

INTERNATIONAL UNION OF AMERICAN REPUBLICS

BULLETIN
OF THE INTERNATIONAL BUREAU OF THE
AMERICAN
REPUBLICS

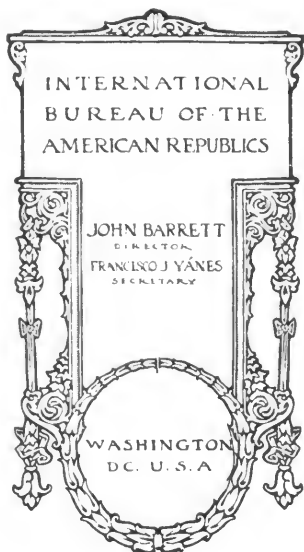
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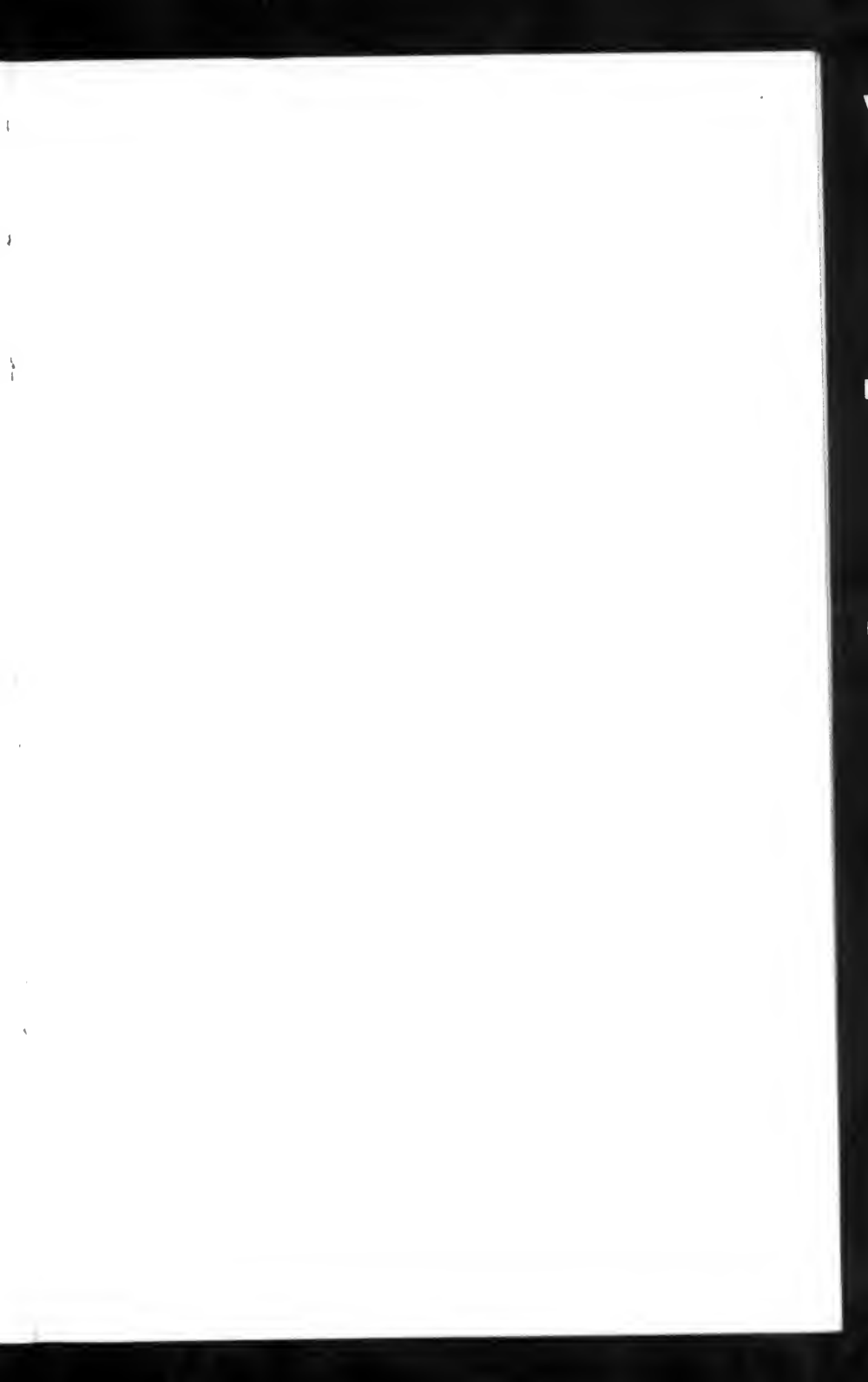
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Dominican Republic.....FENTON R. MCCREERY, Santo Domingo.

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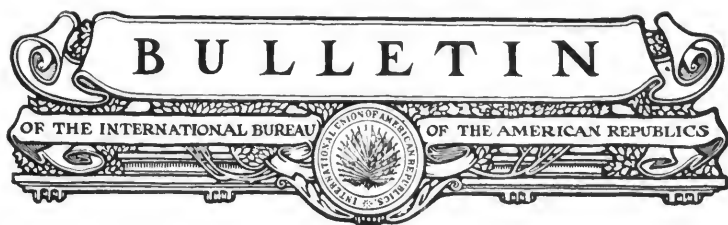
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DR. JOSE FIGUEROA ALCORTA, PRESIDENT OF THE ARGENTINE REPUBLIC.



BULLETIN

OF THE INTERNATIONAL BUREAU OF THE AMERICAN REPUBLICS

Vol. XXVII.

OCTOBER, 1908.

No. 4.

WHILE the editorial staff of the MONTHLY BULLETIN does not wish to appear as praising its own work, it is only fair, as a matter of record, to refer to the great numbers of letters which the Director is constantly receiving from all parts of the world commending its improvement not only in general appearance and quality but in all those details which go to make up a successful and popular publication. The editors of several of the leading magazines of the United States, which have an enormous circulation, have gone out of their way to remark upon the excellence of the BULLETIN, especially as it is official in its nature and is limited by rules and regulations which do not apply to unofficial publications. When copies of the BULLETIN for September and October, 1908, are compared with corresponding months for 1907, and again with those for 1906, the remarkable progress and improvement made are at once understood and appreciated. In view of the overwhelming demand for the BULLETIN in its present form, it is almost to be regretted that it can not take advertisements and thus be able to increase its revenue and print more copies. Under the present rules it is entirely dependent, in the matter of the expense of preparation, on a small appropriation and a limited list of subscribers which must be kept within a certain number of copies. In another year new rules and regulations may be adopted which will give more elasticity in the income and circulation of the BULLETIN, with corresponding benefits to the development of commerce and trade among the American Republics and to that increasing constituency of the Bureau which wishes to be supplied with accurate information regarding the American Republics. In recording these observations, however, the Director wishes to state that he is fully conscious of many shortcomings in the BULLETIN, and he asks not only the forbearance but the assistance of all men interested in the promotion of pan-American comity in making it an ideal official international publication.

While the utmost care is taken to insure accuracy in the publications of the International Bureau of the American Republics, no responsibility is assumed on account of errors or inaccuracies which may occur therein.

SATISFACTORY PROGRESS OF THE NEW BUILDING.

In answer to the constant inquiries about the new building of the International Bureau, it can be said that excellent progress is now being made in its construction. The brickwork of the basement is already laid, the first tiers of marble are in position, and much of the steel floor and upright work is in place. It is now possible to gain an idea of the size of the structure and the commanding appearance it will have when finished. No building in the history of Washington has been constructed more solidly, and, when completed, it should be able to stand the wear and tear of ages. The contractors promise to have a skeleton roof on before the season of snow comes, so that work on the interior can be pushed forward and the building be practically completed by the middle of next summer. Photographs of the work published in the BULLETIN from time to time give evidence of the progress being made in construction.

THE WEST COAST OF SOUTH AMERICA.

In the report of Special Agent CHARLES M. PEPPER made to the Department of Commerce and Labor of the United States, stress is laid upon the prospect of improving the steamship facilities from Panama to the south both as a benefit to trade and to mail transport. The Peruvian Government has at present two 18-knot steamers building in British shipyards, the first to be put in commission in the spring of 1909, and when the new line is in full operation the time from Panama to Callao will be reduced to five days instead of twelve, as at present. With a twelve-day service between Panama and Valparaiso under Chilean subsidy, conditions will be further improved, so that while, as Mr. PEPPER states, conditions on the west coast do not favor the establishment of industries on a large scale, ample opportunities will be furnished for the extension of trade relations between the United States and the countries of the Pacific. The total foreign commerce of Ecuador, Peru, Chile, and Bolivia is estimated between \$250,000,000 and \$260,000,000, of which the United States has about \$50,000,000, the balance being slightly against the latter country. There is a tendency to increase the proportions, and with adequate transport facilities much might be done. Harbor improvements necessitated by increased trade for the west-coast countries are estimated at about \$60,000,000, those of Valparaiso involving an outlay of \$20,000,000. Other improvements in railway transport would be brought about, and in the report of Mr. PEPPER each country's resources in this respect are set forth in detail. It is noted that most of the construction now in progress is due to United States capital, that country also supplying the bulk of railway material and mining machinery. Heavy investments have also been made by United States capitalists in the development of mining properties.

DEATH OF EX-DIRECTOR FREDERIC EMORY.

It is with sincere regret that the MONTHLY BULLETIN has to record the death of the fourth Director of the International Bureau of the American Republics, Mr. F. EMORY, who passed away on September 20, 1908. Mr. EMORY was a distinguished scholar, a journalist of great ability and judgment, a novelist of renown, and a lifelong friend and defender of the policy of obliterating all prejudices between the three Americas, in a commercial and social sense. For twelve years Mr. EMORY devoted himself to the service of the United States Government, leaving behind him an excellent record as Chief of the Bureau of Trade Relations under the Department of State, as Secretary of the International Bureau of the American Republics in 1893, from which place he returned to the Department of State as Chief of the Bureau of Statistics, where he edited the "Consular Reports" and a number of statistical publications. After the death of Mr. JOSEPH P. SMITH, third Director of the International Bureau of the American Republics, Mr. EMORY was appointed to fill the position in a temporary capacity in February, 1898. The work done by Mr. EMORY in the reorganization of the Bureau was of such a character that the Executive Committee of this institution as a reward for his services appointed him Director, giving him a vote of confidence. In May, 1899, however, Mr. EMORY, whose duties at the International Bureau and at the Bureau of Statistics were such that made it practically impossible for him to discharge both to his satisfaction, was superseded by Mr. W. W. ROCKHILL, now American Minister to China. As a token of respect to the memory of Mr. EMORY, the Bureau's flag was ordered at half-mast on the day of the funeral.

EXCELLENT WORK OF UNITED STATES CONSULAR OFFICERS IN LATIN AMERICA.

The BULLETIN wishes to commend the quality and character of the majority of the reports of United States Consuls which are now being published by the Bureau of Manufactures of the United States Department of Commerce and Labor. They show that the average American Consul is efficient and is doing his best to provide the merchants, exporters, and manufacturers of the United States with the class of practical information which they need. Now and then there is a report which may be of little value, but there is no reason why this should blind people to an appreciation of the others which are excellent. Most of the criticism that is now directed against the United States Consular Reports comes from men who do not read these carefully or do not comprehend the labor that a Consul devotes to their preparation. The fact that the BULLETIN does not give much space to them is not due to its lack of appreciation of their data, but to the fact that they are nearly all made public through the Daily Consular and Trade Reports, and to give them again in the



THE LATE FREDERIC EMORY,
Fourth Director of the International Bureau of American Republics.

BULLETIN would be merely duplication. Beginning, however, with the next issue of the BULLETIN, there will be published a list of all the Consular Reports on Latin America in the previous month, together with the names of the Consuls preparing them, and the subjects discussed. This will provide a useful record of material that has been made public and form a ready reference list which can be consulted by the constituency of the BULLETIN wishing to know what reports are obtainable from the Bureau of Manufactures.

THE PAN-AMERICAN SCIENTIFIC CONGRESS.

From the number of papers that are being prepared for the Pan-American Scientific Congress, which meets in Santiago, Chile, next December, it would appear that this gathering will be most successful in every respect. At least a score of papers have been sent to the International Bureau for translation, from different American scientists, in addition to those which will be submitted by the regular United States delegates. Dr. L. S. ROWE, the chairman of the delegation, is now in the Argentine Republic, where he will remain until he proceeds to Chile, shortly before the opening of the Congress. Dr. WILLIAM R. SHEPHERD, of Columbia University, New York, is now in Spain making some investigations before continuing his journey to Chile. Several of the other delegates are on their way, while others are preparing to start in November. An interesting discussion of the effects of the Pan-American Scientific Congress to be held in Santiago during December, has been reproduced in this issue from the "*Revista de Derecho, Historia y Letras*," of Buenos Aires. A consideration of the fundamental differences of American and European mentality and of the methods of greatest value in the development of the former is stated as the central idea of the coming Congress. Seventeen Republics are to be represented at the sessions, and all the principal universities of America have notified the committee in charge that they will send delegates. Extensive preparations are being made for their reception and the steamship lines running to Santiago will reduce their rates by one-third for the occasion.

THE INTERNATIONAL HORSE SHOW IN BUENOS AIRES.

In the month of November there will be held in Buenos Aires, Argentine Republic, a great international horse show, to which foreign countries have been invited to send military representatives to take part in the various cavalry competitions, which will be a feature of the programme. There has been some correspondence on this subject between the Argentine Legation in Washington and the State and War Departments, it being desired that some of the best cavalry officers of the United States Army might be able to go, accompanied by their trained horses.

UNITED STATES MINISTER TO HONDURAS.

The Minister from the United States to Honduras, the Hon. WILLIAM BROOKS SORSBY, is a native of the State of Mississippi, and was born in 1858. By profession he is a newspaper editor and was connected with several papers in his native State prior to his appointment as Consul-General at Guayaquil, June 26, 1889. In 1893 he retired from the consular service to engage in gold mining in Ecuador. Four years later, in 1897, he reentered the service as Consul at San Juan del Norte, Nicaragua, from which place he was transferred to Kingston, Jamaica, November 22, 1901. He was appointed by President ROOSEVELT Envoy Extraordinary and Minister Plenipotentiary to Bolivia, July 11, 1902, and after a service of six years at La Paz was, on June 5, 1908, transferred to Honduras, with residence at Tegucigalpa.

THE CONSUL-GENERAL OF PERU IN NEW YORK CITY.

A recent issue of "System" contained an interesting article about the Consul-General of Peru in New York, Mr. EDUARDO HIGGINSON, which is a credit to the country and to the man representing it. The caption in "System" under the portrait of Mr. HIGGINSON says:

EDUARDO HIGGINSON, Consul-General of Peru, whose New York office is a model information bureau for business men interested in the export and import trade. Mr. HIGGINSON has been in the Peruvian Consular Service for sixteen years. His success in attracting capital to Peru and in opening markets to his country's products has placed him in the position of "advance agent" for the Peruvian business man. There are similar offices in London and Berlin.

We congratulate the Consul-General on this opinion of his office, given by a magazine, which is a good judge in that respect.

ECONOMIC STATUS OF THE ARGENTINE REPUBLIC IN 1908.

Data covering Argentine conditions for the first six months of 1908 demonstrate a remarkable era of prosperity prevailing throughout the Republic. Trade values for the period are given as \$454,349,628, an excess of imports over the corresponding period of the preceding year being noted in the amount of \$1,000,000, while exports show an advance in value of over \$38,000,000. Harvest reports show a million-ton increase in the wheat yield for the year and in linseed a gain of nearly 300,000 tons, while the maize crop is expected to offset the comparative failure recorded in 1907. Industrial advancement is indicated by the fact that an increased number of mills and factories are operating throughout the country, while among the extensive improvements in process in the port of Rosario is included the construction of the largest and best-equipped grain elevator in South America. Railroad connections are being extended, and many works of public utility have been provided for by the Government in honor of the approaching centenary of the country's independence.



HON. WILLIAM B. SORSBY,

Envoy Extraordinary and Minister Plenipotentiary from the United States to Honduras.

FINANCIAL AND INDUSTRIAL CONDITIONS IN BOLIVIA.

The report recently presented to the Bolivian Government by the Minister of Finance and Industry, extracts from which are reproduced in this number of the BULLETIN, sets forth the commercial values of the most important national products. It is shown that while the tin output in the last statistics (for 1907) showed a decrease as compared with that of the preceding year, silver values advanced as did that of several vegetable products of the country. An analysis of Bolivian petroleum recently made in the United States has given satisfactory results. The President's message to the National Congress delivered on August 6 was an exposition of the country's political status.

BRAZIL'S COFFEE LOAN AND NATIONAL INDUSTRIES.

The successful floating of Brazil's coffee loan for \$60,000,000 is a matter of paramount interest in the coffee world. The distribution of the loan is general, though London and Paris take the bulk, or \$50,000,000. Interest is being shown to an increased extent in the development of mining properties, and a recent code promulgated in the State of Bahia is intended to stimulate the exploitation of a valuable national resource. In addition to the immense advance shown in the textile industries along established lines, such as the weaving of cottons and silks, it is proposed to place the valuable perini fiber, or linen plant, on a commercial footing, while the culture of silkworms and the growing of mulberry trees has passed beyond the experimental stage. It was with the purpose of demonstrating not only the extent of the national resources but also the practical local application of them that the Brazilian Exposition now in progress was inaugurated.

UNITED STATES MINISTER TO GUATEMALA.

HON. WILLIAM HEIMKÉ, the United States Minister to Guatemala, is a native of France, born in 1847, and naturalized in the United States. He came to America at a very early age, and when only fifteen, in 1862, enlisted in the Seventeenth Infantry of the Regular Army. He served with distinction during the Civil War and was engaged in several of the most important battles. After the war he was headquarters clerk to Generals SHERMAN, POPE, HANCOCK, and SHERIDAN, and was also in the Quartermaster's and Commissary Departments under Generals VAX VLIET, SANTON, and MORGAN. In 1881 he became purchasing agent for the Mexican Central Railroad, and two years afterwards, in 1883, was appointed general manager of the Chihuahua and Durango Telephone Company in Mexico. After four years with the telephone company he again entered the service of the United States as Vice-Consul at Chihuahua, appointed February 2, 1887. He was advanced to Consul August 18,



HON. WILLIAM HEIMKE,

Envoy Extraordinary and Minister Plenipotentiary from the United States to Guatemala.

Photograph, Harris Ewing.

1892, and retired in September, 1893. After nearly four years of private life he was in May, 1897, appointed Second Secretary of the Legation at Mexico, and was promoted to First Secretary and assigned to the Legation at Bogota, July 18, 1906. He was appointed Envoy Extraordinary and Minister Plenipotentiary to Guatemala March 10, 1908. Mr. HEIMKÉ is a member of the American Academy of Economic, Social, and Political Science of Philadelphia and of the International Folk Lore Society of Chicago.

THE COLOMBIAN MINISTER AT WASHINGTON.

In the report made by the Minister of Foreign Relations of Colombia to the National Congress in July, special mention is made of the valuable services rendered his Government by the present Colombian Minister in the United States, Señor Don ENRIQUE CORTES. Not only has he been instrumental in maintaining the cordial relations between the two Governments, but he has been instructed to include in the new treaty to be negotiated the most favorable conditions possible for Colombia in regard to traffic through the Panama Canal. The translation of the United States Public Health Report on the bubonic plague, furnished the International Bureau by Señor CORTES, has been widely reproduced in the papers of Latin America with appreciative comment on the value and excellence of the work.

COSTA RICA'S COMMERCE IN 1907.

Costa Rican commerce in 1907 indicates the steady growth of this Central American Republic, imports for the year showing an increase of 1.04 per cent and exports of 3.30 per cent as compared with 1906. The preponderant value of bananas as an article of export is recorded in the fact that out of a total valuation of \$9,350,000 this item figures for \$4,864,000 on the exportation lists. Practically all of this fruit is received at United States ports, but an extensive propaganda is being made with satisfactory results to introduce it generally in European markets. It is noteworthy that the neighboring Republics advanced their percentage on the import list of Costa Rica from 1.62 per cent to 9.02 per cent, the increase being covered principally by cattle. Important regulations in regard to the shipment of cattle and the receipts thereof have been decreed effective from September 15.

RAILROAD PROGRESS IN ECUADOR.

The message of the President of Ecuador, delivered to the National Congress on August 12, 1908, outlines the conditions prevailing throughout the country during 1907 and the first part of the present year. He

states that while the budget of expenditures and receipts for the year show a slight deficit, it must be borne in mind that the additional outlay was made on account of the Southern Railway, and his advocacy of railroad construction as a means of developing the resources of the Republic is emphasized. Not only has the Guayaquil to Quito line been successfully inaugurated, but in August preliminary work was begun on the road from Huigra to Cuenca with the prospect of opening up the rich mining and agricultural districts of the southern section of the Republic within two years. Extensions are recommended on existing lines and the inauguration of new enterprises urged.

THE CENTRAL AMERICAN BUREAU IN GUATEMALA.

The inauguration of the International Central American Bureau in Guatemala City on September 15, 1908, was a practical fulfillment of one of the important conventions made at the Peace Conference of Washington in 1907. The presence of the President of the Republic and many notable personages gave an added importance to the event, which was also made the occasion of popular rejoicing. The following telegraphic dispatches were exchanged in regard to the event:

GUATEMALA, *September 16, 1908.*

DIRECTOR BUREAU OF THE AMERICAN REPUBLICS, *Washington.*

Greetings: We have the honor to inform you that the President of this Republic has inaugurated to-day in this capital with imposing ceremonies and great public rejoicing the International Central American Bureau which we compose. We have firm intentions of carrying out the lofty and generous ideas embodied in the Convention of Washington creating this important institution.

(Signed)

RICARDO J. ECHEVERRÍA,
Delegate from Costa Rica.

CARLOS GUILLEN,
Delegate from Salvador.

JOSÉ PINTO,
Delegate from Guatemala.

MANUEL P. BARAHONA,
Delegate from Honduras.

BENJAMIN F. ZELEDON,
Delegate from Nicaragua.

WASHINGTON, D. C. *September 18, 1908.*

TO THE PRESIDENT OF THE INTERNATIONAL CENTRAL AMERICAN BUREAU.

Sincere congratulations on the establishment of the Bureau, a new proof of the good will existing between the Central American peoples. Thanks for the telegram of Messrs. ECHEVERRÍA, GUILLEN, PINTO, BARAHONA, and ZELEDON.

JOHN BARRETT.

MEXICAN COMMERCIAL STATISTICS AND RAILWAY DEVELOPMENT.

The enterprise of the statistical department of Mexico renders it possible to publish details of the trade of that country with great promptitude, returns being at hand covering the trade for the fiscal year ending June 30, 1908. It is shown that a decline of something more than \$8,000,000 occurred in the total commercial value as compared with the preceding fiscal year. Of this decrease over \$5,000,000 is attributable to imports, the only notable item on this list being textiles, which show a gain of \$2,400,000. As the bulk of Mexican exports consist of raw materials for which the demand abroad was smaller on account of the business crisis prevailing, and as prices were correspondingly depressed the explanation of the export decline is obvious. Furthermore, the same condition reacted upon Mexican purchases made abroad for importing purposes, thus accounting for decreased imports. Full particulars of the year's trade are published in the BULLETIN. The completion of the Mexican section of the Pan-American road, the opening of the Tehuantepec, and other extensions are to be followed by the standardizing of the Interoceanic line, which is announced for the early months of 1909. The National railways of the Republic are to be photographically featured at the New England Food Exhibit of Boston in October in connection with a display of the industrial resources of the Nation. Panoramic views and scenes of Mexican life along the railroad are to be exhibited in an artistic setting and subsequently shipped to the Mexican National Exposition at London.

UNITED STATES MINISTER TO THE DOMINICAN REPUBLIC.

The Hon. FENTON R. MCCREERY, Minister from the United States to the Dominican Republic, is a native of the State of Michigan, and was born in 1866. He was educated in the Michigan Military Academy and in the University of Michigan, graduating from the latter in 1888. He was appointed Secretary of Legation at Santiago de Chile November 7, 1891, prior to which time for one year he had served as clerk in the United States Consulate at Valparaiso. In May, 1893, he retired from the diplomatic service, but returned to the same on April 8, 1897, as Secretary of Legation at Mexico, where he served until his appointment as Minister to the Dominican Republic. From August 4, 1905, to March 7, 1906, he acted as Chargé d'Affaires at Mexico. He was appointed by President ROOSEVELT, on January 10, 1907, Minister Resident and Consul-General to the Dominican Republic, with residence at Santo Domingo.

MESSAGE OF PRESIDENT AMADOR GUERRERO.

On September 1, 1908, an important document was presented to the National Assembly of Panama in the form of the message of the retiring President, Dr. MANUEL AMADOR GUERRERO. A résumé of the general



HON. FENTON R. McCREERY,

Envoy Extraordinary and Minister Plenipotentiary from the United States to the Dominican Republic.

Photograph, Harris-Ewing.

conditions existent throughout the country, both politically and economically, shows a satisfactory status for the young Republic. Financial reports are excellent, the national receipts for the six months ending June 30, amounting to \$1,259,574 from internal taxes and a balance being turned into the Treasury after the payment of current expenses of \$105,307.

CANNING COMPANIES IN PARAGUAY.

An important development of native industry in Paraguay is covered by the granting of governmental franchises to companies engaging in meat extract and meat canning enterprises. All materials and machinery necessary for the installation of plants may be brought into the Republic free of duty, and cattle from the Argentine Republic and from the State of Matto Grosso, Brazil, are also exempt from import duty.

PERU AND THE MINING INDUSTRY.

In a paper specially prepared by the Minister of Fomento of Peru stress is laid upon the possibilities of the mines of the Republic and the aid provided by the Government for their exploitation. Tribute is paid to the influence and participation of United States capital, notably in the Cerro de Pasco region. These mines are said to be producing 3,000,000 pounds of copper per month at a net cost f. o. b. in New York of 9 cents a pound. The total production of the Republic in 1907 was worth more than \$8,500,000, which was almost double that reported for the preceding year. All materials and machinery for exploitation of mining properties are free from import duty, and liberal grants are made to interested purchasers.

THE NEW NATIONAL PALACE, SALVADOR.

The new National Palace of San Salvador, Republic of Salvador, occupies a picturesque location of 100 square yards fronting the handsome grounds of Bolivar Park, a beautiful square of equal area near the center of the metropolis of the country. The magnificent and imposing structure, which is of iron, is faced with delicately tinted fire brick and rests upon massive stone foundations. The roof is of corrugated iron. The architecture is a combination of French and Italian Renaissance developed from the classic Greek-Roman style. The building, with its two elevated towers, its marble trimmings, and great interior and exterior beauty, is a work of art worthy of being seen and visited by natives and foreigners, and an edifice of which Salvadorians may well be proud.

BOOK NOTES

"The Other Americans," by ARTHUR RUEL (Charles Scribner's Sons), New York. This volume, prepared in Mr. RUEL's characteristic style, will be welcomed by the general reader as an appreciative exposition of the life and surroundings of the Americans of Venezuela, Colombia, Panama, Ecuador, Peru, Bolivia, Chile, the Argentine Republic, Uruguay, and Brazil. In his progress through these various countries the writer finds the most striking circumstance to be the curious blending of old and new. Engineers, promoters, prospectors, drummers, etc., skirmish over the fields of antique civilization; the American sewing machine whirrs in the environment of the viceroys; and the phonograph blares modern operatic and street tunes in the mining camps of the heart of the Cordilleras. In the coquettish capital of Venezuela the news of the Parisian boulevard is the news of the day, but in Bogota, situated 10,000 feet in the air, in the interior of a country ten times as large as the State of New York, the regimen of Spanish life prevails, and here the tongue of Cervantes and Calderon is spoken with greatest purity. At Panama, the West Indian negro arrives for canal labor attired in the conglomeration of British ready-made clothing, to be shortly shed for almost jungle nudity. Down the west coast the Pacific steamer performs the functions of a houseboat, freighter, village gossip, and market gardener, and articles of international trade become almost human connecting links between the world's marts and the eager purchasers whether these articles be Panama hats, milling machinery, fresh chocolate, or pineapples. In Peru, the highest railroad in the world, and the most extraordinary, climbs to a height of 15,665 feet above sea level over the Peruvian Andes, past mud villages and mediæval structures, leaving in the rear the trailing llama trains of the past to arrive finally on the roof of the world where is a cheerful barroom with every kind of bottle known to the Anglo-Saxon ranged along its walls. In Lima, where lie Pizarro's bones, is a modern statue of poignant pathos erected to the memory of the Peruvian hero of the war with Chile representing him in the moment of defeat, while in the San Marcos University established by CHARLES V in 1551, the Lima co-ed takes notes on the history lecture in a room full of dark-eyed señors. The Peruvian city of Arequipa, lying in a buried valley, overlooked by a dead volcano, is reached by a Yankee railway, and is the home of the Harvard Observatory in South America. Chile bustles with the noise of a nation finding itself amidst traditions of the past, while across the Cordilleras, crowned by the bronze Christ, the Argentine Republic receives its flood of European immi-

grants and sends forth its harvest products for the support of the stay-at-homes, and Uruguay prepares its beef extract for the hospitals of the world. Because of her coffee Brazil has more tangible utilitarian meaning to North Americans than most of South America, but its capital has its Academy of Forty Immortals, its Fine Arts Academy, and its opera season as New York and Buenos Aires, and its great public library is the memorial of the temporary transfer of the Portuguese court thither in 1808. All this fascinating disarray moves across the pages of Mr. RUIZ's book, borne on a current of comment, pertinent, vivacious, and veracious. Many of the chapters have previously appeared, in part, in "Collier's" and "Scribner's Magazine," but every word will bear rereading by pleasure or profit seeking students.

"Peru," by C. REGINALD EXOCK, F. R. G. S. (printed in Great Britain and imported by Charles Scribner's Sons), New York, 1908. This history of a great South American Republic is one of a series of publications designed to set forth the present civilization, history, topography, natural resources, and general development of the countries of Latin America. It is a worthy successor to the previous work of Mr. Exock, entitled "The Andes and the Amazon," and, like that volume, contains a scholarly introduction by MARTIN HUME, who is editing the series. The story of the conquest of the Incas, with its deeds of shame and wrong, furnishes, of course, the romantic episodes of the volume; but it is to be noted that the more or less extravagant notions as to the splendor of Inca civilization as indicated in their road construction are entirely dispelled. While the roads were excellent and suitable for travel, as understood in those days, they bear no comparison with modern construction for modern needs. On the other hand, the Oroya Railway is held up as an example of audacious construction principles. This road is a type of present-day advancement in Peru, where good government and internal development are the main purposes of administration. The fabulous mining wealth of the country is discussed with moderation, and note made of the fact that within the last years the agricultural resources are bidding fair to take front rank in the nation's economic life. These two industrial branches have an annual valuation of about \$17,000,000, and are capable of greater development. The lack of capital is being met by foreign interests, notably those of Great Britain and the United States, while the labor question is being solved by the employment of large colonies of Japanese.

Many of the Indians occupying the upland and forest regions, being of a hardy constitution, are much employed in mining industries, but the destructive effects of Spanish rule greatly reduced the native pop-

ulation. In the mad thirst for gold that was the mainspring of the conquest, large bodies of the Indians were condemned to cruel hardships, so that the native population of the Andine regions of the present day is something under two millions. The mining laws of the country are liberal, and have greatly stimulated to revival of interest in mineral development. The silver product in 1907 was a little over \$6,000,000, and Mr. Exoek is of the opinion that in spite of the great extent of mines their output in the past has been greatly exaggerated. The impress of the Spanish régime is observable in the aristocratic bearing of the upper classes, the romantic beauty of the women, and the rigid observance of social etiquette, but with the industrial development that has marked the last decade, more of an Anglo-Saxon tendency is to be remarked. Step by step the conditions which have marked the evolution of Peru are followed by the writer, with the final conclusion that the country contains both in her soil and people elements of greatness which are being worthily developed.

“The Brazilian Year Book” for 1908 covers in exhanstive detail all matters relating to the economic life of the Republic of Brazil up to the close of 1906, with such supplementary information as was obtainable up to the time of its final going to press in February, 1908. Its issuance marks an epoch in the compilation and publication of Brazilian statistics, as it is the first standard English annual of its class. Compiled and edited by J. P. WULEMAN under the patronage of the Brazilian Government, it contains a mass of information valuable to investors and business men generally. The general comment as to the absence of any data covering the valorization project may be explainable from two standpoints; in the first place the agreement in regard to coffee holdings and valuation entered into between the Brazilian States was not acted upon finally until August, 1906, and therefore in the latest year covered in the volume (1906) the workings of the project were not discoverable. In the second place, Mr. WULEMAN has until lately occupied the position of Director of the Brazilian Statistical Service, from which he recently resigned, as he considered his governmental connections inconsistent with the expression of his opinion concerning this and other national measures in the “Brazilian Review,” of which he is editor. Aside from this lack, every matter of Brazilian interest is reported on—historical, geographical, geological, statistical, and financial. The explanation of the Conversion Law and of the object in establishing the “Caisse” is lucid and informing, while the section devoted to municipal issues and stock companies is of noteworthy value. The volume, which contains comparative statistics for five years and comparisons, in some

cases, for fifty years, will no doubt become a standard reference book, and it is promised that future issues shall be more prompt and extended. Commercial values are given in pounds sterling, thus simplifying the comparisons with figures of other countries.

"The United States as a World Power," by ARCHIBALD CARY COOLIDGE (The Macmillan Company, New York), 1908. In this volume are discussed many important and urgent aspects of the United States considered as a prominent factor in the world's progress. The writer was the Hyde lecturer at the Sorbonne in the winter of 1906-7, and it is of the substance of the lectures then delivered that the volume is composed. A large portion of the work covers a critical consideration of the present and possible status of the mutual relations of the United States and European nations, and further, of the resultant effects of the Panama Canal and Latin American relations. In the application of the tenets of the Monroe Doctrine it seems an absurdity to Mr. Coolidge that the Atlantic Ocean should be regarded as a natural barrier between peoples to a greater degree than the Pacific, though this definition seems to represent the geographical limits of the doctrine as at present comprehended by the American mind. An interesting section is devoted to the policy known as pan-Americanism, which, it is stated, is based on two considerations. The first is a sentimental one, proclaiming the natural community of ideals and aspirations of the American Republics, and the second of a more practical nature, having for its object the economic exploitation of American resources for American needs, which will result in binding the nations of the Western Continent by commercial ties to the advantage of both. The application of the principle as affecting the various countries of Latin America is considered, as well as the claims of other lands to establish a working theory of pan-Iberianism, pan-Germanism, etc., while the preponderance of German commercial influence in Brazil is comprehensively noted.

"The New Brazil," by MARIE ROBINSON WRIGHT (George Barrie & Sons), Philadelphia. In this, the second edition of her interesting work on Brazil, Mrs. WRIGHT has revised and enlarged the former issue and brought it up to date. It is stated in the introduction that all eyes are now turning toward South America and that there is every reason to believe that the phenomenal growth and progress which marked the history of the United States of America during the nineteenth century will be duplicated in the next hundred years by her sister Republic and friend—the new Brazil. In many ways this

condition seems to have been already attained and the accounts of the natural, industrial, and commercial resources of the vast country demonstrate still greater possibilities. Special importance is given to the assembling of the Pan-American Conference at Rio de Janeiro and the visit of the Secretary of State of the United States, while the remarkable embellishments of the capital effected within recent times, the harbor improvements at the various great ports, and the encouragements offered to the development of new industries are noted in laudatory terms. Of especial interest are the numerous and beautiful illustrations of public buildings, plantations, natural beauties, and industrial plants with which the volume abounds. Portraits of public men and celebrities—literary and professional—put the reader in touch with the best of Brazilian life.

"The Future of Cacao Planting," by HAROLD HAMEL SMITH, editor of "Tropical Life" (John Bale, Sons & Danilesson, 91 Great Titchfield street), London. The book deals with the cacao-planting industry in all its branches and includes many valuable suggestions concerning the use of vacuum chambers for drying the beans, the principle of planting belts of rubber and other economic plants around the cacao to distribute the financial risk, the grafting of trees, improved methods of pruning, and green manuring. It is rather an essay than an exhaustive treatise, but, as there is an appendix with opinions and criticisms from some of the leading cacao experts in the West Indies and the Gold Coast, it has been made a valuable handbook of the cacao industry.

"Viva Mexico," by CHARLES MACOMB FLANDRAU (D. Appleton & Co.), New York. The enthusiasm of the writer concerning his topic is evidenced by the book's title, and in his capacity of coffee planter Mr. FLANDRAU was enabled to come into closer touch with the national industrial life than most makers of books. Aside from an untechnical and therefore understandable account of the manner of planting, growing, and marketing coffee, many attractive sketches are given of Mexican life and customs, while in regard to the popular statement that the City of Mexico resembles the city of Paris, the opinion is expressed that the Mexican capital is like nothing but itself and is the better for it. It is wonderful and growing more wonderful every day.

"On the Canal Zone," by THOMAS GRAHAM GRIER (press of the Wagner & Hanson Company), Chicago. This is a record of per-

sonal impressions concerning the conditions of the Canal Zone in 1908, and may be regarded as a corollary to previously issued publications on the subject. Apart from an introductory sketch it deals solely with present-day events, and is a valuable exposition of the work accomplished both in regard to the main object of Isthmian life—canal building—and such inherent requisites as sanitation, recreation, food supplies, dwellings, and workmen. A variety of half-tones illustrates the topics treated and adds further interest to the book.

"Mexico with Comparisons and Conclusions," by A. A. GRAHAM, (Crane & Co.), Topeka, Kansas. The author treats the Mexican Republic to a study, in advancing scale, from the following viewpoints: Physical, industrial, commercial, religious, political, and, finally and principally, social. In making comparisons, the institutions of the United States are taken as a standard in the main, but those of other countries are also used under certain conditions. While the conclusions set down were arrived at after a two months' stay in the country and might be re-formed after a more intimate knowledge of the subject, many interesting statements are made on the topics discussed.

"The Justice of the Mexican War," by CHARLES H. OWEN (G. P. Putnam's Sons), New York and London. The aim of the writer of the book in reference, as stated by himself, has been to sift the evidence introduced by historians in regard to the war of 1848 between Mexico and the United States, and to distinguish, in the interest of truth, between opinion, assumption, and mistaken reasoning. As a result a valuable brief for the United States' side has been presented to the judicial criticism of the world on a case concerning which there has been much difference of opinion in the past.

Other books received by the Columbus Memorial Library:

"One Way Round South America," by DELIGHT SWEETSER PRENTISS (the Bobbs-Merrill Company), Indianapolis. A personal narrative of travel through interesting lands.

"Blue Waters and Green," by F. DUMONT SMITH (Crane & Co.), Topeka, Kansas. A record of a trip made to the Far East, with studies of people and customs. Illustrated.

"Doekham's American Trade Reports," Boston, 1907. Covering textile manufacture and dry goods trade and directories. Forty-first year.

“Porto e Cidade do Recife” (the Port and City of Recife), by ARTHUR ORLANDO, Pernambuco. The volume is an exhaustive historical and chronological review of the port and city of Recife, and a report upon the sanitary conditions of same.

“O Estado Moderno e a Agricultura” (the Modern State and its Agriculture), by A. GOMES CARMO, Rio de Janeiro, Brazil. Contains an extensive and well-written report upon the different methods of agricultural industries adopted by several nations, among which the United States, in his opinion, takes the lead.



WHAT IS IN THE MAGAZINES

"Leslie's Weekly" for September 17, 1908, publishes one of a series of papers written by Mrs. C. R. MILLER on Latin American topics, the one chosen for this issue being a consideration of "What American Capital is Doing for Peaceful Costa Rica." The most noteworthy achievement is the development of the banana industry of the country, it being stated that Port Limon, which a few years ago was a tropical swamp, has been transformed into a thriving, healthy town of 7,000 or 8,000 inhabitants, possessing one of the best harbors in Central America, from which each month from 30,000 to 40,000 bunches of bananas are shipped to the United States. A railroad owned and operated by Americans runs from Port Limon to San José, a distance of 102 miles. Next to bananas, coffee and cacao rank as articles of commercial interest among the vegetable productions of the country, and both enjoy a high reputation in the world's markets. Costa Rica was the first Central American country to revise the old Spanish laws and to bring her jurisprudence into accord with that of other advanced nations. The capital is cosmopolitan in its social characteristics, and the Chief Executive, CLETO GONZALES VIQUEZ, is a man of high literary attainments as well as a statesman of the first rank. He is especially appreciative of the benefits accruing to his country through the investment of United States capital. English is taught in the schools, and through the efforts of the Minister from Costa Rica in Washington instructors from the United States have been placed in charge of certain branches of public instruction and hygiene.

"Van Norden Magazine" for October, 1908, devotes considerable space to a paper written by FREEMAN TILDEN on "Uruguay—the Oriental," which, though the smallest Republic in South America, is also proportionately one of the richest and most successful. It maintains its finances on the gold standard, and the capital, Montevideo, is noted for the culture and refinement of its inhabitants. It is calculated that about 250,000 cattle are slaughtered annually by the Liebig Extract Company, operating at Fray Bentos, and that the live stock in the country numbers 8,000,000 cattle, horses 610,000, and sheep nearly 22,000,000, while many thousands of live cattle are annually driven into Brazil from the pastures of its small neighbor. The Montevideo harbor, whose value has been greatly injured by the earth and mud brought down by the River Plate from the interior, is

to be deepened and improved by a French company, at an expenditure of \$25,000,000, for which the Republic was not obliged to contract a loan. Paysandu and Salto are Uruguay River ports, and to the former ocean-going steamers can ascend for their cargoes of cured and canned meats, though it is many miles inland. The methods of preparing meat for export are reported as beyond reproach in every way, and this industry forms one of the leading sources of wealth to the prosperous Republic. With an annual foreign trade valued at nearly \$70,000,000, the share taken of the United States is about one-tenth.

"The Bimonthly Bulletin of the American Institute of Mining Engineers," for September, 1908, has a valuable résumé of the geological distribution of "The Silver Mines of Mexico," by ALBERT F. J. BORDEAUX, France. Placing the Republic second as a copper producer and seventh as a gold producer, it is accorded front rank in silver production, with a yearly metallic output worth \$160,000,000 (Mexican) and an invested capital of \$250,000,000, the figures being for 1906-7. Recorded mining properties number over 20,000. The yearly silver product ranges between \$45,000,000 and \$50,000,000 gold.

The same issue publishes a consideration of "The Future Gold Output of Colombia" and "Gold-Dredging on the Choco River," by HENRY G. GRANGER, of Cartagena, whose information is collated after a fourteen years' residence in the Republic. The mining resources are stated to be as vast and varied as the Cordilleras which bear them, the platinum deposits being second only to those of Russia and occurring usually in combination with gold. The principal gold region is located on the great ridge that separates the Choco and Antioquia, and the scarcely less rich sister range between the waters of the Cauca and the Magdalena. Wherever there is gravel, there is gold, and while various attempts have been made in past years to dredge the gold and platinum gravels of the Choco River beds, modern equipment has been lacking. Recently, however, a dredge for which the necessary requirements are claimed has been sent to the Choco, and better results are to be expected.

"Scribner's Magazine" for October has an account of "Divisions in Picturesque Game Lands," by WILLIAM T. HORNADAY, who describes the Piuacate region of northwestern Mexico as its wildest corner. Practically unknown and unexplored, the whole region is lava, with an obvious explanation for the absence of grass and water. But these lacks in no wise diminished the ardor and interest of the party, of which the writer was a member, only instead of their

energies being occupied in shooting big game the expedition became one of crater hunting, with cameras in addition. The fascinations of the sport are enthusiastically described, though the four-footed animals inhabiting that lava land are by no means numerous. The sheep of the region are to the zoologist and sportsmen extremely interesting products, for they represent the great genus *Ovis* at one of its American limits.

The "Century" for October, printing the "Experiences of a Naval Attaché," prepared by Commodore W. H. BEEDLER, U. S. Navy, records the writer's performance of duty as an intelligence officer at Rio de Janeiro and his permitted inspection of Brazilian forts and ships as a student of naval and military science shortly after the close of the Spanish war. He found, in some respects, a better equipment than existed in the United States, notably in the matter of torpedo boats. An interesting theory of the destruction of the *Maine* in the harbor of Havana is also included in the paper.

In its department devoted to foreign comment the "Literary Digest" for September 26, 1908, reprints extracts from the "*Hamburger Nachrichten*," sounding the keynote of German views as to the comparative position occupied in South American trade by the United States and Germany. The Monroe Doctrine is characterized as a shrewd commercial move, its results being shown in the fact that whereas the trade between Latin America and the United States in 1907 aggregated \$586,000,000, that of Germany was \$383,000,000 only. The future alone can show which part of the world is to benefit most from the industrial development of international privileges.

The September issue of "The Annals of the American Academy of Political and Social Science" is a tariff-revision number, in which, among other papers by recognized authorities, are the following on Latin-American topics: "Tariff Relations with Cuba—Actual and Desirable," by EDWIN F. ATKINS; "Notes on Our Tariff Relations with Mexico," by Hon. FRANCIS B. LOOMIS; and "Reciprocity in Our Foreign Trade Relations," by WILLIAM R. CORWINNE.

"Shoe and Leather Reporter" for September 24, 1908, has a contribution from the Director of the International Bureau of the American Republics, Mr. JOHN BARNETT, covering "Pan-American Opportunities." The writer deprecates the prevailing ignorance as to the

immense commercial possibilities offered by Latin America and endeavors, by the statement of well-established facts, to aid in dissipating this condition of affairs.

"The Spice Mill" for September, 1908, continues the publication of its articles on "The Coffee Industry of Spanish America," this issue being devoted to a consideration of Mexico as a source of supply. The Chiapas variety is considered as the best of the Mexican species, and several plantations were visited by the writer, Dr. AUGUSTO RAMOS, in the interest of the subject and extensively reported upon.

"The Bankers' Magazine" for September in its Latin-American section has a statement on "Foreign Capital in Brazil," notes on "Banking Rates in Colombia," and several general paragraphs reproduced from the August issue of the BULLETIN.

"Dun's Review" for September, 1908, publishes a contribution from ROBERT A. WILSON, of San Pedro Sula, concerning "Present Conditions in Honduras," which is an interesting résumé of the economic status of the Republic.



IRRIGATION IN LATIN AMERICA

Address before the National Irrigation Congress, Albuquerque, New Mexico, United States of America, September 29-October 3, by John Barrett, Director of the International Bureau of the American Republics, Washington, D. C., and formerly United States Minister to Argentina, Panama, and Colombia.

THE remarkable achievements of our sister American Republics in irrigation and reclamation demonstrate forcibly the importance and progress of these nations. Their far-reaching work, both past and present, in this line of material development of their vast areas and limitless resources astonishes the average man and is little appreciated throughout the United States.

What they have done, are doing, and intend to do, rival the most ambitious schemes of this country and make us admire their enterprise and energy. If the irrigation expert of the United States were to visit and inspect the principal reclamation works between Mexico on the north and Argentina on the far south, he would return not only with new and valuable impressions which would be helpful in extending the work here but with an enthusiasm for the possibilities of our Latin American neighbors that would do much to foster closer relations of commerce and comity.

AN INTERNATIONAL PAN-AMERICAN IRRIGATION CONGRESS IN 1910.

Right here I want to make a recommendation which may be worthy of your careful consideration. It is that this National Irrigation Congress meeting here in Albuquerque, New Mexico, in 1908, take steps toward holding two or three years from now, or at some date in 1910 or 1911, a great International Pan-American Irrigation Congress, to which each one of the twenty Latin American Republics will be invited to send delegates and experts. Such a proposition carefully directed would surely meet with favorable response by our sister nations and would be the means of vastly benefiting, by mutual exchange of views and reports, irrigation undertakings in all America. It would be highly advisable that a committee should be appointed by this Convention to consider the carrying out of this plan and to ask the National Congress at Washington to make a reasonable appropriation to cover the participation of the United States. Such appropriation would give a Government sanction and

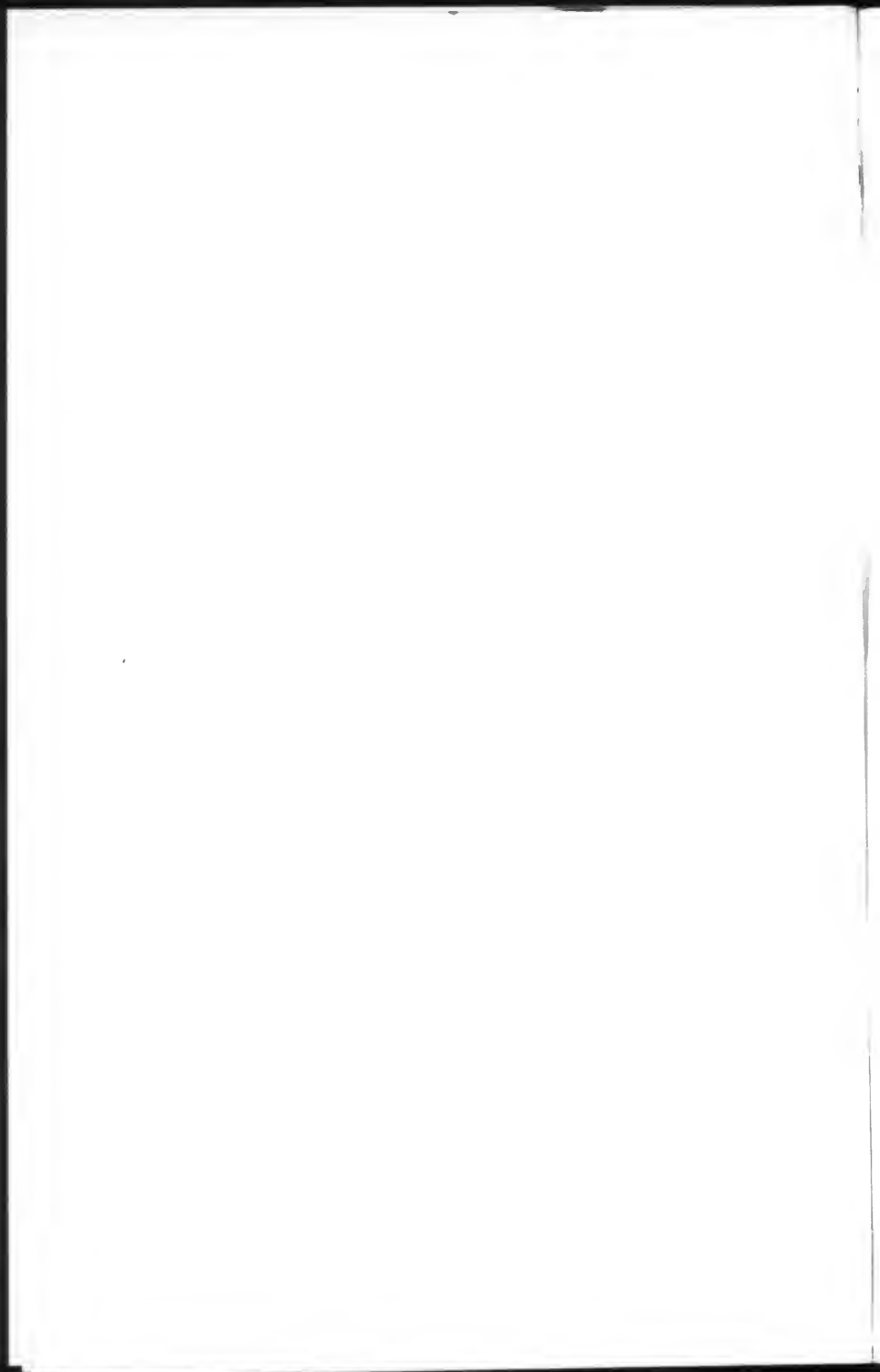


OLD METHOD OF IRRIGATION, MEXICO.



WAITE—Copyright, 1908

SAN RENOVATO DAM, GUANAJAUTO, MEXICO.



require the appointment of Government delegates, which would insure the actual interest and participation of the other American Republics. As a *special corollary* to this main proposition, I would suggest further, as a step of international courtesy which would please not only our great and prosperous neighbor, Mexico, but all Latin America, that the national and private irrigation interests of Mexico be particularly invited to cooperate with those of the United States in preparing for, and extending invitations to, such a pan-American gathering. With this idea, moreover, goes the highly tempting possibility of holding this International Congress in Mexico City, the great capital of a nation which is second only to the United States in planning and supporting the movement for reclamation of arid areas and for the conservation of natural resources. The years 1910 or 1911 are mentioned, instead of 1909, because it would be impossible to do the preliminary work necessary and secure the acceptance of foreign Governments prior to 1910.

IRRIGATION NOT A NEW PROBLEM IN LATIN AMERICA.

Irrigation in Latin America is no new problem. In fact, there are to be found to-day evidences of great irrigating canals and systems built by the Aztecs of Mexico and the Incas of Peru long before the Spanish Conquest and even the discovery of North America. It is not my purpose in this address, however, to pay more than passing attention to these vast undertakings of the ancients—although they are worthy of close and careful consideration—but a few facts, illustrative of what they had accomplished in the line of irrigation before Europe invaded the New World may be of interest. The student of the problem of irrigation will find abundant material in Mexico, Peru, and the Argentine Republic to prove the beneficial work done by these early peoples.

Let us look for a moment at Peru. The Incas, the Peruvian aborigines, were thorough agriculturists, and, although much of the country along the seacoast suffered from want of water, as little or no rain fell there, many places were capable of being reclaimed, and, indeed, needed only to be properly irrigated to be susceptible of extraordinary production. To these spots water was conveyed by means of canals and subterraneous aqueducts, executed on a noble scale. They consisted of large slabs of freestone nicely fitted together without cement, and discharged a volume of water sufficient, by means of latent ducts or sluices, to moisten the lands in the lower level through which they passed. (Prescott.)

MIGHTY IRRIGATION PROJECTS OF THE INCAS.

Some of these aqueducts were of great length. One, that traversed the District of Condesuyo, measured between four and five hundred



INCA TERRACES IN PERU.

Many of these "andenes," or agricultural terraces, may be seen to-day all through the Highlands, even at an elevation of 14,000 feet. The area of cultivated land was greatly increased by this method, which consisted of tiers of stone walls on the sides of the mountain slopes, which were filled with earth. These terraces were irrigated by water obtained from the glaciers. The water was conducted to the narrow valleys and allowed to percolate through the series of terraces.

miles. They were brought from some elevated lake or natural reservoir in the heart of the mountains, and were fed at intervals by other basins which lay in their route along the slope of the Sierras. In this descent a passage was sometimes to be opened through rocks (without the aid of iron tools), impracticable mountains were to be turned, rivers and marshes to be crossed; in short, the same obstacles were to be encountered as in the construction of their mighty roads. Near Caxamarca a tunnel is still visible which they excavated in the mountains to give an outlet to the waters of a lake.

Most of these beneficent works of the Incas were suffered to go to decay by their Spanish conquerors. In some spots the waters are still left to flow in their silent subterraneous channels, whose windings and whose sources have been alike unexplored. Others, though partially dilapidated and closed up with rubbish, still betray their course. Such remains are found in the Valley of Nasca, where the ancient water courses of the Incas, measuring 4 or 5 feet in depth by 3 in width, and formed of large blocks of uncemented masonry, are conducted from an unknown source.

WATER ALLOTTED SO AS TO BENEFIT ALL.

The greatest care was taken that every occupant of the land through which these streams passed should enjoy the benefits of them. The quantity of water was allotted by law, overseers superintended its distribution and saw that it was applied faithfully to the ground. The people of the coast valleys of Rimac and Nasca were of marvelous industry, as is shown in their admirable system of irrigation by means of underground channels. Around the homes of the rulers were the fertile valleys, peopled by industrious cultivators and carefully irrigated. The irrigation works constructed in the upper part of the Chira Valley were astonishing in their magnitude and in the engineering skill with which they were constructed. In early days the two valleys of Pura and Chira, according to a census made for Archbishop Loaysa, supported a population of 193,000, and a simple restoration of the irrigation works would quadruple the productive power of the land. The same remark applies to nearly all the coast valleys of Peru. The habitable and cultivable area on the coast was remarkably increased at that time, and in some places these works of the Incas are, even to-day, kept in repair.

MARVELOUS RECLAMATION PROJECTS OF THE AZTECS.

Coming to the Northern Continent, we find again marvelous evidences of reclamation work. The Aztecs had a most complete and well-arranged system of irrigation. They used water from the mountain streams and had a knowledge of dike building; they surrounded

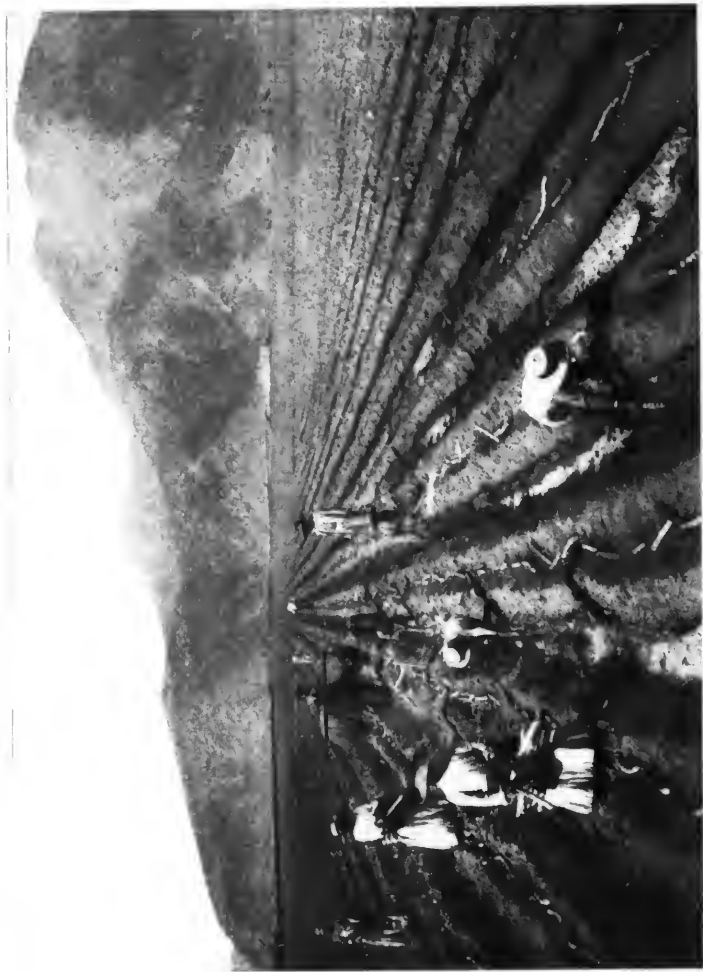
their fields with hedges of stone, and directed canals through them. They showed also good judgment in the management of their ground. When it was exhausted it was permitted to lie fallow, and its extreme dryness was relieved by canals, with which the land was irrigated. To prevent this dryness there were severe penalties against destruction of woods, with which the country was well covered before the Conquest. Around the city of Mexico the district was checkered with patches of Indian corn and plantations of cacao which required constant irrigation. The water was supplied from numerous canals and reservoirs intersecting these fields so that the country could not be traversed without great difficulty by Cortes's horsemen. These irrigation canals nearly proved the ruin of the Spanish Army. The wide plain around Cholulo, at an elevation of 6,000 feet above the sea, was found by the conquerors to be cultivated, to use Cortes's own words, "for every hand's breadth." The soil everywhere—not an uncommon thing in the table-land—was irrigated by numerous canals and streams, and many of these irrigating canals can be found in use to-day in Mexico.

I have taken up in detail what has been accomplished in the past in Peru and Mexico because these two portions of Latin America show such distinct evidences of engineering skill on irrigation lines, although traces of similar works have been found in the other areas of the countries to the south of us.

LATIN AMERICA'S GREAT PRESENT PROGRESS IN IRRIGATION.

But what is Latin America doing to-day to solve this great problem which is attracting the attention of the entire world? Surely it is making great strides in this as in all other directions. Some of the Republics are so fortunately situated that the problem of irrigation is not yet a necessary one, because their areas are well blessed with abundant streams and sufficient rainfall. For the present their needs are fully met by the natural water supply of the cultivated fields. The questions of great, costly irrigating schemes have not come immediately before them. The rapid progress these countries are making, however, and the steady increase in population, will undoubtedly necessitate the same consideration of this problem which we are to-day giving it in the United States. The great majority of our sister nations are reaching practical solutions of the demands of the agriculturists.

A moment ago I spoke of what had been done by the Aztecs in ancient Mexico. Now let us consider what has been accomplished in modern Mexico, and what are some of the projects for the future in that country. Within a few hundred miles of Albuquerque there is to be found one of the most splendid examples of irrigation in



PLANTING SUGAR, SANTO CLARO, PERU. (SHOWING IRRIGATION.)

The cultivation of sugar has extended along the entire coast of Peru. In few countries are the climate and soil so propitious to the development of this industry. Under good cultivation these coastal lands yield from three to four sugar tons per acre per the acre, a return which has not been surpassed in any part of the world. Irrigation works are being rapidly extended.

(Copyright—Photographs, Underwood & Underwood.)

the world. I refer, as you of course know, to the reclamation of the Nazas Valley. The great plain of northern Mexico embraces nearly the whole of the States of Chihuahua and Coahuila, being bounded east and west by the Sierras of the Pacific and Gulf coasts, respectively. It consists of two watersheds, that of the Rio Grande to the north and the so-called deserts of the Bolsón of Mapimí in the south. It is about 400 miles wide by 600 long, and maintains a general level of about 4,000 feet above the sea. The Bolsón of Mapimí has much the same formation as the basin of the Great Salt Lake. It receives the drainage of all the eastern slopes of the Durango Sierras and the western slopes of the Coahuila Ranges, but possesses no outlet. As a consequence the rivers run into broad, shallow lakes, whence the water is gradually lost by evaporation during the dry season. Of these rivers the largest is the Nazas, which has a course of nearly 300 miles from its source to where it is dispersed over the shallows, called on modern maps Lake Mayran. Sixty years ago the Nazas discharged its waters into a series of extensive lagoons, the present fertile laguna district of Durango and Coahuila. (Romero.)

FERTILE WILDERNESSES AWAITING WATER.

Later, long-continued rainfall caused the Nazas to open a new course and leave the Cayman lagoons 30 miles on one side. These lagoons were converted into a mesquite wilderness, almost dead level, composed of a deposit of the finest detritus. The central depression of this lake bed filled a broad valley running north and south. The area thus comprised was about 210 square miles of pure vegetable loam, locally known as the "Lake of Tlalnalilo." This *cuenca* (or bowl) was the spot chosen, about 1892, for the establishment of a great irrigation enterprise.

It had been early determined that the lands left dry were of extraordinary fertility, and half a century ago these tracts immediately adjacent to the river had been brought under irrigation after the rough methods then practiced, so that already 250,000 acres of this land had been reclaimed and the region was producing the greatest part of the cotton grown in Mexico as well as heavy crops of corn and wheat (1890). The Tlalnalilo basin was known to be the richest portion of the district, but the 30 miles of sun-baked desert separating it from the course of the river presented an obstacle to utilization. In 1889 a project was formulated for carrying a ditch across the intervening desert, and converting the whole area into a huge hacienda.

The lowest level of the basin was 100 feet below the point on the Nazas, which it was proposed to dam; the main canal would require a development of 39 miles; the slope of the land within the basin was such that 175 square miles out of the 210 composing the basin



LA PRESA DAM, SAN LUIS POTOSI, MEXICO.



WAITE—Copyright, 1908

ESPERANZA DAM, GUANAJAUTO, MEXICO.



could be irrigated. A dam was thrown across the river where it was 1,500 feet wide at flood. The main line of the canal, 39 miles long, terminated in a distributing tank at the entrance of the irrigable area where it bifurcated.

The rainfall in the Bolsón of Mapimí is confined to a few days of heavy showers in June and December, but in the mountains of Durango the rains are heavy and protracted, lasting for several weeks at a time. In the Tlahualilo basin, a week or ten days of irrigation is all that is needed for the cotton plants during the year, but corn and wheat must, of course, receive it at each planting. The distributing of the water is regulated by Government schedule; each property on the river is allotted its proportion of water and each canal is permitted to take as many irrigations as it desires during the season of high water, but in strict rotation. Here is a project carried out at our very door, at a cost of several millions of dollars. The production of cotton alone, in the year 1907, was valued at over \$10,000,000, an increase of 800 per cent over the amount grown before the land was irrigated.

IRRIGATION WORK NEAR MEXICO CITY.

Another example of irrigation in Mexico warranting attention is that near the City of Mexico in the State of Hidalgo. In 1900 the drainage system of the Valley of Mexico was completed, and a company was formed to use for irrigation the waters discharged from the Cut of Tequisquiác, by turning them into the Rio Salado, conducting them finally to the Tlamaco Dam. Here is constructed a canal 14 miles long, at the end of which there is a fall sufficient to furnish 2,000 horsepower for electrical purposes. Another canal about 2 miles long follows, which is finally divided into three subsidiary canals. This permits irrigation to an area of about 45,000 acres. The company has established a maximum fee of about \$3 gold per acre per year, but for estates of more than 200 acres the payment is proportionately reduced. As was natural, the value of the land receiving the benefits of irrigation has noticeably increased; land that sold before at \$5 to \$10 an acre is bringing to-day \$75 and \$100. So great has been the advantage that the income of the Government of the State of Hidalgo has been augmented considerably, without a per capita increase of taxation.

SUMMARY OF VARIOUS MEXICAN PROJECTS.

In Mexico the Government sometimes undertakes irrigation projects, sometimes grants permits to private associations or individuals, but control of the waters and prices is retained in Government hands. Instances of what has already been accomplished in the various

States may be briefly given. In Sinaloa a modern irrigation plant furnishes water to 88,000 acres. In Puebla 15 square miles have recently been brought under irrigation at a cost of \$100,000. In Guerrero irrigation works have been completed at a cost of \$150,000. In Chihuahua, Señor CREEL, the distinguished Mexican Ambassador to the United States, and Governor of the State of Chihuahua, is irrigating one farm of 6,000 acres; Colonel GREEN and his company are planning large irrigation systems, and it has been estimated that 500,000 acres are thus served. In Durango a company has recently received permission to use the waters of the Palmillas River. In Chiapas the National Secretary of Colonization and Industry has given permission to use the waters of the River Canalejo, supplying 1,000 gallons (4,000 liters) a second, for irrigation. In Nuevo Leon, east of Monterrey, there is an irrigation system with a reservoir to hold 250,000,000 gallons of water, which flows through 6 miles of pipe. The Agricultural Board of Jalisco offers prizes for wells and for plans for the increased use of water, and releases from taxation irrigation plants and machinery to be used in developing such plants. This same encouragement is offered in many instances by the National Government. In many of the other States of Mexico vast schemes are under way for irrigating the land, but those which I have taken up may be considered as illustrative ones.

RECLAMATION PLANS IN OTHER LATIN AMERICAN REPUBLICS.

If modern Mexico shows such progress, it is equally true that Peru, Chile, Argentina, Brazil, and, to some extent, the other sections of Latin America are in the van.

Let us consider first the Republic of Peru, where many recent important irrigation works have been successfully carried out. Worthy of mention is a plant in the Valley of Nasca which, through the restoration of an ancient canal of the Incas 30 miles long, fertilizes 25,000 acres of land. Thirty-five thousand acres have been reclaimed from barrenness in the Valley of Lomas. In the Valley of Chira there are 77,000 acres of tillable land, 16,000 of which are now under cultivation. An area very much larger will be brought into use by repairing one of the ancient canals. In the Department of Piura an area of from 50,000 to 60,000 acres has been surveyed, and already 15,000 acres are irrigated. A contract, it is reported, has been entered into with a cotton planter for irrigating 30,000 acres. In the Department of Lima, the arid lands of Ñoco are being irrigated. An interesting result has been obtained at the port of Mollendo. Water from the aqueduct of Uchumayo, built in 1870 for the use of the railway to Arequipa, has been partly diverted for irrigating purposes. The cost of these works was about \$1,300,000. The aqueduct has a length of 87½ miles, divided into 14 sections with intermediate

reservoirs; in Mollendo there are two other tanks from which the water is immediately distributed. In a recent report of the Minister of Public Works of Peru, mention is made of a newly organized section under this ministry to study the problems of irrigation on the west coast. The River Rimac, near Lima, the capital of Peru, is at present used to irrigate seven valleys with about 60,000 acres of land.

The Peruvian Government has, during the past few years, been employing experts from the United States Geological Survey and the Reclamation Service testing the possibilities of irrigation in the Republic. As a result of these investigations, it is estimated that approximately 2,500,000 acres of the Peruvian coast region are susceptible of irrigation, of which between 800,000 and 1,000,000 acres



CHICAMITA CANAL, PERU.

The cultivable lands on the coast of Peru exceed 49,000,000 acres, but on account of the lack of water only about 3 per cent of this acreage is under cultivation. Peruvian capitalists are building irrigating canals through these coastal lands, which will naturally bring about a complete transformation of this zone.

are in the valley districts. As Peru's leading crops—sugar, cotton, and rice—are all irrigation crops, it can be seen how energetic the Government has been in this undertaking.

MILLIONS OF IRRIGATED ACRES IN THE ARGENTINE REPUBLIC.

In the Argentine Republic one of the most interesting examples of irrigation is furnished in the city and neighborhood of Mendoza. This lies at the foot of the Andes and was undoubtedly occupied by the aborigines long before the Spaniards came. Mendoza stands in the center of an extremely fertile stretch of territory, but the verdure

of the city and surrounding country is due to the ingenuity of man. When the system of irrigation was begun is not known, but for the last twenty years the scheme of irrigation has been thoroughly regulated. The rivers Mendoza and Tunuyan have been dammed at great expense by the Irrigation Department of the Government. About 1,100 miles of canals are utilized, and the irrigated surface measures 1,000 square miles (640,000 acres). This is the great wine district of the Argentine Republic, and without irrigation the industry could not thrive.

San Juan, north of Mendoza, has splendid irrigation works, dating from 1858. The city of Cordova, east of San Juan, is famous for the system of irrigation within the town itself and through the surrounding country. The Dique San Roque (dam) of the Rio Primero furnishes water for many leagues in the neighborhood and is the largest of the kind in South America, if not actually in the world. The lake created by the dam holds 260,000,000 cubic meters of water (over 68,000,000,000 gallons), which are distributed over 360 square miles (230,400 acres). This irrigation system ran into millions of dollars for construction, and is noted among engineers for the results accomplished. The Argentine Government maintains a service of irrigation in the Department of Public Works with a pay roll amounting to \$156,780 a year. I wish I could devote more attention to the accomplishments in the Argentine Republic, but there is not time nor space.

CHILEAN RECLAMATION AND IRRIGATION WORK.

I should like to explain in detail the irrigation and forestry service proposed by the Government of Chile, but I shall confine myself to some general observations. Irrigation was practiced by the original inhabitants of Chile and the remains of their aqueducts show extraordinary enterprise and skill. With the intensive agriculture of to-day, indeed, irrigation is a necessary factor of the success secured by the farmers and wine growers of the country. In the great central valley of the Republic, southward from Santiago, there are many illustrations of irrigation systems in operation, and projects for new plants are constantly maturing. Each section of the valley is a drained lake, the bed of which is being continually enriched by the alluvial deposits of the mountain torrents. The water from all these lakes and rivers is used to fertilize the land and turn the mills. Where there is no water from such sources the land is barren, and in passing through this central valley therefore from time to time are seen great expanses of arid, virgin land; but where water can be obtained, and where the rivers bring down natural fertilizing matter from the mountains, some of the richest land in Chile is the result.



SAN ROQUE DAM, CORDOBA RANGE, ARGENTINE REPUBLIC.
Fifty million cubic meters of material were used in the construction of this dam, which represents 260,000,000 cubic meters of water and irrigates 230,000 acres. The dam cost \$1,320,000 in gold.

The irrigation system is excellent, the water provided is abundant, and the vegetation therefore is luxuriant and varied. Each farmer or hacendado is a subscriber to an irrigation canal, constructed at considerable expense and regulated by carefully elaborated laws. A canal is divided into so many regadores, a regador being an outlet through which 35 liters (9 gallons) of water can pass per second. Each farmer can have all the water he subscribes for distributed at his pleasure and at the cost of the company. At the Normal Agricultural Schools of the Government, of which Chile maintains several, courses on irrigation are offered in quite the same way that viticulture and fertilization are studied.

WHAT BRAZIL IS NOW ACCOMPLISHING.

I must mention briefly something of what has been undertaken in the largest of the South American Republics, Brazil. The Commission of Engineers in charge of irrigation works is investigating different river beds in the regions affected by drought in the States of Ceara and Rio Grande do Norte with a view to constructing reservoirs. The work of clearing the bed of the Maxaranguape has already been begun, and it is proposed also to construct dams at Carnubas and Angicos. The Commission has planned the construction of a dam at Santa Anna do Pão dos Ferros, which is about 338 miles from Natal. This is an important work. The dam to be built is 10 meters high, and the reservoir will be able to withstand three successive years of drought. Many of the large coffee plantations in the States of São Paulo and Rio de Janeiro are under irrigation, but this has been a matter rather of private enterprise than of National or State initiative. Of course these are only a few illustrations of what is going on in Brazil looking to its proper irrigation. The mighty streams of Brazil have in them ample water for irrigation purposes, and wherever irrigation may be needed it will be only a question of simple control of this supply.

OTHER COUNTRIES IN LATIN AMERICA.

Other countries, like Uruguay and Paraguay, are so well watered that there has been no great call for artificial irrigation. In the mountain countries, however, the rainfall may be great, but the valleys sometimes need water during the dry season, and consequently the problem of irrigation becomes a practical one.

In Ecuador, the Minister of the Interior and Public Works is very active in encouraging all plans for the extension of modern agricultural methods wherever applicable. The water supply of the cities, at present a vital problem, is receiving particular attention.



IRRIGATION DAM NEAR IRAPUATO, STATE OF GUANAJUATO, MEXICO.



but hand in hand with this goes the use of water for irrigation purposes, and careful study is given to the latter as well as to the former. Near Quito new drain and irrigation pipes have been laid at considerable expense, and in the Province of "El Oro" noticeable progress has been made on the rivers Caluburo, Buenavista, and Pital.

The traveler in Colombia and Venezuela can not fail to notice the verdure of the landscape at all seasons of the year, although the roads may often be uncomfortably dusty during the dry season. Natural water supply and drainage account for much of this perpetual green, but irrigation by trenches has been practiced for generations. If nature is kind, man has not forgotten this kindness, and he takes advantage of every means to supplement it by the simpler methods of irrigation. In a recent report the Minister of the Treasury of Colombia notes the abundance of water in the cultivated areas, but he also gives careful attention to drainage and irrigation, noticing especially a project to combine the two along the great highway of Caubao.

The area of Bolivia is wonderfully diversified. The mountain regions are dry, rocky, and often sterile, but the plateaus to the east and north contain some of the richest land in South America. Here everything will grow, but there are valleys between the mountain peaks where crops and herds could be much increased if water were more abundant or better preserved. The study of these higher valleys has been carefully undertaken within the last two years by the Minister of Colonization and Agriculture, with gratifying results. In this case the Government is decidedly in advance of present demands, for the soil needs agriculturists to till it quite as much as water to nourish it. When, therefore, colonization shall have filled the unoccupied spaces Bolivia will have plans ready to make fertile by irrigation all land settled by the farmer.

Enterprises of this kind are not confined to the larger countries to which I have called your attention. For instance, the Dominican Republic, appreciating the value of irrigation, and the increased income both to the agriculturist and the Government, has recently made an appropriation for irrigating the Monte Cristi District, and the Public Treasury has appropriated annually the sum of \$75,000, which is to be expended according to the plans prepared for this purpose by the Ministry of Promotion and Public Works. The Executive power is authorized at the same time to use all means within its reach to hasten the realization of this important work.

I must mention the fact that Porto Rico—and in many senses of the word this island is part of Latin America—has inaugurated a magnificent irrigation programme. The sum of \$4,000,000 was within the last few days appropriated by the Legislature in special session.

SOME GREAT FACTS ABOUT LATIN AMERICA.

In conclusion, let me mention a few general facts about our sister American nations which are primary in their nature and yet not generally recognized by the average citizen of the United States. All America, including the United States and excluding Canada, which is not a republic, covers an area approximately of 12,000,000 square miles, of which Latin America occupies nearly 9,000,000, or three-fourths. The total population of the same Pan-America is 160,000,000, of which 70,000,000 or almost half, live in Latin America. The total average foreign commerce, exports and imports, of Pan-America is \$5,000,000,000, of which the share of our little appreciated sister nations is over \$2,000,000,000, or considerably more than one-third. Last year the foreign commerce of the Argentine Republic reached nearly \$600,000,000. Buenos Aires, the capital of the Argentine Republic, has a population of 1,200,000 and is growing faster than any city in the United States after New York and Chicago. Rio Janeiro, the metropolis of Brazil, has nearly reached the 1,000,000 mark, while the total area of Brazil exceeds the connected area of the United States by sufficient square miles to have room almost for Germany in addition. Out of the Amazon River every day flows four times as much water as out of our mighty Mississippi. And so I might go on telling of this southern wonderland of Latin America, but I will stop here and ask you to place yourselves in touch with my office in Washington, the International Bureau of American Republics, if you care to learn the details of the story, together with pamphlets, maps, and books which will prove that I have not exaggerated one iota.



SOUTH AMERICAN EXPORTS TO THE UNITED STATES

IN foreign exports the United States occupies a position intermediate to the countries of western Europe on the one hand and the South American Republics on the other, with a constant and rapid approach to the European position. It marks the middle ground between foreign trade founded on exploitation of natural resources and foreign trade resulting from highly specialized manufacturing effort.



ALPACAS, PERU.

The wool of the alpaca is nearly a foot long, soft, and fine as silk. The great bulk of the production, in value between three and four million dollars, is exported. Very little goes to the United States.

South America, the United States, and western Europe represent in the immediate present three steps in the world's industrial progress, which in concrete is the progress of each particular nation of the world. In a new country, such as America was for more than three

hundred years after its discovery, and such as the overwhelmingly greater portion of it yet is, industry must of necessity first concern itself with the land and the immediate products of the land. As population and capital increase, more diversified industries come into being. The tendency and the desire of every country is to attain an industrial position where it is the sole consumer of its own raw products, which, through its own industries and its own factories, are converted into articles of necessity or luxury for the rest of the world. To attain this end, population and industrial capital are necessary, and to obtain this each country must begin as every country in America, from Canada to the Argentine Republic, has begun—by first exploiting natural resources for the use of foreign countries.

Population and capital have marvelously increased on the American continent within the last one hundred years, and this increase is the direct and consequential result of the immense quantities of cotton, wheat, wool, lumber, beef, hides, oil, cacao, asphaltum, rubber, nitrate, gold, silver, iron, copper, coffee, and sugar which the New World has produced and sold at a profit to the Old World. For America, as a whole, foreign export trade means a trade in food products and raw, or but slightly manufactured, material.

The one exception to this rule is the United States, wherein the foreign trade is assuming a different character, and where, with much of similitude, there is an important difference between its industrial position and that of South America in this, that whereas the former is approaching the limit of its capacity to produce raw material, the latter is an almost virgin field, whose possibilities are so immense as now to appear almost unlimited. In addition, the United States is constantly consuming a larger and larger proportion of its own raw material and food products in home consumption. In other words, its surplus will constantly decrease, while in South America the surplus will constantly increase.

Every country naturally, and by force of circumstances, engages in that kind of trade which at the time is most profitable to it. It devotes its energy and its capital to what produces immediately the greatest returns. In a new country this always means the exploitation of natural resources. So long as this field remains open and profitable, to it will be directed the principal efforts and the bulk of the capital of a people. Only when the accumulated capital has become sufficient for the purpose, and the pressure of an increasing population so great as to demand other fields of labor, or when the limit of productive capacity is reached, is it found profitable to direct the new capital and the new energy into other channels.

This period may be long or short, mainly due to the climate, area, and quantum of natural resources of a country. In the North Atlantic portion of the United States it was comparatively short; in the

vast area of Brazil, Bolivia, Peru, Colombia, or the Argentine Republic, with the almost unlimited natural resources of these countries, it will be long.

South America is the world's great storehouse of natural produce which, to develop and make available, will require a capital greater than the accumulated savings of the world and a population at least ten times greater than it now has.

Its industrial progress for the fifty or sixty years following freedom from European political control was comparatively slow, and offers a striking contrast to the rapid progress made by the United States during the same period.



WHEAT AWAITING TRANSPORTATION, ARGENTINE REPUBLIC

The production of wheat in the Republic is about five and a half million tons a year, of which over four million tons are exported, mostly to Europe.

European, and to some extent American, writers have been accustomed to ascribe this more or less backwardness of the South American Republics to a defect in Latin-American character and to unstable political conditions. Lack of a sustained purpose and revolutions were the reasons given why in wealth and population South America was so far outstripped by the United States.

This view is unsound and is founded in false premises. North Americans and Europeans who are acquainted with such cities as Buenos Aires, Rio de Janeiro, and Santiago, and who form their opinions at first hand by observation, find no essential differences in

industrial capacity, energy, initiative, or even "bullheadedness," if that be a merit, between the business men of these cities and those of London, Paris, or New York; and the immense and rapid progress in wealth, industries, and population of these and other South American cities, within the last fifteen or twenty years, proves conclusively that no such differences do exist. Rio de Janeiro with nearly a million, and Buenos Aires with over a million population, have within this short period grown with a rapidity outstripping, if possible, the phenomenal growth of some of the cities of the United States.

As regards revolutions, there has been much misstatement and distortion of actual facts. Small disturbances which elsewhere scarcely would be dignified with the name of riots are set down as revolutions. As said by a distinguished South American diplomat at the Trans-Mississippi Commercial Congress in Kansas City, "When a drunken soldier discharges his rifle or emits a subversive yell, lo! on the instant the cable communicates to the whole world—revolution in South America! The press makes merry in painting our countries under the most ridiculous phases. On the stage a hundred generals march out in command of a single private, and this is called a South American Army."

The truth is that for the last half century South America, compared with the rest of the civilized world, has enjoyed more than its proportionate share of peace. There are ten independent Republics, comprising, with the Guianas, the whole of the continent. As against these ten it would be difficult, if not impossible, to place ten other countries in which there has not been for the last fifty years, or even from the date of South American independence, say 1820, more of war and revolution. Look at the map of Europe as it was in 1850 and as it is to-day. With the exception of the British Islands and the Scandinavian and Iberian peninsulas, the political lines of Europe have been recast so as to render the whole picture unrecognizable. This is the result of war and revolution in the oldest, most civilized, and presumably most stable section of the Aryan world. The political map of South America, with one exception, remains practically the same now as it was at the date of independence, and that exception, the dissolution of the greater Colombia into the three States of Venezuela, Colombia, and Ecuador, was accomplished without war or revolution. The failure of the South American Republics since their independence to attain that degree of growth in wealth and population attained by the United States since its entry into the family of nations is due not to any defect in Latin-American character or in any large measure to unstable political conditions, but to natural and economic causes.

First, the United States had the start by nearly forty years in the race for European surplus population and capital. This at a period

when the pressure of population in western Europe was beginning to be felt and demanding an outlet, and when the accumulation of capital was becoming sufficient to warrant foreign investment. For this immigration of men and capital the United States and South America were direct competitors. With the tide turned in its favor for a start of forty years, the United States was able to hold and to increase its first advantage.

Second, in this competition the United States enjoyed a second advantage in that it, like Europe, lies wholly within the Temperate Zone, while the bulk of South America is in the Torrid Zone. The prospective European immigrant would naturally seek that country



DRYING HIDES, ARGENTINE REPUBLIC.

The export of hides from the Argentine Republic is in value about twenty millions of dollars per annum, of which less than one-third goes to the United States.

where the climate, soil, and crops most nearly approached home conditions. South America, with the exception of the southern part, presented in climate, soil, and crops conditions more at variance with European conditions.

This rivalry has ceased. The tide of European emigration in men and capital has turned toward South America, and the United States takes on a new character in the industrial world. It is now a rival with Europe for both the South American export and import trade. It becomes the part of wisdom for it to recognize this changed position and to readjust its relations with South America. Both will be the gainers by the change, most of all South America, in that it loses



CATTLE ON THE PAMPA IN ARGENTINE REPUBLIC.

The provincial censuses show nearly 26,000,000 cattle in the Republic. The provinces showing the largest holdings are: Buenos Aires, 7,000,000; Corrientes, 6,000,000; Entre Ríos, 3,000,000; Córdoba, 2,500,000, and Santa Fe, 2,500,000.

an industrial rival and gains an industrial feeder. But the gain is not entirely one-sided; the United States will profit not alone in what it sells to but also in what it buys from South America. As an industrial rival of Europe it must look after its future supply of raw material. It must be remembered that the gains from the trade in raw material may be as great or even greater to the country importing than to the country exporting.

To illustrate, take the position of England as to the cotton trade. It imports raw cotton to the value of about \$300,000,000, of which two-thirds is from the United States. After supplying its own needs, and it is the largest domestic consumer of cotton among the nations of Europe, it exports in cotton yarn and manufactures goods to the value at the place of shipment of over \$500,000,000.

As a storehouse of raw material South America is unrivaled. To develop this storehouse through labor and capital means the industrial progress of the ten Republics, and it also means the industrial advantage of the country supplying the capital and handling the produce of this development.

It has been a cause of more or less complaint by certain North American writers that the United States occupies the position of buying more from South America than it sells to it. This is a shortsighted and mistaken view of the situation.

Europe has in the past occupied the same position toward the United States that the United States now occupies toward South America, and Europe has not failed to profit by the situation. The exports from the United States to South America are of manufactured goods, and its imports from the same section is in raw material and food products. If there is one element more than another entering into relations between the United States and South America, upon which the former should be congratulated, it is the fact that it has already acquired so large a share in exports from South America. From the standpoint of the United States it is of course to be regretted that its share of the imports into South America is not greater than it is, but this regret should not be coupled with any wish to limit or curtail its share in the exports from South America. Its future industrial conflict with Europe is not only in supplying the world with manufactures, but also in securing the raw material from which these manufactures are made. The position is a new one.

Outside of food products, of which coffee to the value of about seventy millions and cacao to the value of five millions are the chief, the principal imports of the United States from South America are rubber, hides, skins, bones, horns, hoofs, tanning material, nitrate of soda, copper, cabinet woods, vegetable ivory, and asphaltum.

Their values are: Rubber, thirty-five millions, 60 per cent of the total imports; goatskins and hides of cattle, fourteen millions, 26 per

cent; bones, horns, etc., one million, 30 per cent; tanning barks and extracts, over one million, 80 per cent; nitrate of soda, fourteen millions, 100 per cent; copper, over five millions, 11 per cent; cabinet woods, two hundred and fifty thousand, one-half of 1 per cent; vegetable ivory, four hundred thousand, 85 per cent; asphaltum, nearly two hundred thousand, 40 per cent.

This list is not imposing either in length or in amounts, but it tells the tale of the beginning of what is destined to become a great industry in the United States, in fact the industry upon which the future wealth and commercial importance of the country must depend, an export trade in goods manufactured from imported crude



CATTLE IN COLOMBIA.

The production of cattle is one of the growing industries of Colombia. A recent reduction in the export duty from \$3 to \$1 per head is having a beneficial effect on the trade.

material. Already the United States has reached the point where it imports, of some of these products, an amount greater than it needs for home consumption, great as this is, and is exporting the surplus as a finished product. For example, it imports crude rubber to the value of sixty millions, 60 per cent from South America, and an additional 6 per cent from Mexico and Central Mexico. After supplying its own needs for home consumption, which exceeds by double the need of any other country in the world, it exports, in finished and partly finished rubber products, to the amount of seven and one-half million dollars.

The manufacturers of the United States are familiar with the fiber plants and textile grasses of Europe, Asia, and North America. They import of Manila hemp eleven millions, of Mexican sisal fifteen millions, and of British Indian jute eight millions of dollars in value yearly. In addition Italy and Russia furnish hemp; Great Britain, Russia, Belgium, and the Netherlands flax; Mexico istle; Germany, Great Britain, the West Indies, the Dutch East Indies, New Zealand and Africa furnish other varieties of fibers and textile grasses, all to the value of millions of dollars, imported into the United States. From this import there has been built up a large foreign export trade in fabrics, bags, cordage, and twine. South American fibers and textile grasses are practically unknown to the manufacturers of the United States, the one exception being Peruvian cotton, of which from three to four million pounds are annually imported. With this exception, the value of all varieties imported for five years is as follows: 1903, \$86; 1904, \$5,615; 1905, \$2,300; 1906, \$7,255; 1907, \$2,033. This is an average of \$3,458 a year. Brazil or Venezuela either might supply an amount greater than this daily and then not equal one-tenth of the import of sisal grass from Mexico.



HARVESTING IN THE ARGENTINE REPUBLIC.

A SOCIAL FUNCTION IN HONOR OF LATIN AMERICA

The Latin-American Delegates to the Tuberculosis Congress were the guests of the Director of the International Bureau of American Republics at dinner in the New Willard Hotel, on September 25, 1908.

The object of the dinner was to welcome to Washington such members of the Tuberculosis Congress as were then in the city representing Latin-American countries, to make them acquainted with one another and with some of the higher officials of the Department of State, the Latin-American diplomatic corps, and other distinguished gentlemen.

The Director of the Bureau was to leave on the 26th to attend the National Irrigation Congress to be held in Albuquerque, New Mexico, where he will read a paper on "Irrigation and Reclamation of Land in Latin America," and make other addresses on Latin America at the Chamber of Commerce of Los Angeles, California; the Trans-Mississippi Commercial Congress, San Francisco, California; the California State University, Berkeley, California; the Chamber of Commerce of Portland, Oregon, and that of Seattle, Washington, and the Publicity Club of Minneapolis, Minnesota. It was not possible for him to postpone the date when he could welcome all of the Latin-American representatives, on behalf of the International Bureau of American Republics, as the Tuberculosis Congress will have adjourned before his return.

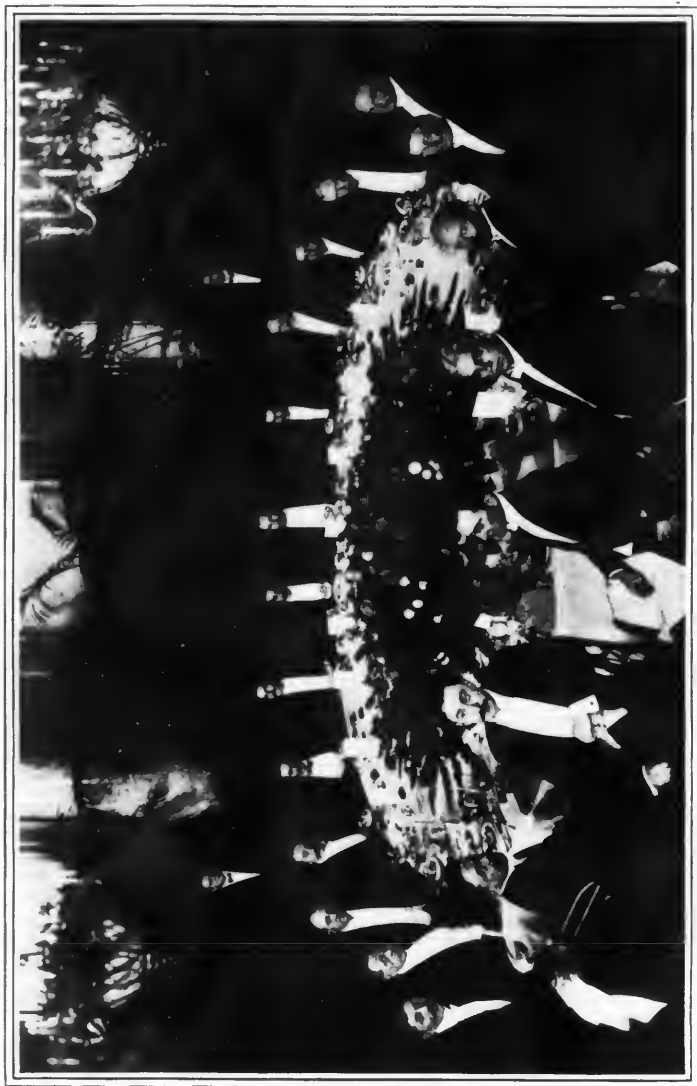
The delegations at the dinner were represented as follows: Dr. EDUARDO LICEAGA, President of the Supreme Board of Health of Mexico, Chairman of the Mexican delegation; Dr. FERMÍN RODRÍGUEZ, Jr., Delegate from the Argentine Republic; Dr. J. J. ULLOA, Delegate from Costa Rica; Maj. J. R. KEAN, Chairman of the Cuban delegation; Dr. FERNANDO RENSOLI, Cuban Delegate; Dr. CHARLES W. RICHARDSON, Chairman of the delegation from Ecuador; Dr. RAMÓN BENGOCHEA, Delegate from Guatemala; Dr. D. VÉRGARA LÓPEZ, Delegate from Mexico. The Department of State was represented by Mr. A. A. ADEE, Acting Secretary of State, and Mr. HUNTINGTON WILSON, Third Assistant Secretary. The Latin-American diplomats present at the dinner were Señor Don JOAQUÍN BERNARDO CALVO, Minister of Costa Rica; Señor Don EPIFANIO PORTELA, Minister of Argentina; Señor Don LUIS TOLEDO HERRARTE, Minister of Guate-

SR. DON J. B. CALVO,
Minister of Costa Rica.
JOHN BARRETT,
Director Pan-American Bureau.
Sec'y Gen'l Tuberculosis Congress.

SR. DON A. PADRO Y ALMEIDA,
Charge d'Affairs, of Cuba.
DR. D. VEGARA LOPEZ,
Mexican Delegate.

SR. DON F. J. YANES,
Sec'y Pan-American Bureau.
DR. T. RENSOLI,
Cuban Delegate.

HON. A. A. ADEE,
Acting Secretary of State.
SR. DON E. PORTELA,
Minister from Argentina.
DR. R. BENGOCHEA,
Delegate from Guatemala



DR. E. LICEAGA,
Chairman Mexican Delegation.
DR. HENRIK ARTE,
Minister of Guatemala.

SR. DON J. W. BAZ,
Mexican Embassy.

HON. HUNTINGTON WILSON,
Third Asst Sec'y of State.
Mexican Delegate.

DR. J. J. ULLOA,
Delegate from Ecuador.
SR. DON R. KILPATRICK,
Chairman, Cuban Delegation.

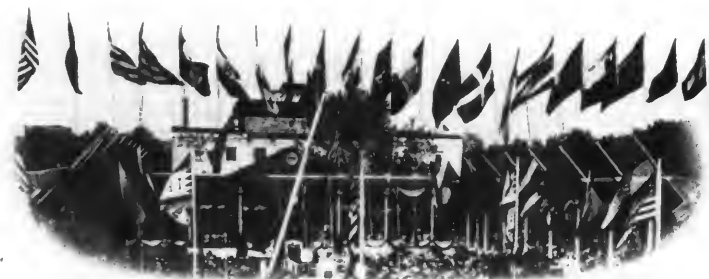


mala; Señor Don ARTURO PADRO Y ALAMEIDA, Chargé d'Affaires of Cuba; and Mr. J. W. BAZ, Secretary of the Mexican Embassy. Surg. Gen. WALTER WYMAN, Public Health and Marine-Hospital Service, Dr. J. S. FULTON, Secretary-General of the Tuberculosis Congress, and Señor Don FRANCISCO J. YANES, Secretary of the International Bureau of the American Republics, were also present.

At the proper moment the health of the Presidents of all the countries of the three Americas, proposed by the Director of the Bureau, was drunk standing. Director BARRETT then spoke a few words of welcome to the Delegates on behalf of the International Bureau, and introduced Doctor FULTON, the Secretary-General of the Congress, who also welcomed the Delegates and stated that because of the increasing knowledge in the United States of the Latin-American countries and its scientific men, due in a great measure to the efforts of the International Bureau of American Republics, Spanish had been made one of the official languages of the Conference. Doctor LICEAGA, of Mexico, in a felicitous speech of thanks, replied on behalf of the Latin-American Delegates, and also paid a highly gratifying tribute to the International Bureau and the work it has accomplished in the lofty task of making all America one common home, one common motherland. Other speakers were Mr. ADEE, Acting Secretary of State, who also extended a warm welcome to the Delegates, and wished them success in their noble and humanitarian mission. Señor CALVO, the Costa Rican Minister; Señor PORTELA, the Argentine Minister, and Doctor TOLEDO HERRARTE, Guatemalan Minister, all were happy in their remarks in reference to the great event and the hopes entertained for the success of the Congress. Surgeon-General WYMAN spoke of the wonderful work on sanitation done in Mexico, mainly through the untiring efforts of Doctor LICEAGA, and of the greater significance of the work of the Bureau. Doctor RICHARDSON, Chairman of the delegation for Ecuador, and Doctor RENSOLL, of the Cuban delegation, showed their enthusiasm for the work to be undertaken, and their keen appreciation of the necessity of fighting the ravages of the white plague relentlessly.



THE FLAGS AND COATS OF ARMS OF THE AMERICAN REPUBLICS



ARGENTINE REPUBLIC.

THE national banner of the Argentine Republic consists of two kinds, the first being known as the "war banner" and the second as the "bandera menor," or the flag of peace and commerce. The former is distinguished from the latter in having a golden or yellow representation of the sun in the center of its field; otherwise both flags are identical, and each is so arranged that it contains three horizontal stripes, the first and third being blue, while the second, or central, one is white.

A halo of romance and singular dramatic interest is attached to the history and origin of the Argentine national banner. It was invented by Gen. MANUEL BELGRANO in 1812, and received, the following year, its baptism of fire and blood when BELGRANO won a brilliant victory over the Spaniards on the 20th of February, 1813. The Congress of Tucuman formally recognized it as the official standard of the new Argentine Commonwealth, then officially designated as "The United Provinces of the Rio de la Plata."

The standard of the Argentine Republic is something more than merely the national flag of the Republic; it is associated, in a large measure, with the glories of Latin America, for, under the consum-

mate leadership of the two liberators, Gen. SAN MARTÍN and General BELGRANO, it was destined to wave over Argentine armies that bore freedom and enlightenment over the towering snow-covered Cordillera of the Andes into Bolivia and Chile, and thence northward into tropical Peru and Ecuador.

The Argentine colors, sky blue and white, may be traced back, according to tradition, to the medieval times of Spain, when, during the battle of Roncesvalles, a singular duel occurred between a Biscayan soldier and a French color bearer carrying a flag with two blue stripes and one white. The former slew his opponent, and on account of his achievement received the title of "Aspiazú."

Dismissing this quaint legend for what it is worth, there can be no doubt that the British invasion of the Rio de la Plata region, or what is now known as "Argentina," in 1806 and 1807, and the subsequent and unexpected success of the people of Buenos Aires, through their own unaided efforts, in routing an army of over 6,000 seasoned British veterans and compelling them to capitulate, in spite of the support of a powerful fleet (July 6, 1807), had considerable influence in inducing the Argentines to adopt blue and white as their national colors. This glorious "Reconquest," besides cultivating self-reliance and a national spirit, caused a large amount of the spoils of war to fall into the hands of the native Argentine militia, and among this booty was a large quantity of blue and white cloth. The various Hispano-American corps which fought against the British wore generally blue and white uniforms. Most potent, however, of all the causes that led to the final adoption of these colors as those of the new-born Argentine Republic (at first officially designated as "The United Provinces of the Rio de la Plata") was the fact that during the popular commotion and excitement on the memorable 25th of May, 1810, when the last Spanish Viceroy, CISNEROS, was still hesitating about bowing to the will of the people of Buenos Aires and resigning his power, one of the popular leaders whose name was FRENCU entered a store and secured a quantity of white and blue ribbons which he began distributing among his followers. This was really a brilliant idea, these colors having become extremely popular since the repelling of the British invasion of 1807, as the crack native Argentine regiment, known as the "*Patricios*," or "*Patricians*," wore blue and white uniforms.

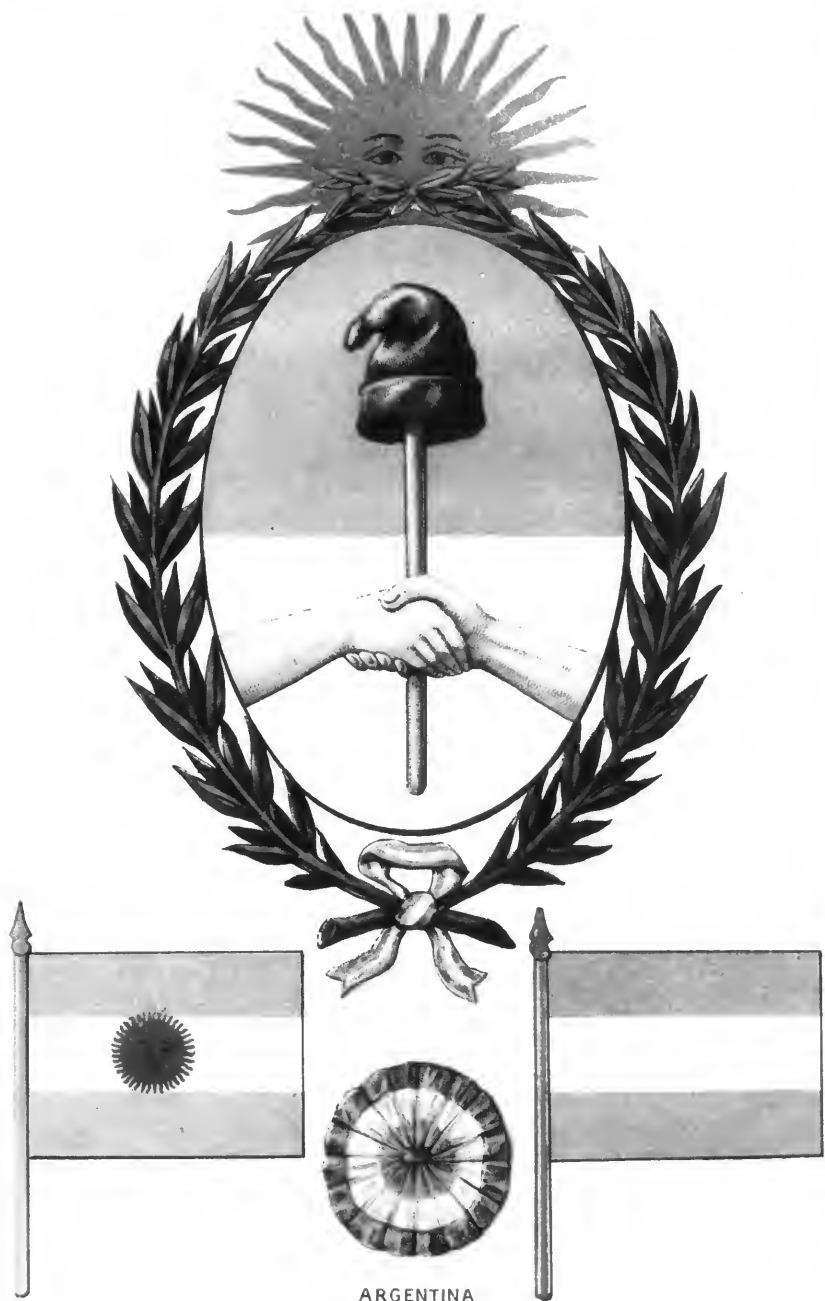
The entire 45,000 inhabitants of Buenos Aires were now fired with enthusiasm, and the Marquis CISNEROS, yielding to the inevitable, resigned the power of Spain into the hands of the new provisional Argentine Republican Government. Since that time, in song, poem, and story, in peace and war, the beautiful Argentine blue and white national flag has waved triumphantly, and the centennial of its birth will be celebrated at the opening of the great Argentine Educational Exposition, on the 25th of May, 1910.

The national shield or coat of arms of the Argentine Republic, as officially recognized by President ALCORRA's decree dated May 24, 1907, may be described as follows: Its essential principle is that of an ellipse, divided into two halves by the horizontal diameter of the same. The field of the upper half is sky blue, and that of the lower is white. In the center of the upper section there is a carmine red liberty cap, which is supported by a vertical golden staff, the latter being so arranged that one-third of its length lies in the upper or blue field, while the remaining two-thirds are in the lower or white field. The staff is supported, in its lower extremity, by two clasped hands and arms, which are at an inclination of 45°, and are of natural flesh tint. The circumference of the ellipse is completely enveloped by a crown of two intertwined laurel branches, whose foliage is painted olive green. At the very apex or zenith of the ellipse there is the representation of a golden sun, with two eyes, and undulating rays of yellow and brown hues. The lower extremities of the laurel crown are tied together by a bow of sky-blue ribbon.

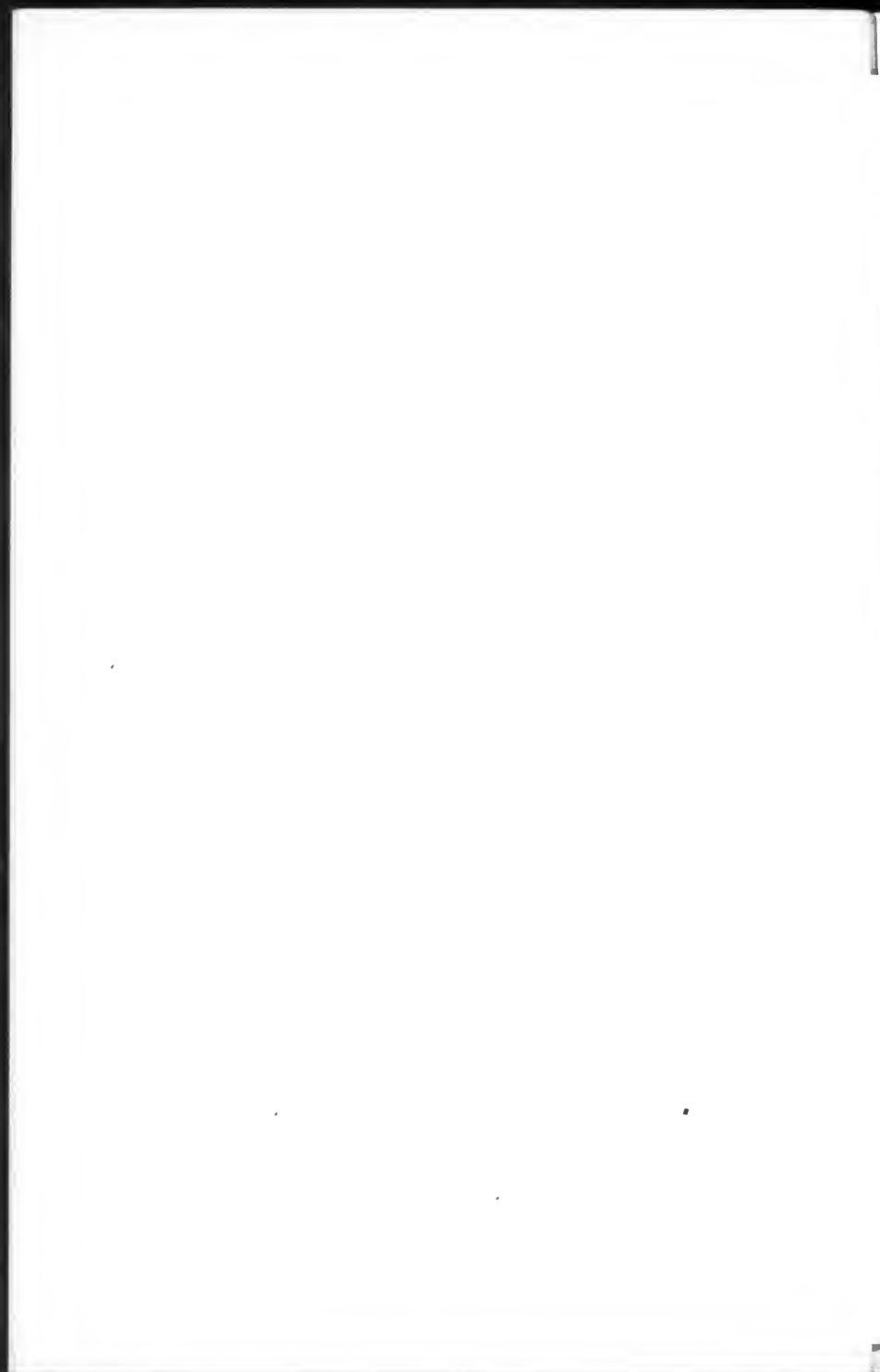
According to the researches of Doctor ZEBALLOS, of Buenos Aires, the details of the Argentine coat of arms may be traced back to the remotest antiquity. As an emblem of power the sun was depicted by the ancient Egyptians on their monuments and in their state records. The two clasped hands denote fraternity and union, while the liberty cap was worn in Greece and Rome by a slave when his master emancipated him and declared him a freedman. It thus became, in the course of time, the emblem of liberty in general, and, as it were, the inspiring standard of freedom in the servile insurrections of antiquity.

A close study of the heraldic arms of the leading families of Spanish nobility proves that the essential design of the Argentine national shield may be traced back to the remotest epoch of medieval Spain. It was, therefore, perfectly natural, when the first Spanish conquerors undertook to colonize the La Plata or Argentine territory, that they should take pride in displaying their traditional heraldic shields upon every available occasion. There are, to this day, many Argentine families of the highest aristocratic Spanish descent whose ancestral coats of arms closely resemble the national shield of the Argentine Republic.

The circumstances leading to the adoption of the present Argentine national shield are of historic and romantic interest. The colors, blue and white, were adopted, tacitly, as those of the new Argentine flag when, in 1810 (May 25), the people of Buenos Aires deposed the last Spanish Viceroy, established a provisional republican junta or directory, and inaugurated Argentina's heroic and eventful struggle for independence against the might of Spain. The new banner was consecrated in a baptism of fire and blood when Gen. MANUEL BELGRANO won a brilliant victory over the Spaniards at Salta, on the 20th of February, 1813. A little over three years later the famous Cou-



ARGENTINA



gress of Tucuman, which, on the 9th of July, 1816, had issued the Argentine stirring declaration of independence, enacted on the 25th of that month, a law formally recognizing and sanctioning BELGRANO'S flag as the national standard of Argentina.

The essential features of the Argentine coat of arms were, however, not fully elaborated until January, 1817, when the patriotic ladies of Mendoza City, which lies at the foot of the eastern, or Argentine, slope of the towering Chilo-Argentine Cordillera, decided to present to their distinguished compatriot, Gen. Don JOSÉ DE SAN MARRÍN, a splendid banner, called "*The Banner of the Sun*," just as this celebrated South American liberator was preparing to conduct a thoroughly equipped and disciplined expedition of 5,000 Argentines and Chileans westward across the forbidding, snow-covered, lofty, and almost impassable Andes, into Chile, where he expected to strike a decisive blow against the Spaniards. This banner was made entirely by the fair hands of the Mendoza ladies. It was made of silk, and its entire field was divided, horizontally, into two equal stripes, the upper being white and the lower a light greenish blue. In the center of the flag, cutting equally the white and blue stripes, was depicted what, in its main essentials, is now the elliptical or oval national shield of Argentina. The edges of the banner were richly embroidered with precious stones.

The new *Banner of the Sun* was publicly consecrated in Mendoza City amid the most elaborate religious, military, and civic ceremonies, on the 5th of January, 1817. As the standard was unfurled to the breeze a salute of twenty-one cannon was fired, after which all the spectators and soldiers shouted: "Long live our Argentine native country!" General SAN MARRÍN then, holding aloft the banner, exclaimed, in a vibrating voice: "Soldiers! Swear to uphold this standard, and die, if necessary, in its defense, as I swear to die!" "We swear to do so!" came the response, amid a triple discharge of musketry, followed by a salvo of twenty-five cannon shots.

Six days later the *Banner of the Sun* waved over the Army of the Andes as camp was broken and the entire expedition, marching westward, prepared, with General SAN MARRÍN at its head, to brave the arctic terrors of the Chilo-Argentine Cordillera, and rapidly disappeared from view in those frightful mountains. This expedition, in the amazingly brief period of twenty-four days, traversed about 150 miles of the Andean heights, and, descending into Chile, surprised and routed a large Spanish army at the Crest of Chacabuco, on the 12th of February, 1817. Slightly over a year later, at the battle of Maipú, April 5, 1818, Chile was forever liberated from the yoke of Spain and began her career as a prosperous, enlightened, independent republic. From Chile the Argentine-Chilean Liberating Expedition proceeded northward as far as tropical Peru and Ecuador, and partially effected the liberation of those South American

Republics, their complete emancipation, owing to the retirement of General SAN MARTÍN to Europe and private life, being accomplished by General SUCRE, the great BOLÍVAR'S second in command, at the crowning victory of Ayacucho, December 9, 1824, fought in the loftiest Peruvian Andes.

The sacred *Banner of the Sun*, after having triumphantly waved over liberating armies through the now enlightened Republics of Argentina, Chile, and Peru, or very nearly over one-half of South America, found a resting place, after eight years of battles and storms, in the Government House of Mendoza City, where it was reverently kept as one of the glorious heritages of Latin America.

AUTHORITIES AND BIBLIOGRAPHY OF THE NATIONAL BANNER AND COAT OF ARMS OF THE ARGENTINE REPUBLIC.

The following are among the most authentic sources of information concerning the national shield and banner of the Argentine Republic:

1. *Anuario del Ministerio de Relaciones Exteriores y Culto de la República Argentina*, publicado por orden y bajo la dirección del Excmo. Señor Ministro Dr. E. S. ZEBALLOS por DANIEL ANTOKOLETZ (Del Ministerio), 1908. Buenos Aires.

A valuable official publication, containing President ALCORTA'S decree, dated May 24, 1907, prescribing in detail what the officially recognized Argentine shield and banner are. This annual has a finely colored plate of both the shield and banner.

2. *El Escudo y los Colores Nacionales* por ESTANISLAO S. ZEBALLOS (Extracto de *La Revista de Derecho, Historia y Letras*). Buenos Aires, 1900.

A carefully prepared essay, by the learned Doctor ZEBALLOS, Argentine Minister of Foreign Affairs, on the origin and history of Argentina's coat of arms and banner.

3. The late Gen. BARTOLOMÉ MITRE, ex-President of the Argentine Republic, who has an international reputation as an accurate historian, gives important and interesting data on the Argentine banner in his *Historia de Belgrano*, Volume I, Chapter X, page 341 et seq., and relates how the Argentine national colors, sky blue and white, came to be adopted. In his "History of SAN MARTÍN" (*Historia de San Martín*, Volume 2, page 500, and following, Chapter XII), the celebrated Argentine and South American liberator, MITRE, gives a very interesting account of the famous *Banner of the Sun*, made by the ladies of Mendoza City, and borne by SAN MARTÍN in 1817 and subsequent years across the towering Andes, during his military campaigns for the liberation of Chile and Peru.



THE NATIONAL HOLIDAYS OF THE AMERICAN REPUBLICS

ARGENTINE REPUBLIC.

THE one national holiday in the Argentine Republic, which is there annually celebrated with all the enthusiasm of the American Fourth of July, is the 25th of May, because, nearly one hundred years ago, on that date, 1810, the last Spanish Viceroy, CISNEROS, was deposed by the patriots of Buenos Aires and republican institutions inaugurated by a revolutionary junta or provisional directory assuming the reins of power until popular elections could be held and a general constituent congress of the La Plata Provinces, as the Argentine territory was then designated, could be convoked. In due time this Congress assembled in the picturesque tropical city of Tucuman, in northern Argentina, and, on the 9th of July, 1816, issued, in the name of the "United Provinces of the Rio de la Plata," a stirring Declaration of Independence.

The history of the birth of representative government and republican institutions in the Argentine Republic is replete with interest. The antecedent causes of the Argentine Revolution of May 25, 1810, may be traced back to the British invasion of the La Plata region and the temporary occupation of Buenos Aires City in 1806 and 1807, and also to the subjugation of Spain in 1808 by the French armies of Emperor NAPOLEON I and the long captivity in France of the legitimate though imbecile Spanish sovereign, FERDINAND VII.

Under three centuries of Spanish rule and colonization the Viceroyalty of Buenos Aires had enjoyed a dormant, unprogressive existence until it was suddenly aroused by the unexpected arrival at the mouth of the Plata River of a British fleet of 6 war ships and 310 guns, on the 10th of June, 1806. The city of Buenos Aires was practically defenseless, and as the Spanish Viceroy SOBREMUNTE completely lost his head, an improvised defense had to be maintained by a French naval captain, SANTIAGO LINIERS, and a young Argentine militia captain, MANUEL BELGRANO, who was later to become famous in the annals of his native country. Under these circumstances it was easy for the British Admiral CHARLES BERSFORD to land an attacking force of 1,600 to 1,800 men, and, on the 27th of June, 1806, to capture Buenos Aires.

The British, left now in undisturbed possession, introduced beneficial reforms, among others, the establishment of the first printing press in Argentina. The native population, however, still remained loyal to the mother country, Spain, and symptoms of discontent quickly began to manifest themselves. A month had not elapsed before a revolt was organized by Captains LIXIER and BELGRAXO; assistance was secured from Montevideo, and, on the 10th of August, a decisive action was fought, which proved disastrous to the British. Next day LIXIER penetrated into the city, and on the 12th Admiral BENEFORD was compelled to make an honorable capitulation, after having lost 300 killed, 1,200 taken prisoners, 35 cannon, and 1,000 rifles. An Argentine heroine, MANUELA LA TRUCUMÁN, distinguished herself in this battle.

Naturally, when news of this humiliating disaster reached London, Great Britain, smarting at the thought that untrained Argentine militia had inflicted such a blow to her prestige, determined to take adequate measures to recover what had promised to become for her a valuable South American acquisition. Accordingly, a powerful British fleet transported, by way of the Cape of Good Hope, an expedition of 10,000 veteran troops of the line, under Lieut. Gen. JOHN WHITELOCKE.

The first action on the part of the British, on again entering, from the Atlantic, the mouth of the estuary of the Plata River, was to besiege Montevideo City, 120 miles west of Buenos Aires, which was effected on the 3d of February, 1807, although the Argentines had already dispatched thither a relieving army of 2,000. As soon, however, as news of this reverse was brought to Buenos Aires the enraged inhabitants, with the cordial cooperation of the Cabildo, or City Council, summarily deposed the incompetent Viceroy Someremonte (February 10, 1807), and made Captain LIXIER their commander in chief, with BELGRAXO as his lieutenant. The latter now showed himself very energetic and ordered a general enlistment of all citizens capable of bearing arms, and, under the most severe discipline, organized a new regiment, called the "*Patricios*" or "*Patricians*," whose white and light-blue uniforms were later to suggest the colors of Argentina's national banner.

Meanwhile, the British, who now had at their disposal 12,000 troops of all arms, were equally active. Their commander, Lieutenant-General White Locke, advanced rapidly toward Buenos Aires, and had his first action with the Argentine patriots on the 2d of July, 1807. This skirmish proved disastrous to the latter, but they were favored, in their retreat, by heavy rains and muddy conditions, as well as by the blunders of the British commander in chief, who, in attempting to take the city by assault, divided his forces into three detachments, operating from the north, south, and west to east. The

British attacking army consisted of 6,200 men (July 3), which succeeded in penetrating a considerable distance into Buenos Aires, then containing 45,000 souls. The heroic inhabitants maintained a desperate defense, hurling down stones and pouring boiling water from the flat-roofed houses upon the foreign invaders with such effect that the latter were forced to beat a hasty retreat.

The contest between the contending armies continued until the 6th of July, when an honorable capitulation was granted by General BELGRANO to the discomfited British, who had lost more than 1,000 prisoners and about 2,000 killed and wounded, or virtually one-fourth of the 6,200 troops making the attempt to recapture Buenos Aires.

One of the results of this glorious "Reconquest" was the public emancipation, with imposing ceremonies, of 70 negro slaves, chosen by lot out of 686 slaves who had gallantly aided in the defense of Buenos Aires.

A new era was dawning upon this La Plata region of South America. Self-reliance and a latent yet growing feeling of independence were spreading among the Argentine patriots, who, left unprotected by Spain, had rescued their native country from a most formidable foreign invasion and had won the respect of the mightiest empire in the world. They were, therefore, in no mood to accept tamely the result when slow-going sailing vessels from Europe brought the news that French armies had in 1808 overrun Spain, deposed the lawful sovereign FERDINAND VII, and placed JOSEPH, the brother of NAPOLEON I, upon the Spanish throne.

For the time being, the Argentines were content to form a regency, governing nominally in the name of FERDINAND VII, but it soon became apparent that the old colonial régime must terminate. With this end in view, the republican minority, led by BELGRANO, Doctor MORENO, and several others of the most cultured members of Buenos Aires society, entered into a conspiracy, won over to their cause the Patriotic and other native regiments, and, on the 25th of May, 1810, made a formal written demand upon the weak and vacillating Viceroy CISNEROS, the last representative of Spanish sway, that he should instantly resign. The latter hesitated for a few hours, but, perceiving the uselessness of an armed conflict with the entire population of the capital, yielded to the inevitable, and surrendered his power into the hands of the new provisional republican junta or committee of directors.

On that auspicious day, Argentina began her heroic war for independence against the might of Spain, and fifteen years later, together with her sister Republics in Mexico, Central America, and South America, became free and independent, with full opportunity to develop along the lines of enlightenment and prosperity.

It is no wonder, then, that the Argentine Government has determined to celebrate the centennial of her birth as a nation by holding in Buenos Aires a great Pan-American Educational Exposition, which will be opened on the 25th of May, 1910.

THE NINTH OF JULY—ITS SIGNIFICANCE AS A NATIONAL HOLIDAY IN THE ARGENTINE REPUBLIC.

Two national holidays are annually celebrated in the Argentine Republic—the 25th of May and the 9th of July. On the former date, in the year 1810, the patriots of Buenos Aires compelled the last Spanish viceroy, CISNEROS, to resign, and established a provisional republican independent government. Then and there Argentine independence was born, but it was not to be maintained except at the cost of a prolonged and sanguinary war against Spain. The Argentines had, however, the courage of their convictions, and, on the 9th day of July, 1816, their first National Constituent Congress assembled in the picturesque city of Tucuman, northern Argentina, and issued a stirring declaration of independence, making the following remarkable prophecy concerning the future prosperity and greatness of the Argentine Republic:

Vast and fertile territories, varied and benign climates, abundant means of subsistence, treasures of gold and silver through an immense stretch of territory, and fine productions of every kind will attract to our continent innumerable thousands upon thousands of immigrants to whom we shall open a safe place of refuge and extend a beneficent protection.⁹

Bearing in mind the circumstances under which the Congress of Tucuman issued its Argentine Declaration of Independence, their action was an exhibition of sublime faith and courage, because, in 1816, the fortunes of the patriots throughout Latin America, from Mexico, Venezuela, and Colombia on the north, down to Chile and Argentina in the south, had reached their lowest ebb. Spain was apparently the undisputed mistress of the situation both upon the seas and on land. Her large, veteran, well-equipped and armed royalist armies occupied nearly every strategic point of vantage in the vast continent of Latin America, with the exception of Brazil, which then was a colony of Portugal. So desperate was the situation for the patriots that it seemed very doubtful whether the Argentine armies could successfully protect their native country from the incursions of the Spaniards issuing from the lofty Andean mountain

⁹ Tierras inmensas i feraces, climas variados y benignos, medios de subsistencia abundantes, montes de oro i plata en estension interminable, producciones de todo género, esquisitas, atraerán á nuestro continente millares i millares sin número de jentes, á quienes les abriremos un asilo seguro i una proteccion benéfica.

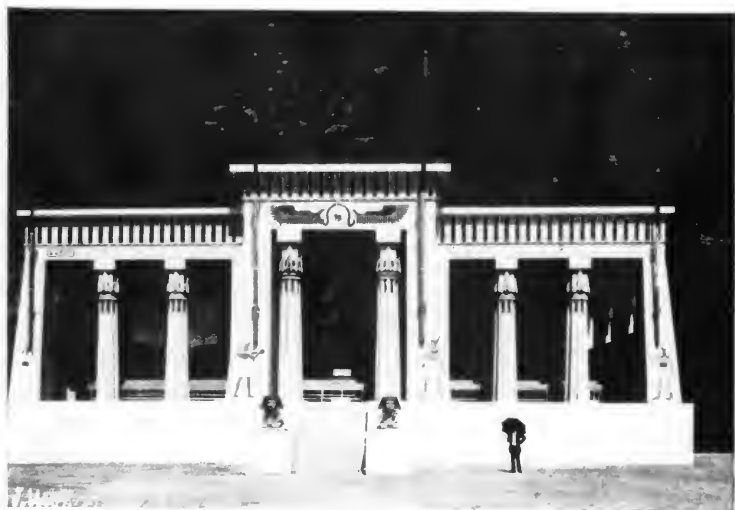
passes of upper Peru (now Bolivia) to the north and of Chile to the west of the Argentine Republic.

There is no doubt that the wisdom, foresight, and courage of the Argentine statesmen assembled in the Congress of Tucuman contributed powerfully in rescuing the cause of liberty and enlightenment in Latin America, when, on the 9th of July, 1816, they adopted the Argentine Declaration of Independence, and proclaimed to the world that Argentina was to become, in fact as well as name, a free, republican, sovereign nation. The future brilliant victories of the great liberators BOLIVAR, SAN MARTIN, and SUCRE were rendered possible, and nine years later, in 1825, Spain lost all of her possessions in the New World, with the exception of Cuba and Puerto Rico.

One can, therefore, understand why, throughout the Argentine Republic, the 9th of July is celebrated as a great national holiday.



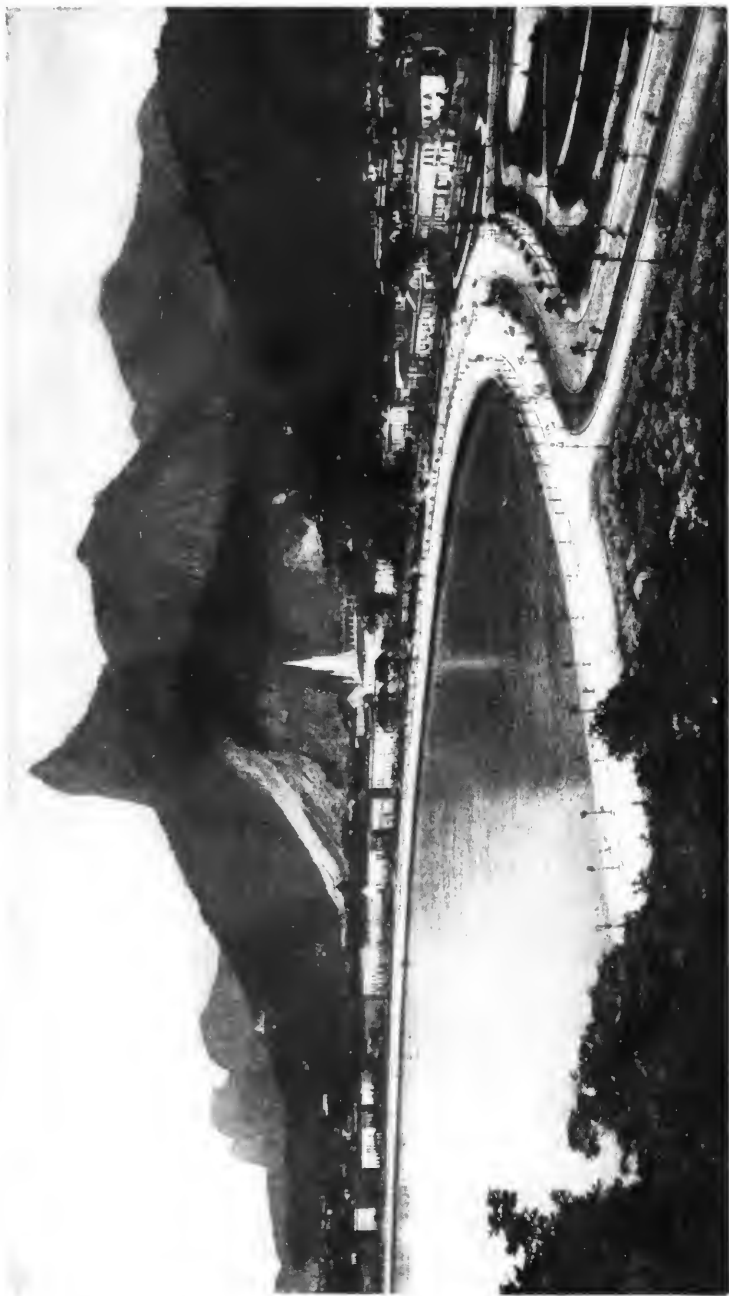
BRAZIL'S NATIONAL EXPOSITION



VERY little was known of Brazil until the last few years, when, suddenly, like Minerva springing from the head of Jupiter, she came to take her place in the foremost rank among the nations of the world.

In the first few years of the Republic little could be done for the aggrandizement of the country at large, each State being fully occupied in adapting herself to the new form of government; but even during the revolt of ninety-three, the only one in the history of our great Republic, a great impulse was given both to industry and agriculture. Slowly but surely the giant awoke from her sleep! Perhaps the evolution was not as rapid as that of her great sister Republic, but once having set her foot upon the upward march she has taken "Excelsior" for her motto, and thanks to the energy of a chosen band our country occupies to-day the place which is hers by right, in virtue of her size, geographical position, and the innumerable riches with which nature has endowed her.

To commemorate the hundredth anniversary of the opening of her ports to the commerce of the world, which was decreed in the reign



SUBURB OF BOTOFAGO, RIO DE JANEIRO, BRAZIL.

This suburban residence section fronts on Botafogo Inlet, an arm of Rio de Janeiro Bay, circular in form and having a very narrow entrance. Botafogo was first designated as a summer resort by the illustrious residents of the city. The inlet is now a harbor for yachts and motor launches, and now it completely occupies the territory formerly dotted with widely separated settlements. The inlet affords safe anchorage for the largest vessels.

of Joux VI. Brazil wishes to show to all nations the progress she has made in all the arts and industries, and in no better way could she prove this than by the great exposition which was opened on August 11, 1908.

The Praia Vermelha (red beach), one of the most picturesque spots in Rio, had been chosen as the site of the great exhibition after much



ENTRANCE TO THE EXPOSITION GROUNDS.

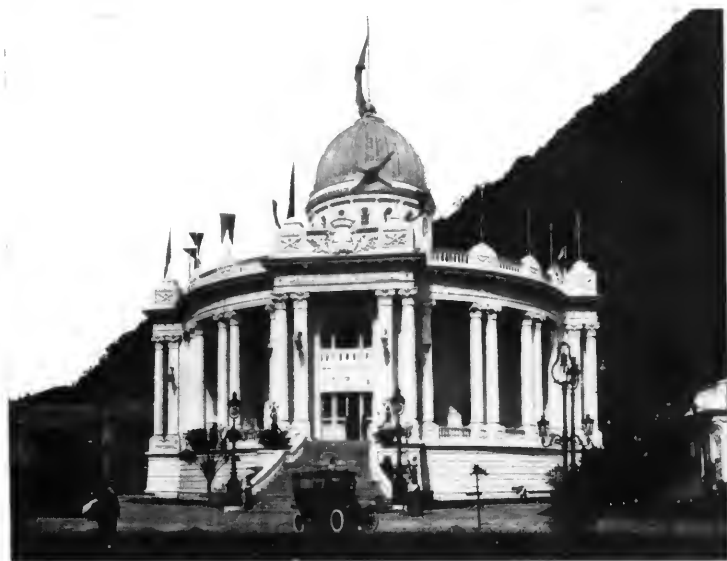
This monumental gateway was designed by Renê Barbá, a well-known Brazilian architect.

discussion. Many were in favor of more central points, but the Brazilians, ever sentimental, found that the everchanging sea was the most fitting frame for the fair White City, which, in an incredible short space of time, was erected upon the sandy beach.

Night and day thousands of men plied their work with but one thought to animate their brain, to nerve the muscles of their arms—

to show to all the world what Brazil has achieved and what her sons can do. All party spirit was laid aside, all the twenty-one States of this great Republic worked harmoniously together, from the giant State of Amazonas to the smallest one, Sergipe—even the newly acquired territory, Acre, joined hands to make the exhibition a great and perfect success.

Nothing could be more beautiful than the chosen spot: in the background the great dark mountains, the Babylonia and Urea, raise their heads to the sky; the Sugar Loaf, of world-wide fame, stands as a sentinel at the entrance of the bay, the waves of the



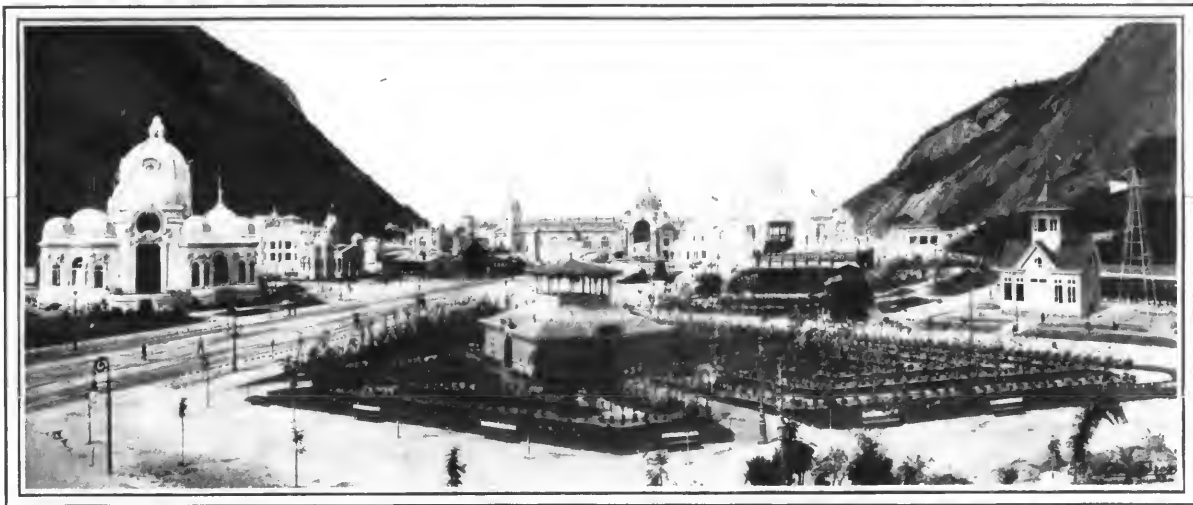
FEDERAL DISTRICT BUILDING.

vast Atlantic lap the shore, and during the night the searchlight flashes over land and water.

The exposition occupies a space of over 200,000 square meters.

The mode of ingress for pedestrians is the large archway, which is lit by thousands of electric lights, and when illuminated by night the myriads of colors give the impression of an enormous rainbow.

As one enters, at the right is a large building in which are exposed the many products of the various industries of the different States of Brazil. Upon entering the largest room the first thing to strike one's view are the reproductions in miniature of the great *Dreadnoughts* which before long will join our Navy. The principal room offers



PANORAMA OF A SECTION OF THE NATIONAL EXPOSITION GROUNDS.

In the foreground is the Botanical Garden Pavillon. To the left is that of the São Paulo, and to the right the Federal District Pavillions. The Textile Industries Building is in the background.



THE TEXTILE INDUSTRIES BUILDING.

This monumental structure, surmounted by a statue of Fame, is the remodeled Military Academy.



THE BANGÚ FACTORY BUILDING.

This building was erected by the Bangú Textile Mills for the exhibit of its products.

a fairy-like spectacle—thousands of diamonds, topazes, rubies, amethysts, all found in our mines, sparkle behind great plates of glass; other show cases are filled with unique and rare minerals, gold dust, etc.

Among other things worthy of note is a collection of jewelry of great historical value.

Large figures of bronze stand around and fine paintings decorate the walls.

Coming into the next rooms one could fancy oneself in a large Parisian *atelier*; every article of feminine apparel is to be found here.



THE SÃO PAULO PAVILION.

The São Paulo Building stands next to that of Minas Geraes, and covers an area of 4,593 square feet. It is one of the finest buildings of the exposition.

from the dainty hat decked with the bright plumes of Brazilian birds and flowers of home manufacture to the tiny Louis XV shoe.

But the male sex has not been forgotten; everything to clothe the human form divine is displayed here.

One section is given up entirely to furniture; the different woods of Brazil are shown here in all their beauty, and great taste has been displayed, and some of it has been purchased by an English nobleman to adorn his castle in old Albion.

It would take too much space to describe each section in full; indeed, it were hard to decide to which branch of industry to award the palm, where all have done their best.



RESTAURANT "PÃO DE ASSUCAR."

The restaurant is situated at the northern end of the esplanade, *Praça Vermelha*. In the background is the Pão-de-Açúcar (Sugar Loaf), one of the natural features of the Exposition grounds.

The larger States, such as Bahia, Minas, São Paulo, have erected artistic buildings, in which, on alternate nights, sumptuous balls, concerts, and receptions are given.

The one of Bahia, although the smallest, is by no means the least beautiful; two winding stairs lead up to a spacious terrace from which the view at night is like unto the Arabian nights.

The pavilion of Minas is the highest, with a large tower where thousands of lamps cast their light over the whole ground.

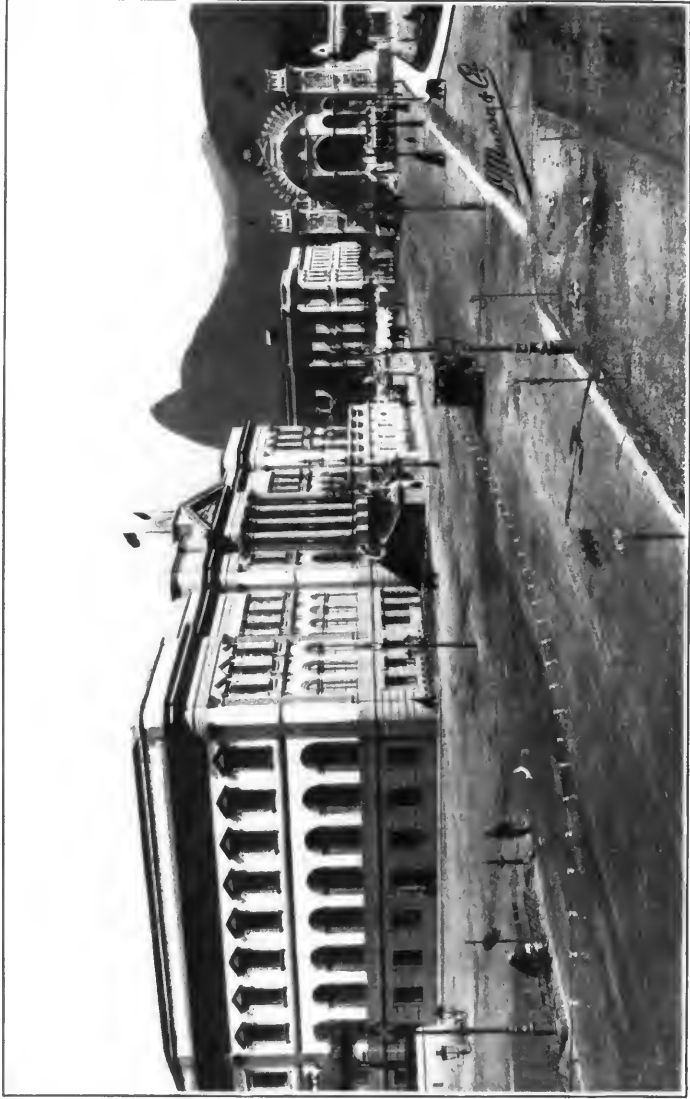
The building in which São Paulo displays her vast wealth is of great artistic beauty, reminding one of an oriental mosque.



THE EXPOSITION THEATER.

The theater has a seating capacity of about 750. Its interior decorations are original and pleasing.

The only foreign nation represented here is Portugal, the home of our ancestors. As one enters within the portal of the "Annex," the name given to one of the Portuguese buildings, the first thing upon which one's eyes rest is a life-size painting of the murdered KING CARLOS. The unfortunate monarch had accepted the invitation to visit our exposition, and the thousands of his subjects living in Brazil had rejoiced in the prospect of seeing their beloved monarch in their midst. But, alas, it was not to be! His son, the present KING MAXUEL, sent a picture painted by the royal hands of his departed father, a landscape, a sunny space in a forest which shows him as much an artist as a king.



EXPOSITION PALACE.

The Palace is used for official receptions during the Exposition and for the exhibits of those states which have no special buildings. It was formerly the War University.

The *elite* of Portuguese painters are represented here: portraits, still life, marine views, are all grouped in artistic confusion. It scarcely needs to speak of the beauty of the silverware made in Portugal, only one thing I will mention particularly—the massive loving cup in heavy silver which KING MANUEL sent to President PENNA.



AGRICULTURAL DEPARTMENT BUILDING.

The vast rooms of the former military academy, now transferred to the State of Rio Grande do Sul, are hung with draperies of silk, linen, and cotton goods of multifarious colors. Nearly everything which man needs is to be found within those walls. Seated in one corner, girls are seen stitching cravats; in another, men are weaving

hammocks, here the shoemaker plies his trade, there the bookbinder binds his books: a small world within a large one.

What is this large white building which first strikes our view upon entering the grounds? It is the building of the Federal District, and in size and beauty would honor any capital of the world.



THE MINAS GERAES BUILDING.

A stately and solidly constructed building, expressing the power and wealth of the great central State. It was designed by the Brazilian architect, Rebecchi.

A building reminding one of a Swiss chalet is filled with the flora of Brazil: another is dedicated to pisciculture, and in a large aviary thousands of birds display their bright plumage: near by the blooded horses of Rio Grande, horned zebras, prize dogs, and fatted sheep are grouped.

Every amusement is to be found within the precincts of the fair. On the boards of one theater the national drama has its home: a variety show is to be found in another one; different cinematographs



POST-OFFICE AND TELEGRAPH BUILDING.

amuse the crowd, while skating rinks, merry-go-rounds, etc., are preferred by the many children who daily throng the grounds.

Each week there are three *corsos*: Wednesday afternoon the *elite* of Brazilian society, in carriage and auto, drive along the palm-lined avenues of the Exposition; on other days bicycle and horseback riders take the same way.



RESTAURANT.

A rustic restaurant, located at the south end of the terrace of the Textile Industries Building.

Words can not describe the loveliness of the scene when at night all the buildings are illuminated, when thousands of Japanese fireworks ascend to the sky and a multitude of people coming by land and sea promenade the many avenues, merry children drive about in wicker carriages, while military bands discourse sweet music. It seems indeed like an enchanted city.



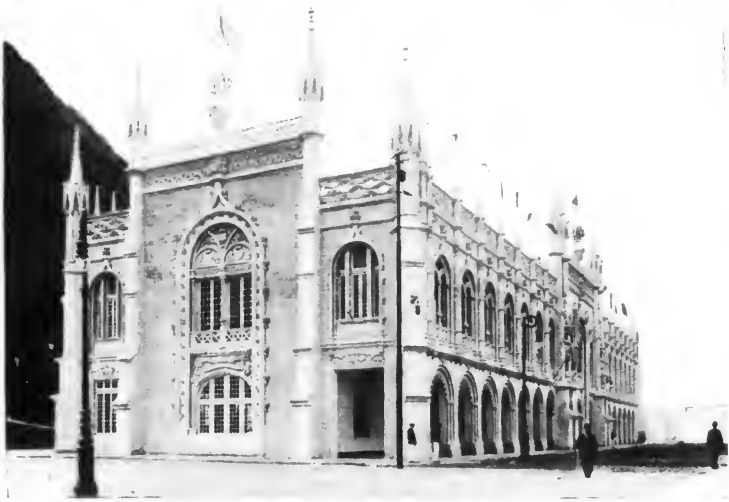
BAHIA BUILDING.

The Bahia Pavilion occupies an area of 51,359 square feet. The exterior is adorned with two majestic statues of Justice and science, and a central group, consisting of figures bearing a shield, representing the State of Bahia.

Let us hope that before long our great statesman, the Baron of Rio Branco, the champion of pan-Americanism, will be able to realize the great desire of the Brazilian people—a vast exposition in these same grounds, in which all American Republics will take part.

HERBERT MOSES.

RIO DE JANEIRO.



THE PORTUGUESE PAVILION.

This pavilion was erected and offered by Brazil to the Portuguese nation for exhibition purposes.

MESSAGE OF THE PRESIDENT OF MEXICO

The Message which President Diaz delivered to the Mexican Congress at the opening of the twenty-fourth session on September 16, 1908, is an interesting review of the affairs of the nation as they exist at the present time.

In regard to foreign relations the Chief Executive says that the relations with foreign nations continue satisfactory, and that there are no pending questions to disturb the public peace.

With respect to the United States, he says:

The Government of the United States of America has given proofs of its friendliness toward us, and in general such questions as have arisen between ourselves and that Government have been satisfactorily adjusted.

Referring to the Central American Peace Court, President Diaz states that—

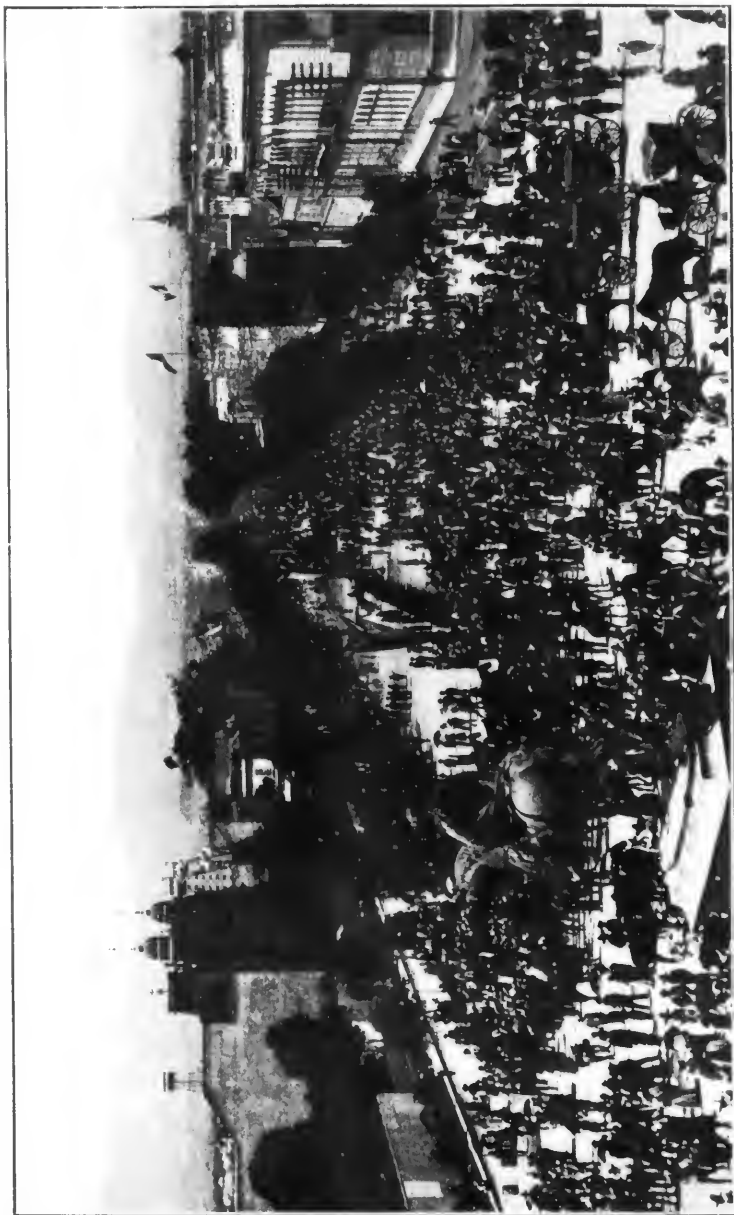
Our Ambassador at Washington was present, in company with an American Commissioner, at the inauguration of the International Court of Justice at Cartago, Costa Rica. As a consequence we have been favored with the visit of a distinguished Special Envoy of the Costa Rican Government, as we had previously had the pleasure of entertaining Commissioners from the nations represented at the Central American Peace Conference.

We hope that the newly-established tribunal will contribute to the maintenance of peace in Central America, and Mexico, for her part, will do all that is possible and proper for the attainment of so desirable an object. With this end in view the Executive consulted Congress as to the establishment of legations in Costa Rica, Honduras, and Nicaragua, and sent the nominations of their personnel to the Senate. The new legations have already been opened, and a diplomatic representative of Mexico is once more in residence at Guatemala City, having charge also of our legation to El Salvador.

Postal conventions have been entered into with some of the Central American States, and an extradition treaty has been concluded with Honduras.

A committee of jurists has been appointed in pursuance of resolutions adopted by the Third Pan-American Conference, to consider the measures that should be taken to carry out the decisions of the three international conferences of American States. In due time Mexico will appoint representatives to the conference to be held in Rio de Janeiro in May, 1909, to draw up codes of international law for the use of the nations of America.

The treaty of arbitration with Italy, signed at The Hague on October 16, 1907, the supplementary convention with Germany amending the convention of May 24, 1892, and Mexico's adhesion to



PASEO DE LA REFORMA ON INDEPENDENCE DAY, CITY OF MEXICO.

Mexico's natal day is the 16th of September. On that date, in 1810, a parish priest, Dolores by name, raised the cry. . . Freedom from bad government," popularly known as "El grito de Dolores." Mexican independence was proclaimed November 6, 1821. Paseo de la Reforma commences at the foot of the wooded hill on which is situated the Castle of Chapultepec, the summer residence of President Diaz, and extends through the center of the city to the Paseo de la Reforma, as far as the colossal equestrian statue of Charles IV., of Spain, the largest in the world. The Paseo is provided with two automobile driveways, two for other vehicles, and sidewalks for promenaders.

(Copyright—Photograph, by Wats.)

the declaration of Paris of April 16, 1856, with respect to maritime law and the abolition of letters of marque, have been promulgated. Delegates have been appointed to attend the diplomatic conference on international maritime law to be held at Brussels in December, 1908.

The field work for a detailed survey of the Valley of El Paso, embracing a radius of some 200 kilometers, has been completed by the mixed boundary commission of the United States and Mexico. Special Commissioners of the two Governments are engaged in investigating the problems involved in the irrigation of the Colorado River Valley, in which both countries are equally interested.

The sanitary conditions of the coast are excellent, and stringent measures have been put in force to combat dangers from yellow fever and other contagious diseases throughout the country. In the war against smallpox, 10,000 persons have been vaccinated, and 6,000 revaccinated between April and the middle of August, 1908.

During the fiscal year an average of 4,124 persons were cared for daily by the charitable institutions of the Republic at a cost of 1,307,000 *pesos*.

The works for supplying the capital with additional drinking water are well advanced, some of the new water being already received in the city, and the construction of additional reservoirs is well under way.

The construction of 3,360 meters of main sewers in the Colonia de la Condesa in the capital prepares the way for the sanitation of the suburb of Tacubaya. More than 15,000 square meters of asphalt, 15,000 square meters of stone pavements, and 10,000 square meters of flagstone sidewalks have been laid during the year in the capital, and ground costing 225,500 *pesos*, needed for public improvements in the City of Mexico, has been acquired by expropriation proceedings.

The congestion of business in the civil courts of the capital has rendered imperative the establishment of a new civil court. The commission for the drafting of the federal code of penal procedure has concluded its work, and the Executive hopes soon to promulgate the new code.

The transactions entered at the Public Registry of Property of the capital during the first half of the present year aggregated 669,439,306 *pesos*, or more than 400,000 *pesos* in excess of the transactions for the first half of the previous year.

A new primary law for the Federal District and territories has been promulgated. Regulations have been issued for medical inspection of schools, and in order to prevent the spread of contagious skin diseases among children it has been decided to create a special school for children suffering from ringworm in which suitable treatment will be given to such pupils. There are at present 45,439 chil-



RURALES, MEXICO.

The Rural Police force was formed for the purpose of ridding the country of outlaws at a time when Mexico was overrun by bandits and robbers. Having fulfilled this duty the organization was continued in the service of the Federal Government to enforce the laws and maintain order throughout the Republic. The force consists of some 2,000 picked men, alike renowned for their fine appearance, good conduct, and splendid horsemanship. It is divided into 10 corps of 200 troopers each, stationed at various points.

dren of school age in the City of Mexico, some of whom do not attend school, and the Government is taking the necessary measures to see that all of these receive the proper instruction.

The Government is giving special attention to the operation of normal schools, and has taken measures for the erection of new buildings and the securing of a higher standard of efficiency in the education of teachers of both sexes.

The Bacteriological Institute continues to prepare vaccine and serum, for overcoming smallpox and the plague, for the use of the Superior Board of Health. The Medical Institute has commenced a systematic study of the flora and fauna of the Valley of Mexico. The equipment of schools has been improved, and especially is this true of the primary and normal schools, the manual training schools, and the scientific schools and colleges of the capital.

The class of ethnology of the National Museum has made important expeditions to the States of Tamaulipas and Veracruz for the purpose of studying the indigenous races of those regions the class of archaeology of the Museum of Zacatecas has investigated that subject in said State, and a group of pupils in the vicinity of the burning well of Dos Bocas have been sent to observe that phenomenon and the manner of combating it.

A new building has been erected and equipped for the School of Arts and Trades for Women, and the departments of archaeology and history in the National Museum are being enlarged. The exploration of the pyramids of Teotihuacan continues, and a railway line to haul away the débris has almost been completed.

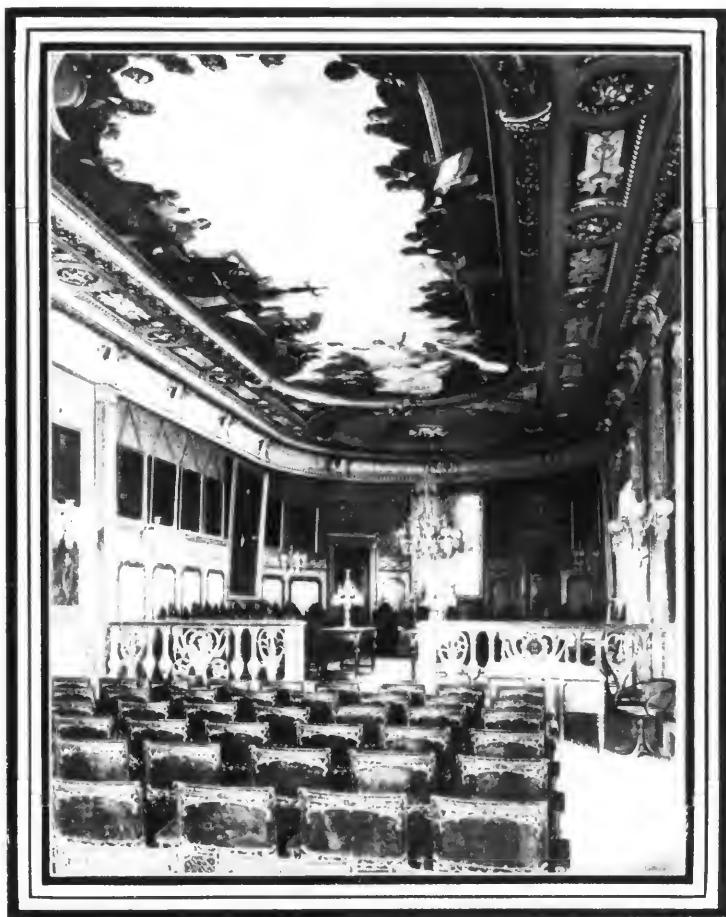
The Government has appointed delegates to the First Pan-American Scientific Congress, to be held in Santiago, Chile, in December of the present year, as well as delegates to the first International Congress of Moral and Social Training, held in London in September, 1908, and delegates to the International Congress on Tuberculosis, held in Washington from September 21 to October 12, 1908.

The Executive has also appointed delegates to a committee to make preparations for the foundation of an international institute to inquire into the causes and cures of mental diseases, and as chairman of the Mexican committee of the First International Congress of Administrative Sciences, which will be held at Brussels in 1910, he has appointed the present Minister of Finance, and will appoint delegates to the Third International Congress of Family Education, which will meet in Brussels in 1910.

The Government has accepted an invitation to have an exhibit in the Exposition to be held in Boston from October 5 to 31, 1908.

From January to June, 1908, the Department of Fomento issued 831 title deeds for land, covering 336,562 hectares, which yielded to the Federal Exchequer 175,392 *pesos*.

The work of completing a general map of the Republic is being encouraged by the Administration, and the hydrographic map of the State of Nuevo Leon, the first of a series which it has been decided



SESSION HALL OF THE MUNICIPAL BUILDING, MEXICO CITY.

This assembly room was recently remodeled and embellished under the supervision of a committee of noted architects and engineers of the Republic. The walls are decorated with oil paintings of Mexico's illustrious men, and on the ceiling is a fresco portraying every governor of the country during the suzerainty of Spain. The City Hall has occupied the same location since 1532, but the present structure was erected in 1721, at a cost of \$68,000.

to prepare with a view to the acquisition of a better knowledge of the rivers of the country and the utilization of their waters, has been finished.

A commission is now studying the flora and fauna of the Republic in the State of San Luis Potosí, and will proceed from that State to the States of Nuevo León and Veracruz.

Networks of meteorological stations have been established in the States of Sinaloa and Sonora, and observations were taken of the eclipse of the sun on June 28 last.

The mining titles issued from January to June, 1908, numbered 3,600, and covered an area of 58,781 hectares. These, added to those issued during the first half of the fiscal year, make a total of 6,600 title deeds, covering 119,634 hectares.

The Geological Institute has made topographical surveys of different formations of a considerable part of the State of Oaxaca; has completed an examination of the Peninsula of Yucatan and of the Verde River, in the State of San Luis Potosí; has made a hydrographic study of the basin of La Laguna, and has made a report that will form the basis for the construction of a great dam on the Nazas River.

The agricultural stations at Ciudad Juárez and Rio Verde have done important work concerning the improvement of the breeds of domestic animals and the production of new crops. A central board of forestry has taken an active part in the planting of trees in the neighborhood of the capital, and has studied a project for the formation of an artificial dune, planted with trees, near the city of Veracruz.

Stock raising has been encouraged, and concessions have been granted to the Coyocan association to hold periodical shows for the exhibition of stock, and 58,000 *pesos* has been appropriated for prizes and expenses of cattle and horse shows.

From January 1 to June 30 of the present year, 525 patents of invention and 12 for industrial designs were granted. The trademarks registered numbered 511, commercial announcements 3, and commercial names 32.

Waterworks for Coatzacoalcos have been completed, and 850,000 cubic meters of earth have been removed from the port by dredging. The port of Salina Cruz has been dredged to a depth of 10 meters at low water, and improvements have been made to the dry docks and drains of the city.

The railways under Federal control number 18,809 kilometers which, plus 4,840 kilometers under the jurisdiction of the States, makes a total of 23,649 kilometers of railways in the Republic.

There are 2,934 post-offices in the Republic, which handled during the fiscal year 195,000,000 pieces of mail matter, issued 50,955,000 *pesos* in domestic postal drafts and 5,237,000 *pesos* of foreign postal drafts. The total earnings of the post-office department for the last fiscal year were 4,200,000 *pesos*.

The total length of the Federal telegraph system is 62,412 kilometers.

The receipts from customs duties for the fiscal year ended June 30, 1908, were a little more than 54,000,000 *pesos*, and the total revenues of the Republic were 110,000,000 *pesos*, approximately.

The National Railways of Mexico have induced the holders of shares and bonds of the National and Central Railways, to surrender the securities of those companies which have their domicile in the United States in exchange for securities of the new company domiciled in Mexico, and the public issues of bonds of the new company have been largely oversubscribed in foreign cities where they were offered to the public.

At the invitation of the Government of the United States, a physician and surgeon has been appointed to attend the annual meeting of the Association of American Military Surgeons which will take place in Atlanta, Georgia, in October, 1908.

In conclusion the President says:

What I have told you will prove that the Executive has spared no effort to keep all the departments of the Administration on the path of progress along which for years past they have traveled to the greater welfare of the Republic. This auspicious condition is the result of the order and peace which the country enjoys, and nothing can deprive it of those benefits while that order and peace endure. * * * We may therefore trust, placing as ever our reliance on the good sense of the Mexican people and the enlightened patriotism of the legislators, that the prosperity of the Republic will endure and wax greater as the years go by.



INTERNATIONAL CENTRAL AMERICAN BUREAU

THE International Bureau of the American Republics was informed on September 15, 1908, of the inauguration on that date in the capital of Guatemala of the International Central American Bureau. This institution is one of the practical outgrowths of the Central American Peace Conference held in Washington in the closing month of 1907, and has as representatives from the various countries of Central America the following delegates:

From Costa Rica, RICARDO J. ECHEVERRÍA; from Salvador, CARLOS GUILLÉN; from Guatemala, JOSÉ PIXTO; from Honduras, MANUEL P. BARAHONA; from Nicaragua, BENJAMÍN F. ZELEDÓN.

The President of Guatemala was present at the imposing ceremonies which marked the opening of the Bureau, and the occasion was made one of public rejoicing.

The object of the Bureau is to develop, supervise, and care for the common interests of the five Central American Republics, such, for instance, as to combine every effort toward the peaceful reorganization of Central America; to impress upon public education in the different countries an essentially uniform, broad, complete, and practical Central American character in accordance with the modern pedagogical tendency; to develop Central American commerce, and all that may tend to make it more active and profitable, and to advance agriculture and industries that can be developed to advantage in the different sections of the Republics.

Other important functions of the Bureau are to make uniform, civil, commercial and criminal legislation, recognizing in so doing, as a fundamental principle, the inviolability of life, respect for property, and the sacredness of the personal rights of man. Uniformity in the system of custom-houses, in the monetary system with a view to securing a fixed rate of exchange, in general sanitation, and especially the sanitation of Central American ports, and uniformity in the system of weights and measures, will receive the careful attention and consideration of the Bureau. The question of the definition of what constitutes real property in such a manner that it will serve as a foundation for credit and permit the establishment of mortgage banks, is also one of the important subjects within the scope of the Bureau.

The Bureau is composed of five delegates—one from each of the Central American States—and is empowered to make all provisions of internal regulation that may be conducive to the proper fulfillment of the mission of maintaining and developing the Central American interests that may be placed under its care and supervision. Every six months the Bureau will make a detailed report to each of the Governments, showing what it has accomplished during that period. The help of the diplomatic and consular agents of the contracting Governments will be made use of, whenever necessary, in obtaining such data, reports and information as may be considered of use to the Bureau in the prosecution of its work.

The expenses incident to the support of the Bureau will be borne in equal proportions by the signatory powers, and the Bureau will be a medium of intelligence among the Republics in interest, and will do all that it may deem proper, within the scope of its powers, toward the development of the relations and interests of the Central American States. The Bureau will have an organ of publicity in connection with its work, and will endeavor to maintain intercourse with other offices of a like nature, and particularly with the International Bureau of the American Republics in Washington. The convention creating this Bureau will remain in force for fifteen years from the date it was signed, and may be extended for a longer period of time at the will of the contracting nations.

PAN-AMERICAN SCIENTIFIC CONGRESS.

Señor AUGUSTO VICIÑA, of Chile, Pro-Secretary of the Committee on Organization of the Pan-American Scientific Congress, which meets in Santiago, Chile, on December 25 next, has an article on the Congress in the August number of the "*Revista de Derecho, Historia y Letras*," of Buenos Aires, a translation of which is given below.

AMERICAN AND EUROPEAN MENTALITY.

The interest growing from day to day which the coming Pan-American Scientific Congress awakens among thinking men and in public opinion of the American countries exceeds greatly that taken in the brilliant Latin-American assemblies which met in Buenos Aires, Montevideo, and Rio de Janeiro. This greater interest in the Congress which will assemble in our country is due primarily to the new questions to be worked out on this continent, which the Congress will present for scientific investigation, and, secondarily, to the enlarged Pan-Americanism given to the Congress by the agreement to invite the United States to take part in the work.

In the congresses of Buenos Aires, Montevideo, and Rio de Janeiro undoubtedly an elevated spirit of solidarity was dominant, since in them participated the most cultivated intellects of the Latin-American Republics, as a crown to whose work an aggregate of principles was enunciated, vital to the political, social, and economic life of these Republics.

The decision by which a Pan-American character has been given to the coming Congress acquired public importance, seeing that this decision will have its part in cementing, upon the basis of mutual understanding and intellectual community, friendship with the United States—a country that now for some time has drawn toward the young American Republics, not in order to satisfy bastard ambitions for territorial annexations or any such like purposes, but in order to offer them its aid in successfully fulfilling the duty of progress laid upon every nation aspiring to hold a place in civilization. So, if the presence of the United States in the sessions of the Fourth Scientific Congress shall contribute to give to that assembly greater prestige than was enjoyed by former assemblies, or, if it gives greater weight to the votes and decisions of the Congress, all of this will constitute simply a gain for the American countries.

In regard to the countries foreign to America the coming Congress would be remiss if it raises not a standard destined to mortally wound prejudices and false ideas that have kept us for nearly a century subject to an intellectual slavery in which Europe has dominated and influenced us with its laws, customs, history, and literature. From time to time the voice of some far-seeing statesman has been raised on the virgin soil of America warning its people of the great danger that would come to them in accepting blindly this political, social, and economic literature which Europe has dumped upon us. Useless labor!

Here no one lends ear to the warnings of those who, appreciating and esteeming highly the intellectual aid which Europe proffers us, wish at the same time to take an inventory of what we are receiving, in order to choose what agrees with us and to refuse what does not accord with our social organizations, our customs, the traditions which dominate us, and with our education which, finally, is the regulator of progressive capacity.

It was necessary that the American nations sift out all the solutions which to their political, social, and economic organization are offered by the countries of monarchical institutions, like England; of a great working-class element, like France, and the exporting country par excellence, Germany. It was necessary, we say, that these principles embodied in the institutions of these countries should have been a complete failure, in order that in the end a way is made for the

idea that America must develop its institutions in the light of its history and the peculiar conditions of its social state.

To form an American mentality, to carry to the laws and to the national organism its own breath of life, to trace in the special peculiarities of each people that best for its moral, intellectual, and material perfectionment—here is the beneficent idea which it is proposed to make central at the coming Congress. We are convinced that this idea must rule, for it is the only means of accomplishing through the adoption of rational laws based on experience, the purification of our political and administrative system, and the securing of a fixed economic policy.

At present everything tends to clear the road, in order that the intelligence of the three Americas may join efforts so as to bring to the solution of all these problems a criticism cool, independent, and entirely free from the imposition of a foreign medium.

Once the absolute supremacy of European ideas and criticism in regard to the interests of the people of Columbus's world was applicable. The enmities and jealousies which kept these peoples apart, want of communication between them, the difficulty of intellectual commerce, precursor of material commerce—all this conjunction of circumstances worked so effectively that Europe was for nearly a century the schoolmistress who gave us her primers on political organization, her tracts on political economy, and her texts on pedagogy. Our speakers in Parliament in enlightening public opinion leaned upon the authority of BLUNTSCHIL, STUART MILL, ADAM SMITH, and others.

To-day all is changed. Very powerful currents of cordiality circulate through the American organism; thinking men from the southern half of the continent draw together with men of the northern half, inspired by a sincere purpose to study together the questions which concern the common country, America, until now in the grip of prejudices retarding its march toward progress.

The creation of an American mentality constitutes a menace to no one, nor is it a formula to bring into being political alliances formed for aggressive purposes. No; America acknowledging the services it has received, and is receiving from Europe, can do no less than absorb into its nature ideas and opinions which suited to the ideas and opinions gained from our own leaders of thought, shall form a body of doctrine which will more and more elevate us in the world concert. Chile may justly feel proud of the movement she has initiated.

The enlarged Pan-Americanism of the Congress, as also the special recommendation involved in the idea that on our continent are a series of problems which can not be solved by the same criterions with which Europe would solve them, are opinions formulated by the

Committee on Organization. It is not, then, as some have believed, the carrying out of resolutions agreed upon by the last Congress.

It is very gratifying to take note of the enthusiasm with which the United States has received the idea of the Congress. That country will take part in the assembly, not only represented by a large and select delegation, but with an active and enlightened propaganda through public opinion.

The Fourth Scientific Congress, the First Pan-American, will have, in conclusion, to cement upon granite bases the union of these peoples, not to flamm the sinister trappings of a condition of armed peace, but in order to give an example to the world that there is no victory nobler than that obtained in subjecting the natural elements to the cause of human progress.

THE VEGETABLE IVORY OF COMMERCE.

Ivory nuts, popularly called vegetable ivory, are the fruit of the *Phytelephas macrocarpa*, a species of palm, and they are known in France and Spain as corozo nuts and in Colombia as tagua nuts. The trees require fifteen years or more before they can properly mature nuts for manufacturing purposes. Vegetable ivory is used commercially for the manufacture of buttons particularly, gaming counters, various electrical appliances, and for various kinds of inlaid work, for which they are turned or carved.

The Central American Republics generally grow and export ivory nuts, but the business is particularly important in Colombia, Panama, Ecuador, and Peru. Prices quoted at present, goods delivered in European ports, are: Guayaquil decorticated, 55 to 60 *francs* per 100 kilograms (\$10.61½ to \$11.58 per 220 pounds); Panama, North Colombia nondecorticated, 20 to 23 *francs* per 100 kilograms (\$3.86 to \$4.44 per 220 pounds); Guayaquil, Tumaco, South Colombia, 30 to 35 *francs* (\$5.79 to \$6.75½) per 220 pounds nondecorticated; or 40 *francs* (\$7.72) per 220 pounds decorticated. The decorticated nuts sometimes reach the high price of 70 *francs* (\$13.51).

The chief ports of shipment are Colon, in Panama, and Cartagena and Tumaco, in Colombia.

The chief consuming countries of this article are France, England, Germany, the United States, Italy, Russia, and Spain. The port of Cartagena in Colombia alone exported ivory nuts in 1907 to the following extent in tons: Germany, 3,423; France, 505; United States, 441, and England, 53. These shipments all originated in the Departments of Bolivar, Magdalena, and Atlantico on the Atlantic coast and Cauca on the Pacific coast.

ARGENTINE REPUBLIC

TRADE DISTRIBUTION. FIRST HALF OF 1908.

In the total foreign trade of the Argentine Republic for the first six months of 1908, imports figure for \$131,273,361 and exports for \$223,076,267. The proportion contributed to the import list by the leading participating countries was as follows:

Great Britain, 41 per cent; the United States, 17.1; Germany, 15.4, and Italy, 10.4 per cent, increased ratios being noted for all countries mentioned, with the exception of Germany, as compared with the corresponding period of the preceding year.

Of the exports, 14.5 per cent was sent to Great Britain; 11.9 to France; 13 to Germany; 11.4 to the United States, and 43 per cent was credited to "orders."



BANCO HIPOTECARIO, LA PLATA, ARGENTINA.

La Plata, the capital of the province, is 33 miles by railroad from Buenos Aires. The large and magnificent public and commercial edifices harmonize perfectly with the wide, well-paved avenues, crossed diagonally by spacious boulevards, and interspersed with many large parks.

The classification of exports assigns \$55,345,672 to pastoral products and \$163,794,913 to agricultural products, the former showing a decline of nearly \$13,000,000 and the latter an advance of over \$50,000,000 as compared with the same six months of 1907.

BUENOS AIRES BANKS IN 1908.

The report on the status of the banks of Buenos Aires on June 30, 1908, shows deposits of \$21,347,826 gold and \$748,646,037 national

currency; discounts and overdrafts, \$33,506,734 gold and \$678,029,080 national currency, and cash balances, \$35,507,857 gold and \$248,380,975 national currency.

THE MILLING INDUSTRY IN THE REPUBLIC.

The report on the milling industry of the Argentine Republic for 1907, as presented to the Ministry of Agriculture, shows 350 establishments and 991,491 tons of wheat milled. The resultant flour production was 677,536 tons, of which 127,000 tons were exported and 550,336 tons retained for home consumption. The by-products manufactured were bran, 175,339 tons; middlings, 93,038 tons, and pollards, 18,964 tons.

As a result of the modern methods employed in most of the mills the yield of flour has advanced from 64.5 per cent in 1895 to 68.3 per cent in 1907, and as the average of impurities in the wheat is only 2.8 per cent for the whole Republic, evidence is given of the care taken in the selection of seed by the farmers.

Of the total number of mills in the country, 60 were not in operation during the year; 156 employed steam, 52 water power, 103 animal power, and 39 mixed.

In the consideration of the year's work it is found that every 100 kilograms of wheat produced 68.3 per cent flour, 28.9 per cent by-products, and 2.8 per cent impurities.

The location of the various milling establishments is as follows:

Federal Capital.....	19	La Rioja.....	11
Buenos Aires.....	71	Catamarca.....	15
Santa Fe.....	43	Salta.....	29
Entre Rios.....	36	Jujuy.....	15
Cordoba.....	22	Pampa.....	1
San Luis.....	4	Nenquen.....	13
Santiago del Estero.....	24	Rio Negro.....	1
Mendoza.....	17	Chubut.....	4
San Juan.....	25		

During the year the number of mills increased by 47, of which 9 are credited to Salta, 8 to Entre Rios, 6 to San Juan, 5 to La Rioja, 4 to Santa Fe, 4 to Santiago, and other localities in smaller numbers.

MODIFICATION OF CUSTOMS REGULATIONS.

Article 128 of the Customs Regulations of the Argentine Republic has been modified as regards the allowance for error in declaring the quantity and quality of imported goods. Prior to the promulgation of this law, in cases where the customs examination of imported goods revealed that the articles contained in a package were of superior class or quality to or present in larger quantity than that set forth in the declaration for clearance, no penalty was imposed

provided that the difference in value arising therefrom did not exceed 2 per cent, or as regards the quantity of those goods which are dutiable by weight, did not exceed 6 per cent.

The effect of the alteration now introduced is to abrogate the tolerance of 6 per cent as regards quantity and to substitute therefor a tolerance of 4 per cent in the case of the following goods dutiable by weight: Textile materials and manufactures thereof; paper and cardboard; chloride of lime; sugar, tobacco in bales; lime in wooden receptacles; chicory, coffee, and comestibles preserved in salt, in bales or wooden receptacles. All other goods, without exception, become subject to the general tolerance of 2 per cent.

PORT AND MUNICIPAL IMPROVEMENTS AT ROSARIO.

The port improvements inaugurated on a large scale at Rosario will, according to the report of the French company in charge, be completed and officially inaugurated by the close of 1909. The works are sufficiently advanced to provide berths for 15 vessels, and a channel of adequate breadth along the frontage has been dredged so that vessels drawing 24 feet may enter and clear with ease. The entire port can provide loading berths for about 40 vessels and for 20 to 25 to discharge.

The contract price for constructing the port was fixed at \$12,000,000, but it is estimated that, exclusive of grain elevators and other works which the same company is undertaking at a cost of about \$3,400,000, an expenditure of a much larger sum will be entailed. It is proposed, if the consent of the Argentine Government be obtained, to extend the moles on the north side of the city by miting the National and Central Argentine wharfs, thus making the total length of wharfage aggregate about 3 miles.

In connection with the port works on the south side a large grain elevator, said to be the largest and best equipped in South America, has just been erected at a cost of \$1,000,000. Eight large vessels can be berthed alongside to receive grain in bulk or bag, and 1,000 tons per hour can be loaded, while grain can be received from the railway wagons at the rate of 500 tons per hour. Storage facilities of the best type and modern methods for handling, classifying, cleaning, drying, and weighing grain have been installed. The materials used in construction have been supplied principally from France, Germany, and The Netherlands.

An electric tram service is nearing completion in the city, several sections having been opened during 1907. The total extent of trackage is to be 75 miles, the total cost being \$3,600,000.

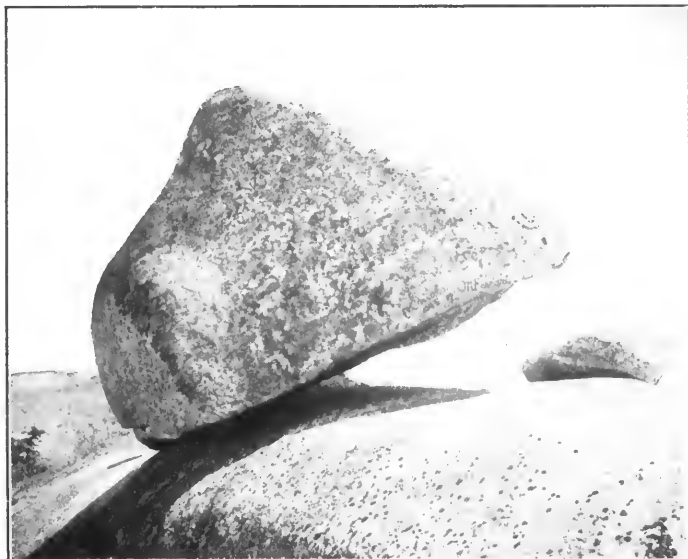
Waterworks and sanitary installations have been greatly improved under the direction of a British company, but the extension of the town calls for improved and extended sewerage works.



PATIO, SAN ROQUE HOSPITAL, BUENOS AIRES.

The city of Buenos Aires contains fifteen hospitals, six of which are primarily for the use of foreigners. There are also numerous other institutions for safeguarding public health, as well as associations of an eleemosynary and civil character for the physical uplift of the large cosmopolitan population of the capital.

Railway connections have been extended and a route opened up from the capital via Rosario to the northern limits of the Province of Santa Fe. On the Cordoba and Rosario line work is progressing and will probably be completed toward the end of 1908. This line will connect the narrow-gauge system with the interior, making it possible to travel via Rosario, Cordoba, Tucuman, and Jujuy to the most northern Provinces, almost to the Bolivian frontier. A new railway, financed by a French company, is to tap an important district of fertile land suitable for agriculture and stock raising, and



ROCKING STONE OF TANDIL, ARGENTINA.

The stone measures 13 feet in height by 16 in diameter and, apparently, is balanced on the crest of a huge mass of solid rock. The phenomenon is explained by the fact of a circular protrusion on the under side of the stone which, fitting snugly into a depression in the foundation, holds it in place. A strong wind causes it to oscillate perceptibly. This curiosity is 205 miles from Buenos Aires, on the main line of the Southern Railway.

connection is to be made between Rosario and Port Belgrano, at which latter point port works are to be erected. Other improvements have been made by the combined railway companies whose lines connect with Rosario.

The population of the city, according to latest statistics, is 160,000, the Rosario district ranking to that of Buenos Aires as the destination of immigrants arriving in the country.

Import valuations at the port of Rosario for 1907 are given as \$31,987,897, as compared with \$29,013,667 in the preceding year, the

exports for the two years figuring to \$36,506,992 and \$46,578,816, respectively. The total movement of the trade of the port in 1907 is given as 2,321,500 metric tons, against 2,862,393 in 1906.

IMPORTATION OF RAILWAY MATERIAL.

The railway material imported into the Argentine Republic during the first half of 1908 largely diminished, as compared with that of the same period of the preceding year. The decrease is due in part to the fact that there remained unused at the beginning of the present year an excess of construction material, rolling stock, and railway supplies imported in former years, and is probably only of a temporary nature, inasmuch as new railways are now being built and many of the old ones improved and extended. As this material is admitted free of duty, the revenues of the nation have not been affected from this cause. The following values, in gold, show the imports of railway material during the first halves of 1904 to 1908, inclusive: 1904, \$4,425,776; 1905, \$37,237,552; 1906, \$11,784,176; 1907, \$23,517,536, and 1908, \$14,071,624.

HARVESTS OF 1908.

The wheat reported for the Argentine harvest of 1907-8 shows a total of 5,238,705 tons, as compared with 4,245,434 in the preceding year, divided among the Provinces as follows:

Province.	1907-8.	1906-7.
	<i>Tons.</i>	<i>Tons.</i>
Buenos Aires.....	2,505,321	2,339,000
Santa Fe.....	1,019,708	653,377
Cordoba.....	1,183,409	849,326
Entre Rios.....	247,796	261,731
Pampa Central.....	207,471	80,000
Various.....	75,000	71,000

The value of the Santa Fe and Cordoba crops is very evident, the two Provinces accounting for nearly three-fourths of the million tons increase noted.

The figures for linseed are as follows:

Province.	1907-8.	1906-7.
	<i>Tons.</i>	<i>Tons.</i>
Buenos Aires.....	324,306	348,643
Santa Fe.....	504,734	288,926
Cordoba.....	110,448	66,425
Entre Rios.....	151,440	116,470
Pampa Central.....	7,012	2,800
Various.....	2,800	2,500
Total.....	1,100,710	825,764

• ARGENTINE REPUBLIC •					
• WHEAT PRODUCTION •					
• BUENOS AIRES •		• CORDOBA •		• SANTA FE •	
1907-8	1906-7	1907-8	1906-7	1907-8	1906-7
2,505,321 TONS	2,330,000 TONS	1,183,409 TONS	849,326 TONS	1,010,708 TONS	653,377 TONS
• ENTRE RIOS •		• PAMPA CENTRAL •		• VARIOUS •	
1907-8	1906-7	1907-8	1906-7	1907-8	1906-7
247,796 TONS	261,751 TONS	207,471 TONS	80,000 TONS	75,000 TONS	71,000 TONS
• LINSEED PRODUCTION •					
• SANTA FE •		• BUENOS AIRES •		• ENTRE RIOS •	
504,734 TONS	206,926 TONS	324,306 TONS	348,643 TONS	151,410 TONS	116,470 TONS
• CORDOBA •		• PAMPA CENTRAL •		• VARIOUS •	
110,448 TONS	66,425 TONS	7,012 TONS	2,800 TONS	2,800 TONS	2,500 TONS

BRANCH LINES TO THE BUENOS AIRES AND WESTERN RAILWAY (LIMITED).

A law has been enacted by the Argentine Congress giving the Buenos Aires and Western Railway (Limited) the right to construct and exploit the following branch lines as a part of its railway system: An extension of approximately 100 kilometers (62 miles) of the railway from Toldos to Roberts and the fifth meridian to the western boundary of the first section of the Central Pampa; a branch from Las Toseas station toward the south to the western limit of the second section of the Central Pampa; a branch from or near Pehuajo station to Tres Lomas, and a branch which, intersecting the company's main line at Mercado Central de Frutas, terminates at Riachuelo. The gauge of the branch lines will be the same as that of the main line. Within twelve months from July 27, 1908, the date of the promulgation of the law referred to, the concessionaire must submit for the approval of the Executive power complete plans and estimates of each of the branches, and construction work must be commenced

within six months from the date of the approval thereof, the concessionaire being liable to a fine of 25,000 *pesos* (\$12,500) if the construction work is not finished within the time specified.

EXPLORATIONS IN PATAGONIA.

Dr. SIGFRIED BENIGNUS, a distinguished German educator and a former professor in the University of Chicago, after a recent exploration trip made by him through the southern part of the South American Continent, although reporting a marked sameness in the outward appearance of Patagonia on both the Argentine and Chilean side of the peninsula as far as the islands of Terra del Fuego, never-



SANTA CRUZ RIVER, PATAGONIA, ARGENTINE REPUBLIC.

Argentine Patagonia is divided into several territorial divisions, the southernmost of which takes its name from the Santa Cruz River which traverses it from west to east through a sheep-grazing country, emptying into the Atlantic Ocean near the port of Santa Cruz. This river preserves an average width of more than 800 feet throughout its course, with a current velocity of 6 miles an hour. The picture shows the camp of a United States meteorological expedition when making observations in this newly settled country.

theless finds a great many variations in the geologic structure, flora, and fauna of the country. Up to the present time, barring a few exceptions, only preliminary investigations have been made in these particular fields of study, so that, from a scientific point of view, there still remains much to be done in the examination of this interesting and largely unknown zone of the southern part of the Western Hemisphere. A special study has been made of the fossils of this region, and more or less conflicting theories have been advanced concerning them.

The Andes in this part of the continent are rich in minerals. Coal is found, though not of a good quality for fuel, due to the fact that it belongs to a comparatively recent geologic age. As to the petro-

lem of Patagonia, it can not be unfavorably commented upon, but, at the same time, no good reasons exist for too highly optimistic views concerning it.

Doctor BEXIGU'S, who is an eminent philologist, regrets that there is no complete history of Patagonia, and especially that no scientific study has been made of the language of the aborigines, the more so when it is borne in mind that some of the tribes seem destined to disappear within a few decades, such, for instance, as the Tehuelche Indians. In Chile, however, excellent investigations and studies have been made of the language of the Araucanian Indians by German missionaries, and the results of their labors have been given to the world.



TIGRE HOTEL, PROVINCE OF BUENOS AIRES.

"Little Venice of Argentina" is the name given to the country in the vicinity of this hotel. The Hotel Tigre is a fashionable summer resort for the elite of Buenos Aires, located about 18 miles by railroad from that city, in the delta land of the La Plata River. Here are the headquarters of the Tigre Rowing Club, one of the largest in the world.

As to the importance of Patagonia from an economic standpoint, it is stated that it is the country *par excellence* for the raising of sheep, horses, and cattle, and that not only the fertile valleys of the Territories of Rio Negro and Chubut are suitable for the growing of agricultural products, but that those of many other districts of that region are equally well adapted to this purpose. Large portions of Patagonia can be easily irrigated, and a great number of valleys at the foot of the Andes Range in that district are covered with luxuriant vegetation.

He found the climate of Patagonia excellent, notwithstanding the cold nights in winter, and the west winds which often blow with considerable violence over the treeless plains. The whole region is practically virgin, and most of the population now there consists of men.

Wherever there is a demand for labor in Patagonia the wages paid are good—higher even than they are in other parts of the Argentine Republic or in Chile. The inhabitants of southern Argentina are anxious for the construction of railroads into their rich and undeveloped territory, and are not only ready and anxious to cooperate in the promotion of railway enterprises in that section of the Republic, but are clamoring for the prompt building of railway lines. Where steamers touch on the eastern coast of southern Argentina good transportation service is afforded. Doctor BEXIGUS believes that properly organized colonies of German agriculturists would be quite successful in southern Argentina and would become a powerful factor in the development of this fertile agricultural zone situated in the extreme south of the Western Hemisphere.

PUBLIC WORKS FOR THE CENTENNIAL OF 1810.

The President of the Argentine Republic has recommended that the Congress enact a law providing for the commemoration of the centennial of the revolution of May 25, 1810, which culminated in the resignation of the Spanish Viceroy HIDALGO DE CISNEROS and the establishment at Buenos Aires of a Provisional Board ("*Junta Provisional*") or Government. The outline of the celebration comprises the erection at the entrance of the port of Buenos Aires of a statue representing the Republic, with the following inscription: "Peace and liberty to all men who wish to inhabit Argentine soil;" the erection in the *Plaza de Mayo* of a commemorative monument to be selected by the National Centenary Commission; the construction of a National Pantheon, or Mausoleum, for the reception of the ashes of the great men of the country; the erection in one of the public parks of the capital of statues of MARAÑO MORENO, BERNARDINO RIVADAVIA, and Admiral BROWN; the erection in the *Plaza de San José de Flores* of a statue of ΠΕΡΑΛΕΩΣ; the erection in the Municipal Plaza of the capital of the Province of Buenos Aires of a monument to the "*Cabildo de 1810*" (Municipal Council of 1810), and the construction in the *Campo de Mayo* of an artificial mound, composed of the soil of that battlefield, mixed with earth brought from the battle grounds of South America where Argentine blood has been spilled, the mound to be surrounded by representations of the bravest troops in the War of Independence, and crowned by an allegorical scene of the patriot army sowing the seeds of liberty and harvesting the fruits of glory.

BOLIVIA

REVENUES COLLECTED IN 1907.

The revenues collected by the Government of Bolivia in 1907, according to a statement published by the Department of Finance in "*El Estado*" of July 24, 1908, aggregated 4,130,161.63 *bolivianos* (\$852,000). The principal items showing increases in the amounts, as estimated in the budget, were customs duties, consular invoices, corporations and mining companies, state telegraphs, patents and trade-marks, post-office boxes, stamps, university entrance and graduating fees, and tax on liquors. The principal items showing a decrease, as compared with the estimates of the budget, are tin, copper, bismuth, gold, rubber, alcohol, mortgage drafts, rubber lands, mining licenses, sealed paper, document stamps, public lands, mining plans, and the Guaqui Railway. The excess of the budget in 1907 over the revenues collected was 416,649.23 *bolivianos* (\$166,640).

ANALYSIS OF SARA PETROLEUM.

The Bolivian Minister of Colonization and Agriculture, some months ago, sent samples of petroleum from the Province of Sara to be analyzed by expert chemists in the United States, who were to report on its chemical composition and industrial qualities. The report received by the Bolivian Government shows that the oil is of first-class quality and it is possible that the petroleum district of the Republic may become a source of national prosperity.

BRAZIL

SANTOS COFFEE STATISTICS.

The coffee market at Santos for the twelve months from July 1, 1907, to June 30, 1908, as compared with the preceding fiscal year shows the following movement:

	1906-7.	1907-8.
	<i>Bags.</i>	<i>Bags.</i>
Entries	15,302,170	7,263,809
Shipments	13,815,918	8,423,132
Sales	(a)	5,256,785
Stock at close of season	2,855,290	701,102

* Not available.



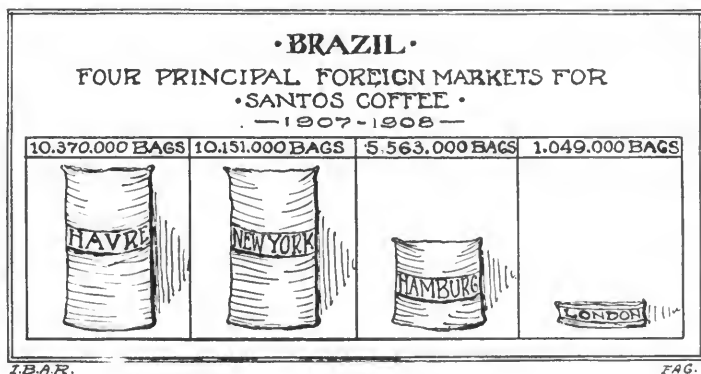
SAN BARTOLOME MOUNTAIN PASS, POTOSI, BOLIVIA.

There are a number of natural passes in the Bolivian Andes, most of them at an imposing height, affording access from one section of the country to the other.

In the four principal foreign markets the transactions of sales and resales amounted to 27,133,000 bags, distributed as follows: New York, 10,151,000; Havre, 10,370,000; Hamburg, 5,563,000, and London, 1,049,000 bags.

NEW BRAZILIAN LOAN.

In conformity with the law of December 3, 1907, and the decree of July 1, 1908, the subscription to the £4,000,000 Brazilian loan was opened on July 23, 1908, and closed on the following day. In accordance with the conditions prescribed, the bonds are in denominations of £100, £500, and £1,000, are payable to bearer, and draw interest at the rate of 5 per cent per annum. The interest is payable semiannually in London, Paris, and Amsterdam on January 1 and July 1 of



each year. The issue was made at the rate of £96 per £100 of nominal value. The bonds are redeemable in nine years and in nineteen semi-monthly drawings.

STATUS OF THE COFFEE LOAN AND VALORIZATION.

The financial committee of the Legislature of the State of São Paulo has approved the bill creating an additional duty of 20 per cent ad valorem on export coffee exceeding 89,500,000 bags in 1908 and 10,000,000 bags in the following years. The bill also has authorized a loan of £15,000,000, secured by coffee belonging to the State.

Following is a translation of the text of the new São Paulo law authorizing the increase in the surtax on coffee, the limitation of exports, and the new £15,000,000 loan:

ARTICLE 1. An additional tax of 20 per cent ad valorem in the form established by law shall be levied on all coffee exported from the State exceeding 9,000,000 bags during the present crop year, exceeding 9,500,000 bags as from

July 1, 1909, to June 30, 1910, and exceeding 10,000,000 bags in succeeding years.

ART. 2. The surtax established by article 29, of law No. 984, of December 29, 1905, levied on all coffee exported from the State shall be raised to 5 francs or its equivalent in currency, calculated at the official rate of exchange of the day.

ART. 3. The Government of the State is hereby authorized to proceed at once to raise a foreign loan not exceeding £15,000,000 to complete the measures necessary for the defense of coffee and to consolidate all loans undertaken for this purpose.

PAR. 1. The loan about to be contracted shall, in addition to general guarantees, enjoy the collateral guarantees of the coffee bought and still held by Government, and the product of the surtax referred to in the preceding article.



MUNICIPAL PALACE, RIO DE JANEIRO.

This edifice, built in 1882, is regarded as one of the finest structures of the capital. It is situated on Republic avenue, named in honor of the proclamation of Brazilian independence. The municipal affairs of Rio de Janeiro are administered by a council elected by the citizens of the district. The executive authority is exercised by a prefect, or mayor, appointed for four years by the President of the Republic.

PAR. 2. The product of the sales of coffee belonging to the State, which shall be effected as occasion offers, shall be applied to amortization of the loan contracted in virtue of this authorization.

PAR. 3. Government shall introduce into the contract the conditions of interest, amortization, type, duration, exemption from taxes, and such others as it may deem advisable.

ART. 4. All dispositions to the contrary are hereby revoked.

The following are the leading points of the message of the President of São Paulo in regard to the coffee valorization status:

The maximum yield has now been reached from the present coffee plantations, and this maximum, according to the record of the past four crops and the

actual state of the plantations, should, on the understanding that the law restricting plantation remains in force, in future years provide an average yield of 10,000,000 bags. Estimating the yearly average production of the remaining Brazilian States and other producing countries of the world at 7,000,000 bags, which is to a certain extent confirmed by statistics covering the past five years, it may safely be said that the world's output during the next ten years will average about 17,000,000 bags. It is therefore evident that the crisis due to overproduction is effectively conquered, as the production is positively limited to the producing capacity of the existing plantations, whereas, on the other hand, consumption is constantly and progressively increasing, and at present there are no indications of a possible interruption of this favorable reaction, which can only augment as the legitimate fruits of the present vigorous propaganda campaign recently initiated in several countries. Under these cir-



CITY OF OURO PRETO, BRAZIL.

This old city was founded in 1698, and until 1897 was the capital of the State of Minas Geraes. For two centuries it was better known in Portugal than Rio de Janeiro, as being the greatest center of wealth in Brazil. Railroad connection with Rio has been established, with the result that the old capital is being rapidly transformed into a modern city.

circumstances, and having overcome the originating elements of the crisis, it is, however, necessary to admit that the situation is not what it should be since the value of coffee is maintained at a basis which does not remunerate production, and this is mainly due to the varying output of the plantations, as well as to the surplus stocks carried forward from previous seasons, and the greater part of these at present are held by the Sao Paulo Government.

From the foregoing summary of the situation it is evident that two important measures should be adopted and executed, the first of which consists in regulating the exports, which should be fixed at 9,000,000 bags for the current year, 9,500,000 bags for the second year, and at 10,000,000 bags for the following seasons. When the clearances reach these limits a sufficiently high tax will be charged on shipments to render further exports prohibitive. The second measure refers to the convenience of providing the Government with ample funds to keep its stocks out of the market as long as the coffee does not rise in value and is not required for consumption. For this purpose it is indispensable

that an additional surtax of 2 francs should be decreed on all coffee exported from the State. The present 3 francs surtax is not sufficient to cover all expenses in connection with the State's holdings. As circumstances advise the necessity of keeping the Government's stock out of the market in order to insure success, it is obvious that the Treasury should be furnished with the necessary funds to meet corresponding obligations with due punctuality, as well as to enable the consolidation of the existing loans which were contracted to defend the State's production; therefore the Government submits to the consideration of Congress the convenience of contracting a new loan of \$15,000,000, which will be guaranteed by the coffee held by the Government and the revenue forthcoming from the augmented surtax. Collections proceeding from sales of coffee are to be applied to the amortization of the debt.

It is reported that the new \$15,000,000 coffee valorization loan has been subscribed as follows: New York, through the City Bank, is to take \$2,000,000; London, \$5,000,000; Paris, \$5,000,000; Hamburg, Berlin, and Brussels, \$3,000,000 between them.

THE PORT OF SANTOS IN 1908.

The Santos imports for the five months of 1908, according to figures of the Brazilian Bureau of Statistics for that city, were \$15,401,980, as compared with \$16,508,526 in 1907. The imports by countries were:

Country.	1907.	1908.	Country.	1907.	1908.
Germany	\$2,611,389	\$2,884,596	France	\$1,105,616	\$996,190
Argentine Republic	2,283,567	1,926,780	Great Britain	4,163,666	3,934,347
Austria-Hungary	205,746	196,865	Italy	1,565,164	1,633,487
Belgium	513,269	565,037	Portugal	833,348	561,213
United States	2,278,983	1,590,294	Other countries	917,747	1,121,671

The loss of the United States so far in the year, accordingly, has been greater than the average loss. The imports by principal items were as follows:

Article.	1907.	1908.	Article.	1907.	1908.
Cotton and cotton goods..	\$1,189,432	\$1,139,536	Jute	\$936,408	\$182,317
Iron and steel, manufac- tured and not manu- factured	1,719,997	1,899,762	Coal	731,770	492,956
Industrial machinery	219,062	367,542	Kerosene	359,535	260,936
Agricultural machinery ..	73,071	91,582	Rice	42,092	4,496
Other machinery and utensils	199,456	1,133,673	Codfish	399,616	380,821
Chemical and pharma- ceutical products	351,682	304,878	Flour	1,081,952	536,832
Leathers	260,395	300,390	Wheat	1,057,989	1,352,536
			Wines	1,310,671	1,108,186
			Other food-stuffs	1,193,282	1,098,472
			Money and specie	214,127	9,599

The story of exports is, of course, told in the figures for coffee. The total exports for the period this year were \$26,204,858, as compared with \$43,193,665 in 1907. The principal items are:

Article.	1907.	1908.	Article.	1907.	1908.
Coffee	\$42,941,171	\$26,016,435	Mangabeira rubber	\$55,918	\$16,184
Salted hides	73,894	5,336	Bam	28,121	75,719

The amount of coffee exported from Santos during the period reviewed was 2,657,411 bags, as compared with 4,774,059 bags in 1907. The exports by countries were:

Country.	1907.	1908.	Country.	1907.	1908.
Germany	\$7,553,666	\$4,592,138	France	\$7,371,470	\$2,416,692
Argentine Republic	370,795	342,610	Great Britain	2,325,464	134,206
Austria-Hungary	957,141	1,110,953	Holland	3,204,228	3,024,938
Belgium	9,109,492	1,145,311	Italy	212,176	296,589
United States	11,659,522	12,675,405	Other countries	429,712	465,016

The notable increase in the exports to the United States, in spite of the general decrease in exports and the decreased imports from the United States, even greater than the decrease in general, is quite in keeping with the general commercial relations of the two countries.

The total value of the foreign commerce of the port of Santos during the first six months of 1908 amounted to \$54,998,571.27, of which \$21,015,478.31 were imports and \$33,983,092.96 exports.

Among the principal products exported were 3,431,144 bags of coffee; salted hides, rubber, and bran.

Vessels arrived to the number of 751, with a tonnage of 1,708,460, and departures of 743, with a tonnage of 1,725,588.

THE TEXTILE INDUSTRY.

Figures recently published by the "*Diario Oficial*," of Brazil, indicate that substantially one-third of the entire industrial capital of the country is invested in cotton mills, while the total annual output of the local manufactories of all kinds is less than the imports of foreign goods. While the proportion of the commercial life of the country represented by industrial enterprises is very small, the actual increase in industries shown by them is notable, and in some lines even remarkable. The "*Diario Oficial*" gives as the total number of industrial enterprises now registered in Brazil (and none can operate without being registered), together with the number of employees and financial data, as follows:

State.	Establishments.	Employees.	Capital.	Annual production.
Alagoas	21	3,092	\$2,010,900	\$2,260,800
Amazonas	7	322	542,100	914,100
Bahia	72	9,929	6,067,500	7,488,600
Ceara	18	1,237	1,056,300	4,888,000
Federal District	584	30,490	42,582,000	61,598,700
Espirito Santo	4	90	89,400	173,400
Maranhão	17	4,550	3,758,700	2,178,900
Minas Geraes	551	8,849	7,453,800	10,849,800
Para	20	1,411	2,394,900	3,873,300
Paralyba	31	1,304	915,000	1,277,400
Parana	79	2,467	3,618,900	4,592,000
Pernambuco	9	11,222	16,283,400	10,692,000
Rio Grande do Norte	5	372	290,400	327,600
Rio Grande do Sul	212	10,490	11,431,500	23,486,100
Rio de Janeiro	190	11,719	25,083,200	15,896,100
Santa Catharina	125	1,692	2,184,000	3,093,900
São Paulo	323	23,067	31,446,600	35,213,100
Sergipe	21	1,563	1,685,100	1,584,600
Piahy	3	355	402,000	364,500
Total	2,292	123,931	162,818,700	186,633,300

Of the number of factories indicated, those in the States having larger cities, notably the Federal District, São Paulo, Bahia, Pernambuco, Para, and Rio Grande do Sul, include a large number of miscellaneous establishments like furniture factories, manufactories of candles, soap, beer, chocolate, paints, shoes, hats, clothing; in fact all of the smaller and more common establishments common to any city.

The list includes sawmills and carpenter establishments and a similar class of concerns not ordinarily counted as industrial establishments, embracing all millinery and similar places, paper-consuming establishments, printing offices, artificial flower factories, and the like. São Paulo and Rio Grande contain meat and fruit packing establishments, Rio de Janeiro and São Paulo flour mills; a number of the States contain notable sugar establishments, and in general there are in nearly all the States such small establishments as may reasonably be looked for. But the only industry that in any measure approaches national importance is that of cotton manufacturing. The number of cotton factories in the several States, with other data relating thereto, is given as the following:

State.	Mills.	Employees.	Capital involved.	Production in meters.
Federal District.....	10	8,200	\$17,400,000	76,000,000
Rio de Janeiro.....	15	6,400	10,800,000	46,000,000
São Paulo.....	25	7,000	9,000,000	40,000,000
Minas Geraes.....	30	3,200	3,840,000	18,000,000
Ceará.....	4	680	570,000	3,600,000
Rio Grande do Norte.....	1	300	240,000	1,000,000
Parahyba.....	1	513	352,400	2,900,000
Sergipe.....	2	800	1,125,000	4,350,000
Pernambuco.....	5	2,900	1,390,000	22,400,000
Bahia.....	11	1,000	1,680,000	29,000,000
Alagoas.....	5	1,850	1,386,000	1,500,000
Maranhão.....	19	3,630	2,955,000	1,500,000
Piauí.....	1	280	507,000	1,200,000
Santa Catharina.....	12	150	114,000	1,000,000
Paraná.....	3	25	13,500	9,600
Rio Grande do Sul.....	2	980	1,740,000	2,000,000
Total.....	137	41,018	50,682,900	251,119,600

Of the total capital invested in Brazilian industrial establishments, over 36 per cent is represented by cotton factories. In view of the fact that a large number of establishments are included in the list of industrial concerns given, which in the United States would hardly be regarded as industrial, the actual percentage of the industrial life of Brazil, according to American standards, held by the cotton industry, is much greater. The cotton mills of Brazil are unquestionably its most prosperous industry—the most prosperous line of business of any sort in the country. Practically all of them are increasing their output and all of them are paying large dividends. Factories like the Industrial Mineira of Rio de Janeiro, the Mageense Fiação & Tecidos, and the Manufactura Fluminense of Rio de Janeiro, and the Paulistiana of São Paulo pay about 25 per cent per annum



MANGO TREES, BOTANICAL GARDEN, RIO DE JANEIRO, BRAZIL.

This highly useful tree was introduced into Central and South America by colonists in the eighteenth century from southeastern Asia. It is now raised extensively throughout the tropical zone. The foliage is very dense and affords protection from storm and rain. The fruit is highly prized, both for its food value and the costliest and medicinal properties it possesses.

on an average. Exceptional factories like the Progresso of Rio de Janeiro pay more, this factory paying about 22 per cent on capital trebled in a few years out of its earnings, something like 66 per cent on the original capital. Such figures are taken at random and are characteristic of the business. The custom is to pay the directors of such businesses well and to carry large reserve funds. The entire business of cotton manufacture rests upon the exceedingly high tariff rates on cotton imports in Brazil, which have been discussed from time to time in reports from this consulate general. In general,



REPUBLIC AVENUE, BELEM (PARA), BRAZIL.

This spacious avenue is one of many radiating from the public square of the same name on the site of the old Largo do Polvora, or Powder Storage House of the colonial days. On the establishment of a Republic the name was changed to Praça da Republica, the square greatly improved, and a system of avenues established, all converging to it at a center. Although situated under the equator, Belem is one of the most beautiful places of residence in northern Brazil, the mean annual temperature being about 80° Fahrenheit. During the hottest part of the day the cooling sea breeze is strongest.

owners of industrial property in Brazil demand large returns upon their investments.

SERICULTURE IN SÃO PAULO.

The Brazilian State of São Paulo is reported to be making progress in the growing of mulberry trees and the culture of the silkworm.

Samples of native silk of magnificent texture have been exhibited at local fairs and the State government has offered prizes with a view to encouraging the industry. A silk spinning and weaving mill has been operating successfully for some time at Villa Prudente in the

environs of the city of São Paulo, and the high protective duties imposed favor the local development of sericulture.

RAILWAYS IN OPERATION AND UNDER CONSTRUCTION.

According to statistics of recent issue by the Brazilian Department of Public Works, the total length of railways in the Republic in traffic on January 1, 1908, was 17,605 kilometers (nearly 11,000 miles). Under construction were 3,312 kilometers, while plans had been approved for the building of 6,680 kilometers more, making a total of 27,597 kilometers.

PORT WORKS AT PERNAMBUCO.

The contract entered into between the Government and Messrs. EDMOND BARRISSOL and DEMETRIO RIBEIRO for the execution of improvement works at the port of Pernambuco was approved by Executive decree of July 2, 1908.

The works comprise a breakwater to be constructed on the line of reefs that form the port, 1,147 meters in length, and quays with 10 meters depth of water alongside at low tide. The contractors are required to deposit \$60,000 as security on or before July 31, 1909, and the value of the work to be done semiannually must be equivalent to one-tenth of the total value of the contract.

The works will be paid according to schedule prices in Brazilian bonds amortizable in fifty years of value of \$100 each, secured by a special tax of 2 per cent gold levied on the official value of imports from foreign countries in the State of Pernambuco, as also by the net revenues of the port and docks themselves. The issue of bonds can not exceed \$16,800,000, of which \$8,000,000 are covered in the first issue immediately upon the signing of the contract.

A deposit against the delivery of the bonds of \$7,220,000, or its equivalent, is required of the contractors at the disposition of the Federal Treasury in London or elsewhere within sixty days of the date of the decree authorizing the contract, in default of which the contract is to be declared null and void.

COLONIZATION IN SÃO PAULO.

The "Universal Cooperation Brotherhood," of San Francisco, United States of America, is in treaty with the São Paulo State Government for the purchase of a large tract of land to be devoted to the founding of a large colony in the State.

According to its president, Mr. JOHN ALBERTS, the brotherhood has already 1,600 members, the majority of whom are Scandinavians, Finns, and Germans who are disposed to leave the United States to

settle in Brazil. The organization is based upon mutual aid, mutual work, and equal rights to the profits.

Possessing the necessary funds and most modern agricultural appliances, it is the intention to found a model colony, in which each member will devote his best energies to the common welfare for a certain number of years, during which he will be afforded the necessary comforts to lead a peaceful life.

After the stipulated time of personal service has been completed each member is entitled to life pension of no less than \$1,000 per annum.

After the colony has been started Brazilian members will be admitted in the proportion of 25 per cent of the total membership.

THE STATE OF BAHIA AND THE MINING INDUSTRY.

The State of Bahia, which is the richest of Brazilian States in mineral deposits, framed a mining code in 1907 designed to stimulate the promotion of this important branch of national industry. In the promulgation of these regulations the State Government made liberal provision for the rights of landowners, but at the same time provided the necessary impetus for the exploitation of the mineral resources of the property either by the holders or possible lessees.

Old Portuguese records fix the annual gold product of the country at over \$5,000,000 annually, a large proportion of which was obtained from Bahia, while the 1,700 tons of monazite sand and the 16,000 tons of manganese ore shipped from the State in 1907 demonstrate its possibilities in these lines.

The official value of diamonds and carbons exported from Bahia in 1907 is given as equivalent to \$50,000, but it is more than probable that this amount represents but a very small proportion of the total value of these articles mined and exported.

JAPANESE COLONIZATION IN THE REPUBLIC.

The first lot of Japanese immigrants arriving in Brazil under the arrangement concluded between the Japanese and Brazilian Governments landed at Santos, for the State of São Paulo, on June 18, 1908.

The party consisted of 781 persons and arrived in the Japanese ship *Kasato Maru* something less than six weeks out from Yokohama. Within two days all were distributed among the coffee plantations in the State of São Paulo, where they will work in coffee for the current crop. At the end of the coffee-picking season they will be distributed among several "nucleus colonies," or subsidized communities founded by the government of the State, and it is proposed to devote their labor practically exclusively to rice culture. Further shipments of

immigrants are expected regularly until the total will reach well into the thousands under present contract arrangements.

The transportation company having the matter in charge projects the formation of a South American association with a very wide field of enterprise, the purpose of which is the promotion of commercial, industrial, and social intercourse between Japan and the States of South America.



FOREIGN COMMERCE FIRST HALF OF 1908.

The foreign commerce of the Republic of Chile for the first half of 1908 was 284,311,423 *pesos* (\$94,770,471), made up of imports and exports valued, respectively, at 139,176,672 *pesos* (\$46,392,224), and 145,134,751 *pesos* (\$48,378,250). The following is the value in Chilean *pesos* of the imports and exports in detail:

IMPORTS.	
Animal substances.....	8,697,899
Vegetable substances.....	11,799,734
Mineral substances.....	25,603,769
Textile fibers and manufactures thereof.....	30,909,876
Industrial oils, bitumen, and fuels (coal).....	22,229,702
Paper, cardboard, and manufactures thereof.....	1,036,673
Beverages and liquors.....	1,738,557
Perfumery, pharmaceutical and chemical products.....	2,915,439
Machinery, instruments, tools, etc.....	29,286,901
Arms, ammunition, and explosives.....	1,049,132
Miscellaneous.....	896,930
	139,176,672
EXPORTS.	
Animal products.....	4,181,364
Vegetable products.....	12,610,384
Mineral products.....	126,087,551
Beverages and liquors.....	98,761
Coins.....	110,800
Miscellaneous.....	509,949
Manufactured products.....	1,535,912
	145,134,751

The foregoing figures do not include the exports through Punta Arenas.

RECEIPTS AND EXPENDITURES FIRST HALF OF 1908.

The revenues of the Republic of Chile during the first half of 1908 were 191,600,589.04 *pesos* currency, and 59,808,670.61 *pesos* gold, while the expenditures for the same period amounted to 143,253,451.65 *pesos* currency and 22,270,817.87 *pesos* gold, leaving a balance on hand July 1, 1908, of 48,347,137.39 *pesos* currency and 37,537,852.74 *pesos* gold. During the six months referred to the receipts from custom-houses, posts and telegraphs, mintage, treasuries, railways, and special entries were 80,191,631.69 *pesos* currency and 33,110,865.35 *pesos* gold.



HOME OF THE AMERICAN CONSULAR AGENT, PUNTA ARENAS, CHILE.

Punta Arenas, the southernmost city in the world, is situated on the mainland of South America nearly midway between the Atlantic and Pacific oceans. Its importance as a port of call for vessels passing through the Strait of Magellan is further enhanced by serving as a distributing point for the southern part of Chile. It is lighted by electricity and has public waterworks, two plazas, a hospital, two theaters, and several schools.

SAVINGS BANK DEPOSITS FIRST HALF OF 1908.

On December 31, 1907, there were 174,791 persons with deposits in the savings banks of Chile, representing \$19,966,774.61, while on June 30, 1908, the number of depositors had risen to 198,419 and the deposits to \$22,876,141.65, or an increase during the first six months of 1908 of 23,628 depositors and \$2,909,367.04 in the amount of the deposits. The following table shows the depositors and deposits in detail on December 31, 1907, and June 30, 1908:

Cities.	December 31, 1907.		June 30, 1908.	
	Depositors.	Deposits.	Depositors.	Deposits.
Iquique.....	15,024	\$1,786,485.51	17,341	\$2,272,223.22
Antofagasta.....	11,747	1,611,751.28	13,491	2,072,361.90
La Serena.....	576	77,166.74	2,497	280,442.63
Valparaiso.....	35,337	4,588,439.52	38,018	4,763,126.75
Curico.....	876	92,365.34	2,828	296,868.41
Talca.....	7,349	731,321.53	8,248	817,829.06
Chillan.....	8,114	542,327.72	9,281	638,478.12
Concepcion.....	13,257	1,035,493.52	15,606	1,386,116.94
Temuco.....	591	28,568.14	4,028	171,790.00
Valdivia.....	5,657	471,486.41	6,917	519,741.21
Punta Arenas.....			1,497	272,156.47
Santiago.....	76,263	9,011,168.90	78,667	9,375,006.94
Total.....	171,791	19,906,771.61	198,419	22,876,141.65

NATURAL GAS AND PETROLEUM DISCOVERED.

Petroleum and natural gas have been discovered in the township of Caremapu, in the Province of Llanquihue, Chile, about 500 miles south of Valparaiso.

Enough gas pressure has been secured to run a cook stove, a heating stove, and two gas jets at one time. Soundings have been made to the depth of 500 feet with good results. It is proposed to put down a well to the depth of 3,000 feet in order to determine what may be expected. This discovery is made in the vicinity of a fairly rich gold-mining district, and not very far from the site of the extensive steel works being built near Corral.

STOCK RAISING IN THE TERRITORY OF MAGELLAN.

The Territory of Magellan, Chile, the southernmost political division of the Republic, is an excellent field for stock breeding. This extensive Territory, comprising about one-fourth of the total area of Chile, contains, approximately, 48,000,000 acres of land, and owes its present prosperity principally to sheep breeding and the working of its placer mines.

The climate of the Territory of Magellan varies greatly, being cold in the far south, and temperate and invigorating in its middle and northern zones. Parts of the Territory, especially the southern portions, are heavily wooded, and the damp and humid climate of this part of Chile produces an abundant, vigorous, and luxuriant vegetation, and causes the formation at some places on the coast of considerable deposits of turf. The southernmost points of Chile, with the exception of some dry lands near the frontier of the Argentine Republic, is unsuited for stock raising, but the southern, middle, and northern sections of the mainland of the Territory of Magellan are well adapted to the raising of stock.

The breeding of sheep, which is now the largest and most prosperous industry of the Territory, dates back to 1876, when Governor DUBÉ ALMEIDA brought from the Falkland Islands the first consignment

of sheep for breeding purposes to this part of the Republic. Notwithstanding the unpromising results of the earlier efforts at sheep raising in the Territory of Magellan, this industry was soon established on a firm footing, and has been increasing by leaps and bounds from that date to the present time.

In 1884 the Government conceived the plan of leasing to private persons or companies tracts of from 2,000 to 30,000 hectares (5,000 to 75,000 acres) of Government lands for terms of from five to twenty years to be devoted to stock raising, and 531,267 hectares (1,312,000 acres) were leased during that year. Subsequently new concessions were made, until, in 1896, about 3,000,000 hectares (7,413,000 acres) were disposed of in this part of Chile to be used in the stock-raising industry. In 1903 a law was passed permitting the sale of Government lands in the Territory of Magellan, and the first sale at public auction of 800,000 hectares (1,976,000 acres) brought an average price of 5.41 *pesos* (\$1.97) per hectare (2.471 acres). The remaining public lands in the Territory of Magellan, consisting of about 1,756,862 hectares (4,341,000 acres), and which were sold at public auction from 1904 to 1906, were disposed of at an average of 7.27 *pesos* (\$2.65) per hectare (2.471 acres).

It is estimated that there were 1,873,709 head of sheep, 37,804 head of horned cattle, 23,888 head of horses, 827 hogs, 122 mules, and 33 goats in the Territory of Magellan in 1907. The exports of wool through Punta Arenas in 1905 consisted of 5,280,745 kilograms (11,616,000 pounds), valued at 5,197,320 *pesos* (\$1,897,000), as compared with 7,495,190 kilograms (16,500,000 pounds), valued at 8,244,709 *pesos* (\$3,009,317) in 1906. Practically all of the wool and hides shipped from southern Chile in 1906 went to Great Britain, Germany, and Belgium, the former country receiving about four-fifths of the entire output of these two products.

Several industries closely allied to and depending upon stock raising are at present being exploited in the Territory of Magellan. In 1906 there were seven tallow factories in the aforesaid Territory, having a capital of 425,000 *pesos* (\$155,125), with an annual output valued at 1,930,000 *pesos* (\$704,405). There are two refrigerating plants in the Territory. The one at Rio Seco has a capital of 1,500,000 *pesos* (\$547,500). In 1907 this plant exported 120,000 frozen wethers. The factory at Punta Delgada, belonging to the "Stock Raising Company of Magallanes" (*Sociedad Ganadera*), is the only meat-canning establishment now in operation in the Territory. The capital invested in this plant is 700,000 *pesos* (\$255,000). There are also stearin, soap, salted meat, and ham factories in the Territory.

The climate is so mild and the temperature so even in the stock-growing section of Magellan that the herds can remain day and night

in the pasture the year round without suffering injury. In the sheep industry no country yields such a large proportion of lambs—115 to 120 for each 100 ewes—as does Chile, while at the same time the wool produced is fine and of a strong fiber. At the present time many of the flocks belong to subjects of Great Britain, who were pioneers in the stock-raising industry in the Territory of Magellan. Some idea may be had of the fortunes arising out of sheep breeding in southern Chile when it is remembered that persons engaging in this occupation with a capital of \$6,000 to \$10,000 ten or fifteen years ago are now the owners of flocks of from 60,000 to 90,000 sheep.

The raising of horses is a profitable industry in the Territory of Magellan. The Chilean horse is a descendant of the Andalusian breed, is hardy, docile, intelligent, and vigorous, and, it is said, is capable of doing more work on less food and with less care than the European or American horse. Chilean cavalry horses are taught to lie down at the word of command, the cavalymen using them as rests for their rifles, the animals remaining motionless until after the firing is over and rising again to their feet at the word of command. Because of these qualities Chilean horses are highly esteemed for the light cavalry service of the armies of modern times. In Chile a young horse of from 2 to 4 years old, of average quality, is worth from \$20 to \$30, and a horse of the best class and of the same age from \$60 to \$70. During the last twenty years the equine race in Chile has been improved by the introduction of stallions from England, Germany, and France.

SHOE AND LEATHER INDUSTRY.

The manufacture of shoes in Chile by machinery is increasing rapidly. A short time ago the first shoe factory employing machinery was opened at Valdivia, and now there are twenty-two well-equipped factories of various sizes located in different cities of the country. A large percentage of the shoe machinery in use in Chile is from the United States. France comes next, followed by England.

There are still in the country a large number of shoe shops where from ten to a dozen men are employed making shoes by hand. The wages paid these men are small, being from 50 to 80 cents per day.

Practically all the cheaper shoes worn in Chile are made in the country from native tanned leather. This is the class of shoes generally worn by the working class and farmers. Shoes retail at from \$1.20 to \$1.50 United States gold, and a better grade made from native leather for dress shoes from \$2.50 to \$2.75. Then come those with imported uppers and native soles, which is a very good shoe. The uppers will generally wear out two or three soles, for the sole leather is of an inferior quality. This grade of shoes retails at \$4 to \$4.75.

Shoes were imported during the year 1907 to the value of \$127,609, of which the United States furnished \$11,477, against \$61,142 for England, \$29,617 for France, and \$17,218 for Germany.

CONCEPCION TO TALCAHUANO ELECTRIC RAILWAY.

The electric railway from Concepcion to Talcahuano, Chile, has been completed, and was opened to public traffic in July of the present year.



TREATY OF AMITY, COMMERCE, AND NAVIGATION WITH JAPAN.

On May 25, 1908, the Ministers of Colombia and Japan, accredited near the Government of the United States, in representation of their respective countries, signed, in the city of Washington, a treaty of amity, commerce, and navigation, subject to approval in due form by the Governments of the countries in interest. The treaty is signed in duplicate in Spanish, Japanese, and English, and in case of differences of interpretation, the English text is to govern.

MEASURES OF THE CONGRESS OF 1908.

The Colombian Congress adjourning in August has issued a statement relating that Colombia has adopted a treaty of friendship and commerce with Japan, another with Switzerland, a commercial and industrial treaty with Great Britain, and a fiscal convention with the Holy See. There has been approved also a sanitary convention with the United States, a customs tariff for the Republic, and a project that the national assembly meet every twelve months.

APPROVAL OF BOUNDARY TREATY BETWEEN COLOMBIA AND ECUADOR.

The additional convention to the boundary treaty between Colombia and Ecuador of May 24, 1908, signed on July 21 of that year by the representatives of the two countries, was approved on August 14, 1908, by the Congress of Colombia, and was duly promulgated by the President of the Republic on that date.

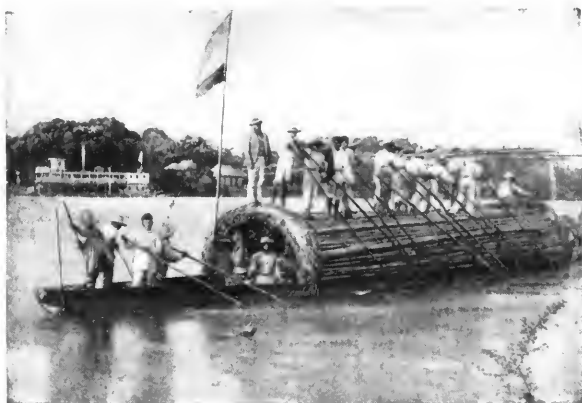
NEW POLITICAL DIVISIONS.

A law promulgated on August 11, 1908—effective January 1, 1909—abolishes the present political divisions of Colombia, and di-

vides the Republic into thirty-four Departments, each of which, when the law becomes operative, must pay its revenues into the Federal Treasury. The law also provides for the distribution of the property of the extinguished political entities among the municipalities of the new Departments. The Federal District, in which the capital of the Republic is situated, is not affected by this law.

FOREIGN RELATIONS OF THE REPUBLIC, JULY, 1908.

In the July, 1908, report of Señor FRANCISCO JOSÉ UBRUTIA, Minister of Foreign Relations, to the National Congress assembled in Bogota, the Minister calls attention to the able manner in which Señor DON ENRIQUE CORTES, Envoy Extraordinary and Minister



CHAMPAN ON THE MAGDALENA RIVER, COLOMBIA.

This craft is in use on the upper Magdalena River. The champans sometimes traverse the entire length of the Magdalena from Paez, a town 600 miles inland, to Barranquilla, near the river's mouth. These boats are long and narrow, with a bamboo covering, circular in form, affording protection from sun and rain. From 15 to 18 men are required to push one of these crafts against the stream.

Plenipotentiary of Colombia near the Government of the United States in Washington, has filled the delicate duties of his post, relating to many of the most important international questions of Colombia, by fostering and maintaining the most cordial and amicable relations between the Governments of the two countries. The report states that the Legation in Washington has instructions to endeavor to include in a new treaty to be negotiated with the United States the most favorable conditions possible, in so far as concerns the interest of Colombia, with respect to traffic through the Panama Canal when that great artery of international trade is opened to the commerce of the world.

Mention is made of the valuable cooperation of Mr. ELIHT ROOT, Secretary of State of the United States, in obtaining the return to Colombia of the sum referred to in article 2 of the contract concerning the concession for the opening of a canal through the Isthmus of Panama, celebrated on March 20, 1878, between the Republic of Colombia and Mr. L. B. WYSE. The amount in question was deposited in London, and netted the Government of Colombia, after deducting the part corresponding to the new canal company, £24,000. The mutual spirit of good will manifested by the representatives of both Governments during the progress of the negotiations is referred to by the Minister of Foreign Relations in his report to the Congress.

Referring to the resolutions of the Second and Third Pan-American Conferences, held in Mexico and Rio de Janeiro, respectively, the Minister recommends the ratification by the Congress of the following conventions, signed by the delegates of Colombia at the Third International Conference of American States: On pecuniary claims; on establishing the status of naturalized citizens who again take up their residence in the country of their origin, and the convention relating to patents of invention, drawings and industrial models, trade-marks, and literary and artistic property.

The convention on international law, adopted by the Rio Conference, has been approved by the Government of Colombia, and the latter, in conformity with the terms of that convention, intends to send a delegate of the Republic to Rio de Janeiro on May 10, 1909, for the purpose, in conjunction with the other delegates of the signatory powers, of forming a Code of International American Law.

One of the resolutions of the Third Pan-American Conference, held in Rio de Janeiro in 1906, recommends the appointment, by the respective Governments, of Pan-American committees, under the direction of the Department of Foreign Affairs, and in accordance with this recommendation the Government has appointed Señor VÁZQUEZ COBO, ex-Minister of Foreign Relations of the Republic, and Dr. URIBE URIBE, one of the delegates of Colombia at the Third International Congress of American States.

Referring to the International Union of American Republics, the Minister says that—

The International Bureau of the American Republics, which is to-day something more than a commission charged with serving as a permanent bond between the meetings of the different American conferences, earnestly devotes its efforts to the end that each American Republic should interest itself not only in the agreement of past conferences, but also in the possible labor of future conferences.

EXPORTS OF PRECIOUS METALS.

The precious metals exported from the Department of Antioquia, Colombia, via Cartagena, in 1907, aggregated 7,301 kilograms (16,095

pounds), of which 2,081 kilograms consisted of gold bullion and 497 kilograms of platinum, and the balance of silver and gold in other forms. The exports of precious metals through Barranquilla during the same period aggregated 6,010 kilograms (13,222 pounds). The values of these metals sent to the different countries were as follows: Germany, \$600; Belgium, \$1,790; United States, \$457,665; France, \$107,940; England, \$866,144, and Italy, \$3,429.

RAILWAYS OF THE REPUBLIC.

Señor Don José M. RÍZ, Minister of Public Works, in an interesting report to the Congress of Colombia, under date of July 20, 1908, gives the following information concerning the railways of the Republic:

Sabana Railway.—This railway is equipped with first-class rolling stock, and in sufficient quantity to meet the demands of traffic. It is under the direction of the Central Bank, which looks after the service and attends to the preservation of the road. The profits derived from this line is a source of considerable revenue to the Government.

Southern Railway.—This road is the property of the nation, but since September, 1907, in accordance with the contract made with the Government, it has been under the direction of an English company. Negotiations are now under way looking to the sale of the road.

Northern Railway.—The section of this railway from Bogota to Zipaquirá is in the hands of the Colombian Northern Railway (Limited), an English company, having offices in the capital, and which has complied with the terms of the concession. The section from Zipaquirá to Chiquiquira is under the direction of the Colombian Central Railway Company (Limited). Work has been temporarily suspended on this line from Nemocón toward the terminal point. The Government is at present considering a modification of the concession.

Girardot Railway.—The Government has shown particular interest in this road, not only because it is a shareholder, but principally on account of the necessity of this line to the material development of the interior of the Republic. The road is in exploitation from Girardot to El Hospicio, and the line is being extended to Facativá. The construction company promises to complete the work to the latter place by the close of the present year.

Dorada to Honda Railway and its extension to Ambalema.—The first section of this railway was opened to traffic by the Dorada Railway Company (Limited), several years ago, since which time branch lines have been built, and the roadbed and bridges improved. The extension of the National Western Railway of Colombia by the Dorada Extension Railway Company (Limited) was completed in 1907, and opened to traffic by the President of the Republic in September of that year.

Junction of the Girardot with the Dorada Railway.—Negotiations are in progress for the construction of a railway uniting the Girardot with the Dorada Railway, so that in a short time it will be possible to travel by train from Bogotá to a point on the Magdalena River, and from thence down that stream by boat to the coast.

Cauca Railway.—Work is rapidly progressing on this line and it is hoped that it will be completed to Papagayeros in December, 1908, and to Cali on July 20, 1910.

Great Northern Central Railway.—The survey and plans of this line have been completed. Money is being raised for the construction of the line, and

engineers have already been sent from London with sufficient material to begin the building of the road.

Railway from Puerto Berrío to Medellín.—This line has been constructed to kilometer 102, from which place it is being built toward the terminal point as rapidly as the available funds will allow. Up to the present time the Government has furnished \$116,000, and negotiations are under way looking to the completion of the line to Medellín as soon as possible.

Santa Marta Railway.—The exploitation of the part of the Santa Marta Railway already constructed and the extension of the line to Port Banco, the terminal point on the Magdalena River, is under the direction of the Santa Marta Railway Company (Limited), which is an English corporation. The section open to traffic is 95 miles long. The Government is negotiating with the company for the construction of branch lines to different banana plantations, and



ROAD TO SANTANDER, COLOMBIA.

Santander, the capital of the province of the same name, is situated in the table-lands of Colombia near the Venezuelan frontier. Its population numbers 9,000 inhabitants. Communication is maintained with surrounding cities and provinces by caravans of pack horses which follow the narrow trails through the extremely rugged country.

is endeavoring to obtain the lowest freight rates possible for the transportation of that fruit.

Tundama Railway.—The option on the railway contract made by the Government with TOMAS G. RIBON in February, 1907, expired in August last.

Other railways.—The Cartagena, Barranquilla, and Cucuta railways, which have been in operation for several years, have continued to be exploited in accordance with the various contracts and concessions under which they were constructed. The preservation of the line of each of these railways has been properly attended to.

COFFEE CULTURE IN THE REPUBLIC.

Coffee production in Colombia averages about 600,000 bags annually, of which 67 per cent is shipped to the United States. The

principal districts where its cultivation is carried on are: The Department of Cundinamarca, which produces the renowned Bogota brand; the Department of Santander in the Ocana, Cuenta, and Bucaramanga districts, and in the Tolima and the smaller valleys of the Cordilleras.

Colombian coffees are known as "Bogota," "Bucaramanga," "Cauca," "Jerico," "Antioquia-Medillin," "Ocana," and "Santa Marta," the bulk of which are shipped under the name of "Bogota." The bean is variable in size and the roasted product not so bright as Guatemala, Mexican, or Caracas coffees, but the flavor is rich and delicious and blends well with that of other established varieties. In the region around Bucaramanga, a coffee which nearly approaches Java and other East Indian varieties is grown, and properly blended it is difficult to distinguish it from those brands.

Bogota and Bucaramanga are on the west slope of the eastern Cordilleras and Medellin on the west slope of the central Cordilleras, the sections providing the proper climatic conditions for growing fine coffees. In fact, the bean may be grown in almost all parts of the Republic where the temperature varies from about 59° to 77° F. In the hotter climate, the bean is larger but requires shading, while in colder regions a smaller bean is produced with less care.

About 25,000 bags of Colombian coffee is retained for home consumption, the remainder going to Europe and the United States and commanding a constantly growing appreciation.

MEDAL COMMEMORATIVE OF NATIONAL INDEPENDENCE.

The Congress of the Republic of Colombia has decreed the coining of a medal to commemorate the first centennial of the proclamation of the independence of the Republic, and has authorized the President to select the material of which it is to be made, prescribe its form, and the manner of distributing the same.

INTERNAL REVENUE RECEIPTS IN 1907.

The internal revenue receipts of Colombia in 1907 aggregated \$5,706,143.23, made up of excise duties on the following articles: Hides, \$1,356,447.71; cigarettes, \$480,024.40; slaughter of food animals, \$1,266.80; matches, \$216,693.07; liquors, \$1,917,903.62; tobacco, \$668,079.83; document stamps, \$361,764.74; salt, \$525,154.05, and miscellaneous, \$178,809.01.

Duties on merchandise imported for the use of industrial, railway, and navigation companies, in accordance with their respective contracts and the laws in force on the subject, were remitted in 1907 to the amount of \$227,213.38.

CONDITION OF PUBLIC BUILDINGS.

The improvement of Colombian public buildings during President REYES's administration has been most notable. In Bogota the large building occupied by the School of Arts and Crafts has been repaired, and several halls added thereto. A hall has been constructed in the School of Medicine for the study of bacteriological subjects, and the necessary repairs made to the building. A surgical hall was likewise constructed in the San Juan de Dios Hospital. Extensive repairs and construction work have been made in the *Palacio de la Carrera*. Work has been begun on the repair of the Capitol, in accordance with the recommendations of a commission of engineers. The architect of this edifice has submitted plans for the completion of the building. The old Military Hospital has been repaired and turned into a hospital for the insane. Other necessary repairs to nearly all of the principal edifices of the capital have been made, and especially to the following buildings: Buen Pastor, National Academy of Music, School of Fine Arts, Palace of the Apostolic Delegation, School of Commerce, Normal School for Males, the Aserrio, the National Police Station, the Panopticon, the Engineering School, the National Lithographing Building, San Francisco, Santo Domingo, the Quinta de Segovia, the Astronomical Observatory, the Columbus Theater, etc.

Improvements and repairs have been made to the following buildings outside the capital: The reconstruction of the Buenaventura custom-house; repairs to the Tumaco custom-house; defense works on the Tumaco Island; repairs to the Cartagena custom-house; reconstruction of the customs warehouse at Cuesta; repairs to the Barranquilla custom-house; preliminary work in the construction of the Santa Marta custom-house; barracks at Cali and Barranquilla, and many other Government buildings throughout the Republic.

ATTENDANCE AT THE PUBLIC SCHOOLS IN 1907 AND 1908.

The number of pupils attending the public schools of Colombia during the scholastic year 1907 was 223,426, as compared with 236,985 for the same period in 1908. For the purpose of improving the schools of the Republic, the Government proposes, in 1909, to send a commission abroad to investigate the educational systems of foreign countries, and especially concerning the organization of primary schools, schools of commerce, and universities.

EXPORT DUTY ON CATTLE.

For the purpose of increasing the exports of cattle, and in compliance with the request of many petitions addressed to the Government of Colombia soliciting the reduction of the export duties on that

important article of exportation, the duty on male animals exported was reduced, on June 22, 1907, to \$1 per head, the old duty of \$6 per head on female animals exported remaining in force.

VALUE OF SALT MINED IN 1907.

The gross value of the salt produced by the salt mines of the Government of Colombia in 1907 was \$525,620.14. Deducting from this amount \$158,506.58, the cost of production, the net output of the salt mines of the Republic during the year referred to was \$367,113.56, as compared with a net production of \$202,337.69 from the same source during the first half of 1908.

INTERNAL FLOATING DEBT, 1908.

Señor B. SAINX CAXO, Finance Minister of Colombia, in his report of July 20, 1908, to the Congress of the Republic, states that the total issue of the floating internal debt of Colombia up to June 30, 1908, amounted to \$22,419,172.75, of which sum \$19,356,160.60 has been paid, leaving \$3,063,012.15 as the outstanding internal debt of the Republic on the date mentioned.

SANITATION OF CARTAGENA.

The government of the Department of Cartagena, Colombia, has appropriated \$42,700 for the sanitation of the city of Cartagena. The money became available on September 1, 1908, at which time the work of sanitation was commenced by the municipal authorities.

POSTAL AND TELEGRAPH SERVICE.

The Government of Colombia has encouraged the betterment of the postal and telegraph service of the Republic to such a degree that during the last few years the mail service has been greatly enlarged and improved, and the telegraph system largely extended throughout the entire country.

The number of pieces of foreign and domestic mail handled during 1904 was 93,558 and 326,325, respectively, or a total for the year of 419,883. During the first half of 1908 the total number of pieces of mail handled in the Republic was 389,240, consisting of 83,702 pieces of foreign mail, and 305,538 pieces of domestic mail, or an increase in 1908 of almost 100 per cent as compared with the number of pieces of mail matter handled in 1904. The conventions of the last Postal Congress held in Rome have been ratified by Colombia, and a division has been established in the Department of Posts to carry out the provisions of the same relating to the exchange of foreign mail with the Republic.

On March 31, 1907, there were 14,752 kilometers (9,161 miles) of telegraph lines in the Republic. From that time to July 20, 1908, 1,880 kilometers (1,168 miles) of telegraph wires have been strung, making the total extent of the telegraph system of Colombia on July 20, 1908, 16,632 kilometers (10,328 miles).

The paid telegrams forwarded and received over the telegraph system of the Republic of Colombia in 1907 numbered 2,068,175, and produced a gross revenue of \$489,965.81 silver. The number of franked or official messages handled during the same period was 795,937. The cablegrams sent and received in 1907 numbered 7,870, and produced gross receipts to the value of \$78,712.14 gold.

Wireless telegraphy is daily coming into more extended use in Colombia. Successful wireless experiment stations have been established on the Magdalena River at Mompos, Yati, and Buenavista. By means of the latter station direct communication now exists between Bogota and Santa Marta. On the lower Magdalena River the wireless system is taking the place of the subfluvial cables. The Hughes wireless apparatus is being introduced into the country, and a school has been established for the purpose of giving instructions in the use of this instrument. An official telegraph map of the Republic has been prepared, and will soon be ready for distribution.

GOLD AND PLATINUM DREDGING IN THE QUITO RIVER.

The "*Diario Oficial*" of the Republic of Colombia, in its issue of July 15, 1908, contains the full text of an important concession granted by the Colombian Government to Antonio Olano authorizing him to extract by dredging, or by any other process, gold, platinum, or other metals found in the bed of the Quito River from its confluence with the Atrato River to the place where it is now or may be made navigable for steam launches. The same privilege is granted with respect to the beds of the navigable streams of the affluents of the Quito River, as far as they are now navigable or may be made navigable for steam launches, the concession not to interfere in either instance with the rights of third parties. The concessionaire agrees to pay to the Government 5 per cent of the value of the gross output of the gold, platinum, and other precious metals found in the beds of the aforesaid rivers, this payment to be in lieu of any export taxes on the metals which are subject of this contract. The 5 per cent will be deducted by the Government from the value of the metals exported, the calculations being made on the London market prices prevailing two months before the metals are exported from Colombia.

COAL AND OIL DEPOSITS.

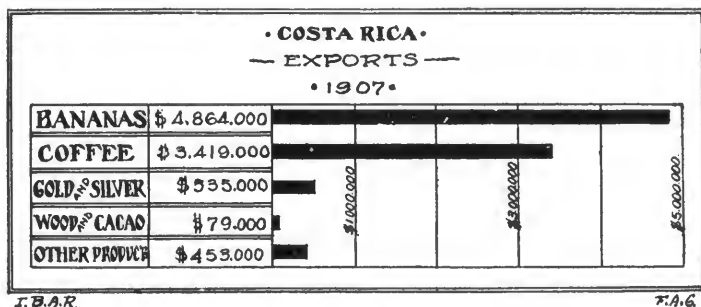
United States Consul ISAAC A. MANNING, of Cartagena, advises that recent reports from the Colombian regions about the Gulf of

Uraba, between the rivers Atrato and Leon, bring the news that valuable coal deposits have been discovered there; also that a spring has been encountered which flows about a pint of crude petroleum per hour. Without doubt this is an extension of the coal and oil belt, heretofore known to exist, reaching from near Cartagena to the Valley of the Simi River.

COSTA RICA

COMMERCIAL STATISTICS FOR 1907.

According to information furnished to his Home Government by the British Consul, Mr. F. N. Cox, the total foreign trade of the Republic of Costa Rica for the year 1907 aggregated \$16,905,000, divided between imports, \$7,555,000, and exports, \$9,350,000. As compared with the preceding year, imports show an increase of 1.04 per cent and exports an increase of 3.30 per cent.



Bananas form the most valuable export item, shipment of 10,165,759 bunches, valued at \$4,864,000, being reported, an increase of over 50,000 bunches as compared with 1906. The next item in point of value was coffee, of which 281,137 bags, with a weight of 17,325 metric tons, were sent abroad between October 1, 1906, and September 30, 1907, with a total valuation of \$3,419,000. Gold and silver bullion ranks next in importance for \$535,000, followed by wood (principally cedar) and cacao to the amount of 278 metric tons, worth \$79,000. Other shipments comprise rubber, hides, tortoise shell, mother-of-pearl, and specie.

In imports, the bulk of receipts is covered by general merchandise to the value of \$5,622,000, comprising textiles and articles of domestic

use mainly. Over \$600,000 is scheduled for cattle imports, principally from Nicaragua, Honduras, and Venezuela.

The United States takes practically all of the bananas exported, figuring for 7,032,080 bunches, the remainder going to Great Britain. The latter country also received nearly three-fourths of the coffee, the remaining fourth being sent to the United States and Germany in nearly equal proportions, and France and other countries receive inconsiderable shipments.

Though it is stated that the plains of Sarapiquí and San Carlos possess excellent rubber lands, but small plantations have been laid out, producing, however, notable results.

Cacao shipments nearly doubled in quantity as compared with 1906, and the fine prices realized have greatly stimulated its culture.

The United States still leads other nations as a supplier of imports, furnishing 44.99 per cent, while Great Britain and her colonies increased their exports to Costa Rica by 0.65 per cent. The Spanish-American Republics advanced their proportions of shipments from 1.62 per cent to 9.02 per cent, mainly attributable to cattle. Food-stuffs, railway material, and hardware form the bulk of United States exports to the Republic.

Parcels-post imports increased to \$356,000, as against \$296,000 in 1906, France furnishing over 31 per cent; Germany, 29.73; the United States, 19.71, and Great Britain, 13.87 per cent.

Public health statistics show a generally satisfactory condition for the year and the estimated population at the close of 1907 was 351,176.

A pmnetual weekly steamship service is maintained between Limon and Manchester and a fortnightly one between Limon and Bristol for the transport of bananas, and the Royal Mail Steam Packet Company runs a monthly cargo steamer to Limon. Other lines calling regularly at Limon are the Hamburg-American Steamship Company, weekly, with the Atlas service to New York and monthly boats for Hamburg; the *Compagnie Generale Transatlantique*, monthly (French), and a monthly service from both Spain and Italy. The banana steamers of the United Fruit Company sail from Limon three times a week bound for Boston, Mobile, New Orleans, and Philadelphia. At Pmmta Arenas the Pacific Mail Steamship Company calls three times a month on the voyage from San Francisco to Panama, and thrice monthly on the return voyages, while the Kosmos liners call once a month on their southerly voyage from San Francisco. Total tonnage of vessels entering Limon during 1907 aggregated 909,008, the number of vessels being 609, both sail and steam, while clearances are reported of 610 vessels, with a total of 915,988½ tons. At Pmmta Arenas 102 vessels arrived, with 210,962 tons burden, 104 being reported cleared during the year.

The Northern Railway Company of Boston, managers of the Costa Rica Railway Company's lines under a working agreement, have extended various branch lines for the service of the banana industry and have carried out important improvements, notably the remodeling of the Limon freight yard and various sectional developments. The rolling stock has also been increased by seven new 76-ton engines and 200 freight cars.

The mileage of open lines on these railways, whose terminus is Limon, is as follows: Costa Rica Railway, main line, 137.47 miles; branches and sidings, 63.36 miles; Northern Railway, main line, 43.48 miles; branches and sidings, 87.34 miles.

On the Pacific Railway construction work has been carried to Las Huacas, a point 11 miles beyond Santo Domingo de San Mateo in the direction of Punta Arenas, and an authoritative survey has been completed of the country which has to be crossed in order to connect the Pacific Railway, running from San José to Las Huacas, with the Punta Arenas-Esparta line. The distance between the two railways, measured along the route adopted, is about 11 miles, and the estimated cost for completing the construction is about \$600,000.

The Abangares Mining Company, the Esperanza, and the Colbomn mine have been in operation throughout the year, and development work is proceeding at the Montezuma mine in the Barranea district, and at Machuca and Agnacate mines in the Agnacate district.

The service of the external debt remained stationary during the year and the internal debt increased by \$574,000, amounting on March 31, 1908, to \$4,666,000. Revenue for the year ended March 31, 1908, was given as 7,916,474 *colones* (\$3,787,000) and expenditures as 9,191,449 *colones* (\$4,398,000), the deficit being occasioned by such extraordinary expenses as were caused by railway construction, construction of public buildings, and the establishment of the liquor monopoly by the Government.

BUDGET FOR 1908-9.

The Congress of the Republic of Costa Rica has fixed the expenses of the Government for the fiscal year 1908-9 at 7,359,003.93 *colones* (\$3,458,730). To cover these expenses, the revenues from all sources are estimated at 7,535,000 (\$3,541,450). The items, in *colones*, are as follows: From customs duties, 4,650,000; from consular fees, 125,000; from liquors, 1,850,000; from sealed paper, 50,000; from stamps, 35,000; from Government lands, 15,000; from the Pacific Railway, 300,000; from posts and telegraphs, 300,000; from Government Printing Office, 25,000; from public registrations, 35,000, and from sundry other sources, 150,000.

SURCHARGE ON IMPORT DUTIES.

The British Consul in Costa Rica has reported to his Home Government that the fees charged abroad for Costa Rican consular invoices have been suppressed, but a surcharge is made of 2 per cent on the amount of import duty levied on merchandise, and is collected by the custom-houses of the Republic.

REGULATION OF CATTLE AND FEED DUTIES.

The Government of Costa Rica has decreed that on and after September 15, 1908, all cattle imported into the Republic, with the exception of sleek or fat cattle, shall be free of duty. Sleek or fat cattle shall pay a duty of 18 *colones* (\$8.37) per head.

In future the State will pay no bounty on cows or heifers brought into the Republic, but until December, 1911, the Government of Costa Rica will pay the maritime freight to Costa Rica, and land freight in the Republic, on blooded cattle, male or female, brought from Europe or the United States.

Work oxen imported, even though they are fat or sleek, are not subject to import duties, but work oxen exported are subject to a duty of 10 *colones* (\$4.65) per head.

Blooded cattle exported are subject to a duty of 25 *colones* (\$11.62) per head, but if the blooded animal was brought into the country and the freight on the same was paid by the Government, the exporter shall return the amount of said freight to the Government.

The free admission of foreign grains, in accordance with decree of November 26, 1902, and the by-products of grains referred to in article 3 of the law of August 20, 1903, is made applicable to hay in bales.

The law of August 1, 1900, articles 1, 2, and 4 of the law of August 20, 1903, the law of July 28, 1904, and the rules and regulations of September 10 of the same year, have been repealed.



FOREIGN COMMERCE, 1907-8.

Figures compiled by the Statistical Bureau of the Cuban Government report total imports by the Republic during the fiscal year 1907-8 at \$96,993,134 and exports at \$97,449,917, a total trade value of \$194,443,021 being thus indicated. For the preceding fiscal year 1906-7, imports and exports figured for \$96,668,889 and \$110,764,937, respectively.

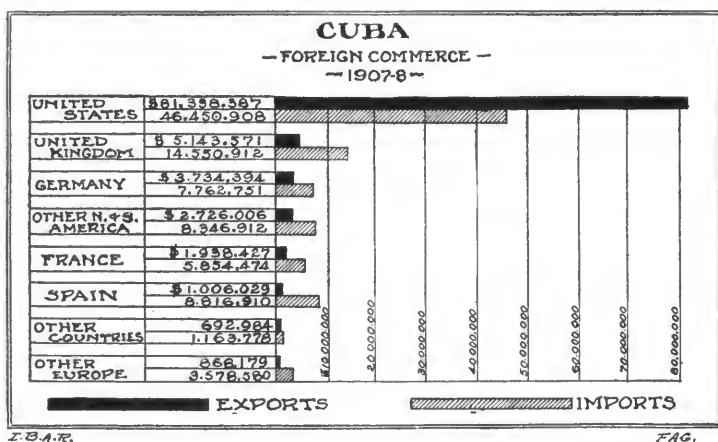


COLUMBUS PARK, HAVANA, CUBA.

The site of this park was originally a messfield and fovee preceding a march which was ordered by the enterprise of Bishop Espada, a public-spirited ecclesiastic. It was later laid out into a drill ground for the Spanish soldiery by Governor-General Tacón, and finally transformed into Columbus Park, now an attractive pleasure ground.

The values furnished and received by the various countries engaged in commerce with Cuba for the two periods under comparison were as follows:

Countries.	Imports.		Exports.	
	1907-8.	1906-7.	1907-8.	1906-7.
United States.....	\$46,450,908	\$48,192,672	\$81,338,327	\$98,141,012
Other North and South America.....	8,346,912	9,500,962	2,726,006	2,211,501
Germany.....	7,762,751	6,433,969	3,731,394	3,130,757
Spain.....	8,816,910	8,286,973	1,006,029	413,305
France.....	5,854,474	5,781,608	1,938,427	1,002,329
United Kingdom.....	14,550,912	13,639,130	5,143,571	4,416,223
Other Europe.....	3,578,580	3,434,585	868,179	821,672
Other countries.....	1,163,778	1,398,996	692,981	598,135



Specie imports for 1907-8 are reported as \$1,835,787 against \$665,306 in 1906-7, while exports of specie during the same periods are given as \$14,675,020 and \$4,047,909, respectively.

CONTRACT FOR THE CIENFUEGOS WATERWORKS.

The amended contract entered into between the Cuban Government and the Reilly Company on August 10, 1908, for the building of the Cienfuegos waterworks, fixes the date of completion of the system at two years from the date of the contract.

Government supervision of the work is provided for and the Department of Public Works is authorized to make the necessary leases, purchases, and condemnations of private property for the construction, maintenance, and operation of the same.

Authority is given for the use of public highways for the necessities of the undertaking and for the utilization of the Hamabanilla

River. The Secretary of Public Works is authorized to include in the contract water and sewer connections with private houses at the expense of the property owners.

Bonds of the city of Cienfuegos are to be accepted by the Government for the reimbursement of three-fourths of the cost of the works, the remainder of the expenditures being provided for by certain specified collections of rentals and charges.

CUSTOMS MODIFICATIONS.

Decree No. 563, dated May 27, 1908, of the Provisional Governor of Cuba, amending the customs tariff provides that article 286 of the customs tariff in force be amended as follows:

Coffee, chicory roots, and chicory—

(a) Raw (not roasted), T. (Disp. III, rule 5)-----	100 kilos--	\$18.00
(b) Roasted, in the bean or ground, T. (Disp. III, rule 5)-----	do-----	22.50

Circular No. 49, of June 3, 1908, assessing with duty zinc plates for protecting steamship boilers, states that zinc plates with a hole in the center only to be used for protecting steamship boilers, shall not be regarded as accessory parts of boilers and shall be classed in tariff No. 226 and not in No. 74f.



DRAFT OF NEW CONSTITUTION.

The "*Gaceta Oficial*" of the Dominican Republic, in its issues of August 15 and 19, 1908, contains the full text of the proposed new Constitution which was submitted to the consideration of the Congress on December 18, 1907. The Constitution now in force, after having been revised by the Legislature of the Dominican Republic in 1896, was promulgated by the President on June 20 of the same year.

ECUADOR

MESSAGE OF THE PRESIDENT.

On August 12, 1908, President ELOY ALFARO, delivered an important message to the National Congress of Ecuador at its regular session in Quito, stating that the Government had taken special pains to cultivate, strengthen, and extend the cordial relations of the Republic now obtaining with other powers, and calling attention to the fact that the strongest ties of friendship and good will continue to exist between Ecuador and the countries of Europe and America. He referred to the satisfactory services rendered abroad by the able diplomatic corps of the Republic, and stated that he had cooperated in every way possible to the end that the arbitral award of the boundary question with Peru be pronounced by the King of Spain at the earliest date practicable. The President expressed the belief that the boundary dispute with Colombia would be settled by the amicable and direct negotiations of the two Republics, and informed the Congress that a treaty relating to that subject would be submitted for consideration by the Minister of Foreign Relations. President ALFARO expressed his sympathy with the plan of confederation with Colombia, so strongly and ably advocated by President REYES in a recent message to the Congress of Colombia.

The revenues of the Republic for the fiscal year 1907 were 12,724,567.09 *sucre*s (\$6,362,283.55), while the expenditures aggregated, during the same period, 15,401,785.65 *sucre*s (\$7,700,892.82), making a deficit for the year of 2,677,218.56 *sucre*s (\$1,338,609.28). The operating expenses of the Government were, however, in 1907, only 13,268,438.35 *sucre*s (\$6,634,219.17), the difference of 2,133,347.10 *sucre*s (\$1,066,673.55) having been used principally for disbursements on account of the Southern Railway.

The receipts from maritime and land custom-houses for the fiscal year 1907 were 9,802,881.91 *sucre*s (\$4,901,440.95), as compared with 8,132,560.56 *sucre*s (\$4,066,280.28) in 1905, or an increase in the receipts of the former year over those of the latter of 1,670,321.35 *sucre*s (\$835,160.67), due largely to the increased facilities of the railways for the handling of traffic.

The revenues from salt in 1907 amounted to 490,413.19 *sucre*s (\$245,206.59), as compared with receipts from the same source in 1905 of 372,359.51 *sucre*s (\$186,179.75), or an increase in 1907 of 118,053.68 *sucre*s (\$59,026.84).

The tax on alcohol in 1907 produced 506,252.20 *sucres* (\$253,126.10), as compared with 254,161.14 *sucres* (\$127,080.57) in 1905, or an excess in the receipts of the former over those of the latter year of 252,091.06 *sucres* (\$126,045.53).

In order to meet the deficit for the fiscal year 1907, a loan of 2,892,810.69 *sucres* (\$1,446,405.35) was negotiated.

Concerning the railway from Guayaquil to Quito, the President says:

The Trans-Andine Railway—the surest foundation for the progress of the nation—has at last arrived at Quito. The earnest wishes of a patriotic people and my most fervent desires have been realized, but this gigantic undertaking has cost us innumerable sacrifices, inasmuch as the Government has had to overcome many difficulties in order to prevent our hopes from being shattered and the prosperity of the Republic long retarded. I will give you, in a special message, an account in detail of this truly regenerating work—a work we can not now appreciate in all its magnitude. All that was possible and necessary to do to crown with success such a great undertaking has been done, and the efforts and sacrifices of the administration have received the approval of the whole nation.

On August 6, 1908, preliminary work was begun on the railway from Huigra to Cuenca, and the contractor promises to have trains running into the rich mining and agricultural districts of southern Ecuador within the next twenty-eight months. Construction on the railway from Bahia to Quito will soon be commenced. The President advocates the extension of the Guayaquil and Quito Railway to Ibarra and Tulcan, thus placing the principal part of the Republic in rapid communication with the rich and fertile Provinces of Imbabura and Carchi. The building of the proposed railway to Curaray is likewise recommended.

There has been a notable improvement in the public school system of the nation, and the modern methods adopted have produced satisfactory results. The establishment of scientific and industrial schools, and especially of an agricultural college, is earnestly recommended.

In regard to colonization and immigration, the Executive favors liberal laws, such as will encourage the coming of immigrants, because it is through proper immigration that new nations develop and reach the pinnacle of their wealth and greatness.

The Government will celebrate the hundredth anniversary of its independence by holding a National Exposition in Quito in honor of the political heroes of the emancipation period of the country's history, in which a number of nations have already decided to participate.

The Executive calls attention to the needs of the charitable institutions of the country, and earnestly recommends them to the favorable consideration of the Congress. As a means of obtaining funds

the President suggests that lands held in mortmain be leased or administered by the State, and that the proceeds thereof be applied to the maintenance of eleemosynary institutions.

INDUSTRIES OF THE DEPARTMENT OF GUAYAS.

An interesting report of the Governor of the Department of Guayas to the Minister of the Interior of the Republic of Ecuador says that the domestic industries of that Department, the capital of which is Guayaquil, continue to increase and develop in a satisfactory manner, but recommends, in order to stimulate and augment the home industries of the Department and of the Republic to a still greater degree, that the Federal Government cooperate in a practical and ef-



PINEAPPLE PLANTATION IN ECUADOR.

Ecuadorian fruit is extensively exported to the dry coast zones of Peru and northern Chile.

fective manner by sufficiently protecting the domestic manufacturers of the country against the competition of foreign manufacturers engaged in producing the same class of articles. According to the report referred to, the principal industries of Guayaquil that have been established for a long time cover such important articles of consumption as vermicelli, chocolate, biscuits, beer, ice, soap, candles, liquor, etc., while the newer industries consist in the manufacture of bags, wafers, cotton fabrics, mosaics, and a well-equipped tannery. The manufacture of matches has been particularly successful in the Republic, and the quality and price of this product compare most

favorably with matches of foreign manufacture. The report especially recommends all domestic industries that have to import raw materials for the manufacture of the finished product to the consideration and protection of the Federal Government, and suggests the reduction of duties on raw products and an increase of duties on foreign articles coming in competition with merchandise manufactured therefrom.



GUATEMALA

PUBLIC INSTRUCTION IN THE REPUBLIC.

The value attached by the Guatemalan Government to public instruction has been amply supported by the present President, MANUEL ESTRADA CARRERA. The higher educational institutions are established at Guatemala City and Quezaltenango and include schools of law, medicine, surgery, dentistry, pharmacy, and commerce. These schools, particularly that of medicine, under the auspices of which the Pan-American Medical Congress was recently held, enjoy a high reputation in all Latin America and attract many students from neighboring republics. There are also night schools for artisans and workmen, the pupils of which are exempt from military service.

The secondary course of instruction, established at Guatemala City, Quezaltenango, and Chiquimula, is under the direction of Belgian professors, as is one of the normal schools. The United States has also contributed an efficient corps of men and women teachers, and no expenditure has been spared to make the course of study practical and thorough. The Minister of Instruction has a special portfolio in the President's Cabinet, and many Guatemalan youths are educated abroad at Government expense.

The country maintains a national conservatory of music and a school of fine arts, in both of which the instructors are largely European and American artists, while the Government especially encourages the manual and mechanical arts. One of the features of the entertainments of the Pan-American Medical Congress was a fine production of the opera "Aida" on a high plane of artistic merit.

The school year ends with October with appropriate festivities held in the beautiful "Temple of Minerva," constructed for the celebration of scientific and scholastic ceremonies.

HAITI



RAILWAY STATION, PORT AU PRINCE, HAITI.

Port au Prince is connected by rail with l'Etang-Saumatre and Lake Assugi. A railway is also under construction between the city and Gonaives. Other lines building will join the capital with Cape Haitien and Perrin.

COMMERCIAL CONVENTION WITH GERMANY.

The Haitian and German Governments, desirous of increasing the trade relations between the two countries, have concluded a commercial convention which was signed July 29, 1908, and promulgated August 25, 1908.

According to this convention the following Haitian products will, upon their importation into Germany, pay the minimum customs duties: Cabinet and dye woods, cacao, coffee, wax, and honey, while the following German products imported into Haiti will enjoy a reduction of 25 per cent on all the principal duties and on those collected for docking, weighing, visé, as well as on the surtax of 50 and 33 $\frac{1}{3}$ per cent inscribed in the Haitian minimum tariff: Stockings and socks of all kinds and grades, matches, tin and enameled ware, cement, rope, faience, and twine.



MEXICO

FOREIGN COMMERCE, 1907-8.

Figures issued by the Statistical Division of the Treasury Department of the Mexican Government place the total value of the trade of the Republic for the fiscal year 1907-8 at \$464,374,899.75 Mexican currency (\$232,187,400 gold), against \$480,247,588.68 silver (\$240,123,700 gold) in the preceding year.

Imports figure for \$221,535,993 silver (\$110,767,900), as compared with \$248,018,010 silver (\$124,009,000) in 1906-7, the export valuations for the two periods being \$242,783,906.52 silver (\$121,369,400) and \$232,229,578.68 silver (\$116,114,700), respectively.

A decline is thus indicated in the later period in both branches of national trade, the loss on the import list being \$10,693,585.36 and on the export of \$5,279,103.48 silver valuation.

On the import list, the only item for which a notable increase is cited is classified under textiles and manufactures thereof, in which a gain of \$4,814,786.60 silver (\$2,400,000) is reported in 1907-8. While minerals and metals as a whole decreased in import value by \$12,984,473.60 silver (\$6,492,000) it is noteworthy that materials of iron and steel for building and industrial purposes showed an advance of \$3,366,307.31 silver (\$1,683,000).

On the export list, while gold shipments increased by \$8,047,305.33 silver (\$4,023,600) and while those of silver declined by \$6,827,039.46 silver (\$3,413,500), precious metals as a whole advanced \$1,220,265 silver (\$610,000). Vegetable products as a whole declined by \$1,624,391.52 silver (\$812,000) but coffee advanced by \$3,354,956 silver (\$1,677,400) rubber by \$2,212,755.30 silver (\$1,106,300), and guayule by \$1,171,409 silver (\$585,700).

The balance of trade in favor of the Republic, as indicated by the excess of exports over imports, is \$21,202,913.20 silver (\$10,601,400), which is a favorable showing as compared with the preceding fiscal year, when the trade balance figured for \$15,788,432 silver (\$7,884,200).

The business crisis which occurred during the year naturally affected the demand for raw materials abroad, and as this class forms the bulk of Mexican exports the explanation of the decline in the shipment of national products is furnished. At the same time, fewer sales necessitate fewer purchases on the part of the producer, so that

in the economic consideration of the matter the year's report is, in the main, favorable to Mexico's commercial status.

A lowering of the price of some of the commodities exported accounts in some degree for the decline in export values, thus henequen was really shipped in larger quantity during the year 1907-8 than in 1906-7, but a decline in price caused a corresponding decline in valuation to the amount of \$4,420,905 silver (\$2,210,400). In addition to the coffee and rubber increase noted above, tobacco shipments show an increased valuation of \$742,911 silver (\$371,400), while other native products, such as cotton, wheat, rice, corn, and beans, were subject to greater domestic demand, thus necessitating a cutting off of exports.

IMPORTS.

[Silver valuation.]

Articles.	1907-8.	1906-7.
Animal substances:		
Live animals.....	<i>Pesos.</i> 2,364,613.38	<i>Pesos.</i> 3,883,771.95
By-products of animals—		
Food.....	369,319.04	383,142.62
Industrial.....	1,246,614.26	1,414,407.21
Medicinal.....	16,315.42	1,701.42
	1,632,248.72	1,799,554.25
Animal products—		
Food.....	6,008,378.16	6,376,011.76
Industrial.....	1,115,545.54	982,407.31
Medicinal.....	36,656.94	32,941.36
	7,162,580.64	7,391,360.46
Manufactured articles—		
Hides.....	1,910,995.85	1,999,057.32
Boots and shoes.....	3,423,913.07	3,432,957.44
Miscellaneous.....	769,440.36	760,684.18
	6,106,349.28	6,192,698.94
Total animal products.....	17,263,792.02	19,267,385.60
Vegetable products:		
Textile fibers.....	2,030,786.22	1,456,069.79
Fruits and grains—		
Food.....	5,994,335.66	9,581,536.76
Medicinal.....	12,635.51	13,756.46
Industrial.....	75,228.32	63,426.32
Live plants and seeds.....	214,087.49	174,260.45
	6,300,306.98	9,832,979.99
Sundry vegetable substances.....	1,646,521.48	2,005,450.04
Miscellaneous vegetable products—		
Food.....	2,211,736.89	1,903,975.28
Medicinal.....	287,880.78	223,377.05
Industrial.....	3,696,609.08	2,845,824.09
	6,196,226.75	4,973,176.42
Woods.....	7,260,518.30	6,912,747.91
Manufactures of vegetable substances—		
Of lumber.....	564,649.03	523,491.76
Of lumber with other substances.....	2,120,378.13	1,916,933.48
Furniture.....	2,202,226.83	2,016,742.51
Of sundry vegetable substances.....	2,330,849.33	2,108,269.70
	7,227,103.32	6,565,437.45
Total vegetable substances.....	30,631,463.05	31,745,861.60



SAN RAFAEL MINING WORKS, PACHUCA DISTRICT, HIDALGO, MEXICO.

The district of Pachuca is probably the richest mining section of the Republic. It was the first section worked by the Spaniards after their arrival in the country. In addition to silver, gold and lead and a quality of iron, which is unsurpassed in the world, are found here. San Rafael, though a comparatively new silver mine, is very prosperous.

IMPORTS—Continued.

Articles.	1907-8.	1906-7.
Mineral substances:		
Gold, silver, and platinum—		
Minerals and metals.....	<i>Perus.</i> 38,150.49	1,022,158.56
Manufactures.....	6,956,618.47	21,716,712.06
	6,994,768.96	25,768,870.62
Copper and its alloys—		
Minerals and metals.....	3,115,627.34	2,968,809.94
Manufactures.....	4,622,795.79	4,367,886.36
	7,738,423.13	7,336,696.30
Tin, lead, and zinc—		
Minerals and metals.....	424,805.66	445,906.31
Manufactures.....	945,232.11	815,443.43
	1,370,037.77	1,291,349.74
Iron and steel—		
Minerals.....	2.00	8,339.75
Construction and industrial material.....	23,409,922.51	20,043,615.20
Manufactures.....	7,248,457.73	7,069,098.42
	30,658,382.24	27,121,053.37
Other metals.....	330,517.14	237,161.14
Stones and earths—		
Stones and earths.....	10,103,682.45	9,013,807.67
Products.....	6,868,584.50	6,112,282.61
Manufactures.....	937,430.50	1,086,407.06
Flint glass, glass, chinaware, and porcelain.....	4,515,800.16	4,504,551.94
	22,425,547.61	20,747,049.28
Total mineral substances.....	69,517,706.85	82,562,180.45
Fabrics and their manufactures:		
Cotton—		
Yarns.....	2,744,778.83	2,251,875.16
Fabrics.....	10,760,394.67	8,836,718.20
Manufactured articles.....	4,153,019.72	3,333,500.20
	17,658,193.22	14,425,183.56
Flax, hemp, and similar fibers		
Yarns.....	413,127.90	401,724.19
Fabrics.....	763,943.82	807,825.39
Manufactured articles.....	254,945.66	247,436.13
	1,432,017.38	1,456,985.71
Wool—		
Yarns.....	95,681.27	91,655.97
Fabrics.....	3,985,645.48	3,259,452.78
Manufactured articles.....	1,961,419.85	1,857,762.26
	6,052,746.60	5,208,871.01
Silk—		
Yarns.....	101,221.75	102,463.00
Fabrics.....	1,512,063.06	1,198,007.07
Manufactured articles.....	1,739,779.48	1,380,981.13
	3,353,064.29	2,681,451.20
Silk mixed with other substances—		
Yarns.....	929.57	964.00
Fabrics.....	1,188,403.21	1,011,533.69
Manufactured articles.....	845,022.81	881,437.81
	2,004,435.59	1,923,935.50
Artificial or artificial silk—		
Yarns.....	535.30	174.03
Fabrics.....	35,161.22	15,117.38
Manufactured articles.....	69,721.68	49,310.31
	105,418.20	64,601.72
Total fabrics and manufactures thereof.....	30,575,815.30	25,764,028.70

IMPORTS—Continued.

Articles.	1907-8.	1906-7.
	<i>Pesos.</i>	<i>Pesos.</i>
Chemical and pharmaceutical products.....	10,350,906.51	9,413,002.93
spiritoous, fermented, and natural beverages.....	7,163,930.41	7,296,236.31
Paper and paper products:		
Waste and pulp for paper manufacture.....	982,125.75	1,086,230.31
Paper and cardboard.....	1,211,040.73	1,218,274.78
Manufactured paper.....	1,642,736.85	1,551,895.82
Articles made of paper.....	2,310,962.69	2,156,066.48
Total paper and paper products.....	6,146,866.02	6,012,467.39
Machinery and apparatus.....	28,673,000.63	27,797,865.86
Vehicles.....	7,387,088.67	9,003,324.21
Arms and explosives.....	3,650,313.77	3,907,892.89
Miscellaneous.....	10,179,110.03	9,522,332.71
Total imports.....	221,535,993.32	222,229,578.68

Countries of origin for imports were as follows:

Countries.	1907-8.	1906-7.
	<i>Pesos.</i>	<i>Pesos.</i>
EUROPE.		
Germany.....	28,297,661.78	21,036,437.13
Austria-Hungary.....	1,626,651.19	1,315,687.88
Belgium.....	3,237,551.31	3,127,630.92
Spain.....	7,609,924.55	7,927,986.31
France.....	19,986,727.16	17,317,603.73
Great Britain.....	32,870,327.42	23,451,272.89
Holland.....	579,182.67	563,779.03
Italy.....	1,922,268.38	1,876,159.19
Norway.....	352,726.70	355,580.22
Portugal.....	142,810.42	306,565.08
Russia.....	307,707.69	228,234.71
Sweden.....	581,161.04	571,562.37
Switzerland.....	1,410,391.83	985,873.24
Other countries.....	91,205.72	119,226.08
	99,719,297.86	82,194,468.81
ASIA.		
China.....	231,470.71	288,133.66
Hindustan.....	1,024,019.57	1,157,536.90
Japan.....	958,935.42	723,802.73
Other countries.....	58,581.71	74,569.57
	2,276,010.41	2,244,047.86
AFRICA.		
Egypt.....	212,851.01	299,650.07
Other countries.....	12,753.26	26,547.83
	225,604.27	226,197.90
NORTH AMERICA.		
Canada.....	817,556.43	417,676.64
United States.....	117,235,184.64	146,392,884.26
	118,052,741.07	146,810,560.90
CENTRAL AMERICA.		
Guatemala.....	9,346.98	8,595.88
Honduras.....	17,918.19	14,087.56
Other countries.....	88,178.18	16,670.35
	115,473.35	39,353.79
SOUTH AMERICA.		
Brazil.....	11,970.03	9,013.38
Colombia.....	33,629.64	16,405.00
Chile.....	85,139.50	160,531.79
Ecuador.....	145,451.62	95,976.38
Panama.....	12.97	700.00

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Countries.	1907-8.	1906-7.
SOUTH AMERICA—continued.		
	<i>Pesos.</i>	<i>Pesos.</i>
Peru.....	16,820.26	18,168.13
Argentine Republic.....	349,627.00	49,376.68
Venezuela.....	17,815.60	26,811.36
Other countries.....	1,740.90	6,553.98
	665,213.52	381,536.70
WEST INDIES.		
Cuba.....	136,946.77	177,562.45
Other countries.....	5,971.76	9,902.91
	142,918.53	187,465.36
OCEANIA.		
Australia.....	300,378.28	65,081.36
Other countries.....	38,354.00	38,806.00
	338,732.28	103,947.36
Europe.....	99,719,297.86	82,194,468.81
Asia.....	2,276,010.14	2,241,047.86
Africa.....	225,606.27	236,197.90
North America.....	118,052,711.07	146,840,560.90
Central America.....	115,473.35	39,553.79
South America.....	665,213.52	383,336.70
West Indies.....	142,918.53	187,465.36
Oceania.....	338,732.28	103,947.36
	224,535,993.32	232,229,578.68

EXPORTS.

Articles.	1907-8.	1906-7.
<i>Pesos.</i>		
Mineral products:		
Gold coin, Mexican.....		29,990.00
Gold coin, foreign.....	5,046,593.54	10,070.00
Gold in bars.....	23,097,909.34	18,905,646.10
Gold in other forms.....	3,776,516.39	4,928,007.84
Total gold.....	31,921,019.27	23,873,713.94
Silver coin, Mexican.....	10,671,274.00	24,521,921.00
Silver coin, foreign.....	165,037.00	161,829.00
Silver in bars.....	69,173,114.04	63,191,248.18
Silver in other forms.....	13,025,328.56	11,986,791.88
Total silver.....	93,034,750.60	99,861,790.06
Total silver and gold.....	124,955,769.87	123,735,504.00
Antimony.....	1,094,187.00	1,427,421.00
Copper.....	24,834,068.11	28,792,778.98
Marble, unwrought.....	36,063.00	81,724.00
Plumbago.....	64,376.00	134,365.00
Lead.....	5,344,561.86	3,644,738.56
Zinc.....	888,484.00	2,010,108.12
Other minerals.....	616,115.33	419,064.11
Total minerals.....	158,430,625.37	190,246,004.10
Vegetable products:		
Cotton, raw (cu borra).....	44,342.00	595,454.00
Cotton, raw (cu rama).....	1,275,186.80	3,658,325.00
Cotton, uncleaned.....	15,746.75	169,665.00
Coffee.....	10,592,186.00	7,237,529.34
Casahuate and tanning barks.....	13,001.00	8,269.00
Rubber.....	8,801,684.30	6,678,926.00
Chicle.....	2,251,624.71	2,144,724.00
Oil of aloes.....	116,772.00	97,755.00
Beans.....	588,183.00	862,605.00
Fresh fruits.....	385,899.08	329,990.43
Peas.....	3,418,258.70	4,084,521.00
Guayule.....	1,232,634.00	61,225.00
Horse beans.....	1,965.00	2,550.00
Henequen.....	27,019,340.00	31,440,245.77
Ixtle.....	2,900,727.78	3,813,176.00
Woods.....	2,189,718.14	2,169,778.50

EXPORTS--Continued.

Articles.	1907-8.	1906-7.
Vegetable products--Continued.	<i>Pesos.</i>	<i>Pesos.</i>
Corn	6,316,74	8,870,80
Mulberry logs	83,201.00	91,725.00
Haywood	633,196.16	739,810.12
Fodder	99,804.70	235,937.00
Broom root	2,317,699.00	1,831,217.00
Leaf tobacco	2,637,742.33	1,894,830.35
Vanilla	1,911,061.00	2,662,266.00
Sarsaparilla	72,168.00	121,512.00
Other vegetable products	1,457,227.80	863,677.20
Total vegetable products	70,185,982.99	71,810,374.51
Animal products:		
Hides	101,645.40	96,413.00
Horns	19,150.00	59,558.00
Cattle	2,227,118.00	1,560,362.00
Bones	43,053.00	11,721.00
Honey	159,393.65	113,121.68
Dried flies	16,106.00	40,071.00
Hides, undressed	6,788,424.89	8,853,091.03
Other animal products	271,897.78	364,787.31
Total animal products	9,659,788.72	11,151,928.02
Manufactured products:		
Sugar	684,605.00	1,161,339.00
Heusepen rope	250.00	1,122.00
Flour, cotton-seed cakes, and lardoline	839,627.00	846,284.00
skins, dressed	82,513.11	74,883.00
Sugar loafs	23,181.50	26,612.00
Bran	47,071.08	61,360.00
Straw hats	439,157.22	631,218.80
Tobacco, manufactured	501,634.17	493,228.00
Other manufactured products	390,659.10	507,450.32
Total manufactures	3,014,028.78	3,766,433.72
Miscellaneous	1,448,480.66	1,043,209.65
Total exports:		
Precious metals	124,955,769.87	123,735,504.00
Other articles	117,783,136.65	121,282,506.00
Total	242,738,906.52	245,018,010.00

The destinations of exports were as follows:

Countries.	1907-8.	1906-7.
EUROPE.	<i>Pesos.</i>	<i>Pesos.</i>
Germany	22,359,371.83	20,109,664.21
Austria-Hungary	19,064.00	3,555.00
Belgium	6,029,537.35	5,308,503.52
Spain	2,371,048.23	2,938,411.00
France	12,393,816.10	8,054,972.79
Great Britain	26,256,848.43	31,874,023.54
Holland	44,510.00	51,850.00
Italy	48,956.00	37,966.00
Norway	1,000.00	20.00
Portugal	544.00
Russia	19,565.00	51,067.00
Sweden	450.00
Other countries	110.00	2,222.00
	69,504,371.01	68,482,705.06
China	1,090.00	796.00
NORTH AMERICA.		
Canada	184,603.84	456,679.00
United States	170,125,337.35	175,809,123.63
	170,309,941.19	176,265,802.63

Countries.	1907-8.	1906-7.
CENTRAL AMERICA.		
	<i>Pesos.</i>	<i>Pesos.</i>
Guatemala.....	459,765.90	482,470.91
Honduras.....	323,341.53	299,135.40
Other countries.....	31,733.92	8,728.00
	811,741.35	790,332.31
SOUTH AMERICA.		
Chile.....	27,108.39	1,200.00
Ecuador.....		200.00
Panama.....	14,874.00	71,054.00
Peru.....	3,690.58	29,580.00
Argentine Republic.....	1,545.00	750.00
Venezuela.....	50.00	
Other countries.....	300.00	
	47,657.97	103,394.00
WEST INDIES.		
Cuba.....	1,977,359.00	2,372,180.00
Other countries.....	83,743.00	2,000.00
	2,061,102.00	2,374,180.00
Australia.....		800.00
Europe.....	69,504,371.01	68,482,765.06
Asia.....	1,090.00	795.00
North America.....	170,399,911.13	176,265,802.63
Central America.....	814,711.35	790,332.31
South America.....	17,657.97	103,394.00
West Indies.....	2,061,102.00	2,374,180.00
Oceania.....		800.00
	242,738,906.52	248,018,010.00

CONSTRUCTION OF THE NAZAS RIVER DAM.

Contracts have been entered into between the Mexican Government and the representative of the company of S. PEARSON & SOX, for the preparation of plans for the proposed dam at Cañon de Fernandez, in the State of Durango, for the storage of the waters of the Nazas River. The contract also provides for the preparation of plans by the same company covering the necessary works for distributing water throughout the Laguna district.

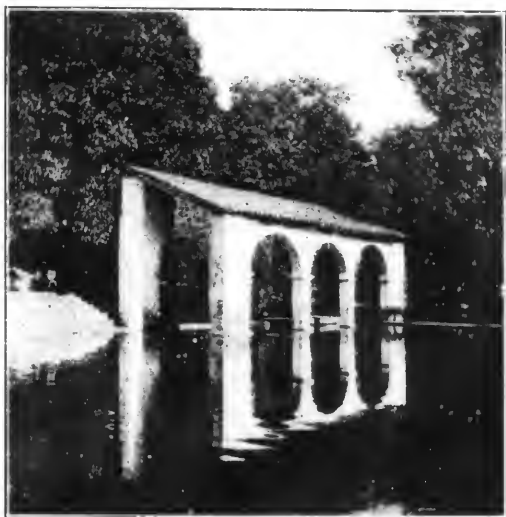
IRRIGATION IN THE COTTON DISTRICT.

One of the immediate benefits to be derived from the construction of the Nazas River dam at San Fernandez will be an immensely increased cotton yield in the Laguna district. This section of Mexico is a level basin with wonderfully fertile lands suitable for the culture of cotton. The district is dotted with factories and traversed by railroads for the transport of both raw and manufactured products, while the surrounding mountains are impregnated with rich metal deposits.

At present the mineral production is the leading source of revenue to Lerdo, Gomez Palacio, and Torreon, the centers of industrial life in the district, but it is anticipated that the proper distribution of

the Nazas water supply will not only double the output of cotton but also give immense impetus to other agricultural enterprises.

Experts of Europe claim that the Lagima cotton is of remarkably strong fiber and of excellent texture and color. The total crop of the Republic for 1907 was 80,000 bales, and as the consumption in the mills was about 155,000 bales, large quantities are imported to meet local demand. The imports of textile fibers by Mexico for the fiscal year 1907-8 were nearly double in value those reported for the preceding year, the annual imports from the United States being estimated at about 50,000 bales.



IN THE LA BORDA GARDENS, CUERNAVACA, MEXICO.

This beautiful garden was designed by José de la Borda, a millionaire miner, a century and a half ago. Its terraced slopes, fountains, running streams, and artificial cascades, adorned with the rich verdure of a multitude of tropical and subtropical trees and plants, is the realization of a miner's dream of fairyland. This veritable paradise was a favorite spot of the unfortunate Carlotta, Empress of the ill-fated Maximilian.

In 1906, the cotton yield was far in excess of the demand, and 50,000 bales were shipped to Europe, but, lacking sufficient and regular water supply, the growers are unable to accurately gauge the output from year to year. This uncertainty will be overcome by the agency of the San Fernandez dam.

COMMERCIAL VALUE OF GUAYULE.

In connection with the increased shipments of guayule from Mexico during the fiscal year ending June 30, 1908, when the valuation was given as over \$500,000 in excess of the preceding year, it is significant

that receipts of rubber in the United States from Mexico, mainly guayule, are steadily on the increase.

From January to December, 1907, total exports of guayule aggregated 11,900,000 pounds, of which, according to the "India Rubber World," 9,400,000 were sent to the United States and the remainder to Europe. In the first six months of 1908 guayule was sent abroad to the amount of 8,910,000 pounds, of which 6,980,000 pounds were exported to the United States and 1,830,000 to Europe.

Of total rubber imports, amounting to 62,233,160 pounds, by the United States in 1908, Mexican rubber figured for 9,269,443 pounds, as against 1,705,915 in a total of 57,884,345 pounds in 1906.

THE PALO COLORADO AS A RUBBER PRODUCER.

Since the exploitation of the guayule business, with its attendant financial success, prospectors have been investigating other plants and trees in Mexico in the hope of meeting with similar good fortune.

The investigators confidently expect to more than duplicate what has been achieved with the guayule plant by utilizing the palo colorado. They claim that the sap from the palo colorado tree contains over 33½ per cent of pure caoutchouc. Several tons of sap have been gathered and is being experimented upon. The results of the experiments have not been made public, but the fact of bonding large tracts of land would indicate that the promoters have great confidence in the ultimate outcome.

The palo colorado encracho tree grows fairly abundantly on the Pacific slope of the Sierra Madre Mountains at an elevation of from 2,500 to 4,000 feet above sea level, and it forms in many places the line of demarcation between the pine and oak timber.

The largest and most thrifty growth is to be found in the shady places—that is, in the shade of other trees of a larger growth or in the mountain ravines where the sun shines little. The tree attains an average height of 24 feet, and in diameter is from 8 to 14 inches.

The leaves are large, oval in shape, usually three on a stem, sometimes five, the leaf stem being about 6 inches in length and the size of a lead pencil. A person handling the leaves experiences the same sensations as in handling nettles. The tree bears a large white blossom, commencing to flower in May and continuing in flower until late in August. The bark is a dark reddish gray in color, very soft and thin. It is tapped in the same manner as the true rubber tree, and when tapped there exudes a thick white sap which, as it is exposed to the air, becomes semisolid. The pans used in collecting are wet to prevent the sap from adhering. The season for sap gathering continues throughout the whole year. When tapped the larger trees

produce as much as a kilogram (2.2 pounds) per day, but after one or two days' run the cut is closed with clay to allow the tree to regain its vitality.

The guayule, or rubber substitute, five years ago was practically unknown as a commercial factor. In the year 1905 there was exported to the United States nearly \$125,000 worth; with the year ending June 30, 1908, the exportations of the product of this plant amounted to over \$2,250,000 from the consular district of Durango alone. The guayule business has grown to one employing several thousand men and capitalized to the extent of over a million dollars.

BANKING INSTITUTION FOR AGRICULTURAL AND IRRIGATION PROMOTION.

The concession authorizing the establishment of a banking institution in the Mexican capital to serve as an aid to agriculture and to irrigation enterprises in the Republic was signed by the Minister of Fomento on September 3, 1908, the concessionnaires being representatives of the following banks: The National Bank of Mexico, the Bank of London and Mexico, the Mexican Central Bank, and the Mexican Bank of Commerce and Industry. The primary purpose of the institution is to furnish funds on long time and at moderate interest to national irrigation, agricultural, and stock-raising concerns, and, in a supplementary manner, for the exploitation of mineral, fuel, and metallurgical works.

The initial capital is placed at a minimum of \$10,000,000 Mexican and the Federal Government binds itself to guarantee both as to principal and interest, the bonds or obligations which the bank is to issue in order to accomplish the purposes of its being, subject to the following conditions:

(1) The total nominal value of the bonds or obligations shall not, for the present, exceed \$50,000,000 Mexican, or the equivalent of that sum in foreign coin. This amount may not be exceeded without authorization by the Federal Congress and unless the bank capital be increased in such proportion that it shall never be less than one-fifth of the amount of the bonds or obligations guaranteed by the nation.

(2) The rate of interest, the rate of issue of the bonds or obligations, and the conditions for their amortization will be decided in every case with the approval of the Department of Finance.

A report and balance sheet covering the status of the institution shall be presented semiannually to the Government, the particulars of which shall be published in the "*Diario Oficial*."

The terms of the loans to be made by the bank shall not exceed fifteen years on mortgage securities, and in other cases the duration

is limited to three years. On neither shall the rate of interest exceed 7 per cent, save by special permit of the Department of Finance and Public Credit. The rate may also be ordered decreased by the same Department when the bank, by means of Federal guaranties, is enabled to secure funds at an actual interest disbursement of less than 5 per cent per annum.

Loans on mortgages shall not exceed 60 per cent of the value of the property affected, appraisement being made either in accordance with the opinion of specially appointed experts or with the tariff for the sale of vacant lands in force at the time of the proposed transaction.

The incorporation of the bank is to take place by public deed by November 3, and one month thereafter is assigned as the time limit for the approval of the statutes by a general meeting of the shareholders, both deed and statutes to be subject to approval by the Department of Finance and Public Credit.

The life of the company is fixed at fifty years, unless it be extended by an act of the Federal Congress and by virtue of a resolution of the shareholders.

The limit of the operations of the bank is set forth in article 3 of the concession.

CUSTOMS RECEIPTS, JULY, 1908.

Figures covering the customs receipts at the various ports of the Mexican Republic for July, 1908, aggregate, for imports, \$2,806,731 Mexican (\$1,403,360), and for exports, \$30,304.71 Mexican (\$15,152).

THE SALTILLO WHEAT CROP.

It is reported that the wheat crop in the Saltillo district of Mexico has proved to be even smaller than earlier estimates indicated, and the supply of native wheat will not last the mills longer than September if they are run steadily. A petition has been forwarded to the Federal Government asking for the removal of duties on imported wheat. Without waiting for the abolition or reduction of import duties one miller of Saltillo has already ordered ten carloads of wheat from the United States.

The retail price of flour at Saltillo is now about \$5.60 United States currency per 100 pounds. The import duty is about \$2.25 per 100 pounds.

DEVELOPMENT OF OIL FIELDS.

United States Consul WILLIAM W. CANADA, of Veracruz, reports that there has been great activity in different parts of Mexico in prospecting for and developing oil lands, and a number of American syndicates are said to have obtained options on extensive tracts of land in the States of Tamaulipas, Veracruz, and Chiapas.

A large number of deals have recently been closed, and the necessary drilling outfits have been brought from the United States. Test borings are taking place in every direction, and reports of new wells struck are of frequent occurrence.

The Huasteca Petroleum Company has been granted a very favorable concession for the exploitation of oil lands in the northeastern part of the State of Veracruz. Machinery, tankage, and supplies for this venture may come free of duty and are also exempt from Federal taxation for a term of years. The company has a capital of \$250,000 gold and is organized under the laws of Mexico. Arrangements are under way for the construction of a pipe line to Mexico City.

In the Piedralco district, in the State of Chiapas, the Anglo-Mexican Oil Fields (Limited) is putting down a number of wells and is said to have struck a good flow of oil near El Chapapote at a depth of only several hundred feet. The same company is opening up a new field on the San Carlos hacienda, near El Caimbe.

STOCK AND AGRICULTURAL FAIR AT COYOACAN.

The Mexican Government has granted a concession for the establishment of a stock and agricultural fair at Coyoacan, a suburb of the capital of the Republic. Exhibits of cattle, fowls, domestic animals, agricultural products, machinery, and tools will be made at stated intervals, and prizes will be given to the exhibitors making the best displays. The Government agrees to make an annual appropriation of 27,000 *pesos* (\$13,500) as a prize fund, to be awarded to exhibitors either in money, medals, diplomas, etc., and to pay the company an annual subvention of 6,000 *pesos* (\$3,000) to be used in the conservation and repair of buildings, expenses of administration, and other necessary outlays. Should the company decide to sell its property the Government retains the right to acquire it, should it desire to do so, in preference to any other purchaser. With the consent of the Government, other fairs and expositions may be held in the buildings and on the grounds of the company, provided they do not interfere with the stock and agricultural fairs referred to in the concession. The contract will remain in force for five years from August 10, 1908.

CONCESSION FOR THE STORAGE AND SALE OF COAL AT MANZANILLO.

The Mexican Government has authorized EDGAR K. SMOOR to construct a building or buildings at Manzanillo, State of Colima, Mexico, for the storage and sale of coal at that port. The plans of the buildings, wharves, and railway terminal facilities of the coaling station must be submitted to and receive the approval of the Government within twelve months from August 13, 1908. The concession is for a period of thirty-five years.

CAPITAL OF THE BANKS OF THE REPUBLIC.

On January 31, 1908, the capital of the banks of the Republic aggregated 171,600,000 *pesos* (\$85,800,000), while on June 30, 1908, it had risen to 176,100,000 *pesos* (\$88,050,000), an increase of 4,500,000 *pesos* (\$2,250,000) during the period referred to.

WATER POWER IN THE GUADALAJARA DISTRICT.

An estimate prepared for the Mexican Central Railway in regard to the water power available in the city and tributary territory of Guadalajara shows the enormous total of 200,000 horsepower.

According to a conservative estimate, the Bermejillo concession at Juanaacatlan, with 15,000 liters of water per second and 57 meters of fall, has a theoretical power of 11,400 horses; the Mannel Cuesta Gallardo concession, with 15,000 liters of water per second and 250 meters of fall, covers 50,000 horsepower; the French or Negrete concession, with 15,000 liters of water per second and 110 meters of fall, 12,000 horsepower; the Perez-Vasquez-Rogers concession, with 15,000 liters of water per second and 210 meters of fall, 42,000 horsepower. This gives a total theoretical power of 115,400 horsepower, leaving still unapplied nearly 100,000 horsepower available for industrial purposes for delivery in Guadalajara.

The concessions mentioned control the Santiago River from Lake Chapala to a point 2 kilometers below San Cristobal, covering a total distance of about 90 kilometers, the river forming a semicircle around Guadalajara.

Lower down on the river additional power aggregating about 100,000 horsepower is obtainable, the total amount being within 25 miles of the city.

The companies operating concessions in the vicinity are importing much new machinery, and the owner of one of the most valuable has recently secured the rights covering the lighting and power system of Guadalajara.

**THE MINING INDUSTRY IN THE REPUBLIC.**

An extended review of the mineral industry of Nicaragua, furnished from Bluefields to the "Mining Journal" (London) for August 22, reports gold shipments from the Atlantic coast of the Republic during 1907 (fiscal year) to the value of \$800,000. For the year ending June 30, 1908, the general decline as compared with

the figures for the preceding year amounted to about \$100,000, of which \$50,000 is credited to exports from Bluefields. For 1907 the Bluefields shipments of gold were reported by the American consular agent at that port as \$557,550, a record being established thereby.

Exports do not represent the entire production of the Republic, as a portion of the output is made up into native jewelry; some goes into the interior of the country and to Honduras, and part of it taken from the country as contraband. These supplementary portions were scheduled in 1907 at \$200,000, so that the entire output for that year may be figured at \$1,000,000.

Duties on gold are paid in export bonds, in the absence of which a surcharge of 50 per cent is made. About 100 square miles of fine mining property are held by the La Villebeuvre concession, while the United States and Nicaraguan Company have property rights in several thousand square miles of mining ground, railroad and telegraphs, river navigation, etc., having spent \$1,000,000 in developing their concession. Another company operating under the name of the Sigüia Mining Company holds mineral rights of 18,000 hectares (about 45,000 acres); also concessions for dredging the three small rivers between Bluefields and Greytown, along which the lands lie.

EXPORTS FROM BLUEFIELDS, FISCAL YEAR 1908.

The gross value, in gold, of merchandise shipped from Bluefields to the United States for the year ending June 30, 1908, as reported by Mr. M. J. CLANCY, United States Vice-Consul at that port, was as follows:

Alligator hides, 328 pounds.....	\$73. 07
Amalgam (gold)	69,366. 13
Bananas, 970,000 bunches.....	409,965. 90
Cocoanuts, 49,700.....	1,564. 99
Copper ore (samples).....	5. 53
Deerskins, 326 pounds.....	76. 59
Gold (billion), 27,274 ounces.....	429,799. 81
Household goods	296. 68
Hides, 597 pounds.....	70. 90
Maps	250. 00
Oranges, 15,000.....	70. 00
Pineapples, 3,850.....	234. 38
Rubber, 209,784 pounds.....	129,261. 78
Soles, 33,505.....	14,189. 57
Tmo, 510 pounds.....	82. 50
Turtle shell, 640 pounds.....	3,665. 12
United States gold and currency.....	1,500. 00
Wood, 70 pounds.....	11. 31
Yellow metal (old).....	147. 14
American goods returned.....	5,070. 65

The total of the above items is \$1,065,642.05, which includes the regular duty, export bonds duty, *bodega de revisión*, concession and subconcession charges, bluff wharf tax, freight, insurance, and other expenses.

The shipment of alligator hides, bananas, coconuts, rubber, and turtle shells is controlled by concessions.

CONCESSION FOR ASIATIC IMMIGRATION.

United States Consul JOSÉ DE OLIVARES writes from Managua that the Nicaraguan Government has given a five-year concession to a Mexican, granting the right to introduce Chinese and Japanese immigrants into Nicaragua for employment as laborers in connection with plantations and other industries in the country. This concession, however, is conditioned on the establishment by the concessionaire, within the period of one year, of a line of steamers from Hongkong, touching at Shanghai, San Francisco, Salina Cruz, and Central American ports, including Corinto and San Juan del Sur.



MESSAGE OF THE PRESIDENT.

President M. AMADOR GUERRERO in delivering an interesting message to the Congress of the Republic of Panama, assembled in regular session, on September 1, 1908, stated that the Republic continues to maintain amicable and friendly relations with all the nations of the world, as is shown by the cordial treatment of the diplomatic representatives of Panama in the New and in the Old World, and by the honors accorded him during his recent unofficial visit to the United States and to some of the cities of Europe.

The Republic of Panama was represented at the Second International Peace Conference held at The Hague, and will send delegates to the International Commission of Jurists, that will meet in the capital of Brazil in compliance with a resolution of the Third Pan-American Conference held in Rio de Janeiro in July and August, 1906.

Referring to telegraph construction, the President recommends a considerable increase in that item of the budget, in order that telegraph lines may be extended to all the important districts and settlements of the country, some parts of which are at present without this useful and rapid means of communication.

The foreign postal service is being operated in a satisfactory manner and in accordance with the provisions of the Universal Postal Union. Panama has celebrated, from time to time, a number of postal conventions with different countries of Europe and America. Internal postal communication answers the present local wants, but the President recommends the enactment of measures for the extension and betterment of the service to meet the growing demands of the nation, and suggest the employment of a larger number of women in that branch of the public service.

Regarding the finances of the nation, it is interesting to note that the cash balance on February 20, 1904, when President GUERRERO



ANCIENT TOWER OF THE OLD CITY OF PANAMA.

This old tower, overgrown with vines and vegetation, marks the site of the original city of Panama, founded 5 miles inland from the present city in 1515. It flourished until 1671, when it was wantonly destroyed by Morgan, the buccaneer.

became the Chief Executive of the Republic, was \$3,149.77, which amount, plus \$10,000,000 received from the Panama Canal negotiations, made a total of \$10,003,149.77. During the present administration \$206,469.40 was paid out of the aforesaid sum on account of loans made by the Provisional Government Board and subsequently to defray expenses incurred by order of the said board; \$3,250,000 have been invested in public works of unquestioned utility to the country. Notwithstanding these outlays, the credit balance of the Republic on June 30, 1908, consisted of \$7,860,696.68, represented by deposits and mortgages in the United States, \$250,000 on deposit

in the Mortgage and Security Bank (*Banco Hipotecario y Preudario*), and cash on hand in the General Treasury of the nation to the amount of \$33,473, making the total available assets at the time mentioned \$8,144,169.68. During the four years of the present administration the outlay of the Government for public improvements and current expenses was only \$1,859,320.66 in excess of the receipts from the regular sources of revenue, which excess represents useful and substantial improvements made throughout the entire country.

The revenue system of the Republic is founded on import duties on foreign merchandise and internal taxes on liquors. The President recommends that these sources of revenue be preserved and that protection be given to some of the new industries recently established in the Republic, the principal one of which is the rearing of stock, and suggests that the bounty system be carefully studied in order to see if it would be of benefit to adapt it in some cases in the encouragement and development of some of the newer industries of the country.

The President manifests a keen interest in the cause of public education, and states that there has been considerable growth and improvement in primary instruction in Panama. There has been established in the capital a School of Arts and Trades, which promises to become one of the most useful and salutary institutions of the country. The capital also has a primary training school to supply teachers for the education of the aborigines of the country.

Nearly all the public works commenced under the present administration have been successfully terminated. Among these the most worthy of mention are the Government Palace and the National Theater. These two buildings were erected at a cost of a little over \$700,000, the Government Palace being now in use, and the theater soon to be opened to public service. Many other public works, such as the construction of buildings, bridges, wharves, and the opening, improvement, and extension of roads, have been undertaken and completed during President GUERRERO's administration.

Another important event which has occurred during the present administration has been the encouragement to steam navigation in the coastwise trade of the Republic. The Government has subventioned a maritime company, and a satisfactory coastwise service has been established for the Pacific coast region, and the benefits derived from this sure and convenient mode of communication are already being felt all over the country.

The charitable institutions of the country have received the special attention and encouragement of the administration, the Santo Tomas Hospital having been completely renovated and placed in first-class condition. The number of patients treated in this institution in 1907 was 4,316, the death rate being less than 8 per cent. The other prin-

cial eleemosynary institutions of the capital are the Lying-in Hospital and the Bolivar Asylum, the first named having treated 103 cases during the last seventeen months, and the latter having been of great benefit to the unfortunate poor of the Republic.

The President closes his message by strongly recommending measures that will tend to attract currents of immigration to Panama, calls attention to the favorable sanitary condition of the country at the present time, to its safety as an abode for immigrants, and to the benefits agricultural immigrants would lend to the development and material progress of the Republic.



OLD SEA WALL AND WATCH TOWER OF THE CITY OF PANAMA.

When these fortifications were erected they were among the most formidable in the world, and have successfully resisted many an onslaught from buccaners. The bay of Panama, which is about 50 miles across, contains a number of protruding rocks and odd-shaped islands, upon one of which Pizarro fitted out his expedition for the conquest of Peru.

FINANCIAL STATUS IN 1908.

The report issued by the Secretary of the Treasury of the Republic of Panama for the six months ending June 30, 1908, shows credit balance of the Government on that date as \$7,860,696.68. Of this, \$6,000,000 gold is represented by first mortgages on real-estate holdings in New York City paying $4\frac{1}{2}$ and 5 per cent interest. In addition, \$1,505,307.03 is on deposit as account current in the same city.

National receipts during the six months covered by the report amounted to \$1,259,574.15, from the following sources: Liquor tax, \$231,704.07; match tax, \$6,297.68; salt tax, \$2,018.63; from stamped paper, \$25,275.54; lottery tax, \$31,000.34.

A balance after paying the expenses of the Government for the six months to the amount of \$105,307.03 was turned into the Treasury, and for current expenditures there were at the end of June, \$55,389.65.



FRANCHISES FOR THE MEAT INDUSTRY.

The President of Paraguay promulgated on July 7, 1908, a general law governing the granting of franchises, valid until December 31, 1935, to meat extract and canning companies organized in accordance with its provisions. Under the terms of this law any company desiring to engage in the industry of extracting and canning meats is allowed to import, free of duty, the material and machinery necessary for the erection of the factory and the installation of the machinery, together with other supplies and substances, such as packing boxes and material and machinery for their manufacture, required in the preparation of the output of the plant. Coal for fuel may also be imported without the payment of duty.

The free importation of cattle is permitted from the Argentine Republic and the State of Matto Grosso, Brazil, if there is no epizootic at the places where the shipments originate, and provided the sanitary laws and customs regulations of the Republic of Paraguay are complied with. No export duty will be levied on the products and by-products of the industry, but lighterage and storage charges will be collected if use is made of the equipment, cranes, and stevedores of the Federal custom-houses, but should the company use its own wharf in loading and unloading, it shall be exempt from the aforesaid charges.

The Executive reserves the right to specify the minimum number of animals that shall be slaughtered annually in the establishment operating under this law, and should the company fail for a period of twelve consecutive months to slaughter said minimum number, this omission, *ipso facto*, shall work a forfeiture of the concession, unless such failure was due to an act of God or unavoidable circumstances. The Executive will also appoint an inspector to guard the interests of the State and to see that only healthy animals are slaughtered, the salary of said official to be paid by the company.

The President will decide annually, and in each particular case, after having received the report of the customs administrator, based upon the importance of the output of the factories, concerning the merchandise that may be imported free of duty in accordance with the provisions of this law. Meat extract and canning factories shall only pay a Federal tax of 20 cents gold for each animal slaughtered in lieu of an export duty on hides.

All articles imported or exported by the concessionaires in violation of the provisions of this law are subject to confiscation by the State and to the forfeiture of the concession. The companies organized under this law must have their legal domicile in the Republic and keep their accounts in Spanish.

No more favorable concessions than those provided for under this law shall be granted to any meat extract or canning company without also applying to the companies organized under the provisions of this act.

LIVE-STOCK CONVENTION WITH THE ARGENTINE REPUBLIC.

On July 16, 1908, the Government of Paraguay approved the convention signed at Buenos Aires on May 30, 1908, between the representatives of Paraguay and the Argentine Republic, regulating the interchange of stock between the two nations.



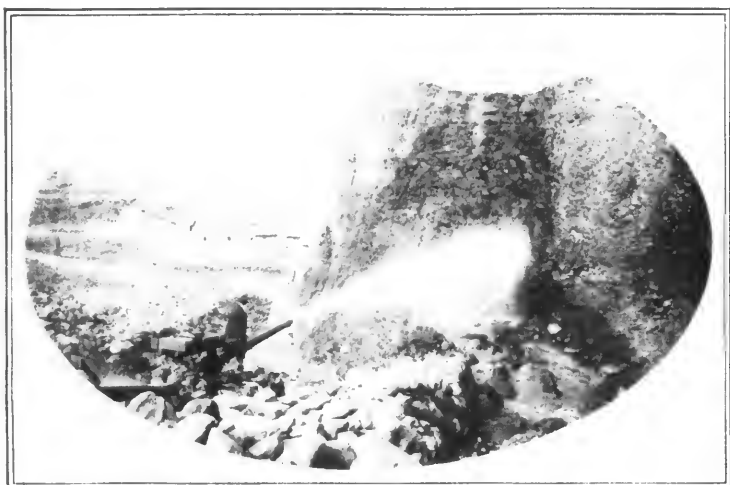
MINERAL RESOURCES AND MINING LAWS.

An exhaustive consideration of the resources and mining laws of the Republic of Peru has been furnished the "Mexican Mining Journal" by the Minister of Fomento of the Peruvian Government, who states that if nature has favored the country with great riches in all departments of the vegetable kingdom it has been even more prodigal with its gifts in the mineral kingdom. As its fertility is extraordinary, as its vegetation is exuberant, and its flora rare and varied, the country is even richer in the great abundance and variety of its minerals. The resources of the country in this line include gold, silver, copper, lead, mercury, tin, bismuth, zinc, iron, cobalt, molybdenum, arsenic, wolfram, vanadium, antimony, mica, manganese, aluminum, graphite, potash, soda, silica, salts, sulphur, bituminous coal, peat, asphalt, pitch, petroleum, etc.

The discovery and exploitation of the principal mining districts of Peru constitute an interesting chapter in the history of the period.

The natural development of the industry was halted at the beginning of the eighteenth century, primarily caused by Indian rebellions, which were followed by the long wars for independence, so that in 1824, when Peru achieved her independence, the mining industry had fallen into decay. During the first years of independence the established Government could do but little to promote the progress of the industry, and the lack of capitalists and practical mining operators militated against its development. With the establishment of the School of Mines in 1876 and the enactment of the mining law of 1877 the rehabilitation of the mining industry was initiated.

The promulgation of a new mining code in January, 1901, gave new impulse to mineral development and it is to the judicious and



GOLD MINING AT POTO, PERU, 16,000 FEET ABOVE SEA LEVEL.

Enormous deposits of auriferous gravel are washed by hydraulic methods. Peru's mineral output for 1907 amounted to \$18,000,000.

liberal legislation on the part of the Government that the progress noted in recent years is due. This code facilitates to the greatest extent the acquisition of claims and permits the greatest freedom in working the properties while guaranteeing absolute protection to the rights acquired. Mining rights are free to all nationalities, the only requirement being the payment of a semiannual tax of 15 *soles* (about \$7.50) per *pertenencia*. Furthermore, a special law passed in 1860 provides that until 1915 it will not be possible to burden the mining industry nor the exports of the products thereof with any new tax.

The usual dimensions of a *pertenencia* are 200 by 100 meters, but for coal and oil, as well as for placers of silver, tin, etc., it has the

form of a square, 200 meters to the side. The number of pertenencias that may be denounced is practically unlimited, though the law provides that the maximum of contiguous pertenencias shall not exceed 60. A documentary stamp of 5 *soles* (\$2.50) must be attached to each petition of denouncement, which is the only fee imposed on the transaction, whether the denouncement cover 1 or 60 pertenencias.

The National Government, through the Department of Fomento, directly supervises the adjudication of mining concessions of all classes. The Minister of Fomento has in his charge the formation of the "*Padrón General de Minas*," which is the official register for the inscription of all concessions.

The importation of machinery, supplies, tools, etc., for use in mining operations is exempt from duties, the same being true as regards coal, lumber, dynamite, mercury, and all material necessary for the construction and operation of railroads.

The Corps of Mining Engineers, created in 1902, has for its object the further development of Peruvian mines by exploring and making known by means of commissions new mineral districts, describing also the geological formations and magnitude of the lands explored. The results of these important works are published in special pamphlets, profusely illustrated with photographs and maps.

The influence and participation of United States capital have been prominent factors in the recent evolution of Peruvian mines, many successful enterprises having been undertaken, while others are in process of organization. The Cerro de Pasco Company and the Inca Mining Company are specially noteworthy examples.

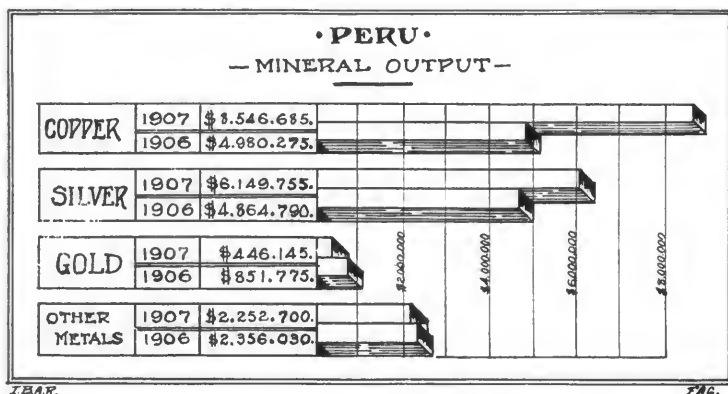
The mineral output of 1907 is valued by President Parro at \$17,395,285, that of the preceding year having been \$13,052,870. While copper maintains the first rank, with \$8,546,685, the value is almost double the figures cited for 1906, when \$4,980,275 represented the value of the output. Silver, the next ranking item, was produced to the value of \$6,149,755, against \$4,864,790 in the preceding year, whereas gold declined from \$851,775 to \$446,145. Other minerals, with the exception of coal, increased the value of their output.

The increased number of petitions for denouncements of mining properties is practical evidence of the growth of the industry, it being stated that the adjudicated claims during the first half of 1908 exceeded those of the preceding half year by 3,334. According to the "*Código de Minería*," in 1906-7 the superficial area conceded for mining purposes in the Republic aggregated 71,000 hectares (about 275 square miles).

The developments in copper mining are particularly numerous and important. The United States company now operating at Cerro de Pasco produces approximately 40 tons of copper daily, or an annual output of 15,000 tons. The smelters recently erected at Aneah, Yanli,

Pisco, etc., will greatly augment the copper production, and the development of large deposits lately discovered at Huayllay, Quiruvilca, Apicamarca, Cachi-Cachi, and elsewhere have proven very valuable, so that it is estimated that within a short time Peru's annual shipments will amount to 50,000 tons, thus bringing the country third only to the United States and Mexico as a producer.

Silver is found disseminated through all the Andean region, commonly associated with lead or copper and frequently with both. "*Cascajo*," a mineral without metallic brilliancy and of a reddish color, due to its proportion of iron oxide, is a silver-bearing mineral peculiar to Peru, and, with copper, forms the great deposit of the Cerro de Pasco district. The best known silver districts in the north are Hulgayoc, Salpo, and Callejon de Huaylas; in the center are Catajumbo, Hnarochiri, Yanle, Cerro de Pasco, Hnallanca, Castrovireyna, and in the south, Lucanas, Cailloma, Lampa, and Puno.



Copper distribution is common both separately and in combination throughout practically all of the Republic. Veins, chiefly of copper containing a small portion of silver and traces of gold, abound on the coast in Chimbote, Ica, and Lomas. The sulphurides, arsenical and antimonial ores are found in great abundance in the Andean country, and are the objects of considerable exploitation in the mining camps of Cerro de Pasco, Yanli, and Ancaho. The famous ore bodies of Cerro de Pasco are situated in the union formed by the Cordilleras of the east and west Andes, at the bottom of a valley surrounded by "*cerros*" of slight elevation. This deposit is a great ore body of copper, silver, gold, and lead, with several other minerals in a less scale, among which is vanadium.

Gold is found in veins of ferruginous quartz in the spurs of the western Cordilleras and in the same form in the rest of the Andes

region, associated generally with other metals, as silver and copper, and in the form of scattering flakes it is found in the alluvial deposits and also in the sands that are washed off the mountains during the freshets. On the coast the richest gold zone is that of Nasca and Camana; in the Andean region, those of Huancuco, Aymares, Cata-bambas, Pataz, and Quispicanchi, and in the Montaña those of Sandia and Carabaya, that of Marañon, and various others.

Lead abounds principally in the form of argentiferous galena, and the famous historical mine of Santa Barbara, celebrated for its mercury in colonial times, is located in the Department of Huancavelica. Cinnabar is found in the vicinity. Notwithstanding the abundance of tin in the Andes contiguous to the Bolivian border, it has been



SANTO DOMINGO MINE, PROVINCE OF CARABAYA, PERU.

This gold mine, situated in the Montaña district, on the eastern slope of the Andes, is the property of Pennsylvania capitalists.

found in Peru only in the Provinces adjacent to that Republic, such as Huancane, Department of Puno, but without economic importance. Iron is of common occurrence, but has not as yet been the subject of exploitation.

Peru contains immense coal beds, anthracite being found in the Chimbote and Huarez districts, in the Provinces of Otuzco, Huamachuco, and other places. Bituminous coal is found in the Departments of Cajamarca, Ancash, Jujin, Ica, Arequipa, Puno, and Moquegua. There are a number of deposits that might be exploited with profit, the most valuable under working being in the vicinity of Cerro de Pasco.

Petroleum is found in the neighborhood of Chimbote, in the Calaveras Mountains of the Province of Casma, in the district of Palpa, Province of Ica. In the district of Puse, Province of Huancayo, Department of Puno, great deposits of petroleum have been developed by drilling, and it has been located in many other sections. The discovery of new petroleum deposits in southern Peru near Lake Titicaca will add considerably to Peru's supply of this combustible.

The metallurgical plants now in operation number 89, of which 19 are for amalgamation, 32 for lixiviation, 23 smelters, and 12 concentrating with lixiviation and other processes. There are also 2 petroleum refineries and 1 for sulphur. About 13,000 persons are employed in the exploitation of the various mining developments of the Republic.

DEVELOPMENT OF COMMUNICATION FACILITIES.

Many notable public improvements have been undertaken during the able administration of President José Pardo, who was inaugurated as the Chief Executive of Peru on September 21, 1904. Some of these works have already been completed, while others are still in process of construction. The following is a list of some of the most important of these enterprises:

HIGHWAYS.

One of the most important national highways of the Republic is that now under construction between Paucartambo and the Madre de Dios River, a distance of 200 kilometers (125 miles), the estimated cost of which is £34,000. Before this road can be completely opened to traffic two large bridges, costing £14,500, will have to be constructed over the Pini and Tono rivers. When this highway is completed and after the railway reaches Cuzco, the trip from Mollendo to the Palotoa River can be made in five days, viz: One-half day by rail from Mollendo to Arequipa; one-half day by rail from Arequipa to Caycay; one day on horseback from Caycay to Paucartambo; one and one-half days from Paucartambo to Asuncion; one day by horseback from Asuncion to Palotoa, and one-half day on the Palotoa River to Mann. Navigation from Palotoa is made without any risk whatever.

The road from Cajamarca via Chachapoyas to Moyobamba, and from the latter place to Balza Puerto and Yurimaguas, is another public highway that is destined to become an important factor in the material development of the northern part of Peru. The length of this road is about 600 kilometers (373 miles), and the cost of construction will not be less than £12,000. About 50 kilometers (31 miles) of this highway have been constructed.

The roads from Casma to Huaras, 151 kilometers (93 miles), and from Recnay to Caraz via Carhuaz and Yungay, 101 kilometers (63 miles), and other roads in the Department of Ancash, are being improved and extended.

The Atoghuarco pass of the public road from Cerro de Pasco to Huancayo is being prepared for the reception of a substantial bridge that is to be erected at that place. Four surveys have been made of the road between Huancayo and the Mozon Mountains, and plans have been made to build and improve many other roads in the Republic.



THE STONE BRIDGE, LIMA, PERU.

The first bridge across the Rimac River was a wooden structure, built in 1554. Fifty-six years later it was replaced by a stone bridge, which has withstood the ravages of time, and is to-day the principal highway connecting the banks of the river.

A valuable improvement to the suburbs of the capital is the construction of a beautiful avenue between Miraflores and El Mar, establishing in this manner direct communication between Lima and the places mentioned.

BRIDGES.

Bridges are being constructed over the Cresnejas, Cumbil, Pativilea, and Santa rivers, and at different places in the Republic, such as Quiroz, Recnay, Lambayeque, Atoghuarco, Challuanca, Huarocondo, Huarancalla, and Challa. Arrangements have been made to construct bridges at Tambo, Majes, Piahnasi, Rans, Tono, and Piñi

Piñi, and bridges are being built or repaired at Ququijana, Huari-pampa, Llocllapampa, and Huaquillas.

RAILWAYS.

At the end of September, 1904, there were 1,741 kilometers (1,082 miles) of railways in operation in the Republic and 106 kilometers (66 miles) in construction. Since that time 284 kilometers (176 miles) of railways have been completed, 358 kilometers (222 miles) are now under construction and will be finished by the end of the present year, and 2,010 kilometers (1,246 miles) have been surveyed and steps taken toward their construction.

COTTON GROWING IN THE REPUBLIC.

The average value of Peruvian cotton is about \$2,500,000 annually.

The general conditions for the cultivation of cotton in the valleys and lowlands of the west coast of Peru are exceedingly favorable to the growth and development of this important fiber-producing plant, and insure a long and prosperous life to this branch of the agricultural wealth of the nation. Considerable variations in the manner of cultivating cotton in different parts of the Pacific coast of the Republic exist, due largely to the situation and productiveness of the land, the water available for irrigation purposes, the abundance or scarcity of labor in the different cotton-growing sections, and above all to the effect of the climate upon the growth of the plant and the quality of the product.

There are large tracts of land suitable for the cultivation of cotton available on the west coast in the valleys of the rivers and streams that flow down from the Andes Mountains to the Pacific Ocean. The soil of the parts of the valleys adapted to the cultivation of cotton is formed of successive layers of alluvial deposits, and, under the stimulus of proper irrigation, is rendered exceedingly productive. In the famous cotton-producing departments of Lambayeque and Piura the valleys near the sea spread out into considerable plains of unsurpassed fertility, and the slope of the land toward the ocean is, generally speaking, such that irrigation along the mountain streams and rivers is rendered inexpensive, easy, and profitable. Water is most abundant in the summer months at the time vegetation is most vigorous and when the cotton plants require the greatest moisture for their proper growth and development. Sometimes the streams, fed by the melting snows and copious rains of the upper Andes, slightly overflow the plains and deposit thereon a rich sediment of alluvium which fertilizes and stimulates the growth of the cotton plant.

Cotton is a surer and more suitable crop to cultivate in this part of Peru than sugar cane, since the latter needs water all the year

round, while the former requires, relatively, but little water for its development and thrives with intermittent periods of moisture and irrigation. Climate, soil, and facility of irrigation make the cultivation of cotton in many of the valleys of Peru similar to that followed in the noted cotton belt of Egypt, and the quality and excellence of Peruvian cotton have long been celebrated in the cotton markets of the world.

In northern Peru, Paita is the chief port for the export of cotton, while Piura is the center of its production and preparation for the market. In the latter Department, five good crops, the first in the same year it is planted, and two crops annually during the two suc-



CONCEPCION MARKET, LIMA, PERU.

Lima has four market places, this being the principal one. It occupies both floors of the building, which covers an entire block. It is well ventilated and equipped and is supplied with a great variety of meats, birds, fish, vegetables, and fruits.

ceeding years, may be obtained from one planting, the first crop being somewhat light, the second fair, the third of greatest abundance, and the two remaining crops yielding a diminishing return as compared with the third or maximum crop. Cotton from the Department of Piura is usually classed as "rough Peruvian," notwithstanding the fact that it varies greatly in quality, length of staple and color, and close resemblance of the fiber of some grades to wool, so much so that it has been called "vegetable wool." This kind of cotton is in great demand by manufacturers of ladies' fine merino underwear and hosiery.

A field of fully developed Peruvian cotton is most beautiful to behold, the plant containing at one time the flower, the boll, and the open cotton ready for the picker. Pinra cotton has never been successfully grown in any other part of the world, due, probably, to the peculiar climate and soil required for its development and growth, and to the periodic seven-year rains for which this narrow belt of the coast land of Peru is noted.

There is a unique variety of Peruvian cotton of a delicately brownish tint, the fiber of which resembles wool, that is much sought for in commerce, inasmuch as it requires no dyeing to prepare it for a popular color of underwear and hosiery that is in great demand in the United States and Europe. This cotton has rather a long fiber, and is used sometimes by European manufacturers in the adulteration of certain grades of silk fabrics.



FOREIGN TRADE, FIRST QUARTER OF 1908.

Official statistics of Salvador show that the total exports for the first quarter of 1908 were valued at \$2,940,535, of which coffee amounted to \$2,392,530 and silver bars \$320,509. Sugar and anil (indigo) were the only other exports of any consequence, amounting to \$75,857 and \$49,084, respectively.

The exports to the principal countries were as follows during the quarter: United States, \$604,285; France, \$774,795; Germany, \$747,479; United Kingdom, \$219,439; Italy, \$205,573; Spain, \$139,324; Austria-Hungary, \$133,276; all other countries, \$116,364. Coffee constituted nearly the whole exports to these countries, with the exception of the United States, for which destination the exports of silver bars amounted to \$330,509 and coffee to \$259,427.

PROPOSED RAILWAY FROM SANTA ANA TO AHUACHAPAN.

The "*Diario Oficial*" of Salvador publishes in its issue of August 10, 1908, a contract which the Government of that Republic proposes to make with the Salvador Railway Company (Limited), of London, for the extension of the railway from Santa Ana to Ahuachapan, via Chalchuapa and Atiquizaya. According to the terms of the proposed contract, on the completion of the railway and the opening of the same to traffic, one train a day at least must be run in each direction between the terminal stations. The Government is to grant to the construction company a right of way of at least 20 meters wide, and



SAN SALVADOR. GENERAL VIEW FROM THE PARK.

San Salvador is the capital of the Republic, situated 2,188 feet above sea level, and has a population of 50,500 inhabitants. It is one of the oldest of New World cities, having been founded in 1528. It is substantially built, and contains many fine buildings, among them the new Cathedral, Municipal Palace, University, Palace of Justice, and Artillery Barracks.

such other grounds as may be needed for the stations, switches, etc., free of charge to the company, except in case of the lands of private persons, in which instance the company must reimburse the Government at the rate of 1,200 *pesos* (\$480) per kilometer (0.621 mile). Construction is to commence early in 1909, and the line is to be completed and opened to traffic within two years from that date. The Government is to pay to the company an annual subvention of £2,085 for a period of thirty-five years, or during the life of the proposed contract.

COMMERCIAL TREATY WITH GERMANY.

By the terms of the commercial treaty between the Republic of Salvador and Germany, concluded in April, 1908, the contracting parties agree to accord to one another most-favored-nation treatment in commercial, maritime, and consular matters. It is, however, stipulated that any right, favor, or immunity which Salvador has already granted or may hereafter grant to any or all of the other Central American Republics may not be claimed by Germany unless such right, favor, or immunity be extended to some country other than the Central American Republics.

The treaty becomes effective upon the exchange of ratifications, and is to remain in force for ten years, and unless denounced one year before the expiration of that period it shall continue in force for another year, renewable by yearly periods until one year after denouncement.



INSURANCE REGULATIONS IN THE REPUBLIC.

In July, 1908, the time limit accorded by the Uruguayan Government to insurance companies operating in the Republic for compliance with the provisions of the law of January 18, 1908, in regard to the deposit of guaranties and the payment of a tax on the premium income expired.

The law in reference, as previously recorded in the BULLETIN, requires foreign companies to put up a guaranty of \$30,000 gold if fire insurance is covered and \$20,000 if marine; while if both branches are served, the deposit is as before noted for fire and \$5,000 for marine. The premium tax is 5 per cent for fire and 4 per cent for marine.

National companies pay half the above guaranties and pay a tax of 2 per cent on both classes of insurance. It is provided that foreign companies may qualify as national companies if they invest \$150,000 gold in real estate or bonds, or deposit this amount in bank, not to be touched by the company holding it. Several foreign companies have complied with the latter condition, and are operating as national organizations.



CENTRAL RAILWAY STATION, MONTEVIDEO, URUGUAY.

The railway systems of Uruguay have a length of about 1,500 miles, and represent, including the lines under construction, a capital of \$98,000,000. Of this sum \$28,000,000 carries a Government guarantee of 3½ per cent interest. Uruguayan railroads are exempt from trade and land taxes, as well as from import duties on construction material.

MUNICIPAL STATISTICS OF MONTEVIDEO.

The population of Montevideo on June 30, 1908, is given as 312,946, as against 308,057 on the same date of the preceding year. Tramway returns for the first six months of the year show 5,775,369 passengers carried on the horse-car lines and 17,673,326 on the electric lines, the figures for the corresponding period of 1907 being 7,482,270 and 12,076,695, respectively.

The electric light company supplying the city shows profits from the operations for the year ending June 30 of \$146,786.80 gold, an advance over the previous year of \$24,000. Private lighting increased by 12,434 incandescent lamps and 59 arc lamps.

CUSTOMS REVENUES, JULY, 1908.

Customs receipts of the Uruguayan Republic for July, 1908, and for the seven months of the year ending with that month aggregated \$1,107,113.91 and \$8,040,522, respectively. For the seven months' period an increase of \$126,337 is noted, as compared with the same portion of the preceding year, whereas in comparison with the month of July, 1907, there was the slight decrease of \$32,000.

Revenues from imports for the month are placed at \$916,334.21 and from exports at \$123,025.43, while the Department estimate is \$67,754.27.

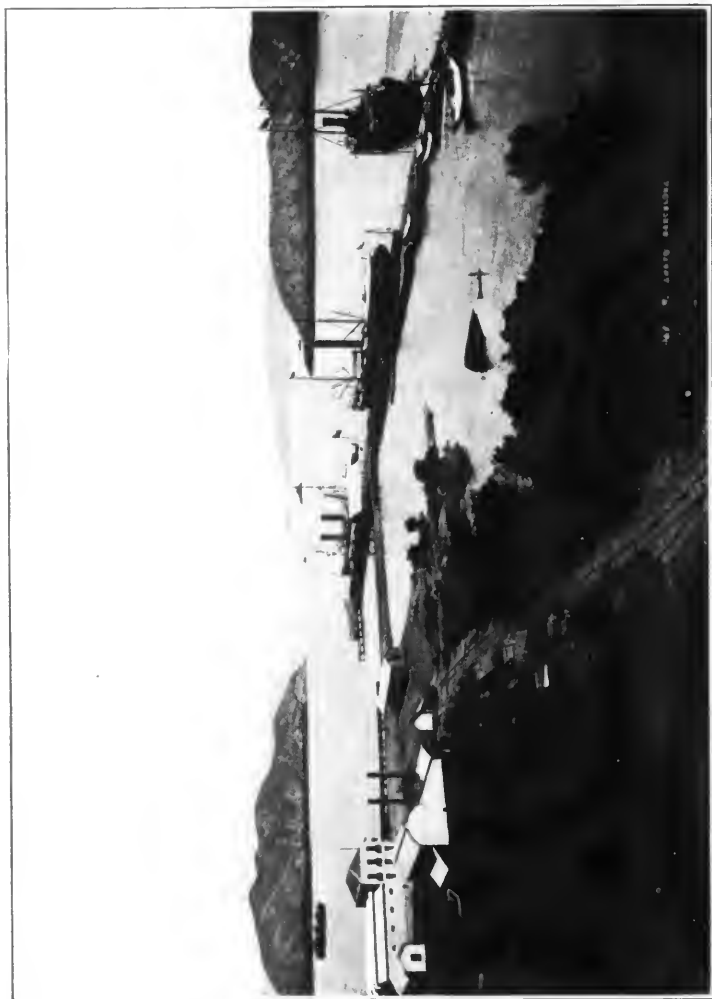
NATURALIZATION CONVENTION WITH THE UNITED STATES.

The United States Minister to Uruguay has reported to the State Department that he has signed with the Uruguayan Government a naturalization convention between the two countries. The convention now goes to the United States for ratification.



STATE BOUNTY FOR THE CULTIVATION OF RICE.

For the purpose of stimulating the cultivation of rice the governor of the State of Zulia, Venezuela, has been authorized by the State Legislature to offer prizes or bounties aggregating a total of 4,000 *bolivars* (\$800) to the agriculturists of that State who succeed in producing certain quantities and qualities of this useful cereal. The first two prizes are for 1,000 *bolivars* (\$200) each, to be awarded to the planters who produce, in the harvest of 1909 the largest quantity of rice of a good quality, the quantity to be at least 150 *faneegas* (240 bushels) of this cereal. Another prize of 600 *bolivars* (\$120) is offered to the agriculturist who continues to raise the largest quantity of a good quality of rice, provided the production does not fall below 100 *faneegas* (160 bushels). Smaller prizes are offered on similar conditions to other planters who produce smaller quantities of a good quality of rice. The prizes are to be awarded on October 28, 1909, by a board appointed by the Governor for that purpose.



PORT OF GUANTA, VENEZUELA.

This is a landlocked harbor on the Caribbean sea, the city being connected by railroad with the near by port of Barcelona. Owing to its natural advantages, Guanta has succeeded to a large part of the trade, formerly tributary to Barcelona, and is one of the principal centers in Venezuela for the exportation of live stock.

COALING OF VESSELS AT THE PORT OF LA VELA.

Under date of August 17, 1908, the Government of Venezuela decreed that foreign vessels desiring to coal at the port of La Vela are exempt from the payment of the port dues fixed by the Code of



PACK MULES IN VENEZUELA.

Inland traffic is largely carried on by means of small but hardy donkeys, which carry immense loads of merchandise strapped to their backs. The markets of the cities are daily supplied with vegetables and other produce brought in from the country by these patient little animals.

Finance on the entrance and clearance of vessels, and that such vessels will be provided with all the assistance possible in the operation of taking on coal. The price of coal at La Vela is fixed at \$5 a ton.



CAVALRYMAN, ARGENTINE REPUBLIC.

The cavalry branch of Argentina's standing army consists of eleven regiments. The men are expert horsemen, and this branch of the national service appeals to them. The mounts are of small stature, strong, hardy, and high spirited, but very tractable.



LEZAMA PARK, BUENOS AIRES.

This is one of the popular parks of the city. Its location on a beautiful hill is picturesque, from which can be seen the surrounding suburbs of La Boca and Barracas, and a long stretch of La Plata River. The Russian church is shown in the background of this view.



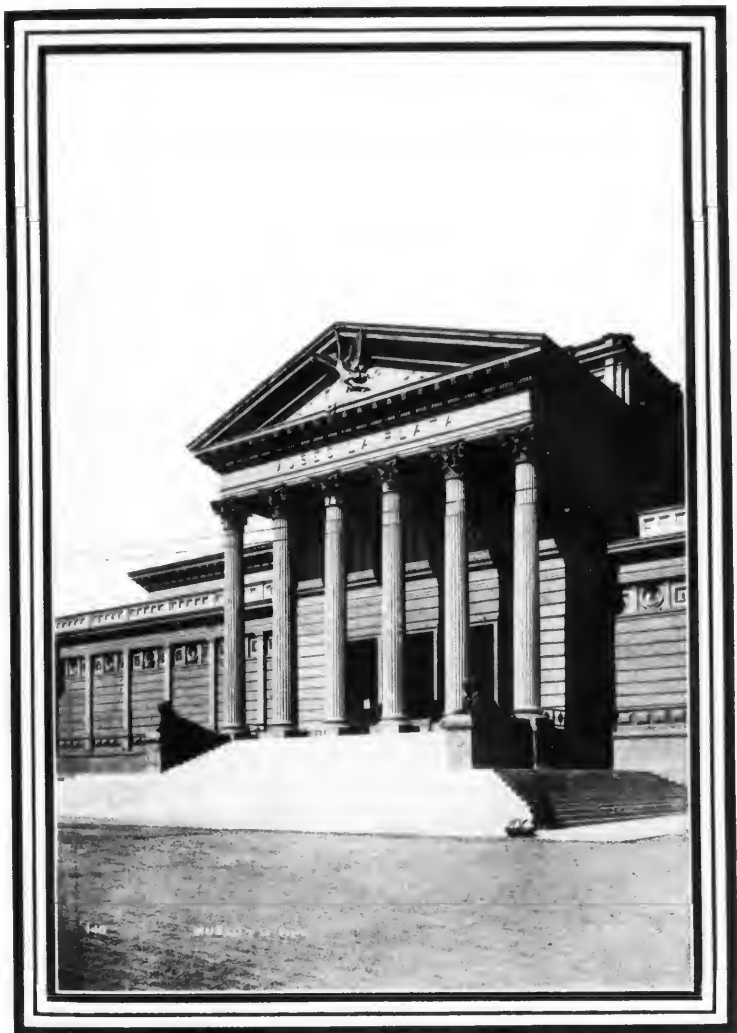
POST-OFFICE AND TELEGRAPH BUILDING, LIMA, PERU.

Notwithstanding the great physical obstacles encountered, Peru's postal and telegraph services have reached a high state of efficiency. The former has been more than self-sustaining for several years, and there are 550 post-offices in the Republic. The telegraph system has a mileage of 3,200, all but 20 per cent of which is operated by the Government.



SCENE, ISLAND OF TIERRA DEL FUEGO, ARGENTINE REPUBLIC.

Though in 55° south latitude, a portion of the island abounds in thick forests. In the more open country the sheep industry prospers.



MUSEUM, LA PLATA, ARGENTINE REPUBLIC.

This institution was founded in 1884 by its present Director, Francisco P. Moreno, and is situated in the suburbs of La Plata, in what is known as the La Plata Forest. It contains the largest collection of American fossils in existence.



STATUE OF GENERAL PAEZ, CARACAS, VENEZUELA.

José Antonio Paez, a famous general and President of the Republic, was born June 13, 1790, and died in New York City May 7, 1873, while on his way home from a tour of Europe and America. As a lieutenant in command of cavalry under General Bolívar he distinguished himself by capturing a fleet of Spanish transport vessels with a force of 50 troopers, the only recorded instance of the capture of a fleet by cavalry.



ALAMEDA, SANTIAGO, CHILE.

Formerly this beautiful avenue was lined with two rows of massive poplars. Recent improvements caused the destruction of many of these giants, but other trees were planted in their stead. The avenue extends some distance along the foothills of the Andes, making a picturesque driveway and promenade.



PUBLIC PARK, SÃO PAULO, BRAZIL.

São Paulo's park system is favorably compared with those of the largest European and American cities, and is the outcome of the past twelve years of progress and improvement. Of more than \$200,000,000 in gold expended in public enterprises, a large portion was devoted to laying out and beautifying the city with numerous plazas, parks, and avenues.



CHURCH OF SAN FRANCISCO, LIMA, PERU.

More than \$2,000,000 were spent in the construction of this church and convent. The walls are decorated with multicolored tiles, and the interior carvings are works of great merit.



OVERLOOKING THE OLD TOWN OF SANTA MARTA, COLOMBIA.

Santa Marta, founded in 1525, was the first settlement of the Spaniards on the northern coast of what is now Colombia. In 1533 an expedition from this settlement founded the near-by city of Cartagena, and three years later sent forth the expedition which discovered Bogota, then known as Mequeta. Simon Bolivar died in 1830 on the San Pedro estate, about 3 miles from the city. At the present time Santa Marta is a flourishing trade center for the export of bananas and other fruits, being the terminal of a railroad and a shipping port for the steamers of the United Fruit Company.

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RIVER SAN JOSE, AT ITS JUNCTION WITH THE TUY AND STRAMINA RIVERS, STATE OF BURMUDEZ, VENEZUELA.

The territory in Venezuela is watered by 1,659 rivers and streams, 63 of which are affluents of the Orinoco River. The balance discharge into the northern lakes and gulls.



SUBTROPICAL GARDENS OF LOTA, CHILE.

This park was the gift of Don Luis Cousiño, who, in 1852, purchased the property which has developed into the wonderfully rich coal mines of Lota. The Cousiño family has since spent large sums in beautifying and upbuilding the community.



STATUE OF DOM PEDRO I, RIO DE JANEIRO, BRAZIL.

Dom Pedro, the son of King John, of Portugal, espoused the cause of Brazil in the struggle for independence, and became its first Emperor under the Constitution. In 1831 he abdicated the throne in favor of his son, Dom Pedro II, who reigned until the establishment of a Republic in 1889.



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GOVERNMENT ROAD FROM TEGUCIGALPA, HONDURAS, TO THE COAST.

Tegucigalpa is one of the few inland capitals of the world which is still without complete railway communication with its ports. The Government, however, has constructed a well-built road to the Pacific coast through the lofty mountains which surround the city.



MOUNT CHIMBORAZO, ECUADOR.

Few of the works of nature are calculated to produce impressions of higher sublimity than the aspect of this mountain, rising 21,420 feet above sea level, with its glorious canopy of snow and ice glittering far above the clouds.

...the mountains ...



TEMPLE OF MINERVA, AMATITLAN, GUATEMALA.

On October 28, 1899, President Manuel Estrada published a decree setting apart the last Sunday in October of each year as a national holiday to celebrate the benefits of public instruction. The exercises and festivities are participated in by teachers, pupils, and the general public, and are held in temples erected and dedicated to this purpose.

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