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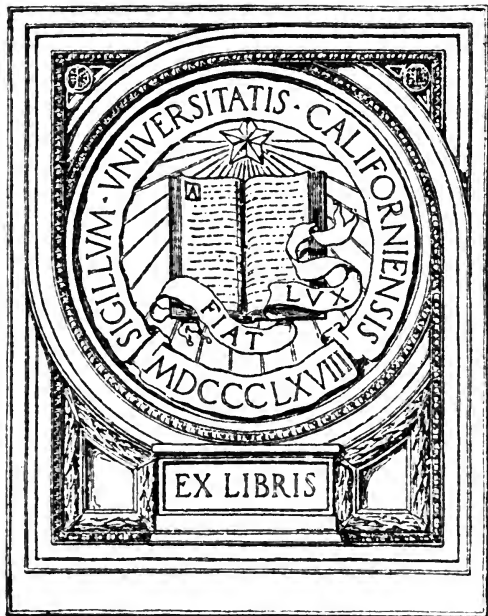
1891.

BUREAU OF THE AMERICAN REPUBLICS,

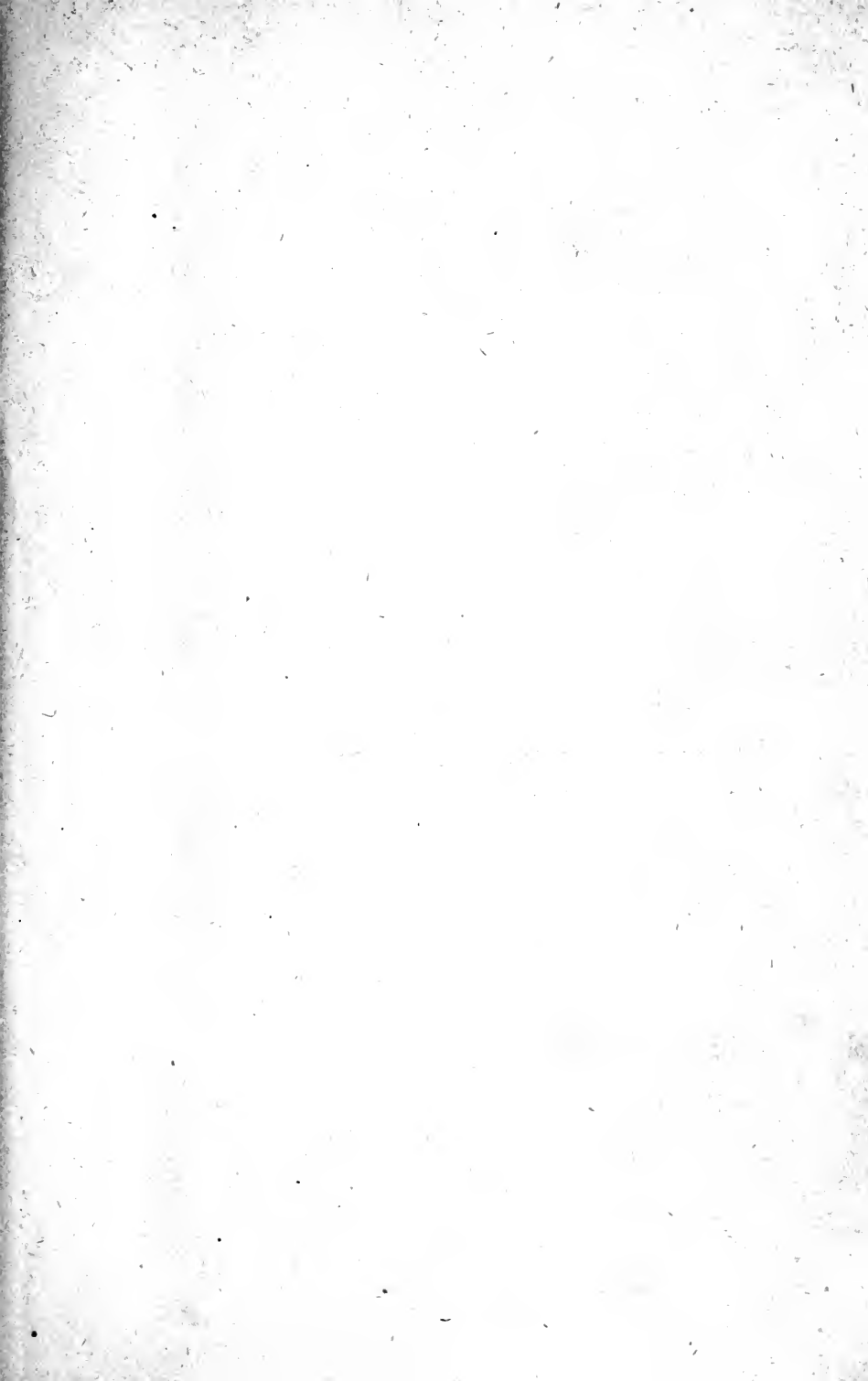
Washington, D. C., U. S. A.

Bulletin No. 41.

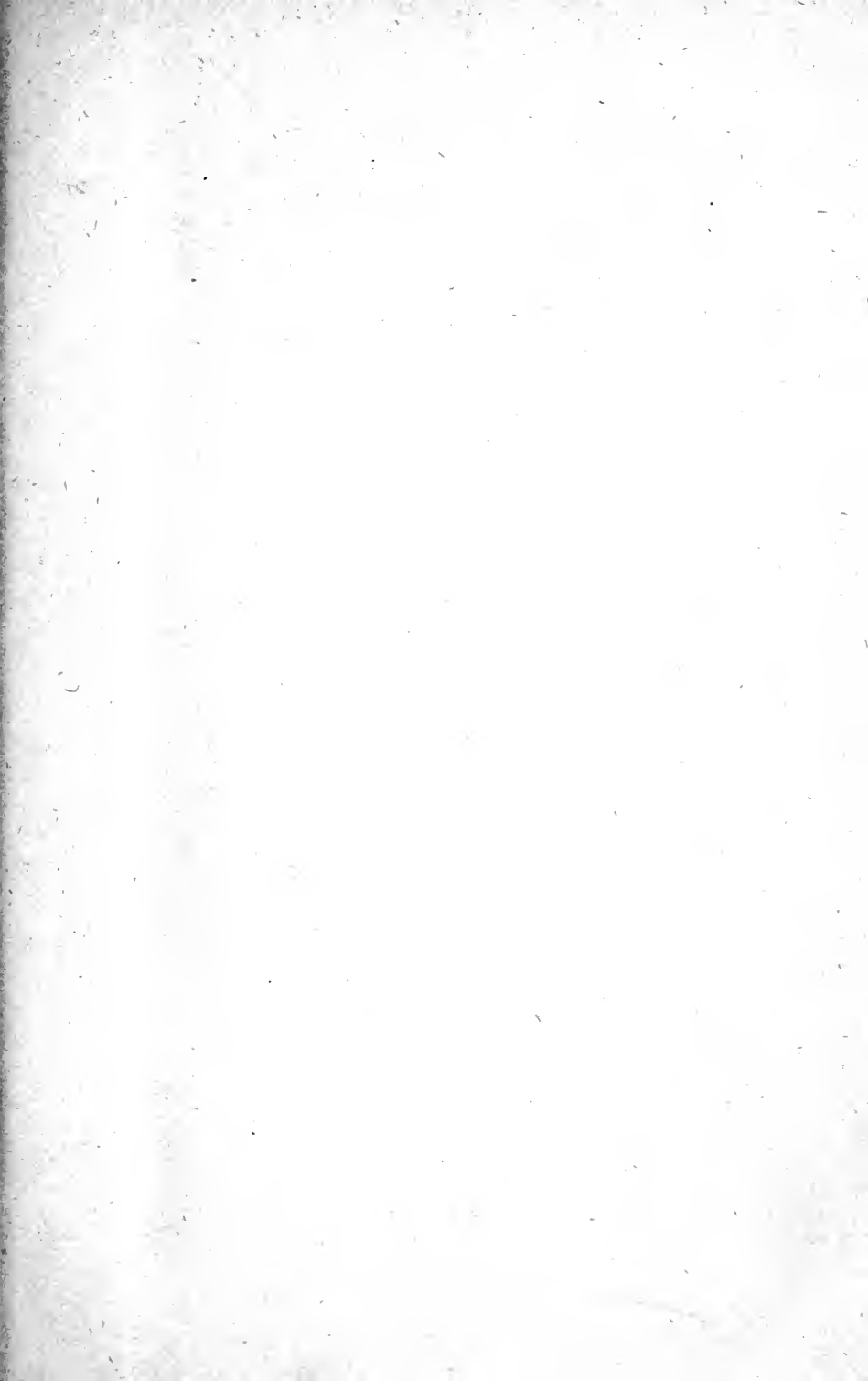
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Washington, D. C., U. S. A.

Bulletin No. 41.

April, 1892.

no. 41

BUREAU OF THE AMERICAN REPUBLICS.

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EXPLANATORY NOTE.

During the past year (1891) the Bureau of the American Republics has furnished to the press of the United States, Mexico, Central and South America, the West Indies, and Europe, daily bulletins containing information concerning current events in the American Republics and Colonies; their progress, and the development of their resources, their industries, and commerce. As much of this information is of permanent value and interest to manufacturers, merchants, historical students, and others, it has been deemed expedient to publish selected extracts from these daily bulletins in a classified form.

The Argentine Republic.

THE NEW CUSTOMS LAW.

The following is the decree regulating the new customs law of the Argentine Republic :

LAW NO. 2772—CUSTOMS LAW.

The President of the Republic decrees:

ARTICLE 1. The foregoing law shall come into force from the date of promulgation in the custom-house of Buenos Ayres and from 1st of February in the other custom-houses of the Republic.

ART. 2. Twenty-four hours' grace are hereby given for the payment, in accordance with the former arrangements, of manifests liquidated prior to the promulgation of the new law, so that such manifests may be paid, up to 4 o'clock of the day of promulgation, half in gold and half in paper. On the expiry of this term no reclamation shall be attended to in that respect.

ART. 3. A special account shall be kept in the custom-houses of these additional duties, as also in the *contaduria-general*.

ART. 4. The proceeds of said duties shall daily and directly be remitted to the *caja de conversion* by the custom-house of Buenos Ayres, and every fortnight or month by the other custom-houses of the Republic, according to the importance of the sums to be remitted. These remittances shall be made, in preference, in bills on the national bank or in money. The proceeds of the duties shall be deposited in the local branch of the national bank, to the order of the revenue department, while awaiting the date fixed for the remittance. The *caja de conversion* shall publish every month a statement of the remittances.

ART. 5. In the case of goods shipped prior to the promulgation of this law for minor custom-houses, and which come under the prohibitions of Article 5, the finance minister shall decide in which of the custom-houses said goods shall be dispatched, keeping in view the interests and facilities of trade and State.

ART. 6. The general revenue department is hereby intrusted with the execution of this decree.

ART. 7. Let this be communicated, etc.

PELLEGRINI.

V. F. LOPEZ.

REPORT ON FOREIGN AFFAIRS FOR 1891.

The annual report of Señor Costa, Argentine minister of foreign affairs, for 1891, says that notwithstanding the recent crisis the real industries of the country have never been more prosperous than now. The enormous rise in land prices has tended to break up large properties into small holdings, and the immigration department has vast areas of land at the disposal of settlers. The area under tillage in 1891 exceeds anything before known, and new colonies have been established in Santa Fé, Entre Rios, and Cordoba. In spite of the crisis, there were 110,000 immigrants in 1890, and 34,050 during the six months ended June 30, 1891. These were chiefly friends of people already in the agricultural colonies. The immigration department, which cost the Government \$1,687,000 in 1890, will not entail an expense of more than \$309,000 this year and \$200,000 in 1892. The expenses of the foreign department have been reduced from \$2,500,000 to \$1,150,000 by the closing of the legations at Vienna, Brussels, Berne, Lisbon, and Mexico, and by other measures of economy.

EXPORTS OF CEREALS.

The total value of cereals exported from the Argentine Republic was \$16,429,228 in 1889, and \$25,825,899 in 1890. This included wheat, corn, flour, flax, linseed oil, and other cereals. The following statement shows the increase of exports from 1881 to 1890:

Year.	Wheat.	Flour.	Maize.	Flax.
	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>
1890	326, 185, 736	13, 017, 875	707, 231, 955	30, 720, 636
1881	1, 165, 628	1, 286, 396	25, 052, 189	6, 304, 618
Total	325, 020, 108	11, 731, 479	682, 220, 766	24, 326, 018

And comparing the returns of 1889 and 1890:

Year.	Wheat.	Flour.	Maize.	Flax.
	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>	<i>Kilos.</i>
1890	326, 185, 736	12, 017, 875	707, 281, 955	30, 720, 636
1889	22, 806, 373	3, 360, 876	432, 590, 679	28, 195, 816
Total	303, 379, 363	8, 656, 999	274, 691, 276	2, 524, 820

EXPORTS OF WOOL FOR THE YEARS 1888-'89-'90.

The following table shows the exports of wool from the Argentine Republic for 1888, 1889, and 1890:

	1888.	1889.	1890.
	<i>Bales.</i>	<i>Bales.</i>	<i>Bales.</i>
Antwerp	115, 598	130, 932	87, 821
Havre	27, 432	15, 601	18, 621
Dunkirk	126, 671	168, 030	128, 009
Bremen	38, 317	56, 359	48, 757
Hamburg	60, 303	48, 807	30, 314
Marseilles	202	530	211
Bordeaux	1, 404	650	1, 994
London	1, 072	1, 187	915
Liverpool	3, 423	5, 657	2, 613
Genoa	3, 178	4, 151	3, 521
Total	377, 590	431, 913	322, 290

EXPORTS OF WOOL.

The exports of wool from the Argentine Republic by the port of Buenos Ayres for the ten months ending October, 1891, as compared with the same period of the previous year, are as follows:

	1890.	1891.
	<i>Bales.</i>	<i>Bales.</i>
France	65, 479	39, 556
Belgium	40, 630	55, 800
England	2, 645	5, 530
Germany	38, 705	39, 822
Italy	3, 445	327
United States	1, 224	2, 373
Spain	46	302
Brazil	98	.....
Total	122, 572	144, 710

FOREIGN COMMERCE FOR 1890.

The official returns of the foreign commerce of the Argentine Republic for the year 1890 show a falling off of \$21,031,604 in the imports, and \$3,440,041 in the exports. The following are the exports and imports of merchandise and specie :

	Imports.		Exports.	
	1889.	1890.	1889.	1890.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Subject to duty.....	129, 258, 139	96, 613, 925	89, 926, 859	100, 350, 745
Free of duty.....	35, 241, 848	45, 438, 309	28, 431, 351	5, 266, 921
Specie.....	11, 749, 759	7, 072, 381		
Total.....	176, 249, 746	149, 124, 615	118, 258, 110	105, 617, 666

The imports and exports by countries were as follows :

	Exports to.	Imports from.
	<i>Dollars.</i>	<i>Dollars.</i>
Great Britain.....	20, 980, 407	61, 217, 504
France.....	26, 881, 803	20, 377, 204
Germany.....	11, 680, 023	12, 209, 328
Belgium.....	12, 003, 075	10, 983, 811
United States.....	6, 066, 063	9, 307, 315
Italy.....	3, 194, 981	8, 661, 918
Uruguay.....	7, 104, 004	8, 547, 065
Spain.....	2, 083, 577	4, 333, 062
Brazil.....	10, 009, 012	3, 711, 843
Paraguay.....	375, 653	1, 799, 476
The Netherlands.....	160, 249	174, 399
Sweden and Norway.....	61, 722	174, 399
Bolivia.....	111, 445	111, 155
Portugal.....	456, 701	102, 309
Chile.....	2, 118, 938	45, 145
All other countries.....	2, 053, 957	6, 992, 210
Total.....	105, 617, 666	149, 124, 615

The principal exports from the Argentine Republic were wool, hides, wheat and other breadstuffs, cured meats, and frozen carcasses of beef and mutton. The imports include all forms of manufactured goods.

FOREIGN COMMERCE FOR THREE MONTHS IN 1891

According to official statistics, the importation and exportation of the first quarter of the year 1891, as compared with same period of last year, were as follows :

	Imports.		Exports.	
	1890.	1891.	1890.	1891.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Subject to duty.....	30, 548, 302	11, 623, 824	.....	26, 041, 504
Free of duty ..	9, 923, 733	7, 560, 564	38, 234, 628	12, 575, 088
Specie	2, 487, 903	573, 893	2, 286, 464	585, 918
Total	42, 959, 938	19, 758, 291	40, 521, 092	39, 202, 510

FOREIGN COMMERCE FOR SIX MONTHS IN 1891.

The official returns of the foreign commerce of the Argentine Republic for the first six months of the year 1891 show a very large falling off in both exports and imports. The following is a statement in gold :

	1890.	1891.
	<i>Dollars.</i>	<i>Dollars.</i>
Imports for six months.....	74, 100, 000	33, 200, 000
Exports for six months	71, 400, 000	64, 700, 000
Total.....	145, 500, 000	97, 900, 000

This statement shows that the imports have decreased 56 per cent and the exports 9 per cent, while the total foreign trade of the Republic has decreased 33 per cent, and illustrates the lamentable results of the financial crisis.

The imports of cotton goods have fallen from \$3,200,000 during the first six months of 1890, to \$2,400,000 in the first six months of 1891, woolen goods from \$1,350,000 to \$610,000, and boots and shoes from \$260,000 to \$6,000, which shows that the

boots and shoes of the people are being made at home. The imports of timber have fallen from \$5,100,000 to \$1,600,000, and agricultural implements from \$680,000 to \$260,000. These items show the decline or suspension of the development of local industries.

The statistics of exports show a total value of \$17,100,000 of agricultural products exported against \$25,900,000 for the first six months of 1890. There was a considerable increase in the exports of wool, which was 245,000,000 pounds during the first six months of 1891 against 216,000,000 for the first six months of 1890, but there was a decrease in other items.

The total exports by classes for the six months were as follows:

	1890.	1891.
	<i>Dollars.</i>	<i>Dollars.</i>
Agricultural	25,900,000	17,100,000
Pastoral	38,100,000	39,700,000
Miscellaneous	7,400,000	7,900,000
Total.....	71,400,000	64,700,000

GROWTH OF AGRICULTURE.

The immigration department of the Argentine Republic has issued a circular respecting agriculture in the Province of Santa Fé, comparing the area under cultivation in 1884 and 1889. The figures are as follows:

	1884.	1889.
	<i>Acres.</i>	<i>Acres.</i>
Wheat.....	760,000	1,320,000
Maize	140,000	142,000
Linseed	85,000	55,000
Sundries	135,000	76,000
Total.....	1,120,000	1,593,000

With regard to yield per acre, it appears to have been unusually abundant. The estimated weight of crops for 1891 is as follows:

	Tons.	Kilograms per acre.
Wheat	501,000	380
Maize	18,000	126
Linseed	15,000	270

A comparison of the imports of the Argentine Republic for 1890 with those for 1889 shows that the agricultural development of the country has been very much retarded by the financial troubles, as the number of animals for breeding purposes imported in 1890 numbered only 2,020, while the number imported in 1889 was 11,640. This conclusion is confirmed by the fact that the importation of wire fences has fallen from 39,000 tons to 10,100 tons. The Argentine people imported 4,400,000 gallons less of wine in 1890 than in 1889, but there was a corresponding increase of 20 per cent in the amount of beer imported. That shows that during the hard times people have taken to cheaper beverages. The imports of iron and steel decreased from 59,000 tons in 1889 to 4,000 tons in 1890; the number of plows from 39,500 to 26,800; the number of sewing machines from 22,000 to 13,000. The importation of lumber declined 50 per cent, which indicates a great falling off in the building, and the importation of coal declined 20 per cent. The following table shows the comparative exports of the principal staples of the Argentine Republic in 1889 and 1890:

	1889.	1890.
Wool	312,000,000	260,000,000
Sheepskins	80,000,000	59,000,000
Frozen mutton.....	16,500	20,400
Linseed	28,200	30,700
Maize	450,000	710,000
Wheat	24,000	326,000
Tallow	18,500	17,400
Cowhides.....	3,500,000	4,300,000

THE CROPS FOR 1891.

The following estimate has been made of the value of the rural products of the Argentine Republic in 1891 :

AGRICULTURAL.

Wheat	\$32,000,000
Maize.....	15,000,000
Alfalfa.....	22,500,000
Sugar.....	2,500,000
Wine.....	2,000,000
Linseed.....	600,000
Sundries.....	7,500,000
Total	<u>\$82,100,000</u>

PASTORAL.

Wool.....	33,000,000
Meat.....	10,500,000
Hides.....	20,500,000
Tallow.....	4,000,000
Sundries.....	40,500,000
Total	<u>\$103,500,000</u>
Grand total.....	<u>\$190,600,000</u>

WHEAT AND CORN EXPORTS FOR TEN YEARS.

The following statement shows the amount of wheat and corn exported from the Argentine Republic during the last ten years, both by quantity and value :

	Quantity.		Value (in gold).	
	Wheat.	Corn.	Wheat.	Corn.
	<i>Tons.</i>	<i>Tons.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1881.....	160	25,000	11,000	560,000
1882.....	1,700	107,000	69,000	2,210,000
1883.....	61,000	19,000	2,340,000	370,000
1884.....	108,000	155,000	4,340,000	2,270,000
1885.....	78,500	198,000	3,160,000	3,960,000
1886.....	37,900	232,000	1,510,000	4,640,000
1887.....	328,000	362,000	9,510,000	7,240,000
1888.....	179,000	162,000	8,250,000	5,440,000
1889.....	23,000	433,000	1,600,000	13,000,000
1890.....	328,000	707,000	9,800,000	14,150,000
Average.....	105,500	240,000	4,060,000	5,380,000

Advices received from the Argentine Republic show that the value of agricultural and pastoral products in that country during the year 1891 exceeded anything ever before known. The value of the agricultural crop in 1891 is estimated at \$85,000,000, and the value of the pastoral products will equal \$120,000,000, making a total for this years' crop over \$200,000,000, which is 15 per cent greater than any previous year, and equivalent to \$50 per capita of the population of the country. The wheat product is estimated at 8,000,000 tons, valued at \$32,000,000, the corn crop at 1,000,000 tons, valued at \$15,000,000 and the wool product at 150,000 tons, valued at \$36,000,000. The value of the wheat and corn surplus for export is estimated at \$27,500,000, and the value of wool, hides, and other pastoral products for export is estimated at \$60,000,000. It is believed that this enormous crop will restore prosperity to the country.

The shipment of frozen carcasses of mutton from the Argentine Republic to England has increased very rapidly within the last six years. In 1885 the total number of frozen carcasses received at Liverpool and other British ports was 190,571, while in 1890 it was 1,320,944.

The attempt to ship horses from the Argentine Republic to London has not been profitable. The average cost of placing well-bred horses in London was £20 sterling per animal, while the average obtained at the auction sales was only £18.

The sugar industry in the Argentine Republic now absorbs a capital of between \$50,000,000 and \$60,000,000 and gives employment to 100,000 people. Within a few years it is expected that the yield will be equal to the consumption, which is between \$60,000,000 and \$70,000,000 annually, thus making the Republic independent of Europe for its supply and retaining the \$5,000,000 or \$6,000,000 which is annually sent away. Since the refinery was started it has worked 18,000 tons of raw sugar, yielding 16,000 tons of refined sugar, and of that amount 15,000 tons has been

sold at \$53.20 a ton, the dividend distributed amounting to \$23,999, gold.

Returns of the commerce of the Argentine Republic for the nine months ending September 30, 1891, show an enormous falling off from the imports during the same period of the previous year. The average decrease is 55 per cent, but the largest decrease is found in luxuries and wearing apparel. The fall in wines and liquors is more than 75 per cent. The customs duties collected during the first nine months of 1889 were 30 per cent less than those collected during the corresponding period of the previous year, although there had been an increase in the tariff on many articles.

In the Argentine Republic land is dealt in by the league. What, then, is a league? The square league is equal to 2,700 hectares, or 6,669 acres. Nevertheless, according to a Buenos Ayres paper the equivalents of a league of land vary in the provinces as follows :

	<i>Hectares.</i>
Buenos Ayres.....	2,700
Santa Fé.....	2,700
Cordoba.....	2,710
Mendoza.....	2,517
Tucuman.....	2,663
Salta.....	2,669
Santiago del Estero.....	1,880
San Luis.....	2,798
San Juan.....	2,517
Jujuy.....	2,515
Rioja.....	2,553
Catamarca.....	2,517
National territories.....	2,500

1 hectare = 2.47 acres.

RAILROADS.

The following is a synopsis of the report of the railroads in Argentine Republic for the year 1890, and shows the comparison of the miles in operation in 1889 and 1890:

	1889.	1890.
Buenos Ayres and Rosario.....	343	738
Central Argentine.....	273	432
Argentine Great Western.....	318	318
East Argentine.....	99	99
Central Northern.....	688	688
Buenos Ayres Western.....	750	634
Pacific.....	425	425
Andine.....	157	157
Entre Rios.....	184	184
Buenos Ayres Northern.....	18	.....
Ensenada.....	66	66
Great Southern.....	838	838
Santa Fé Western.....	130	130
Santa Fé Colonies.....	432	506
Northwestern Argentine.....	93	112
Chubut.....	43	43
Chumbicha.....	40	40
Cordoba Central.....	130	130
Northeastern Argentine.....	.....	170
Total.....	5,027	5,710

At the end of the year there were in the course of construction 1,364 miles, making a total mileage of 7,070. The capital invested amounted to \$234,000,000; the receipts in 1889 were \$17,957,388; in 1890, \$16,935,420. Owing to the financial crisis there was a falling off both in the amount of freight transported and in the number of passengers carried.

The Bureau of American Republics is informed that the Argentine Government has issued a decree creating a board of railway commissioners similar to the Interstate Commerce Commission in the United States. This commission has supervision of all the relations between the Government and the railways of the Republic, and so far as possible of provincial lines also, and is authorized

to report to Congress legislation necessary to secure the most satisfactory regulation of the railway service.

The Buenos Ayres and Great Southern Railway Company is rapidly pushing the construction of its extended line from Bahia Blanca to Carmen, on the Rio Negro, which, when completed, will make a continuous line of railway for more than 400 miles south from Buenos Ayres. The Rio Negro is navigable from the sea for light-draft steamers for more than 350 miles, and it is proposed to establish a line of steamers to run in connection with the railway. The valley of the Rio Negro is said to be very fertile and capable of producing everything which can be grown in the temperate zone, while the country back from the river, both north and south and toward the base of the Andes, contains immense tracts of grazing land, which are being rapidly acquired by capitalists, who are establishing cattle, sheep, and horse ranches. Another railway is being surveyed south from the Rio Negro, via Port Madryn, in the Chubut Colony, to Santa Cruz, within 150 miles of the entrance to the Straits of Magellan. Already a short line of railway is in operation in Chubut, and, with the construction of the proposed line, uninterrupted communication will be had from Buenos Ayres to the south of what was once known as Patagonia, opening to immigration and settlement a vast area of rich agricultural and pasture lands. The mineral phosphates, nitrates, and guano deposits which have been discovered in the provinces of Santa Cruz, added to the gold findings at Virgin Point, on the Straits of Magellan, are attracting the attention of investors, and, at no distant day, a railway line is assured quite to the southernmost point of the continent.

The Bureau of the American Republics has received information of the completion of the narrow-gauge railway from Cordoba to Rosario, in the Argentine Republic. This is a branch line, which completes the connection of the narrow-gauge system of that country. There are in operation at present over 2,500 miles of this class of railroad, divided into thirteen branches and extensions.

The roads are well built, having ties of steel and a number of extensive bridges, and they are also so arranged if it should be necessary the system could be changed in a very short time to the standard gauge.

An official report of the condition of railroads in the Argentine province of Santa Fe has been received. In 1888 there were 360 miles in operation in the province. This number had increased in 1889 to 418 and in 1890 to 508, while 193 miles was in process of construction. A direct line is building from Santa Fe to Rosario, which will probably be open to traffic before the end of the year. The returns in 1889 amounted to \$902,222 and the expenses to \$1,027,856 as compared with returns of \$2,034,772 in 1890 and expenses of \$1,602,958. The rates in 1890 were the same as in 1889, but since April, 1891, the depreciation of the paper dollar has compelled an increase of 110 per cent in rates.

The Bureau of American Republics is informed that a new enterprise has been developed in the Argentine Republic. The refrigerator ships which were constructed for the dressed-beef trade between Buenos Ayres and Europe are being utilized for the transportation of frozen fish. The "pejery" of the fresh-water streams and lagoons of the Argentine Republic is a fish of delicious flavor, and when frozen solid at once after being caught can be preserved for any length of time. The export and sale of those fish has been very successful and satisfactory.

Official returns just issued by the Argentine Government show that there were 5,710 miles of railway in operation in that republic during the year 1891, which is an increase of 700 miles over the total mileage under operation during the year 1889. The net profits on the operation of this system were one and seven-tenths per cent, against two and nine-tenths per cent during the previous year. The Government guaranties on railway capital paid last year were \$3,100,000, against \$2,200,000 the previous year.

THE ARGENTINE SCHOOL SYSTEM.

[Bishop Walden in Harper's Magazine for May.]

The Argentine school system is imbedded in the national constitution, which provides that Congress shall have power to decree plans for general and university education, and requires that the constitution of each province shall provide for primary education. In harmony with this organic law the several provinces have made some provision for common or primary schools. Congress has found some legislation necessary, and also makes some appropriations where the provincial fund is insufficient for the primary schools. Some municipalities are charged with the maintenance and supervision of primary schools. The grade of these public schools depends upon their locality, those in which the most branches are taught and which are supplied with the most efficient teachers being in the most advanced provinces, and generally in the cities. The presence of normal schools and colleges in the provincial capitals stimulates the interest of the citizens in their common schools. The number of pupils in attendance throughout the republic in 1864 has been placed at 39,000; the number reported for 1888 was 175,239.

The number of these public schools, called fiscal where supported by public funds, increased from 1,515 in 1884 to 2,263 in 1888. Of the latter, 34 were schools of application, in which the pupils must pass in the common branches, and, in addition, study French, geometry, civil government, and some of the natural sciences; and the girls are also taught sewing, embroidery, and domestic economy; 12,915 pupils were in these schools in 1888. Under the general classification of public schools in 1884, there were reported the 1,515 fiscal schools, 41 connected with charitable institutions, 32 maintained by religious orders, and 364 private schools—in all 2,094—with an attendance of 104,139 in the fiscal schools, and 41,521 in the others—total number, 145,660. Of

these, 70,187 were males, and 68,473 females. The increase of attendance in the fiscal schools from 1884 to 1888 was 71,000. There are private schools more or less closely connected with the Protestant churches, and the Methodist mission maintains a school at each mission station. The school age for the fiscal schools is from 6 to 14, inclusive. Basing an estimate on the enumeration of 1884, the present school population approximates 600,000, and the attendance less than 40 per cent of this population.

In 1871, after Dr. Sarmiento's return from the United States, he secured the establishment of a system of normal schools, the declared purpose of which is to give practical instruction in teaching. The first normal school was opened at Paraná, the capital of Entre Rios, in 1871. There are now two—one for boys and one for girls—in each of the fourteen provincial capitals, except Cordova, which has three; and in addition to these there are five in Buenos Ayres, the national capital—in all thirty-four. Dr. Sarmiento was also instrumental in introducing into these schools teachers from the United States. At the present time about forty American ladies are employed in them, receiving a liberal compensation, and commanding high respect. The schools of application are so few that much of the work prescribed for them is really done in the normal schools. This course must be studied before passing to the normal department, in which there are three years' training with specific reference to teaching—professional training. Those who receive public aid must teach three years.

The normal schools, in support and administration, are national institutions, but they are entirely distinct from the national colleges. Of these there are fifteen; one in each of the provinces, in most instances at the capital, and one at Buenos Ayres. As the name imports, these also belong to and are maintained by the general government. Such students as desire it may be accommodated with rooms and boarding in the college buildings. These buildings are fine structures, in harmony with the public pride in

the educational enterprises of the state. In the provision for classes, the fifteen buildings will accommodate about 12,000 scholars. There is a six years' course of study, embracing history, geography, elementary and higher mathematics, chemistry, physics, natural history, political economy, ancient and modern languages, literature, music, drawing, bookkeeping, etc. The aggregate attendance is about 2,000, and one-fifth of these attend in Buenos Ayres. Only a few, comparatively, have completed the course of study; the large proportion study two or three years, and then engage in other pursuits.

MISCELLANEOUS.

Recent returns from the Argentine Republic show much more encouraging conditions for the future of that country. Until August last more people were leaving the country than were arriving; but in September the tide turned and immigrants have again begun to arrive in large numbers at the several ports of the Republic and taken up lands in the interior of the country.

According to the recent census there are 3,546,000 inhabitants in the Argentine Republic and the population of the city of Buenos Ayres is 549,434.

A statistical summary of the Argentine Republic since 1861 shows that in thirty years the population has increased from 1,350,000 to 4,000,000; and the number of acres in cultivation from 480,000 to 7,000,000. In 1861 the only railroad in existence was from Buenos Ayres to Merlo, a distance of 18 miles. Now there are over 5,000 miles of railroad opened to traffic and 6,000 more in course of construction. Commerce and national wealth have multiplied five times over within the same period, but the public debt has increased in much greater proportion. It was \$17,000,000 in 1861; in 1890 it was \$401,000,000, exclusive of cédulas and the paper currency, which would raise it to a total of \$613,000,000.

Mail advices bring information of the discovery of a vast bed of silver in the bottom of the Bay of San Blas, Argentine Republic. The silver appears in the black metallic sand which covers the bottom of the bay. This sand is full of silver pellets and divers have brought up a sufficient quantity to justify the belief, as stated by the Buenos Ayres Standard, that "the silver deposit in the bottom of the bay is greater than in the famous Bonanza mines of California."

An important deposit of that rare metal known as vanadium has been found in the province of Mendoza, Argentine Republic. This metal is one of the rarest and most valuable known, and is used for setting dyes in silks, ribbons, hosiery, and other fine goods. The principal source of supply, until recently, has been a small deposit in the Ural Mountains, and it has been held as high as \$1,500 per ounce. This newly discovered deposit in Mendoza will therefore be recognized as of great importance.

A syndicate of British capitalists have made an application to the Government of the Argentine Republic for the privilege of exploring the Patagonian coast for minerals.

A mine of coal of very fair quality for steaming purposes has been found by accident in the Straits of Magellan. Signor Fossetti, the captain of an Italian steamer, was compelled to anchor in Shagnet Bay to make some repairs, and while there he discovered coal very near the surface. Reaching Valparaiso he sent a corps of experts to the scene of the discovery in a steam launch, who found that the coal was not only abundant, but of excellent quality. The importance of the discovery to the commerce of the world can only be appreciated when it is considered that all steamers passing through the Straits of Magellan are required to coal there and that the supply has heretofore been brought from Cardiff, Wales.

The outlook for the recently discovered coal mines in the Argentine Republic is so favorable that the railway companies of that country have declined to renew their contracts with the British

miners for fuel. Hitherto all the coal burned on the Argentine railroads has been imported, but it is believed that the newly discovered mines will furnish a supply entirely sufficient for domestic consumption.

In 1870 the Argentine Republic passed a law permitting the National Government to pay a reward of \$25,000 for the discovery of paying coal field. Though many efforts have been made to earn this prize none have approached success until recently. It is now asserted that a coal bed meeting the requirements has been discovered, but further boring operations are necessary to fully verify the statement. All the coal used in the Republic has to be imported. The imports in 1889 amounted to 658,000 tons.

Natural gas has been discovered in the Argentine Republic, where Dr. Arata, a local chemist of good reputation, has by analysis found it to be quite as rich in heating and lighting power as that found in the United States. As the lack of fuel for manufacturing purposes has been one of the greatest drawbacks in the Argentine Republic, this is considered of the very greatest importance.

A gentleman named Aquiles Thour left Buenos Ayres on the first of October for the purpose of making a horseback journey to Paris by way of Bolivia, Peru, Colombia, Central America, Mexico, the United States, Canada, Alaska, Russia, and Germany. He expects to be until January, 1894, on his journey.

The Buenos Ayres papers report that the recent purchase by Baron Hirsch of 3,001 square leagues of land in the northern part of the Argentine Republic, for 260,000 sovereigns, makes him the possessor of a territory larger than is owned by any other man, and it exceeds in area the kingdom of Montenegro.

The Argentine Government has sold a tract of land in the Grand Chaco—the northern part of the Republic—to Baron Hirsch for the establishment of a Jewish settlement. One million dollars in gold has been paid for 1,000 square miles of territory.

The work of installing the Jewish emigrants, sent to the Argentine Republic by the munificence of Baron Hirsch, is being actively carried on. A branch railway has been constructed from the main line to what is known as the Mauricio Colony, in which the Hebrews are being established, and two hundred families are now already comfortably settled and engaged in the cultivation of the soil. One thousand additional families were reported to be on their way from Europe, in December, 1891; and it is proposed to bring them hereafter at the rate of one thousand families per month.

The annual report of Governor Kerr, of the Falkland Islands, which lie off the coast of Patagonia, shows a singular state of things. There was not a single case, either civil or criminal, in the courts of the colony during the year 1889. All the courts have been practically closed since 1887.

The settlement of the archipelago of Tierra del Fuego, which until recently was considered a barren and useless territory, is so rapid and has progressed so far as to require telegraphic facilities between the islands and the continent. The commander of the Argentine man-of-war *Ushuaia* has been directed to lay a cable between Cape Virgin and Espiritu Santo, which are 22 miles apart. This is one of the widest channels in the Straits of Magellan, but it is considered the safest and most convenient for cable communication.

The President of the Argentine Republic has appointed Julio Victorica and Carlos Lix-Klett as commissioners to collect and arrange an exhibit for the Argentine Republic for the World's Columbian Exposition in 1893, and has issued a decree placing at their disposal the \$100,000 appropriated by Congress for that purpose. Señor Victorica is connected with the agricultural department of the Government, and has a wide knowledge of the resources of the country. Señor Lix-Klett was the commissioner from the Argentine Republic to the Paris Exposition, and has had

a great deal of experience. The appointment of these men guarantees a splendid exhibit from that country.

The following table shows the number and tonnage of the steamers entering the harbors of the Argentine Republic during 1890, and the nations under whose flag they sailed:

	Number of steam- ships.	Tonnage.	
		Gross.	Net.
British	5, 302	8, 043, 872	5, 106, 581
German	689	930, 754	656, 182
French	471	805, 983	656, 182
American	419	533, 333	375, 950
Spanish	350	432, 627	273, 919
Italian	300	294, 705	185, 796
Norwegian	371	245, 052	176, 419
Dutch	164	220, 014	149, 355
Russian	230	177, 752	116, 742
Swedish	403	172, 613	126, 642
Danish	197	154, 497	103, 578
Austrian	111	149, 447	96, 503
Japanese	158	123, 279	76, 412
Belgian	55	98, 056	71, 658
Brazilian	129	75, 970	48, 901
Greek	68	70, 435	44, 424
Portuguese	41	49, 364	29, 554
Total	9, 638	12, 825, 709	8, 286, 647

Bolivia.

INTERNAL TRANSPORTATION FACILITIES.

In order to facilitate the internal transportation in Bolivia the Government of the Republic is taking active steps to secure the construction of wagon roads and railways, both by means of concessions to private parties and through the agency of the national engineers.

The Bureau of the American Republics has received interesting accounts of the opening of an important road from Cochabamba to Sucre. The public functionaries of Sucre and a vast crowd from the neighboring country marched in procession to the Arch of San Roque, where the ceremonies of the formal inauguration took place amid showers of flowers from the ladies assembled and other manifestations of rejoicing. Other roads are in active course of construction from Sucre to Potosi, from Cochabamba to Santa Cruz, from Tarifa to the interior, from Oruro to the Argentine provinces, passing through Tolapalca, Culta, Ayoma, and Mancha. The Government has granted aid to roads from Cochabamba to Beni River, to San Ignacio, and to Chimore River. The railroad between La Paz and Uyuni is rapidly approaching completion, and is expected to be open for traffic by the beginning of the year.

A number of proposals for the construction of railway lines have received the consideration of the Executive. Among these are one from Gen. T. O. Osborn, from Sucre to the Paraguay frontier; one by John Firth, from Oruro, La Paz, to the Peruvian

line, connecting with the line from Arica and Tacna; one by Santiago Secombe, from Aruro to Cochabamba, with extension to Colquechaca; one by Agosto Stumpp, from Sucre to Huaicho. A concession has been granted to a London firm for a line from Pacheco, on the Paraguay River, to the city of Santa Cruz. The Department of La Paz has united with Peruvian authorities in the projection of a road to La Paz, which will connect with the line from Mallendo to Puno, by the way of the Desaguadero.

Mr. John Hurd has applied for the right of navigating the branches of the Madera, and also to build railroads, completing those from Santa Cruz to Rio Grande, from Cochabamba to Rio Chimore, and from La Paz to Rio Beni.

The Government of Bolivia has granted to Fernando Cordena, an Argentine engineer, a very important concession for the construction of a railway from Oruro to the head of navigation on the Amazon River, in the heart of the rubber region of Bolivia. The construction of this road will connect the mineral regions of Bolivia with the Atlantic, and thus give cheap transportation to Europe. The Government has guaranteed Señor Cordena 6 per cent interest annually for twenty years on the capital invested; has given him 9 miles on each side of the proposed line from which to take materials for construction purposes, and, in addition, has granted him 100 square leagues of land, to be taken at intervals from the territory adjacent to the road.

A concession has been granted by the Bolivian Government to Lord Donoughmore, of London, and Michael P. Grace, of New York, for the construction of a railway from La Paz to Lake Titicaca, the line to be finished within three years. This road is practically an extension of the line of railway which runs from Mollendo, a port on the coast of Peru, to Lake Titicaca.

The scientific exploration of the Desaguadero River in Bolivia and Peru has been completed over 85 leagues, or 250 miles, and it is expected that steam communication will be established at once

by the Government of Bolivia as far up the river as Corocoro, from which a railroad will be built to La Paz, the capital. This will afford Bolivia a direct outlet to the Atlantic Ocean by way of the Amazon River, upon the construction of 60 miles of railroad, which will naturally contribute to the development of the country's natural resources.

Lieut. W. E. Safford, commissioner of the World's Fair, to the Republic of Bolivia, reports that the Congress of that country has authorized the President to appoint a commission to take charge of its representation at Chicago, and that the expense will be paid from what is known as "Misiones extraordinarias," a permanent fund for paying the expenses of diplomatic intercourse.

Brazil.

CONSULAR INVOICES.

The Brazilian Government, by a decree which taking effect on the 1st of January, 1892, includes consular invoices among the documents required to effect a clearance at Brazilian custom-houses. The decree quotes the resolution adopted by the International American Conference held at Washington, recommending this course, and expresses the opinion that the general adoption of this plan will be of value to the public and also an aid to commerce and a check upon improper and fraudulent declarations in the manifests.

The Brazilian Minister of Finance has informed the consular representatives of the Republic of the suspension, until May 1, 1892, of the recent decree regarding consular invoices on all goods shipped to that country. Bills of lading only need be legalized by the consuls until that date.

BONDED WAREHOUSES.

The custom-house inspector has issued the following regulations:

The inspector of the custom-house, by virtue of the authorization which was granted him by the *aviso* of the department of finance on June 17, 1879, has decided that for the definite clearance of merchandise discharged into bonded warehouses the following instructions shall hereafter be observed:

(1) The agents of steamship companies or captains of vessels, the owners or consignees of merchandise destined to be deposited, must present, together with the application wherein they ask permission for depositing, two similar (original and duplicate) lists, made out in accordance with the prescribed

form, in which are to be described, without amendments or erasures, the packages, number, description, and quantity, together with the quality of the contained merchandise, the name of the vessel bringing it, and the date of entry.

(2) The said application and annexed list will be presented to the manifest clerk for the verification as to the agreement between the declarations in such documents with those that appear on the manifest.

(3) The deposit granted, the lists will be dated and signed by the depositor, presented to the employé of the first section charged with this service, who will place in the proper space the number of the order which belongs to it, in the scale of deposits for the warehouse referred to, and, after the initialing by the chief of the section, it will serve as the original deposit bond, while the duplicate will be at once sent to the respective warehouse, in substitution of the *guia* referred to in article 237 of the consolidated custom-house laws.

(4) The bonds (*termos*) thus prepared will replace for all legal effects the special book to which article 238 of the consolidated laws refer, for which end they will be filed in the first section and bound by years or half years, numbered, initialed separately for each warehouse.

(5) The owner or consignee of merchandise deposited who intends to clear it for consumption will present the papers duly prepared at the warehouse, or store, for the specification of the discharge and receipt of the said merchandise, the ordinary forms for the clearance of goods discharged into the custom-house stores to be afterwards observed.

(6) The order for delivery to which article 249 of the consolidated laws refers will be substituted by an application signed by the *conferente* of the clearance who is to order the delivery, the said application to contain all the requisites demanded in similar documents relative to packages discharged into the custom-house stores.

(7) Within six months after the date of the deposit the respective bonds will be liquidated, the conferring with the manifest made, and the packages uncleared or not delivered will be inventoried for the purposes determined by the consolidated laws.

(8) The obligation upon the storekeepers of bonded warehouses to forward upon the same day that the discharge is made, or at the latest upon that following, unless it be a holiday, a document extracted from the counterfoil book showing the merchandise received in conformity with article 240, remains in force, under the penalties prescribed in article 270, both of the said consolidated laws, if it be not done.

COMMERCE BETWEEN BRAZIL AND BELGIUM.

Interesting information has been received in regard to the commercial relations between Belgium and Brazil, which are reported to have become much closer during the year 1890 than ever before. Belgium finds in Brazil an important market for its iron goods and cast iron, while Brazil has increased its exports to Belgium considerably. The cargoes of vessels leaving Antwerp for Brazil represented in 1890 a value of \$5,520,000, and the price of goods exported from Brazil to Antwerp was \$12,400,000. The exports from Brazil to Belgium consist principally of coffee, leather, cocoa, wool, and tobacco, and the increase in value of these exports since 1888 has been more than \$3,500,000, the greater part of the increase being due to coffee, the price of which was maintained at a high level during 1890. Nearly half a million sacks of coffee, representing a value of more than \$12,000,000, entered the port of Antwerp from Brazil in 1890. Of this amount 351,643 sacks came from Santos, which is now the most important market for the export of Brazilian coffee, although the coffees of the province of Bahia are much sought after on account of the facility with which they can be mixed with other varieties. The coffee of the Dutch Colonies, and particularly of Java, no longer offers a serious competition to the Brazilians. Antwerp, in connection with Hamburg, remains the great entrepôt for Brazilian coffees.

The imports of Brazilian hides at Antwerp increased in 1890 from 24,368 skins to 42,073. The dry leather exported from Brazil, chiefly from Rio Grande, Bahia, Rio, and Santos, was valued at over \$25,000.

The imports of British goods into Brazil for the first four months of 1891 show a general increase. The cotton-goods imports were \$7,591,440, as compared to \$3,702,215 during the similar period of 1890; linen, \$324,850, as compared with \$242,365; woolen stuffs, \$745,195, as compared with \$537,393; railroad materials and machinery, \$2,981,700, as compared with \$2,095,990. A

total of 67,829,800 yards of cotton piece goods were exported from Great Britain to Brazil during this period, as compared with 57,176,700 a year ago.

VALUE OF COTTON TRADE.

The value of the trade in cotton goods in Brazil is shown by the returns for the first four months of last year, January 1 to April 30, as published by the British Board of Trade. During this period the exports of cotton piece goods, unbleached, from Great Britain to Brazil amounted to 5,162,900 yards, as against 6,597,500 yards during the same period of the previous year.

The exports of cotton piece goods, bleached, for the period named, amounted to 21,744,100 yards in 1891, as against 17,275,300 yards during the corresponding period of 1890.

The exports of prints for the four months named in 1891 were 30,536,800 yards, as against 24,359,400 during the corresponding period of 1890.

The exports of colored or dyed cotton piece goods amounted to 10,386,000 yards, as against 8,944,500 yards during the previous year. These making a total of 67,829,800 yards of cotton piece goods exported to Brazil from Great Britain for the first four months of last year, as against 57,176,700 yards exported during the corresponding period of the previous year.

The value of cotton piece goods exported to Brazil for the first four months of 1891 was \$3,866,580, as against \$3,443,965 for the corresponding period of the previous year.

MISCELLANEOUS.

The latest estimate places the Brazilian coffee crop for 1890-'91, now coming into market, at 2,200,000 bags. Notwithstanding the high prices, the daily receipts do not average over 3,000 bags. Should the present disorganization of labor continue, it is believed that the coffee crop for 1891-'92, now placed at 8,000,000 or 9,000,000 bags, will not exceed 6,000,000 or 7,000,000 bags.

The Brazilian Government has ordered the purchase of 500,000 cuttings of grape vines in the United States and Europe, for use in starting experimental vineyards in that Republic.

A leading merchant of Brazil writes as follows :

Almost anything made in America is good for this country. Glassware is wanted badly, particularly big tumblers, water sets, and small liquor glasses; knives and forks, all kinds of tinware, hardware, tools and notions of every kind, cotton, sheeting, prints, and cheap light-weight woolen goods. In fact, I can only say that I do not know what will not sell. We want paper and stationery of every kind, varnishes, felt shoes, wooden ware, gloves, and blank books. We have recently had the largest shipment of manufactures from the United States ever landed here, and although the prices charged were outrageous they met with a wonderfully quick sale. Lamps which are sold in New York at 85 cents were sold here at \$3 net, and I disposed of 200 in a couple of days. If I were business in New York, instead of Rio de Janeiro, I would do a big trade throughout all the provinces of Brazil. It only wants some of the New York wholesale firms to go for this market, and before long our people would regularly send all their supplies.

Information as to rapid development of the wine industry in southern Brazil has been received. In certain districts the vineyards cover immense stretches of land, and a decided improvement has taken place in the quality of the product. Notwithstanding its defects, good prices are obtained for it—more remunerative than coffee. The Government has taken steps to foster the culture of the vine by granting for two years free transportation for the products over the state railways, and has provided for the establishment of an œnological and a phylloxera station with a vineyard attached for the diffusion of information as to vine culture. The œnological establishment will, it is claimed, be able in two years to supply annually 25,000 to 30,000 feet of vine having two years' growth and having the advantage of being acclimatized. The development and propagation of different species is about to be carried out also in the state of Minas Geraes, where land has been acquired for the purpose.

A report from the United States consul-general at Rio de

Janeiro states that the sales of locomotives of American manufacture in Brazil have been very large. One firm in Philadelphia during the past ten years has sold two hundred and fifty-one. The sales for each year were as follows:

1881	16	1886	21
1882	35	1887	17
1883	27	1888	19
1884	32	1889	45
1885	8	1890	26

The Government of Brazil has appointed Dr. José Augusto de Freitas and Capt. José Candido Guillobel as special commissioners to represent the Government of Brazil in submitting to the arbitration of the President of the United States the boundary question which has long existed between Brazil and the Argentine Republic.

The Bureau of the American Republics is informed of the organization at Rio de Janeiro of the Companhia Para Amazonas, with a capital of \$5,000,000 for the purpose of exploring and developing the natural resources of the Amazon. It is intended to establish colonies on the upper branches of the Amazon and afford means of transportation to market for a region that has heretofore been practically unexplored.

The Bureau of the American Republics is informed that the legislature of the State of Espirito Santo, Brazil, has passed a bill granting a subsidy of \$90,000 a year for the establishment of direct steam communication with the United States.

The Hungarian Diet has authorized the minister of commerce of Hungary to enter into an agreement with the Adria Steamship Navigation Company to extend its service to Brazil and the River Plate countries, for which it will receive an annual subsidy of 570,000 florins. The capital of the company will be increased to 5,500,000 florins, of which 3,000,000 florins will be invested in new ships.

By a decree of the Government of Brazil, dated January 31,

of last year, the consulates of that country in the United States are divided into two groups, that of the consulate-general at New York embracing the New England States, the Pacific coast, and the middle Atlantic States to the boundary of Maryland; and that of the consulate at Baltimore embracing all the other Atlantic and Gulf States from Maryland to Texas.

The Government of Brazil has issued a decree dividing the legations of that Republic in foreign countries into two classes, as follows :

First class: The United States, Germany, France, Great Britain, Chile, Argentine Republic, Uruguay, Italy, and Portugal, where the legation will be in charge of envoys extraordinary and ministers plenipotentiary of the first class.

Second class: Austria, Hungary, Belgium, Bolivia, Spain, Mexico, Paraguay, Peru, Russia, the Vatican, Switzerland, and Venezuela, where the legations will be filled by envoys extraordinary and ministers plenipotentiary of the second class.

The new Government of Brazil has suspended proceedings in the confiscation of the property belonging to Princess Isabella and other members of the family of the late Emperor.

The Brazilian Congress has fixed the salary of the President at \$60,000 per year, and that of the Vice-President at \$18,000.

The Bureau of the American Republics is informed that one of the first acts of the Brazilian Congress when it reconvened after its dispersion by the late President Deodora was to make an appropriation of 610 contos of reis, which is equivalent to \$329,000, "to aid the representation of the United States of Brazil at the International Exposition at Chicago." The new President of the Republic formally approved the bill, and the money was placed to the credit of the minister of agriculture, who is to have general direction of the Brazilian exhibit. The amount thus appropriated is to pay the expense of the General Government in connection with the Exposition, but nearly all of the individual states of Brazil

have made separate appropriations to pay the expense of securing exhibits of their own resources. The display from Brazil will be very complete and will include agricultural and mining products, a large number of the woods of her forests, fiber and medicinal plants, means of transportation, and large collections of objects having historical and ethnological value. The practical working of the mining, coffee, tobacco, cotton, and other industries will be shown, and it is expected that a family of Indians from Parana will be at Chicago as part of the collection of native types of America.

The Corcovado Railroad Company of Rio de Janeiro proposes making an exhibit in miniature of their railway at the Chicago Exposition. It is the purpose to have large photographs illustrating the mountain route through which the railway passes, the bridges, the stations, the hotel at the summit, and interesting scenery adjacent. They will have molded, in papier-maché, the mountain of Corcovado in miniature, with the railway laid down as in actual operation. The total length of the road is 10,528 feet; or two miles, less 300 feet. The rise from the station at the upper end of the road to the summit is 2,300 feet, and is reached by a footpath. The average grade of the road is 13 per cent, the maximum grade is 33 per cent, and the minimum grade 8 per cent. The Sylvester Bridge, which is built entirely of steel and in what is known as balloon frame pattern, is 264 feet long and 164 feet high. It has a curved axis, with a radius of curvature of 395 feet, and the grade on the bridge is 20 per cent. The road is constructed on the Riga plan. The Corcovado Railway connects the city of Rio de Janeiro with the top of the mountain of the same name. The mountain can be seen on a clear day by mariners approaching the harbor of Rio at a distance of more than 100 miles. The view from the top of Corcovado is a magnificent one, comprising the ocean, the city and bay of Rio, with the Organ Mountains inland.

Chile.

WHERE CHILE BUYS HER IMPORTS.

The French consul at Valparaiso, writing on the subject of the commercial condition of Chile, says:

The greater part of the commodities for daily consumption come from Europe. The same is the case with regard to materials for large works. England and Germany send to Chile, via Valparaiso, rails for railways, portable rails for mines (competing as regards this latter article with France, which sends small railways on the Decauville system), machinery of all kinds, including locomotives entirely fitted up. Belgium sends a quantity of zinc in sheets, which is used for covering houses, and even often for the building of complete houses; she sends, via Antwerp, German and Belgium refined sugars, which are largely consumed in Chile. France sends principally provisions, mineral waters (Vichy, St. Galmier), Bordeaux and champagne wines. Preserved foods, boxes of sardines, tunny, etc., fruits in brandy, are in great demand, notwithstanding the customs duties with which they are taxed. Tissues find also a ready sale, notwithstanding the competition of English and German makers. French tailors, dress and shirt-makers, and hatters are largely appreciated in the country. Within late years France has made great headway in the consignment of her metallic products to Chile. Quite recently the "Forges et Chantiers de la Méditerranée" have constructed two cruisers, the *President Pinto* and the *President Errazuriz*, and a large armor-clad, the *Capitan Prat*.

The share of the other nations in the import trade of Chile is insignificant. Italy sends white marbles in sheets and slabs, tiles of faience for paving, olive oils, and wines; Spain sends wines and tissues; Denmark and Norway send beer and salt fish; Switzerland, cottons and woollens; Holland, cheese, gin, tissues, etc. As regards American nations, their part is very insignificant. Brazil, Central America, and Mexico send coffee; Peru and Ecuador, raw sugar and cocoa; Argentine Republic, cattle and raw hides.

Australia sends principally coal from its port at Newcastle and coke for the foundries.

THE TRANSANDINE RAILWAY.

The Bureau of American Republics is informed that satisfactory progress is being made on the Transandine Railway, which is to connect the Argentine Republic with the Pacific coast of Chile. The following statement has been furnished: The work is important from two distinct points of view. The engineering difficulties can only be surmounted by skill and great perseverance. Indeed, it is only possible to appreciate the magnitude of the undertaking when one realizes that mountains, clad with perpetual snows, are to be pierced by tunnels over 10,000 feet above the sea; that the only approach is by means of mule tracks, impassable for six months in the year; and that food, material, and machinery have to be carried four days' journey on the backs of mules over paths so steep and tortuous that only single loads of moderate dimensions can be carried. The country through which the line passes—a great part of it little frequented—presents objects of interest from an agricultural, mercantile, and commercial standpoint, although there are long stretches of sandy banks and mountain passes. The fertile plains of the pampas and the vineyards near the Andes offer a field of enterprise to the farmer and agriculturist, and when the cattle reared on the pampas can be carried in a few hours over the Andes by the new line, instead of having to be driven for days over the mountains, where food is scarce, the productive powers of the country will doubtless be utilized to an extent hitherto impossible.

The railway will, when completed, form, as has been already stated, the final connecting link in the transcontinental railway between Buenos Ayres, the capital of the Argentine Republic on the Atlantic coast, and Valparaiso, the chief seaport of Chile on the Pacific coast, and unite the railway systems of the two most important republics in South America. The distance between Buenos Ayres and Valparaiso by transcontinental railway will be about 850 miles, of which 757 miles are in Argentine and 93

miles in Chilean territory. The whole of the Argentine section was included in the original concession to Messrs. Clark, but 220 miles from Villa Mercedes to Mendoza were constructed by the Government; they were subsequently bought by Messrs. Clark, and now form the Argentine Great Western system. The 428 miles from Buenos Ayres to Villa Mercedes were built by Messrs. Clark, and now constitute the main line of the Buenos Ayres and Pacific Railway. Both of these lines have a gauge of 5 feet 6 inches, the standard broad gauge of the country. The remaining 109 miles from Mendoza to the frontier are under construction, and form part of the Transandine Railway.

On the Chilean side, the distance from Valparaiso to the frontier is 93 miles, of which 53 miles to Santa Rosa are built to the 4 feet 8½-inch gauge, and have been worked for some years by the Chilean Government, leaving 40 miles from Santa Rosa to the frontier, which are now under construction by Messrs. Clark.

Messrs. Clark have, however, the whole of this mountain railway in hand, 109 miles on the Argentine side, which they are constructing for the English company, called the Buenos Ayres and Valparaiso Transandine Railway Company (Limited), and 40 miles on the Chilean side, called Clark's Transandine Railway, which they are constructing on their own account, making a total length of 149 miles, the whole of which is of a mountainous character, presenting engineering difficulties of exceptional magnitude.

The starting point, Mendoza, is 2,376 feet, and the terminus, at Santa Rosa, 2,704 feet above sea level. The lowest pass between these points attains an elevation of 12,467 feet above sea level, or about 10,000 feet above the termini. A careful survey showed that to carry a surface line, with gradients that could be worked profitably by adhesion, would entail a considerable deviation, adding materially to the mileage, without providing any security against snow and avalanches. It was therefore decided to adopt the Abt rack system, with 8 per cent gradients, for a portion of

the line, and to carry the line in tunnels for a considerable distance in those portions where snow and avalanches had to be encountered, and at the summit, where 2,000 feet in altitude could be saved by a tunnel 3 miles in length. It has been finally arranged that the first 84 miles of the line from Mendoza are to be constructed with gradients not exceeding $2\frac{1}{2}$ per cent, worked by adhesion. The locomotives to be used in the remaining 65 miles will be constructed so that they can work either by adhesion or by use of toothed wheels, thus enabling short sections of rack to be introduced where required. The longest section of rack, which will be about 10 miles, will be at the summit.

But 49 miles remain to be constructed of the railway that is to connect Buenos Ayres with Valparaiso. At the recent meeting of the directors of the company in London it was announced that 700 miles are now open to traffic. Had it not been for the Baring Brothers' failure it is believed that the road would have been finished at the present time. But the work of construction, which was suspended for a time, has been begun with renewed vigor, and the directors promise that it shall be pushed through without further delay. The mountain section, which is 149 miles in length, involves very heavy work and necessitates a large number of tunnels, many of them in the region of perpetual snow, more than 10,000 feet above the sea. The mountain section is to be worked partly by adhesion on gradients of $2\frac{1}{2}$ per cent, or 132 feet, to the mile, and partly (the locomotives being geared so that they enter upon the track without stopping) by the use of toothed wheels, upon the Abt system, over gradients the maximum of which is 8 per cent, or 422.4 feet, per mile.

It is authoritatively announced that in a very short time the new telegraph line will be completed between Valparaiso and Buenos Ayres. This line will connect at Buenos Ayres with the Coast Line, from Buenos Ayres to Europe, by way of Montevideo and the Brazilian ports. It will be operated from Valparaiso in connection with the West Coast Cable Line.

Colombia.

COMMERCE WITH THE UNITED STATES.

The Hon. Climaco Calderon, consul-general of Colombia at New York, has made the following report to his Government concerning the commerce between Colombia and the United States :

I have the honor to transmit to your excellency three tabular statements showing the number of cases of merchandise, their weight in kilograms, and their value in United States money, exported from this port to Colombia in 1890.

It appears from these tables that, in the year referred to, merchandise exported from this port to Colombia amounted to \$2,580,736.86, representing a bulk of 468,010 cases, with a gross weight of 26,972,855 kilos. Of these exportations 263,954 cases, weighing 14,003,909 kilos, and amounting to \$976,392.45, were for the free ports, and 205,055 cases, weighing 12,968,964 kilos, and to the value of \$1,604,344.41, for the ports of entry. The goods imported through Maracaibo and Cucuta do not figure on those tables, because the invoices are not certified by this consulate, but by that of Venezuela.

From the statistics of the foreign commerce of the United States for the fiscal year ending the 30th of June, 1890, published by the Treasury Department, the exportations from the United States to Colombia amounted in that year to \$2,522,351, exclusive of gold and silver, in coins or in bars, exported to the same country. These exportations consist principally in flour, canned meats, drugs and medicines, coal, cotton goods, petroleum, machinery of every kind, hardwares, glasswares, and stationery. From the statistics published by the American Government it is seen that the exportations of the United States to Colombia, exclusive of the precious metals, amounted to—

1880	\$5, 230, 000	1886	\$5, 290, 000
1881	5, 180, 000	1887	5, 970, 000
1882	6, 230, 000	1888	4, 920, 000
1883	6, 720, 000	1889	3, 730, 000
1884	6, 170, 000	1890 (as stated).....	2, 522, 351
1885	5, 400, 000		

The exportations to Colombia during the fiscal year ending the 30th of June, 1890, compared with those of the preceding year, will show a decrease of \$1,206,610.

In what relates to the importations of Colombian products into the United States, the only data that this consulate can submit are drawn from the statistics published by the Treasury Department. From them it appears that the importations for the last eleven fiscal years ending the 30th of June, fluctuated as follows:

1880	\$8, 440, 000	1886	\$3, 000, 000
1881	5, 990, 000	1887	3, 950, 000
1882	5, 980, 000	1888	4, 390, 000
1883	5, 170, 000	1889	4, 263, 789
1884	3, 890, 000	1890	3, 575, 283
1885	3, 340, 000		

According to these data, the importation of Colombian articles into the United States were \$683,266 less in 1890 than in the preceding year.

In the above figures, referring to the exportation from the United States to Colombia and to the importation of Colombian articles into the United States, gold and silver in coins or in bars are not included. The amounts imported by each country into the other are as follows:

Year.	Imported into the United States.	Imported into Colombia.
	<i>Dollars.</i>	<i>Dollars.</i>
1880.....	598, 683	155, 780
1881.....	523, 140	231, 241
1882.....	429, 813	290, 540
1883.....	374, 558	475, 384
1884.....	349, 453	864, 631
1885.....	966, 956	825, 072
1886.....	932, 642	962, 277
1887.....	820, 350	1, 043, 394
1888.....	1, 134, 097	791, 085
1889.....	1, 642, 795	393, 278
1890.....	1, 778, 326	.....

The preceding data show, most unmistakably, that our commerce with the United States, far from increasing, has lately declined. Respecting the importation of Colombian products to the United States, the following statements for the years 1880 and 1888 will be found useful.

Colombian products.	1880.	1888.
	<i>Dollars.</i>	<i>Dollars.</i>
Cacao.....	375, 031	45, 676
Coffee.....	2, 018, 471	1, 749, 862
Peruvian bark.....	1, 069, 242	39, 154
Cochineal.....	53, 267	.....
Leather.....	1, 775, 206	1, 239, 213
Caoutchouc (India rubber).....	1, 909, 851	388, 691
Indigo.....	130, 295	114
Rosin.....	44, 029	381
Timber.....	60, 133	47, 529
Plantains.....	.....	143, 494
Cocoanuts.....	.....	256, 759
Tagua.....	.....	93, 118
Vanilla and other vegetable products.....	.....	38, 311
Dyewood.....	30, 424	3, 554
Cotton.....	10, 888	101
Unprepared hides.....	10, 058	53, 945
Fruits of various kinds.....	156, 184	1, 604
Unrefined sugar.....	46, 994	123, 047
Tobacco.....	19, 646	658
Different products and articles.....	732, 253	168, 033
Total.....	8, 441, 972	4, 393, 258

As seen by this table the exportations from Colombia into the United States for 1888 were \$4,048,714 less than in 1880. The lowest value of the articles exported in 1888, compared with that of those of similar kind exported in 1880, is as follows:

Peruvian bark (quinine).....	\$1, 030, 088
Cacao.....	329, 355
Coffee.....	267, 609
Leather.....	535, 993
India rubber.....	1, 681, 160
Indigo.....	130, 181

There are some articles, such as cochineal, the exportation of which has ceased completely, and the same has happened with quinine, and may also take place with tagua, which has depreciated a great deal, and the commerce of that product is threatened with extinction. There is, however, a small increase, though of small importance, in fruits, unprepared hides, and unrefined sugar. In regard to the quantity of the principal articles, it will be observed that the exportation to this country has decreased, and that the lowest value depends upon the lowest quantity. Thus, for instance, it will be seen that coffee, which in 1880 reached 12,687,423 English pounds, decreased to 10,893,354 in 1888; the exportation of cacao went down from 1,947,972 pounds in 1880 to 198,564 in 1888, quinine from 4,746,379 pounds in 1880 to 299,011 in 1888, indigo from 141,718 pounds

to 142, and india rubber from 3,871,665 to 919,408. The exportation of cochineal in 1880 reached 132,470 pounds, but this article, like quinine and indigo, does not figure in the last statistics, and seems to have disappeared entirely from this market.

I am of your excellency the obedient servant,

CLIMACO CALDERON.

RESOURCES.

A correspondent writes as follows to the Evening News and Post of London :

The expulsion of Jews from Russia and their influx into this country in more or less alarming numbers in a destitute condition is once more bringing prominently before the public many important points of political economy, and more especially the consideration of questions dealing with surplus population, the unemployed, and other kindred topics. Into these considerations, of course, there enters largely the question of immigration and emigration, and all the heartburning elements of that painful controversy. The influx of destitute aliens, we are informed, is likely to increase instead of diminish, unless there be a prompt interference by Parliament, and this in face of increasing labor troubles and struggles for daily bread among the legitimate population. I am not proposing to discuss here the expediency of whether we ought or ought not to adopt restriction, on immigration, but rather to consider the question of dealing with the difficulty through the medium of fresh and attractive fields of colonization. There are many philanthropic schemes under discussion in this connection for diverting the flow of these poor people to Syria, to America, and to other places where they might find rest and occupation, and in this connection it would appear to me that the Republic of Colombia, South America, offers many attractions. The resources of this country are most varied and vast, and give promise of tremendous development within a period not very remote. The government of Colombia are quite alive to this important branch of political economy, and very liberal laws have been passed and every inducement offered by them to attract emigrants. In my opinion, few better places could be found for European emigrants. In the Republic of Colombia, South America, opportunities for investment are numerous, and there is an ample demand for labor in coffee, tobacco, and cocoa estates, and in the various mines.

The climate of the higher regions is cool and healthy, whilst within the country itself there are ample markets and facilities for profitable commerce. The shores possessed by the Republic equal in length the line of coast extending from Cadiz to Dantzic. But it is upon the internal resources of the country that, I

think, its immediate future will depend. What are those resources? They are simply immense. In addition to the natural facilities afforded for the cultivation of cocoa or chocolate, maize, sugar, cotton, tobacco, gum, spices, timber, barley, wheat, and numerous tropical fruits, cattle can be raised in quantities and cheaply, whilst the mineral resources of the country—including gold and silver, and emeralds, mineral oils, salt, and coals—are immense. Reference to the map will at once demonstrate the undoubtedly admirable geographical situation of the Republic for the purposes of commerce. Drought is a thing almost unknown, whilst the facilities for the adoption of hydraulic machinery are noted, and the means of transport are inexpensive, if not quite so rapid and efficient as could be desired. The government are, however, fully alive to the necessity for improving this condition of things, and they have just passed through Congress a bill for stimulating the construction of railways, the chief feature of which is a grant of \$5,000 for every mile completed. A line is now being pushed forward from the river Magdalena to the capital of the State of Antioquia, a distance of 130 miles. This State is the great mining center of the Republic, rejoicing in an annual surplus of over \$500,000. Moreover, it is noteworthy that the inhabitants are chiefly descendants from Jews expelled from Spain, and are a thrifty, hard-working class. The Government of the Republic are looking to the development of the resources of the country by the civilizing and peaceful methods of railway and mining and agricultural enterprise. Considerable activity prevails at the present time within the prolific valley of the river Magdalena, than which it would be impossible, perhaps, to find a more fertile and valuable country. The virgin soil is 15 feet deep, and gives two, and on some products three, crops a year, whilst the presence of auriferous gravels is repeatedly met with. The hills consist of alluvial deposits of gravel, in which rich deposits of gold have been discovered.

Many of the gold mines are wonderfully productive. I recently witnessed what is termed a clean-up in one of these rich mines—the Colombian Hydraulic—whilst I saw other mines even with richer deposits of gold on the Barreto property, near Fiegno, and am in complete accord with Humboldt's views, stated as long ago as in 1804, when he said that the Republic of Colombia furnishes a vast field for the enterprising spirit of the miner. Indeed, gold, platinum, silver, mercury, copper, alum, gum, salt, and sulphur, are becoming objects of important workings. The gold produce, even in Humboldt's time, amounted on the average to 20,500 marks of Castile per annum. It is calculated that the Barreto mining estates alone would take one hundred years to work out. At the Colombian Hydraulic Mine, the average amount of gold obtained per cubic yard is of the value of 12 cents; yet the company pay 20 per cent per annum. At Fresno, however, the yield is much greater. The theory of experts, indeed,

is that even greater quantities of gold are to be found in the higher ranges of the hills, and that the Colombian mine, although a very paying concern, is only the tail end of the gold which has descended from the higher to the lower ranges of the hills. There can be no doubt, I think, that when these gold deposits are opened out they will astonish the world. Many valuable silver mines are also met with. I need mention only one—the Tolima mine, at Frias. About \$2,919,900 worth of silver has already been extracted from it, and there are said to be over \$1,946,600 worth more in sight. In fact, the deeper the mine penetrates the richer seems to become the lode. Vast as is the mineral wealth of the country, I am of opinion that by far greater resources lie in its agricultural productiveness. I have already alluded to the richness and deepness of the virgin soil in the valley of the Magdalena, where estates can be obtained and many of them are now being developed at considerable profits, notably those belonging to Messrs. Fruhling and Goschen, at Ambalema. No doubt, whilst land is easy of acquisition in good localities, the difficulty is considerable. To render an estate a very paying concern it is essential that the land be rich and generous and well watered; that the means of communication to the markets for the sale of the produce of the estate, either by road or river, be easily available; that the estate be situated in a district where labor can be easily and cheaply obtained, and that any squatters on the estate be bought out.

Such estates can only be obtained after considerable trouble and some expense, and probably after careful searching for years. But when obtained, with good management aided by a fair amount of working capital, the profits are immense, ranging from 20 per cent up to 50 per cent on the outlay. Land, however, in less favored regions can be obtained easily enough, and will give a fair return of, say, 8 per cent or 10 per cent on the capital invested.

It is estimated that an estate of about 4,000 acres would cost at the rate of about \$12.17 an acre for clearing and placing in cultivation, and that in the growth of maize, plaintains, cassava, beans, yams, sweet potatoes, etc., articles for which there is an immediate and ready sale in the country itself would yield an immediate annual net profit of something like \$80,297, or 23½ per cent upon the capital. In addition to this may be carried on a business in timber and in cattle-breeding, which is usually more productive still. But it is for the cultivation of the cacao or chocolate tree that the land of the Magdalena Valley, especially the part betwixt Honda and Puerto Berro, with which I am more intimately acquainted, is most celebrated, and this is an industry far surpassing those I have mentioned in lucrative productiveness. I visited the Ambalema and other agricultural estates belonging to Messrs. Fruhling and Goschen, and other estates, and was very much impressed by their wealth and capacity. They were in parts well wooded with useful descriptions of timber and excellent

in all respects for extensive agricultural pursuits. But by far the largest and most profitable source of revenue is to be derived from the planting on a large scale of the valuable cacao tree. Some of these trees have been known to bear 12 pounds, 14 pounds, and 16 pounds apiece, and after four years the labor involved in attending to them is very slight. The profitable results obtained from their cultivation have induced the Colombian planters to pay special attention to their culture, and a regular line of steamers is now running between the river Simi and Cartagena for the accommodation of this traffic. Maize, sugar cane, cotton, tobacco, and other products can be grown simultaneously with the cacao tree without injury to the latter. Large markets for the products of these estates will be found in the internal trade of the country itself, and, as a matter of fact, the demands of Colombia exceed the supply of cacao at the present time, but there is also a large and growing export trade. The foreign office returns for 1890, for example, show the total exports of Great Britain, France, the United States, and Germany—four of the chief countries trading with Colombia—to have been in merchandise \$6,044,898 and in coined money, \$153,723, or a total of \$6,198,621. The greater exports were to Great Britain, to which were exported \$2,200,612 in merchandise and \$12,487 in coined money, making a total of \$2,213,099. This merchandise included \$1,558,273 in metals and ores, \$435,255 in coffee, \$56,958 in india rubber, \$22,756 in cacao, and the rest in hides, tobacco, ivory, timber, cotton, and other articles. This country monopolizes by far the greater part of this carrying trade, for out of the total number of ships (both sailing and steamers) entering Colombian ports during the same year of 894 vessels and 798,762 tons Great Britain supplied 261 vessels and 418,260 tons. It may be said that these figures are somewhat insignificant in themselves, and that is precisely what I am desirous of drawing attention to, because I am of opinion that they are capable of wonderful expansion when once the remarkable resources and natural products of the country are opened out. That they will be opened out, and that very shortly, there is already abundant proof. Industrial and commercial agencies will do much to foster the productive wealth of the Republic, but at the same time a judiciously supervised system of emigration thence would, in my opinion, considerably accelerate that development.

IMPORTS AND EXPORTS FOR 1889-'90.

In 1889 the total amount of foreign merchandise imported into Colombia weighed 81,540,936 pounds, and represented a value of \$11,777,624. In 1890 the weight was 95,709,131 pounds, and the value \$13,445,792.

Duties collected in 1889, \$7,801,600; in 1890, \$8,627,688.

The increase in the importation has been noticed especially in the following articles: Liquors and beverages, material for illuminating purposes, hides and skins, drugs, rattan, crockery, timber, quicksilver, copper, bronze, iron, steel, lead, tin, paper, pasteboard, and common salt.

A decrease has been noticed in the following: Provisions, glassware, perfumery, soaps, and building material.

The increase of the imports from Germany in 1890 was \$314,629; of the imports from France, \$301,461; of the imports from Great Britain, \$405,325. The imports from Spain were double that of the year before.

The exports from Colombia were, in 1889, \$16,199,718; in 1890, \$20,457,855.

Exportation of coffee in 1889, \$3,516,293; in 1890, \$4,262,030.

Exportation of cotton in 1889, \$96,176; in 1890, \$304,351.

Exportation of tobacco in 1889, \$798,029; in 1890, \$1,820,757.

Exportation of coin (silver and gold) in 1889, \$315,887; in 1890, \$1,024,964.

Exports to Germany in 1889, \$1,410,683; in 1890, \$2,475,388.

Exports to the United States in 1889, \$3,950,531; in 1890, \$4,636,480.

Exports to France in 1889, \$1,781,619; in 1890, \$1,566,636.

Exports to Great Britain in 1889, \$4,547,628; in 1890, \$4,835,321.

The exports from the port of Savanilla, Colombia, during the year 1889, comprised fifty different kinds of products, in 273,930 packages of various sizes, weighing 7,000 tons, and valued at \$3,006,437. In this lot were included 70,725 bags of coffee, valued at \$1,720,355, but no other agricultural product is largely represented, chocolate being represented by a solitary package valued at \$50, while there were 500 bags of raw cocoa, valued at

\$20,654. The exports of hides were valued, at \$812,586, horns \$69,277, and gold and silver exclusive of specie at \$126,619.

Official returns of the production of precious metals in Colombia have been received. During the ninety years of the present century the gold and silver mines of Colombia have yielded the aggregate amount of \$240,000,000.

In colonial times the production of the mines never exceeded \$3,100,000 per year.

Subsequent to the independence, in 1884, in 1889, and 1890, more than \$4,000,000 per year were obtained. In 1889 the production was \$4,024,000, and in 1890 \$4,430,000.

The average annual production can be estimated at \$2,666,666. There values are in the gold coin of Colombia.

In 1890 the exports of precious metals were as follows: Gold, \$3,600,000; silver, \$830,000.

Antioquia is the richest State in this respect. It represents in this total of \$4,430,000 no less than \$2,935,000. The State of Cauca comes next with \$750,000, and then Telima with \$625,000, Panama with \$70,000, Santander with \$30,000, and Bolivar with \$20,000.

MISCELLANEOUS.

Near Bucaramanga, in the Republics of Colombia, there has recently been discovered a mineral substance not unlike asbestos. Sr. D. Eloy Valenzuela, a distinguished geologist, has given this material the name of bucaramanquina. It is the color of amber, is perfectly transparent, and incombustible. Experiments now being made in Bogota with this wonderful material indicate that it will be invaluable for the manufacture of bank-note paper and other uses. It can be reduced to pulp and molded into light fire and water-proof tiles for house covering; can be woven in pliable fire-proof cloth or shaped in casques suitable for firemen's wear. A white varnish can also be extracted from this substance, and as experiments proceed it is claimed that the uses to which it

can be put will make it much more valuable than asbestos. There appear to be inexhaustible deposits, and a ready market is promised for all that can be taken out.

Among the projects for railway construction in Colombia the line to connect Medellin in Antioquia with the river Magdalena is the likeliest to be carried out. This railway is about 62 miles in length, of which 25 are already constructed and in working order. It starts from Puerto Barrio on the above river, traverses a marshy country, and then goes over a mountainous region to Medellin. The inhabitants of Antioquia are especially interested in the opening of this line and are making great efforts to achieve this result.

The Bureau of American Republics has received the text of a contract entered into between the Department of Antioquia, Colombia, and Messrs. Osbina Brothers for the construction of a narrow gauge railway between Medellin and Amaga in that State. The section of country through which the new road is to run is very rich in mineral and agricultural wealth that is right at hand, awaiting the development which this work promises. The rails and sleepers will be of steel, and the general construction of the most approved style. The Government guarantees interest at the rate of 6 per cent per annum on the cost of building the road. As the road will cross the Valle and Cauca railways, which are now in operation, there is no doubt of its being able to enter at once into a paying business and that it will result in a very great development of the outlying country.

Great progress is being made in the construction of the ocean pier at Puerto Colombia, the new seaport 5 miles west of Savanilla, and which is in direct communication by rail with Barranquilla. The pier when finished will be 4,000 feet long, built entirely of iron and steel, with double line of rails its whole length, and depth of water sufficient to receive alongside the largest ships afloat. Six to ten ocean steamers can be moored at the same time, and by means of hydraulic lifts their cargoes can be quickly and economically

handled. Already 2,000 feet have been finished, and the pier is actually open for business to ships drawing 22 feet or less.

The Government of Colombia has made a contract with M. A. Fonseca for the construction of a canal between the city of Barranquilla and the city of Savanilla, in order that the boats of the Magdalena River may be sent direct to the anchorage of the ocean steamships, and there receive and discharge their cargoes. Barranquilla, lying at the mouth of the Magdalena, was formerly the principal port of the Republic, but the river having formed a large bar at its mouth it was necessary to build a new city on that bar, which is called Savanilla, and is connected with the old port by a tramway.

Señor Dribbelaar has signed a contract with the government of the State of Bolivar, Colombia, for the construction of a railway between Carmen City and Port Sambrano, on the River Magdalena. Señor Dribbelaar has deposited 50,000 francs in the Colombian legation at Paris as a guaranty, which will be forfeited if work on the line does not commence within three months after the approval of the contract.

Work on the railroad which is to connect the city of Cartagena with the Magdalena River, has been commenced and is being rapidly carried on. This railroad is the property of a Boston syndicate, headed by Mr. T. Jefferson Coolidge, who was one of the delegates to the late International American Conference. The company has purchased from Messrs. Vetez & Co. the Cartagena wharves and lighterage system for the sum of \$70,000.

The Colombian Government has given a subsidy to Señor Don José Bonnet for the establishment of regular steam communication on the Orinoco and its branches within the limits of the Republic of Colombia. He is to receive \$3,200 for each round trip from the head of navigation to Ciudad Bolivar, in Venezuela. Mr. Bonnet has received a similar subsidy from the Government of Venezuela for establishing steam communication on the lower

portion of the river, and his enterprise will now give the people of Colombia an outlet to the Atlantic as well as to the Caribbean Sea. The head of navigation on the Orinoco is within 80 miles of Bogota, the capital of Colombia.

Señor Bonnet also contracted to establish three agricultural colonies on the River Meta, in Colombia, each to begin with not less than ten families of three adults each. This is the beginning of a development of the rich resources of the eastern regions of Colombia, which have never been touched and are only partially explored.

The Bureau of the American Republics has received the text of a contract between the government of the department of Panama and Leon Morenos, by which the latter undertakes to establish a line of steamers between the province of Chiriqui and Panama. The contractor is to have the usual exemption from port and other charges, and will receive \$300 for each voyage. The sovereignty of the province of Chiriqui has been in dispute between Colombia and Costa Rica for a long time, and the matter was submitted to arbitration by the treaty of 1880, but has not been decided.

The Queen Regent of Spain, having been appointed umpire in the dispute between Colombia and Venezuela over the boundary lines between those two Republics, has rendered her decision, which is entirely in favor of Colombia. She establishes the boundary lines along the rivers Orinoco, Atabapo, and Rio Negro, which gives Colombia the whole of the Goajiro, the San Faustino, and the Arauca territories.

Information is received of the establishment at Bogota of a rubber factory, the first of the kind in Colombia, at which rubber cloth, ornamental articles, and other classes of goods in which rubber is used will be manufactured.

The Government of Colombia has decided to have an exposition, which will be opened at Bogota on the anniversary of its independence, the 20th of July, 1892. A decree has been issued by the President, calling upon the governors of all the States to

organize commissions and secure full exhibits of their resources, industries, and products. There will also be a historical, archaeological, and ethnological section. The exposition will continue from July 20, 1892, through August, September, and October, when everything there exhibited will be sent to Chicago as an exhibit from the Republic of Colombia.

Costa Rica.

TRADE WITH UNITED STATES.

The Consul-General of Germany at San Jose, Costa Rica, has made an official report to his Government under date of June 30, 1891, in which he says:

There is no doubt but that the extraordinary endeavors which the American industrial world, backed up by the Government, is making to increase its trade with Spanish-American countries are meeting with success. The difference in price, if any, is more than compensated for by the attractive and handy get up of American goods. Germany, however, plays a large part in the import trade of this country, having supplied \$873,500 worth of merchandise in 1890, as against \$855,269 in 1889; still, our trade is closely pressed by Great Britain and the United States. Amongst others, Germany predominates in the following articles: Beer, barbed wire, woolen cloth, buckskins, glassware of all kinds, common crockery, toys, furniture, lamps, mirrors, jewelery, half silk stuffs, ready-made men's clothing, leather, cotton trousering, cotton hosiery, musical instruments, cement, and of late enameled sheet-iron goods. The German, American, and British industrial worlds are now doing their level best to crush each other's trade in ironware of all kinds, cotton shirts, underclothing, biscuits, preserves, and the like; this is more especially the case as regards cotton piece goods. Cheap calicoes at about 4 cents per yard, and common handkerchiefs can not be got from Germany owing to the great distance; but in the dearer qualities we compete successfully. Our trade, especially in calicoes, would be largely increased if our great Mulhausen, Augsburg, Leipsic, Elberfeld, and other export houses would adopt the press system of packing in vogue in Manchester and New York. Tallow candles, wrought iron, steel, colors, oils, and tin plate (used in large quantities) are obtained from Great Britain. Woolen shirts, woolen counterpanes, woolen and half-woolen piece goods, such as cashmeres and alpacas, are still obtained to better advantage from Great Britain as regards common qualities, the better class of merchandise coming from Germany.

IMPORTS OF COSTA RICA IN 1890.

The total value of goods imported into Costa Rica during 1890 in the money of the country was \$6,615,410, divided as follows:

United States	\$2, 255, 138	Ecuador.....	\$94, 020
England.....	1, 426, 317	Cuba	61, 534
Germany	1, 261, 798	Italy	35, 347
France	773, 492	Jamaica	22, 259
Colombia.....	268, 028	Belgium.....	13, 051
Central America	218, 721	Mexico.....	10, 586
Spain.....	175, 119		

The increase of imports over the previous year was \$309,002 and the exports showed an increase of \$3,098,394, due largely to the increase in the price of coffee, the exports of that product amounting to \$9,196,202. Other exports were: Bananas \$622,671; hides, \$85,786; cacao, \$13,267.

MISCELLANEOUS.

Since the completion of the Costa Rican railway the price of coffee and banana lands adjacent to the lines have increased from two to three hundred per cent in value, and the acreage under cultivation has very nearly doubled within the last year. Some thirty families from the United States have settled on the line of the road within the last few months to engage in the cultivation of coffee, bananas, and cocoanuts.

Although the population of Costa Rica numbers only about 250,000, advices received indicate that the rich resources of the country are being utilized by its industrious inhabitants. There were in 1890 over 8,000 coffee plantations whose product of 333,362 quintals was valued at \$7,500,000. The two hundred cocoa groves produced 3,244 quintals of cocoa, worth \$162,000, while the production of the sugar estates amounted to 13,241 quintals of sugar and 151,296 quintals of molasses, bringing, respectively, \$185,374 and \$1,512,906. Bananas have become a very important article

of growth, over 1,000,000 bunches having been sold, realizing about \$400,000. Altogether, the year 1890 was a very prosperous one for the agricultural community.

Official notification of the abolishment of the wharf charges at Port Limon, Costa Rica, on the exportation of bananas, fruits, vegetables, and alimentary roots has been received.

The Republic of Costa Rica has renewed its contract with the Foxhall Line of steamers between New Orleans and Port Limon for four years; with the Kosmos Line of Hamburg, Germany, for one year; and with the Atlas Line of steamers and the Royal Mail Steam Packet Company for five years each. These companies receive no subsidies in cash, but a rebate of 5 per cent is given on the duties charged upon merchandise brought by them to the ports of Costa Rica; and they are relieved from port dues.

A cablegram from Costa Rica announces that the Congress of that country has ratified a contract made between the Government and a railroad syndicate for the construction of a railroad from San José the capital, to Puntarenas, the principal Pacific port. The Government guaranties a minimum profit of 5 per cent annually on the total cost of the road for twenty-five years, the cost being estimated at \$4,000,000. The completion of this railroad is very important not only to Costa Rica, but to the entire world, for it will furnish immediate competition with the Panama Railroad. There is already a railroad from Port Limon, the Atlantic port of Costa Rica, to San José, the capital, and the completion of the line to Puntarenas will give through rail transportation to the Pacific. There are now two trans-isthmian railways under construction, this one across Costa Rica and another under the auspices of the Government of Mexico across the Isthmus of Tehuantepec. Two other rival roads have been surveyed, one across the Republic of Honduras, a district of 210 miles, of which 37 miles is already constructed and in operation, and one across the Republic of Guatemala for the construction of which the

Government of that country is endeavoring to secure a loan in England.

The Costa Rican Government has appointed Anastasio Alfaro as superintendent of the national museum of Costa Rica, recently established for the purpose of purchasing all sorts of archaeological specimens and curiosities of a historical character, which will be exhibited at the exposition in Madrid and then transferred as a whole to the Columbian Exposition at Chicago. Persons who do not wish to dispose of the articles they may possess are invited to loan them to the museum, which will give bonds for their safe return after their exhibition.

On the 31st of October, 1891, the Hon. Richard Cutts Shannon was received by the President of Costa Rica, who expressed himself very much gratified at the sending of a minister especially charged to the three countries of Costa Rica, Salvador, and Nicaragua.

The Latin American Department of the World's Columbian Exposition has heard from Lieut. Scriven that Señora Dolores de Troye, of Cartago, Costa Rica, is going to send to the exposition her valuable and well-known collection of antiquities, which she has placed at the disposition of the Costa Rican Government for this purpose.

The census of Costa Rica, which will be taken on the 18th of February, 1892, will show, by means of blanks put in the hands of every householder beforehand, the exact state of the population of the Republic on that day. The most important particulars are sex, age, moral condition, occupation, profession, capacity to read and write, etc.

Señor Lizano, the minister of public works of the Republic of Costa Rica, assures the special commissioner of the World's Fair, now in that country, that the Government of Costa Rica will spend \$150,000 on its exhibit at the Chicago Exhibition.

COFFEE CULTURE.

[Federico Peralta, in the Scientific American.]

Costa Rica is one of the five Central American Republics. It is bounded on the northeast by the future Nicaragua Canal, on the southeast by the United States of Colombia, on the northeast by the Atlantic Ocean, and by the Pacific Ocean on the southwest.

The area of the country is 37,000 square miles, and its population was, in 1890, 216,756 inhabitants. Now about 300,000 are calculated. Costa Rica has the most delightful and favorable climate, not only for the growth of coffee, but for every kind of culture. Its temperature through the year is from 65° to 70° F.

The country may be divided, according to its climate, into three different zones :

I. The "hot zone," running from the sea level to the altitude of 3,000 feet, where most of the virgin forests are found. It is the hottest in the country. The mean temperature is from 72° to 82° F.

II. The "temperate zone," in which agriculture is chiefly practiced and which may be regarded as the center of population and commerce.

III. The "cold zone," 6,000 feet of altitude, where the thermometer sometimes falls below freezing point.

Properly speaking, there are but two seasons, summer, or dry season, and winter, or wet season. The former is from November to April or May, and it differs from the latter by the absence of rainfall.

Coffee plantations are chiefly cultivated in the vicinity of the capital, San José (altitude 3,711 feet above sea level), in the provinces of Cartago (4,633 feet), Heredia (3,655 feet), and Alajuela (2,950 feet).

The largest coffee plantations are to be found in Heredia and in Santo Domingo. Nature seems to have particularly favored

the lands of Costa Rica. There are indeed few countries in either continent possessing so much fertile soil as this small Republic.

A single fact among hundreds may prove this statement. The first coffee seeds sown a century ago in the Province of Cartago were introduced from Havana; the old trunks from which seeds were distributed to the other Central American Republics are seen yet, and, as the writer was told, they are producing perhaps as much fruit as when they were young. Meanwhile, in Brazil fifty to sixty year old trees are seen as a curiosity.

Mr. Biolley, in his very interesting work on "Costa Rica and her Future" (Judd & Detweiler, Washington, D. C., 1889), says:

Almost everywhere in Costa Rica the land is found to have most favorable conditions for recompensing labor, admirably watered by streams, often navigable, and wooded with species of the most valuable and useful trees.

The alluvial lands of ferruginous clay and silico-argillaceous lands predominate. All over the central plateau the vegetable stratum is of a remarkable depth.

COFFEE PLANT.

Coffee Arabica is the species grown in Costa Rica. There is also the "Grecia" coffee, but it is not very much cultivated. It is found in the northeast part of the central plateau. This shrub is shorter than the precedent, and its branches are somewhat more compact and numerous than the former.

Some years since "Liberia" coffee was introduced, and its cultivation seems to extend throughout the Republic.

When the shrub (Coffee Arabica) is four years old it has reached the full amount of production. Then it is from 6 to 8 feet high. It blossoms in April or May, and if it should rain when the flowers have "set," a shower will be of great benefit for the future crop. Irrigation is sometimes practiced when the season is too dry. Very good results have been obtained by watering the plantation artificially.

The berry, in the first days of its existence, is of a dark green color, changing to a yellow red, and finally to crimson.

When the berries have become crimson they are then quite ripe, and harvesting must begin, else the berries will turn black. The external envelope will contract on itself and the fruit fall to the ground.

PLANTING—NURSERY BEDS—SPACES.

Every one knows that coffee is propagated by seeds. For that purpose a space is chosen in the same plantation, varying in size according to the number of seedlings wanted.

When the soil has been loosened and cultivated and cleared from weeds, stones, etc., the seeding is done, covered with soil enough to cover the seeds. Leaves are spread on that piece of ground, which will act as mulch to hinder the evaporation of water and to keep the soil as moist and cool as possible, so that the seedling will start freely.

During the first year of the young plant's growth, great care must be given to it. Weeds are not allowed to grow, lest they should become, in a short time, larger than the coffee plant, and would hinder its development.

At the end of the year or before, they are transplanted to their permanent place in the estate or are sold. In the former case, the holes are dug to receive the young plants. When these are removed from the nursery bed, some earth is left around the roots, and this ball of earth is covered with banana skins, to keep it moist. The same thing is done when the plants are to be sold.

The space left between the shrubs varies somewhat. Generally, they are left 10 feet apart, so that 400 to 435 trees cover an acre of land.

CULTURE.

As has been said, weeds grow very rapidly, because of the great fertility of the country. So a great deal of labor is needed to keep the gardens free from weeds. The weeding is done by hand labor. Each workman is provided with a large sharp shovel, with which

he cuts down the weeds, taking some loose earth and heaping it around the trunk to form low ridges. The earth serves to cover the weeds and hasten their decomposition. This operation is called in the country "aporca," and it is done from May to June. During the winter months the operation is reversed. The ridges, built up in summer, are now spread out between the rows of coffee. This operation is called "desaporca." Again, the "aporca" is done before harvesting, in order to have the ground clean and to facilitate the picking up of the berries that fall down during the harvesting.

Finally, the "desaporca" comes again after the crop has been harvested. Once a year, as a general rule, the plantation is plowed, but only on one side of the rows, the other side of the row being left for the plowing in the next year.

Some writers have, perhaps, exaggerated in saying that the cultivation of coffee suffers very much in Costa Rica from the want of labor. This assertion may be true to some extent, and immigration is doubtless very much required for the prosperity of the country, not only in respect to agriculture, but to other forms of industry.

MANURE.

The fertility of the estate is kept up in different ways.

In weeding, the furrows are not only made for the sake of covering the weeds, but also to prevent the washing of the surface soil. Holes that are 3 to 4 feet square are dug between every four or more trees. These holes are left open. So that when it rains the alluvial soil, which would otherwise be washed away when sloped, is retained. When they have become filled up, the contents are spread around the shrubs.

Among the natural fertilizers, green manure may be cited. Farm-yard manure is very much employed, producing very good results. Composts of pulp, husk, banana skins, and all the refuse from the curing of the coffee serves as fertilizant materials.

If we regard irrigation as a fertilizer, it should be mentioned in this classification. Irrigating water is sometimes mixed with pulp, and with the "honey" of the coffee.

Some planters import Peruvian guano, recognizing its great merits as a coffee fertilizer. It is applied in most cases in circular ditches, dug at 9 or 10 inches distance from the trunk of the trees to a depth of 3 or 4 inches; 4 to 6 ounces of guano are spread in each ditch, and covered with the soil which was taken from it.

To fertilize an acre of land, 125 to 150 pounds of Peruvian guano are needed, as the coffee gardens are not manured every year with guano. Some planters are accustomed to apply it twice a year.

SHADE.

In order to prevent the coffee flowers from being damaged by the sun's rays, experience has proved that the coffee tree should not be left without shade. For that purpose banana trees are planted between each third or fourth row of coffee trees. Besides bananas, many other trees are planted, which, with their large branches, cover much ground. Several species of acacia have proved to be beneficial in the plantations of coffee or "cafetales," Poró, juiquiniquil, etc., are grown among the shrubs, and some of them bear excellent fruit crops.

PRUNING

is performed in order to let air and light circulate freely among the trees, to facilitate their development and to obtain the largest possible crop. Not every planter in Costa Rica is agreed as to the best method of pruning. Some of them think that no branches other than those which are dead should be cut off, while the majority know that great benefits may be derived from a judicious pruning, and that the future crop may be vastly increased. The latter not only cut off the dead branches, but also those that appear

to be half dead. When the suckers become numerous a part are cut off. When the trees are 5 or 6 feet high they are "topped" to prevent them from growing out of reach. This operation is performed by pinching off the two new leaves which form the top of the tree. When the "top" is destroyed, the shrub tends to throw out side branches, and remains at such a height that the gathering of the fruit is facilitated. Finally, the tree is "handled" after each crop to remove the dry wood, vegetable mosses, and parasites, and also to prepare for the next year's crop.

DISEASES AND ENEMIES.

Few or no diseases are known in Costa Rican coffee plantations. Isolated cases have been reported where the leaves become brownish and soon after fall down. This disease is caused by a fungus known as "*Depazea maculosa* of Berkeley," and the disease itself is called "*Mancha de hierro*." Among the enemies are the *clusia insignis*, called in the republic "*matapalo*," which must be carefully destroyed, for it would kill the shrubs. The others are vegetable mosses, lichens, weeds, etc.

HARVEST.

It has been calculated that in 1890, on 8,130 coffee estates, there were 26,558,251 coffee shrubs. Each tree produces from 1 to 2 pounds, not infrequently 5 or 6 pounds of coffee in "*oro*," that is to say, ready for market.

Harvesting begins as soon as the cherries are quite ripe, usually from November to February. Sometimes the berries do not ripen all together, in which event a second harvest is needed.

The gathering of coffee is done by men, women, and children. To each one a basket of the capacity of 15 to 18 quarts is given. I have seen myself coffee pickers to fill their basket from ten to twelve times a day if the crop is good, and to get for each basketful 10 to 30 cents, so that coffee gathering may produce to them

from \$1 to over \$3. In payment, money is not given, but "tokens" which represent the value above stated. On Saturday evening or Sunday morning these tokens are changed to current money.

The harvesting is performed methodically. A man who takes care of the crop assigns to the "cafeteros" those trees which must be picked first. The pickers can not change from place to place as they would like until they have picked the trees designated by the "mandador," the man in charge.

In the evening, an ox cart is driven to the places where the picking is going on, in order to get the coffee which has been gathered during the day.

PREPARATION OF THE BERRIES.

As soon as all the coffee has been "entregado" it is carted immediately to the factory and thrown into a brick tank which is larger or smaller according to the size of the plantation. It is large enough to hold as much coffee as can be picked in a day. Water enough is run in to thoroughly cover the berries, which are allowed to soak for a short time; then from this first tank the berries are conveyed to the pulper through a channel, by means of water.

PULPING

consists in the separation of the beans from the pulp in which they were enveloped by means of the "pulper," which is a machine composed of an iron cylinder covered by a sheet of copper, having its surface toothed. At a convenient distance from this cylinder there is a piece of iron, placed in such a way that no bean can pass through this part of the machine and the cylinder without being squeezed. The bruised beans pass through the teeth of the machine, while the pulp falls to one side. The pulp is carefully gathered and piled up in heaps, where it ferments. Finally it is utilized as a manure for coffee and sugar cane.

The beans coming from the pulper are covered by a parchment-like membrane and saccharine matter. If these are not removed from the berries, they will dry easily or rot. For this reason a special fermentation is needed.

FERMENTATION.

From the pulper, water conveys the husked beans to a tank filled with water. During the whole time the beans remain in this tank they are frequently agitated with wooden rakes, to wash out the saccharine matter and any pieces of pulp that may have escaped the action of the pulper.

The light berries, together with pieces of pulp, leaves, etc., float upon the surface and are skimmed off, while the good berries remain at the bottom of the tank.

This tank is made of brick and cement; it has at its lowest part a sluice door, from which, by means of cars or channels, coffee is carried to the drying floors or "patios." The patios are generally square, flat, built of rammed stone and cemented at the surface. These are made to slope slightly, so that water may drain away.

DRYING

is one of the most important operations in the preparation of coffee, because, if it were allowed to become too dry, it would lose weight and contract upon itself and present a nonattractive appearance. If too wet, the coffee would become mouldy and be spoiled.

The beans coming from the tank are spread on the "patios" to a depth of 2 to 3 inches, and are left there drying, but are constantly turned over with light rakes into rows, in order that the drying be slow. The time of drying depends on the weather. If it rains, the beans are heaped and covered with canvas. When the beans are perfectly dry, as is known by the fact that they can not be dented with the finger nail, and that they crack between the teeth instead of tearing, they are fit to be stored or peeled.

PEELING OR HULLING.

has for its object the removal of the parchment skin that is still adherent to the dry bean.

To perform this operation, the beans are thrown into a circular basin with a broad channel or groove. Two or more wooden or stone wheels, moved by oxen or by water power, run in this circular groove, which has been filled half or three-quarters full with dry beans.

In the center of the basin, or "trilla," an axis is fastened to the ground. From this two or more horizontal bars serve to move the wheels, which are kept running until all the dry beans have been separated from their parchment cover.

From the "trilla," coffee husks and dust are put into bags and thrown into a winnowing machine. The husks are blown out by the current of air, while the coffee falling down passes through different sieves. The uppermost sieves have round holes, which allow the sand, smaller beans, and stones to pass through, while the larger beans are retained. The second sieve has holes small enough to permit the sand and very small gravel to get through, but not the perfect coffee beans, which fall by the front part of the machine, where they are bagged. The dust takes another way, passing free from any bean, through one of the sides of the fan.

There is yet another skin, called "silver skin," that must be removed. The operation is the same as for peeling, but with lighter wooden wheels.

This old fashion of removing the silver skin by means of wheels has been changed by a machine composed of two cylinders, having their surface roughened and moving in a contrary direction, the results being better and economy of labor.

The coffee, as it comes from this machine, goes to the "pulidor," for it needs to be separated into various sizes for market.

The machine which performs this classification is called "clasificador."

It is composed of a long horizontal cylindrical sieve formed of galvanized or steel wire, divided into sections of different meshes. A very strong brush of the same length, but smaller, lies against and turns with the cylindrical sieve, so as to prevent the coffee from choking the meshes.

The "clasificador" is run by hand or by hydraulic power.

In the first section, the sand and dust fall down, in the next the small and broken beans, in the third large beans, while in the last the largest beans are delivered. The so-called "pea berry" rolls freely in each section till it gets to the end of the sieve, where it falls down.

The coffee from each division is gathered apart and forms the first, second, and third classes, and pea berry, or "caracolillo."

After this mechanical sorting, coffee passes through women's hands, who pick up and separate small stones, light coffee, foreign seeds, etc.

This work is done on tables made specially for this purpose, "sorting tables." The coffee coming from these tables is ready and bagged in sacks containing about 130 pounds each and shipped.

STATISTICS.

The exportation of coffee in the follows years was:

Year.	Exported.	Value.
	<i>Pounds.</i>	<i>Dollars.</i>
1886	19, 931, 214	2, 259, 263
1887	28, 852, 177	5, 231, 766
1888	22, 745, 502	4, 742, 253
1890	33, 924, 675	9, 196, 202
Total	105, 453, 568	21, 429, 484

The crop of the year 1888 was distributed between the following countries:

Countries.	Quantity.	Value.
	<i>Pounds.</i>	<i>Dollars.</i>
England	13, 507, 818	2, 859, 896
United States.....	6, 862, 367	1, 395, 920
Germany.....	1, 304, 860	279, 763
France.....	860, 575	165, 002
South America	209, 882	41, 672
Total	22, 745, 502	4, 742, 253

In 1887, 284,454 pounds of coffee, having a value of \$51,590, were exported from Costa Rica to Boston. The average price was a little over 18 cents a pound; while in London market Costa Rican coffee sells at 92s. to 130s. the hundred weight; meanwhile the best Javan costs only 90s. to 100s.; the Mexican, 65s. to 84s.

Costa Rica's coffee is said to be unsurpassed in strength as well as in aromatic flavor by the eastern growths. Its preparation is so good that it competes in the English market with that of Java, Molucca, and with the best known grades.

What better proof can we have of the goodness and superiority of Costa Rica coffee than the fact that in the Paris Universal Exhibition of 1889 it obtained the "Grand Prix?"

Ecuador.

EXPOSITION IN QUITO.

There will be held a grand exposition in Quito, Ecuador, during the months of September, October, and November 1892. The exposition will afford an opportunity for the display of American manufactures in a market that is now practically unoccupied; particularly is this so in respect of the smaller articles of agricultural implements, in which the genius of the people of this country have made so great progress. Axes are unknown in that country, the natives using the machetes or long cane knives for the felling purposes. Hoes, rakes, spades, small hand mills, plows, cultivators, and all the other articles exhibited in such great profusion at agricultural fairs, if sent to Quito under the charge of persons competent to explain the manner in which they are used, would doubtless open the way to a large and remunerative trade.

Manufacturers of light, but strong wagons, harness, etc., will find here a practically open field that by proper presentation may be made to yield handsome and increasing profits.

The authorities in Ecuador would be particularly pleased to see at this exposition a compact but comprehensive collection of labor-saving and improved agricultural implements.

Further details as to the exposition which will be held by the Republic of Ecuador at Quito have been received. This exposition will offer to American manufacturers of agricultural implements and machinery, tools, hardware, sewing machines, rubber goods, notions, etc., an opportunity to make their wares known in

Ecuador, where a good market could probably be obtained, as the country has just entered upon a period of progress. Manufacturers should act in concert in getting up their exhibits, which should be small but carefully selected and assorted, and in the hands of one or two competent men who speak Spanish. As the goods sent for exhibition will have to cross the Andes to reach Quito, they should be carefully packed, with a view to being transported on pack mules. Packages should, if possible, weigh not more than 100 pounds, the load for a mule being 200 pounds. From January until May it takes about two weeks to transport goods from Guayaquil to Quito. Mr. William B. Sorsby, the consul-general of the United States at Quito, has informed the State Department that the Government of Ecuador has decided that agricultural machinery and implements, the manufacture of the United States, which are to be exhibited at the exposition there, may be introduced into Ecuador and carried to Quito free of customs duties for one year, with the privilege of return if the said machinery and implements are not sold, in which latter case the duties must be paid.

MISCELLANEOUS.

At the request of the President of the Republic, the archbishop of Ecuador has issued an order to the bishops and priests throughout the entire Republic directing them to collect and forward to Quito any and everything which may be in their keeping illustrative of the history of the country suitable to exhibit at Chicago. The archbishop also requests the priests to send in to Quito any and everything which they may find illustrative of the wealth and products of Ecuador.

The President of Ecuador has decreed the admission, free of duty, both import and export, of all exhibits which may be sent from the United States to the National Exposition to be held in Quito during the months of February, March, and April, 1892.

It is especially desired that the manufacturers of the United States should send a good exhibit of agricultural machinery and all implements for agricultural purposes to this exposition, as it is believed a good market will be opened in that country to our manufacturers. Every possible facility will be given to transport any exhibits which may be sent from the sea to the capital, and goods will take precedence over ordinary merchandise, and rates charged therefore will be greatly reduced.

In Ecuador the year 1890 was a very prosperous one, owing principally to the large cocoa harvest, which was the richest ever gathered in the country. Other products have shown very favorable results, the coffee crop also being larger than any previous year, and the prices ranged much higher than the average. The exports of rubber and cinchona bark show a small increase, and 900 tons of sugar have been exported to Europe. Increased attention has been paid in Ecuador to the cultivation of the sugar cane, and plantations and mills have been started on larger scales than at present exist in the country. The total exports for 1890 exceeded by 36 per cent the value of the exports of 1889—the largest increase being in cocoa, 40 per cent; coffee, 22 per cent, and cinchona bark, 26 per cent. The statistics of imports have not yet been published.

ADJUSTMENT OF FOREIGN DEBT.

By the readjustment of the foreign debt of Ecuador on the plan of settlement which the London creditors have agreed to, the bondholders will receive for every £1,000 the sum of £400 in new bonds, bearing interest at the rate of $4\frac{1}{2}$ per cent for fifteen years. With every £400 of new bonds they will also receive twelve shares of £5 each in the New National Railway of Ecuador, which has partially been constructed. The holders of these shares are entitled to one-half the profits of the line, the other half going to the Government.

Information has been received of the final adjustment of the debt of Ecuador, which has been pending for several years. A

decree of President Flores, on the 2d of December, gives effect to the arrangement entered into with the foreign bondholders, and is as follows:

ARTICLE 1. From 1st June, 1892, the custom-houses of the Republic will collect the 10 per cent charged on the import duties.

ART. 2. The collectorship of the Guayaquil custom-house will every fortnight hand over to Señor Don George Chambers, representative of the council of foreign bondholders, the product of this charge; and the custom-houses of other ports will remit to the same fortnightly by the first post the amount collected by them for account of the said 10 per cent.

ART. 3. Every six months an account of the amounts handed to the representative of the council of foreign bondholders will be taken, with the object of making up any deficiency that may exist up to the full sum of £16,875, corresponding to each half year during the first five years.

ART. 4. The minister of finance and the superintendent of customs shall be charged with the duty of carrying out this decree, and the minister of foreign affairs will communicate the contents thereof to the foreign diplomatic and consular bodies in the Republic, as well as its agents abroad.

Given at the Government Palace in Quito, December 2, 1891.

A. FLORES.

A parcels post treaty has just been celebrated between Ecuador and England, whereby packages up to 12 pounds may be exchanged through the medium of the post, the charges being as follows: Three pounds shall pay 3*s.* 7*d.*, 4 to 7 pounds will pay 5*s.* 6*d.*, and 8 to 12 pounds will be 7*s.* 7*d.*

The income of the Government of Ecuador from customs dues in 1890 amounted to \$2,261,250.

The Governments of Colombia and Ecuador, in order to encourage transportation and trade between the two countries, have entered into a reciprocity treaty providing that goods imported from one country to the other by land shall be advanced through the custom-houses free of duty.

By a recent census the city of Guayaquil, Ecuador, was found to have 44,515 inhabitants.

Guatemala.

TRANSPORTATION FACILITIES.

The Government of Guatemala has entered into a contract with the Kosmos Steamship Company for the establishment of a line of steamers to sail monthly each way between the ports of Guatemala and Hamburg, Germany. The steamers are to be of not less than 1,500 tons capacity. The following are the names of the vessels engaged in the line: *Karnack*, *Memphis*, *Ramses*, *Setos*, *Theben*, and *Menes*.

These steamers will touch at Hamburg, Grimsby, Antwerp, and Bordeaux, in Europe, on both eastward and westward voyages. They agree to charge no more than £4 10s. per ton for fine merchandise, such as silks, cotton goods, etc., nor more than £3 10s. for heavier articles, such as crockery, hardware, boots and shoes, coarse wearing apparel. Large pieces of machinery and packages exceeding a ton in weight, or 40 cubic feet by measurement, are to be carried by agreement. The company agrees to receive cargoes from London and Bremen at the same rate of freight, and also agrees to carry free of cost all employés of the Government and to transport for one-half the ordinary tariff agreed upon all articles imported for the use or benefit of the Government; also to carry all immigrants from Europe to Guatemala at one-half the regular fare. The steamers are to carry free the mails from Guatemala and the other American Republics on the west coast of South and Central America to the ports of Europe and bring the

European mails. In consideration of this concession, the Government of Guatemala agrees to pay the company a subsidy of \$1,000 for every steamer of the Kosmos line calling at its ports, the condition being that not less than one a month shall call there. The steamers are absolved from all tonnage, anchorage, and port dues, and are to have preference in the way of advantages for unloading and loading.

The authorities of Guatemala have approved the contract entered into with the agent of the New Orleans and Belize Royal Mail and Central American Steamship Company for a regular mail service between the port of Livingston and New Orleans. The Government agrees to pay \$5,000 a year for two years, and is to enjoy special rates for employes and the carrying of the mails, while the company will be free from all port and other similar charges.

The Government of Guatemala has recently granted a concession to Messrs. Martin, Roberts & Co. for the construction of a canal 52 miles in length from Point Lengua de Buey, near Port Livingston on the Caribbean Sea, to Gualan, a city of the interior, about 150 miles from Guatemala City, the capital of the Republic. A railway is now in process of construction between the latter towns. The canal is to be of sufficient length and depth to accommodate steamers of 100 tons.

MISCELLANEOUS.

The Bureau of American Republics is in receipt of a dispatch from Consul-General Kimberly, in Guatemala, transmitting a decree of the Guatemalan Government, dated June 3, 1891, remitting all customs duties on imports of flour and salt from and after that date, except so far as a proportion of those duties is pledged for the payment of the interest on the public debt and the repayment of the special loan of \$1,000,000, negotiated some time ago. The same decree also permits the free introduction and slaughter

of live cattle, sheep, and hogs from the neighboring Republics, and exempts from export silver tax the money sent out of the country to pay for such cattle, etc.

By a recent decree of the Government of Guatemala revolvers and pistols pay an import duty of 3 piasters per pound gross weight, and fire-arms introduced by special authority of the Government 2 piasters and 50 centavos.

By a recent census the population of Guatemala is found to be 1,460,017.

Haiti.

PORT CHARGES.

The Government of Haiti has recently adopted a new rate of port charges as follows:

Cape Haitien.—Pilotage and signal, \$14; sanitary visit, paid to doctor of port, \$12.50; sanitary dues, paid to Government, \$22.92; tonnage dues, per ton on cargo landed, 50 cents.

Gonaïves.—Pilotage, \$5; sanitary visit, paid to doctor of port, \$12.50; sanitary dues, paid to Government, \$22.92; tonnage dues per ton of cargo landed, 50 cents.

St. Marc.—Pilotage, \$5; sanitary visit, paid to doctor of port, \$12.50; sanitary dues, paid to Government, \$22.92; tonnage dues per ton of cargo landed, 50 cents.

Port au Prince.—Pilotage, \$15; signal, \$2; sanitary visit, paid to doctor of port, \$12.50; sanitary dues, paid to Government, \$22.92; light dues per ton on gross tonnage, 50 cents; on vessels, in gold, 6 cents.

Petit Goave.—Pilotage, \$10; sanitary visit, paid to doctor of port, \$12.50; sanitary dues, paid to Government, \$22.92; tonnage dues per ton on cargo landed, 50 cents.

Miragoane.—Pilotage, \$15; signal, \$2; sanitary visit, paid to doctor of port, \$12.50; sanitary dues, paid to Government, \$22.92; tonnage dues per ton on cargo landed, 50 cents; stages for landing, single, \$15; lines, \$5.

Jeremie.—Pilotage and signal, \$6; sanitary visit, paid to health officer, \$12.50; sanitary dues, paid to Government, \$22.92; tonnage dues per ton on cargo landed, 50 cents.

Aux Cayes.—Pilotage paid to pilot, \$10; pilotage, paid to Government, \$13; interpreter, about \$5; sanitary visit, paid to health officer, \$12.50; sanitary dues, \$22.92; tonnage dues per ton on cargo landed, 50 cents.

Jacmel.—Pilotage and clearance, \$15; sanitary visit, to doctor of port, \$12.50; gratuity to doctor, \$2; sanitary dues to Government, \$22.92; interpreter, about, \$10; tonnage dues per ton on cargo landed, 50 cents.

NOTE.—Beyond these charges various gratuities are given. Except the light dues at Port au Prince, which are levied in gold, the above disbursements are paid in Haitien currency, which is converted at \$4.80 to the pound sterling, after deduction of the premium in favor of gold, which varied during 1890 between 4 and 36 per cent.

Honduras.

CULTIVATION OF FRUIT

A letter from a prominent American citizen of Honduras contains the following extract:

The northern part of this Republic, which is the part best adapted for agriculture and fruit-growing, is just now improving very rapidly, particularly in the neighborhood of San Pedro Sula, the present terminus of the railroad, 39 miles south of Puerto Cortez. Quite a number of Americans have located in that vicinity and have engaged in fruit-culture; many of them are from California, experienced fruit-growers. Seven more families from that State will arrive within the next few weeks and have already secured land. The Americans are introducing the industry of drying bananas. The ripe banana when dry resembles the fig. They are selling in the United States at 20 cents per pound, at which price they are far more profitable to the grower than selling the bananas in the bunch to the steamship-owners. The result of this movement will be to give a great impetus to their cultivation and to secure a much higher price to the producers.

In the near future the above-named locality will be the great fruit region of Honduras. With fine healthful climate, fertile soil, and splendidly watered, all the tropical and semitropical fruits can be produced and matured, not at any particular season, but all the year round, with absolute certainty, as frosts and destructive droughts are alike unknown. There are no taxes in this country on real estate. The best fruit lands are selling at \$5 per acre, and it costs about \$10 per acre to clear and plant the ground with bananas. These prices are in Honduran currency, worth 25 per cent less than American dollars, consequently reducing the above figures by that amount when calculated in United States money. While the bananas are growing, two crops of corn can be produced on the ground between the rows. Corn is worth in San Pedro generally about \$1 per bushel. There is also plenty of land in the neighborhood spe-

cially adapted for raising coffee and the cocoa bean, both of which are profitable crops.

When all these advantages are combined with the fact that Puerto Cortez is only 900 miles from New Orleans it is not very difficult to predict what the future of this region will be.

The Government of Honduras has granted a concession to William C. Burchard, United States consul at Ruatan, to organize a company for the purpose of developing the fruit trade and establishing new industries in the district of Mosquitia, Honduras. The Government agrees to sell Mr. Burchard alternate sections of public lands at the rate of fifty cents per manzana (1.7 acres), and all agricultural colonists he may introduce into the Republic will receive a free title to all lands that they may cultivate without interruption for three years. La Mosquitia is the eastern province of Honduras, is bounded by Nicaragua, and is known to be very rich in the natural resources of the Republic.

Information has been received in regard to the cultivation of bananas on the north coast of Honduras, which has increased rapidly during the last few years and has of late assumed remarkable proportions. Ten years ago scarcely a banana "finca" was to be found on the mainland of Honduras, and the trade that existed at that time was confined almost exclusively to the Bay Islands. The line of the coast was an unbroken forest, but since that time towns of considerable size have sprung up, and from Puerto Cortez to Truxillo there is almost a continuous field of bananas, while twelve steamers a month ply between the various ports of the coast and New Orleans, each carrying a full load of bananas on every trip. The cultivation is very profitable. An acre of land of suitable soil, well attended to, should produce about 300 bunches of bananas, worth on the average 50 cents a bunch, and the cost of preparing the land should not exceed \$20 an acre. At a cost not exceeding \$12 an acre, yearly crops can be taken off for at least eight years. Several planters about the towns of Coiba, Belfate, and Tela, are able to cut several hundred bunches

of bananas twice or three times a month the year round, but most of the plantations are on a smaller scale.

A letter received from Dr. Jeronimo Zelaya, Minister of Foreign Affairs for the Republic of Honduras, brings the information that Col. F. F. Hilder, of New Orleans, has obtained a concession, under which he proposes to utilize the fiber of the banana tree, and to that end he is going to start banana plantations. Dr. Zelaya continues as follows:

It is easy to obtain lands on the coast at very low prices, and even gratis, upon application to the Government. During the five months of our summer the heat on our coasts, both north and south, is intense, but not unhealthful. In the interior of the country, as, for instance, here in Tegucigalpa, Yuscaran, the Angeles Valley, Intibuca, Santa Rosa, &c., the climate is excellent.

The new port of Ceiba, recently established in the Republic of Honduras, has entered into active commercial relations with the United States. The Bureau of the American Republics has received information that from the 1st to the 11th of September there were exported to the United States 39,000 bunches of bananas, of which 27,000 bunches were shipped to New Orleans and 12,000 to New York. The steamers of the Oteri Pioneer Line, from New Orleans, now stop at this port regularly, while communication with New York is maintained three times a month by the fleet of the Wessels line. The first vessel to be registered on the books of the new custom-house was the José Oteri, Jr., from New Orleans.

The Bureau of the American Republics is informed that the values of the exports from the Republic of Honduras during the last fiscal year were as follows:

Live stock	\$451, 115. 59
Vegetables.....	1, 491, 316. 56
Minerals.....	593, 086. 99
Manufactured goods.....	41, 489. 07
Total	<u>2, 667, 008. 21</u>

MINING.

The Government of Honduras has established a Mining Bureau, under the direction of Dr. R. Fritzgartner, of Tegucigalpa, which will furnish reliable information gratuitously to all persons who are interested in that subject.

A prominent American, now visiting Honduras, writes in respect to the manner in which the mineral and other resources of that country, as well as its railroads, are being absorbed by European countries. He says :

If one-tenth part of the truth were known about this country in the United States its capitalists and people would not sit supine and permit the trade and rich natural resources of the country to be absorbed by European countries. Last year the English secured vast holdings of minerals and are preparing to repeat the South African movement. They are also negotiating for lands for colonization. At present they control the building of the Interoceanic Railroad. The French recently bought out a native syndicate which had obtained large concessions of mining lands with special privileges. Their engineers arrived yesterday to begin work; also the engineers for the railroad from the interior to the Pacific which the French are building. The Germans are today negotiating for the largest developed mining property in the country, now owned by an American company with insufficient capital, and if they secure it they will get back the price paid for it in two years.

I am of the opinion that a strong American syndicate might secure the control of the Interoceanic Railroad, owing to the financial stringency in Europe, and that would change the situation not only in respect to Honduras, but all Central America, as branch lines would quickly tap the other Republics. Two hundred miles of Interoceanic Railroad added to that already built would capture Honduras, a good part of Central America and the west coast of South America, opening up a country of enormous capacity in the production of fruit, sugar, coffee, precious woods, gold, silver, copper, magnetic iron, and I believe coal.

COMMUNICATIONS.

The Government of Honduras has granted a concession to S. B. McCormic to construct a railroad in the Territory of Mosquitia, from the east coast to the interior, giving him 9 square miles of any unoccupied land that he may select for every mile of railroad he may construct. It is further stipulated that he shall

have the right to import free of duty all rolling stock, supplies, implements, and provisions of food that may be required for the construction and equipment of the railroad; that it shall be forever free from all taxation, either state or municipal, and that any foreign workmen he may introduce into the country for the construction of the road, and as settlers upon the lands that are granted him, shall be exempt from military duty and from the payment of personal taxes. Such settlers will have the right to import free of duty all tools, implements, machinery, etc., necessary for the cultivation of their lands and the preparation of their crops for market. The company is also granted the right to cut mahogany and other timber on Government lands, upon the payment of \$5 for each mahogany tree.

The Government of Honduras has made a concession to a syndicate of French capitalists for the construction of a narrow-gauge railway, 93 miles long, from the Pacific Ocean to the city of Tegucigalpa. The proposed road will pass through the plains of Choluteca, following the course of the Rio Grande, thus avoiding topographical difficulties in reaching the higher plateaus of Tegucigalpa and those of the interior. The road, although by no means not a direct route from the coast, will be of great importance and utility, as it will touch a number of the most important mining districts and fertile agricultural lands. The importance of this road, as regards the mining industry, can not be easily overestimated, as it not only provides easier and cheaper freightage, but also opens up new timber districts which up to this time are untouched, being too far from the mining districts to haul the timber by ox teams.

The Government of Honduras has granted to Messrs. E. W. Perry and F. M. Imboden, both citizens of the United States, a concession of land covering the entire region known as Mosquita, the payment for which is to be made in the construction of expensive public works, including an army road from Tegucigalpa to

the coast of the Caribbean Sea, more than 300 miles in length; another, a canal to connect the Caratasca Lagoon with the Guayapa River. This canal is to be 20 miles in length, with uniform width of 12 yards and a depth of 5 feet, and will afford facilities for transportation that have long been needed. In addition to these works, Messrs. Perry and Imboden agree to erect 100 miles of telegraph line, establishing communication by wire between the Mosquito region and the interior of the country. Active measures will at once be taken to induce immigrants to settle upon the lands of the concession, and liberal inducements are offered.

The Government of Honduras has issued a decree continuing for another term of years the steamship company maintained by Messrs. De Leon and Alger, between Puerto Cortez, Belize, and New Orleans.

A private letter received from a prominent citizen of Honduras says:

It seems at last as if the great barrier to commerce, lack of transportation, is about to be overcome. English engineers are now at Puerto Cortez, busy with the preliminaries for the work of extending the railroad which now exists from the port of San Pedro 39 miles to Portrerillos, 31 miles farther, or 70 miles from the coast. This will form the first division of the Interoceanic Railroad, 210 miles from the Caribbean Sea to the Pacific. The capital for this work has been provided by an English syndicate, and as soon as it is completed it is their intention to appeal to the public for capital to finish it to the Bay of Fonseca, thus furnishing a perfect and beautiful overland route with a magnificent natural harbor at each end. A French company has also just obtained a concession to build a railroad from San Lorenzo, on the Bay of Fonseca, to this capital, and their representative here tells me it is their intention to proceed with the work immediately. These roads will be the entering wedge that will break up the isolation of this beautiful country, and make it accessible to the forces of capital and enterprise, all that is required to make it "blossom as the rose."

WHERE COLUMBUS FIRST STOOD ON THE CONTINENT.

Col. F. F. Hilder, of Honduras, has proposed that a subscription list be opened during the World's Fair to raise money to erect a monument on the spot where Columbus first stood on the

continent of America. This was at what is now known as Point Castilla, near Truxillo, Honduras. The exact spot where Columbus landed is well known because of landmarks, although not even a single stone or inscription of any kind marks the place so memorable in the history of the world.

Mexico.

COMPARATIVE STATEMENT OF EXPORTS FOR THE FIRST HALF OF 1890-'91 AND 1889-'90.

The following table shows the exports of merchandise of the Republic of Mexico for the first half of the fiscal year 1890-'91 in comparison with those for the corresponding previous year:

	First half of 1890-'91.	First half of 1889-'90.
	<i>Dollars.</i>	<i>Dollars.</i>
Rum	13,661.50	5,935.00
Jewels and precious stones.....	5,313.00	1,840.00
Living animals	162,928.00	231,841.50
Indigo.....	48,754.88	60,196.00
Sugar.....	455.00	38,225.80
Empty barrels.....	9,834.50	9,955.00
Coffee	1,019,616.09	1,317,888.49
Stone coal.....	85,124.35	91,091.00
India rubber.....	30,856.77	45,963.15
Bristles	21,130.51	22,670.94
Copper	1,650.00	156,137.00
Mother-of-pearl shells, pearl.....	18,735.00	24,122.74
Tanning barks.....	10,500.00	8,284.00
Chicle	533,781.99	326,434.99
Peppers.....	12,678.85	16,860.00
Baggage	8,473.25	6,447.00
Beans.....	97,472.49	109,186.54
Fruit.....	59,566.12	42,457.25
Peas.....	31,395.25	84,588.49
Guano		8,025.00
Henequen.....	3,314,514.88	4,084,480.30
Ixtle.....	519,029.49	491,938.78
Wool	30.00	21,894.05
Lemons.....	48,542.50	41,167.00
Woods, sundry.....	882,842.15	645,335.90
Manufactures.....	8,848.65	7,804.13
Marble.....	46,760.00	79,425.46
Merchandise returned.....	30,975.50	108,835.65
Honey	26,889.52	37,240.13
Samples.....	4,659.00	21,031.50
Orchilla	1,351.00	7,145.00
Fine pearls.....	11,000.00	54,000.00
Skins, sundry.....	717,133.85	854,443.74
Muscovado sugar.....	4,820.00	7,212.50
Lead.....	377,344.41	272,439.72

Comparative statement of exports for the first half of 1890-'91 and 1889-'90—Continued.

	First half of 1890-'91.	First half of 1889-'90.
	<i>Dollars.</i>	<i>Dollars.</i>
Jalap	47, 238. 80	257. 92
Broom root	218, 186. 04	213, 539. 14
Empty sacks	3, 063. 00	10, 710. 00
Salt	375. 00	5, 185. 00
Cotton seed	200. 00	7, 871. 40
Tobacco	446, 925. 59	379, 365. 37
Wheat	570. 00	12, 680. 00
Vanilla	345, 306. 00	583, 409. 46
Securities	910, 528. 50	116. 90
Sarsaparilla	11, 604. 75	8, 392. 52
Other articles not specified and which do not reach \$5,000 in the half year.....	54, 635. 95	78, 837. 81
	10, 205, 302. 13	10, 643, 909. 27

The exports of precious metals for the same period amounted to \$22,165,192.93, making a total of \$32,370,495.

STATISTICS OF EXPORTS FOR THE FISCAL YEAR OF 1890-'91.

EXPORTS BY CUSTOM HOUSES.

Comparison of the value of exports made through the custom houses of the Republic in the fiscal year 1890-'91, with those corresponding to the previous year 1889-'90.

Custom-houses.	Fiscal year 1890-'91.	Fiscal year 1889-'90.	Excess in 1890-'91.	Decrease in 1890-'91.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Acapulco	154, 914. 58	203, 194. 60	.....	48, 280. 02
Altata	61, 832. 36	94, 013. 17	.....	32, 180. 81
Ascensión.....	93, 381. 00	51, 197. 00	42, 184. 00	.....
Bahía de la Magdalena....	263. 90	117, 563. 79	.....	117, 299. 89
Camargo	30, 049. 61	38, 201. 84	.....	8, 152. 23
Campeche	178, 358. 00	154, 566. 14	23, 791. 86	.....
✓ Ciudad Juárez	14, 301, 855. 87	15, 137, 724. 59	.....	835, 868. 72
✓ Ciudad Porfirio Diaz.....	2, 698, 218. 71	2, 521, 946. 74	176, 271. 97	.....
Coatzacoalcos	102, 403. 79	67, 181. 30	35, 222. 49	.....
Frontera	185, 375. 54	152, 373. 86	33, 001. 68	.....
Guaymas	543, 961. 51	414, 388. 68	129, 572. 83	.....
Guerrero.....	1, 045. 00	15, 669. 23	.....	14, 624. 23
Isla del Carmen	956, 732. 66	860, 987. 98	95, 744. 68	.....
La Paz.....	808, 802. 42	652, 719. 46	156, 082. 96	.....
× Laredo de Tamaulipas	3, 332, 243. 57	3, 047, 864. 71	284, 378. 86	.....
Las Palomas.....	.....	6, 295. 00	.....	6, 295. 00
Manzanillo.....	155, 962. 77	307, 214. 27	.....	151, 251. 50
✓ Matamoros.....	371, 203. 37	451, 866. 75	.....	80, 663. 38
Mazatlán.....	5, 033, 313. 00	5, 321, 455. 40	.....	288, 142. 40
Mier.....	72, 506. 50	160, 763. 44	.....	88, 256. 94

Comparison of the value of exports made through the custom houses of the Republic in the fiscal year 1890-'91, with those corresponding to the previous year 1889-'90—Continued.

Custom-houses.	Fiscal year 1890-'91.	Fiscal year 1889-'90.	Excess in 1890-'91.	Decrease in 1890-'91.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Nogales	895, 336. 65	534, 859. 48	360, 477. 17	.....
Palominas	228, 762. 18	79, 041. 15	149, 721. 03	.....
Progreso	7, 447, 548. 24	7, 748, 400. 19	.....	300, 851. 95
Puerto Angel	177, 784. 35	192, 704. 30	.....	14, 919. 95
Salina Cruz	84, 264. 25	143, 755. 35	.....	59, 491. 10
San Blas	275, 441. 85	240, 203. 00	35, 238. 85	.....
San José del Cabo	15, 798. 50	13, 623. 78	2, 174. 72	.....
Santa Rosalía	947, 640. 50	711, 402. 00	236, 238. 50	.....
Sásabe	6, 064. 00	23, 668. 00	.....	17, 604. 00
Soconusco	279, 783. 35	231, 552. 43	48, 230. 92	.....
Tampico	1, 075, 121. 13	718, 125. 10	350, 996. 03	.....
Tijuana	28, 605. 00	51, 344. 50	.....	22, 739. 50
Todos Santos	203, 415. 87	36, 917. 32	166, 498. 55	.....
Tonalá	415, 308. 80	221, 538. 50	193, 770. 30	.....
Túxpam	1, 579, 635. 78	1, 659, 711. 79	.....	80, 076. 01
Veracruz	20, 533, 460. 73	20, 115, 353. 85	418, 106. 88	.....
Total	63, 276, 395. 34	62, 499, 388. 69	2, 943, 704. 28	2, 166, 697. 63
Net increase .....	.....	.....	777, 006. 65	.....

EXPORTS BY NATIONS.

Comparison of the value of exportations, by nations, as enumerated in the fiscal year 1890-'91 with the corresponding exportation in the previous year 1889-'90.

Nations.	Fiscal year 1890-'91.	Fiscal year 1889-'90.	Excess in 1890-'91.	Decrease in 1890-'91.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Germany	2, 785, 874. 86	1, 693, 733. 15	1, 092, 101. 71	.....
Colombia	57, 416. 28	77, 512. 35	.....	20, 096. 07
Costa Rica	212. 00	.....	212. 00	.....
China	845. 00	.....	845. 00	.....
Spain	515, 193. 74	534, 057. 27	.....	18, 863. 53
United States	44, 983, 086. 37	43, 022, 440. 67	1, 960, 645. 70	.....
France	3, 653, 551. 33	3, 159, 259. 50	494, 291. 83	.....
Guatemala	193, 711. 47	117, 670. 65	76, 040. 82	.....
Holland	187, 931. 65	150, 580. 08	37, 351. 57	.....
Honduras .....	.....	3, 700. 00	.....	3, 700. 00
England	10, 882, 728. 33	13, 722, 122. 52	.....	2, 839, 394. 19
Italy	920. 00	4, 555. 00	.....	3, 635. 00
Nicaragua	6, 289. 31	8, 569. 20	.....	2, 279. 89
Russia	4, 000. 00	.....	4, 000. 00	.....
San Salvador	4, 635. 00	2, 802. 30	1, 832. 70	.....
Venezuela .....	.....	2, 346. 00	.....	2, 346. 00
Total	63, 276, 395. 34	62, 499, 388. 69	3, 667, 321. 33	2, 890, 314. 68
Net increase .....	.....	.....	777, 006. 65	.....

EXPORTS BY ARTICLES.

Comparison of the values of exports by articles as enumerated in the fiscal year 1890-'91, with the corresponding exportation in the previous year 1889-'90.

Articles.	Fiscal year 1890-'91.	Fiscal year 1889-'90.
	<i>Dollars.</i>	<i>Dollars.</i>
Cane spirits (rum).....	14, 323. 50	9, 316. 37
Garlic.....	29, 989. 03	31, 332. 50
Jewels.....	17, 574. 00	6, 850. 00
Starch.....	.....	11, 181. 00
Living animals.....	184, 482. 00	500, 217. 25
Indigo.....	93, 143. 88	85, 305. 37
Rice.....	10, 368. 40	2, 225. 00
Sugar.....	24, 018. 40	61, 983. 80
Empty barrels.....	18, 769. 50	12, 275. 00
Cocoa.....	93. 00	3, 633. 25
Coffee.....	6, 150, 358. 72	4, 811, 000. 48
Coal.....	160, 702. 35	188, 507. 00
Meat.....	66. 00	1, 247. 50
Rubber.....	72, 558. 92	97, 245. 75
Bristles.....	58, 477. 92	64, 207. 13
Copper.....	940, 920. 00	735, 183. 60
Shells.....	24, 411. 31	30, 258. 74
Barks.....	22, 163. 00	14, 484. 00
Chicle.....	1, 286, 997. 10	716, 746. 33
Chile peppers.....	22, 051. 75	19, 919. 44
Manuscripts.....	6, 464. 00	111, 535. 00
Drugs.....	1, 049. 70	1, 005. 00
Baggage.....	39, 734. 25	15, 366. 00
Essence of aloes.....	8, 415. 00	2, 005. 00
Beans.....	208, 506. 38	279, 839. 56
Fruit.....	103, 849. 62	68, 581. 25
Pease.....	98, 251. 28	98, 141. 40
Cochineal.....	.....	2. 00
Guano.....	.....	28, 025. 00
Henequen.....	7, 048, 556. 76	7, 392, 244. 69
Bones.....	6, 982. 00	3, 874. 25
Ixtle fiber.....	823, 349. 84	827, 980. 61
Wool.....	30. 00	26, 826. 40
Vegetables.....	1, 768. 61	1, 512. 25
Books.....	3, 961. 00	15, 732. 00
Lemons.....	70, 675. 00	79, 788. 50
Linseed.....	1, 000. 00	6, 000. 00
Woods.....	1, 726, 527. 08	1, 739, 138. 30
Maize.....	8, 108. 80	597. 00
Manufactures.....	13, 962. 74	15, 402. 63
Maps.....	1, 369. 00	1, 790. 00
Marble.....	87, 555. 85	162, 134. 26
Merchandise returned.....	97, 154. 69	178, 435. 40
Honey.....	91, 874. 92	103, 266. 49
Copper ore.....	850. 00	1, 857. 00
Samples.....	9, 745. 90	26, 157. 50
Orchil.....	1, 351. 00	114, 796. 68
Pearls.....	17, 500. 00	88, 750. 00
Skins and hides.....	1, 804, 828. 69	1, 913, 129. 05

Comparison of the values of exports by articles as enumerated in the fiscal year 1890-'91, with the corresponding exportation in the previous year 1889-'90—Continued.

Articles.	Fiscal year 1890-'91.	Fiscal year 1889-'90.
	<i>Dollars.</i>	<i>Dollars.</i>
• Unrefined sugar.....	29, 202. 58	12, 516. 30
Living plants.....	15, 151. 00	21, 969. 00
Lead.....	1, 125, 468. 64	607, 329. 70
• Feathers.....	17, 911. 00	3, 224. 00
• Jalap.....	67, 457. 66	10, 023. 04
• Zacaton or broom corn.....	513, 254. 04	426, 889. 26
Empty sacks.....	3, 129. 00	23, 333. 00
Salt.....	2, 765. 25	.....
Cotton seed.....	3, 138. 40	11, 781. 40
• Hats.....	12, 680. 77	3, 070. 75
Tobacco.....	1, 105, 446. 73	948, 332. 17
Wheat.....	790. 00	12, 682. 00
Vanilla.....	519, 741. 04	917, 409. 66
Securities.....	2, 073, 706. 50	43, 286. 90
Chalk.....	4, 629. 00	.....
• Sarsaparilla.....	31, 350. 06	15, 993. 55
Various articles.....	79, 310. 62	108, 223. 00
Silver ore.....	8, 874, 457. 24	6, 394, 662. 41
Coined foreign gold.....	20, 594. 00	13, 204. 00
Coined Mexican gold.....	134, 219. 00	96, 592. 00
Gold bullion.....	612, 619. 12	457, 610. 59
Coined foreign silver.....	229, 806. 85	141, 032. 70
Coined Mexican silver.....	17, 622, 171. 10	23, 084, 489. 40
Mixed silver.....	729, 134. 81	368, 871. 87
Silver bullion.....	6, 751, 219. 07	7, 259, 958. 68
Sulphuret of silver.....	1, 280, 768. 97	803, 058. 58
Silver in other forms.....	1, 382. 00	1, 810. 00

The exportation in the fiscal year 1890-'91 is as follows :

In precious metals.....	\$36, 256, 372. 16
In other articles.....	27, 020, 023. 18

Total..... 63, 276, 395. 34

The exportation in the fiscal year 1889-'90 is as follows :

In precious metals.....	\$38, 621, 290. 23
In other articles.....	23, 878, 098. 46

Total..... 62, 499, 388. 69

Differences in the fiscal year 1890-'91 were as follows :

Excess of merchandise.....	\$3, 141, 924. 72
Decrease in metals.....	2, 364, 918. 07

Net increase..... 777, 006. 65

MEXICAN EXPORTS IN 1891.

[Report by Minister Ryan.]

The following official tables, taken from the Diario Oficial of April 10, 1891, show that the total value of the exports of merchandise and precious metals during the first half of the fiscal year 1890-'91 (July to December) from Mexico was \$32,370,495.06. It will be seen that of this sum the precious metals amount to \$22,165,192.93 and the merchandise to \$10,205,302.13. Of the latter the United States took \$8,161,294.82, or about 80 per cent of the total export of merchandise. Of the total exports of precious metals (\$22,165,192.93) the shipments to the United States were \$13,349,314.34. The net increase of exports of precious metals over the corresponding period of the preceding year was \$1,196,177.68. It will be observed that the increase of silver-ore exports exceeds 25 per cent.

Table showing the total exportation through each custom-house during the first half of the fiscal year 1890-'91.

Custom-houses.	Precious metals.	Merchandise.		Total value of exports.
		Quantity.	Value.	
	<i>Dollars.</i>	<i>Kilos.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Acapulco	27, 563. 50	872, 284	66, 079. 90	93, 643. 40
Altata	17, 270. 36	662, 621	18, 662. 00	35, 932. 36
Ascensión	57, 820. 00	2, 800	14, 906. 00	72, 726. 00
Camargo	1, 950. 00	61, 836	13, 149. 83	15, 099. 83
Campeche	3, 300. 00	1, 962, 755	78, 969. 00	82, 269. 00
Ciudad Juárez	6, 573, 601. 09	894, 953	1, 017, 313. 07	7, 590, 914. 16
Ciudad Porfirio Diaz...	768, 626. 86	24, 316, 783	630, 630. 35	1, 399, 257. 21
Coatzacoalcos .....	.....	4, 182, 949	42, 435. 69	42, 435. 69
Frontera	230. 00	2, 851. 505	72, 686. 88	72, 916. 88
Guaymas	323, 548. 41	60, 041	8, 335. 50	331, 883. 91
Guerrero .....	.....	700	812. 00	812. 00
Isla del Carmen .....	.....	23, 068, 677	503, 614. 00	503, 614. 00
La Paz	364, 841. 36	963, 122	32, 283. 00	397, 124. 36
Laredo de Tamaulipas..	1, 529, 290. 93	4, 016, 072	562, 607. 65	2, 091, 898. 58
Manzanillo	36, 200. 00	702, 931	23, 763. 80	59, 963. 80
Matamoras	143, 205. 65	1, 213, 499	67, 895. 10	211, 100. 75
Mazatlan	2, 554, 915. 86	1, 319, 956	49, 111. 00	2, 604, 026. 86
Mier	22, 510. 00	65, 578	18, 747. 50	41, 257. 50
Nogales	243, 474. 27	610, 210	38, 845. 00	282, 319. 27

Table showing the total exportation through each custom-house during the first half of the fiscal year 1890-'91—Continued.

Custom-houses.	Precious metals.	Merchandise.		Total value of exports.
		Quantity.	Value.	
	<i>Dollars.</i>	<i>Kilos.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Palominas	90,665.19	3,749	28,853.00	119,518.19
Progreso.....	223,680.20	26,741,303	3,352,223.84	3,575,904.04
Puerto Angel	500.00	7,255	2,653.45	3,153.45
Salina Cruz	24,700.00	44,339	7,204.04	31,904.04
San Blas.....	105,864.00	492,101	12,045.13	117,909.13
San José del Cabo.....		458,049	11,061.50	11,061.50
Santa Rosalia		1,275	260.00	260.00
Sásabe.....	3,150.00	2,797	712.00	3,862.00
Soconusco.....	33,800.00	114,229	63,042.84	96,842.84
Tampico.....	159,345.50	4,226,260	363,477.93	522,823.43
Tijuana.....	570.00	38,572	12,440.00	13,010.00
Todos Santos.....	65,577.78	70,088	1,695.00	67,272.78
Tonalá.....	138,167.80	37,668	40,445.89	178,613.69
Tuxpan.....		5,358,703	883,920.55	883,920.55
Veracruz.....	8,650,824.17	8,156,127	2,164,419.69	10,815,243.86
Total	22,165,192.93	113,581,888	10,205,302.13	32,370,495.06

Table showing the values of precious metals exported during the first half of the fiscal year 1890-'91, compared with the same period of 1889-'90.

Metals.	1890-'91.	1889-'90.	Increase.	Decrease.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Silver ore	4,590,408.44	3,326,316.63	1,264,091.81	.....
Foreign gold coin	4,844.00	11,625.00	.....	6,781.00
Mexican gold coin.....	62,329.00	47,857.00	14,472.00	.....
Gold bullion	266,518.51	194,711.64	71,806.87	.....
Foreign silver coin.....	88,658.85	83,279.20	5,379.65	.....
Mexican silver coin.....	13,117,575.10	13,072,610.00	44,965.10	.....
Silver for fluxing	682.00	60.00	622.00	.....
Silver mixed with gold.	319,300.27	213,703.56	105,596.71	.....
Silver bullion	3,195,561.30	3,643,959.76	.....	448,398.46
Silver sulphurets	519,315.46	374,892.46	144,423.00	.....
Total	22,165,192.93	20,969,015.25	*1,651,357.14	455,179.46

* Average increase, \$1,079,638.

Table showing the exports by articles for the first half of the fiscal years 1889-'90 and 1889-'90, with the increase or decrease in 1890-'91.

Articles.	1890-'91.	1889-'90.	Increase.	Decrease.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Brandies.....	13,661.50	5,935.00	7,726.50	.....
Jewels and precious stones.....	5,313.00	1,840.00	3,473.00	.....
Live animals.....	162,928.00	231,541.50	.....	68,913.50
Indigo.....	48,754.88	60,196.00	.....	11,441.12
Sugar.....	455.00	39,225.80	.....	38,770.80
Empty barrels, casks, etc.....	9,834.50	9,955.00	.....	120.50
Coffee.....	1,019,616.09	1,317,888.49	.....	298,272.40
Hard coal.....	85,124.35	91,091.00	.....	5,966.65
Rubber.....	30,856.77	45,963.15	.....	15,106.38
Horsehair.....	21,130.51	22,670.94	.....	1,540.43
Copper.....	1,650.00	156,137.00	.....	154,487.00
Pearl, mother-of-pearl, etc.....	18,735.00	24,122.74	.....	5,387.74
Hides, wet.....	10,500.00	8,284.00	2,216.00	.....
Chicle.....	533,781.99	326,434.99	207,347.00	.....
Chile peppers.....	12,678.85	16,860.00	.....	4,181.15
Baggage.....	8,473.25	6,447.00	2,026.25	.....
Beans.....	97,472.49	109,186.54	.....	11,214.05
Fruit.....	59,566.12	42,457.25	17,108.87	.....
Chick pease, etc.....	31,395.25	84,588.49	.....	53,193.24
Guano.....	.....	8,025.49	.....	8,025.49
Hemp.....	3,314,514.88	4,084,480.30	.....	769,965.42
Ixtle.....	519,029.49	491,938.78	27,090.71	.....
Wool.....	30.00	21,894.05	.....	21,864.05
Lemons.....	48,542.50	41,167.00	7,375.50	.....
Woods (various kinds).....	882,842.15	645,335.90	237,506.25	.....
Manufactures.....	8,848.65	7,804.13	1,044.52	.....
Marble.....	46,760.00	79,425.46	.....	32,665.46
Refunded merchandise.....	30,975.50	108,835.65	.....	77,860.15
Bees' honey.....	26,889.52	37,240.13	.....	10,350.61
Samples.....	4,659.00	21,031.50	.....	16,372.50
Orchilla.....	1,351.00	7,145.00	.....	5,794.00
Fine pearls.....	11,000.00	54,000.00	.....	43,000.00
Hides (various).....	717,133.85	854,443.74	.....	137,309.89
Unrefined sugar.....	4,820.00	7,212.50	.....	2,392.50
Lead.....	377,344.41	272,439.72	104,904.69	.....
Jalap (jalapa, purging herb).....	47,238.80	257.92	46,980.88	.....
Grass root.....	218,186.04	213,539.14	4,646.90	.....
Empty sacks.....	3,063.00	10,710.00	.....	7,647.00
Salt.....	375.00	5,185.00	.....	4,810.00
Cotton seed.....	200.00	7,871.40	.....	7,671.40
Tobacco.....	446,925.59	379,365.37	67,560.22	.....
Wheat.....	570.00	12,680.00	.....	12,110.00
Vanilla.....	345,306.00	583,409.46	.....	238,103.46
Valuable papers.....	910,528.50	116.90	910,411.60	.....

Table showing the exports by articles for the first half of the fiscal years 1889-'90 and 1890-'91, with the increase or decrease in 1890-'91—Continued.

Articles.	1890-'91.	1889-'90.	Increase.	Decrease.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Sarsaparilla	11, 604. 75	8, 392. 52	3, 212. 23	.....
Sundry articles unspecified, whose exportation does not exceed \$5,000 in the six months	54, 635. 95	78, 837. 81	.....	24, 201. 86
Total	10, 205, 302. 13	10, 643, 909. 27	1, 650, 631. 12	2, 089, 238. 26

RÉSUMÉ.

Increase in precious metals	\$1, 196, 177. 68
Decrease in merchandise	438, 607. 13
Net excess of exports	757, 570. 54

Table showing the exports by countries of merchandise and precious metals during the first half of the fiscal year 1890-'91.

Whither exported.	Precious metals.	Merchandise.		Total value of exports.
		Quantity.	Value.	
	<i>Dollars.</i>	<i>Kilos.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Germany	787, 111. 06	3, 848, 709	425, 959. 05	1, 212, 070. 11
Colombia	42, 287. 40	15, 308	1, 923. 63	44, 211. 03
Costa Rica .....	.....	72	200. 00	200. 00
Spain	15, 780. 10	2, 205, 613	201, 107. 07	216, 887. 17
United States	13, 349, 314. 34	75, 359, 251	8, 161, 294. 82	21, 510, 609. 16
France	2, 136, 964. 56	4, 943, 451	395, 508. 70	2, 532, 473. 26
Guatemala	17, 841. 15	22, 491	4, 888. 00	22, 729. 15
Holland .....	.....	765, 421	31, 743. 41	31, 743. 41
England	5, 812, 397. 72	26, 409, 256	980, 455. 45	6, 792, 853. 17
Italy .....	.....	9, 000	750. 00	750. 00
San Salvador	1, 780. 00	3, 316	2, 472. 00	4, 252. 00
Nicaragua	1, 716. 60	.....	.....	1, 716. 60
Total	22, 165, 192. 93	113, 581, 888	10, 205, 302. 13	32, 370, 495. 06

THE MEXICAN EXPORT TRADE.

[From the Mexican Financier.]

We present to-day tables showing the amount of the national exportation in the fiscal year 1890-'91, ended June 30 last, the exportation by custom-houses being given, by nations to which sent, and also by individual articles, the whole forming an interesting subject for the study of statisticians and of especial importance to the holders of Mexican securities abroad. The latter will not be disappointed, for, even with the most conservative corrections and explanations, the figures show the steady growth of Mexico's foreign commerce, and, above all, demonstrate that the country is increasing her exportation outside of the precious metals. The country is sending abroad more of the products of the field and forest, a matter of prime importance in these days when silver can no longer be relied on to maintain a fairly stable price.

In the tables elsewhere given we make no change in the figures as coming from the Treasury Department, but here we take the liberty to rectify the amount of merchandise exports by deducting the item of "Securities exported." These have no proper place, in our opinion, in a presentation of the national exportation. Bonds are not wealth; they represent indebtedness, are promises to pay and nothing more. In the fiscal year 1890-'91 the item of "securities exported" makes a considerable showing, being no less than \$2,073,706.50. In the previous fiscal year only \$43,286.90 were included under that head.

The Treasury Department's figures, rectified, stand as follows:

The statistics show merchandise exports in 1890-'91 to have been	\$27, 020, 023. 18
Deduct securities	<u>2, 073, 706. 50</u>
And there remains the real merchandise exportation..	24, 946, 316. 68
This, compared with the real merchandise exports of the preceding fiscal year, which were.....	<u>23, 834, 811. 56</u>
Shows an increase of.....	I, 111. 505. 12

In our opinion this is a satisfactory gain. In fact, as compared with the average value of merchandise annually exported in the five years prior to 1889, the gain is \$8,641,000, or more than 50 per cent.

The custom-house returns of exports will be closely studied abroad, where there is much interest felt in the effects of railway construction to the various frontier and maritime custom-houses. For the information of our readers we present the following table of percentages :

Percentage of exports via principal custom-houses.

	1889-'90.	1890-'91.
Veracruz	32. 1	32. 4
Ciudad Juárez (El Paso)	24. 2	22. 6
Laredo	4. 8	5. 2
Ciudad Porfirio Diaz (Piedras Negras)	4. 0	4. 2
Tampico	1. 1	1. 6

It will be noted that Veracruz is holding her own remarkably well and that Laredo has made a noticeable advance. When Tampico gets her bar cut through, she will show better figures, and already the exportation via that port is increasing rapidly.

Another table of percentages will show at a glance where the products of the country go.

Percentage of exports by nations.

	1889-'90.	1890-'91.
United States	68. 8	71. 0
Great Britain	21. 9	17. 1
France	5. 0	5. 7
Germany	2. 6	4. 4
All other countries	1. 7	1. 8
Totals	100. 0	100. 0

The enormous preponderance of the United States as a buyer of Mexican products will be noted.

In order that an intelligent comparison of the changes in various important items of the national exportation may be had we present the following table :

Exportation of leading products in thousands of dollars.

	1890-'91.	1889-'90.	Annual average in previous five years.
Living animals	184	500	537
Indigo	93	85	60
Sugar	24	61	97
Cocoa .....	.....	12	19
Coffee	6, 150	4, 811	2, 369
Rubber	72	97	129
Copper	940	735	297
Chicle.....	1, 286	716	310
Beans.....	208	279	92
Fruits.....	103	68	65
Peas.....	98	98	23
Henequen.....	7, 048	7, 392	4, 784
Ixtle.....	823	827	500
Wool.....	.....	26	132
Lemons.....	70	79	26
Marble.....	87	162	25
Orchil.....	1	114	76
Pearls.....	17	88	31
Skins.....	1, 804	1, 913	2, 000
Lead.....	1, 125	607	397
Zacaton.....	513	426	312
Tobacco.....	1, 105	948	718
Vanilla.....	519	917	601
Silver ore.....	8, 874	6, 394	4, 086
Gold bullion.....	612	457	349
Mexican dollars.....	17, 622	23, 084	21, 769
Silver bullion.....	6, 751	7, 259	5, 919
Woods.....	1, 726	1, 739	1, 686
Honey.....	91	103	67

Tobacco, lead, coffee, ore, copper, chicle, and ixtle show remarkable gains.

A careful study of the tables given will disclose the important fact that the national production for export is increasing in exactly those articles that will best build up a healthy foreign trade.

EXPORTS FOR THE FIRST SIX MONTHS 1891.

The official statistics of exports from Mexico during the first six months of 1891 show a total of \$30,905,900. The nations to which the exports were sent and the appropriation of each are as follows :

	Precious metals.	Other articles.	Totals.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Germany	977, 335. 69	596, 469. 06	1, 573, 804. 75
Colombia.....	11, 526. 00	1, 697. 25	13, 205. 25
Costa Rica		12. 00	12. 00
China		845. 00	845. 00
Spain	36, 324. 00	261, 982. 57	298, 306. 57
United States.....	10, 051, 518. 00	13, 420, 958. 61	23, 472, 477. 21
France	626, 430. 77	494, 647. 30	1, 121, 078. 07
Guatemala.....	150, 850. 00	20, 132. 32	170, 982. 32
Holland.....		156, 188. 24	156, 188. 24
Great Britain.....	2, 233, 565. 17	1, 856, 309. 99	4, 089, 875. 16
Italy.....		170. 00	170. 00
Nicaragua.....	3, 276. 00	1, 296. 71	4, 572. 71
Russia		4, 000. 00	4, 000. 00
San Salvador	353. 60	30. 00	383. 00
Total.....	14, 091, 179. 23	16, 814, 721. 05	30, 905, 900. 28

MEXICAN IMPORTS FOR THE YEAR 1889.

The bureau of statistics of the Mexican Republic has published tables showing the commerce of Mexico during the fiscal year 1888-89. The total value of the imports for 1889 were \$40,024,894, and the duties collected thereon were \$22,477,962, or 56 per cent. The following table shows the values of the various classes of merchandise imported and the duties collected thereon :

Imports by articles, 1889.

Articles.	Values of imports.	Duties collected.
	<i>Dollars.</i>	<i>Dollars.</i>
Free goods.....	13, 506, 230. 23	
Cottons.....	7, 534, 088. 70	7, 447, 394. 70
Linen and hemp.....	674, 029. 52	671, 590. 87
Woolens.....	1, 613, 186. 22	1, 986, 020. 61
Silks.....	394, 691. 60	378, 614. 57
Silk mixtures.....	394, 889. 86	410, 419. 80
Food products.....	4, 893, 706. 49	3, 789, 270. 57
Stone and earthenware.....	81, 815. 68	41, 244. 81
Glass and china.....	607, 727. 18	686, 884. 84
Gold, silver, and platinum.....	320, 843. 60	27, 967. 36
Iron and steel.....	1, 510, 129. 91	1, 259, 480. 12
Copper and its alloys.....	593, 166. 91	324, 225. 37
Tin, lead, and zinc.....	75, 968. 92	39, 289. 76
Small wares.....	658, 853. 68	505, 497. 81
Machinery and apparatus*.....	539, 582. 35	128, 205. 84
Carriages and wheelwrights' goods.....	213, 796. 20	116, 206. 57
Arms, powder, and ammunition.....	280, 453. 04	172, 830. 78
Wood, and its manufactures.....	473, 684. 25	368, 523. 72
Paper, cardboard, and its applications.....	1, 352, 143. 12	1, 161, 250. 81
Skins, and goods of leather.....	414, 109. 54	290, 211. 92
Medicinal drugs.....	1, 697, 830. 38	997, 449. 42
Miscellaneous.....	2, 193, 969. 94	1, 675, 382. 70
Total.....	40, 024, 894. 32	22, 477, 962. 95

The bulk of the machinery imported paid no duties, and is included under free goods.

The following table shows the importation by countries:

Countries	Values.	Duties.
	<i>Dollars.</i>	<i>Dollars.</i>
United States.....	22, 669, 420. 71	9, 169, 787. 87
England.....	6, 337, 980. 30	5, 083, 870. 75
France.....	4, 956, 568. 41	3, 846, 252. 66
Germany.....	2, 842, 932. 35	2, 310, 015. 60
Spain.....	1, 920, 942. 72	1, 177, 177. 30
Italy.....	269, 826. 70	121, 818. 78
Belgium.....	242, 083. 89	232, 287. 68
Switzerland.....	157, 444. 25	89, 830. 54
Austria.....	96, 436. 65	74, 814. 11
Ecuador.....	89, 451. 62	38, 429. 46
Colombia.....	78, 178. 75	32, 635. 35
Venezuela.....	73, 738. 25	25, 435. 75
Holland.....	72, 009. 25	53, 010. 82
India.....	69, 629. 40	123, 362. 39
China.....	39, 351. 10	25, 346. 99
Norway.....	31, 176. 20	33, 358. 84

Importation by countries, 1889—Continued.

Countries.	Values.	Duties.
	<i>Dollars.</i>	<i>Dollars.</i>
Costa Rica.....	22,425.00	6,580.29
Algiers.....	13,649.70	15,907.07
Guatemala.....	11,548.22	3,636.93
Salvador.....	11,315.00	4,644.38
Portugal.....	9,132.00	2,656.46
Turkey.....	2,327.00	761.29
Sweden.....	1,607.00	2,295.55
Denmark.....	1,112.00	729.75
Greece.....	1,089.00	462.66
Russia.....	833.40	386.65
Peru.....	772.00	347.04
Bolivia.....	600.00	277.94
Australia.....	485.00	216.27
Brazil.....	309.45	230.82
Chili.....	106.00	72.60
Persia.....	102.00	73.89
Japan.....	95.00	64.34
Arabia.....	82.00	24.00
Santo Domingo.....	80.00	60.12
Argentine Republic.....	30.00	32.25
Zanzibar.....	20.00	37.76
Uruguay.....	2.00	10.00
Total.....	40,024,894.32	22,477,962.95

Recent statistics published by the Mexican Government show that the exports from Mexico into the United States have increased so rapidly that the people of this country now take all but 20 per cent of the merchandise exported from Mexico, although the manufactories of the United States do not furnish more than half of the imports of that Republic. Of the exports of precious metals the United States takes 66 per cent, England 21 per cent, Germany 3.7 per cent, and France 7.7 per cent.

COMPARATIVE ANALYSIS OF TRADE OF UNITED STATES WITH MEXICO.

Mr. Richard Guenther, United States consul-general to Mexico, furnishes the following table to show that Mexico does not wish to strangle commerce with the United States. The figures represent trade with outside countries for the year ending May 31, 1891 :

	Total of impor- tations.	Free list.	Dutiable mer- chandise.	Duties.	Percent of duties.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Per cent.</i>
United States	22, 669, 420	10, 293, 301	12, 376, 119	9, 169, 787	74. 1
England	6, 337, 980	2, 050, 826	4, 287, 153	5, 083, 870	118. 6
France.....	4, 956, 568	322, 379	4, 634, 189	3, 846, 252	83. 0
Germany.....	2, 842, 932	299, 136	2, 543, 795	2, 310, 015	90. 04
Spain.....	1, 920, 942	448, 685	1, 472, 257	1, 117, 177	79. 9
All other countries	1, 297, 049	91, 900	1, 205, 149	890, 858	74. 6
Total.....	40, 024, 894	13, 506, 230	26, 518, 664	22, 477, 962	84. 7

It can easily be seen by examining the table that the United States is not discriminated against, because England's percentage of duty on goods entering Mexico is 118.6 per cent, while that of this nation is but 74.1 per cent—in fact, less than any other of the great commercial nations. The other figures speak for themselves.

Mr. Guenther has also prepared the following comparative analysis of Mexican imports :

	United States.		England.	
	Value.	Duties.	Value.	Duties.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Articles on free list.....	10, 293, 301	.....	2, 050, 826	.....
Cottons.....	3, 834, 784	2, 742, 828	2, 768, 341	3, 601, 784
Linens.....	80, 804	87, 116	383, 946	386, 656
Woolens.....	380, 108	508, 782	364, 390	399, 920
Silks.....	72, 857	69, 501	27, 806	20, 573
Silks with.....	48, 619	48, 158	27, 097	22, 593
Alimentary substances.....	2, 115, 088	1, 742, 165	57, 032	53, 876
Stones and earth.....	26, 287	15, 293	1, 088	489
Crystal and porcelain.....	243, 033	254, 651	16, 225	28, 677
Gold, silver, and platinum.....	36, 728	2, 956	687	373
Iron and steel.....	815, 225	565, 752	337, 595	372, 990
Copper and its alloys.....	261, 418	128, 139	66, 857	50, 563
Tin, lead, and zinc.....	20, 771	8, 981	10, 843	4, 340
Fancy goods.....	236, 454	176, 189	24, 582	11, 566
Machines and apparatus.....	436, 736	88, 880	3, 461	1, 144
Wagons and carriages.....	191, 664	104, 141	415	147
Arms, powder, and ammunition.	200, 914	130, 356	7, 034	2, 243
Wood and its manufactures.....	301, 649	247, 451	7, 124	4, 372
Paper and pasteboard.....	378, 395	355, 719	32, 528	27, 751
Furriers' goods.....	188, 817	159, 460	10, 443	5, 585
Medicinal drugs and chemicals..	1, 184, 809	737, 287	88, 545	52, 116
Divers objects.....	1, 320, 951	995, 972	51, 018	36, 101
Total.....	22, 669, 420	9, 169, 787	6, 337, 980	5, 083, 870

Information from Mexico indicates that the manufacture of cotton goods is being actively prosecuted in this country. This is more particularly shown by the following statement of the imports of these goods from Great Britain in the past nine months: In 1890 the value of unbleached stuffs was \$19,636; bleached, \$683,159; prints, \$662,642; dyed, \$187,404; making the total importations for that year \$1,552,841. This year the values of the imports for the same period are as follows: Unbleached, \$22,289; bleached, \$843,729; prints, \$449,908; dyed, \$174,196; total, \$1,490,122. This falling off in importations of the prints and dyed stuffs is almost entirely due to the marked improvement made by the domestic manufacturers in the quality of their goods.

ADOPTION OF A NEW COMMERCIAL CODE.

The Republic of Mexico has recently adopted a new commercial code affecting foreign merchants in that country. The following are the most important provisions:

Every foreign commercial house desirous of conducting business in Mexico must have its company's contracts registered, and joint stock companies will be required, further, to publish monthly a statement of their affairs. The non-fulfillment of these regulations will entail the responsibility of the representatives of these companies in Mexico.

The establishment of warehouses is permitted for storing as well as for the deposit, superintendence, and sale of the goods. Every depositor will receive a warrant and this warrant may be given as security. The holder of the warrant is entitled to the goods, even in event of the depositor being declared bankrupt after giving up the warrant.

The legal rate of discount is reduced from 12 to 6 per cent.

The mortgage duty on real estate is abolished.

A petition for bankruptcy may be presented by a creditor and the holder of a protested bill. Hitherto action has been taken by three creditors and when three protested bills were presented.

THE FREE ZONE IN MEXICO.

[By M. Romero, Mexican Minister to the United States.]

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In the northern part of Mexico, along its border line with the United States, there extends a strip of land which is governed by trade regulations wholly different from those of the rest of the Republic. This strip is known as the Free Zone, or, in Spanish, *Zona Libre*, and it is, it seems to me, an institution wholly misunderstood in this country. The general opinion seems to be, first, that it was established by Mexico as an act of antagonism, if not of unfriendliness, toward the United States, and, second, that its main, if not its sole, purpose was to encourage smuggling, to the prejudice of the fiscal interests of this country. I wish to show how unfounded such impressions are; and, prompted as I am by a due regard for a fair understanding and harmony between the two countries, I believe it will not be considered presumptuous on my part to offer some statements concerning that subject. I will not be expected to write in defense of the Free Zone. The official records of Mexico show that, far from being its friend, I have ever been its most earnest opponent, and I am the only Mexican Secretary of the Treasury who has so far officially advised its abolition. I intend to consider the matter impartially and fairly, and to do this I will first state how the *Zona Libre* originated in Mexico, and then define what we mean by that term.

When, in pursuance of the treaty of February 2, 1848, the Rio Grande River, from El Paso del Norte to the point where it flows into the Gulf of Mexico, was accepted as the boundary line between Mexico and the United States, new settlements sprang up on both banks of the river, and things began to take their level under the new conditions. The two nations, which so far had been separated by a desert, were at once brought into close contact with one another, and it was found that the economical and

commercial conditions on the north and south banks of the Rio Grande were in striking contrast to each other. In the towns of the United States along the north bank no taxes were levied and no restrictions of any kind were imposed upon internal trade. The import duties on foreign goods brought into the United States were at that time relatively low, and this country was then at the beginning of its unexampled career of material progress and prosperity. On the opposite bank, in Mexico, the towns were loaded down with the onerous system of taxation which had come down to us from the Spaniards. The heavy taxes which were levied on internal commerce had largely increased the cost of foreign and domestic goods, and the collection of those taxes made a system of interior custom-houses, with all their attending evils, a necessary institution. There were many and very onerous restrictions both upon foreign and domestic trade, and the import duties on foreign goods were so high as to be, in many cases, practically prohibitory. Many commodities were actually excluded from the country under the plea of protection to our national industries, and among these were articles of prime necessity, such as grain and provisions. The result of this condition of things was that radically different prices prevailed in the towns on both sides of the river. At Brownsville, Tex., for instance, on the north bank of the Rio Grande, all sorts of domestic articles and the necessaries of life, such as provisions and clothing, were bought at a low price, while in Matamoras and other Mexican towns, on the south bank, the same articles of domestic production, and often of an inferior quality, cost twice and even four times as much as at the stores just across the river. A still greater disproportion existed in the price of foreign goods on either side of the river, and the cheapest commodities were always sold on the left bank of the Rio Grande.

This difference of taxation and consequently of prices on the frontier necessarily brought about one of two results. It either caused the inhabitants of the Mexican towns to emigrate to the

settlements on the other side of the river, in order to enjoy the advantages which were to be had in this country, or it induced them to purchase in the United States the goods which they needed and to smuggle them across the Rio Grande to their homes in Mexico.

In 1849, the year following the adoption of the new boundary line by the two countries, the situation on the Mexican frontier became so untenable and disquieting that our Federal Congress was obliged to pass, on the 14th of April of that year, a law authorizing for three years the importation through the frontier custom-houses of the State of Tamaulipas of such provisions as were needed for the use of the people of the frontier. Such goods had up to that time been prohibited by the existing tariff, or had been subject to almost prohibitory duties. This law did not meet the exigencies of the situation, because it was restricted to provisions, and these were not the only things that men require for their life and comfort.

On August 30, 1852, the United States Congress passed a law by which the contrast between the conditions of the two sides of the Rio Grande was made still greater, and the condition of things on the Mexican side became worse than ever. By that act foreign goods could be sent in bond to Mexico over certain routes specified in the law and others to be authorized by the Secretary of the Treasury. These goods could be held on the frontier in the United States until a favorable opportunity came for their exportation into Mexico, and they were free of all duties on the part of the United States. There was no similar privilege within the territory of Mexico, and all foreign goods, of whatever kind they might be, were there subject to the payment of duty upon their importation. The result was that the inhabitants of the Mexican side of the river were placed under such disadvantages that the public men of Tamaulipas, the only State which at that time had towns on the border facing the border villages of Texas,

came to believe that they must have privileges similar to those existing in the United States, to enable them to live on the frontier. It was this belief that originated the Free Zone, and, in the unsettled condition of Mexico, such men soon found an opportunity to bring about what they desired.

This statement of facts shows that the Free Zone was not really an invention of the Mexican authorities of the State of Tamaulipas, but an imitation on a larger scale of a similar measure enacted more than five years previously by the United States Government for the benefit of that portion of its territory bordering on Mexico.

On February 5, 1857, we adopted our present constitution, which went into operation on the 16th of the following September. On the 1st of December of that year, General Don Ignacio Comonfort, who had just been elected President under the new constitution, was inaugurated. Two weeks later he unfortunately issued a pronunciamiento against the very constitution to which he owed his election and consequently the legality of his powers, and he thereupon dissolved the Federal Congress then in session. Almost all the Mexican States refused to consent to such a daring violation of the constitution, and many of them, especially those far removed from the capital, reassumed their sovereignty, and their legislatures granted extraordinary powers to the governors, in order to enable them to defend their institutions against those who had betrayed their trust in trying to overthrow the constitution, acting very much as some of the Brazilian States recently did when the president of that Republic, Marshal Deodoro Da Fonseca, attempted to assume the Dictatorship.

By virtue of such powers, the governor of the State of Tamaulipas issued on March 17, 1858, a decree designed to afford a remedy for the hardships from which the frontier population of that State were then suffering. This decree established what has since that time been known in Mexico as the Free Zone. It permitted all foreign goods intended for the use of the frontier towns of that

State, for the ranches in their jurisdiction, or for trade between those towns to be exempt from all federal duties, but not from municipal or State taxes. Such goods could remain in bond in the same towns either at the house of the importer or at the public warehouse. The Federal Government not then having warehouses on the frontier, all packages had to go, of course, to the house of the importer. Thus, goods imported into the frontier towns could remain stored indefinitely without paying any storage or any other charges to the federal treasury, and they only paid import duties when they were taken from the frontier towns to the interior of Mexico.

Nothing could furnish a better idea of the true object of the ordinance issued by the governor of Tamaulipas, if there were room for any well-founded doubt, than the grounds on which he based his action, which he stated in the preamble of his decree in the following words:

The citizen Ramon Guerra, governor *ad interim* of the State of Tamaulipas:

Whereas our towns on our northern frontier are in a state of actual decadence for the lack of laws to protect their commerce; and whereas, being situated in close proximity to a commercial nation which enjoys free trade, they need equal advantages in order not to lose their population, which is constantly emigrating to the neighboring country: Now, therefore, desiring to put an end to so serious an evil by means of franchises which have so long been demanded by the frontier trade, favorably considering the petition of the inhabitants of Matamoras, and using the extraordinary faculties with which I am invested by the decree of December 28 of the honorable legislature of the State, with the advice and consent of the council, I have seen fit to decree as follows, etc.

The articles of the decree which I give below contain the main provisions about the free zone and show exactly how far it was intended to go:

ARTICLE 1.

Foreign goods designed for the consumption of the city of Matamoras and of the other towns on the bank of the Rio Bravo, Reynosa, Camargo, Mier, Guerrero, and Monterey Laredo, and for the trade which these towns carry on among themselves, shall be free from all duties, with the exception of municipal

duties and such taxes as may be imposed to the end that the burdens of the State may be borne. In like manner, goods deposited in Government warehouses or in warehouses belonging to private individuals in the said towns shall be free of duties so long as they are not conveyed inland to the other towns of the State or of the Republic. The terms on which this trade is to be conducted are laid down in the following articles.

* * * * *

ARTICLE 7.

Foreign goods leaving the privileged towns to be conveyed into the interior of the Republic shall, at the time of so doing, become subject to the duties laid upon them by the tariff, and they shall never be conveyed into the interior without having paid, at the custom-house of their place of departure, all duties which are required to be paid in the port, and without the observance of all the requirements and provisions of the laws in force, in order not to be molested or detained on their way.

The governor of Tamaulipas foresaw that his decree would naturally facilitate smuggling, to the disadvantage of the federal treasury of Mexico, but I am sure he little imagined that the Treasury of the United States would suffer in consequence thereof, and he earnestly recommended the citizens of the State to try to prevent such a result by all means in their power, as appears from the following article of his decree :

ARTICLE 8.

As the privilege granted by this decree ought not to cause any detriment to the national revenue, it is the duty of the inhabitants of the frontier to prevent, by all the means in their power, this privilege from being converted into a shameful smuggling traffic ; it is, therefore, the duty of every inhabitant of the frontier voluntarily to become a sentinel, constantly on the watch to prevent smuggling ; otherwise, the Government will be under the painful necessity of withdrawing this privilege by revoking the present decree.

The governor's decree ended with this article :

ARTICLE 9.

This decree shall be subject to the revision and approval of the legislature of the State at its next meeting in ordinary session and to that of the Federal Con-

gress when constitutional order shall be restored, although it shall go into force as soon as published in the privileged towns.

Therefore I order it to be printed, published, circulated, and duly enforced.
Done at Ciudad Victoria, March 17, 1858.

RAMON GUERRA,
JOSÉ MARIA OLIVERA,
Chief Official.

The foregoing decree was confirmed and amplified under the plea of establishing regulations for its execution by another decree of the governor of Tamaulipas, bearing date of October 29, 1860. The former decree was submitted, in compliance with the provisions of its last article, to the legislature of the State, and also to the Federal Congress for its approval, and was sanctioned by the latter body July 30, 1861.

This brief statement will, I think, be sufficient to show that the establishment of the Free Zone was a step taken in fulfillment of the duty of self preservation, so to speak, and imitating similar measures adopted by the Congress of the United States, and that it was by no means a measure approved in a spirit of unfriendliness, much less of hostility, towards the United States, as has been generally believed in this country.

The second impression prevailing here in regard to the Free Zone is equally unfounded, as I will try to show. The events connected with the foreign intervention in Mexico did not permit the natural effects of the Free Zone to be felt in the country until the Republic returned to its normal condition, that is, until after the downfall of the French intervention and the so-called Empire of Maximilian, events which took place during the year of 1867. In January of 1868 I was called to the Treasury Department by President Juarez, and in my annual report to Congress, September 16 of that year, I stated that one of the causes of the then depleted condition of the Mexican treasury was the large contraband trade that was carried on through the Free Zone and enjoyed by the frontier towns of Tamaulipas; further remarking that the custom-houses of

those towns were scarcely able to meet their clerk and office expenses, and that this fact showed that the Free Zone had not made that region prosper; and that, in my opinion, that institution was not the proper remedy for the evil which it was intended to cure.

It is true that the privilege granted by the Free Zone to the inhabitants of the northern portion of Tamaulipas to import and consume foreign goods without paying federal duties, to store them in their own houses, and to keep them in bond for an unlimited time, was a powerful incentive to smuggling from the Free Zone either to Mexico or the United States; and that Mexico, which has suffered greatly by that result, has been obliged, with a view to the repression of smuggling, to establish a costly, oppressive, and complicated system of inspection; but protection to smuggling was not the object of the creators of the Free Zone, nor is it possible that smuggling should have been carried on to the prejudice of the United States, to the same extent to which it has been done to the disadvantage of Mexico.

As the duties levied by the Mexican tariff are much higher than those collected by the United States, it is evident that the most lucrative contraband trade, and the easier one to make, is that which is carried on to the detriment of the Mexican Treasury. Smuggling is more easily done in Mexico, because the Mexican frontier is very sparsely populated, and therefore the difficulty of guarding it is greatly increased, while the frontier of the United States is more thickly settled and better protected against illicit traffic.

It does not seem to me reasonable to imagine that the Free Zone was established for the purpose of encouraging smuggling, to the detriment of the United States Treasury, when in fact it harms Mexico to a much greater extent than it does this country, as, in order to injure the United States, the Mexicans would not be willing to injure themselves ten times as much; and if the contraband trade carried on under the shadow of the Free Zone was a sufficient reason for its suppression, the interest of Mexico in this matter would long since have settled the question.

Any human institution can be abused by men. The goods stored in the frontier towns of the United States, in accordance with the act of August 30, 1852, were easily smuggled into Mexico, and yet when the United States Congress passed that law, they did not intend, of course, to encourage smuggling, to the detriment of Mexico, although such was practically its result. In the same manner the Governor of Tamaulipas at first, and the Mexican Congress afterwards, did not intend, in establishing the Free Zone, to encourage smuggling, to the detriment of the United States. To prevent smuggling from the Free Zone, as far as this was possible, the Mexican Government has been obliged to duplicate its frontiers of inspection with the United States, at great expense and considerable inconvenience to bona-fide merchants, as it has, besides the custom-houses right on the boundary line with proper inspection between each of them, some distance further south, under the name of fiscal police, another system of custom-houses and inspection to prevent smuggling between the Free Zone and the rest of the country.

What would the people of the United States think if Mexico should charge that such provisions of the tariff of this country as are lower and more liberal than ours were enacted by the United States to encourage smuggling, or if they should demand that the tariff be changed because it did encourage smuggling? What would the people of this country think if we should ask them to repeal the act of August 20, 1852, because it encouraged smuggling in Mexico? The Mexican people feel exactly as the people of the United States would feel if the circumstances were reversed.

I think it will not be amiss to make a few remarks about the different phases that the Free Zone question has assumed in Mexico, since the restoration of the Republic in 1867. The Committee of Ways and Means of the Fifth Mexican Congress reported, in its session of 1870, a tariff bill which sanctioned the

Free Zone, and this matter was fully discussed during the latter part of October and the beginning of November of that year. Members of the Cabinet have in Mexico, not only the privilege of the floor in both houses, as in the United States, but the right to participate in the debate and to express the views of the Executive. As Secretary of the Treasury of Mexico, I made a thorough study of this important and complicated subject, and I took part in that debate in the sessions of the House of the 28th and 29th of October, and 4th and 5th of November, 1870, making extended remarks against the Free Zone, and I recommended its abolition to Congress, in behalf of the Executive. The reasons which led me to this conclusion were mainly of a constitutional character, namely, that the Free Zone constituted a privilege in favor of a State, forbidden by our constitution; and that although I was aware that the situation of the frontier towns of Mexico required the adoption of suitable remedies, I thought that one could be found of such nature as would embrace the whole country, and be divested of the odious character of a privilege. My efforts were in vain; Congress voted in favor of the maintenance of the Free Zone; and although that vote never became a law, the tariff then under discussion nevertheless exercised great influence upon the existing and other administrations, as it showed what was the opinion of the representatives of the people on that question.

The abolition of the Free Zone was agitated in Mexico after I left the Treasury Department in November, 1872. When, four years later, in 1878, I was again at the head of that Department and saw that it was not possible then to abolish the Free Zone, because the frontier influences were then stronger than ever, I thought that we ought at least to make proper regulations, with a view to prevent, as far as possible, any abuses of its franchises, and the regulations of June 17, 1878, were then issued. After that there was a strong reaction in favor of the Free Zone, especially when General Gonzalez, a citizen of the State of Tamaulipas, became President from 1880 to 1884.

General Diaz succeeded General Gonzalez on December 1, 1884, and in a new tariff act issued by him, January 24, 1885, the Free Zone, which had been up to that time restricted to the State of Tamaulipas, was extended to the whole frontier, namely, to the States of Coahuila, Chihuahua, and Sonora, and to the territory of the Lower California, for a distance of 20 kilometers from the boundary line, thereby placing it on a better footing than it was before, when it appeared as a privilege confined to a single State and denied to others which were exactly in the same condition. But the same tariff act, which so extended the Free Zone, limited considerably its franchises by the regulations contained in Chapter XII of the tariff of January 24, 1885. The frontier towns and the representatives in Congress, however, exerted such pressure in the Federal Congress, that by an act dated June 19, 1885, the limitations established in that tariff were suspended, and very liberal regulations were again adopted in the succeeding tariff of March 1, 1887, which remained in force until the present one of June 12, 1891, was issued. This act marked a new era, in so far as the Free Zone is concerned, as article 676 of the same subjects all foreign goods coming to the Free Zone, which heretofore had been free of all import duties, to a duty of ten per centum upon the import duties in the other Mexican ports, excepting cattle of all kinds, which will pay full duties. I consider this provision as the beginning of a new system which will finally result in doing away with that institution.

As I have already remarked, the opinion of Mexican statesmen on the Free Zone question has been divided, some entertaining the belief that it should be abolished because it grants to one section of the country privileges which are not authorized by the constitution, and others, by far the largest number, holding that, under the circumstances, it was an imperative necessity, as its abolition would be equivalent to the destruction of the frontier. The friends of the Free Zone represented that the frontier towns

of Mexico owed their prosperity to that institution, and that they could not exist without it. There was a coincidence, which is one of the causes that induced a great many Mexicans to attribute to the Free Zone more beneficial results than it has really produced, and this circumstance, to which I shall refer, has had a great influence in its maintenance and extension.

The situation of the Mexican frontier up to the beginning of the Civil War in the United States was, as I have already remarked, one of poverty and even of misery, and formed a striking contrast with the one existing on the other side of the Rio Grande. That war broke out almost simultaneously with the establishment of the Free Zone, and the situation of the Mexican frontier changed very materially as a consequence of the war, during which, and for some time afterwards, welfare and prosperity crossed from the left to the right bank of the Rio Grande, on account of the general prostration then prevailing in the South. Superficial observers attributed that prosperity not to its true cause, which, in my opinion, was the war, but to the Free Zone; and feeling convinced that it had been productive of extraordinarily favorable results, they naturally considered it as a panacea for all evils, and its extension as one of the country's most imperative necessities. The latter opinion finally prevailed in the councils of the Mexican Government from 1877 to 1885, and this led to the extension of the Free Zone to all the boundary States.

There is another point of view of this question, which, in my judgment, has so far passed entirely unnoticed. The Free Zone is really an advantage to the United States, since, as I have already stated, the Mexican system of legislation concerning customs and excise duties has generally been restrictive and even prohibitory, both by reason of the high import duties and of the existence of inferior custom-houses, and also of State and municipal taxes on foreign goods, which require vigilance and restrictions that can not but hamper business transactions. Any relaxation

of such a system of restriction can not but be favorable to foreign nations trading with Mexico, and specially to a neighboring country like the United States, whose manufactures are mainly, if not exclusively, consumed on the Mexican frontier.

If the Free Zone has inconveniences for this country much less serious than those which it has for Mexico, it possesses, in my judgment, another decided advantage which has also remained hitherto unnoticed. It practically makes of a portion of Mexico a free market for all products and manufactures of the United States, since merchandise of all kinds from this country may be imported into and consumed on Mexican territory duty free, and be warehoused in the region of the zone for an unlimited time. No greater privilege can be asked for the commerce of a nation, and the only drawback in this respect that I see to the Free Zone is that it does not embrace the whole of Mexico. Supposing its privileges were extended to the whole of Mexico, would the United States consider the free admission of their products in my country as prejudicial to their interests? How strange it appears under this view of the question—the idea prevailing here that the Free Zone brings only harm to the United States and has been established to the advantage of only European goods, when the largest amount of goods imported there under its franchises are from the United States!

The Government of the United States has been recently trying in a very earnest manner to obtain from foreign countries, and specially from the American republics, the free entry, or the admission at a reduced rate of duties, of a limited number of its products and manufactures, and they naturally feel pleased when a new agreement is made. And yet the liberal terms provided by Mexico in favor of the free admission of all the products and manufactures of this country into our Free Zone, has been taken here as an unfriendly act on our part towards this country.

There can be no doubt as to the right of the Government of

Mexico to establish such duties and regulations on the foreign trade of the country, even in case they would harm in any manner the mercantile interests of any other foreign nations, and I therefore think it unnecessary to establish the right of Mexico to adopt and maintain the Free Zone.

I think it proper on this occasion to state that the misunderstanding which has prevailed here with regard to the object and tendencies of the Free Zone and the manner in which that misunderstanding has been expressed by certain Federal and State officials, has really served as a powerful argument to the Mexican defenders of the Free Zone who accuse their opponents of subserviency to this country, attributing to them a design to sacrifice the interests of Mexico to the demands of the United States. It may not be out of place for me to quote here certain views regarding this aspect of the question that I expressed as Secretary of the Treasury of Mexico, in my annual report submitted to the Federal Congress under date of September 16, 1870, and which are as follows:

The friendly representations made by the United States Government to that of the Republic in relation to the injury accruing to the United States from the Free Zone are also worthy of being taken into consideration by Congress, not that it may seek to please the neighboring nation in a spirit of servility, at the expense of the rights and interests of the Republic, which it is under obligations to care for and uphold above everything else (which spirit would be unworthy of our national representatives), but as a neighborly act, and in order to have a right to be heard and treated with consideration in case that in the process of time some difficulty may arise on our northern frontier of such a nature as to possess, regarding Mexico, the character which the Free Zone possesses as regards our neighboring nation; in order, moreover, that Mexico may acquire a new title to be heard and considered in a cordial and friendly, as well as just and equitable, manner when she may have occasion to offer remonstrances with a view to the protection of her interests. A nation's dignity is not so well upheld by refusing to consider the moderate and amicable remonstrances of a neighboring nation, as it is by hearing and considering such remonstrances and then acting according to the requirements of justice.

For more detailed information on this subject, and especially for the English translation of some of the official documents bearing on the same, I refer the reader to a message which the President of the United States sent to the Senate on March 16, 1888 (Senate Ex. Doc. No. 130, Fiftieth Congress, first session), and to the report and accompanying documents of the Committee on Foreign Affairs of the House of Representatives, on the relations of the United States with Mexico, presented by Mr. Schleicher on the 25th of April, 1878 (House Report, No. 701, Forty-fifth Congress, second session).

I sincerely hope that the foregoing remarks will in some measure contribute to dispel the wrong impressions prevailing in the United States as to the Mexican Free Zone, and that thereby, when the agitation on this subject shall have completely disappeared, it will be then easier to adjust this matter in such a manner as will be honorable and satisfactory to all concerned.

REVISION OF THE MEXICAN SYSTEM OF TAXATION.

The following important information from the City of Mexico regarding the revision of the Mexican system of taxation has been received:

Realizing that the imposition of taxes on imported merchandise by the State and municipal governments throughout the Republic impeded commerce, the Mexican Government called to the capital an economic conference with delegates from each State to confer as to the best method of removing this obstacle without an embarrassing loss of revenues. The conference which has been in session since last December has reached certain conclusions, which, although not yet finally acted upon, will in all probability be adopted, and are of the greatest importance to all persons engaged in commerce with the Republic.

It is proposed:

First. That all interior customs houses be abolished, and that all imported merchandise having complied with the customs laws at the port of entry shall thereafter pass unimpeded to its destination.

Second. In place of the existing alcabala (internal duties) an indirect tax is to be substituted, to be collected from the consumer, which shall be uni-

form throughout the Republic, at a rate not to exceed 8 per cent ad valorem on all articles except tobacco and spirits, and shall be paid in the form of stamps which the general Government shall issue to the several States as they shall make requisitions for the same. This tax shall be imposed for twenty years from and after the 5th day of February, 1892.

Third. The tax upon tobacco and spirits shall be determined from time to time by special regulation.

Fourth. The law authorizing the States to impose a tax of 5 per cent on the import duties levied upon imported merchandise is to be repealed, and there is to be no taxation whatever upon imported merchandise except the regular Federal customs dues and the 8 per cent stamp tax herein mentioned.

Fifth. The revenues from the new 8 per cent tax shall belong to the States that collect them, and those collected in the Federal districts and the Territories shall be paid into the Federal treasury.

Before this plan goes into effect it must be approved by the Federal Congress and ratified by the several States.

ABOLITION OF INTERNAL CUSTOMS DUTIES.

A copy of the plan for the abolition of internal customs duties in the Republic of Mexico, recommended to the Government by a commission appointed some months ago has been received. It is well known by all who have studied the subject that the system of customs dues imposed upon imported merchandise by the States and municipalities of Mexico, in addition to those imposed at the custom-house on the border by the general Government, has been a source of great annoyance and a serious obstacle to the extension of trade, therefore the several States, at the suggestion of the Federal power, committed to a commission of eminent economists the duty of proposing a solution of the problem. After nearly a year devoted to the investigation of the subject, they recommended the adoption of the following substitute for article 124 of the constitution of the Republic :

ART. 124. From the first day of July, eighteen hundred and ninety-three, both national and foreign merchandise shall be absolutely free in its circulation within the national territory. As a consequence:

1. Neither the Federal Government nor those of the States shall impose any of the taxes known as the *alcabala*, *portazgo*, *consumo*, and package dues, or any other tending to prevent or restrict the movement of goods.

Neither shall they:

A. Impose any tax on the mere transit of goods in the internal commerce of the country.

B. Subject to taxation of any kind the introduction of merchandise into, or the extraction of merchandise from, the territory of the States, or forbid either operation except for reasons of police.

C. Impose differential duties on domestic goods according to the place of their manufacture or origin, nor establish any distinctions in taxation excepting such as are founded on the kind and quality of the goods.

2. Only the Federal authorities are empowered to impose transit duties and then only on foreign merchandise passing through the country.

3. Neither domestic merchandise nor foreign merchandise legally imported shall, in its circulation through the country, be confined to any given route or be liable to examination or search, or need to be accompanied by any fiscal document; saving, however, all such regulations as the Federal authorities may draw up for the introduction of foreign merchandise.

4. Foreign merchandise, when converted into domestic merchandise by a process to be more exactly determined by a special law, shall be on the same footing as domestic merchandise as regards general and local taxes.

In the new Mexican tariff which goes into effect November 1, the following commodities have been added to the free list: Fresh milk, guano, belts of leather, etc., seeds for agriculture, type metal in bars, ironstone hammers, iron barrels, perforated sheet iron, asbestos crucibles, millstones, insulators for telegraph and telephone purposes, silk cloth for flour sieves, printed sheets for bank notes, maps, wall pictures for schools, drawing courses, copying apparatus, electric batteries, miners' lamps, scientific apparatus, lightning rods, collections of coins, miners' hats and caps.

A decree recently issued by the President of Mexico removes many of the arbitrary restrictions at the custom-house at the City of Mexico. The decree provides that foreign merchandise paying duty on entering the country at the frontier or maritime custom-houses shall not be subject to further taxation beyond the 5 per

cent consumption tax, calculated on the amount of the import duties, on being introduced into the Federal district. Foreign goods on the free list of the tariff shall not pay anything on entering the Federal district.

The Bureau of American Republics has received official notice of a decree by the Government of Mexico amending paragraph 199 of the tariff of the Federal district, so that the duty on rag paper, blotting paper, wrapping paper, with the exception of colored papers for wrapping, and unsized paper, except for cigarette wrappers, is hereafter to be 50 centimes per 100 kilograms. Colored wrapping paper and unsized paper for cigarette wrappers of native manufacture are exempt from all duty.

The Bureau of American Republics has been notified that the Mexican State of Coahuila has exempted capital invested in flouring mills, starch factory, and cotton cleaning establishments from State and local taxation for a period of twelve years.

COFFEE RAISING.

Maj. J. D. Warner, of Mexico City, supplies the following facts concerning coffee raising in this country:

The coffee raising in Mexico is as yet in its infancy, but it pays from one hundred to two hundred per cent on capital invested, the Mexican coffee being of a superior quality and ranking amongst the best in the world. A new coffee plantation will pay original cost and leave a good margin of profit by the end of the fifth year after planting. Coffee is worth at present, at the plantation, from 20 to 25 cents per pound, while the annual cost of production averages only 7 cents per pound, the coffee being sold for cash only and never commissioned out to find a market. Good coffee land with an exceptional title can be bought from \$5 to \$100 an acre, according to location and condition and 1 acre will grow 1,000 trees.

A coffee tree begins to bear in the third year after planting, and when in full bearing will yield from 2 to 10 pounds of coffee annually, according to age—the life of the tree being from thirty to forty years. The coffee plantations of Mexico have never been attacked by any disease or parasite. Irrigation is not required.

Much of the labor incidental to the raising and preparation of coffee can be, and is, performed by women and children, which largely increases the available labor supply and reduces the cost of the same.

The soil and climate suitable for coffee are suitable also for tobacco, corn (of which three or four crops are raised yearly), beans, oranges, and lemons, and in the lower lying districts for sugar-cane, rice, and all of the tropical fruits as well. The altitude suitable for coffee is from 1,000 to 5,000 feet, or say, "frost line."

The coffee districts are amongst the healthiest in the country, and the climate adapted to coffee is suitable also for persons accustomed to a temperate zone.

The wages in the principal coffee raising districts according to official tables, average $43\frac{3}{4}$ cents per diem, and the necessary labor for prosecuting this industry is obtainable without difficulty.

The picking season for coffee commences at the end of November, the buyers leaving the plantations about the end of May.

The value of all the coffee produced in Mexico in the year 1891 amounted to \$6,500,000, while the consumption in the United States in the same year was \$75,000,000.

Every coffee planter should carry on, simultaneously with his main business and in addition to the raising of corn, beans, and tobacco already mentioned, the following industries:

- (1) The fattening of cattle which gives an annual profit of 100 per cent.
- (2) The raising and fattening of hogs, an important industry in Mexico.
- (3) The raising of vanilla and cacao; on the former of which as much as 300 per cent has been made in good years.
- (4) The sale of valuable timber, such as mahogany, cedar, and rosewood, which are found on all uncleared coffee lands.

The foregoing items of information apply particularly to the State of Veracruz, where the collateral conditions of accessibility to the land and facility for transportation of its products to the more important markets, are the best in the Republic.

It may be mentioned that the soil and climate suitable for coffee are adapted also to the growing of tea, to the profits and possibilities lying in the cultivation of which product the attention of many people is now being drawn.—*The Mexican Trader*.

There are now in active operation, in the district of Soconusco, State of Chiapas, Mexico, twenty-six coffee estates which employ over fifteen hundred men. In this district there is still a very large extent of first-class coffee land not being cultivated, which

could easily produce over 2,000,000 pounds of coffee. The cost of production to the growers is about 7 cents per pound, packed in bags and ready for transportation. The demand is always in excess of the supply, and sales are readily made at the plantations at 20 cents per pound. The lack of sufficient labor is the great hindrance to the increase of production. The reports which have been circulated of the total failure of crops in Chiapas is denied by residents of the State. Although the yield of wheat and corn in several of the districts is less than usual in that very fertile section, yet the lands produce so bountifully, even when uncultivated, that it is almost an impossibility for a condition of famine to exist there.

The Congress of the State of Nuevo Leon, Mexico, for the purpose of encouraging the cultivation of fiber plants, has exempted from taxation, for a period of twenty years, all lands devoted to that purpose.

The most important industry of the Mexican peninsula of Yucatan is the export of henequen fiber, which is used very extensively in the manufacture of cordage. Recent statistics show that the production for the present year will exceed 100,000,000 pounds, about one-half of which is exported to Boston, Mass.

The exportation of tobacco from Mexico during the fiscal year ending 1891 amounted to \$156,844.56 more than the previous year, which exceeded that of 1888-'89 by \$23,533.80.

The Bureau of American Republics is informed that over three hundred thousand orange trees have been planted within the past year on the line of the Monterey and Gulf Railroad, Mexico, by planters who have been engaged in orange culture in California.

MINERAL DEVELOPMENT.

An interesting account has been received relative to the development of the immense deposit of salt on the island of Carmen, in the Gulf of California, near Loneto in the Territory of Lower

California. This island was purchased by the Carmen Island Salt Company, not long ago, for \$500,000, and it is proposed to utilize this magnificent gift of nature in a most extensive manner. Steamers of the greatest draft will be able to load, by means of a series of chutes, directly from the immense wharf which is now in the course of construction, jutting out into the Gulf some 3,000 feet. The output of the mines is expected to be about 300 tons a day, and the company will be able to send north by the Sonora Railway, a train load daily from Guaymas. Large quantities will also be shipped by steamer to Mazatlan, where a great deal of salt is necessary to be used in the mines of Sinaloa for the reduction of the refractory ores mined in that district. The deposit is almost pure salt in the form of crystal, and is so situated as to be capable of advantageous and economical mining.

The Tráfico, of Guaymas, confirms the already published reports of the San Marcial anthracite coal fields. It appears that there was some fear in Sonora lest English capitalists might secure the coal fields and hold them undeveloped until such time as there should be a scarcity of coal in England. It is very likely that, if English capitalists should acquire control of the Sonora deposits, they would work them to make all the money possible in as short a time as possible. English capitalists are not given to buying up properties in foreign lands for purely patriotic considerations. Operations at the coal fields are being carried on some 40 miles from Ortiz, a town on the Sonora Railway between Hermosillo and Guaymas. The concession, which is owned by a Mexican company, covers about 4,000,000 acres. The enormous extent of the anthracite deposit may be comprehended when it is said that borings 50 miles apart have found coal. The diamond drill has gone through four veins; the first being 2 feet, the second 4 feet, the third $7\frac{1}{2}$ feet, and the fourth the drill had penetrated 22 feet and is still working in coal. The coal is by actual test equal to the finest Lehigh Valley product of anthracite.

It can be traced for miles on the surface, and the different borings of the drill show the same four veins of the same thickness. A railway 60 or 65 miles will bring the coal to the harbor at Guaymas, and the entire distance is very smooth, offering no engineering obstacles. The coal can be laid down in San Diego, Cal., for \$5 per ton, with less than a thousand mile water haul around the peninsula of Lower California.

A synopsis of the report made by the governor, don Joaquin Baltran, to the Secretary of the Treasury, in Mexico, gives the results of recent explorations of the coal deposits in Sonora. It appears that the deposits of anthracite coal in that department are practically inexhaustible, the area in which it is found extending over a region of 570 square leagues. In making the borings it was found that the veins varied greatly, some of them being merely from 2 to 4 feet thick, while others range from 8 to 25 feet. It was estimated by the engineers that the valley of San Marcial, as shown by the exploration, contains over sixty billion tons, in round numbers, of excellent quality coal. Col. Baltran brought with him fine specimens of plumbago, which he says exists in large quantities in the neighborhood of the coal veins.

The Bureau of the American Republics has received a valuable report upon the coal deposits of Mexico, which are regarded as even more essential to the prosperity of the country than the gold or silver mines. Although traces of coal have always been found in several of the Mexican States, it was not supposed to exist in paying quantities until recently. It is now known, however, that there are very large deposits of both hard and soft coal of excellent quality in nearly all the States of the Republic, and the total area of coal beds in the Republic is estimated at 125,000 square miles. The development of those resources is, however, dependent upon the construction of transportation facilities.

Search is being made by a party of Americans for diamond fields believed to exist near Tlacotepec, in the comparatively in-

accessible State of Guerrero, Mexico. It is an historical fact that Gen. Vicente Guerrero, a patriot of the first Mexican revolution, after whom the State is named, came suddenly into possession of a number of rough diamonds of great size and value, and died without disclosing where he obtained them. It is believed they were discovered near the site now being explored.

An important discovery of quicksilver has been made at San Juan Anahuac, in the State of Guerrero, Mexico. The mines, so far as examined, appear to be very extensive, and assays have yielded as high as 50 per cent of mercury. Señor Antonio de Castillo, director of the National School of Mines and professor of mining engineering and metallurgy in that institution, has been commissioned to examine and report upon the property, and has left for Guerrero. At present the most valuable quicksilver mines in Mexico are those of Huitzaco, belonging to Señor Romero Rubio, and it is said that he will secure the right of exploiting the new mines should they prove of practical value. Deposits of cinnabar are also stated to have been discovered at Flor Cañon, midway between Victoria and the Gulf of Mexico.

The Bureau of the American Republics is informed that large and valuable deposits of mother-of-pearl have recently been found in the city of Chihuahua, Mexico, on the banks of the river Conchas. Some of the shells are very large and of first-class quality. A company has been formed to develop the deposits and very profitable results are expected, since a good quality of mother-of-pearl is very rare and prices are high.

A curious discovery has been made on Cedros Island, Mexico, in the form of a bed of white sand extending along the top of the mountain. It is believed to be the remains of an ancient quartz ledge, pulverized by intense heat, and is said to be as fine as though it had been run through a battery of stamps. It varies from 3 to 8 feet in thickness, and is asserted to be rich in gold.

The remarkable development of the business of smelting lead

ores in and around Monterey, Mexico, continues unabated. Previous to the Treasury decision making the lead contained in certain descriptions of Mexican ore dutiable at $1\frac{1}{2}$ cents per pound, the exportation of mixed silver and lead ores from Mexico into the United States amounted to over 100,000 tons a year. The ore formerly sent into the United States to be smelted is now treated within Mexican borders. Smelters already in operation in Monterey have a daily capacity of 500 tons of ore. Other works in course of construction will make the smelting capacity equal to nearly half a million tons per annum. It is confidently expected that even this enormous capacity will be doubled in the next eighteen months. The smelters will use nearly 75,000 tons of limestone and over 100,000 tons of coke per annum. It is calculated that the labor employed in this industry involves a distribution of at least \$600,000 a year in wages to Mexican workmen, and the wagon and railroad freightage on the ores is estimated to amount to \$5,000,000 a year. The industry will further add to the resources of the country by opening up to profitable working hundreds of low-grade mines, the ore from which could not previously be made to pay owing to the absence of a home market and the enormous cost of transportation.

Recent advices indicate a great growth in the State of Monterey, Mexico. During the past year there have been located there and in active operation two smelters with a capacity of 450 tons of ore daily, one foundry and machine shop, one sash, door, blind, and furniture factory, one roller flour mill of 125 barrels capacity daily, one soap factory, two ice factories, and one machine brickyard. A large brewery and cold storage house for meats is nearly completed, and an immense smelter of 1,500 tons daily capacity is in the course of building. Nearly all the products of the smelters are shipped by Tampico to New York and Europe.

WAGES IN MEXICO.

[By *M. Romero, Mexican Minister to the United States.*]

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I have often heard it stated, as the chief reason for advocating restrictions on this country's trade with Mexico, that we pay low wages to our laborers, who are sometimes called paupers or peons, and that the maintenance of the high wages prevailing here requires that the free entrance of Mexican products similar to those of the United States be forbidden. As this reason is repeated whenever it is proposed to adopt liberal measures to promote trade between the two neighboring Republics, it seems to me that I might render a service to their better understanding of each other and to their increase of trade, reciprocally advantageous, if I should give an idea of the wages which are paid in Mexico; of the causes which control their amount; of the manner in which these causes affect the cost and therefore the price of the commodities we produce; and of the price of Mexican articles obtained with low wages, compared with the same commodities produced here with high wages. I should be very glad if I could in this way help to dispel the mistaken ideas which prevail in this country in regard to the labor and wage system of Mexico, and which stand in the way of measures tending to increase our mutual trade.

The broken surface of Mexico gives us all the climates of the world, frequently at very short distances from each other, and enables us to produce the fruits of all the zones, while placing at our disposal, at the same time, an immense hydraulic power, of which for the present we hardly avail ourselves. But, on the other hand, it makes transportation very expensive; and this fact renders exceedingly difficult the interchange of products. The obstacles to communication between the various sections of the country, and the diversity of conditions existing in each, cause a great difference in the wages paid in different localities.

The Department of Public Works of the Mexican Government has been for some time collecting exact data regarding the wages paid to field laborers, and during my last visit to the City

of Mexico I obtained a summary of these data. It is very difficult to present it in a complete and correct form, because there are several systems of wages. In some places a fixed amount is paid for one day's work; in others a given sum is paid for a certain amount of work done; in some others, besides the wages, rations are given, which consist of a certain quantity of grain, sufficient for the subsistence of the laborer and his family; the quality and quantity of these rations vary, as well as their value, for grain has different prices in the various localities; and all these causes render it very difficult to make an entirely accurate résumé of the official data. The most complete that I have been able to prepare is the following, which embraces the maximum and minimum field wages paid in the different States of the Mexican Confederation.

States.	Minimum.	Maximum.	Average.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Aguas Calientes .....	.18 $\frac{3}{4}$	.18 $\frac{3}{4}$	.18 $\frac{3}{4}$
Baja California (T.) .....	.50	.50	.50
Chiapas .....	.25	.75	.50
Chihuahua .....	.18 $\frac{3}{4}$	.25	.21 $\frac{7}{8}$
Coahuila .....	.31 $\frac{1}{4}$	.75	.53 $\frac{1}{8}$
Colima .....	.55	.37 $\frac{1}{2}$	.31 $\frac{1}{4}$
Durango .....	.25	.75	.50
Distrito Federal .....	.31 $\frac{1}{4}$	.37 $\frac{1}{2}$	.34 $\frac{3}{8}$
Guanajuato .....	.18 $\frac{3}{4}$	.31 $\frac{1}{4}$	.25
Guerrero .....	.18 $\frac{3}{4}$	.50	.34 $\frac{3}{8}$
Hidalgo .....	.12 $\frac{1}{2}$	.37 $\frac{1}{2}$	.25
Jalisco .....	.18 $\frac{3}{4}$	.50	.34 $\frac{3}{4}$
Mexico .....	.12 $\frac{1}{2}$	.37 $\frac{1}{2}$	.25
Michoacan .....	.15 $\frac{1}{2}$	.75	.45 $\frac{1}{4}$
Morelos .....	.25	.75	.50
Nuevo Leon .....	.18 $\frac{3}{4}$	.18 $\frac{3}{4}$	.18 $\frac{3}{8}$
Oajaca .....	.18 $\frac{3}{4}$	.50	.34 $\frac{3}{8}$
Puebla .....	.18 $\frac{3}{4}$	.50	.34 $\frac{3}{4}$
Queretaro .....	.18 $\frac{3}{4}$	.37 $\frac{1}{2}$	.28 $\frac{1}{8}$
San Luis Potosi .....	.18 $\frac{3}{4}$	.25	.22 $\frac{1}{4}$
Sonora .....	.30	1.00	.65
Tabasco .....	.37 $\frac{1}{2}$	.50	.43 $\frac{3}{4}$
Tamaulipas .....	.25	.50	.37 $\frac{1}{2}$
Tepic (T.) .....	.25	.50	.37 $\frac{1}{2}$
Tlaxcala .....	.25	.50	.37 $\frac{1}{2}$
Vera Cruz .....	.25	.62 $\frac{1}{2}$	.43 $\frac{3}{4}$
Yucatan .....	.25	.37 $\frac{1}{2}$	.31 $\frac{1}{4}$
Zacatecas .....	.18 $\frac{3}{4}$	.50	.34 $\frac{3}{8}$
Total average .....	.23 $\frac{1}{3}$	.50	.36

NOTE.—The Norte, a newspaper of the City of Chihuahua, referring to the extracts published by the Mexican Financier of an article of Mr. Matias Romero, Mexican

Minister at Washington, which appeared in the *North American Review*, of January, 1892, stating that the wages of laborers range in Chihuahua from 18¾ to 25 cents, maximum, says that they are not so low, and that on the contrary that State is perhaps one of those in Mexico where field hands and workmen in general are better paid. The wages of laborers there, the Norte says, vary from 37½ cents, minimum, to \$2, the latter being the amount paid to cowboys who furnish their mounts.

Since the construction of the railroads, it is said, wages in general and especially those paid to the poorest classes or laborers, have had a remarkable advance, which has been maintained with a tendency to a further rise rather than a fall.

For instance, the bricklayers get at least \$1.25 per day, while a foreman bricklayer gets \$3 per day. It is difficult to get a servant for less than \$10 a month, besides the board, and the other laborers are paid on the same scale.

I do not know that a statement similar to the preceding one has been made concerning the wages paid to laborers in factories, in mines, and on railroads, but I understand the Mexican Government is now collecting such data. I am sure, however, that these laborers earn wages considerably higher than those paid to field hands, as those working on railways on the coast and on the frontier receive as much as \$1.50 per day.

Before giving an account of the causes of the diversity of wages paid in Mexico for field work, and showing why these wages are so low, it is opportune to state that it is not in Mexico only that such diversity of wages exists, for something similar takes place in this country. According to the latest information published by the Wisconsin labor bureau, a common laborer in Atlanta earns 7½ cents per hour, while the same laborer in Galveston, which is another Southern city, earns 25 cents per hour, or three times as much.

As I have just stated, the broken surface of Mexico makes transportation very expensive, there being comparatively few wagon roads. On the one from Vera Cruz to the City of Mexico, which was the best constructed, the average freight in normal conditions was \$68.75 per ton of 2,200 pounds for a distance of only 263¼ English miles, or more than 26 cents per mile and ton; and in extraordinary circumstances, as during the French intervention in

Mexico from 1861 to 1867, the freights were as high as \$330 per ton, or over \$1.25 per mile and ton.

Nothing shows more plainly how high freights have been in Mexico than to state that, in accordance with the Mexican laws, the company to which a grant was given in 1857 to build a railroad between Vera Cruz and the City of Mexico forfeited its charter because of services rendered to the French intervention; and when the national Government returned to the City of Mexico, in 1867, and revived the grant, among the new restrictions agreed to by the company, a maximum freight was fixed at \$62 per ton of 2,200 pounds, or 24 cents a mile per ton; and this rate was then considered quite reasonable.

The common way of transporting merchandise was on the backs of mules or donkeys, the former carrying from 300 to 400 pounds and the latter about 100 pounds, both making about 15 miles a day, and where there were no mule paths goods were carried on the shoulders of Indians. The high cost of transportation allowed only the exportation of gold and silver, because the precious metals, having great value in comparatively small volume and weight, could bear the expense. These metals were, therefore, almost the only articles of export from Mexico for about three hundred years, excepting a few other high-priced products, like cochineal and indigo, which, before the progress of chemistry, were almost the only materials used to dye in red and blue colors, and for this reason commanded a very high price. Even now, when Mexico has in operation over 5,000 miles of railways, and when the depreciation in the value of silver has established a bounty of about 30 per cent on the exportation of commodities, the total amount exported from Mexico during last year was, in round numbers, \$40,000,000 in precious metals and only \$20,000,000 in commodities.

Merchandise could not be transported from one place to another in Mexico, whenever there was any distance between them, without increasing the cost very largely. Sugar, for instance, which

in some localities was produced at the cost of 1 cent a pound, was sold in others at 25 cents a pound. Such a condition of things reduced the consumption and consequently the production to a very narrow limit, and very often a year's abundant crops amounted to a calamity to the farmers, as the abundance of products without an increase of consumption caused a great fall in prices. Under such circumstances the wages paid to the field laborers had necessarily to be low; and although they now begin to improve with the greater demand for labor brought about by the construction of railroads, and the consequent material progress of the country, they are yet far from being what is desired, and what I am sure they will be before long.

It is a fact that wages in Mexico are far lower in many cases than those paid for the same industries in the United States; but this ought not to seem strange when it is considered that this country pays probably the highest wages in the world; and not even the foremost manufacturing nations of Europe, as England, France, Germany, and Belgium, can compete with it in this regard. Yet, while it is true that labor in the European countries is not so well remunerated as in the United States, it must be taken into account that it does not produce there as much as it does here. I am assured by competent persons that a bank-bill printer, for instance, does not print in England more than 1,500 sheets per week, while the average work done by the American workman is 6,000 sheets per week; and it is stated in the *Journal des Economistes* that a French weaver can take care of only four looms, a Belgian of five, an English weaver of six, and one from this country of eight. But the actual production during a given working time is in Mexico far less than in the United States or even in Europe. The day's work of a Mexican laborer very likely represents only one-fourth of what is accomplished during the same time by a laborer in the United States. A Mexican laborer working from ten to eleven hours a day, for instance, accomplishes less work, or produces less,

than a European or an American laborer in nine hours, and in some instances the disproportion is as great as 1 to 5. I have been assured that a Mexican bricklayer in eleven hours' work does not lay more than 500 bricks, while a bricklayer in the United States lays 2,500 in nine hours; and that a Mexican weaver can not attend to more than two looms. Under such conditions the high wages of \$3 a day paid in the United States are no higher than the wages of 50 cents paid in Mexico, so far as the product of labor is concerned.

The principal causes for this difference in working capacity are, in my opinion, the following: (1) The Mexican laborer is not so well fed and paid as his brother in this country; (2) he generally works until he is exhausted, and his work is not, therefore, so productive; (3) he is not, on the whole, so well educated as the average laborer in the United States; (4) he has fewer wants to satisfy, and therefore less inducement to work. Perhaps there is, besides these causes, at least in some localities, a climatic influence, due to the enervating character of the tropical climate and to the high altitude above the level of the sea, and the consequent lower atmospheric pressure, where a large portion of the population of Mexico is located. I am inclined to believe that this is a factor in the case, as a similar difference is noticed among animals. A plow drawn by one horse in this country would in Mexico require two or three horses to accomplish the same work in similar localities; and this shows that the difference in working strength may be due, at least in part and in some places, to natural causes or climatic influences.

The impression prevailing in this country regarding the Mexican peon is an erroneous one. It is supposed here that peonage is equivalent to slavery, and that it is spread throughout the whole country. I must state at once that it exists principally in a comparatively reduced area where laborers are very scarce, and this fact shows that, while the system is liable to abuse, it has some advantages for the laborer.

The largest portion of the Mexican population is located on the mountains, central table-lands, and other high regions, which enjoy a cold and healthful climate, on account of their elevation above the sea level. Only the products of the cold zone can grow there, and they used to be cultivated on a limited scale, solely for local consumption, however, as the high cost of transportation prevented their being carried to any distance. In this region labor is abundant, and exceeds considerably the demand. Consequently the wages are low, and the peonage system only exists to a small extent; and, as the number of working hands is greater than the demand, the laborers are exposed to disadvantages that fortunately are now disappearing as the progress of the country increases the demand for labor.

The temperate region embraces the lands located from 3,000 to 5,000 feet above the level of the sea, and it is sparsely populated; but its products are valuable, like coffee, sugar, and other tropical fruits. It is very difficult to find in this region the necessary hands to till the land on a large scale. For these reasons, and, above all, because of the high cost of transportation, such articles can not be grown for export, except in a few places favorably located, and then in a limited quantity. This explains why some of these products command a higher price in some localities of the country where they are produced than in foreign markets, where they are transported from great distances. Sugar, for instance, which is retailed in New York at $4\frac{1}{2}$ cents a pound, costs in the City of Mexico from 12 to 18 cents, and it is not so well refined as the article sold here, although for that reason it has a greater amount of saccharine matter.

The hot region, which embraces the coast on both oceans and low valleys situated in the interior of the country, is very sparsely inhabited; labor is therefore very scarce and wages are higher than in any other region. While in the high and cold regions wages are often $12\frac{1}{2}$ cents a day and rations, on the coast they are some-

times \$1.50 a day. The inhabitants of the cold and temperate regions do not come down to the warm zone, because they are exposed to sicknesses prevailing there, such as yellow fever and intermittent and remittent fevers, and because they are terribly annoyed by mosquitoes and can hardly endure the heat. If at any time they do go there, it is only for a few days, and they return home very soon afterwards. It has been thought, because the lowlands are the most fertile and rich, and almost uninhabited, that they could only be cultivated by means of negro or Asiatic labor; and this idea has induced some Mexican planters to try Chinese immigration, as Article 11 of our Constitution grants to all men the right freely to enter and leave Mexico.

The laborers living on the warm lands have, on account of the scarcity of their number, advantages which are not shared by their brothers inhabiting the higher regions. The first of these advantages is, as I have already stated, larger wages; the second is that they can obtain advances, in reasonable amounts, for any needs they may have, as marriages, births, sickness, or death in their families, since the small amount of their wages does not allow them to economize for such emergencies, and these advances are willingly made by their employers on account of future services, without interest or security. But, unfortunately, these very advantages are the source of great abuse on the part of some employers, of which the laborer is sometimes the victim on account of his ignorance and complete destitution on one side and the influence and wealth of his employer on the other.

I speak of this subject from personal experience, because, having spent several years as a planter in the department of Soconusco, state of Chiapas, where these conditions prevail, I saw practically the workings of the peonage system. It was not possible there to obtain a laborer either as a domestic or a field hand without paying beforehand the debt he had contracted with his former employer, which was from \$100 to \$500; so it is easy to understand what

an expenditure of money was required before a large number of hands could be obtained. Lapse of time increases the debt instead of diminishing it, since the laborer asks each week, as a rule, for more than the amount of his wages. Whenever the hands are displeased with their work—either because they quarrel among themselves, because their employer does not treat them well, because they do not get all the advances they ask for, or for any other reason—they have full freedom to offer their services to anybody else, who willingly pays their debt, as everybody is always in need of help; but often, and especially in the case of persons who do not live permanently in the country, as happened to me in Soconusco, laborers whose debts reach a considerable sum conceal themselves, fly to another district where they are not known, or in some other manner evade the payment of their indebtedness; and the result is that it is lost to their employer.

These are the practical results of the peonage system, so far as my experience goes, although I do not deny that it is liable to great abuse on the part of the employers, who are favored in a few cases by the tolerance of some local authorities and by the ignorance and poverty of the laborers.

There are some places—especially in the States of Tabasco and Campeachy, where fine woods are cut in uninhabited spots, which change as the wood is exhausted—where the employer assumes in the absence of any authorities or magistrates, and generally through an overseer, for he himself seldom remains at such places, all the powers of government. There of course the opportunities for doing wrong are very much increased in view of the fact that there is hardly any responsibility for abuse of authority. In most of these cases the employer is obliged to set up, for the convenience of his laborers, as I have heard, never having seen such a thing personally, a store where they can provide themselves, there being no other near by, with groceries and such dry goods as they need in the ordinary course of life, paying for them with the

scrip issued to them in settlement of their wages by the employer over his signature. It is easy to see how greatly this system is liable to abuse since the laborer has to purchase at the store of his employer everything he wants and at such prices as the owner may think fit to charge, losing all the benefits of competition.*

But the peonage system has no legal existence in Mexico, because article 5 of our constitution of 1857, enacted for the purpose of abolishing it, provided that "nobody should be obliged to render personal service without proper compensation and his full consent," and forbade the law to authorize any contract which might have for its object the "loss or irreparable sacrifice of the freedom of man through work, education, or religious vows." This article was amended on the 25th of September, 1873, with the main view of prohibiting the taking of religious vows in Mexico, and of making it more explicit, and it reads now, so far as work is concerned, as follows: "The State can not allow the fulfilment of any agreement, contract, or covenant which may, in any manner impair, destroy, or irrevocably sacrifice man's liberty, either through work, education, or religious vows."

The Catholic clergy of Mexico encouraged the system of having

* It seems that something similar to this is done in the United States, as is shown by the following extract from Gen. Rush C. Hawkins's article, entitled "Brutality and Avarice Triumphant," published in the June number of *THE NORTH AMERICAN REVIEW*, page 660: "One of the most facile means in the hands of avarice for cheating the poor and helpless is the 'corporation and contractors' store.' It is usually owned by corporations whose employés are the only patrons, and the rule is to sell the poorest possible quality of supplies at the highest price obtainable. In many instances employés are given to understand that they are expected to trade at the company and contract stores, or, failing to do so, will be discharged. This oppressive method of cheating is not confined to any particular part of the country, but prevails, with varying degrees of malignancy, wherever under one management, either corporate, partnership, or individual, any considerable number of employés are assembled together. Since the close of the Civil War many thousands of ignorant blacks have been made the victims of this common and heartless swindle, which has absorbed their scant earnings. At the end of each month, year in and year out, it has proved to their untrained minds an astonishing fact that the longer and the harder they worked the more they got in debt to their employers."

a great many feast days, because they were quite productive to the church. Over one-third of the year, not counting the Sabbath, was given up to religious festivals, during which all work was stopped. So objectionable were the results of this system that when, in 1858, the laws of reform were enacted separating the church from the state, the feast days were reduced by law to a very limited number—about six only in a year; but, as happens with all legislation in conflict with the actual habits of the people, the law has not been faithfully complied with, especially because it does not provide any punishment for the offenders. This fact makes foreigners in Mexico consider native labor unreliable.

It is time now to speak of the prices of Mexican commodities and to compare them with such as are produced here. The department of public works has been for some time collecting data as to prices of agricultural products in Mexico, and during my recent stay in the capital of the republic I obtained a résumé of such data, which I give on the next page, reducing the weights and measures used in Mexico to those used in this country, and stating the price of each article in each country.

It has been very difficult to make this table, for the complete accuracy of which I can not vouch, notwithstanding that I have used much care and availed myself of all the means within my reach to make it as complete as possible; but the difficulty of obtaining the average price of certain articles in both countries is very great, and no less the reduction to a common standard of the weights and measures used in each. So far as commodities in the United States are concerned, I have taken as the basis for fixing their price the data contained in No. 12 of the statistical abstract of the United States for the year 1889, prepared by the Bureau of Statistics under the direction of the Secretary of the Treasury, and sent by him to the House of Representatives on the 4th of December of the same year. In regard to such commodities as were not embraced in that document I have used the data contained in the

thirty-second annual report of the chamber of commerce of the city of New York for the fiscal year 1889-'90, and in the report of the produce exchange of New York for the same period, and such other as I have been able to obtain from reliable sources.

Articles.	Prices.	
	City of Mexico.	United States.
Bacon.....per pound..	\$0. 50	\$0. 20
Beeves (gross weight).....do....	.08	.04½
Coal.....per ton..	16.00	3.18
Coffee.....per pound..	.22	.19
Corn.....do....	.02	*.00¼
Cotton prints.....per yard..	.10½	.03½
Cottons.....per pound..	.19	.10
Flour.....do....	.05	†.01½
Ham.....do....	.50	.18
Hogs, live (gross weight).....do....	.09	.03¾
Iron, pig.....per ton..	32.00	19.00
Lard.....per pound..	.18	.08½
Meats—		
Beef.....do....	.12	.07
Mutton.....do....	.14	.08¼
Pork.....do....	.11	.05¾
Paper, printing.....do....	.15	.05
Prints.....per yard..	.08½	.06¼
Rice.....per pound..	.07	.05
Salt.....do....	.07	.04
Sheep (gross weight).....do....	.09	.05
Sugar.....do....	.21	.05
Tallow.....do....	.15	.04½
Tobacco.....do....	.24	.06¼
Wheat.....do....	.03	‡.01½
Whisky.....per gall..	¼. 80	||. 36

* Or 43 cents per bushel of 56 pounds.

† Or \$2.75 per barrel of 196 pounds.

‡ Or 83 cents per bushel of 60 pounds.

§ Or \$16 a cask of 20.0787 gallons.

|| In bond.

One reason why Mexican products are so high is that when they reach the markets they have paid the local duty levied in coming into the cities. Unfortunately the internal commerce of Mexico is not free, as in the United States, where such freedom has contributed greatly, in my opinion, to the marvelous prosperity of the people. Our constitution of 1857 prescribed the abolition, from the 1st of July, 1858, of the interior duties and custom-houses throughout the whole country; but unfortunately

it has not yet been possible to comply with that provision, and the time has been extended by amending the constitution. The railroads have come to demonstrate practically the great inconvenience of the system of trammelled interior commerce, and the Mexican Government is now endeavoring to bring the different States to an agreement to replace such duties with some other tax less objectionable.

The reciprocity treaty of January 20, 1883, contained a provision which was, I think, little commented upon or appreciated here, whereby complete immunity from all local, State, and municipal taxes was granted to merchandise from this country imported into Mexico, giving it the same freedom as it enjoys at home. My object in agreeing to the above clause was not only to encourage and promote the development of trade between the two countries, but also to undermine the present obnoxious legislation, which, by interposing so many obstacles, makes traffic almost impossible. The moment foreign merchandise was exempted from all local duties and barriers, domestic merchandise was left in such an unfavorable condition as to demand imperatively a change for the better.

I expected in this instance a repetition of what took place with our postage rates, which up to 1874 were almost prohibitory—25 cents per quarter of an ounce—thereby considerably encouraging evasion. Our Minister to Berlin was appointed a delegate from Mexico to the Universal Postal Union Congress which met in Paris, and he was one of the signatories of the convention concluded June 1, 1878, whereby the international postage rate was fixed at 5 cents per sixteen grams, or half an ounce. When the Mexican Government ratified that convention the old postage rates could not be kept up, and a few years later they were finally reduced to 10 cents per half ounce, and the number of letters forwarded in the Mexican mails has since immensely increased, the revenue therefrom having augmented fourfold.

When economical errors of long standing prevail in a country and become imbedded in the people, the most effective way to eradicate them is sometimes to make their remedy a subject of stipulation with a foreign country, giving it thereby a special force; otherwise, if the remedy is enacted by one Congress, another can repeal that measure, as has been the case in Mexico with the alcabalas excise. We have great respect for international agreements, and hold that the legislative branch of the Government can not abrogate them, unless with the consent of the other party, or in case of war.

It is now time to show that the low wages paid in Mexico do not produce cheap commodities, and could not therefore, by competition, lower the compensation of labor or the cost of similar manufactured articles in the United States.

We pay at home, in several cases, wages amounting to about a sixth of what is paid here for similar work, and yet the production in Mexico, with such low wages, is a great deal more expensive than the production of similar articles in the United States, with probably the highest wages in the world and with prices consequently higher.

It is true that wages are one of the principal factors in the cost of production of all kinds of merchandise, but they are not the only, and in many cases not even the principal, one. The question of wages is very complex, and it seems that, in comparing the wages of this country with those paid in Mexico, two important factors are overlooked: First, the cost of living in each country, or the purchasing power of the currency in each; and, second, the amount of commodities produced in each country by the same unit of work, either on account of the greater fitness or greater physical strength of the laborer, or through the use of machinery, which increases the amount of production and cheapens it enormously. When these two circumstances are taken into account it will be found that the high wages paid here are often no higher for the

work performed, perhaps in some cases even lower, than those paid in Mexico and in other countries; and only in that way can we explain how this country with its high wages can produce many articles—for instance, watches and clocks—which compete successfully with those made in Switzerland, where wages are comparatively low.

The cost of production, too, depends on other circumstances, different in each country, all of which must be considered for a proper appreciation of the subject. I would need more space than I can reasonably use in this article to mention all the causes which affect wages, and to show how far they influence the cost of production; and I shall only present some practical and suggestive examples taken from the preceding table, to show that the same commodities produced in this country, with high wages, cost less, and therefore are sold at a lower price than similar articles produced in Mexico with low wages.

One of the best illustrations of the correctness of this statement is the working of mines in both countries. Although wages in Mexico are probably one-fourth or one-fifth of those paid in the United States, the production of silver costs much less here than there. Mr. Thomas H. Carter, late member of Congress from Montana, and a very competent judge, stated, during the first session of the last Congress, that miners' wages here were \$3 a day, while he fixed at 50 cents per day the wages of Mexican miners. I do not think his statement correct so far as Mexican mining wages are concerned, as miners there earn larger wages than field hands. That our production of silver is more costly than it is here is shown by the fact that mines similar to those which we abandon because it does not pay us to work them on account of the low grade of silver, or for other reasons, are operated in the United States with profit. This is in a great measure because mines are worked in this country by machinery, which diminishes the cost and increases the production; but this very fact shows that wages

are not the only factor affecting the cost of production, and also that with high wages it is possible, and even easy, to produce at a less expense than with low wages.

Cotton-culture is another example. I am aware that the cotton-growers of the United States hold that what they call their cotton belt has peculiar conditions for the production of their staple, which in their opinion do not exist in any other portion of the world, and they believe, therefore, that nobody can compete with them in this regard. Without any intention on my part to belittle the advantages of the cotton belt of this country, I am of the opinion that there are in Mexico lands as well adapted for the production of cotton as the best in this country, and in some of our regions perhaps even more so; yet, notwithstanding these advantages and although our wages are low, cotton is produced cheaper in this country, and is sold with profit by the planters for one-half the price that it commands in Mexico. So great is the difference in the price of this staple in the two countries that notwithstanding an import duty on cotton of 8 cents per kilogram, or almost 5 cents per pound, which is equivalent to 50 per cent ad valorem, we import from this country almost one-half of the cotton used in our home manufactures. I do not overlook the fact that cotton is raised here by negro labor, which is considerably cheaper than white labor; but, even assuming that wages in this case be the same in both countries, the difference in cost is so great that labor is not the only factor in the expense of production.

Something similar happens with sugar. Here it is produced with high wages, and—although its culture in Louisiana is an artificial one, since frosts prevail there, since the cane has to be planted every year or two, and the ground cultivated at considerable expense several times a year, so that such culture is almost as artificial there as coffee-culture would be in New England—yet the Louisiana planters sell their sugar in New York with profit at from 6 to 7 cents per pound, while in the City of

Mexico and other places in my country it commands twice and even three times that price.

The same is the case with tobacco. Although the climate and soil are very likely better fitted for its culture in Mexico than in this country, tobacco costs there on an average, $24\frac{1}{2}$ cents per pound, while it is sold here at $8\frac{1}{2}$ cents per pound.

I shall not speak of the products of the cold climate, like wheat, barley, oats, etc., because the climate and soil of this country are naturally adapted for such culture, while for tropical products the conditions are decidedly in favor of Mexico; but despite the fact that we also have cold regions in Mexico, and notwithstanding the difference in wages, wheat is worth there twice as much as here, and there is about the same difference in the price of corn.

It is much the same with manufactured articles, like common printing paper, which in the United States is worth about 3 cents a pound and in Mexico 15 cents, although we have abundant raw material and water power for its manufacture. To encourage the making of paper we established an import duty on foreign unsized and half-sized paper of 10 cents per kilogram, or over 5 cents per pound, equivalent to over 100 per cent ad valorem, which was reduced by our present tariff to 5 cents per kilogram for the unsized, keeping the duty of 10 cents on the half-sized paper; and notwithstanding this we import printing paper from this country, where the wages are so high compared with ours. Something similar happens with cottons and cotton prints, the former being worth 5 cents per yard in this country and from 10 to 15 cents per vara of 33 English inches in Mexico, and the latter, which are sold here at 8 cents per yard, being worth in Mexico about 20 cents per yard.

I believe that the preceding facts show beyond all doubt that unless there is a material change in the present conditions of Mexico, there need be no fear of competition in the United States from Mexican manufactures in articles produced by us with cheap labor.

My country, too, has adopted the protection system, and we have carried it considerably further than it ever was carried in the United States. We established it originally, as it was established here, for the purpose of obtaining the means to defray the expenses of the Government, and it was developed under the supposition that the higher the import duties the larger would be the revenue yielded; but we failed to consider that smuggling is, in the nature of things, and especially in countries like Mexico, well adapted for its operation, the regulator of prohibitory or exceedingly high duties. Under the protective duties several industries have been established at home which are now greatly interested in the permanency of the present system. The import duty upon common cotton goods, which is the material worn by the largest portion of the Mexican population, is from 9 to 17 cents per square meter, or over 100 per cent on the price of the goods in England. Flour pays 10 cents per kilogram, or more than 5 cents per pound, equivalent to 350 per cent upon its value in New York. Printing paper pays, as already stated, 5 and 10 cents per kilogram, or over $2\frac{1}{2}$ and 5 cents per pound, equivalent to from 100 to 200 per cent ad valorem. I could multiply similar instances of high duties; and yet we have not succeeded in cheapening our products or in perfecting our manufactures.

A very suggestive instance where high duties encouraged smuggling came under my personal observation. Mexican tobacco could not reach the northern States of Mexico on account of the high rates of transportation, to which I have alluded, and it could not be raised close by because its culture was for several years a Government monopoly. Therefore, the inhabitants of that region used tobacco raised in the United States, which they bought at a moderate price. Our import duty on tobacco up to the year 1878 was \$1.25 per kilogram, or about 66 cents per pound, and although tobacco from the United States was consumed in all the frontier of Mexico, and that was the only tobacco

imported in the free zone, which at that date was limited to the State of Tamaulipas, and although the yearly importation exceeded 1,000,000 pounds, yet there hardly appeared in the treasury any revenue collected on this article. At that time I had the treasury department of Mexico under my charge, and, having observed this fact, I obtained the sanction of the President, who then had full authority from Congress for that purpose, and reduced the duty on tobacco to the comparatively moderate amount of 16 cents per kilogram, or less than 8 cents per pound; and from that time we derived some revenue from foreign tobacco. I could mention many other instances as forcible as this one.

As the system of collecting import duties *ad valorem* is liable to many frauds, Mexico has adopted specific duties, or a fixed amount per weight, unit, or measure. Although this system has the disadvantage that the duty is not proportionate to the price of the merchandise, as is theoretically the *ad valorem* duty, it is not liable to so many frauds as the other, and for that reason, I understand, it has been adopted by most of the European nations.

Agricultural products of this country, like wheat, cotton, and other farm products, notwithstanding the high wages paid here to field laborers, compete in the English and other free foreign markets, and successfully sustain a sharp competition with similar foreign products obtained with low wages, in some cases even lower than in Mexico, as in the case of China and the East Indies. There need, therefore, be no fear of competition from Mexico.

I believe that the people of the United States have the necessary pluck and fitness to compete with any other people in the world in the production of manufactured articles. It is true the high wages paid here, the import duties upon raw materials, and the higher price of coal than in some other countries, enhance the cost of the production of certain commodities as compared with similar ones manufactured in England, France, Germany, and Belgium; but it must at the same time be remembered that the application of machinery, which is used here on a much larger

scale than in any other country, cheapens production so greatly that it enables this country to manufacture many articles at a less cost than any other. An instance of this is the manufacture of steel rails in the Edgar Thompson factory, at Pittsburg, Pa., where the entire production being mechanical, few hands are employed and where natural gas is used as fuel.

High duties collected in Mexico, amounting in some cases to even 300 per cent ad valorem, have not increased or cheapened our production. Our imports in the fiscal year ended on the 30th of June, 1889, the last one for which official data have been published, amounted to \$40,024,894.32; if we deduct from this the free articles, valued at \$13,506,230.23, we shall have as the dutiable merchandise \$26,518,664.09, yielding a revenue of \$22,477,962.95, or an average of 84.7 per cent, which is larger in proportion than that of any other American nation, and almost double that of the United States, where the average was 44.41 per cent for the fiscal year ending on the 30th of June, 1890; the value of the dutiable articles amounting to \$507,511,764, and the import duties to \$226,540,037. Notwithstanding all this, and although our wages are lower than those in this country, our production is considerably dearer.

I should be very glad if the explanations made in this article result in dispelling the errors prevailing in this country in regard to the conditions of labor in Mexico; and hope that, in case restrictions against Mexican trade are discussed, they will not be urged on the ground that our articles are produced with peon labor. I sincerely hope that both countries, instead of acting in a way contrary to the ends of nature, which has placed one beside the other, and has given them different climates, productions, and possibilities, will coöperate with the purpose of nature, and not interpose other obstacles to reciprocal trade than those absolutely necessary for their mutual well-being and progress.

NOTE.—In confirmation of the data contained in the article on "Wages in Mexico," published in the *North American Review* of January, 1892, the

following statement is given, taken from the list of current prices of Mexican products, which appeared in the Official Journal of the Federal Government of Mexico, of December 15 1891, showing the price of a fanega of corn, equivalent to about 2½ bushels, in different parts of the country:

At Tepic (Territory of Tepic).....	\$1. 87
At Guadalajara (Jalisco).....	\$2. 25 to 2. 50
At Cuatxingo (Mexico).....	3. 50
At Allende (Chihuahua).....	4. 50
At Alamos (Sonora).....	6. 50
At Culiacan (Sinaloa).....	11. 00

This remarkable difference in price is also noticed on some other grains and produce, such as beans, chick-peas, wheat, and barley, and is due to the different conditions of each locality, and specially to the abundance or scarcity of rain, which naturally affects the crops, as also to the difficulty of communications and the consequent high freights. Prices would find their level if the grain could, for instance, be carried profitably from the places where it is abundant to those where the crops have failed or been poor. This state of affairs, however, goes to show the great chances open to business in Mexico.

INDUSTRIAL DEVELOPMENT.

INDUSTRIAL DEVELOPMENT OF MONTEREY.

The city has three cotton factories which alone represent an invested capital of \$3,000,000, a woolen factory not at present in operation with a capital of \$200,000; the Monterey shirt and underwear factory, capital invested, \$50,000, and three hat factories with a combined capital of \$85,000. Other industries not of a textile nature are as follows:

Flouring mills (3).....	\$200, 000
Starch factory.....	100, 000
Brick factories (4).....	100, 000
Iron and brass foundry.....	175, 000
Smelters.....	3, 000, 000
Furniture factories (2).....	150, 000
x Breweries (2).....	350, 000
Soap factories.....	100, 000
Sugar factory.....	100, 000
Electric light plant.....	120, 000

Monterey refrigerator	\$75,000
Steam laundry	60,000
Tanneries.....	100,000
Carriage factories	75,000
Masa manufacture for tortillas.....	30,000

There are employed in the various textile factories of Mexico 10,741 men, 2,489 women, and 1,859 children.

The State of Tamaulipas has exempted from all forms of local taxation, for three years, all new cotton plantations and the machinery thereon.

Interesting advices of the development of manufacturing capacities of Chihuahua, Mexico, have been received. The Mexican Industrial Company of Chihuahua, which has been extensively engaged in the production of cast iron and steel from its valuable mines, and the manufacture of heavy machinery, is about to extend the field of its operations and is now constructing large shops to be used in the manufacturing of articles of hardware and husbandry, which are now imported from abroad, such as nails, screws, nuts, rods, valves, kettles, plates, presses, etc.; also bronze in various shapes. As there are extensive beds of excellent quality of clay in the neighborhood a number of large kilns for burning fire bricks are in course of erection. The fuel to be used in the new works will be hydrocarbon gas, and for this purpose an immense pump has been ordered, with other necessary machinery. There are at present employed in the shops some 150 workmen, all Mexicans, which number will be greatly increased so soon as the new departments are ready to begin operation. The probable proceeds of the establishment for the next twelve months will be over half million dollars. The enlargement of this undertaking will have the greatest beneficial influence on the prosperity of Chihuahua, not only, from the amount of money which its operations will put in circulation in the neighborhood, but in a greater degree from the increased opportunities which will afford for providing remunerative employment to the people.

REVENUES.

The returns concerning the revenues of Mexico show that Republic to be in a most prosperous condition. The debt now consists of \$52,500,000 external 6 per cent bonds, \$30,000,000 of 6 per cent bonds issued for railway subsidies, and \$24,000,000 internal bonds bearing 3 per cent interest. The Government is also responsible for \$6,500,000 bonds of the Tehuantepec Railroad and \$2,500,000 6 per cent silver bonds of the Monterey Railroad. On the total interest of about \$6,250,000 a year is required. With the prosperity indicated by the growth of exports of home produce there has been a rapid increase in the income of the nation. The following statement shows the revenues of the Government from various sources from 1887 to 1890, and the estimated revenues for 1891-'92:

Year.	Duties.	Interior taxes.	Sundries.	Total.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1887.....	18,021,787	11,211,116	2,068,237	31,301,140
1888.....	19,657,740	11,726,510	2,486,826	33,871,076
1889.....	19,711,192	11,964,390	2,511,545	34,187,127
1890.....	22,939,269	12,938,811	2,568,613	38,446,693
1891.....	23,800,000	13,500,000	3,200,000	40,000,000
1892.....	24,600,000	13,000,000	3,400,000	41,000,000

The difference of \$8,700,000 between 1887 and 1891 represents a gain of about 27½ per cent.

The Bureau of American Republics is informed of the decree issued by the President of Mexico concerning the future operations of the Mexican bureau of public debt. Under the authority of Congress President Diaz decrees that as it is indispensably necessary for the consolidation of the national credit to determine the exact amount of the public debt and the obligation of the Government, all persons who have claims against the Republic of Mexico must present them on or before the 31st of March, 1892, when they will be examined by the bureau of public debt and reported upon to the treasury.

COINAGE OF THE REPUBLIC DURING THE YEAR 1891.

The Bureau of the American Republics has received the official figures of the coinage of the Republic of Mexico during the last fiscal year, ending June 30, 1891. There are eleven mints in the Republic, and the following statement shows the amount of coinage in silver and gold at each:

Mint.	Silver.	Gold.
	<i>Dollars.</i>	<i>Dollars.</i>
Alamos	515,500.00	27,900
Culiacan	852,502.00	14,889
Chihuahua	2,082,729.00	47,400
Durango	1,292,557.75	
Guadalajara	1,752,350.50	
Guanajuato	3,597,850.00	27,500
Hermosillo	567,960.00	
Mexico	7,910,200.00	169,731
Oaxaca	224,600.00	
San Luis Potosi	1,400,210.00	
Zacatecas	4,046,000.00	20,663
Total.....	24,237,449.25	308,683

The amount of copper coins issued by the Mexico City mint is \$218,869.21. The total amount of the year's coinage is, therefore, \$24,764,401.86. The total coinage for the fiscal year 1889-'90 was \$24,706,256.92, showing the sum of \$58,144.94 in favor of 1890-'91.

The statistics of the mail matter handled by the Mexican Post-office during the first six months of the calendar year 1891 show a very large increase over the previous year, which numbered 65,571,650 pieces, a gain over the preceding half-year of 1,609,182 pieces. The first-class matter, including ordinary letters and written communications, totaled 26,315,398 pieces, and the printed matter, circulars, book-packets, samples, etc., amounted to 38,658,209 pieces. Registered matter, delivered and sent, consisted of 598,043 pieces, against 575,266 in the preceding half year.

Information received shows that the number of new post-offices established in Mexico in 1891 is the greatest on record, and that the receipts of the Post-Office Department were never so large before. This is one of the surest indications of the country's prosperity.

The Congress of Mexico has conferred special powers upon President Diaz to enable him to alter contracts and concessions for public works at his discretion in such a manner as to promote their rapid construction and early completion, it being provided, however, that the cost and expenditures of the Government shall in no way be increased by the Executive acts.

The Mexican Congress has just approved the contract with Richard Kent for the establishment of an international bank of deposit, discount, and guaranty. This will be the first institution in Mexico which has undertaken to attempt the position of a security for public and private employés. The company will also open storage warehouses and will issue certificates of goods stored. It will also offer its services in the placing of State and municipal loans. Its capital must be at least \$500,000, of which two-fifths must be paid in before it will be allowed to begin operations.

The Government of Mexico has granted a concession to Miguel G. and Manuel A. Lizardi for the erection in the City of Mexico of a first-class hotel on the scale of the great hotels in Europe and the United States. The concession is now before the Congress of Mexico for approval. Under the conditions the hotel must be erected upon plans approved by the department of works, and must be finished within a year after the granting of the concession. It is to be exempt from taxation for a period of two years, and all material necessary for its construction will be admitted through the custom-house free of duty.

The Government of Mexico has entered into a contract with Capt. Brenton, of the British navy, to fit out a training ship for the education of Mexican boys in seamanship. The training

vessel will be equipped at Liverpool, and several retired officers of the English navy will go as instructors. The vessel will proceed from Liverpool to Vera Cruz, and there receiving its cadets, will start on a voyage around the world.

Several of the Mexican States have decided to establish permanent sample rooms for the exhibition of their resources and products in London, Havre, and New York.

The city of Colima, Mexico, has made a contract for an electric-light plant.

A building association has been organized in the City of Mexico with a capital of \$1,000,000. The stockholders are nearly all citizens of the United States residing in Mexico.

The Bureau of American Republics is informed from official sources that there are now in operation in the Republic of Mexico 10,183 kilometers of railway, which is equal to 6,325 miles.

THE MEXICAN SOUTHERN RAILWAY.

ITS HISTORY AND PRESENT CONDITION—WEALTH OF THE STATE OF OAXACA—ENGINEERING DIFFICULTIES.

[*From the Mexican Financier.*]

Now that the Mexican Southern Railroad is in a few weeks to be opened for public traffic from Puebla to Tecomavaca, a distance of 224 kilometres, a brief account of the history and prospects of this line will be of interest to our readers.

Mr. H. Rudston Read, of the firm of Read & Campbell, was impressed with the value of the concession owned by General Mier y Teran on a journey made to Oaxaca for business purposes in the year 1886, and shortly afterwards negotiations were opened with the intention of acquiring the concession. The concession was obtained in Mr. Read's name in May, 1888, modifications of same being published in the *Diario Oficial* of the 30th May, 1889. The location of the line was immediately proceeded with

under the direction of Mr. J. E. Earley, and in May, 1889, a company was formed in London for the purpose of constructing what is known as line No. 1, viz, from Puebla to Tecomavaca.

The company was formed with a capital of £1,100,000, £600,000 debentures, £500,000 in preference, and £500,000 in ordinary shares. The Trustees and Executors' Insurance Corporation were appointed trustees for the bondholders, and a board of directors of the highest character—including such names as that of the Rt. Hon. A. J. Mundella, Mr. Gomez Farías, Hon. H. W. Campbell, L. L. Dillwyn, M. P., G. E. Paget, deputy chairman Midland Railway, and Sir George Russell, M. P.—was constituted. In May of 1889, a contract was made by the company with Messrs. Read & Campbell for constructing the line from Puebla to Tecomavaca, and in the month of September of the same year construction was commenced. On leaving Puebla the road runs parallel to the Interoceanic for a short distance until Amozoc is reached, and then continues via Tepeaca, Tecamachalco, and Tlacotepec to Tehuacan, a distance of 127 kilometres. The work on this section of line No. 1 is of a light character, the road passing through a gently undulating valley, the level of Puebla being about 2,150 metres above sea level, that of Tehuacan 1,650 metres, the maximum grade not exceeding 1.80 per cent. There are no works of any great importance on this section of the line, and no bridges of large span with the exception of two shortly before reaching Tlacotepec, one of 30 metres and another of 25 metres. The country through which this section of the road passes is a rich agricultural district, well populated, and raising large quantities of maize, wheat, barley, etc., the production of which will undoubtedly be considerably stimulated by the building of the railroad, which will enable the farmers to command more distant markets.

The construction of this section of the road was finished on the 12th of January, 1891, and the line accepted by the Government

and opened to public traffic on the 9th of February of the present year. The construction of the road on this section, and as far as Tecomavaca, as well as on that part still in course of building, is of a very first-class character, and decidedly superior to any other road yet built in this country, and as a narrow-gauge road not surpassed even in the United States. The weight of the rails used is 50 pounds per yard, and two-thirds of the whole distance from Puebla to Tecomavaca is laid with steel sleepers weighing 60 pounds each, to which the rails are secured by steel keys. The fishplates are what are known as angle fishplates, and weigh 25 pounds per pair. Where wood ties are used, these are all of oak, and are of a first-class character. The ties are spaced 1,370 to the kilometre, or 2,200 to the mile. The masonry throughout is of the best quality, and no temporary openings of any kind have been put in, all the work being of a permanent character. All streams of any importance are crossed by wrought-iron girders or iron truss bridges; small culverts are constructed with iron girders, or arched with masonry, and in culverts of 5 meters' opening or less wrought-iron beams have been used. The road is completely ballasted throughout, the ballast being laid to a depth of 30 centimeters boxed up flush with the top of the sleepers, and $2\frac{1}{2}$ meters wide at the top. We believe that this is the only case in which the contractors have handed a road over to the Government in this country completely ballasted, and with all station buildings, etc., erected. The station buildings throughout the line are of very first-class construction, and all of a permanent character. The main station in Puebla is a handsome and commodious building, built entirely of stone. The workshops at Puebla have been laid out in accordance with the most modern ideas, and the buildings are all constructed of stone with iron roofs. The shops, running sheds, etc., are all in complete working order, and have been so for some time. The yard facilities at Puebla are very good, and the whole has been laid out with special attention to the possible requirements of future traffic.

Proper water tanks, and houses, varying from a capacity of 15 to 6,000 gallons have been provided at all points where necessary along the line, being filled by gravitation, where possible, through galvanized wrought-iron tubes, but where this is not practicable steam pumps have been put in. A double line of telegraph has been provided of the best possible character, with porcelain insulators, and 20 posts per mile, while ink-recording instruments, batteries, and all other appliances have been provided at each station or passing place. The rolling stock is far superior to any in use on any of the narrow-gauge roads in this country, and may even be considered as possibly too good for the requirements. The passenger cars of all classes are finished in teak on the outside, and picked out with gold letters, the roofs slightly arched, and covered with white canvas, and the general appearance of the train is exceedingly pleasing to the eye, while it is easily seen that everything is of very superior character. The locomotives, as well as the rolling stock, which is modeled on the American plan, were all constructed in England. Those provided for Line 1 consist of locomotives of the following types: Passenger engines, four wheels coupled; outside cylinders 14 by 22 inches stroke; driving wheels 4 feet 3 inches diameter; four-wheeled bogie truck. Weight with tender, 39 gross tons, without fuel and water. Freight engines outside cylinders 16 by 22 inches; six wheels coupled, driving wheels 4 feet diameter; four-wheeled bogie trucks; weight with tender, $43\frac{1}{2}$ gross tons, without fuel and water. Also tank locomotives, weight 20 gross tons, without fuel and water.

Those provided for Line No. 2, Tecomavaca to Oaxaca, on which the heaviest grades occur, are of the following type: Tank locomotives, six wheels coupled, four-wheeled bogie, with outside frames; outside cylinders 16 inches diameter, 20-inch stroke; rigid wheel base, 7 feet 1 inch; total wheel base, 18 feet 11 inches; heating surface, total, 1,892.7 square feet.

Section 2, Line 1, from Tehuacan to Tecomavaca, included in

the original contract, has just been completed and will be opened to public traffic on the 1st of August. The total length of opened line will then be 225 kilometers (Line 1). The construction difficulties on this section (2) have been considerably greater than on section 1. The line, after leaving Tehuacan, passes by Santa Cruz, San Sebastian, Venta Salada, San Antonio, and Nahuatipan. Shortly after this it enters the cañon of the Rio Salado, and further on a continuation of the same cañon, called the "Cañon de los Cues," emerging finally at Tecomavaca. Up to the time of reaching San Antonio the line passes through a very rich agricultural country, raising sugar, maize, and other cereals in great abundance, the country being very well populated. Shortly after passing San Antonio the two mountain ranges which have hitherto bordered the railway—one on either side, forming the valley through which the railway passes—suddenly commence to close in, forming a deep cañon, through which the Rio Salado flows southward, forming later on, by its junction with the Rio Grande, the Rio Papaloapam. This cañon becomes very confined further on, at a point where it bears the name of "Los Cues," and here the most difficult part of the construction has been encountered, some exceedingly heavy work having been executed on this part of the line, the general features being very similar in many points to those on the Denver and Rio Grande in the Marshall Pass, with the exception that the "Cañon de los Cues" is somewhat wider; on Line 2 the similarity is more striking.

The traffics, so far as section 1 of Line 1 is concerned, have proved considerably in excess of what was anticipated by the contractors, in spite of the fact that this season has been by no means a fair test, as the severe drought of 1890 reduced the crops in the district by one-half or more. It is hoped that the traffic receipts, with regard to the balance of Line 1 to Tecomavaca, when it is opened for traffic, will also turn out to be in excess of those anticipated by the contractors.

The capital necessary for the construction of Line 2 was raised in September, 1890, and the contract signed with Messrs. Read & Campbell on the 10th of September for the construction of this line from Tecomavaca to Oaxaca. The location of this portion of the line was completed under the direction of Mr. J. E. Earley, and on account of the difficulties and the necessity for an extremely careful study it occupied some two years. Construction was commenced in October, 1890. The line, after leaving Tecomavaca, crosses the Rio Salado by means of a bridge of two 50-meter spans, and shortly afterward the Rio Grande with a similar bridge. It then follows the course of the Rio Grande, passing by Cuicatlan and San Pedrito, and at some 31 kilometers from Tecomavaca it again crosses the Rio Grande by two 40-meter spans, and hence follows the course of the river Tomellin, which is known further as the river San Antonio, through a deep box cañon. The whole of the construction from kilometer 35 to about kilometer 95, counting from Tecomavaca, is of an extremely difficult character, the line having to be carried through the narrow and precipitous cañon of the Tomellin or San Antonio River, which at many points is entirely inaccessible from the main road on horseback during the wet season. As showing the unusual difficulties encountered on this part of the road, it may be mentioned that the line crosses the river seven times, and that there are three tunnels, besides several half-tunnels or galleries, and in fact it may be said that the work is of the most difficult class encountered in railway construction, apart from the minor difficulties of keeping engineers and contractors' camps supplied with food, and the great difficulty of getting on to the works the explosives, tools, and other supplies necessary in order to be able to carry out the construction. This cañon, between kilometers 37 and 52, was until a special trail was cut to connect with the high road, at a cost of some thousands of dollars, entirely inaccessible, and had probably until the time of the surveys never been traversed.

At Las Sedas, kilometer 97, the highest point on the line is reached, and here some extremely heavy work occurs in through cuts. After leaving Las Sedas the line falls away gradually to Oaxaca, passing close to the towns of Huitzo, San Sebastian, and Etna. The maximum grade permitted on this line is 4 per cent, and the minimum curve 100 meters in radius, proper allowance being made for compensating the resistance due to curvature on the maximum grades. The elevation of Tecomavaca is some 600 meters above sea level, Las Sedas about 1,925, and Oaxaca 1,550, and the total length of Line 2, 143 kilometers. As far as kilometer 32 the road traverses a rich but somewhat narrow valley, where sugar cane is raised in great abundance and where there are numerous "haciendas" of considerable importance. The same district is also noted for the variety and quality of the fruits produced. On both sides of the cañon valuable forests exist, and cereals of all kinds are raised at the higher levels, while after leaving Las Sedas the road passes through the already renowned and rich valley of Etna, which extends as far as the city of Oaxaca.

The construction of Line 2 is nearly completed as far as kilometer 35, and it is anticipated that the track will be laid to this point by the end of October. Work is proceeding very actively along the whole of the rest of the line, and there is every reason to believe that the locomotive will reach Oaxaca by September, 1892, and the road be opened to traffic.

The main offices of the contractors, for the purposes of this contract, are in Puebla, and the construction of the road and the management of the part already opened are in charge of their agent, Mr. W. A. Eckersley, with Mr. J. G. Clow as chief assistant, the engineers in charge of construction being Messrs. D. G. Davies, J. E. McCurdy, and T. S. Abbot. The traffic department is in charge of Mr. W. Morcom, already well known in this country through his connection with the National and other railroads.

Quite lately important modifications have been made in the

concession as granted to Mr. Read, changes which have made this concession by far the most valuable in the Republic. Lic. Martinez del Rio, the legal adviser of Messrs. Read & Campbell, has been chiefly instrumental in effecting these valuable changes. He also represents the London company, and all matters of right of way and those of a legal character have been most ably treated under his direction, thus avoiding any friction with the owners of the land and others along the line of the railway.

The Government inspector is Mr. Francisco Gonzalez Cosío, well known as the engineer in charge of the construction of the main high road to Oaxaca, and a thoroughly capable and practical man in every respect.

The inhabitants of Oaxaca are largely indebted to the liberality and clear-sightedness of Gen. Diaz and of his ministers of public works for the construction of this road, which will undoubtedly be of the greatest possible value to them.

As regards traffic, there can hardly be any question that the traffic will be large and lucrative, once the city of Oaxaca is reached. Oaxaca, which has always, one may say, been isolated and practically cut off from communication with the remainder of the Republic, has, in spite of this great disadvantage, become a large and important city. This fact of itself proves, without lengthening this article by adducing other facts and figures, what the great natural wealth of this part of the country must be. Apart from its agricultural resources, which are enormous, the mineral wealth of the State is known to be very great, although as yet comparatively unexplored, and if the Government will only continue its policy of opening up cart roads into the country, which may act as feeders to the railway, a considerable amount of development will be effected even before the arrival of the line at Oaxaca. It is unquestionable that great stimulus will be given to the undeveloped and, in a great measure, unknown mining districts of the State by the completion of this road; in fact, mines

are already being worked near San Antonio, on the line of the railway. It is believed that the Tomellin Cañon, through which the road passes and which, as above mentioned, has been hitherto unexplored, contains large mineral deposits.

At a later date it is proposed to continue the line to the Pacific coast, and no doubt it might be immediately pushed with the greatest advantage to Miahuatlan, as before reaching that point it already taps very large plantations raising coffee, cacao, and other tropical products for which the State is famous, and which have hitherto found their way out of the country through Puerto Angel and other ports. On the line reaching Miahuatlan it would not only secure all this traffic, but would doubtless also prevent any products being shipped out of the country, even from points beyond this, as the railway would offer greater facilities for their transportation.

The foregoing is a brief exposition of the present position of the Mexican Southern Railway, and even thus stripped, as the account is, of the romance which usually, no doubt with much reason, always surrounds the descriptions of the famous State of Oaxaca, traversed by this line, sufficient has been said to prove that no line in this country can, with a like amount of reason, look forward to such an assured and prosperous future.

RAILROADS IN 1892.

The Mexican Government has recently published an official document containing detailed descriptions of the various railroads of that country as they existed on the 1st of January, 1892. From this report the following table has been collated, which shows at a glance the length of each line, its capital stock, and other useful data:

RAILROADS IN 1892.

MEXICO.

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	Name of railroad.	Kilometers constructed.	Capital stock. <i>Dollars.</i>	Subsidies.	Terminated, in construction, or projected.	Duration of the concession.
1	Mexican.....	569.250	40,286,400	Subsidized with \$14,000,000..	Terminated.....	Unlimited time.
2	Merida to Progreso.....	36.456	370,000	\$6,000 per kilometer.....	do.....	99 years.
3	Federal District.....	184.630	5,300,000	No subsidy.....	In construction.....	Unlimited time.
4	Hidalgo.....	148.000	.....	\$8,000 per kilometer.....	do.....	99 years.
5	Veracruz to Alvarado and Tehuantepec.....	70.410	1,200,000	do.....	do.....	Do.
6	Merida to Peto.....	99.000	1,500,000	\$6,000 per kilometer.....	do.....	Do.
7	Interoceanic from Acapulco to Veracruz.....	735.607	12,500,000	\$8,000 per kilometer in certificates payable by the custom-houses, 3 per cent of whose receipts is set aside for this purpose.	do.....	Do.
8	Puebla to Izucar of Matamoras.....	83.312	(*)	\$8,000 per kilometer.....	Terminated.....	Do.
9	Sinaloa and Durango.....	61.927	1,238,540	\$8,000 per kilometer in 6 per cent bonds, issued at 90 per cent.	Terminated, as far as the valid portion of the concession is concerned.	Do.
10	Mexican Central.....	2,933.253	47,551,600	\$9,500 per kilometer, in certificates, payable at the custom-houses, out of 8 per cent of their proceeds set apart for that purpose.	The international line terminated; the interoceanic line in construction.	Do.
11	National Mexican.....	1,704.240	144,070,000	\$7,000 per kilometer, in certificates, payable by the custom-houses out of 6 per cent of their proceeds.	do.....	Do.

*The capital of this railroad is included in the capital of the above Interoceanic Railroad.

† In shares.

RAILROADS IN 1892—Continued.

	Name of railroad.	Kilometers constructed.	Capital stock.	Subsidies.	Terminated, in construction, or projected.	Duration of the concession.
12	National Mexican Constructing Company.	142.000	<i>Dollars.</i> *8,000,000	\$6,000 per kilometer, in certificates, payable by the custom-houses out of 6 per cent of their proceeds.	In construction	99 years.
13	Sonora	422.302	5,278,775	\$7,000 per kilometer	Terminated, as far as the valid portion of the concession is concerned.	Do.
14	Merida to Valladolid, with a branch to Progreso.	67.688	1,515,413	\$6,000 per kilometer	In construction	Do.
15	Company to Tlahuacalco, Chalco y Amecameca.	26.680	100,000	.....do	Terminated	Do.
16	Merida to Campeche	129.153	1,546,472	.....do	In construction	Do.
17	For vessels	659.960	12,000,000	No subsidy	Projected	Do.
18	International Mexican	76.000	.....	.....do	In construction	Do.
19	Nautla to San Marcos . . . . .	.....	.....	\$6,000 per kilometer, in bonds, at par, with interest at 5 per cent.	.....do	Do.
20	San Juan Bantista to El Paso del Carrizal.	5.750	52,000	\$3,500 per kilometer	Terminated	Do.
21	San Andres Chalchicomula to Chalchicomula Station.	10.353	35,000	.....do . . . . .	.....do	Do.
22	Orizaba to Ingenio	7.550	47,000	No subsidy . . . . .	.....do	Do.
23	Santa Ana to Tlascala	8.500	60,000	\$3,500 per kilometer . . . . .	.....do	Do.
24	Cardenas to Rio Grijalva	7.500	73,549	\$4,500 per kilometer . . . . .	.....do	Do.
25	San Benito to Tapachula . . . . .	.....	.....	\$8,000 per kilometer	Projected	Do.
26	Toluca to San Juan de las Huertas.	15.721	125,202	\$3,500 per kilometer	Terminated	Do.
27	Potrero, Cedral, Vanegas and Rio Verde.	65.000	.....	\$5,500 per kilometer	In construction	Do.
28	Tehuacan to Esperanza	50.000	408,651	\$3,000 per kilometer	Terminated	Do.

* In shares.

MEXICO.

29	Merida to Izamal.....	65,848	630,000	\$6,000 per kilometer.....	.....do	99 years.
30	Chihuahua and Hidalgo to the Sierra Madre.	11,000	.....	\$8,000 per kilometer, in 6 per cent bonds at 90 per cent.	Work suspended at present.	Do.
31	Puebla to Oaxaca and Tehuantepec.	224,839	10,000,000	Subsidy of 8 per cent per annum, during 15 years, on the value of \$30,000 per kilometer terminated.	In construction	Do.
32	Pacific Mexican.....	.....	.....	No subsidy.....	Projected.....	Do.
33	Tonalá to Tuxtla and Frontera.	50,000	5,022,000	\$8,000 per kilometer, in 6 per cent bonds at 90 per cent.	In construction	Do.
34	Marquez to Zimapan.....	23,206	.....	No subsidy.....	.....do	Do.
35	Lower California.....	.....	.....	\$8,000 per kilometer, in 6 per cent bonds at 90 per cent.	.....do	Do.
36	Sonora, Sinaloa and Chihuahua.	.....	.....	\$8,000 per kilometer, in 5 per cent bonds at par.	.....do	Do.
37	Monterey to the Gulf and Venadito.	224,000	100,000	\$8,000 per kilometer, in 6 per cent bonds at 90 per cent.	Terminated.....	Do.
38	Tecoluitla to Epinal.....	9,000	.....	\$6,000 per kilometer, in 6 per cent bonds at par.	In construction	Do.
39	Ixtacalco, Mexicaltzingo, and Ixtapalapa..	20,058	260,000	No subsidy.....	Terminated	50 years.
40	Oaxaca to Tehuantepec.....	.....	.....	\$6,000 per kilometer.....	Projected.....	99 years.
41	Lampazos, Sierra Mojada and Jimenez.	.....	.....	\$8,000 per kilometer, in 6 per cent bonds at 90 per cent.	.....do	Do.
42	Cordova to Tuxtepec.....	51,000	.....	\$8,000 per kilometer in the main line, and \$6,000 per kilometer in the branch lines, in 6 per cent bonds at par.	In construction	Do.
43	Pachuca to Tampico.....	10,000	.....	\$8,000 per kilometer.....	.....do	Do.
44	Maraballo to Iguala	50,000	757,500	\$6,000 per kilometer, payable, \$3,000 in money and \$3,000 in 6 per cent bonds at 30 per cent.	.....do	Do.
45	Northeastern Mexican	50,000	.....	\$6,000 per kilometer.....	Terminated	Do.
46	Salamanca to the Valley of Santiago and Jaral.	35,000	.....	\$8,000 per kilometer.....	.....do	Do.
47	Tlahupantla to Atizapun.....	10,000	.....	\$6,000 per kilometer, in 6 per cent bonds at 90 per cent.	In construction	Do.

RAILROADS IN 1892—Continued.

	Name of railroad.	Kilometers constructed.	Capital stock.	Subsidies.	Terminated, in construction, or projected.	Duration of the concession.
			<i>Dollars.</i>			
48	Veracruz to Boca del Rio	6,000		\$8,000 per kilometer	In construction	99 years.
49	Mexican Valley	22,000		No subsidy	do	50 years.
50	Tehuantepec National	174,000		No subsidy; belongs to the nation.	do	
51	Ometusco to Pachuca	45,710	(*)	No subsidy	Terminated	99 years.
52	Matamoras, Izucar and Aca-pulco.			The Government guarantees for 35 years a net profit of 7 per cent per annum on the amount of \$33,333 per kilometer constructed. When the net profits exceed 7 per cent, the surplus shall be divided by halves between the Government and the company.	Projected	Do.
53	Puebla Industrial	15,000		No subsidy	Terminated	Do.
54	Matamoras to Machuala			\$8,000 per kilometer, in 6 per cent bonds at 90 per cent.	In construction	Do.
55	Matamoras to San Luis Potosi.			do	do	Do.
56	Continental			\$8,000 per kilometer in 5 per cent bonds at par.	Projected	Do.
57	Tula to Zamaltepam			do	In construction	Do.
58	Isthmus of Tehuantepec to the Guatemalan frontier.			do	Projected	Do.
59	Railroad for the service of the mines, reducing establishments, and other railroads.	125,000		No subsidy	In construction	Do.
60	City of Mexico to Zitmatanejo.			do	Projected	Do.
61	City of Mexico to Tecoaapa.			do	do	Do.

*The capital of this railroad is included in the capital of the Mexican Railroad.

	44. 50	.....do	Terminated.....	Unlimited time.
62	Mixcales to Santa Cruz.....	.....do	.....do	.....do
63	Saltillo to a point in the International Railroad.	\$8,000 per kilometer, in 6 per cent bonds at par.	Projected.....	99 years.
64	Railroad branches at Michoacan.	No subsidy.....	.....do.....	Do.
65	Puebla to Rio Verde.....	\$8,000 per kilometer, in 6 per cent bonds at par.	.....do.....	Do.
66	City of Mexico to Coyoacan.....	No subsidy.....	In construction.....	50 years.
67	Teapa to Solusachiapa.....	.....do.....	Projected.....	99 years.
68	Monterey to Porfirio Diaz City.	\$8,000 per kilometer, in 6 per cent bonds at par.	.....do.....	Do.
69	Garita Porfirio Diaz to Garita Arteaga.	No subsidy.....	Construction now suspended.	50 years.
70	City of Mexico to the northern limit of the Federal District.	.....do.....	Projected.....	Do.
71	Metropolitan Belt Line.....	.....do.....	In construction.....	Do.
72	Paraito to Cunduacacan and Ermita to Teapa.	.....do.....	Projected.....	99 years.
73	Toluca to Tenango.....	.....do.....	.....do.....	Do.
74	Apam to Barra de Cazones..	.....do.....	.....do.....	Do.

(1) The Government assistance for the construction, repairs, and working of the railroads consists not only in subsidies granted to some of them, but also in the exemption of duties granted to all articles imported into the country for such purposes, and in the exemption of taxes on the capital invested in railroads.

(2) No line has been subsidized by furnishing it capital for the construction of the railroad.

(3) The advantages so far derived from the railroads chiefly depend upon the facility of communication in a large portion of the territory of the Republic and the development of commerce, to which they have been highly instrumental. They have also contributed to the development of several industries. Vast regions which were almost unknown before the railroads have been since explored, and this exploration led to the discovery of many new mineral zones and mines, and deposits of coal, salt, petroleum springs, and other natural riches.

MEXICO, CUERNAVACA AND PACIFIC RAILWAY.

[*From the Railway Age.*]

The line is intended to run from the City of Mexico in a southerly direction through the States of Morelos, Guerrero, and Oaxaca to the Pacific coast at Palizada, a distance of about 300 miles. For the first 20 miles it will pass through a thickly settled region, from which a very large suburban freight and passenger traffic is naturally expected. The present population of the City of Mexico and of the seven suburban places in the distance named is stated as follows: City of Mexico, 350,000; Tacubaya, 20,000; Mixcoac, 8,000; San Angel, 8,000; Coyoacán, 12,000; Tlalpam, 18,000; Xochimilco, 10,000; Chalco, 6,000; total, 432,000. This shows altogether a population of some 82,000 in the places outside the city, from which suburban business is expected. The Mexico, Cuernavaca and Pacific Railway is to be built under a concession granted to Gen. Herman Sturm in May, 1890, and it will pass through a territory as yet comparatively unsupplied with transportation facilities and yet abounding in agricultural, mineral, and mechanical products. Cuernavaca, one of the principal points to be reached, is the capital of the State of Morelos and a city of 16,000 inhabitants. It is situated on the south side of a mountain and is said to have one of the finest climates to be found in the world. Palizada, the proposed Pacific coast terminus, is, it is thought, destined to become the site of a large city, lying as it does upon a bay which forms a safe, land-locked harbor, with a depth of 25 feet of water at low tide and entirely free from obstructions. Major Butinan estimates that the entire line can be constructed for a cost of not over \$20,000 per mile, including rolling stock, shops, machinery, and way stations, though not including expensive stations at the principal cities. In regard to the character and productions of the country along the line he says:

The selection of your line of railroad from the City of Mexico to the Pacific Ocean, as made by Gen. Sturm, has been a most happy one. The entire distance is of easy grade, easy bridging, and without a tunnel on the whole line. All the material for ties, bridges, etc., is near at hand, with abundant and cheap labor ready to construct the road. Thousand of tons of sugar, rice, brandy, and other products of the soil, immense amounts of mineral products, not to speak of the vast quantities of fruit, dyewoods, etc., are waiting for a railroad to transport them to the City of Mexico or to the Pacific and to a market. The route of your road through Oaxaca and Guerrero will pass through what will, immediately upon its completion, become the Adirondacks of Mexico and the paradise of the hunting and fishing fraternity. This section of the country abounds in mountain streams filled with numerous specimens of valuable game fish, among which I will mention the trout, mojarras, lisa, bobo, pollock, barbel, robalo, curbina, blanquillo, crawfish, and bagre. The forests throughout this section contain abundance of wild game, such as the deer, ounce, leopard, wild cat, tiger, wolf, lion, tapir, badger, wild boar, weasel, armadillo, and many other wild animals, including eagles and an endless variety of birds, while there is no end to the ducks, widgeons, herons, pheasants, and chachalacas. This section will soon become the favorite resort of the hunter and fisherman, both for pleasure and profit. No such territory exists throughout the entire Republic for the sportsman as your route will open up, and once open for traffic wonders will be worked in the way of providing for the immense rush of pleasure-seeking clubs and individuals who will not be slow in improving the splendid opportunities offered throughout this vast tract of now almost unbroken wilderness. It would be folly to attempt anything like an estimate of the traffic that will seek an outlet to market immediately upon the completion of your road. Although Oaxaca and Guerrero are the two richest mineral States of the Republic, I consider the traffic from the mines will sink into insignificance compared to the lumber that will be offered for transportation.

The Mexican Government has just granted a concession for a standard gauge railway about 350 miles long from the City of Mexico to a town on the Pacific coast now known as Palizada Bay, and the letting of the contract will take place during the present month. The road will traverse what has been considered the richest mineral section of old Mexico, which not only produces silver, gold, and lead ores, but has also large agricultural and timber resources. In addition to the local traffic it is believed

that this line will secure a large transcontinental patronage, as it will offer the shortest route between Australia and Europe.

The Government of Mexico has canceled the concession granted to Gonzalo A. Esteva for the construction of two railways from Aguas Calientes to Guadalajara and Chamela on the Pacific coast because of his failure to comply with the conditions of his contract.

The *Diario Oficial* of Mexico also announces the forfeiture of the concession held by Col. A. K. Owen for a railway from Topolobampo to Presidio del Rio Grande, on the northern frontier.

The earnings of the Mexican Central Railroad for October, 1891, were \$772,886.95, which was a large increase over the same month of the previous year.

The first steamer of the new line between Mobile, Ala., and Tampico, Mexico, reached the latter port on the 7th of January, 1892, and was received with great rejoicing by the people of that portion of the Mexican Republic. Hereafter these steamships will run regularly every two weeks from Mobile to Tampico, and through bills of lading will be given from all points in the United States to all points in Mexico.

TEHUANTEPEC IMPROVEMENTS.

The work of improving the harbor of Coatzacoalcos, Mexico, for which a contract has been made with the Mexican Harbor Improvement Company, of Illinois, will be under the charge of Engineer E. L. Corthell, so long associated with the late Capt. Eads in his many important works. Mr. Corthell expresses great confidence in the success of the enterprise, which will save 2,400 miles of distance in the traffic from New York and New Orleans that now goes by the way of the Isthmus of Panama, as the Tehuantepec Railway will connect Coatzacoalcos with Salina Cruz, where it is proposed to build a breakwater for the protection of the shipping, the depth of water being ample there, although it is now but an open roadstead. The depth of water at the crest of

the bar at the mouth of Rio Coatzacoalcos is from 13 to 15 feet, and as the river is a very large one, no trouble is anticipated in its cutting through so as to obtain a channel for the passage of vessels of the greatest depth, the harbor itself, within the shore line, having ample accommodation for the largest fleets. A maximum depth of 26 feet in the channel must be had within three years and a half, and the whole works finished and delivered in five years and a half. Besides building the jetties, the contractors must build a pier 500 meters long and offices for the custom-house, etc., at a cost not to exceed \$25,000. The price to be paid by the Government of Mexico is \$4,300,000, and the company furnishes a guaranty of \$200,000.

Mr. E. L. Corthell, engineer in charge of the harbor improvements at Tampico, Mexico, has made a very good report concerning that undertaking. The breakwater can be said to be almost completed for a distance of a mile and a quarter from land, there remaining but 400 feet to finish. The contractor, Mr. Hampson, has during last year actively pushed the work forward. Notwithstanding that, owing to the drought this year, the river did not have its usual strong current, a mean depth of 20 feet has been obtained along the length of the breakwater. In some places there are 30 feet at a distance of 6,000 feet from land, where a year and a half ago there were but 9 feet of water. Comparing the depth of water in June and October, it will be seen that in four months the river carried off 1,035,000 cubic yards of deposits. At the beginning of 1892 a depth of 18 feet had been obtained.

THE FEDERAL TELEGRAPHS.

BRIEF HISTORY OF THE SYSTEM NOW EXTENDING OVER 32,000 KILOMETERS.

The thoroughness of construction is attested by the fact that the lines have remained in operation during the most severe storms. Among other great tempests will be remembered the

experience in Yucatan, Campeche, and Tabasco, in the winter of 1887, when the cyclone which produced such havoc interrupted the service for only a few days. At the time of the floods in Leon the Government line alone remained in working condition, still another proof of the solidity above referred to. Lastly, the rains this year have been exceptionally heavy in some parts of the country, but prompt communication with these places has never been lacking for more than twenty-four hours at a time.

The present director established and has maintained telegraphic communication with the States above named, Tabasco, Campeche, and Yucatan. To fully appreciate this statement it is necessary to understand the peculiar difficulties to be overcome, such as the climate, topography, the mighty rivers, and even the insects, which make their nests and propagate in such vast numbers in the insulators. These are some of the obstacles to be counted on by telegraphers in those places.

Another important improvement instituted by Mr. Islas must be mentioned, namely, the laying of the cable in two sections across the Laguna de Términos, which insures permanent communication with Yucatan, and is much superior to the private company's cable to Galveston, being of a better class and having three conductors.

The offices are equipped with the most modern instruments, and the facility with which messages are transmitted and the economy of operating will be appreciated by anyone, no matter how little conversant with the telegraphic service.

The present management is aware of the improvements attained in Europe and in the United States as regards telegraphs, and if, having studied them, it has not proposed their adoption in Mexico, it is because they would be barren of practical results in our vast territory, considering the needs of our service, or are not within our means. However, the progress of telegraphy in other countries is carefully watched, and any new discovery which might profitably be transferred to our system will be adopted.

The adoption of a tariff was one of the most difficult subjects to be settled. Each that was offered presented difficulties arising from the extent of the Mexican territory, its broken character, and other circumstances that it would be tedious to mention. The present tariff was finally adopted, by which the Republic was divided into circles, each having for its center the town from which the message was sent.

This system of charges is like that in operation in Russia, the same reasons securing its adoption there as here. For the press there is now a special tariff, the charge now being 1 cent a word to any part of the country. Even this reduced price has been thought high and not at all a liberal concession. Much could be said in this regard, and it would not be out of place to mention that France, one of the most thickly settled and richest countries on the globe, gives to the press a rebate of only 50 per cent on its telegrams.

Notwithstanding the reduced prices, the increase in revenue during the past five years has been considerable. We give herewith a statement of the value of the messages, both official and private, transmitted from 1886 to 1890:

Year.	Official.	Totals.
	<i>Dollars.</i>	<i>Dollars.</i>
1890	769,092.14	952,492.08
1889	540,694.40	785,980.99
1888	474,541.86	886,182.53
1887	511,899.97	904,965.23

As will be seen, the revenue during the last five years has increased some \$200,000. Meanwhile, the amount of official telegrams has diminished correspondingly, this result having been brought about by the action of the various department secretaries, who most earnestly recommended their subordinates to make a judicious use of the service and to word their messages as laconically as possible.

Mexican railways are in a state of active progress. A contract has recently been made with Mr. F. A. Da Costa, of Eagle Pass, Tex., for the construction of a narrow-gauge railroad 43 miles long, from Sierra Mojoda to the extensive salt deposits at Laguna Jaco, on the borders of the States of Coahuila and Chihuahua. The formal opening of the through line of the Monterey and Mexican Gulf Railway from Monterey to Tampico will take place on the 16th instant. The National road has just received from the United States four new Baldwin locomotives, and is daily having large shipments of silver ore from Mexican mines to the smelters. More than 3,000 men are now at work on the extension of the Mexican Central.

A new steamship line has been established between Mobile, Ala., and the new port of Tampico, Mexico, which promises to be a very important factor in the development of the commerce of Mexico and also of the southern portion of the United States. The Mexican Central Railroad has recently opened a line to Tampico, and, with the assistance of the Government of Mexico, is building a harbor there which, when completed, will accommodate the largest steamships that float. The first steamer of the new line arrived at Mobile last week, and they will now continue to make fortnightly voyages.

Interesting advices of railway development in Mexico have been received. On the morning of the 15th of September, 1891, active work was commenced at Torreon, on the extension of the International Railroad of Mexico to connect that city with Durango. The day was selected by the president of the road, Mr. C. P. Huntington, in honor of the birthday of the President of the Republic. The ceremony of driving the first spike was witnessed by a large number of the inhabitants of the surrounding country. Immediately afterward the regular operations of track laying were vigorously prosecuted. This line will complete the connection between Durango and the interior cities of Mexico, and opens up to traffic

a very fertile portion of the Republic. The road will be 156 miles long, and it is expected that cars will be running through to Durango in less than two years.

A strong company of capitalists has been organized in Boston for the purpose of carrying out what is known as the Salazar concession for a railway from Matamoros, in Mexico, in a southerly direction to some convenient point on the frontier of the Republic of Guatemala. The directors of this company are William A. Paine, Thomas W. Pierce, Feliciano San Roman, Demetrio Salazar, Enrique Viscaya, Franklin R. Brown, Joseph S. Anthony, Jacob M. Copley, and George H. Towle.

The earnings of the Mexican National Railway for the month of October, 1891, were \$384,956.79, being an increase of \$58,987.06 over the corresponding month of 1890.

The passenger department of the Mexican Central Railroad is preparing some magnificent photographic views of the picturesque scenery on the line of its road, to be exhibited at the World's Columbian Exposition in Chicago, and will also be sent to the principal cities of the United States. The views will be taken with greatest possible care to exhibit the characteristics of the country through which the road passes, and will be of a very large size.

Detailed information has been received relative to a concession which has been granted by the Mexican Government to Messrs. James W. Porch & Co., of Philadelphia, for the establishment of a line of steamships to ply between Philadelphia and the Mexican coast ports. The concession is a liberal one, and Messrs. Porch & Co. declare their intention to give Mexico an efficient freight, passenger, and mail coastwise service. The business men of Philadelphia are evincing the liveliest interest in the enterprise, and the success of the undertaking from a financial point of view is assured. It is proposed that the office of the company in Philadelphia shall be made the headquarters for information of commercial interest regarding Mexico, and Messrs. Porch & Co. in-

tend publishing a monthly bulletin, to be compiled from reports of agents in the principal Mexican cities.

ACQUISITION OF LAND IN MEXICO.

Regarding the acquisition of land in Mexico the Bulletin du Musée Commercial for the 14th of November, 1891, has the following:

The Mexican Government at present favors the establishment of companies whose aim is to measure and divide into lots the numerous untitled lands which exist in the Republic. The companies, in order to be authorized, must particularize the lands which they propose to measure and the number of colonists which they can establish there within a given time. One-third of the lands thus measured is ceded to the companies, which in their turn can sell them by lots, of which the area does not exceed 2,500 hectares. The Government also favors the establishment of companies whose object is to introduce immigrants into the country. These companies enjoy the following privileges: Acquisition at low prices and for long terms, of national lands, free of any tax except the stamp duty; exemption from port dues for ships which bring at least ten families of colonists; exemption from import duties for machinery, tools, and animals for the use of the colonists; premium for each family establishment in a colony; transport of colonists on account of the Government.

Beyond the advantages accruing to a country with a large immigration, favored by the numerous concessions enumerated, the Mexican Government proposes, by the sale of the national lands, to liquidate the whole or part of its debt, one-third of the acquisitions of land made by the colonists or the companies being payable in bonds of the public debt; a condition also to the advantage of the buyers, since these bonds can be purchased below par.

A COLONY ON THE ISLAND GUADALUPE.

The department of public works in Mexico has given to Mr. Romulo Vilarasau a concession for the colonization of the Island of Guadalupe, in the Pacific Ocean, the contract to run for twenty years, with a rentage of \$300 a year for the first six years, \$600 for the six following, and \$800 for the last eight years. The lessee has the right to use the forests and the herds of wild goats on the island, care being taken to preserve both from destruction, and he may establish on the island Mexican and foreign colonists.

The Government offers for each family 200 hectares (500 acres) of land up to a total 97,000 hectares, as a compensation to the concessionaire, while each family is entitled to eight hectares for cultivation.

NEGRO COLONY IN SONORA.

An association, called "The American Colored Men's Mexican Colonization Company," is planning to establish a colony of negro farmers, coming chiefly from the States of Mississippi and Tennessee, in the State of Sonora, Mexico, and it has arranged for the purchase of a tract of 100,000 acres about 20 miles south of Yuma, Ariz., on the Southern Pacific Railroad, at a place where the remains of the Lerdo colony, founded by Mr. C. Andrade, of San Francisco, still remain.

The Mexican Government has granted a concession to Mr. Arthur C. Reeves, authorizing him to establish in the State of Puebla a colony of Swedish farmers and artisans. Mr. Reeves is to be granted the territory known as the Mesa de Coroneles, at the nominal price of \$2.50 per hectare, payable in bonds of the Mexican Government or custom-house certificates, which is equivalent to about 25 cents per acre in cash, and is to have ten years in which to make the payment. The colony is granted unusual annuities, exemptions, and privileges.

A party of colonists, numbering 130, has recently arrived at Guaymas, Mexico, en route for Topolobampo. These emigrants are well equipped with tools for farming, blacksmith shops and other occupations, and are furnished with ample supplies of provisions, cattle, etc. Notwithstanding the numerous unfavorable reports which have been published respecting this colony, it is said to be in a prosperous condition, and it is expected that the results of this experiment will soon demonstrate it to be a perfect success.

The new census of the State of Nuevo Leon, Mexico, shows the population to be: males, 139,061; females, 132,926; total, 271,987.

Nicaragua.

PROPOSED EXTENSION OF RAILROAD COMMUNICATION IN THE REPUBLIC OF NICARAGUA.

The existing railroad system of Nicaragua consists of two separate sections. The first commences at the port of Corinto on the Pacific, and terminates at Momotombo on the northwestern shore of Lake Managua. The second commences at the capital, Managua, on the southern shore of the lake of that name, and terminates at Granada, on the northwestern shore of Lake Nicaragua. The lengths of these two sections are 58 and 33 miles respectively.

In conjunction with the steamers on Lake Managua, and the steamboat service from Granada to Greytown on the Atlantic (via the San Juan River), they form a trunk line of communication through the country from sea to sea.

These railroads were only completed throughout in 1885, but they had an immediate and most gratifying effect on the commerce and progress of the country. The consequence has been a strong and general public feeling in favor of an extension of the iron road, a feeling which each successive Government has been most anxious to satisfy by giving encouragement to any reasonable project which has been presented to it.

The existing railroad system is, in fact, simply a trunk line passing through the part of the country most thickly populated and connecting the principal towns. What is required now is the extension of the system by branches or connections into those parts of the country already settled and prosperous, but where the common roads are bad and insufficient, and still more into those

parts known to be capable of enormous development, but dependent on railroad construction for that development.

There are three schemes for railroads in Nicaragua which have been sanctioned by the Government.

(1) The Ramiriz concession for the construction of a road from the port of San Miguelito on the east side of the Lake of Granada to the head waters of the Bluefields River, about 60 miles from the Atlantic, the river itself being navigable for ocean-going vessels of great draft, when once over the bar, upon which there is now 11 feet of water, but which will be deepened so as to allow the passing of large steamers to the proposed terminus of the railroad on the river. The length of this road will be about 100 miles, making the entire distance from the lake to the Atlantic 100 miles. The Government gives a guaranty of 5 per cent on \$3,000,000 for thirty years, and also 140,000 acres of public lands to be taken along or near the railroad. The promoters have concluded the surveys and it is found that there will be no serious difficulties to overcome. It is said that the cost will not much exceed \$3,000,000, but that with the improvement of the bar, dredging of the river inside, and building of wharves, the outlay will reach \$4,000,000.

(2) The Climie concession for a line 25 miles long to connect a district known as the Pueblos with the existing railway at the town of Masaya, 19 miles from Managua. This is the most prosperous and best cultivated district in the Republic, producing largely of coffee and sugar. On this concession the Government guarantees 5 per cent on \$500,000 for twenty-five years, and gives 45,000 acres of land. The surveys have been completed and work will begin at once.

(3) The Strong and Thornton concession for a railroad from Momotombo to the head waters of the Rio Grande, about 120 miles from the Atlantic. The contract will be one of far-reaching importance to the Republic, and its terms and conditions

are considered favorable to the country. The total length of this railway will be not less than 200 miles, and will pass through the department of Matagalpa, attaining an elevation of 2,000 feet, where the cultivation of coffee has been commenced within the last two years, and with such promise of success that there is no doubt it will soon be one of the largest coffee-producing centers within the five republics of Central America. Descending toward the Rio Grande, there are splendid lands, well watered, and suitable for cacao (chocolate), while lower still there are great stretches of natural grass lands, and along the valley of the river there are unlimited facilities for the cultivation of bananas and other tropical fruits. Fine timber in great quantities exists near the sea, and in the lowlands, convenient to navigable lagoons, the cocoanut tree is everywhere to be found.

Like all the rivers of the coast, the Rio Grande has a bar at its mouth, but deep water within which will admit of navigation for large seagoing vessels. It is proposed to excavate at the bar when vessels will be able to go up the river alongside of the railway wharves, and load direct from car to ship without the expense of transshipment. The climate is good, especially so on the highlands, and with the opening of this territory it is believed that immigration will turn in this direction, and that soon the country of Matagalpa will become the most important of all Nicaragua.

The immense slopes of the Atlantic have been isolated for want of roads, but these proposed improvements will change the whole aspect, and soon Nicaragua will be equally well known, throughout its entire domain, as any of the sister republics.

Messrs. Strong & Thornton ask no guaranty or subvention of any kind, but the Government gives them 1,250,000 acres of land, and this land will be opened to actual settlement and will be laid out in farm and ranch plats, and in coffee and sugar estates, so that it will be rapidly developed into rich producing lands.

The contractors obligate themselves to settle and place the lands under cultivation within twenty years. The climate is excellent, foreigners are respected, and the natural resources of the country are great.

A copy of the concession granted by the Nicaraguan Government to Dr. Luis Cruz for the establishment of a complete telegraphic service in Nicaragua has been received. All the material for the construction of the line will be admitted free of duty, and during the continuance of the concession no other similar privilege will be granted, except with the canal company, and the various railroad lines will not be prohibited from employing private telephones in the regular course of their own business. The Government will be furnished, free of expense, 25 instruments, with the necessary connections with the central office and all the lines of the company. Many other important privileges are given to the concessionaire, who is authorized to transfer his rights to an operating company should he so desire.

The Republic of Nicaragua has authorized the sale of 22,400 manzanas (equal to 40,000 acres) of the most fertile public lands in the Department of New Segovia, to be used in the cultivation of coffee, wheat, sugar cane, cocoa, etc., in quantities not exceeding 30 manzanas, the proceeds of which are to be devoted to the establishment in the city of Ocal of a college to be known as the "College of the Assumption of Mary."

The Government of Nicaragua has reaffirmed a decree of March 10, 1865, donating to every family of immigrants from the United States and other countries, settling in Nicaragua with the object of becoming naturalized citizens, a maximum of 120 acres of unoccupied land, according to the number of persons in the family, and to each able-bodied single man 60 acres. Immigrants thus settling are entitled to the rights of naturalized citizens, and will be exempt from army service except for the defense

of the integrity of the Republic. At the end of ten years of cultivation of the land, commencing from the date of the cession, and on the completion of naturalization, an absolute title will be given. Persons desiring to avail themselves of this concession must bring papers from the ministers or consuls of Nicaragua in the countries from which they come.

Paraguay.

COMMERCE FOR 1890.

The exports of Paraguay for the calendar year 1890 were \$3,900,729 and the imports were valued at \$2,721,433. The total revenues of the country for 1889 were \$1,724,588, of which \$986,939 was collected from duties on imports and \$196,489 were duties collected on exports.

The statistics for the year 1890 of the commerce of the Government of Paraguay, just received at the Bureau of the American Republics, show that the imports amounted to \$2,725,611.99; exports, \$2,901,589; total, \$5,627,200.99, from which the following revenue was received: On imports, \$990,451.18; exports, \$193,626.65; total, \$1,184,077.83.

The Republic of Paraguay during the year 1890 exported 35,000,000 oranges, but the selling price was too small to justify the gathering and shipping of fruit at a distance of more than 3 miles from the Paraguay River. The orange crop for hundreds of square miles was therefore allowed to rot upon the ground. An attempt is being made now to utilize the surplus of oranges in the manufacture of liquors, and several distilleries have been set up during the last year, and also establishments for the manufacture of flavoring extracts and perfumes from the flower and fruit of the orange.

BALANCE SHEET OF THE GOVERNMENT FOR 1890.

ASSETS.

Cash in the General Treasury, December 31, 1890.....	\$287, 236
Cash in the Treasury of Public Credit, December 31, 1890.....	319, 987
Outstanding debts, to be collected by the Commission of Public Credit, for sale of lands, yerbales, paving rate, etc	238, 172
Shares in the railway from Asuncion to Villa Rica (Paraguay Central Railway).....	1, 050, 000
Shares in the Bank of Paraguay and Rio de la Plata	2, 000, 000
Shares in the Bolsa de Comercio.....	2, 400
Payments on account of the 6 per cent guaranty on the Paraguay Central Railway	81, 764
Capital of the National Bank of Paraguay on December 31, 1890.....	2, 101, 706
Balance in favor of the Commission of Public Credit in National Bank of Paraguay on December 31, 1890	297, 916
Sum handed to the Commission of Inspectors of Banks, to be applied to the redemption of the notes of the National Bank	10, 032
Deficit of the Commission of Public Credit	67, 470
Sundry debtors.....	107, 192
Public debt, December 31, 1890	26, 405, 598
	<hr/>
	32, 969, 471
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LIABILITIES.

Internal debt, December 31, 1890, as under:

Bills payable.....	\$3, 000
Orders payable.....	3, 431
Balances payable.....	54, 213
Credit of 30 per cent to the National Bank.....	1, 779
Bonds of internal debt emitted:	
First series.....	390, 510
Second series	3, 650
Credit in the National Bank of Paraguay	267, 902
	<hr/>
	724, 485
Deposits on December 31.....	194, 934
External debt, December 31, as under:	
To Brazil	\$8, 960, 183
Interest on same	916, 283
To Argentine Republic	7, 770, 570
Interest on same.....	1, 793, 420
Converted loan in London	4, 218, 000
Loan from Argentine National Bank	42, 590
	<hr/>
	23, 701, 046

LIABILITIES—continued.

Bonds emitted in conformity with the law of April 24, 1890	\$2, 500, 000
Bonds of the Commission of Public Credit.....	268, 506
Amount of land warrants issued to foreign bondholders retired by the Commission of Public Credit and exchanged for fiscal lands.....	5, 580, 500
Total.....	32, 969, 471

ASUNCION, April 27, 1891.

MARKET FOR AMERICAN GOODS.

The Bureau of American Republics has received an interesting letter from Guillermo Harrison, a merchant at Villa Rica, Paraguay, who writes as follows:

It is a great pity that our manufactures should be shipped first to Europe and from there to South America, owing to want of means for transport, and once they have to come through that route they are no longer considered out here as being American manufactures, but as European, and the importers here send their orders for those articles to Europe instead of sending to the States.

I inclose a list of articles which I have ready markets for, but they should be of the cheapest possible manufacture:

Hats (felt); printed calico; white calico; bleached calico; cotton socks; cotton stockings; cotton undershirts; cotton white shirts; cotton cuffs and collars; moleskins; sewing thread, hand and machine (spools); kerosene; sewing machines; oilcloth; steel fencing wire, Nos. 8 and 9; T hinges from 6 inches to 18 inches and screws to suit above; door locks; lamps; slips or tower bolts, 3 inches to 36 inches; thread for sewing bags; crockery and glassware; account paper, foolscap size; foolscap, plain, letter paper; envelopes; axes, squaring and felling; loaf sugar; rice; cotton blankets; cotton rugs; alpillera (for making bags), ordinary hemp tweed (this article should weigh 10½ ounces to a yard of 40 inches width); white and colored handkerchiefs, pocket and larger size, imitation or silk; white handkerchiefs, pocket (cotton); cement; linseed oil; turpentine; ink (writing); cutlery; cooking utensils; agricultural implements; furniture; nails, wrought-iron and French; weighing machines, or scales; shovels; hoes.

INDUSTRIAL CONDITION OF PARAGUAY.

The *Economiste Français* gives the following account of the present industrial condition of Paraguay:

The progress accomplished by this Republic has of late years been considerable.

English capitalists have placed nearly a million pounds in this country, and a certain number of European families have come to settle there. Congress has voted considerable sums for the improvement of the capital, the streets of which, which used to be impracticable, are now accessible to carriages. Two lines of tramway cross Asuncion and are open for nearly 12 kilometers. In the interior, about 170 kilometers of railway have been open to commerce, and the southeastern line now reaches Villa Rica. A line is projected to unite Encarnacion, on the Parana, with the capital. It corresponds to a line which is being constructed on the opposite bank of the river, with Monte Video for its terminus. By means of this railway Paraguay will be placed in more direct communication with Europe, and the result can not fail to be favorable to its development. There is also talk of constructing a branch line from Villa Rica to join the system of Brazilian railways, Santos being the terminus. Paraguay being thus placed in communication with its neighbors will be able to work all those natural resources of wealth which are wasted at present for lack of means of transport.

In the open prairies, which are very numerous, nothing has hitherto been done except to rear a race of Brazilian cattle, small in size, and not easy to fatten. But for some time past the owners have been importing from Europe the products of a pure race, which will sensibly improve the value of the herds.

Villa Rica is in course of becoming an important town as the head of the railway which penetrates towards Brazil. Land sells there already at upwards of 40*b.* the manzana of 50 square varas. Out of 117 trading houses 36 are French, with a capital valued at 1,000,000*b.* In the neighborhood of this town the Anglo-Paraguayan Company has bought vast landed property, in order to settle an agricultural colony there.

There can be no question that Paraguay is a great field in the future for small farms. But, for the moment, the land has been seized by great companies, which do not permit it to be divided up or farmed unless the value can thereby be greatly increased. At the present time a league of good land costs 1,000*b.* The Government, in order to encourage emigration, offers a free passage to the families of agriculturists, and has in preparation a law for the completion of the system of protection and help to be given to foreign labor. The Argentine crisis has affected the banks and mercantile houses of Paraguay, and under the influence of the withdrawals of minted money by the Argentines, paper money has suffered a certain depreciation. But, from the general point of view, this crisis is really a benefit to the country, for the Buenos Ayres speculators had begun to buy in the hope of an immediate rise great quantities of land and would certainly have led Paraguay along the same disastrous route in which they have themselves been ruined. Evidently the withdrawal of capital which the

crisis in the Argentine has brought about will for some time check the development of Paraguay, but the danger of a temporary relaxation of the rate of progress has nothing in it to alarm the friends of this young and vigorous nation.

RAILROADS.

One hundred kilometers of the Paraguay Central Railway, from Villa Rica to Yuti, was opened to the public on the 9th of August, and the inauguration of business was attended with great ceremony.

The Congress of Paraguay has approved the project for the construction of a railway, to be known as the Asuncion and Santos Railway, and has authorized a contract to be entered into with the Viscount de Abert, who has already obtained a like concession from the Government of Brazil for that portion of the road to be constructed within Brazilian territory. This is one of the most important projects now contemplated in South America, and will be the means of opening direct communication by rail from the sea at Santos, Brazil, to Asuncion, the capital of Paraguay, thus saving thousands of miles in both sea and river transportation, and shortening the time between Paraguay and the United States from twelve to ten days. The road will run almost due west, on the twenty-fifth parallel of south latitude from Asuncion in Paraguay, to Curitiba, Brazil, 525 miles, and then in a southeasterly direction 110 miles to Santos, where is one of the finest harbors on the Atlantic coast, and from which more than three-fourths of the entire coffee crop of Brazil is now exported.

A contract has been entered into between the Government of Paraguay and Mr. Manuel Obert de Thiensios for the construction of a railway from Asuncion to the Brazilian frontier, with necessary branches. This road is to be built and opened to public traffic within four years. The Government guaranties the payment of 6 per cent interest on \$30,000 for each kilogram of the road, and the company will have the right to occupy land for stations, track, beds, etc., may use the necessary timber, stone, etc., for construction purposes, may establish colonies on public lands,

and may work any mines which may be discovered. The colonists settling on the lands of the company will be exempt from all direct taxation for ten years, and will be permitted to import their agricultural and household supplies of every description for the same period. The company is also granted the right to import all the necessary machinery, cars, and other supplies free of duty. This road is intended to be a part of a transcontinental railway from Asuncion to Santos on the Atlantic Ocean, and will pass through the towns of Enboscada, Arroyos, San Estanislao, and Villa Igatimi.

Peru.

PETROLEUM DEVELOPMENT IN PERU.

The London and Pacific Petroleum Company, an English corporation whose works are at Talara, in the north of Peru, have erected at Callao large tanks for the reception of refined lubricating oil, benzine, and other manufactures of petroleum. They have also erected large tanks for holding the refuse of the petroleum, which is carried there in tank steamers. This refuse is used exclusively as fuel on board some of the coast steamers, and it is also supplied to the Central Peruvian Railroad Company for use on their locomotives. The experiment of using petroleum for fuel on railways has been successful, and several private factories are making arrangements to adopt it in lieu of coal, being much cheaper.

A company under the title of the Mancora (Peru) Petroleum Syndicate has been organized in London with a capital of £120,000, the object of which is to purchase and develop the petroleum wells at Mancora, extending along the coast of Peru from Talara to Tumbes. This is the third petroleum company that has been organized in London within the last year for work in Peru.

Recent advices from Peru report the completion of large storage tanks at Callao for the finer qualities of lubricating oil, benzine, and other manufactures of petroleum now being produced in that country. Large tanks have been erected for storing the refuse of the petroleum which is now being used exclusively as fuel on the coasting steamers and is coming into use also upon the

railways: Several manufacturing establishments at Lima are now arranging to introduce petroleum as fuel instead of coal. Three years ago Peru imported all her petroleum from the United States.

Reports are received by the Bureau of the American Republics to the effect that the experiment of using petroleum for fuel on the Oroya Railway in Peru has proven successful. The trials were made at an altitude of 5,800 feet above the sea with two locomotives from the Rogers Works, of Paterson, N. J. The oil used is not "crude" petroleum, but a residuum oil with a fire test of about 300° F. In the trials the average consumption of oil was 38.55 pounds per mile, while with coal it was 79.30 pounds. It is reported that the Oroya Railway Company have decided to adopt oil fuel on all their locomotives.

Of the industries established in Peru petroleum is prominent for its progress and promises to become of great significance. No less than 516 new petroleum claims have been registered in the past year. The exports from Zorritos were as follows:

	1890.	1889.
Crude petroleum .....pounds...	5, 124, 903	4, 744, 882
Kerosene.....do....	2, 644, 150	2, 204, 346
Lubricating (clear) oil .....do....	2, 460, 045	1, 009, 447

The exports from the new works at Talara consisted, in crude petroleum in tanks, 1,100 tons; kerosene in cases, 46,589; lubricating fine oil in barrels, about 4,000.

REGULATIONS FOR CONSULAR INVOICES.

The Government of Peru has issued the following new regulations concerning the making out of consular invoices:

First. If the goods shipped belong to the class of carpets, damasks, cloths, plush, etc., made of cotton, wool, linen, or silk, the material with which such articles are manufactured must be expressed in the invoice, and also the length in meters of the pieces contained in each package.

Second. If the goods are shawls, ties, shirts, handkerchiefs, or other wearing apparel, the material of which they are made must be expressed, and also the number of dozens of the quantities in each package.

Third. In the case of fancy articles, such as fans and parasols, and also in the case of perfumery, the number of dozens of each must be expressed, and the quality of the goods.

Fourth. In the case of paints, oil, etc., the quality and class must be expressed, and the weight of each drum, keg, barrel, or tin given.

Fifth. Nails, screws, and the like, are to be entered according to weight of each package, stating their quality.

Sixth. Needles, pins, hooks, etc., curtain and picture nails, must be entered per number of grosses, and their quality described.

Seventh. Furniture, with the exception of billiard tables and pianos, must be fully described as to material of manufacture, and the number of pieces of furniture contained in each package given.

Eighth. In the case of machinery of any kind, where several parts constituting one whole are packed into different packages, it is not necessary to give the contents of each, but simply to state the number of parts of the machine contained in each package, with the gross weight of each package, and the value of the whole invoice. But when the several different machines, or tools, or utensils, are packed into one case, then the contents must be detailed, and the value of each package given.

Ninth. In all cases the weight in kilograms and value of each package must be declared on the invoice.

Tenth. It is recommended that shippers be careful to detail, as far as possible, the goods invoiced.

A merchant in the interior of Peru, who ships and receives his goods at Payta, in the northern part of that Republic, calls attention to the fact that the rate of freight from New York to Paita is \$28 gold per ton of 2,240 pounds, while that from Liverpool to Payta is \$20 per ton of 2,240 pounds. That, he says, is the principal reason why the merchants do not buy their goods in the United States.

Peru has reimposed the duties on wheat and rice which were remitted by decree of the 4th of April last.

A specific duty of 11 cents a kilogram (2.20 pounds) has been imposed on all lard imported into the Republic of Peru. It has been decreed that all packages shipped, discharged, or reëmbarked at ports of the Republic shall be marked with the gross weight.

Cases, barrels, and crates must also be marked with the measurement of their three dimensions according to the metric system, and fines are imposed for noncompliance with this law.

ENGLISH COMPANIES.

During the last three years the progress of Peru has been very marked, and a great deal of English capital has gone into that country for investment. The following is a list of the companies organized with English capital for the development of Peru during the last three years:

Central Railway of Peru.....	£2, 500, 000
Pacasmayo Railway.....	200, 000
Trujillo Railway.....	500, 000
Mollendo to Bolivia Railway.....	2, 600, 000
Montes Claros Gold Mines.....	80, 000
Scott Gold Mines, Macate.....	160, 000
Montero and Rey Gold Mines, Macate (capital unknown).	
Caylloma Mining Company.....	250, 000
Talara Petroleum Company.....	25, 000
Sechura Petroleum Syndicate (capital unknown).	
Boca Pan Petroleum Syndicate, Tumbes.....	20, 000
Mancora Petroleum Syndicate.....	12, 000
La Cruz Petroleum Syndicate.....	12, 000
Lima Brewery Company.....	110, 000
Vitarte Cotton Factory.....	134, 000
Irrigation Syndicate, London.....	500, 000
Exploration Syndicate, London.....	50, 000
Maravillas Smelting Works, Puno.....	20, 000
Casapalca Smelting Works, Oroya (capital unknown).	
Piura and Catacaos Railway.....	20, 000
Italian Mining Company, Gasuno S.....	400, 000
Chilean Mining Company, Cachara.....	750, 000

A copy of the report presented to the Congress of Peru by the minister of finance and trade of that Republic has been received, which shows a material improvement in its commerce during the year 1890. The revenue derived from customs duties amounted in 1890 to \$5,698,906.38 against \$4,748,790.32 in 1889, and \$4,361,304.37 in 1888.

The imports of foreign goods into Peru for the fourth quarter

ending 1890, amounted to \$3,025,029.70; the exports from Peru were during that period \$2,950,785.37. A third of these imports, \$1,097,500, came from England, which country took considerably more than half the exports, viz, \$1,643,062; Germany comes next, the imports from which country were \$554,930, and the exports to it were \$209,195; France is next, the imports from which were \$425,868, and the exports to it were \$209,195; then follow the United States, Chile, China, etc. These values are in Peruvian currency.

The receipts for duties at the custom-house of Callao, Peru, for the year 1890, were 4,267,376 soles, or a little more than \$4,000,000.

The population of Callao, according to a census recently taken, is 26,805 inhabitants.

Interesting information from official sources concerning the condition of the internal debt of Peru up to May 31 has been received. The issue authorized by Congress in 1888 was \$38,000,000, of which amount \$32,000,000 bears interest at 1 per cent, the remainder bearing no interest, but being admissible at the periodical amortizations. The amortizations, beginning in December, 1889, have been six in number; \$6,788,382 of the debt has been canceled, \$25,846,417 of the amount still due bearing interest. The interest and sinking fund are supplied from the alcohol duties, which are paid monthly by collectors direct to the public debt committee at the rate of \$35,437 a month, or \$425,245 a year. In addition to this amount 5 per cent of the customs receipts are handed over monthly to the same committee, making the total amount of the fund for the service of the debt \$641,245. The funds at present in hand are \$233,592. After paying interest the amount of thus left for the sinking fund is nearly \$400,000 annually, which ought to insure a continuance of the quarterly amortizations and a rise in the value of the bonds. The prices at the last amortization on May 31 ranged from \$7.50 to \$8.50, and debt to the nominal value of \$1,381,962 was bought in by the Government.

The produce of the alcohol tax, which was instituted for the purpose of paying off the internal debt, is steadily increasing, and its collection is put up at public auction annually.

Mr. P. W. G. Clarke, superintendent of the botanical gardens of Ceylon, has undertaken the exploration of the eastern slopes of the Andes, accompanied by Mr. J. L. Shand, of London, with the object of establishing coffee plantations. A syndicate for this purpose was recently organized in London, and it is claimed that the slopes of the Andes in Peru offer very great advantages over the East India Islands for the cultivation of coffee. One chief advantage is that the plant in Peru is not affected by insects and diseases, which cause great risk in Java and Ceylon.

MINING IN PERU.

Lord Donoughmore says :

Taking Peru and Bolivia conjointly there is scarcely a known mineral they do not produce, and it has been proved that in the higher minerals, such as gold, silver, and copper, the average quality of the ore is far superior to any that is now being worked at a profit in California and other countries. In the valley of Pallasca, in the Province of Anchacs (Peru), there are gold deposits which are now being successfully worked, and of which the output would be greatly increased by further facilities for communication with the coast. North of Lake Titicaca, on the borders of Peru and Bolivia, extensive gold washings are now going on; among others, in the district of Suches, where gold-bearing clay is found over 2,000 acres in extent. There is also gold in large quantities at Oruro, in Bolivia, while along the route of the Southern Railway, the Caylloma silver mines are springing into prominence and other valuable mines are being inspected and opened up. Extensive gold fields exist in the Provinces of Sandia and Carabaya in the south and near the Marañon in the north. On the Central Railway the Yauli district is full of silver mines, which will come into work as soon as the line reaches them. Iron and coal exist there also. Copper is found in Castro Vireyna, Peru, and the deposit of the metal in the Corocoro district of Bolivia is, perhaps, the richest that exists in the world. The cinnabar mines of Huancavelica have just been taken in hand again, and I hope that they may shortly be producing.

NEW BRITISH STEAMERS FOR SOUTH AMERICAN TRADE.

Mr. John Hicks, United States minister at Lima, Peru, writes the Department of State, saying :

Whether it is in anticipation of an attempt on the part of American merchants to gain a foothold in South American ports, or to prepare for the probable increase of business during the World's Columbian Exposition in Chicago, I am unable to say, but it is certain that there is an unusual activity on the part of the English shipbuilders and shipowners connected with the South American trade, and more than a dozen new steamships are in course of erection and will be put in service on the lines between England and Peru within the coming year. The Pacific Steam Navigation Company, which was organized by an American, William Wheelwright, of Massachusetts, has a regular line from Liverpool to Valparaiso and then from Valparaiso to Panama. These steamers carry both freight and passengers and stop at almost every port, large or small, between Panama and Cape Horn, making weekly and semiweekly trips along the whole coast. The steamers of this line are generally large, well managed, and adapted to the trade. In January, 1890, the company brought out two new ones, the *Santiago* and *Arequipa*, costing about £200,000 each, the finest ships seen on the Pacific coast, north or south. Now it is reported that the company has on the stocks at Belfast two additional steamers, which will be ready for service by March, 1892, and will be at once added to the already large fleet in these waters. The new steamers are said to exceed in size, capacity, speed, and accommodations any of the other ships of the company, and will be models of beauty, swiftness, and strength. They will be 460 feet long, 49 feet wide, 34 feet high, and with a capacity of 5,700 tons. Evidently the company intends to be prepared for any opposition. The Peruvian consul-general at Liverpool informs his Government that an entirely new line of English steamers will commence operations on the 1st of December, 1891, between Liverpool and Peruvian ports. These steamers will be thirteen in number and will make monthly trips. It will be seen that this will make the fourth independent English line in the carrying trade between Liverpool and Peru. Besides these there are two German lines, a French line, and many other steamers which make irregular trips between European ports and the west coast of South America.

The Peruvian Corporation have been actively at work in the selection of lands for colonization on the 2,000,000 hectares granted under the decree of January, 1890. A party of Spanish engineers have selected the region of the rivers Puinas, Huayos,

and Perene, where they expect to establish some 400 or more families to devote themselves to agricultural pursuits. An English commission is now making careful examinations for the purpose of choosing sites for large plantations of coffee, cocoa, and other tropical products, to be carried on by colonists from Great Britain or some of its dependencies. Already a number of Englishmen have signified their intention to locate in Peru under the auspices of the corporation.

The Bureau of American Republics is informed that the Government of Peru has paid \$7,000 to Mr. Anibal Villegas, the Peruvian minister to Germany, for the purpose of paying the passage and traveling expenses of 15 German families from Hamburg to Iquitos, where they will proceed to establish a colony on the Amazon River. The Peruvian Congress has also voted \$20,000 to pay the expenses of the immigration and settlement of 30 additional German families in the same locality, which Mr. Carlos Römer is about to bring from Hamburg.

The returns of the late census of the city of Lima, Peru, show that its total population is 103,956, of which 49,350 were males, and 54,106 females; 70,961 can read, and 32,995 can neither read nor write. There has been a singular reversing in the preponderance of the sexes since the last census, which was taken in 1876. At that time the males exceeded the females by 4,422, while, according to the present census, the females now outnumber the males by 5,744.

THE HIGHEST INHABITED PLACE IN THE WORLD.

It has long been supposed that Galera, a village in Peru, 15,635 feet above the sea, was the highest inhabited place in the world, but Mr. Arthur E. Pearce, an engineer who has been prospecting and making meteorological observations in the Andes, has discovered two mining camps that are even higher; these are Vicharrayac, 15,950 feet, and Muscapata, 16,158 feet and more above

sea level, each with a population of miners averaging 200 the year round. High as some of the points are on the famous Oroya Railroad of Peru, of which the Galera is the summit, that road will be surpassed in altitude by a narrow-gauge railroad now under construction to connect with it. This, when completed, will have a length of 75 kilometers, and a mean altitude of 15,850 feet.

In one of the mines on this railroad a tunnel is being driven at a higher elevation than Galera, which, when completed, will be fully as long if not longer than that tunnel. The work is being done by means of compressed air, and the tunnel is lighted throughout by electricity. To facilitate work the mining camps are connected by telephone lines passing over two summits of more than 17,000 feet each. The mean height of the lines being over 16,000 feet.

The Government of Peru has issued a supreme decree declaring that religious feast days shall no longer interfere with the loading and unloading and the dispatch of vessels in the harbors of the Republic. The sailing schedules of the steamships were interfered with by the frequency of feast days, on which the custom-houses were closed and the roustabouts refused to work.

The Government of Peru has employed Mons. Jules Parret, of Paris, to continue the work left unfinished by the late Prof. Ramondi, the famous archæologist and mineralogist of that Republic. Prof. Ramondi, at the time of his death in 1890, had been engaged for over forty years in preparing an elaborate work on the topography and mineralogy of Peru. Several volumes giving the results of his researches have already been published, and Mons. Parret will proceed to prepare the remainder of his notes for the press.

Salvador.

COMMERCIAL RETURNS FOR THE YEAR 1890.

The official returns of the commerce of Salvador for the last year (1890) show that the imports were \$2,405,201, and the exports \$7,578,733. The custom-house receipts were \$2,612,226 and the total revenues of the Government \$4,151,457. The following statement shows the imports and exports of Salvador annually, from 1885 to 1890, inclusive.

Year.	Imports.	Exports.
	<i>Dollars.</i>	<i>Dollars.</i>
1885.....	2, 134, 094. 78	5, 716, 428. 38
1886.....	2, 427, 643. 48	4, 754, 648. 53
1887.....	3, 379, 661. 13	5, 549, 392. 21
1888.....	4, 081, 547. 29	6, 757, 605. 59
1889.....	2, 872, 803. 35	5, 488, 909. 96
1890.....	2, 405, 201. 62	7, 578, 733. 84

The public debt of Salvador on the 1st of January, 1891, was \$5,427,199. The receipts from taxation for the year 1890 were as follows:

Custom-house receipts	\$2, 612, 226. 97
Liquor.....	1, 241, 814. 38
Stamped paper.....	44, 097. 71
Powder and saltpeter.....	23, 661. 45
Rents (del Tajo).....	30, 878. 34
Various	201, 578. 63
Total.....	4, 153, 457. 48

The expenditures for the year 1890 were as follows :

Charities.....	\$158,338.47
Public works.....	371,790.70
Government.....	406,988.87
War.....	*2,753,161.41
Finance.....	341,954.36
Public instruction.....	225,519.62
Justice.....	*153,465.72
Foreign relations.....	90,045.59
Public credit, payment of national debt, etc.....	941,050.09
Total.....	5,442,314.83

The imports by articles for the year were as follows :

	Packages.	Weight.	Value.
			<i>Dollars.</i>
Cotton goods.....	14,457	<i>Kilos.</i> 1,756,554	866,899
Linens.....	222	13,903	14,290
Woolens.....	480	31,406	33,776
Silks.....	237	5,886	43,330
Mixed goods.....	112	8,055	8,981
Flour.....	62,702	3,370,478	169,296
Liquors, wines, and beer.....	37,253	1,211,161	167,081
Earthen and glassware.....	6,420	364,841	38,490
Drugs and perfumery.....	8,619	214,898	70,509
Ironware.....	21,227	961,143	119,602
Machinery.....	4,020	302,886	39,279
Hats.....	214	7,979	29,526
Small wares.....	1,024	52,085	18,317
Provisions.....	13,659	385,991	56,816
Jewelry.....	37	840	1,359
Printed books.....	52	3,011	3,204
Coin.....	107	934	191,986
Furniture and woods.....	12,658	171,589	40,157
Other articles.....	72,141	3,060,190	488,422
Total.....	255,581	10,872,840	2,401,314

* War with Guatemala.

The exports by articles for the year were as follows:

	Packages.	Weight.	Value.
		<i>Kilos.</i>	<i>Dollars.</i>
Indigo.....	8, 345	703, 310	1, 053, 352
Sugar	28, 574	1, 883, 942	290, 155
Balsam.....	462	13, 135	35, 783
Coffee.....	153, 909	8, 781, 060	4, 268, 749
Hides.....	6, 025	85, 349	19, 774
Rubber.....	178	27, 929	15, 507
Sugar, mascobado.....	45	1, 568	698
Woods.....	2, 635	1, 797, 200	24, 700
Silver bruto (ores).....	159	6, 925	20, 447
Coin.....	616	35, 213	1, 352, 949
Tobacco, leaf.....	5, 733	708, 474	86, 066
Tobacco, manufactured.....	1, 542	88, 103	122, 933
Other articles.....	11, 355	244, 928	288, 280
Total.....	219, 580	14, 377, 204	7, 578, 733

The population of Salvador by the last census was 664,513 people, which show 70 inhabitants to the square mile and demonstrates Salvador to be the most thickly populated country on the American hemisphere. The population of New York State is 100 to the square mile.

The official reports of the receipts and expenses of the Republic of Salvador recently received by the Bureau of the American Republics give the following interesting figures for the first half of the year 1891: Receipts, \$3,660,574.07; expenditures, \$3,587,666.89. The principal sources of revenue were: General Treasury, \$813,070.52; custom receipts at La Libertad, \$783,759.89; at Sonsonate, \$875,730.31; at La Union, \$290,333.96.

Exporters of goods from the United States and other foreign countries to Salvador are officially notified by the Bureau of the American Republics that invoices of goods destined for that country must distinctly name each article which has a different wholesale price. The custom-house authorities are instructed either to suspend the registry of the invoice or to exact an extra charge of 10 per cent on the appraisement of the goods that are not properly specified in the invoice.

The Government of Salvador has issued a decree making it imperative on the part of exporters to describe separately in the consular invoices articles of a similar character, but of different quality, in the same consignment.

Official reports have been received giving the custom-house receipts of the Republic of Salvador for the first half of 1891 compared with the similar period of 1890. The receipts of the different ports were:

Port.	1891.		1890.	
	Imports.	Exports.	Imports.	Exports.
La Libertad	\$715, 172. 48	\$67, 331. 43	\$515, 778. 28	\$50, 299. 94
Sonsonate	670, 934. 19	204, 495. 00	519, 323. 38	132, 419. 27
La Union	257, 276. 95	32, 768. 79	209, 316. 44	22, 384. 57

The increase of imports was \$398,966; exports, \$99,491, and of the total foreign commerce, \$498,457.

Statistics of the mining industry recently received at the Bureau of the American Republics show that there are 180 mines of all kinds in operation in the Republic of Salvador, 2 of gold, 20 of silver, and 100 where the gold and silver are combined in the same ore.

The Government of Salvador has granted a concession to Paul Orellana and Manuel Triguera to build a railroad from San Salvador to Santa Toela, with a branch line to the center of each town, work to be completed in two years. The Government has also authorized a contract for building a State line between Santa Ana and Atoos, connecting with the line already in operation.

The Government of Salvador has entered into a contract with the Kosmos Steamship Line, of Hamburg, Germany, for the establishment of communication between the ports of that Republic and Europe. Salvador pays the steamship company a liberal subsidy similar to that paid by Guatemala for a monthly service.

A convention has been concluded between the Governments of Honduras and Salvador for the establishment of telephonic communication between Tegucigalpa and San Salvador, the capitals of the two nations. Each government has bound itself to build at its own cost the section of the line between its capital and the town of Saco on the frontier, where both sections will join. Proper rules providing for the uniformity of service all along the line have been promulgated.

The Bureau of the American Republics is informed that the Congress of Salvador has issued a concession to Philip Marques for the establishment of a bank to be called the Bank of Central America, with a capital of \$3,000,000, divided into shares of \$1,000 each. The bank is authorized to receive deposits, discount notes, buy and sell bills of exchange, make loans on mortgages, and deal in every kind of financial operations. It is authorized to issue notes for double the amount of capital subscribed, but is required to keep a reserve in specie amounting to 40 per cent of its circulation.

The Salvadorean Government has entered into a contract with Signors Tiranni and Felie for the erection of a monument on one of the public squares of San Salvador commemorative of the heroic Salvadoreans who have fallen in the defense of their country. The monument will consist of a base of the stone of the country, on which is to rest a column of marble on whose sides will be engraved the names of the principal heroes and suitable inscriptions. At the apex of the column there will be a bronze eagle, gilded, with wings extended and holding in his talons a scroll, on which will appear the single word "Libertad." At the base of the column there will be an allegorical figure symbolical of Salvador holding a sword and a flag and tendering a crown of laurels to the martyrs.

A prominent official of the Republic of Salvador writes to complain of the sensational dispatches published in the papers of the United States concerning occurrences in that country. These dis-

patches, it is claimed, emanated from unfriendly sources in the City of Mexico. One particular dispatch complained of described an earthquake in the city of Salvador that was alleged to have recently occurred there, attended by ruin, desolation, and an enormous loss of life and property. It is true that there was an earthquake in Salvador about this time and that the inhabitants were considerably frightened, but not a house was seriously damaged and not a life was lost. A few persons were injured, being struck by falling bricks and timber, but the event was not of sufficient importance to receive more than an ordinary paragraph in the local papers.

Uruguay.

FOREIGN COMMERCE OF URUGUAY FOR THE YEAR 1890.

The following table shows the imports by principal articles compared with imports of the same articles for 1889:

	1889.	1890.
	<i>Dollars.</i>	<i>Dollars.</i>
Wines and liquors.....	4, 945, 815	4, 403, 624
Food products.....	8, 076, 686	6, 698, 040
Tobacco and cigars.....	585, 369	589, 308
Dress goods and other fabrics.....	4, 932, 201	3, 769, 570
Ready-made clothing.....	1, 742, 814	1, 534, 735
Machinery and industrial material.....	8, 466, 058	9, 436, 594
All other articles.....	8, 074, 921	5, 927, 681
Total.....	36, 823, 863	32, 359, 552

Although these tables show a decrease or nearly \$4,500,000, the returns are considered more favorable to the prosperity of the country than those of 1889, as during that year the boom of inflation was at its height. The imports of 1889 exceeded those of 1888 by \$7,500,000, and were double those of 1882. The imports for 1890 exceed those of 1888 by \$2,750,000, and those of all preceding years in proportion. The Chief of the Bureau of Commerce at Montevideo suggests that, putting 1889 and 1890 together, the average for the two years, which is about \$34,500,000, represents the healthy import trade of the country.

The decrease in wines and liquors was about \$500,000; that in food products about \$1,500,000; that of dress goods, \$1,250,000;

that of machinery and industrial materials, \$1,000,000; and in various articles the decrease was over \$2,000,000.

The following table shows the exports of Uruguay in 1890 compared with those of 1889, which show a healthy increase of \$3,131,411:

	1889.	1890.
	<i>Dollars.</i>	<i>Dollars.</i>
Animals on foot.....	466, 272	544, 690
Fresh and preserved meats.....	23, 824, 672	26, 030, 084
Farm products.....	373, 280	1, 439, 100
Other products.....	1, 221, 847	1, 026, 698
Provisions for vessels	68, 036	44, 935
Total	25, 954, 107	29, 085, 518

The imports of Uruguay for the last year were largely in excess of the exports, as has been the case for several years, but the difference was not so great. In 1889 the balance of trade against Uruguay was \$10,869,756, whereas in 1890 the difference was only \$3,274,034.

The returns for Uruguay also show that 16,169 vessels, with a tonnage of 5,698,768 tons, entered the ports of the Republic during the year 1889, and 16,044 cleared from the ports of the Republic, with a tonnage of 5,744,125 tons. Eight hundred and forty-one steamers arrived at the port of Montevideo, with a tonnage of 1,397,983 tons. During the year 24,117 immigrants arrived, of whom 19,440 were from Europe.

The total receipts from customs duties for the year were \$9,848,735, of which \$9,417,057 were collected at the port of Montevideo.

The Bureau of Statistics of the Republic of Uruguay reports that 642,100 head of cattle were slaughtered in Uruguay during the year 1890 and 764,000 in the Argentine Republic during the same year, making a total of 1,406,100 for the cattle slaughtered in the River Plate Republics.

The official returns of the receipts from customs of Uruguay for the year 1890 received at the Bureau of the American Republics, show that, although the revenue from this source was not quite as great in 1890 as in 1889, it aggregated more than \$2,000,000 over the annual average. The receipts for 1890 were \$9,850,000 gold. The city of Montevideo has had a year of fair prosperity, nearly 900 houses having been built during 1890, while the sale of real estate amounted to \$300,000,000 throughout the Republic.

EXPORTS AND IMPORTS 1890.

The complete trade returns from Uruguay for the year 1890 show a total foreign commerce for that year of \$61,450,000. This was divided into \$32,360,000 imports and \$29,090,000 exports. The exports and imports by countries were as follows:

Year.	Imported from.	Exported to.
	<i>Dollars.</i>	<i>Dollars.</i>
Great Britain.....	8, 770, 000	3, 950, 000
France	5, 090, 000	6, 120, 000
Germany.....	2, 810, 000	1, 020, 000
Argentina.....	2, 640, 000	2, 550, 000
Italy.....	2, 630, 000	360, 000
Brazil.....	2, 470, 000	3, 280, 000
United States.....	2, 440, 000	2, 010, 000
Spain.....	2, 170, 000	240, 000
All other countries.....	3, 320, 000	9, 560, 000
Total	32, 360, 000	29, 090, 000

The exports for 1890 exceeded those of 1889 by \$3,131,412, which show a healthier condition of affairs, and were divided as follows:

Pastoral products.....	\$26, 550, 000
Agricultural products	1, 230, 000
Sundries.....	1, 310, 000
Total.....	29, 090, 000

The following table will show a comparison of the commerce of 1890 with the previous years:

Year.	Imports.	Exports.
	<i>Dollars.</i>	<i>Dollars.</i>
1862.....	8, 150, 000	8, 805, 000
1872.....	18, 860, 000	15, 490, 000
1882.....	18, 170, 000	22, 060, 000
1885.....	25, 280, 000	25, 250, 000
1889.....	36, 820, 000	25, 950, 000
1890.....	32, 360, 000	29, 080, 000

The imports of 1890 were less by \$4,459,236 than in 1889, the falling off by countries being as follows:

Importation—decrease in 1890.

England.....	\$1, 699, 232	United States.....	\$966, 665
France.....	416, 479	Spain.....	440, 972
Germany.....	622, 515	Belgium.....	130, 227
Italy.....	631, 861	Chili.....	599, 863
Brazil.....	31, 906	Sweden and Norway.....	194, 978

Paraguay, Switzerland, and Denmark each show a decrease under \$12,000 each.

It will be noticed that England maintained her supremacy in the matter of imports, her percentage of the whole being 27.1 per cent. while her percentage for 1889 was 28.4 per cent. France remains second on the list, with a considerable increase, furnishing 15.8 per cent of the imports in 1890 as against 13 per cent. in 1889. The United States receded from the fourth place in 1889 to the seventh place in 1890.

The statistics of the foreign commerce of Uruguay for the first six months of 1891 show that the importation during the latter three months exceeded the former by a half million dollars. The total amount for this period was:

Importation.....	\$9, 708, 785
Exportation.....	18, 702, 757
Total.....	28, 411, 542

The reports give a comparison with the commerce of the past years and show a balance in favor of the country of exportation over importation amounting to over nine millions of dollars. From these reports it appears that the trade of the country is assuming a normal condition and has recovered from the disturbances occasioned by the financial crisis of 1890.

TARIFF CHANGES.

The Congress of Uruguay has made some important changes in the tariff laws of that country, and the following additional customs duties have been imposed (April 5, 1891):

Imports: Five per cent ad valorem calculated upon the official valuations of the existing tariff: with the exception, however, of goods hitherto duty free, and of potatoes, printed books, printing ink, type and presses, printing paper for journals, lithographic paper, flowerseeds, sulphuric, nitric, and hydrochloric acids, dammar, phosphorus in sticks, dyewoods, raw Paraguayan tea, gold jewelry, gold and silver watches, maps, globes, and apparatus for the study of the natural, physical, and mathematical sciences, coal, bay salt and rock salt, and precious stones unset, on which the duties remain as before.

Exports (which have hitherto been free), the following specific duties: Wool, per 100 kilos, \$1.30; sheepskins, per 100 kilos, 80 cents; hair, \$1.70; grease, 50 cents; jerked beef, 40 cents; preserved meat and tongues, \$1; hide dressings, 25 cents; ash and bones, per 1,000 kilos, 60 cents; animal guano, 60 cents; ox hides, salted, per piece, 25 cents; ox hides, dried, 12 cents; mares' hides, salted, 12 cents; mares' hides, dried, 60 cents; calf hides, per 100 kilos, \$1; seal skins per piece, 16 cents; horns, per 1,000, \$2.50; extract of meat, per kilo, 10 cents.

The congress of Uruguay has made the following changes in the tariff on spirits and liquors:

Foreign spirits, not exceeding 20° Cartier in strength, 15 cents

per liter; above that strength, 78 cents for each degree in excess. Spirits manufactured in the country will be subjected to an excise duty of 13.2 cents per liter, irrespective of strength, to be levied on the actually existing stock as well as on what may be hereafter produced.

The duties on bitters, cognac, anisette, gin, and other spirituous drinks, in cask, not exceeding 20° per liter, 31 cents; the same in bottles containing from 51 centiliters to 1 liter, per bottle, 31 cents. Those of greater or lesser size, or greater alcoholic strength, pay in proportion.

Liquors, in casks, per liter, 31 cents; the same, in bottles containing from 51 centiliters to 1 liter, 31 cents. In bottles of greater or lesser size, in proportion.

Vermouth, fornot, and the like in casks, per liter, 31 cents; the same, in bottles containing from 51 centiliters to 1 liter, per bottle, 31 cents. In bottles of greater or lesser size, in proportion.

These duties are payable in gold, and the par value of the dollar is about \$1.04.

The congress of Uruguay has increased the duty on breadstuffs to the following figures: maize (corn), 80 cents per 100 kilos; wheat, \$1.35 per 100 kilos; wheat flour, \$2.70 per 100 kilos; clover and forage, \$1 per 100 kilos. A kilo is two and one-fifth pounds.

There having been a great deal of complaint concerning the port charges in the harbor of Montevideo, the President of Uruguay has laid before the Congress of that country a message recommending important modifications under which a steamer of 1,500 tons, for example, which now pays \$352 dues, in the future will only have to pay \$116. He also recommends that vessels stopping in the harbor of Montevideo only for coal and supplies shall be exempt from all dues, on the ground that such a concession would restore the coaling and provisioning trade of that port.

The budget of Uruguay for the fiscal year 1891-'92 estimates the revenue receipts at \$15,409,500 and fixes the expenditures at \$15,246,175. The consolidated debt of the country is \$84,481,104, on which the interest and service charges amount to \$5,963,320 a year. The total interest obligations are \$8,720,257. The customs receipts for the ensuing fiscal year are estimated at \$10,622,000.

The annual report of the minister of finance of Uruguay shows that the public debt amounts to \$84,500,000, which is at the rate of 30 pounds sterling or \$150 per inhabitant. The revenue of the Government in 1890 amounted to \$15,690,000 and the expenditures to \$15,250,000. The expenditures were as follows: for interest on the public debt, \$7,300,000; for maintaining the army, \$1,770,000; for pensions, \$1,430,000; for expense of the administration of the Government, \$4,750,000.

REDUCTION OF RAILWAY GUARANTY.

All the railroads of Uruguay having a 7 per cent guaranty from the Government have agreed to relinquish it and accept a guaranty of 5 per cent instead, on the condition that a sum of money equivalent to the remaining 2 per cent shall be paid annually into a colonization fund to encourage immigration and a settlement of the public lands. The Government has accepted the proposition.

By the recent census the population of Uruguay is found to be 711,656.

Venezuela.

COMMERCIAL RETURNS FOR THE YEAR 1890.

The revenues of the Government of Venezuela during 1890 amounted to \$8,538,072, which is an increase of \$893,489 over the previous year. Of these receipts, \$6,448,349 were derived from import dues. The exports for the year reached a total of \$19,450,067. The principal articles of export and their values were, coffee, \$13,716,367; cocoa, \$1,798,080; virgin and placer gold and residuum, \$1,713,090; hides, \$468,777; deer and goat skins, \$442,477; cattle, \$226,644; gold and silver coin, \$103,998; caoutchouc, \$52,900; copper, \$35,300; timber, \$26,348, and copaiba, \$23,166. The imports into the port of La Guayra for the same period were of the value of \$10,164,415; being greater by \$803,829 than those of the preceding year.

Official returns from the Republic of Venezuela show that there are 9,000,000 cattle, 6,000,000 sheep, 2,000,000 hogs, and 2,000,000 horses and mules in that Republic.

The following statement shows the production of gold from the Venezuelan gold fields during the year 1889:

Mines.	Ounces.	Mines.	Ounces.
El Callao.....	53, 973. 55	Potosi.....	682. 25
Venezuelan Austin.....	21, 777. 71	Callao Bis.....	24. 00
Union.....	5, 444. 50		
Chile.....	1, 932. 00	Total.....	82, 834. 01

The Government of Venezuela has restored the duty on corn, rice, beans, and pease, which were temporarily exempted from import duties in March last.

The Government of Venezuela has signed a contract with a French gentleman, named José Bonnet, for the establishment of steam navigation on the Orinoco and Meta rivers, from Ciudad Bolivar to Cabayaro. There is now no regular service on the Orinoco above Ciudad Bolivar. A line of steamers has for many years been conducted by Capt. Lee, an American, between Port of Spain, Trinidad, and Ciudad Bolivar, and they have proved to be very prosperous. This new line, however, will open to commerce an enormous tract of country that is almost unexplored, and which is known to be very rich in natural products. Señor Bonnet will receive a subsidy from the Venezuelan Government of \$3,200 for each round trip from Ciudad Bolivar to Cabayaro, and \$2,500 for each round trip between Ciudad Bolivar and the city of Orinoco. In addition to providing steamship service, at least one round trip per month, Señor Bonnet agrees to establish three agricultural colonies on the banks of the Meta River, of at least ten families each, who will engage in the cultivation of sugar, cocoa, tobacco, and other exportable products.

The Venezuelan Government has granted to Henry F. Rudhoff, a citizen of the United States, a concession for a line of railway, commencing at the city of Puerto Cabello, and thence via San Felipe to Araure, supplemented by a further concession to continue the line to Guanare, a total distance of 350 kilometers. Guanare is the capital of the State of Zamora.

IMMIGRATION LAWS.

The Government of Venezuela has recently enacted some very liberal laws relating to immigration. The Government will pay the passage of immigrants by sea, from the port of sailing to the port of landing in the Republic; will admit free of duty all articles

of wearing apparel, household utensils, professional machinery, tools, and instruments; and will pay the expenses of the landing of immigrants and their board and lodging during the first fifteen days after their arrival. Immigrants must, however, bring a certificate from the consul of Venezuela in the country from which they came, setting forth their condition. The cost of transporting the immigrants from the port of arrival to one of the colonies will be paid by the Government except when the immigrant comes under contract with some State or corporation. In this case the state or corporation will be expected to pay the cost of his transportation to his place of residence. Each immigrant is entitled to a fee simple to 1 hectare ($2\frac{1}{2}$ acres) of land upon taking possession, and after one year's residence he may purchase at one-half the legal public price as much public land as he may desire. Immigrants enjoy all privileges conceded to foreigners, and if naturalized are exempt from military duty for five years. Immigrants purchasing public lands are not required to pay for them until two years after taking possession, but they are not allowed to transfer their sales until after three years of actual possession.

The new law for the encouragement of immigration into Venezuela, just received by the Bureau of the American Republics, provides that each of the consuls of that Government in foreign countries should act as special agents to afford information respecting the advantages offered to persons desirous of settling in the Republic.

By a census taken in March last, the city of Maracaibo, Venezuela, was found to have 45,177 inhabitants.

By an act of the Congress of the United States of Venezuela, passed in April, 1891, the Government was ordered to buy the house in which the Liberator, Simon Bolivar, was born, to preserve it in the proper way as a national monument, and to establish in it a museum of Venezuelan antiquities, for which purpose the proper appropriation was made.

The Government of Venezuela has decided to erect a seminary for the higher education of women at Caracas to accommodate two hundred students. The Government last year established four immigration offices in Europe, which are already giving satisfactory results. Señor Rafael Luna, jr., has been appointed consul of Venezuela at Philadelphia, vice Dr. Francisco Lopez Mendez. The Government of Venezuela has issued a decree placing all red wines imported in casks or bottles in the third class of its customs tariff.

British Colonies.

The increasing tide of winter travel to the West Indies is causing the development of a number of steamship and hotel building projects, and the extension of cable communications. A company has been organized to build a \$50,000 hotel on each of the Windward Islands and to construct two new steamers, to be fitted up with first-class passenger accommodation and cold-storage facilities for fruit, to ply between those islands and New York, and not to occupy more than 10 days for the trip. The governor of Granada proposes to subsidize the steamers at the rate of \$7,500 a year for seven years and to guarantee for the same length of time 5 per cent interest on the hotel investment. The governor of Trinidad has also agreed to subsidize a line of steamers to New York and has given a contract for the erection of a hotel at Port of Spain. In the Leeward Islands the governor has subsidized a packet company to run steamers between Dominica and St. Thomas, taking in the chief of the Virgin Islands, hitherto inaccessible.

A company known as the Bermuda and West India Cable Company, which is not connected with the Western Union system, proposes to establish a cable service which will commence at St. Thomas and come down the islands to Trinidad. It promises to reduce cable rates to New York from \$1.15 a word, as now charged, to 75 cents. Another projected enterprise is a system of French cables from Martinique and Parimarico via Pernambuco to Europe.

The Royal Mail Steamship Company of Great Britain is building three small steamers, 120 feet in length and about 900 tons,

for local use between the several British Colonies in the West Indies.

BAHAMAS.

Mr. McLain, the United States consul at Nassau, West Indies, reports that the following articles have been added to the free list of importations into that colony:

Tallow, rosin, caustic soda, potash, palm-oil, electrical apparatus and appliances, crude petroleum, and metal roofing. On all kerosene oil used as fuel in the working of steam engines a drawback of 90 per cent will be allowed on proof of such consumption.

A steamship line between Nassau and the other Bahama Islands has been established under contract with the colonial government, and a cable is now being laid between Nassau and the coast of Florida. It will land at Juniper Inlet and is expected to be ready for operation by the first of January.

BARBADOS.

The Bureau of the American Republics has just received the official report on the census of Barbados. This report shows that the total population enumerated on the night of the 5th of April last was 182,306, being an increase since 1881 of 10,154, or 6.3 per cent. The population of the several districts is given as follows:

Bridgetown.....	29,996	St. Peter.....	10,800
St. Michael.....	35,187	St. James.....	10,500
Christ Church.....	21,492	St. Lucy.....	9,762
St. Philip.....	18,663	St. Joseph.....	9,048
St. George.....	16,054	St. Andrew.....	8,746
St. John.....	10,956	St. Thomas.....	10,098

This shows an increase over the census return of 1881 of 18 for Bridgetown, 5,617 for St. Michael, 1,244 for Christ Church, 514 for St. Philip, 622 for St. George, 587 for St. John, 538 for St. Peter, 446 for St. James, 698 for St. Lucy, 522 for St. Joseph, and 458 for St. Andrew. There appears a decrease in the popu-

lation of St. Thomas of 450 as compared with the census taken in 1881. The density of the average population of the island is shown to be about 5 persons to every 3 acres, or 1,096 to the square mile, as against 1,030 to the square mile in 1881. In Bridgetown and the suburban parish of St. Michael the population gives an average of about 6 persons to an acre, while the average of the other ten parishes is about 4 to every 3 acres.

The West Indian Ice Company, which has been engaged in the manufacture of artificial ice and maintaining cold-storage houses in the islands of Trinidad and Barbados for some years, has arranged for the establishment of a similar enterprise in Georgetown, British Guiana. The company has contracted for a refrigerator steamer to sail regularly between New York and Barbados, Trinidad, and British Guiana, carrying cargoes of fresh meats and vegetables from the United States and bringing tropical fruits as return cargo.

BERMUDA.

As soon as the cable between Bermuda and the United States is laid, it is proposed to extend it to Grand Turk and the other Bahama Islands, and then to Jamaica.

GUIANA.

By a recent census the population of British Guiana is found to be 288,328, an increase of 26,142 from the last census, taken ten years ago. The population of the city of Georgetown was 47,207, and of New Amsterdam 8,903. The increase in the population of Georgetown was 6,001, and of New Amsterdam 779. The native-born population is 170,106, and the East Indian population (coolies) 105,465.

The culture of bananas has been begun on a small scale in Demerara. Suckers, produced from the Jamaica banana, were introduced into the botanical gardens at Providence, Demerara, year before last, and these have been fruiting for several months.

The bunches are said to eclipse samples received from Jamaica of the varieties shipped to the United States, the largest of which weighed 39 pounds 12 ounces, while the second bunch produced at Providence weighed 71 pounds when cut, on July 8, and there were 174 bananas on the bunch, excluding the half-developed ones on the end. The loss of weight in ripening was 1 pound.

The Boston Fruit Company has recently invested a large sum of money in the cultivation of bananas near Georgetown, British Guiana.

The total product of sugar in British Guiana for the current year is 81,883 hogsheads, being 4,600 hogsheads in excess of the product of last year. The exports of rum for the year were 14,116 tuns, being 500 tuns less than in 1890. The output of gold was 75,575 ounces, against 47,090 last year.

The Bureau of the American Republics has received official returns showing that the exports of gold from British Guiana, between the 1st of January and the 1st of August last, amounted to 52,286 ounces, of a value of \$931,432, United States gold. This is an increase of \$68,847 over the exports of the corresponding period last year. Most of this gold is obtained in that portion of Guiana which was seized by England from Venezuela, and the territory, although larger than France, does not contain more than 30,000 people.

A nugget of gold weighing 35 pounds has been found in the gold district recently discovered in British Guiana, and has been sent to England as a specimen of the auriferous deposits of that colony.

The discovery of diamonds in British Guiana has created considerable excitement in that colony, and the matter has become the subject of official investigation. The governor-general of the colony, at the recent session of the "combined court" or legislature, reported that out of the package of 638 stones recently sent to London for analysis, only five examples were found to be

worthless, and the remaining 633 specimens were all found to be genuine and "good water" diamonds. These stones were accidentally found by ordinary laborers, and not by experts, and the result has been a "diamond rush" to Georgetown.

Baron Hirsch, of London, is seeking to introduce Russian Jews into British Guiana, and has applied to the governor of that colony for lands on which to locate colonies. The matter was referred to the Royal Agricultural and Commercial Society, which reported in favor of locating a limited number of Russian Jews, not more than 500 adults, who shall be agriculturists, and not over fifty years of age. The society recommends that grants of from 5 to 15 acres of agricultural lands and from 100 to 150 acres of pasture lands shall be made over to each single adult, with the understanding that this area may be increased by purchase at the rate of \$1 per acre. It is also proposed that implements, seeds, and breeding stock be furnished to the immigrants free of cost by the colonial government, who shall also provide the immigrants with rations for a period not exceeding nine months from the date of their arrival or until they have been able to harvest their first crop. Materials for housebuilding other than those found upon the land is also to be provided by the government.

JAMAICA.

By recent census the population of Jamaica was found to be 639,491, of which 305,948 were males and 333,543 were females. These figures show an increase of 58,687 in the population of the island since 1881; but while the male population has increased 8 per cent the female population has increased 12 per cent.

The Anchor line of steamers, managed by a British company, will run vessels regularly every two weeks between New York and Jamaica, Haiti, Carthagena, and Savanilla. The first steamer left New York on the 5th of December.

The colonial legislature of Jamaica has passed a law abolishing all duties on exports.

Interesting statistics in regard to the growth of penny banks in the island of Jamaica have been received. In 1881, when penny banks were established, there were 4,545 depositors, investing \$4,655. Last year the number of depositors had increased to 14,334, showing an excess of 1,757 over the previous year, and the deposits for the year amounted to \$20,145. Since 1881 the deposits have amounted to \$202,965, and \$158,920 have been withdrawn, leaving \$44,045 still to the credit of depositors. There are now fifty-seven banks in all parts of the island. Sixteen were closed last year and nine new ones were opened.

It will be interesting to the millers of the United States to know that the Canadian commissioner to the recent Jamaica exposition demonstrated that northern flour can be kept a reasonable time in the tropics without being especially treated. He purposely kept flour, both in sacks and barrels, sixty and ninety days, exposed to ordinary weather, and at the end of this time both lots were found to be perfectly sweet and wholesome. Bread from this flour was then baked and distributed among visitors to the exposition.

Col. Ward, commissioner from Jamaica to the World's Fair, says:

I have asked for 7,000 square feet, and we shall exhibit sugar, rum, sisal grass, and all the other commodities that the island exports. A striking feature of our exhibit will be the display made of all the plants the island produces. They will include the cocoanut palm, the mangrove—which is used in tanning—the sisal, and other useful grasses, bunches of the feathery bamboo, yams, cassava, eddoes, and fruits. Coffee will be shown in every stage of growth and process of curing. All those I have mentioned are produced in the low-lying seaboard districts. We also hope to show how on the higher lands cinchona is cultivated, and how from the bark quinine is made. Both the Government departments and the individuals actually interested in the fair have been most kind, and the latter have promised pecuniary help to make the Jamaica exhibit a success.

LEEWARD ISLANDS.

The United States consul at Antigua, West Indies, calls attention to the total absence in that colony of American hardware and kitchen utensils, which would be very acceptable to the people, and he suggests that American manufacturers send samples of such articles to the merchants of that place.

In his annual address to the legislative council, the Hon. W. F. Haynes-Smith, governor of Antigua, British West Indies, has the following reference to the World's Columbian Exposition :

I have to ask you whether you would wish that the colony should be represented, at the Exposition to be held in Chicago in the year 1893. Her Majesty has appointed a royal commission, and it would be necessary to make early arrangements if you desire to be represented in order to secure a proper display of the products of the colony, and to show its capabilities for development. It has been found useful in other colonies to hold a local exhibition first, and it is worthy of consideration whether it would not be desirable to follow the same course here.

TRINIDAD.

The recent census of Trinidad shows a population of 199,784, an increase of 30 per cent in ten years.

The census of the island of St. Lucia shows a population of 41,713.

That of the island of Castries shows a population of 6,686.

Rich organic phosphate deposits have been discovered near Gasparillo, Trinidad. Some of the specimens recently examined have been found to contain no less than 90 per cent phosphate, and in its present condition without being treated chemically it has proved very valuable as a fertilizer for garden vegetables.

The Colonial Government of Trinidad has entered into a contract with Messrs. Turnbull, Stewart & Co., for a steamship service between Trinidad and the city of New York; also for a coasting service around the island of Trinidad, and to the neighboring island of Tobago. The contractors agree to run at least

one steamer a fortnight between New York and Trinidad, carrying all postal matter free, and all packages, plants, and seeds for the botanical department, also all officials of the colony, in consideration of which they are to receive a subsidy of £3,700 per annum, in monthly payments of £308 6s. 8d. The contractors are to have also the use, free of charge, of all Government jetties and wharves now existing, or which may be hereafter erected, and all supplies of coal, fuel, and provisions are to be admitted free of duty for the use of the steamships; and the steamers of the company are not to be subjected to any port or harbor dues.

In addition to the establishment of steamship service, the contractors are to erect and furnish a hotel at the Port of Spain, at a cost of not less than £15,000, on which the Government guaranties an interest of 4 per cent per annum.

A correspondent of the Agricultural Record of Port of Spain, which is the official publication of the Central Agricultural Board of Trinidad, in a long communication urging even a greater display at the Columbian Exposition at Chicago than has already been agreed upon, and for which \$15,000 has been appropriated, makes the suggestion that it would be an excellent thing for the various English colonies of Guiana, Barbados, Jamaica, Trinidad, etc., to combine and erect a typical West India court, which would display the resources and products of the various British colonies.

WINDWARD ISLANDS.

The Bureau of the American Republics has information that the Colonial Government proposes to grant to Messrs. Turnbull, Stewart & Co. a subsidy to maintain direct speedy communication between the island of Grenada in the West Indies and New York. The Government agrees to pay \$5,000 in quarterly installments for one year from the day the first steamer leaves Grenada for New York. The steamers are to be provided with first-class accommodations for passengers and mails, and the rates of

passage are not to exceed: first class, \$50; second class, \$32. The rates of freight for fruits and vegetables are: Bananas and plantains, 60 cents per bunch; oranges and mangoes, 60 cents a box of 100; limes, 60 cents per box of 400; tomatoes, 35 cents per one-half box; ginger, 60 cents per barrel; potatoes, yams, and roots, 60 cents per bag; nutmegs, in boxes, 25 cents per cubic foot. The voyage will occupy eight days.

By the census just completed the British colony of Grenada, West Indies, is found to have a population of 53,209. The town of St. George contains a population of 4,919, and the town of Castries nearly 7,000.

Dutch Colonies.

Questions of boundary, which have been pending for many years as to the limitations of the possessions of France and Holland in Guiana are now on the point of final adjustment, greatly to the advantage of Holland. The award of the Emperor of Russia, to whose arbitration the question was submitted, divests France of a territory, triangular in shape, lying between the two affluents of the Maroni River, which is described as equaling in extent ten French departments. French Guiana will in future be bounded on the north by the river Counani and on the south by the Tumac Huma Mountains. The territory ceded it is claimed was ascribed to France without dispute from 1729 to 1750. It has since been claimed by the Dutch. In 1861 a joint commission composed of four French and three Dutch engineers made a survey which sustained the Dutch claims. Discovery of valuable gold deposits in the disputed territory in 1876 gave increased importance to the contest and both nations agreed to submit the facts to the arbitration of the Emperor of Russia, who has sustained the findings which the French engineers made against themselves in the commission of 1861.

French Colonies.

The authorities of the Island of Martinique have established new sanitary regulations for the government of shipping. Captains carrying on a coasting trade require a single bill of health issued at the point of departure, but it must be viséd by the health officers at each stop. In case there is no health officer, the bill of health must be certified to by the local authorities.

The boundary dispute between French and Dutch Guiana has been settled by the Czar of Russia, to whom it was referred for arbitration.

Mr. Fred A. Ober, the Commissioner of the World's Fair to the West Indies, writes from St. Lucia that he has visited St. Thomas and Martinique, in both of which islands he had very satisfactory interviews with the governors. He was on his way to visit St. Vincent, Barbadoes, Porto Rico, Santo Domingo, and the Bahamas, for the purpose of stimulating an interest in the Exposition. Mr. Ober received many acts of kindness from Admiral Gherardi and the officers of the *Philadelphia* and the *Concord*, who were of much assistance to him in his work.

Spanish Colonies.

CUBA.

In answer to numerous inquiries as to the practical effect of the recent reciprocity arrangement with Spain for her colonies in the West Indies, the Bureau of American Republics furnishes the following statement, which shows the duties charged upon articles of merchandise when imported into Cuba from the United States under the new treaty and the duties charged upon the same articles when imported from other countries under the regular tariff.

	From the United States.	From all other countries.
Lard	Free	\$10. 64 per 220 lbs.
Tallow	Free	6. 45 per 220 lbs.
Pickled beef	Free	2. 61 per 220 lbs.
Pickled pork	Free	4. 35 per 220 lbs.
Smoked beef, pork, hams, bacon, etc	Free	9. 06 per 220 lbs.
Smoked tongue	Free	21. 90 per 220 lbs.
Canned meats	Free	36. 54 per 220 lbs.
Fish, pickled, smoked, cured, or canned...	Free	4. 13 per 220 lbs.
Oysters.....	Free	26. 10 per 220 lbs.
Potatoes, onions, turnips, and other vegetables.	Free	1. 52 per 220 lbs.
Fruits, fresh or preserved.....	Free	3. 62 per 220 lbs.
Butter.....	Free	16. 47 per 220 lbs.
Cheese	Free	9. 06 per 220 lbs.
Hay and straw	Free	1. 16 per 220 lbs.
Oatmeal and maizena.....	Free	6. 09 per 220 lbs.
Starch.....	Free	7. 32 per 220 lbs.
Pine boards and planks	Free	6. 96 per 1, 000 feet.
Walnut boards and planks	Free	17. 40 per 1, 000 feet.
Crude petroleum.....	Free	1. 35 per 220 lbs.
Refined petroleum	Reduced 25 per cent.	5. 80 per 220 lbs.
Resin	Free	1. 30 per 220 lbs.
Turpentine	Free	5. 58 per 220 lbs.
Sewing machines.....	Free	11. 6 per cent ad. val.
Coal	Free	\$0. 70 per 220 lbs.
Ice.....	Free	0. 25 per 220 lbs.
Wheat and flour.....	\$0. 30 per 220 lbs.	4. 57 per 220 lbs.
Corn and meal.....	\$0. 25 per 220 lbs.	1. 52 per 220 lbs.

The above values are expressed in Spanish gold, which is worth 92 cents in United States currency. One hundred kilos metric system is equal to about 220 pounds avoirdupois.

IMPORTS OF HAVANA FOR 1890.

The official statistics of imports into the port of Havana, Cuba, for the year 1890 show a marked increase over those of the previous year in the chief articles imported. The imports of flour, greater than for ten years, were 312,292 barrels, 134,601 of which were from the United States and the balance from Spain; the increase over the imports of 1889 was 20,456 barrels, but it was entirely in the Spanish article, the United States supply falling off almost 10 per cent. This doubtless was caused by the fact that the import duties on Spanish flour, which had been since 1882 gradually reduced, were, on July 1, 1890, entirely removed. The prices obtained for the American flour advanced slightly over those of 1889, ranging from \$10 to 13.50, while the extreme price of the Spanish product was somewhat less than in 1889.

The imports of coal were 184,584 tons, a little in excess of 1889, 154,268 tons of which proceeded from the United States, an increase of 25 per cent over the previous year.

Four hundred forty-six thousand and six hundred quintals of coal oil, entirely from the United States, were entered during the year, an increase of 13,800 over 1889 and the largest quantity imported for ten years; the imports of this article were mostly in a crude state, owing to the increased competition of the refineries there.

There were imported during the year 298,166 quintals of lard, all of which the United States supplied; this was 83,000 quintals more than in 1889; and greatly surpassed the imports of this article for ten years. The prices at from \$10 to \$13 in wood and \$13 to \$16.25 in tins were somewhat lower than the preceding year.

Box and hogshead shooks, at one time a considerable item of

Havana's commerce with the United States, have almost dwindled to nothing in importation, and there has been for several years no entry of boards at this port, of which the United States in 1881 furnished 53,559,000 feet. As the United States statistics still indicate a large trade in these articles, it has doubtless been diverted to other ports.

The receipt of codfish from the United States, though considerably less than in 1881 and 1882, have gradually increased in the last several years, while the imports of this article from Europe have each year lessened. The United States sent 37,656 quintals and Europe 27,737, and the American supply the previous year amounted to 23,606 quintals.

The importation of potatoes through the port of Havana aggregated 162,929 barrels from the United States, and 35,751 barrels, boxes, etc., from Europe. The prices ruling for the former were from \$4 to \$10 per barrel, and for the latter and domestic \$3.25 to \$8.25 per quintal in bank bills.

Of wrapping paper the arrivals at Havana reached 71,236 bales and boxes, 40,855 proceeding from the United States, with prices at from 28 to 38 cents per ream for the American as to size, and 25 cents to 50 cents for other kinds, including the domestic. This importation from the United States was about 1,700 bales and boxes less than in 1889.

Other importations were rice, which the East Indies almost entirely supplied to the amount of \$1,071,838 quintals; jerked beef, from South America only, aggregating 229,309 quintals; 76,192 pipes of wine from Spain, and cheese from the United States and Europe, the former sending 24,545 boxes and packages, which was about 40 per cent above the European supply.

The receipts of ale in 1890 were 2,349 barrels and casks, and 219 boxes from the United States marked against 13,712 casks and barrels and 4,110 boxes from Europe, selling at $\$4\frac{3}{8}$ to \$5 per dozen bottles, and \$12 to \$13.50 per barrel.

Except where differently stated the quotations given were in gold.

The following table shows the importation of the principal articles of commerce at Havana during the period from January 1 to May 31, 1891, and the average importation during a similar period for five years beginning with 1887:

	1891.	Average.
Jerked beef.....quintals..	143, 342	122, 676
Codfish.....do....	27, 852	42, 038
Coal oil.....do....	165, 876	202, 684
Rice, Spanish and West Indies.....do....	320, 741	377, 134
Lard.....do....	104, 729	94, 814
Flour, Spanish and American.....barrels..	148, 395	115, 465
Wine.....pipes..	34, 844	31, 617
Empty hogsheads.....	8, 767	25, 440
Empty barrels and tierces.....	78, 352	50, 040
Empty bags.....	1, 589, 250	1, 652, 980
Lumber.....pieces..	953, 834	686, 273
Coal, American and European.....tons..	109, 815	95, 819
Potatoes.....barrels..	220, 366	22, 115

Collections at all the custom-houses on the Island of Cuba during the month of June amounted to \$1,267,149 as compared with \$1,361,172 in June, 1890.

The Bureau of the American Republics has the following official statement of the imports into Havana from the 1st of January to the 31st of October, 1891, compared with the imports during the corresponding period of 1890:

Articles.	1891.	1890.
Jerked beef.....quintals..	268, 829	200, 964
Codfish, European and American.....do....	78, 970	148, 320
Coal oil.....do....	297, 680	398, 065
Do.....tanks..	57	238
Rice, Spanish and West Indies.....quintals..	725, 360	950, 705
Lard.....do....	419, 630	253, 193
Flour, Spanish and American.....barrels..	260, 178	245, 792
Wine.....pipes..	77, 318	65, 727
Hogshead shooks (packages).....number..	5, 246	7, 722
Box shooks (packages).....do....	16, 187	240
Empty hogsheads.....do....	9, 633	36, 750
Empty barrels and tierces.....do....	101, 343	60, 624
Empty bags.....do....	1, 860, 750	1, 857, 750
Lumber, pieces.....do....	1, 359, 301	1, 422, 471
Coal, American and European.....tons..	159, 824	149, 054
Potatoes.....barrels..	118, 102	117, 747

STATISTICS OF SUGAR INDUSTRY FOR THE LAST TEN YEARS.

Carefully prepared statistics of the sugar industry of the Island of Cuba for the last ten years show the total production of sugar and molasses to have been as follows:

Year.	Tons.	Year.	Tons.
1881.....	590, 511	1886.....	918, 787
1882.....	727, 061	1887.....	799, 593
1883.....	560, 689	1888.....	814, 510
1884.....	674, 539	1889.....	661, 680
1885.....	778, 951	1890.....	768, 558

The exports from all the ports of Cuba of sugar and molasses during the same period have been as follows:

Year.	Tons.	Received by the United States.
		<i>Per cent.</i>
1881.....	545, 813	91. 33
1882.....	669, 082	94. 13
1883.....	508, 547	95. 69
1884.....	588, 626	93. 72
1885.....	631, 588	88. 72
1886.....	668, 533	92. 70
1887.....	776, 468	91. 52
1888.....	771, 510	90. 15
1889.....	607, 371	92. 08
1890.....	683, 643	90. 38

The balance went, in very small proportions, to England, France, and other countries.

The sugar crop in Cuba of 1891 promises to be the largest on record. Last year it was 800,000 tons, but it is expected that it will reach 1,000,000 tons this year.

The Havana commercial papers in February 1892 furnish the following item in respect of the market for flour in Cuba: Flour: American—Heavy receipts, which continue to be readily disposed of at from \$7 to \$8.37½, as to class. Spanish.—Heavy stocks, which continue neglected, owing to the low prices ruling for American, and though current classes may be obtained to-day at

from \$6.50 to \$6.75, and the best ones at \$7 to \$7.25 a bag, they find no buyer.

Between the 12th of March to the 30th of May, 1891, 115,000 barrels of pineapples were shipped from Havana to New York by the Ward line of steamers, and 6,000 barrels by the Tampa line of steamers. This is the largest shipment of fruit of this kind ever made.

Last February, by royal order, the Government of Spain invited the artists of that kingdom to compete for the honor of erecting a sepulcher for the remains of Columbus, in the nave of the cathedral at Havana, and also for the erection of a monument properly commemorating the discovery of America in the Central Park of the same city. For the sepulcher the sum of \$50,000 was appropriated, and \$100,000 for the monument, with the additional sum of \$600 as a prize for the author of the plan second in merit. The designs were submitted to the Royal Academy of San Fernando, Spain, which has awarded the contract for the sepulcher to Don Antonio Melida, and that for the monument to Antonio Susillo. The second prize of \$600 is given to Antonio Alsina for his design for the sepulcher. It is announced that the work will commence at once.

PUERTO RICO.

The Official Gazette of Puerto Rico, in the West Indies, contains in its issue of January 9, the decree of the governor of that island, presenting the Chicago Exposition in a most favorable manner, and appointing a commission composed of some of the most able and influential men in the colony, to take charge of its interests at the Fair. He refers to the brilliant results of former expositions, and their great influence in developing the resources of all countries and in spreading a knowledge of the arts and sciences, assisting industry and commerce, as is shown by the frequency with which the greatest and most progressive nations have held them; and predicts that the great efforts expended by the

United States will secure a magnificent success for the Exposition to be held at Chicago in 1893. Therefore, he says, that in this peaceful contest the varied and precious productions of Puerto Rico should take a high rank; the cordial invitation of the Government at Washington is gladly accepted, and all persons are called upon to contribute in every possible way to the end that the island shall present the best exhibit that can be had. In order to assist him in those efforts he appoints a commission composed of the following members:

Eccmo. Sr. Don Justo Martin Luna, Intendente General de Hacienda Publica.

Eccmo. Sr. Don Pablo Uberri, Vice-President of the Permanent Commission of the Provincial Delegation.

Illmo. Sr. Don Leopoldo Cano y Mazas, Secretary of Governor General.

Don Ricardo Ivorra, Chief of Public Works.

Illmo. Sr. Don Angel Vasconi, Inspector of Mines, and Chief of Fomento.

Don Juan J. Potous, Alcalde of the Capital.

Exmo. Sr. President of the Chamber of Commerce, Industry, and Navigation.

President of the Athenæum Puerto-Riqueno.

President of the Royal Society of Amigos del Pais.

Don Alberto Regulez, Director of the Provincial Institute.

Don Fernando Lopez Tuero, Director of the Agricultural Station of Rio Pedras.

Sr. Don Augustin Sthal.

Don Federico Azenjo.

Don Julian E. Blanco.

Don Ignacio Diaz Canoja, Director of the "Boletin Mercantil."

Dr. Salvador Blau, Director of "El Clamor del Pais."

Don Jose Rodriguez Fuentes.

Don Alvaro Dominguez.

Don Gorgonio Bolivar, Secretary.

Don Jose G. del Valle, Office of the Governor General.

The decree also provides for the immediate establishment of local boards, to assist the central commission in its work, to consist of the mayor, recorder, two merchants, the editors of the two

oldest papers in the locality, and as secretary the one serving the municipal corporation.

The activity and energy displayed by the authorities in the immediate action taken as soon as the official invitation was presented to them, in the opinion of the Special Commissioner of the Latin American Department, Mr. Ober, will undoubtedly produce the most favorable results and insure a very fine display from that island.

General Commercial Information.

A Central American merchant who has been long in the trade writes :

The difficulties are many in the way to increase trade between the Central American States and this country, and may be summed up as follows :

First. The question of credit: The manufacturers of the United States, as a rule, demand cash in from ten to thirty days in payment of goods bought for export, while on the other hand the merchant in Central America requires at least from four to six month's time. This is easily explained. The time necessary for delivering goods ranges from thirty to sixty days, because of the poor means of transportation existing. For instance, goods leaving by the Pacific Mail Steamship Company on the 1st of the month arrive at Colon on the 9th; they are sometimes detained there twenty to thirty days in crossing the Isthmus of Panama, and then go forward by steamer up the coast and are received ten days afterwards at the port of disembarkation. The merchant often does not receive his goods for sixty days from date of shipment; meanwhile the commission merchant in New York has to pay and wait to know the result of his shipment. European agents buy on long time and can afford to give long credit without the disbursement of much money. The terms for payment in Europe vary from six to nine months.

Second. The packing of goods: The manufacturers of the United States do not seem to appreciate this important feature; either for want of knowledge and experience or else from a lack of facilities, very few realize the severe handling which goods are subjected to. For instance a package is loaded in New York by steamer to Colon, from there put on cars to Panama, and then transshipped by lighters to steamer, which goes up the coast and then along the coast by lighters again to the wharf at the port of destination. The ports, as a rule, are open roadsteads, and when the sea is heavy the unloading to the lighters and to the wharf is a matter of great difficulty, and often packages are handled very hard.

Then transportation is in ox carts or mule back, sometimes the journey lasting ten days, and then again goods are handled as many times on the road. Packing should be as light as possible, but very strong; everything should be burlaped and strapped, and weighing about 125 pounds for mule-back transportation, and up to 400 pounds for ox carts.

The chances for robbery are so great on steamers in transit and conveyances on land that, if any package should be at all open or loose, goods are lost, and claims in this respect are sometimes very heavy.

Third. Styles, etc.: The consuming population in Central America, as in all Spanish countries, are very difficult to make any change in their tastes as to designs, etc. Once an article or design suits them, unless they can get the same thing always they will go elsewhere.

The European manufacturers study the wants of these people, and when they get their ideas as to the styles, etc., they make special goods for that trade and keep them in stock all the time. In the United States, where fashions vary every year, it is difficult to find what is wanted, in accordance with what was had before.

Fourth. Transportation: The principal way of shipment is by the Pacific Mail Steamship Company via Colon and Panama. Freights are very high and handling of goods very rough. The Europeans watch this branch of the business also, and accomplish more in that respect than the exporters of the United States can do. Often goods destined for Central America are shipped from here to Europe and transshipped from there more economically than by going direct from New York. The principal obstacle in the way for a change in this respect is the Panama Railroad, controlling the passage across the Isthmus. A contract is said to exist between this railroad and the Pacific Mail Steamship Company, by which there is no way of making through shipments to Central America by any other line than the Pacific Mail Steamship Company, except by way of Europe. If the traffic was free to other lines, freight and passage would be reduced fully 25 to 40 per cent.

Passage: This is another very important feature of the trade. Passengers are carried by the same steamers to Central America that take others for California. The rate to the latter port is about \$120, while to Central America it is from \$145 to \$165, and for only half the distance sailed. For instance, the time to Guatemala takes sixteen days and to San Francisco thirty-one days, all by the same steamer. Complaints of the travelers from Central America are sometimes very severe as to treatment on the steamers coming to New York, and many go direct from Colon to Europe by the French, German, and English lines of steamers, the time of transit being even a little longer via New York.

INCREASING SOUTH AMERICAN TRADE.

The British minister to Chile, in a recent dispatch to the foreign office in London, submits the following suggestions for facilitating and increasing British trade in Spanish America, which apply with equal appropriateness to the United States :

- (1) The study of Spanish in commercial schools.
- (2) The adoption of the metric system of weights and measures.
- (3) The issue of illustrated catalogues in Spanish; prices may be quoted in sterling, but weights and measures must be according to the metric system.
- (4) The appointment by first-class London advertising firms of agents in each Republic.

These agents would contract for space in all native newspapers, and should be prepared to receive as part payment and dispose of such goods as are advertised, otherwise the result of advertising would be nil. So far, the British manufacturers have been content to advertise in Spanish and other advertising periodicals printed in London for the Spanish-American market, which newspapers go direct to the dealer's waste-basket, whereas, an advertisement appearing regularly in the native press is seen by the buying public.

(5) Let each manufacturer issue a telegraphic code arranged for his own special line of goods.

(6) Study the wants of each country, and manufacture special lines of goods suited to the market.

SUGGESTIONS TO EXPORTERS.

The following is an extract from a private letter from an old merchant, in Honduras that contains important suggestions to exporters :

There exists another reason that could be well added to those you give for the failure of the merchants of the United States to capture the Latin-American trade.

That they do not send out reliable agents who can speak the language, and are well acquainted with the habits, tastes, and wants of the people. English and German houses avail themselves of the services of such men, and the consequence is they get the business. As an instance of this, a few months since a commercial traveler came to this city; he represented several manufacturers and shipping houses, three German and two English. He stayed in the city two

weeks, and sold \$45,000 worth of goods: he had been about twelve months on his journey through Venezuela, United States of Colombia, Costa Rica, Nicaragua, and Honduras, and in that time he had sold more than \$1,000,000 worth of goods, as he proved to me by his order books. He was going from here to Salvador, Guatemala, and Mexico, and he said he expected by the time he reached the end of his route to have sold \$500,000 more. The great requisites for such a man are, ability to speak and write the Spanish language, knowledge of the tastes, wants, manners, and customs of the people, knowledge of the patterns, styles, classes, and value of the goods suited to the various markets. These are very variable, often in the same country a particular pattern or class of goods that is preferred in one district is unsalable in another: above all, he must have a thorough knowledge of the style of packing required for different countries, as it varies with the facilities for transportation and what the people have been accustomed to, even the colors and styles of labels on some goods have a great influence on the sale. I have never heard of any American commercial traveler visiting this part of Honduras, and many that I have met in Mexico, Central, and South America, were utterly unfitted for their position by imperfect knowledge of the language, manners, and customs of the people, and principles of business existing in these countries, and a complete ignorance of the style of goods most salable. I think it would be a most valuable and useful addition to your bureau if you could establish a sample room, or as it might be more properly termed a commercial museum, to display:

First. Samples, patterns, specimens, and photographs of all manufactured articles and goods most salable in all the different countries and districts, with statistics of the average amount of each imported and consumed, the prices obtained, and the sources from which present supplies are procured, manner of packing, and any suggestions that could be offered as to the best means of diverting to or obtaining for the United States the trade.

Second. Samples, specimens, etc., of the products of the various countries and districts, paying particular attention to new or rare products at present little known in the United States, prices at place of production, facilities for exporting, etc.

GOODS REQUIRED IN LATIN-AMERICAN COUNTRIES.

A gentleman who has traveled extensively through Peru, Ecuador, and Bolivia, writes as follows concerning the classes of goods required in these countries:

The stores are gay with foreign stuffs of the most brilliant colors, coarse, shaggy, woolen materials finding the most ready sale. There is a call also for

bright-colored velvets, brocades, and silks, which the richer *cholas*, or half-breed women, manufacture into skirts. Nearly all the boots and shoes worn here are of home manufacture, as the natives require peculiar shapes; many of the styles are very elaborate. The Indians use very peculiar shoes. They are now discarding their old-fashioned ponchos for new styles woven here of foreign woads.

Hoes, spades, shovels, mattocks, pickaxes, rakes, sickles, and trowels could be imported into Bolivia. I have seen specimens of nearly all of these imported from the United States and from Germany, but I think it would be very hard to make these people adopt a modern plow. Iron plowpoints, however, would find a sale. I will bring samples of all kinds of hardware found in the market.

There is an enormous demand for aniline dyes—there is not a village in Peru or Bolivia where these are not sought after. Bright-colored crewels or worsteds are equally popular, and there is a good market for figured or flowered ribbons, bright-colored, cheap cotton handkerchiefs, bleached and unbleached muslins, and cheap cloths and cheviots. In the mines much mercury is consumed, chemicals used in the laboratories as reagents, test tubes, retorts, breakers, and other glass material, crucibles, assaying ovens, and the like. Canned meats, lobster, and salmon are in great demand, especially at mining centers. Cheap earthenware, and stoneware, ornamented with gaudy designs, find a ready sale, as well as cheap drinking glasses, knives and forks, and brass spoons. As for hardware, besides the implements mentioned above, I think there would be little demand for anything but locks and scissors. Imitation silver teasetts are popular. Wood is very scarce. I should think fortunes could be made in the lumber trade with this country. A small wooden pole here costs 40 cents, and wood for building purposes is very expensive. For this reason tables and chairs are expensive, and I should think money could be made in the furniture business. The beds in this country are usually made of iron. In the country, however, one usually finds the beds and tables made of mud ledges, with a mud bench around the room to sit upon. This shows the scarcity of wood. For fuel, llama, sheep, and asses dung is used, and where a small scrubby bush, called "tola," occurs, this also is burned.

American watches are held in high esteem. Much petroleum is consumed, foreign stearin candles, and enormous quantities of alcohol. The latter trade is the principal industry of Bolivian merchants. The Indians drink alcohol by the quart, and quantities are used for cooking on account of the scarcity of fuel.

I do not think foreigners could compete with the natives in making saddles, saddlebags, and the like. Corrugated iron for roofing might be used here with advantage. Roofs are made either of straw-thatchery or of tiles. The natives are very fond of small, cheap toys, such as monkeys on sticks, supple jacks,

jack-in-the-boxes, and especially horses on wheels. Dolls are in great demand. Enormous prices are sometimes paid for them. The other day a merchant refused \$60 for a doll, the price of which he said was \$80. While the man was still in the store the merchant let the doll fall by accident and it was broken. Dolls are either blondes or negroes. I have not seen one brunette doll in Bolivia. The little Indian children love to carry about pretty little yellow-haired dolls on their backs, as their mothers do their babies.

Cheap, gaudily colored lithographs and chromos are in great demand, especially those representing religious subjects. If a picture contains a likeness of the devil carrying a soul to hell, or a lot of people in purgatory, it sells very well. This would be a good market for rubber blankets and rubber pouches, but I do not think rubber coats would sell well. Cheap wall papers are greatly in demand, especially those having bright, flowery designs. Besides the above, a good market would be found for cheap gilt picture frames, cheap mirrors, and in general for articles usually found in a "five-cent" store in the States.

SISAL-HEMP CULTURE.

A good deal has been said lately about fibers, and the Kenredy and Weicher extracting machines have attracted the attention of many settlers at the Jamaica Colonial Exhibition, so we think it of high interest to give the following extract of the Bulletin of the Botanical Department of Jamaica concerning the culture of sisal hemp:

Sisal hemp is extracted in Yucatan from several plants, but the true plant (*Agave rigida*) is one nearly allied to the koratoc (*Agave morisii*), a native of Jamaica.

The true sisal-hemp plant exists under several varieties, but the one which is most largely cultivated is of a grayish-green color, with thorny spines on the edges of the leaves (*Agave rigida* var. *elongata*). The department, with the aid of the Government and the British consul at Progreso, was able to secure one dozen plants of this variety from Yucatan, but it has been unable to obtain any more, as the planters there wish to preserve the monopoly. There are now about 100 plants at Hope Gardens, and they are being propagated as fast as possible.

Another variety (*Agave rigida* var. *sisalana*) was very freely distributed in the Bahamas by his excellency Sir Henry Blake, when he was governor in the colony. The inhabitants now see the great importance of this industry, and the Government has been induced to forbid the export of any plants for three

years. This variety is of a dark-green color and has no spines on the edges of the leaves. The absence of spines on the edges saves trouble and expense in harvesting. There are a few of these plants in the Hope Gardens. It has been ascertained that this variety grows in the Caicos Islands, and his excellency Sir H. A. Blake has directed that arrangements shall be made for the importation of as many as can be obtained. It is expected that these plants will arrive next February.

There is another plant which also yields a large quantity of the sisal hemp exported from Yucatan, namely, silk grass (*Furcraea cubensis*.) There is already a large quantity of this plant in Jamacia, and there ought to be no difficulty in planting out a large area. However, it only yields 2 to 3 per cent of fiber, whereas the true sasil-hemp plant yields 4 per cent. Another species (*Furcraea gigantea*) is the Mauritius hemp of commerce.

Soil.—Any dry, poor land will suit sisal hemp, but rocky, gravelly soil is the best for the production of the finest fiber. Moist land is not suitable, nor rich land, like old sugar estates, for, though the leaves grow well and fast, the fiber is poor and small in quantity. Shade is prejudicial even to the young plants.

Planting.—Young plants are the best for planting out, and they should not exceed 2 feet in height. If the plants have to be carried a long distance, the roots should not be trimmed, but when they are planted out the roots should be cut off down to the trunk, and the dry leaves pulled off. The plants are put out in straight rows, the distance between the rows being 12 feet and between the plants 6 feet in the rows. There will then be about 600 plants to the acre. Roads running perpendicular to the rows may be formed at intervals of 10 chains. It is necessary to keep the plant at this distance apart, for if they are too close the leaves may be damaged in high winds, resulting in great loss of fiber. Great care is taken in Yucatan to put out the plants quite upright, and stones are even placed to support them in a proper position, for they grow as they are planted. The rainy season is the best time for planting.

Culture.—The culture is extremely simple. No shade of any kind is allowed. Bush is cut down and trees taken up by the roots. The young suckers are taken off, and if they are not required for planting out they are burnt. Any plant of quite low growth may be planted between the young plants to give "catch crops." When the plants are about two years old cattle may be turned in to keep the grass low and to prevent bush springing up. Sisal-hemp plants thrive better without either hoeing or plowing. Various estimates have been found of the duration of the plants, but at any rate they last from twelve to thirty years. When they show signs of dying off new suckers are planted between and thus there need never be a vacant spot in the plantation.

Harvesting.—When the leaf is ready for cutting it will have inclined

toward a horizontal position and its color will have become darker. Cutting should commence from the bottom and the leaf must be taken off clean and as close as possible to the trunk. As soon as the leaf is cut the prickles on the edges and points should be trimmed off. The leaves are then made up, point and base alternately, into bundles of fifties for delivery at the works. Thirty such bundles are a day's work, but of course more can be done, if the variety cultivated is without the prickles on the sides of the leaves. The bundles are placed on the edge of the cart road, 30 bundles being a load for a dray. The workmen are paid so much per 1,000 leaves. The time required for the leaves to ripen after planting varies according to soil and situation from two to three years.

Extraction of fiber.—The fiber should be extracted from the leaves as soon as they are brought in. If left for more than two or three days after cutting the fiber is spotted.

When the fiber is extracted by passing the leaf through machines, it is hung on drying stands in the sun for about two hours until it is quite dry. If rain comes on the fiber must be hung up under cover, or it will become discolored. In wet weather a fire is kindled to warm the drying house, or operations are suspended.

The fiber is often bleached by leaving it on the drying stands for fifty-four hours after being dried, but it requires to be constantly turned. The fiber is improved in appearance, but weighs less.

The drying stand is made by erecting posts 4 feet high and fastening rails or wire on the top from one to another.

The refuse from the leaves is dried in the sun and burned.

Particular attention is paid in Yucatan to the operation of baling, and all discolored fiber is separated and packed as a second quality. Even the cordage used to cord the bales of first quality must be of the same kind. The bales are pressed either by a screw or a hydraulic press, and great care is taken to make the bale neat-looking and of uniform weight.

Machinery.—One fiber machine is required for every 100 acres of plants.

Yield.—Each plant should produce 30 leaves in the year. If there are 600 plants to the acre, this gives 18,000 leaves per acre per annum. One thousand leaves weigh about 1,500 pounds, and, yielding about 4 per cent of dry fiber, give 60 pounds of hemp. Thus each acre should yield about half a ton of hemp per annum.

DRIED BANANAS

Drying bananas for shipment has been tested in Trinidad, West Indies, with marked success. A report received by the Bureau of

American Republics sets forth that the cost of producing a bunch of bananas weighing 52 pounds, including the purchase of land, clearing, draining, planting, weeding, cutting, drying, fuel, boxes, and packing for market, would average only 53 cents. The fruit in drying loses one-third of its weight. When dried it sells readily at 16 cents a pound. Allowing for the loss of weight this would yield \$2.72 a bunch, a clear profit for the grower of \$2.19. An order for several hundredweight of the dried fruit at 6*d.* (12 cents) a pound for the London market has been received at Trinidad. Even at this price a handsome profit would be realized. An actual sale of nearly 100 boxes of the dried fruit has recently been made in Canada at 20 cents a pound, and the Canadians are asking for more at the same price. Deducting freight charges the net price was 16 cents. The variety of banana which yields the best result is said to be the "Gros Michel." Over 100,000 plants have been distributed in Trinidad and Tobago within the last two years. The purchasers were principally large planters, and there is every indication that the industry will be pursued on an extensive scale, and that dried bananas will soon be an important item in the commerce of the West Indies. The dried fruit can be conveyed to market from remote districts over bad roads without injury, and the risks of handling and of the sea voyage are reduced to a minimum. This is an entirely new and valuable industry. The banana is the most productive of all fruits. Once planted it perpetuates itself and the trouble is often to get rid of it.

Its productiveness is stated to be forty-four times greater than that of the potato, and one hundred and thirty-one times greater than wheat. The driers in operation are found to do their work well. Care is taken to select bananas of as nearly as possible the same size for convenience of packing, and to secure uniformity of color. The dried product is not only palatable as a fruit, but it is a most nutritious article of food. There is practically no limit to the amount that can be produced.

PANAMA SAMPLE ROOM.

Samuel Boyd, the editor of the Panama Star and Herald, who has spent most of his life on the Isthmus, and is probably as familiar with the commercial interests of Central and South America as any man, makes a valuable suggestion to the Bureau of the American Republics. He advises the manufacturers of the United States who desire to extend their export trade in Central and South America to establish in the city of Panama a sample room or exposition, where their goods can be placed on exhibition. The merchants from the west coast of Central and South America must necessarily pass through Panama on their way to and from Europe, and they are generally detained there for several days because of irregular steamship connections. Such a sample room would offer them an opportunity to examine into the character, quality, and price of merchandise to be obtained in the United States, and would, no doubt, in many cases, divert buyers from Europe to this country. Mr. Boyd asserts that in nearly every article of common use the manufacturers of the United States can compete with those of Europe, not only in quality but in price, and that the export trade of this country might be enormously increased were adequate means taken to introduce our goods among the buyers of the southern continent. Mr. Boyd offers to personally advise and assist any merchants or manufacturers who desire to establish such a sample room.

THE UNITED STATES AND SOUTH AMERICAN TRADE.

[From the South American Journal.]

The commercial policy of the United States, as shadowed forth in the McKinley act, seems destined to exercise an important influence on the trade of this country. It has already, during the past year, shown that the United States is capable of following up to a considerable extent the self-containing principle, which, in

other countries, would mean commercial ruin, and, though success has not been altogether unqualified, the adoption of the policy has yet had an appreciable effect in checking the trading movement between the two hemispheres. There are certainly plenty of reasons in explanation of the contraction of British trade with the United States, not the least convincing being the fact that the heavy shipments immediately before the application of the McKinley tariff naturally resulted in a subsequent quietude through the accumulation of stocks. It is pretty evident, therefore, that during the present year there must be a slight recovery in British trade with America, though the most sanguine prophet can scarcely anticipate that it will very soon occupy the position which it formerly held. This unfortunate circumstance is one over which the British manufacturer has no control. He can only do his best with what remains of his connection with the United States, and improve his position with the markets already open to him. It therefore becomes imperative that the United States should not be permitted to further encroach upon the domain of British commerce without a very strong effort being made to preserve British interests. Such an encroachment is threatened by the following out of the policy of Mr. Blaine, to constitute the Republics of South America into commercial dependencies of the United States. The whole of South America, with the exception of one or two States who remain obdurate to the blandishments of Mr. Blaine, are to be formed into a sort of commercial union with the North American Republic, and this is to be accomplished by the negotiation of treaties which are so skillfully drawn up as to leave all advantage to the northern manufacturers. These latter are put in possession of an extensive and profitable market for their wares, a market that can not fail, with the growing requirements of home consumers, to make the manufacturing industries of the United States exceedingly prosperous. In return for this advantage, the South American Republics are permitted to send their

agricultural produce into the United States under favored conditions, but these conditions are by no means so favored as to enable the products of South America to enter into successful competition with those of the United States. It is this somewhat one-sided arrangement that carries with it the conviction that the treaties are not destined to last very long. Where British manufacturers have an opportunity of asserting their interests it is not likely that they will be backward in so doing, and their efforts in regaining the position which they have lost will certainly be facilitated by the natural disinclination of the South American Republics to accord to the United States the lion's share of their trade.

A more legitimate method which the United States is adopting for the monopoly of South American trade is the institution of a Bureau of American Republics. This Bureau was established in 1890, and its first report has just been issued. It shows that the success of this new institution was prompt and striking, and the ends that are being attained through its medium should make British manufacturers reflect upon their position. The Bureau is to be maintained at an expenditure of not more than £7,200 per annum. It is under the supervision of the Secretary of State—United States—and is established for ten years, a period which may be successively renewed if found to be to the advantage of the countries concerned. The countries comprised in the association are the Argentine Republic, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Hayti, Honduras, Mexico, Nicaragua, Paraguay, Peru, Salvador, the United States, Uruguay, and Venezuela. The favor with which the idea of the Bureau was received is proved by the fact that upon its inception there was no fewer than thirty-eight thousand applications for bulletins received from the United States alone, while a similar number was forthcoming from the other Republics. There were likewise, during the first four months, seven hundred inquiries for specific information upon commercial matters, and such inquiries

have continued since that date without intermission. Among these applications a large proportion came from makers of agricultural machinery, railway material, mining implements, and hardwares, for information as to transport charges, and hints to enable them to adapt their goods to the requirements of particular markets. In this way manufacturers who had hitherto done nothing with the South American markets, now have a good connection, and the exports from the United States to the south have grown steadily. It has indeed been found necessary to establish three new lines of steamships between the United States and the ports of South America. Another invaluable aid to the development of commerce between the two divisions of the American continent is the institution by the Bureau of a commercial directory, and this has already done a great deal toward forming connections between manufacturers in the north and consumers in the south. The Bureau has also issued a number of handbooks giving a mass of valuable information upon commerce, coinage, weights, and measures, and other matters, a knowledge of which is essential to international trade. It is obvious therefore that the Bureau is established upon lines that can not fail to have excellent results for the trade of the United States. It is peculiarly comprehensive, embracing nearly every source of information serviceable to the manufacturer and consumer, and it moreover takes an active part in bringing the manufacturer and consumer into close touch for their common interests. Its efficiency is displayed in the first report which it has yet issued, a report the most valuable of any that have been published for many years.

The most instructive feature of the report to British manufacturers is that part which deals with a distinct development of United States trade with certain South American republics to the prejudice of British interests. One striking example of this is afforded by Mexico, where, hitherto, British manufacturers have found an excellent connection. The country, too, allows of so many

possibilities in the future that Mexico has long been regarded as a market capable of considerable development. It is not, therefore, very encouraging to find that the merchants of Mexico and the cities of Central and South America who have heretofore purchased their goods in Europe exclusively are now coming to the United States, and invariably discover that they can find here nearly every article they need of a better quality and at a price as low as can be obtained in Great Britain, Germany, and France; and the recently negotiated reciprocity arrangements afford them advantages that are beginning to be understood and appreciated. A specific instance is given of an agent of one of the largest establishments in Brazil who, while on his way through the United States to Europe, found that he could make a better bargain there both as to price and quality; he accordingly bought goods to the value of several hundred thousand dollars, which were to have been supplied by Great Britain. Such instances as these can not be overlooked by manufacturers in this country. With improving transport facilities between North and South America it is evident that the United States will before long be in a better position to compete for South American custom than Great Britain is at this moment; indeed, the report of the Bureau of American Republics would seem to show that the United States is already in this favored position, and that, having once passed the line of equality in competitive opportunities, the United States will go on improving her position to the destruction of British interest in South America. Happily this is a contingency that need not be anticipated with too much foreboding. What the United States can do Great Britain is surely capable of doing equally well. If the United States can increase its business connection by sheer force of enterprise Great Britain is certainly able to retaliate with the same weapon, and prevent North America from monopolizing more than its legitimate share of trade in the South. It has now become absolutely imperative that the

manufacturers of Great Britain should bestir themselves. They are gifted with as active a spirit of enterprise as are their competitors on the other side of the Atlantic, and it would be strange indeed if they submitted to expulsion from South America without making a bold fight. Their success should be assured by the possession of a valuable weapon, which should serve them good stead. Their interests in South America are not created by themselves; they are the outcome of the enormous amount of British capital invested in the South American republics, and it is this capital which will constitute the bulwark of the British commercial position in South America.

The imports of coffee into the United States in 1866 aggregated 175,794,000 pounds; in 1870 it had increased to 231,173,000 pounds; in 1880 to 440,128,000 pounds, and in 1889 to 561,132,000 pounds. In 1890, owing to scarcity and high prices, the importation dropped to 490,161,000 pounds. In 1866 the consumption averaged 4.96 pounds per capita of population; in 1889 this average had increased to 9.16 pounds, dropping off to 7.83 pounds in 1890.

A certain firm in Pennsylvania, manufacturing iron chain, applied to the Bureau of the American Republics for information as to the importation and duties of iron chain in Brazil. The information having been furnished, the following reply was received:

We have been much gratified with the contents of your letter as it indicates that on many kinds of chain the United States will be able to make such prices in Brazil that it will impossible for England and Germany to compete, when we get the same shipping facilities as those countries possess.

A very important discovery has been reported to the Bureau of American Republics. A mine of coal of very fair quality for steaming purposes has been found by accident in the Straits of Magellan. Signor Fossetti, the captain of an Italian steamer, was compelled to anchor in Shagnet Bay, to make some repairs, and while there he discovered coal very near the surface. Reaching

Valparaiso he sent a corps of experts to the scene of the discovery in a steam launch, who found that the coal was not only abundant but of excellent quality. The importance of the discovery to the commerce of the world can only be appreciated when it is considered that all steamers passing through the Straits of Magellan are required to coal there, and that the supply has heretofore been brought from Cardiff, Wales.

TRADE OPPORTUNITIES.

Messrs. A. Schreiber and G. C. Power were sent by Stuyvesant Fish, esq., president of the Illinois Central Railroad, to Mexico, Central and South America for the purpose of investigating and reporting upon the opportunities of extending the trade of this country in that direction. The following is the report submitted by these gentlemen:

NEW ORLEANS, LA., *July 22, 1891.*

DEAR SIR: In compliance with the instructions contained in your letters of the 4th of February and 9th of March last, we sailed from New Orleans on the 12th of March, proceeded first to Havana, Cuba. Our itinerary thence took us via Progreso (Yucatan), Orizaba, and Vera Cruz, to Mexico City, from which point we reached the Pacific coast at San Blas, taking in our way the important interior city of Guadalajara. Turning southward from San Blas and touching at the ports of Manzanillo and Acapulco (Mexico), and Champerico (Guatemala), we landed at San José and visited Guatemala City; reëmbarking at San José, we continued our journey southward, touched at Acajutla, La Libertad, and La Union (Salvador), and Punta Arenas (Costa Rica), and reached Panama, whence we followed to Guayaquil (Ecuador) and via the Peruvian shipping points, Payta, Eten, Pacasmayo, Pimentel Salaverri, and Samanco, to Callao and Lima. The disturbed condition of affairs in Chile rendering a visit to that country, from a business point of view, unadvisable for the present, we retraced our steps to Panama, crossed the Isthmus and proceeded to Laguayra and Caracas (Venezuela), returning by way of Barranquilla and Cartagena (Colombia), from which latter point we took a steamer direct to New Orleans, where we landed on the 12th inst., having been absent exactly four months.

A glance at the map will show that the above-sketched tour covers the section of Spanish America that may be claimed as tributary to Chicago, in so far as its trade with the United States is concerned.

The favorable position of New Orleans (the outport of Chicago) with

reference to Cuba, the eastern coasts of Mexico and Central America, and the northern coast of Colombia and Venezuela, as far east as Laguayra, is incontestable; and it is evident that for the traffic of the west coast of Mexico and Central and South America that crosses the Isthmus of Panama, Chicago via New Orleans is the shortest line. Chile is, commercially, nearer to Europe than to the United States, much better rates of freight being, as a rule, obtainable, say, to Liverpool or Hamburg direct via the Straits of Magellan, than to New Orleans or New York with transfer across Panama; and the west coast of Mexico from Acapulco northward may possibly trade more advantageously with San Francisco than with any of our Atlantic or Gulf ports.

The value of the commerce of the United States with the countries visited by us is stated as follows in the Treasury Department's report for the fiscal year ending 30th of June, 1890, viz.:

	Imports from.	Exports to.
	<i>Dollars.</i>	<i>Dollars.</i>
Cuba.....	53, 801, 591	12, 669, 509
Mexico.....	22, 690, 915	12, 666, 108
Venezuela.....	10, 966, 765	3, 984, 280
Central American States.....	8, 052, 444	5, 104, 275
Colombia.....	3, 575, 253	2, 522, 351
Peru.....	351, 695	1, 418, 561
Ecuador.....	535, 060	714, 924
Total.....	99, 973, 723	39, 080, 008

The "Hand Book" published by the Bureau of the American Republics, at Washington, in January, 1891, states the value of imports and exports of the above-named countries as follows;

	Imports.	Exports.	Total.
	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
Cuba...	53, 124, 000	74, 560, 000	127, 684, 000
Mexico.....	44, 500, 000	44, 457, 075	88, 957, 075
Venezuela.....	11, 054, 860	11, 817, 767	22, 872, 627
Guatemala.....	4, 941, 142	9, 247, 104	14, 188, 246
Honduras.....	1, 215, 000	1, 296, 000	2, 511, 000
Nicaragua.....	1, 459, 280	1, 034, 960	2, 494, 240
Costa Rica.....	4, 401, 873	4, 860, 829	9, 262, 702
Salvador.....	2, 008, 844	3, 831, 322	5, 840, 166
Colombia.....	8, 220, 782	11, 251, 563	19, 472, 345
Peru.....	6, 052, 313	6, 201, 729	12, 254, 042
Ecuador.....	6, 757, 656	5, 521, 327	12, 278, 983
Total.....	143, 735, 750	174, 079, 676	317, 815, 426

A comparison of the above figures show that we receive (in round numbers) 58 per cent of the exports of the countries named, and we supply them with 27 per cent only of their imports; and it is fair to conclude that, while ample room remains for the extension of our import trade with our Spanish-American neighbor, our export trade is yet to be built up.

It is alleged in explanation of the inferior position of American as compared with European sellers on Latin-American markets, that our merchants and manufacturers have made no effort to develop business in that direction; and that while German, French, British, and Italians are represented everywhere by active agents, who have carefully studied the requirements of consumers, and know the class and style of goods adapted to every locality, Americans are rarely seen, and apparently abandon the field to their foreign competitors—this in face of the intense and unanimous desire of Spanish-Americans to establish close commercial relations with the United States. The allegation is founded upon undeniable fact; but it would be hasty to conclude, therefrom, that our people lose from want of enterprise and business sagacity a trade of which, by reason of their advantage of position, they should get the lion's share. Much of the superiority which we can claim from greater proximity and from cheaper production of the leading articles imported by Spanish America, is offset by the policy which obtains in the management of the lines of transportation now uniting our country with the neighboring Republics, a policy which seems to look more to the maintenance of monopolies than to the stimulation and development of business.

Under the present condition of things, the suggestion of a connection with Chicago through lines of steamers via New Orleans, wherever it was made by your representatives, met, as might have been expected, with an almost enthusiastic response.

Such connection, if taken hold of by a trading company, *controlling its own transportation*, could hardly fail to lead to favorable results.

Cuba and Mexico.—First in importance, from the point of view of direct relations between Chicago and Spanish America, comes our trade with Cuba and Mexico.

The large percentage (71) of the export trade of Cuba which comes to us is due to the fact that we buy nearly the entire sugar crop of the island (600,000 tons); this item alone amounts to \$40,000,000—tobacco, copper ores, fruit, and other articles, aggregating \$13,000,000 in value. On the other hand, Cuba buys from us 23 per cent only of its imports. This discrepancy is chiefly attributable to the "differential duties" established and maintained to favor Spanish producers. Under this system it has been found possible to ship American flour to Barcelona and thence to Havana, where it was sold at a profit as

Spanish flour; should reciprocity do away with the system, there is little doubt that the bulk of Cuba's supply of flour would be taken from the United States; and the importance of the market may be inferred from the statement that the arrivals at Havana, in January, 1891, alone, included 40,000,000 barrels. Lard and hog products are in steady and large demand; also machinery, coal, railway supplies, agricultural and mining implements, nails, lumber, etc., all of which might be furnished advantageously by Chicago.

Our proportion of the foreign commerce of Mexico is 51 per cent of exports and 28 per cent of imports. During the last fiscal year we received from Mexico ores to the amount of \$7,800,000; sisal grass (36,500 tons), representing in value \$5,300,000; coffee (10,300 tons), representing in value \$3,500,000; goatskins and hides, \$1,600,000; vanilla beans, \$515,000; fruit, spices, gums, cabinet and dyewoods, making up a total of \$22,690,000.

In return we shipped to Mexico: Animals (hogs, bees, horses), \$891,000; corn (961,000 bushels), \$481,000; flour (31,000 barrels), \$165,000; machinery, \$845,000; railway cars, carriages, \$622,000; coal, \$398,000; agricultural implements, hardware, sewing machines, \$496,000; cotton goods, \$470,000; lumber, \$561,000; timber (sawed and hewn), \$322,000; malt liquors, \$240,000; lard and other oils, \$265,000; chemicals and drugs, \$251,000; saws and tools, \$161,000; locomotive engines (24), \$171,000; stationary engines (45), \$35,000; wire (3,335,644 pounds), amounting to \$129,000; manufactures of iron and steel, \$553,000; tallow (5,025,258 pounds), \$246,000; hams (834,997 pounds, \$255,000; cotton (unmanufactured, 26,474 bales), \$1,217,805, and butter, cheese, and miscellaneous articles aggregating about \$1,500,000.

The distribution of our trade with Cuba is as follows:

Imports: New York, \$28,286,124; Philadelphia, \$13,314,598; Boston, \$6,383,762; other Atlantic ports, \$878,639; total for Atlantic ports, \$48,703,123. New Orleans, \$1,794,813; Key West, \$1,084,810; other Gulf ports, \$448,598; total for gulf ports, \$3,328,221. Pacific ports, \$587,974; northern border and lake ports, \$861,326; interior ports, \$320,947.

Exports: New York, \$10,534,036; Philadelphia, \$974,917; other Atlantic ports, \$312,583; total Atlantic ports, \$11,831,536. New Orleans, \$——; other gulf ports, \$837,973. (The exports from New Orleans being by the Morgan line of steamers via Key West, are included in the amount [\$420,435] credited to the latter port.)

The demand arising from the requirements of eastern sugar refineries accounts, in a great measure, for the startling disproportion, shown in the above figures, between the imports of Atlantic and those of gulf ports.

But, in view of the fact that most of the articles forming the object of our ex-

port trade are raised or produced within reach of Chicago, it seems an anomaly that that trade should be entirely in the hands of New York.

The following is the distribution of our commerce with Mexico:

Imports: New York, \$8,280,255; other Atlantic ports, \$477,936; total Atlantic ports, \$8,758,186. New Orleans, \$2,567,960; Paso del Norte, \$4,983,197; Corpus Christi, \$2,606,770; Saluria (Tex.) \$1,433,072; Teche (La.), \$1,005,365; other gulf ports, \$389,737; total gulf ports, \$12,986,101. Pacific ports, \$941,527; border and lake ports, \$3,325; interior ports, \$1,876.

Exports: New York, \$4,222,740; other Atlantic ports, \$38,228; total Atlantic ports, \$4,260,968. New Orleans, \$504,565; Corpus Christi, \$3,090,561; Pensacola, \$1,625,902; other gulf ports, \$1,320,813; total gulf ports, \$6,542,201. San Francisco, \$1,564,731; other Pacific ports, \$298,208; total Pacific ports, \$1,862,939.

From the above figures the gulf ports would appear to get the larger share of the Mexican trade. If, however, we deduct from the imports, the value of ores that come overland to Texas points, and from the exports the value of cotton which is shipped partly from New Orleans via Galveston and partly overland or via Brazos Santiago, and Corpus Christi, it will appear that New York holds a preponderating position in the general commerce of the United States with its neighboring republics.

Three lines of steamers connect the United States with Cuban and Mexican ports, viz:

(1) The New York and Cuba Mail Steamship Company (Ward Line), semi-weekly service between New York and Havana, Santiago de Cuba and Cienfuegos; weekly service between New York and Progreso and Vera Cruz.

(2) The Plant Investment Company (Plant Line), semiweekly service between Port Tampa, Fla., and Havana.

(3) The Morgan line, semiweekly service between New Orleans and Havana, from December to May; monthly service between New Orleans and Vera Cruz, from November to May. The steamers cease their service from and after the 1st of May, when the quarantine season commences.

The Plant Line does an almost exclusively passenger business, and, having well-appointed steamers that make the run from Port Tampa to Havana in twenty-five hours, is well patronized by those American tourists who prefer to avoid a long sea voyage.

The Morgan steamers are old-fashioned side-wheel boats, of fair carrying capacity, and having neat accommodations for passengers, but slow.

The whole field, therefore, may be said to be occupied by the Ward Line, a well equipped, well managed, and in every respect a first-class line.

There is, however, reason to believe that the current of trade might be diverted from New York to Chicago. A line of steamers between New Orleans and Havana, Progreso and Vera Cruz, run in connection with the Illinois Central Railroad, would save between 600 and 800 miles in distance, as compared with New York, and both for exports and imports place Chicago at advantage. There is no doubt, moreover, that our export trade with Cuba and Mexico would, by well-directed efforts, be largely increased. Strong agencies established at Havana and Mexico City, carrying fair stocks of the most current articles of sale, and provided with samples, catalogues, and price lists of others, such as agricultural implements, miners' tools and mining machinery, cutlery, glassware, calicoes, cement, barbed wire, etc., would doubtless effect considerable sales, while they influenced or controlled return shipments of sugar, coffee, and other tropical products. With a proper service, the fruit trade with Havana and Vera Cruz could be developed to immense proportions. The agencies should combine with their purely commercial character that of banking and express companies.

It is stated that during the months of January, February, and March of this year the city of Havana was visited by 30,000 American tourists. Assuming that at least an equal number went to Mexico, and estimating the total movement for the year at 75,000 travelers, a wide margin appears for profit on negotiations of letters of credit, change of United States for Spanish American money, and vice versa, care and transfer of baggage, etc.

Central America.—The Central American States (Costa Rica, Guatemala, Honduras, Nicaragua, and Salvador) have an export trade, in round figures, of \$20,000,000, of which the United States received \$8,000,000; and an import trade of \$16,000,000, our share of which is \$5,000,000, the distribution of the traffic being as follows, viz:

	Imports from.	Exports to.
COSTA RICA.		
	<i>Dollars.</i>	<i>Dollars.</i>
Atlantic ports	810, 100	717, 819
Gulf ports	129, 857	179, 219
Pacific ports	736, 513	201, 914
Interior ports.....	241	.....
Total	1, 676, 711	1, 098, 952
GUATEMALA.		
Atlantic ports	1, 016, 137	665, 461
Gulf ports	41, 951	40, 279
Pacific ports	1, 223, 593	620, 648
Total	2, 281, 681	1, 326, 388

	Imports from.	Exports to.
HONDURAS.		
	<i>Dollars.</i>	<i>Dollars.</i>
Atlantic ports.....	274, 646	294, 782
Gulf ports.....	209, 728	142, 961
Pacific ports.....		84, 888
Interior ports.....	30	
Total.....	984, 404	522, 631
NICARAGUA.		
Atlantic ports.....	1, 198, 492	909, 047
Gulf ports.....	453, 162	264, 537
Pacific ports.....	4, 036	96, 489
Total.....	1, 655, 690	1, 270, 073
SALVADOR.		
Atlantic ports.....	489, 321	513, 173
Gulf ports.....		
Pacific ports.....	973, 637	373, 058
Total.....	1, 453, 958	886, 231
Grand total.....	8, 052, 444	5, 104, 275

The nature and value of our chief imports from Central America are as follows:

Coffee, \$5,313,519; fruit, \$1,352,094; India rubber, \$683,377; hides, \$379,970; cabinet woods, \$63,616; dyewoods, \$57,888; indigo, \$39,032.

And the leading articles of exports are:

Flour (169,000 barrels), \$751,000; cotton goods, \$425,000; firearms, \$200,000; sewing machines, \$89,000; malt liquors, \$86,000; railway cars, \$69,000; horses, \$17,000; besides stoves and ranges, lard, bacon, hams, canned meats, wine, lumber, lamps, illuminating oils, butter, cheese, refined sugar, etc.

This trade may be said to be controlled by three ports:—New York, New Orleans, and San Francisco—communications being established with the Atlantic Coast by numerous lines of steamers and with the Pacific Coast by the Pacific Mail Steamship Company and the Panama Railroad Company.

Of the ports on the eastern coast of Central America, one only, Port Limon (Costa Rica), is connected by rail with the interior country; on the west coast Champerico and San José (Guatemala) have short lines running to Retalhuleu (27 miles) and to Guatemala (72 miles); Acajutla (Salvador) is the terminus of a road now completed to Sonsonate (15 miles) and being rapidly constructed in the direction of Amate Marin (80 miles). In Nicaragua the only railway in operation is the one from Corinto to Managua, on the western slope. The

Pacific States are, therefore, those in which the commercial movement is most important.

During the season just closed, the shipments of coffee from Champerico amounted to 580,000 bags, and those from other Central American ports on the Pacific to over 400,000 bags. A small proportion of these shipments go to San Francisco and a smaller one to New York; the bulk of the trade is directed to Hamburg, London, and Havre, and, through rates or freight to and from Europe being lower than to and from New York, the imports and exports of the coast are controlled by Germany, England, and France. Unless the policy of the Pacific Mail Steamship Company and the Panama Railroad Company be reversed, it is difficult to see how our Central American trade can be increased, the business of the east coast being restricted by the comparatively isolated position of the ports.

Ecuador and Peru.—Relations with Ecuador and Peru are dependent upon a traffic arrangement with the Panama Railroad Company to connect with the Pacific Steam Navigation (British) and the South American Steamship (Chilian) lines of steamers, running between Panama and ports in Ecuador, Peru, and Chili. Were such an arrangement effected, a line of first-class steamers between New Orleans and Colon (Aspinwall), scheduled to make close connection with the steamers on the Pacific side, would command, practically, the entire passenger traffic between the west coast of South America and the United States, and the bulk of that between that coast and Europe.

The run from Colon to New Orleans could be made in three and a half days, making the time to Chicago via the Illinois Central Railroad four and a half days, and to New York via Chicago six days, as against seven days to New York by direct steamer of the Pacific Mail Company.

With regular and reliable communication via Colon, trade with Ecuador and Peru would be stimulated and an important business established where, relatively, none exists at present. These countries are now dependent upon the United States for their supply of flour, communication with Chile, their usual source of supply, being almost entirely suspended. Peru will be a large market for lard as soon as "reciprocity" does away with the prohibitory duties now checking the importation of that article and the rapid development of agriculture, mining, and railroad construction in that Republic creates an active demand for agricultural implements, steam plows and mining and railway supplies of all kinds. The return trade would consist of cacao, coffee, hides, goat skins, alpaca wool, etc.

A railway is in course of rapid construction, which, running from Buenaventura, on the Pacific coast of Colombia, to Cali, will open the valley of the Cauca, the richest in South America. The State of Cauca is the most densely popu-

lated, as it is the most active and progressive, of the Columbian States, and offers a new and wide field for commercial enterprise.

Colombia.—A line to Colon, connected by a service between that port and Santa Marta. Savanilla (Barranquilla), and Cartagena, could hardly fail to draw in time to Chicago the larger share of the Colombian trade. The Santa Marta Railroad, now reaching about 30 miles in the interior and soon to be completed to Banco, on the Magdalena River, will connect that stream with the best harbor on the Caribbean coast of Colombia, besides running through a rich banana, cocoanut, and cacao section. Santa Marta is fast becoming a large fruit-shipping port, and an independent, direct fruit line at that port could even now be profitably run. Much of the coffee trade of Colombia, which, from want of a nearer outlet to the sea, has hitherto passed through Maracaibo (Venezuela), will be commanded by Santa Marta.

The value of our trade with Colombia for the fiscal year ending 30th of June, 1890, was:

Imports, \$3,575,253, distributed as follows: New York, \$3,321,890; other Atlantic ports, \$153,524; total Atlantic ports, \$3,475,414. New Orleans, \$99,791; other Gulf ports, \$24; total Gulf ports, \$99,815. Pacific ports (San Francisco), total \$24.

Exports, \$2,522,351, distributed as follows: New York, \$2,211,568; other Atlantic ports, \$146,108; total Atlantic ports, \$2,357,676. New Orleans, \$59,747; other Gulf ports, \$5,039; total Gulf ports, \$64,786. Pacific ports (San Francisco), total, \$99,889.

The chief articles of import were; Coffee, \$1,849,441; hides and skins, \$630,099; India rubber, \$256,427; cabinet woods (cedar, mahogany, etc.), \$129,237; besides ores, dyestuffs, etc.

Our exports comprised: Machinery, \$136,117; hog products, \$111,335; coal, \$105,027; sewing machines, \$95,136; illuminating oils, \$70,694; cotton goods, \$144,149; malt liquors, \$22,147; railroad cars, \$22,278; butter, \$23,577; flour (51,420 barrels), \$248,086; drugs and chemicals, \$159,457; glassware, \$22,517; cordage, \$40,321; saws and tools, \$67,882; wire and manufactures of iron and steel, \$91,403; refined sugar, \$141,929; besides lumber, ready-made clothing, dairy products, paints, naval stores, and other articles.

The Atlas Line of steamers, from and to New York, furnishes the only regular means of communication between the United States and Colombia. The "Harrison" and "West India Mail" steamers touch Sabanilla, Cartagena, and Colon on their way from Liverpool to New Orleans, but return direct to Liverpool.

Venezuela.—The value of our trade with Venezuela for 1889-'90 is stated at: Imports, \$10,966,765, distributed as follows: New York, \$10,886,709; other Atlantic ports, \$80,056; total Atlantic ports, \$10,966,765.

Exports, \$3,984,280, viz: New York, \$3,929,659; other Atlantic ports, \$36,731; total Atlantic ports, \$3,966,390. Gulf ports (lumber from Mobile and Florida ports), \$17,890. Coffee represents \$9,662,207 and hides and skins \$812,347 of the imports.

The exports comprise: Flour (173,759 barrels), \$807,642; corn (240,498 bushels), \$129,132; hog products, \$526,908; cotton goods, \$410,045; illuminating oil, \$109,261; sewing machines, machinery, and nails, \$168,440; butter and cheese, \$96,881; besides lumber, naval stores, paints, agricultural implements, railway, telegraph, and electric implements, stationery, coals, and other articles.

The whole American trade of Venezuela is in the hands of New York, and in view of the fact that our eastern States consume chiefly Maracaybo (Venezuela) coffee, while the west derives its main supply from Brazil, very little of that valuable commerce can be expected to go to Chicago. The latter city, however, might, with proper effort, take a large share of the exports to Venezuela.

The "Red D" Line of steamers connects New York with Laguayra and other Venezuela ports; it is practically managed as a trading company, controlling its own transportation, and the result it has achieved is suggestive.

From the point of view of direct trade relations between Chicago and Spanish America via New Orleans, the above statement points to the following conclusions, viz:

(1) That a large, profitable, and immediately available trade can be established with Cuba and Mexico.

(2) That business with Central America may under certain conditions be increased.

(3) That an important traffic with Ecuador, Peru, and eventually Chile, can be developed.

(4) That the possibilities of trade with Colombia are serious, and

(5) That the field in Venezuela, though now occupied exclusively by New York, may be disputed.

Two steamers of suitable size, running from New Orleans to Havana, Progreso, Vera Cruz, and Tampico, would secure a semimonthly service between Chicago (via the Illinois Central Railroad), and ports in Cuba and Mexico.

One steamer between New Orleans and Colon, touching at Greytown (Nicaragua), and Port Limon (Costa Rica), scheduled to connect with either of the lines plying between Panama and ports in Ecuador, Peru, and Chile, and connected by an annex with the Caribbean ports of Colombia, would give a monthly service for business with the east and west coasts of Central America, the west coast of South America and the north coast of Colombia.

One steamer from New Orleans to Laguayra, touching at Jamaica, with an annex taking Puerto Cabello, Maracaybo, and Curaçao, would establish a monthly service for the traffic with Venezuela.

First-class fast (15 knots) steamers, fitted up with a view to the comforts of travelers, would, on all the lines, do a large passenger business, particularly if arrangements could be made to issue through tickets to and from New York via Chicago. Nothing, however, can be done toward the establishment of the indicated lines unless the quarantine regulations now enforced at New Orleans are modified. There is reason to believe that the board of health of Louisiana are disposed to meet this question in a fair and liberal spirit, and that sanitary rules may be mutually devised and agreed upon which will do away with all unnecessary detention of the steamers.

Direct communication with the Mississippi Valley means, to the Spanish-American countries reviewed in this report, reaching, by the shorter line, the area of cheapest production of their chief articles of import, and opening a market of boundless capacity for their own products; besides creating competition with the transportation lines that now monopolize their trade with the United States, and giving them more favorable rates of freight, improved service, and, consequently, increased business. The encouragement with which the idea of the New Orleans and Chicago line was received is, therefore, easily understood. This feeling will greatly aid and facilitate the efforts of our own people towards the establishment of new commercial relations. To secure the full benefit of such relations, however, it will be essential for our manufacturers and merchants to heed certain points, neglect of which, on their part, is the subject of frequent complaint from Spanish-American buyers, viz:

(1) Spanish-American markets require special sizes, patterns, and styles of goods; the *exact* articles demanded must be furnished, as no substitute, however closely alike or superior to the one ordered, will be accepted by the consumer.

(2) Packing of goods requires the most careful attention. It should be borne in mind that at most Spanish-American ports steamers transfer and receive their cargoes in lighters while at anchor in heavy surf; that the ports are mere points of transit for merchandise destined for interior points; that customs duties are, in most instances, levied on gross weight of packages, no deduction being allowed for breakage or other damage. Goods should, therefore, be put up with reference to protection against damage by water, to adaptability to transportation by mules or light wagons, and to the lightest packing consistent with absolute safety of contents.

The general practice in Spanish America is to sell domestic products for cash and to buy foreign goods on a credit of six months; which credit, it is understood,

may be extended to nine or even twelve months, interest at 8 per cent per annum being paid on the extension.

The whole trade of Europe is conducted on this basis, and it may be remarked in praise of Spanish-American commercial integrity, that losses from credits are of extremely rare occurrence.

In Cuba and Mexico business is gradually tending to a cash basis. In the former country considerable capital is accumulated at Havana, and the disposition of merchants being to keep within their means long credits are seldom, if ever, asked for. In the latter, with the construction of railroads and the establishment at all important interior localities of branches by the banks of the capital, a new direction is given to the movement of commerce, and old methods are being, if not abandoned, at least greatly modified.

In conclusion, it is proper to express your representatives' thankful acknowledgment of the valuable aid everywhere extended to them by the diplomatic and consular officers of this Government, and to state that American interests in Spanish America are in faithful and able hands.

Respectfully submitting the above remarks, and remaining at your command if further information and particulars are desired, we are, dear sir,

Yours very truly,

A. SCHREIBER.
G. C. POWER.

STUYVESANT FISH, Esq.,

President Illinois Central Railroad Company, Chicago, Ill.

TRANSPORTATION.

The firm of Lampert & Holt, now operating lines of steamers between Liverpool and Antwerp and the various ports on the east coast of South America, has decided to extend their service to the west coast and establish a regular line between Panama, Guayaquil, Callao, Valparaiso, and the other cities of Colombia, Ecuador, Peru, and Chile and the ports of Europe. The service will be monthly for the present, and will be conducted by thirteen steamers of about 3,500 tons burden. This will make four lines of steamships between Liverpool and the west coast of Central and South America.

INTERCONTINENTAL RAILWAY.

The following is an abstract of the report of Mr. L. J. Blanco, member of the Intercontinental Railway Commission for Venezuela, concerning that work :

United States and Mexico.—The railways in these two countries being in perfect communication, the commission has only been occupied with their continuation and the choice of the most suitable point of departure; it has decided for Ayutla, on the Guatemala frontier.

Guatemala.—From Ayutla the intercontinental line will descend by the Pacific coast, passing in the neighborhood of Retahuleu and Mazatonango, as far as Santa Lucia. Thence will be used the branch, in course of construction, of the central railway from Guatemala to Escuintla, and will pass from Cujinijilapa to Santa Ana, in the Republic of Salvador.

Salvador.—In this Republic the route of the proposed central line will be utilized, passing by Santa Ana, Nuevo San Salvador, San Salvador, Cujutopeque, San Vincent, and San Miguel, entering Honduras by Guascoran.

Honduras.—From Guascoran the line will continue by the shore of Gulf

Fonseca, crossing the State of Choluteca via the town of that name, going thence to the south toward Nicaragua.

Nicaragua.—In this Republic the line will arrive at the town of Chinandega, where it will rejoin the railway from Corinto to Lake Managua, utilizing this line up to a suitable point, for example, Pueblo Viejo, skirting the lake and coming to the town of Managua, where it will take the line already constructed from Managua to Masaya. From Masaya the line will pass to Rivas, will cross the proposed Nicaragua Canal, and will enter into the Republic of Costa Rica.

Costa Rica.—Following the shores of the Lake of Nicaragua and penetrating the country by the plains of Guatuso and San Carlos, the line will continue as far as the town of Alajuela, where there is a branch to the capital. From Alajuela a continuation will be made by the railway from San Jose to Puerto Limon; thence, by points which are not yet determined, the length of the Isthmus of Panama as far as the entry of the Atrato Valley in Colombia will be traversed.

Colombia.—Colombia being reached, the Intercontinental will traverse the western cordillera of the Andes, entering into the Cauca Valley and reaching the environs of the town of Antioquia; it will ascend by this valley, connecting the principal localities met with, and arriving at Popayan. The central cordillera will be crossed, in order to survey the branch intended to connect Bogota with the main line. From Popayan the line will pass into the Patia Valley, making toward Pasto or Ipialos, with continuation toward Ecuador.

The passage of the cordillera on the route from Popayan to Pasto will be one of the greatest difficulties met with in Colombia; it is at this point that the great ramifications of the Colombian Andes commence.

Venezuela.—In order to place this Republic in communication with the trunk line, a branch will start from a point (still undetermined) of the route in the Cauca Valley, going to Medellin, where it will rejoin the line running from that town to Puerto Berrio, on the Magdalena; thence it will go to Bucaramanga, and thence to San Jose de Cucuta (frontier) and San Cristobal, La Grita, Merida, Trugillo, Barquisimeto, and terminating at Valencia. From Valencia to Caracas, via La Victoria, a railway is in course of construction and will be completed in a few years.

Other lines having been conceded, are being surveyed in the regions just indicated. The route of the Intercontinental will undoubtedly adapt itself to circumstances at the time of the execution of the project, whenever that may be.

Ecuador.—The line will touch at the town of Tulcan; then, descending by the central valley of Quito, will serve the towns of Ibarra, Quito, Latacunga, Ambato, Cuenca, and Loja, there entering Peru.

Peru.—The line will traverse the department of Cajamarca, or the Amazonas,

till it meets the river Maranon, and will ascend by that valley as far as Cerro de Pasco. From the latter point it will follow the course of the Pereno up to a suitable point for a deviation to Santa Ana; then to Cuzco, Santa Ana; then to Cuzco, Santa Rosa, and Puno, skirting Lake Titicaca, in order to penetrate Bolivia.

Bolivia.—The Intercontinental will connect the towns of La Paz, Oruro, and Huanchaca, where it will divide into several branches, going to Chile, the Argentine Republic, Brazil, Paraguay, and Uruguay.

Chile.—The Chilean branch goes from Huanchaca to Antofagasta, a port on the Pacific.

Argentine Republic.—This branch, which has already been surveyed, goes from Huanchaca to Jujuy, the extreme point of the railway system of this Republic.

Paraguay and Uruguay.—The line which is to connect these two countries to the proposed system will start from Huanchaca; will follow the left bank of the Pilcomayo in order to rejoin the Osbourn concession, which, from Asuncion, goes to the north of Paraguay. From Asuncion use will be made of the lines already constructed or in course of construction as far as Montevideo.

Brazil.—The Brazilian branch starts from Huanchaca, going eastward, clearing the Paraguay River at Curumba, where, penetrating on Brazilian territory, it follows the river Taguary as far as Coxim, a railway the concession for which, if granted, will go from this point to Uberaba. From this latter locality the existing lines continue to Rio de Janeiro.

The scientific commissions are authorized to search out and survey the best directions and routes. The above plan must only be considered as a general idea, which, according to the plans drawn up at the Washington Central Bureau, would appear to serve most effectually the interests of the American Republics.

AN ENGLISH VIEW OF THE BUREAU.

The Engineering, the leading technical publication in London, contains the following editorial concerning the work of the Bureau of American Republics:

Probably one of the most interesting and at the same time important commercial reports ever issued concerning the American Republics is that which reached this country on Monday from the Bureau of American Republics. The Bureau was established in 1890, and its object was and is the preparation and publication of bulletins regarding the commerce and resources of the American Republics and other information of interest to manufacturers, merchants, and shippers. It was also provided that the Bureau should at all times be available

as a medium of communication for persons applying for reasonable information pertaining to their customs' tariffs and regulations and to their commerce and navigation. The cost of maintaining the Bureau was not to exceed £7,200 per annum, and this expense is shared by the several Republics in proportion to their population. The duration of the Bureau, which is under the supervision of the Secretary of State, United States, is for a period of ten years, and if found profitable to the nations participating it is to be maintained for successive periods of ten years indefinitely. The countries comprised in the association are the Argentine Republic, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Paraguay, Peru, Salvador, the United States, Uruguay, and Venezuela. It appears from the report that the Bureau has been signally successful in accomplishing its objects. On its inception a circular in the Spanish and English languages was issued by the Department of State announcing the organization of the Bureau, and setting forth in detail the purposes for which it was intended. No less than 38,000 applications for copies of the bulletins of the Bureau were soon received from the United States alone, whilst a corresponding number was received from the other Republics. In addition to this, 700 inquiries for specific information concerning commercial matters were received and answered during the first four months, and such inquiries have continued incessantly. Briefly, the latter applications were made by, among many others, makers of agricultural and mining machinery and implements, manufacturers of railway material, hardware, and chemicals; whilst others sought information as to the demand for their productions, the rates for duties, etc., so as to assist them in determining whether their articles were adapted for use in those markets, as well as to modify them in such a way as to suit the peculiar conditions of the trade. The information imparted by the Bureau has already been the means of extending the commercial and social intercourse between the United States and the Latin-American nations. This fact is demonstrated not only by the rapid growth of the exports, but also by the long passenger lists of the steamers plying between the United States and the ports of Central and South America, and by the enormous increase in the weight of the mails. In fact, manufacturers of the United States, who have never attempted to sell merchandise on the Southern Continent, are now sending agents into those markets to introduce their goods, to make the acquaintance of importing merchants, and to establish agencies and systems of credit. Moreover, three new lines of steamships have been established between the United States and the ports of the Southern Republics, and the existing companies have been compelled to increase the number and size of the vessels engaged in the trade. We now come to a matter of considerable importance to manufacturers at home, and one which is worth quoting in full, as follows:

“The merchants of Mexico and the cities of Central and South America, who have heretofore purchased their goods in Europe exclusively, are now coming to the United States, and invariably discover that they can find here nearly every article they need, of a better quality, and at a price as low as can be obtained in Great Britain, Germany, and France; and the recently negotiated reciprocity arrangements afford them advantages that are beginning to be understood and appreciated. Not long ago the agent of one of the largest establishments in Brazil, which is operating upon European capital, and has heretofore obtained its supplies entirely in Great Britain, visited the United States on his way to purchase goods in Europe. He found that he could do better here, both in quality and in price, and went no further. His purchases, which amounted to several hundred thousand dollars' worth of manufactured merchandise, are now being shipped from New York.” This is, then, one instance of the cementation of the trade of the American Republics. After giving figures showing the enormous increase in the letter mails, the report deals with the handbooks which have been issued by the Bureau, and also with the bulletins, of which twenty-eight have been published up to the present. The handbooks, with maps, and bulletins contain detailed information regarding the condition and commerce of each of the American Republics and colonies, official registers, list of diplomatic and consular officers, commercial statistics, customs' tariffs, the coinage, weights, and measures, patents and trade-marks, port charges, transportation, and postal facilities, etc. Some of the bulletins comprise commercial directories of different Republics, and the customs' tariffs are published in English and Spanish, and those of Brazil in English and Portuguese. The object of these commercial directories, which certainly form a very important feature of the Bureau, is to enable manufacturers and merchants to forward catalogues and circulars and to open correspondence with traders on the Southern Continents. Though these directories are necessarily incomplete, there has been an enormous demand for them on the part of those endeavoring to open up new markets. The Bureau of American Republics has during the first year succeeded in its objects, and its first report will doubtless afford ample food for reflection on this side of the Atlantic.

World's Fair.

COMMERCIAL EXHIBIT OF LATIN AMERICA AT WORLD'S COLUMBIAN EXPOSITION.

[Circular addressed by Department of State to consular officers in Latin-American countries.]

It is conceded that one of the greatest obstacles in the way of extending the export trade of the United States upon this hemisphere is the inability of our merchants and commission men to obtain in this country certain classes of goods that are manufactured in Europe especially for the markets of Central and South America. The manufacturers of Europe, by a close study of the wants and tastes of the people and by a long experience, have become familiar with the peculiarities of a trade that has never been cultivated by the manufacturers of the United States, who have been absorbed in the demands of a domestic market in which the conditions are essentially different.

In order to furnish those who desire to manufacture merchandise for the export trade with the information necessary to enable them to compete with their European rivals, it is proposed to include in the exhibit of the Department of State at the World's Columbian Exposition a practical illustration of the requirements of consumers in Mexico, Central and South America, and the West Indies. The aid of diplomatic and consular officers of the United States is desired to make this illustration complete and effective.

You are, therefore, instructed to prepare, at your earliest convenience, a detailed report setting forth in what respect the manufacturers of this country fail to comply with the demands of consumers in your consular district, and in what respect the manufacturers of Europe excel them in complying with the wants, tastes, and peculiarities of the people, in preparing and decorating their merchandise, and in packing it for transportation.

This report should include:

(1) Cotton and woolen piece goods, thread and worsted goods, spool and machine thread, twine, cordage, etc.

(2) Carriages, wagons, carts, hand and cargo trucks, spokes, fellies, and all knocked-down woodwork for carriage or wagon construction.

(3) Drugs, chemicals, dyestuffs, pharmaceutical products, and all articles used or sold by druggists.

(4) Food and food products imported into the country; canned goods of all kinds, including preserved and conserved fruits in tin or glass; pickles, table luxuries, condensed milk, plain and fancy crackers and biscuit, potted meats and game, dried meats and fish, ham and bacon; and lard and butter in barrels, kegs, and cans.

(5) Furniture and all articles of housekeeping use and decoration, carpets, rugs, mats, hangings, picture frames, and moldings.

(6) Hardware, cutlery, shelf hardware; cut, wrought and wire nails; axes, shovels, spades, hoes, picks, locks, bolts, hinges, iron and steel in bars and bolts, plate iron and steel, and corrugated iron.

(7) Hemp, flax, and the manufactures thereof, and jute bagging.

(8) Leather and rubber goods, boots and shoes, ponchos and mackintoshes, leather belting, saddles, and harness work.

(9) Liquors, both spirituous and malt, in barrels, bottles, and cases.

(10) Machinery of all kinds, agricultural implements, sewing machines, tools and appliances for the working of iron and steel, saws, files, chains; bolts, nuts, rivets; sugar machinery, and hoisting apparatus.

(11) Musical instruments, pianos, organs, brass and nickel wind instruments, drums, flutes, etc.

(12) Paints and painters' utensils and supplies, varnishes, and oils for illuminating and lubricating purposes.

(13) Plate and window glass, table glass, glass for druggists' use and supplies, lamp glass and shades, and lamps and fittings.

(14) Stationery; writing, bill, and note paper; printing paper and cardboard, paper bags, wall paper, and pasteboard.

(15) Watches, clocks, toys and notions, small wares, silver-plated and solid-silver ware, table ware, and jewelry.

(16) Wearing apparel of all kinds, including articles of personal adornment; ready-made clothing in wool and cotton; underwear for men and women; hats, caps, and gloves in cloth and felt; silk and straw hats; silk, cotton, and woolen hosiery, and machine-made embroidery and trimmings, and every other form of raw or manufactured merchandise for which there is a demand in your district.

Each class of article should be treated separately and in detail and in such manner that the manufacturer of the United States can understand what is necessary for him to do in order to meet the popular demand and produce exactly what is wanted; and the reasons for such a demand should be distinctly stated.

You will be good enough, also, to ascertain so far as possible, from reliable merchants, what prices are paid for each class of merchandise in the European market and the cost of transportation to the place of sale. If there are any peculiar conditions in the trade of your district that must be taken into consideration, they should be explained in full.

These reports will be printed in large editions for distribution to the public at the Exposition, and it is hoped that they may be prepared with special care. They should be marked "Special Report for World's Columbian Exposition."

CONCESSIONS GRANTED BY STEAMSHIP AND RAILWAY COMPANIES

IN FREIGHT AND PASSENGER RATES FOR THE BENEFIT OF THE LATIN-AMERICAN DEPARTMENT OF THE WORLD'S COLUMBIAN EXPOSITION

The following corporations engaged in the transportation of passengers and freight have agreed—

- (1) To carry free of cost the Commissioners of the Latin-American Department of the Exposition and their families.
- (2) To carry free of cost all collections furnished by foreign governments for exhibition, provided the expenses of handling are paid.
- (3) To carry for one-half the ordinary rates all articles sent by private parties for exhibition—that is, one full rate having been paid to the United States, the same articles will be carried back without further charge, to the port from which they were originally shipped.
- (4) To reduce passenger rates during the Exposition to cover simply the cost of boarding the passengers.

The Ward Line (New York and Cuba Mail Steamship Company); James E. Ward & Co., agents, No. 113 Wall street, New York.

The Pacific Mail Steamship Company; J. E. Houston, vice-president, No. 35 Wall street, New York.

The Red "D" Line; Boulton, Bliss & Dallett, No. 71 Wall street, New York.

United States and Brazil Mail Steamship Company; J. M. Lachlan, manager, corner Broad street and Exchange Place, New York.

Clyde Steamship Line, No. 5 Bowling Green, New York.

The Trinidad Line; George Christall, No. 45 Exchange Place, New York.

New York and Porto Rico Steamship Company; Miller, Bull & Co., general agents, No. 76 Beaver street, New York.

Linea de Vapores del Orinoco; E. Lee, director, Port of Spain, Trinidad.

Panama Railroad Company; John Newton, president, New York.

Colombian Navigation and Commercial Company; Charles H. Green, president, 82 Church street, New York, and Cartagena, Colombia.

The Guatemala and San José Railroad Company, San José, Guatemala.

Compañia Colombiana de Transportes (Magdalena River); D. Lopez Pentra, managing director, Barranquilla, Colombia.

The Barranquilla Railway and Pier Company; F. T. Cisneros, president, Bogotá, Colombia.

Compañia Sud Americana de Vapores (from Valparaiso to Panama). Agrees to Nos. 2 and 3 and leaves No. 4 for future consideration.

Honduras and Central American Steamship Company; James Rankine, No. 19 Whitehall street, New York. Declined No. 4 for want of room.

Costa Rica and Honduras Steamship Line; J. L. Phipps & Co., No. 140 Gravier street, New Orleans, La. As to No. 4, they will sell round trip tickets for \$60, or 40 per cent below the regular rates.

New Orleans, Belize, Royal Mail and Central American Steamship Company; Macheca Brothers, New Orleans, La. As to No. 2, accept so far as not to interfere with fruit cargoes.

Koninklijke West-Indische Mail-Dienst (Dutch line); Kunhardt & Co., agents, No. 32 Beaver street, New York. Decline

No. 1; agree to Nos. 2 and 3; and as to No. 4, will sell round trip tickets for one rate, plus 10 per cent.

Atlas Line (Atlas Steamship Company, limited); Pim, Forwood & Co., No. 24 State street, New York. "Will return from New York to their port of shipment, free of cost, any exhibits from the Exposition at Chicago that may not be sold, upon the production of the inward bill of lading showing that they arrived by the steamers of this line from one of the ports of call and had paid their inward freight."

Quebec Steamship Company (New York, Bermuda and West India Line), A. E. Outerbridge & Co., agents, No. 39 Broadway, New York. As to No. 4, will reduce rates as stated to passengers holding through tickets to Exposition.

Lake Titicaca Navigation Company.

Arequipa and Puno Railway Company.

Wessels Line; G. Wessels & Co., No. 218 Washington street, New York.

FREIGHT CONCESSIONS BY RAILROADS.

Very liberal concessions and reductions have also been made by the railroads of the United States from all ports of entry at the seaboard to Chicago upon all articles sent as freight and intended for exhibition at the World's Columbian Exposition, as will appear by the following statement of the official action taken by the Central Traffic Association of the railroads of the United States at a meeting held at Chicago, May 13, 1891:

All exhibits will be charged at full tariff rates when going to the Exposition.

Upon presentation of paid freight bills or original bills of lading and a certificate signed by the proper officer of the Exposition that the articles tendered for return shipment are unsold exhibits which paid full rates going, and a release given by the owner of such exhibits, limiting the liability of such carriers to at least one-half of the ordinary responsibility attached to the transportation of the same freight, they will, with the exception of horses and other valuable and fancy animals, be returned free over the same route by which they were

carried on the forward journey to the points within the Central Traffic Association territory at which they were originally received.

Horses and other valuable and fancy animals will be charged tariff rates in both directions.

The Rev. Mr. Wood and the Rev. Dr. Drees, who are at the head of the Methodist missions in South America, propose to prepare for the World's Columbian Exposition an exhibit showing the progress and results of the evangelical missionary work on that continent, and it is believed that the other denominations will unite with them.

Dr. Francisco Valiente, one of the leading photographers of Central America, is making a collection of one thousand views of Central America for exhibition, at the World's Fair in Chicago in 1893.

Prof. Halsey C. Ives, the director of the art department of the World's Columbian Exposition, who is now in Europe for the purpose of interesting the artists in the Exposition at Chicago, writes from Vienna saying :

I had a most enthusiastic lot of artists and collectors to deal with in Southern Russia. The enthusiasm was refreshing. The possibilities and probabilities for a grand collection grows with each week's time given to the work.

The firm of Fraser & Chalmers, Chicago, intend to establish in that city during the Exposition a reading room in some convenient locality for the use of visitors from the Latin-American countries and colonies. Their purpose is to make it a sort of headquarters and information bureau where people from Central and South America may find on file the principal newspapers and periodicals of their countries, with competent persons always ready to give them information on any subject they may desire, particularly with regard to commercial matters. This firm has also volunteered to give aid and information to any persons wishing to make an exhibit at the Exposition involving the use of mining machinery. In their letter to the Latin-American Bureau on this subject Messrs. Fraser & Chalmers say :

Our house confines its business almost exclusively to the manufacture of machinery for the successful treatment of gold, silver, copper, lead, zinc, and tin ores. In this line we are the largest house whose business is exclusively devoted to this branch of industry. We also are large manufacturers of power plants, high-grade Corliss engines, high-pressure, compound, or triple-expansion, and machinery required for cable railway stations.

In the line of mining machinery we make everything that is required for mining the ore under ground, carrying it to the mouth of the shaft or tunnel, hoisting from the shaft or tunnel, crushing the ore, and putting it in shape for the market, either as a high-grade concentrate, or in base bullion, or refined bars of gold, silver, and copper. Our business includes the refining and separation of silver from lead bullion, also the refining of gold, and converting of copper by the Bessemer process, and refining the product by the electrolytic process.

In connection with the World's Fair to be held in Chicago, opening May, 1893, we intend to display our machinery in operation, showing the process known as American methods for the reduction and separation of minerals. We also intend to display power machinery, such as high-grade Corliss engines, compressor plants for driving machinery or drills by air, hoisting engines, and elevated tramways for carrying ore or other material a long distance by suspended cables.

Our business extends largely into the Spanish-speaking countries, in Uruguay, Brazil, the Argentine, and into nearly every district of South America, Central America, and Mexico. In Chile, Peru, South Africa, India, China, and Japan we have a large trade, and have established branch offices in many parts of the world.

It will be our pleasure during the World's Fair period, also before and after that time, to do what we can to help entertain all foreigners who may come to visit our city and fair. If we can aid or assist you in the district to which you confine your operations, it will be a pleasure for us to do so.

At the present time it is our intention to open an office in the center of the city for the use of our friends abroad, and in this office keep the papers and periodicals published in the various countries our friends come from, so that they may find in Chicago a place where they can meet their friends and at the same time read the news as published in the papers at home.

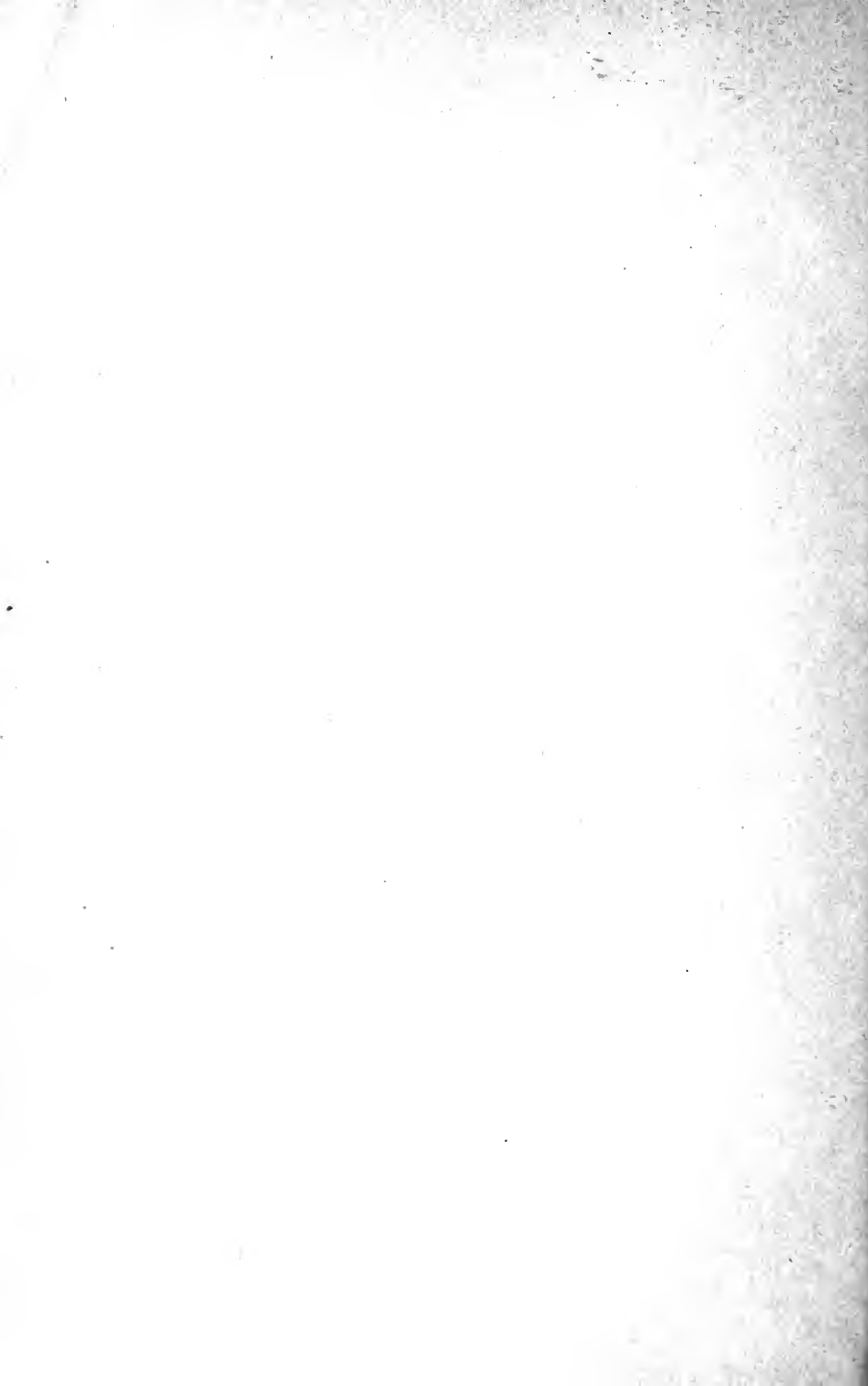
We also expect to keep in our office gentlemen who are familiar with our city, and who speak French, Portuguese, Spanish, German, and English, in order that our friends may have the benefit of their advice and service while they are visiting Chicago.

We talked this matter up with you at the time you were so kind as to call

upon us in Chicago, and have since concluded to address this letter in order that you may be reminded of what was said at the time of our conversation.

If we can aid the people in making their exhibit here an interesting one or assist them in any way, it will be a pleasure for us to receive their letters, to institute inquiries they may wish to make from the World's Fair officials, and reply to the fullest extent possible.

I am at the present time one of the local directors of the World's Fair, and therefore am acquainted with the different officials, and know the manner in which business is transacted, and therefore am in position to aid and assist the people of Central and South America who may wish to make an exhibit.



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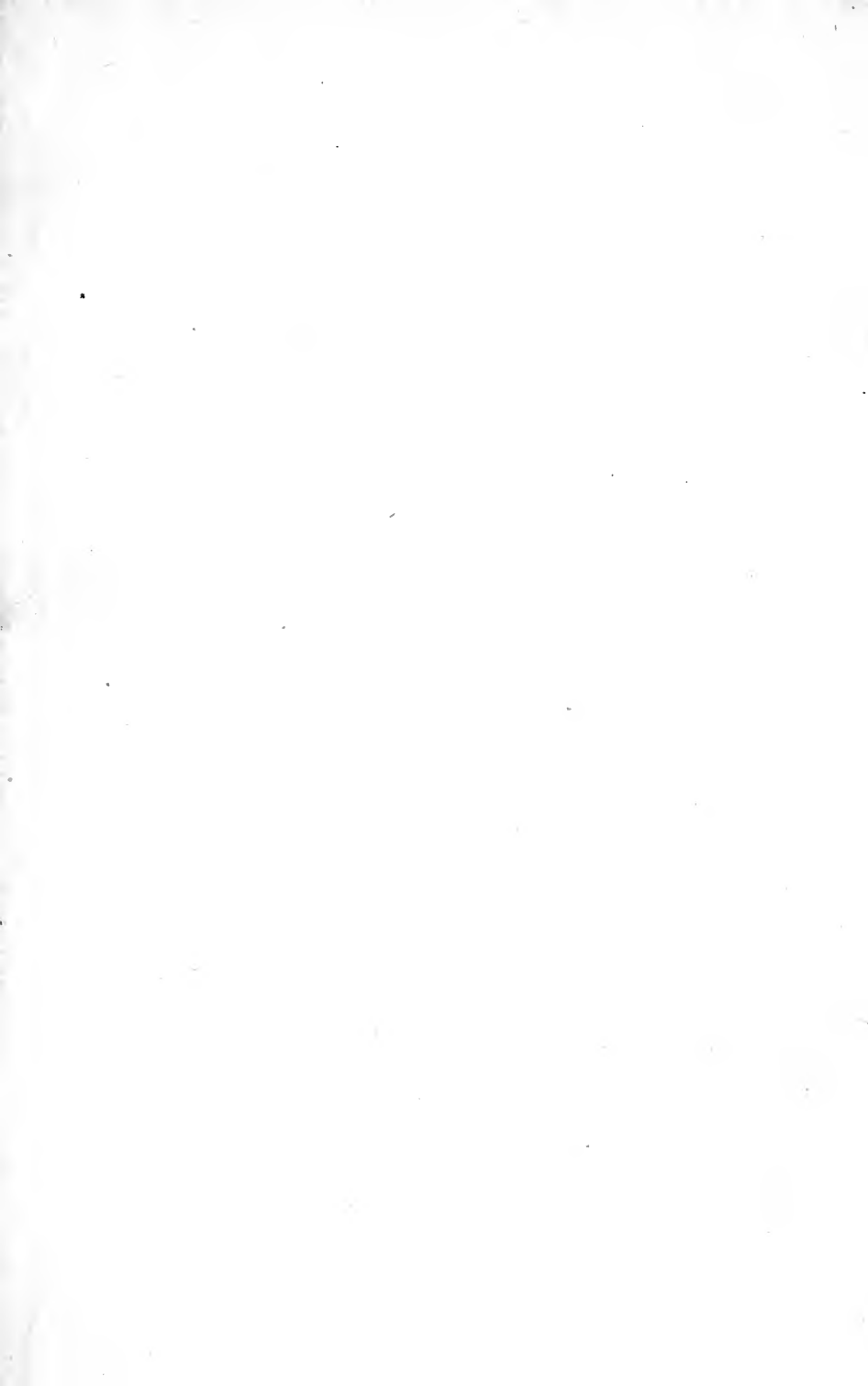
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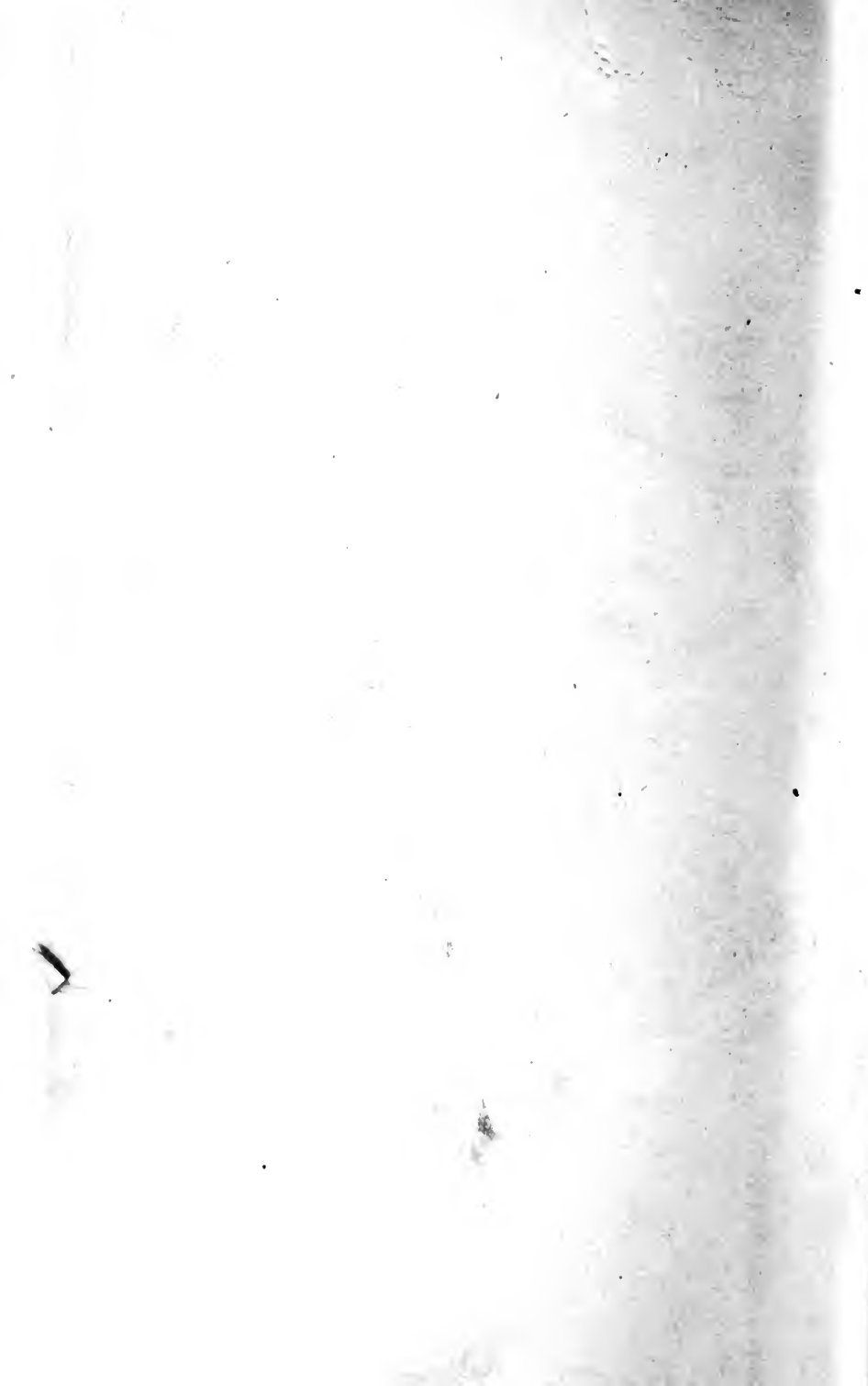
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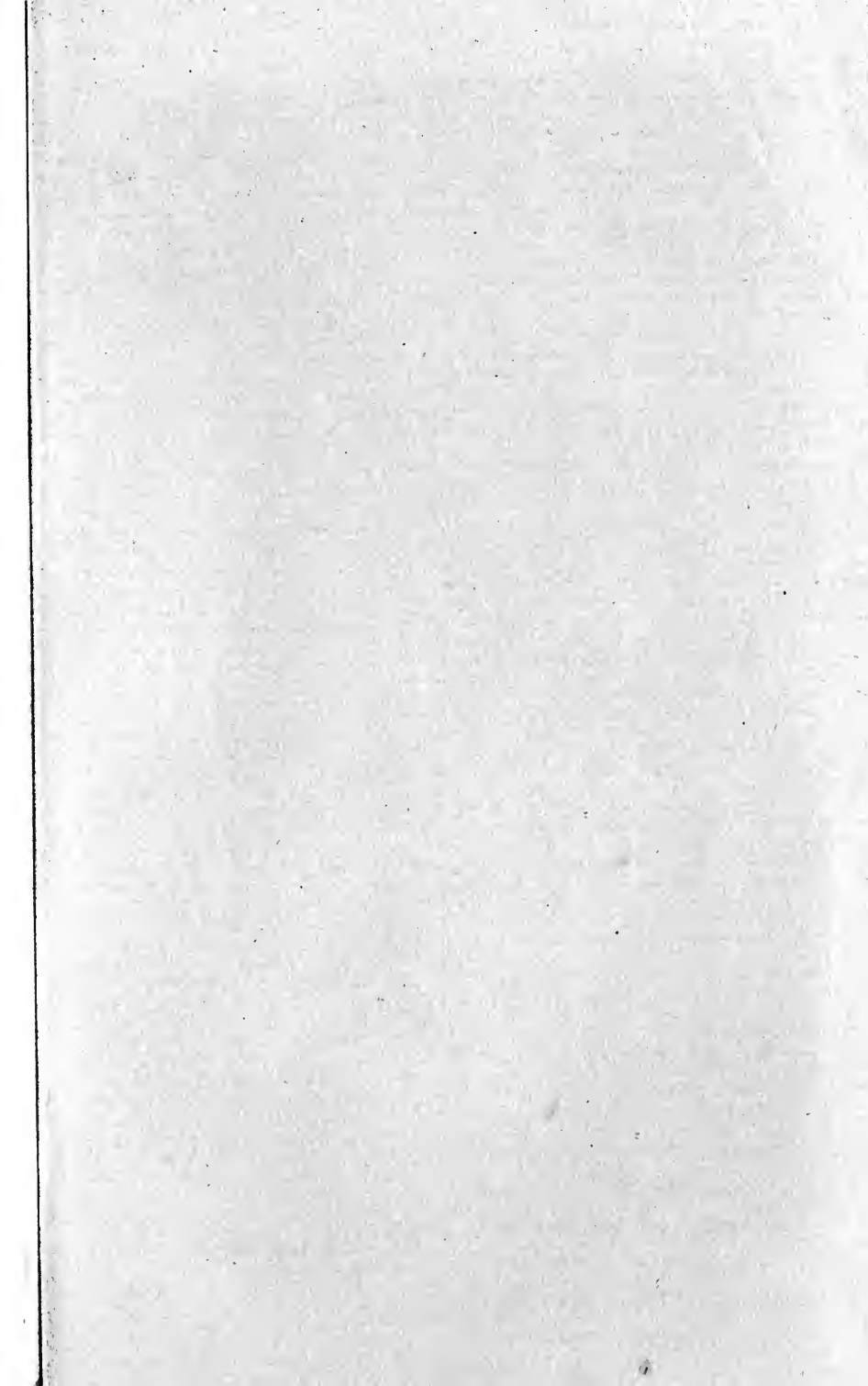
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