INTERNATIONAL UNION OF AMERICAN REPUBLICS

BULLETIN

OF THE INTERNATIONAL BUREAU OF THE

AMERICAN REPUBLICS

MARCH 1909

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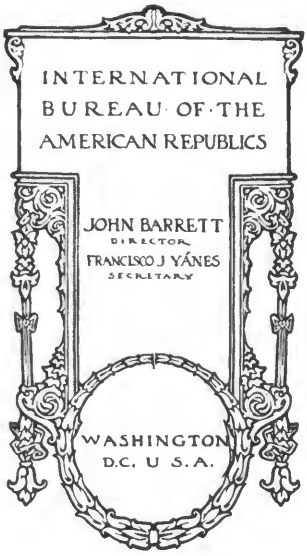

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BULLETIN

OF THE INTERNATIONAL BUREAU OF THE AMERICAN REPUBLICS

VOL. XXVIII. MARCH, 1909. No. 3.

THE growing popularity and widespread usefulness of the International Bureau is proved not only by the quantity but by the varied character of its correspondence. An average of 100 letters arrive daily from all parts of the world, and the number is increasing so rapidly that it will doubtless reach 200 in a few more months. The demands made upon the staff by the careful answer to these can only be appreciated by one who inspects the original letters. It may be interesting for the constituency of the BULLETIN to take a glance at an average morning's mail. First is a letter from a prominent manufacturer in Chicago stating that his attention to the possibilities of South American markets has been awakened by the International Bureau and that he wishes to familiarize himself thoroughly with them in order to build up a trade with that part of the world. He probably asks half a dozen leading questions that can only be answered after careful consideration and by the collected opinion of several different members of the staff. One question alone may involve two or three days' work in collecting data. Second is a letter from a manufacturer in New England who produces an entirely different article, and therefore asks a wholly different series of questions. Third is a communication from a New Orleans importer who wants to know just where in Latin-America he can purchase certain raw products, what will be the cost of transportation, what are the prevailing prices in the original countries, and what are the freight rates by steamer from the port of shipment to the United States. Fourth is a letter from an exporter in Rio de Janeiro who wants to be put in touch with merchants in the United States and wishes a list of reliable firms. Fifth is a letter from the officials of a South American city which is intending to put in a new water or a sewerage system. They desire to know how they can be put in touch with American contractors who will submit bids, and further ask for detailed information about the water and sewerage systems throughout

the United States. Sixth is a note from a Latin-American government stating that it is contemplating the establishment, for instance, of a bureau of labor, and it wants this office to provide it with information about similar bureaus in the different States of the United States, and concerning the central labor bureau in Washington. Seventh is a communication from a president of a western university of the United States, saying that he has been influenced by the propaganda of the International Bureau to start an extended course in Latin-American history and languages, and asking that an outline be prepared of books to be read or studied. Eighth is a letter from a student in some university who is writing a competitive paper on the commercial and material development of the sister Republics of the United States and requests assistance that requires much research. Ninth is a letter from a tourist agency that is preparing to take a party of people around South America, and asking to be provided with full information regarding steamship and railroad rates, hotels, climate, points of interest, etc. Tenth is a note from a Member of Congress wishing comparative statistics covering the trade of North and South America for many years. Eleventh is a note from another Member of Congress asking for data about shipping conditions between North and South America, together with comparative data on shipping between South America and Europe. Twelfth is a letter from a Senator, inclosing one from a constituent in the Far West who wants to go into the cattle and sheep industry in a South American Republic, and asking a multitude of questions bearing on this point. Thirteenth is a communication from a leading legal firm in San Francisco inquiring about the land laws of the Central American Republics. Fourteenth is a letter from a legal firm in Boston asking about the application of certain Cuban laws to foreigners holding property in that island Republic. Fifteenth is a letter from a group of farmers in a Central Western State who think of migrating to Mexico or southern Brazil and who ask a score of questions that would puzzle the greatest expert. Sixteenth is a letter from a young man in South America who wants to enter a university in the United States and wishes suggestions as to what preparation is required. Seventeenth is a letter from the head of a South American library who wants a list of the best books in the United States treating of the forms of government and discussing the constitutional history of the United States. This partial list is supplemented by several scores of letters asking not only for an infinite variety of information, but for copies of the MONTHLY BULLETIN and other publications of the Bureau. If any man has the slightest doubt as to the great educational work regarding North and South America conducted by the International Bureau, he should inspect the files of this institution. They demonstrate beyond issue that there has been a wonderful growth of interest in Pan-American matters during the last year and a half.

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THE SIGNIFICANCE OF THE INAUGURATION OF PRESIDENT TAFT.

This issue of the BULLETIN appears coincident with the inauguration of Hon. WILLIAM H. TAFT as President of the United States. This event has suggested a brief article on presidential inaugurations in the different American nations. It also recalls the statement that President-elect TAFT made to the Director of the Bureau, published in the January BULLETIN, in which he announces his profound interest in the development of closer relations through commerce and comity between the United States and her sister Republics, and his intention of continuing the policies initiated along this line by President ROOSEVELT and Secretary ROOT. There can be no question that the progress of Pan-Americanism will suffer no setback under the new Administration, and it is hoped that an improvement of shipping conditions may be effected and closer mutual trade relationship be brought about through the negotiation of treaties which will subserve the interests of all the countries concerned.

NOTABLE DINNER IN HONOR OF HON. ELIHU ROOT.

On February 26, 1909, at the New Astor Hotel in New York City, a notable banquet was given in honor of Hon. ELIHU ROOT, late Secretary of State of the United States, and recently elected United States Senator from the State of New York. It was under the auspices of The Peace Society of the City of New York, and an expression of appreciation of Mr. ROOT'S work for international peace and arbitration. The chairman of the evening was Hon. JOSEPH H. CHOATE, formerly United States Ambassador to Great Britain, and the principal speaker was the President-elect of the United States, Hon. WILLIAM H. TAFT. Others who made interesting and impressive addresses were the Brazilian Ambassador, Mr. JOAQUIN NABUCO; the Japanese Ambassador, Baron TAKAHIRA, and the British Ambassador, JAMES BRYCE. At the various tables were several hundred of the representative men and women of New York and the country at large.

THE NORTH AMERICAN CONSERVATION CONGRESS.

The first session of the North American Conservation Congress, under the auspices of the United States and attended by delegates from Canada and Mexico, was held in the historic East Room of the White House at Washington on February 18, 1909, the opening address being delivered by President ROOSEVELT. The interest of the three governments represented in the conservation of the forests and streams of America was demonstrated by the prompt response to the invitation to cooperate in the great work delivered on the part of the United States to the bordering

(Photo by Harris & Ewing.)

PRESIDENT ROOSEVELT AND INVITED GUESTS OF NORTH AMERICAN CONSERVATION COMMISSION IN FRONT OF THE WHITE HOUSE, FEBRUARY 18, 1909.

From left to right they are: Lower row—Dr. Henri S. Beland, M. P. (Canada), Hon. Clifford Sifton (Canada), Hon. Sydney Fisher (Canada), President Roosevelt, Señor Romulo Escobar (Mexico), Señor Carlos Sellerier, Secretary of Agriculture and Inspector of Mines (Mexico), Señor Miguel A. de Quevedo, Commissioner of Forestry (Mexico). Upper row—Hon. Robert E. Young (Canada), Robert Bacon, Secretary of State (United States), Hon. Gifford Pinchot (United States), Hon. Shelby M. Cullom, United States Senator (United States), Hon. J. A. Garfield, Secretary of the Interior (United States), Hon. James Bryce, British Ambassador; Mr. T. R. Shipp, Secretary National Conservation Commission of the United States; Hon. P. C. Knox, United States Senator (United States).

(*Photo by Harris & Ewing*)

HONORABLE JAMES S. SHERMAN,
Vice-President of the United States, inaugurated March 4th, 1909.

Hon. Shelby M. Cullom, United States Senator (United States); Hon. J. A. Garfield, Secretary of the Interior (United States); Hon. James Bryce, British Ambassador; Mr. T. R. Shipp, Secretary National Conservation Commission of the United States; Hon. P. C. Knox, United States Senator (United States).

lands of Canada and Mexico through Hon. GIFFORD PINCHOT. From Canada, the government representatives were: SYDNEY FISHER, Minister of Agriculture; CLIFFORD SIFTON, former Minister of the Interior; and Dr. HENRI S. BELAND, M. P., the delegation being accompanied by ROBERT E. YOUNG, land expert of the Canadian government, in the capacity of secretary. From Mexico, the delegates were: ROMULO ESCOBAR, Director of the National School of Agriculture; MIGUEL A. DE QUEVEDO, Commissioner of Forestry, and CARLOS SELLERIER, Chief of the Bureau of Mines. Present at the opening session were: The Secretary of State of the United States, Mr. ROBERT BACON; Ambassador BRYCE, of Great Britain; Chargé d'Affaires ALVAREZ, of Mexico; the Secretary of War of the United States, Mr. LUKE WRIGHT; Justice MOODY, of the Supreme Court; besides other distinguished citizens and the members of the National Conservation Commission.

ADDRESSES DELIVERED ON LATIN AMERICA.

The wish of various commercial organizations and educational institutions in different parts of the United States to learn more of Latin America is shown by the unsolicited invitations which constantly pour into the Bureau requesting that the Director deliver an address on some phase of Latin-American commerce, development, or history. Among such organizations and institutions addressed by the Director within the last month are the following: The Illinois Manufacturers' Association, and the Chicago Bankers' Club, in Chicago, Illinois; the Merchant Marine Convention, in New York City; the Commercial Club of Providence, Rhode Island; the Convention of the National Board of Trade, in Washington, District of Columbia; the New York Bankers' Institute, New York City; the Chamber of Commerce, Passaic, New Jersey; the Tome School for Boys, Port Deposit, Maryland; Trinity College for Young Women, Washington, District of Columbia; the National Tariff Commission Convention, Indianapolis, Indiana, and others.

VISIT OF HON. WILLIAMS C. FOX TO THE UNITED STATES.

It is with pleasure that the International Bureau welcomes to Washington on leave of absence Hon. WILLIAMS C. FOX, United States Minister to Ecuador, and formerly the Director of this institution. Upon Mr. FOX's resignation as Director in 1907, he was appointed United States Minister to Quito, and he has performed excellent service in that South American capital. Minister FOX speaks in interesting terms of the exposition which is to be held shortly in Quito, and expresses the hope that the manufacturers of the United States will send creditable exhibits. Ecua-

HONORABLE EDWIN MORGAN,

Envoy Extraordinary and Minister Plenipotentiary of the United States in Cuba.

MR. ENRIQUE C. CREEL,

Governor of the State of Chihuahua, Mexico, who during his incumbency as Mexican Ambassador to the United States, has been one of the most potent factors in the development of the Pan-American policy of peace and a better understanding.

(*Photo by Harris & Ewing*) DR. FRANCISCO L. DE LA BARRA,

Whose brilliant diplomatic career has won for him the honor of being appointed Mexican Ambassador to the United States.

dor offers a growing market for the products of the United States, and in turn has much to sell to the latter country. Hon. ERNEST H. WANDS, the new commissioner of the United States to the exposition, is now on his way to Quito to make final preparations for the construction of the United States building and the installation of exhibits. Those desiring further information can obtain it from this Bureau, from the Minister of Ecuador in Washington, or from the consul of Ecuador in New York City.

THE RETURN OF DELEGATES TO THE SCIENTIFIC CONGRESS.

As this BULLETIN goes to press the delegation of the United States to the Pan-American Scientific Congress, recently held in the city of Santiago, Chile, is returning to the United States, and it is gratifying to note their enthusiasm over the success of that notable gathering. It was so largely attended and so many subjects were thoroughly discussed that it marks a long step forward in the allied interests of North and South America in scientific and intellectual development. The delegation pays hearty tribute to the hospitality shown by the Chilean Government and to the good fellowship that existed among the delegates of the different Latin-American countries, all of which, with one exception, were represented. An unsolicited compliment to the United States was paid by the selection of Washington as the meeting place for the next Congress in 1912. This will of course be held in the new building of the International Bureau, which is now nearing completion.

UNITED STATES MINISTER TO CUBA.

Hon. EDWIN VERNON MORGAN, Envoy Extraordinary and Minister Plenipotentiary from the United States to Cuba, was born in Aurora, New York. He received his education at Harvard University, taking the degrees of A. B. and A. M., and was later a student at the University of Berlin, Germany. On his return to the United States he was made Assistant Professor of History at Harvard, and from 1895 to 1898 was Instructor of History in Adelbert College, Cleveland, Ohio. Mr. MORGAN was Secretary to the Samoan High Commission in 1899, and the year following began his diplomatic career as Secretary of Legation at Seoul, Korea, being successively appointed Vice and Deputy Consul-General at Seoul, Second Secretary of Embassy at St. Petersburg, confidential clerk to Third Assistant Secretary of State, Washington, Consul at Dalny, Manchuria, Envoy Extraordinary and Minister Plenipotentiary to Korea, and on November 29, 1905, was transferred to his present post in Cuba. He is a Chevalier of the Légion d'Honneur (France) and a member of the Metropolitan Club, of Washington, D. C.

A GROWING PHASE OF THE BUREAU'S INTERNATIONAL WORK.

One feature of the work of the International Bureau which is rapidly growing is the assistance that it is able to give for the development of closer commercial relations and better acquaintance between the Latin American Republics themselves. It is beginning to supply data, for instance, to men in Colombia about Ecuador, and vice versa; to persons in Argentina regarding Chile, and vice versa; to those in Brazil concerning Peru, and vice versa; to those in Central America regarding Mexico, and vice versa. In this way the Bureau extends its practical utility as an international institution and becomes more and more a clearing house of commercial and general information.

RESOLUTION OF THE PAN-AMERICAN SCIENTIFIC CONGRESS.

Among the various resolutions passed by the Pan-American Scientific Congress was the one given below, relating to the International Bureau of the American Republics.

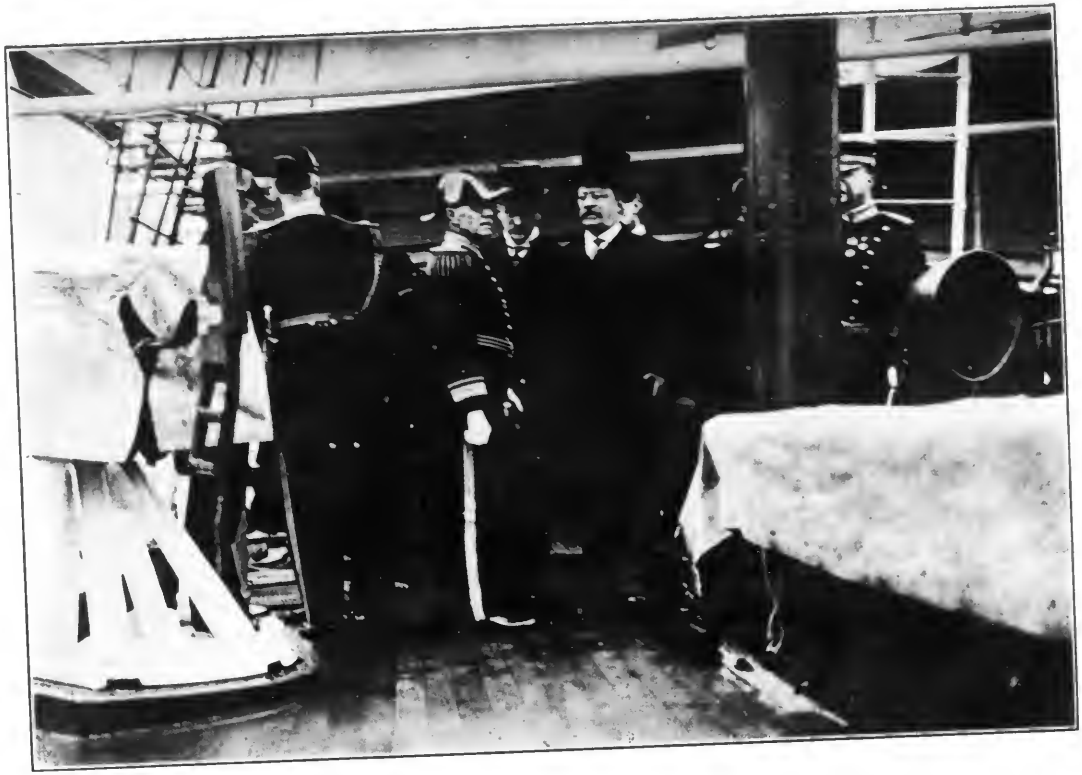
Resolution extending to the Governing Board and Director of the International Bureau of the American Republics the thanks of the Pan-American Scientific Congress for the offer of cooperation:

Whereas the Pan-American Scientific Congress has received with much satisfaction the cordial message of greetings from the Bureau of the American Republics and the kind offer of cooperation; be it

Resolved, That the formal thanks of the Congress be transmitted to the Governing Board and Director of the Bureau, and that it be recommended to the members of the organization committee of the next Scientific Congress to avail themselves in every possible way of the valuable services which the Bureau can render.

REPORTS OF UNITED STATES CONSULS IN LATIN AMERICA.

The Director of the International Bureau wishes to take advantage of this opportunity to refer again to the excellent and practical reports which are being constantly forwarded to the State Department, and published by the Bureau of Manufactures of the Department of Commerce and Labor, of the United States consular officers in all parts of Latin America. The BULLETIN does not publish these in detail, because this would be a reproduction of the work of the Bureau of Manufactures, but it has occasion to constantly refer to them and point out their salient facts, in addition to giving, each month, a list of the reports which are received. This list, the Director notes, is being much appreciated by all those interested in the consular reports and is proving a decided help in finding the information desired.



(*Photo by Harris & Ewing*)
THE HOME-COMING OF THE BATTLESHIP FLEET—PRESIDENT ROOSEVELT AND SECRETARY OF STATE BACON CONVERSING WITH REAR-ADMIRAL SPERRY ON BOARD THE "MAYFLOWER."

(*Photo by Harris & Ewing*)

THE HOME-COMING OF THE BATTLESHIP FLEET—PRESIDENT ROOSEVELT ADDRESSING THE OFFICERS AND CREW OF THE "CONNECTICUT," FROM THE BASE OF THE AFTER 12-INCH GUN TURRET.

NEWSPAPER APPRECIATION OF THE BULLETIN.

The newspapers of the country are recognizing the value of the MONTHLY BULLETIN as a source of supply for special articles or for stories, particularly in their Sunday editions. The carefully prepared articles on specific subjects which are now appearing from month to month in the BULLETIN regarding the Latin-American countries are opening up a new field of information for the reading public and are proving that countries other than the United States have remarkable resources and vast possibilities of commercial, material and agricultural, as well as intellectual development. If we take, for instance, the BULLETIN articles on Latin-American municipalities, we find newspapers all over the United States calling attention to the fact that the people of this country have little appreciated the progress being made in this direction in the countries to the south. The photographs which go with these descriptions prove the facts that are stated. Furthermore, the articles on coffee, cacao, and tobacco which have appeared in recent editions of the BULLETIN have been copied and recopied not only throughout the United States but in Europe. Those descriptive of the national holidays, coats of arms, and flags of the American Republics have attracted wide attention, and there is now a demand that they be reprinted for use in public schools. Particular attention is called to the following articles in this issue: "The maguey plant, which grows in such abundance in Mexico;" "The history of the Trans-Andean Railway, which is to connect Chile and Argentina;" another paper in the series on North American captains of industry in South America, concerning "Col. George Earl Church," and "The flag and coat of arms of Costa Rica."

THE UNITED STATES MINISTER TO PANAMA.

Hon. HERBERT GOLDSMITH SQUIERS, Envoy Extraordinary and Minister Plenipotentiary from the United States to Panama, was born in Madoc, Dominion of Canada, April 20, 1859. He received his education in the public schools of his native place, and later attended Canandaigua Academy, New York State, Minneapolis Military Academy, Maryland Agricultural College, and in 1880 graduated from the United States Artillery School. From 1877 until 1891 he served in the army as lieutenant, first in the infantry arm of the service and later in the cavalry branch. His diplomatic career began on November 15, 1894, as Secretary of Embassy at Berlin, since which time he has been successively Secretary of Legation at Peking, chief of staff to Sir CLAUDE MCDONALD, during the seige of Peking, 1900–1901, for which he received the thanks of the British Government, and Envoy Extraordinary and Minister Plenipoten-

tiary of the United States to Cuba in May 1902, from which post he resigned inNovember, 1905. He received appointment to his present post on October 20, 1906.

CHARACTER OF ARGENTINE EXPORTS.

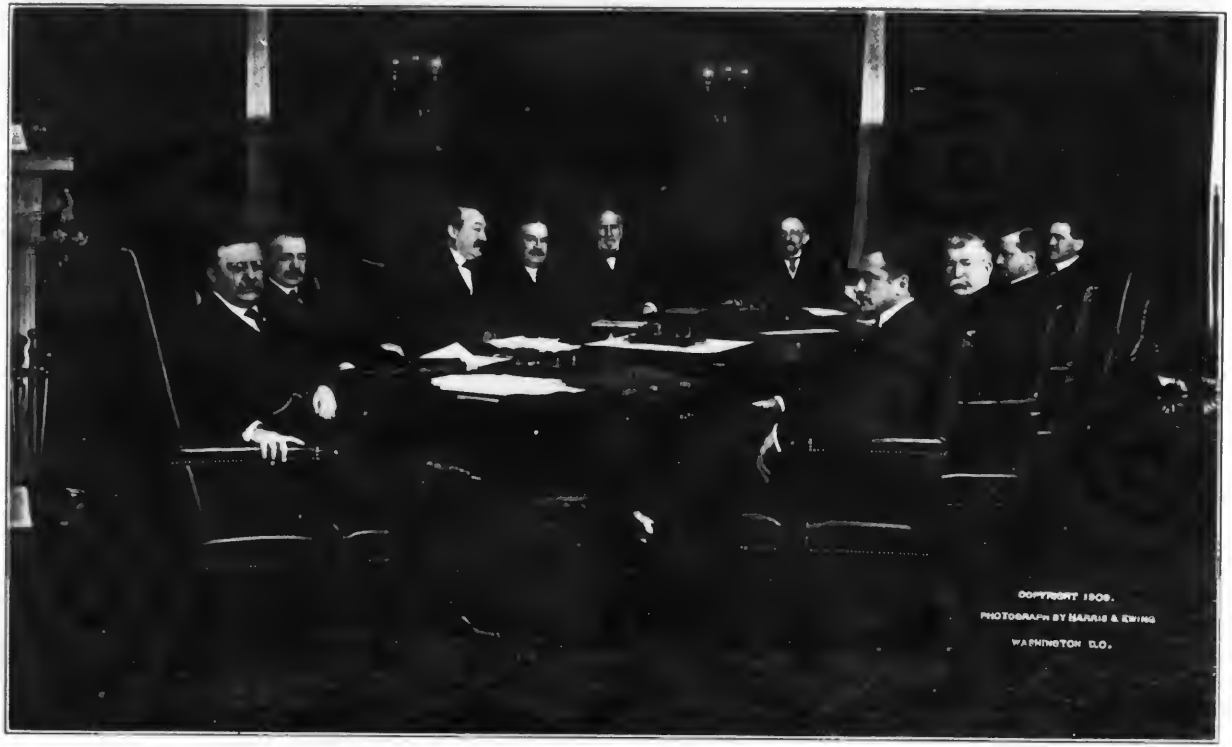
In a reported export valuation of Argentine products during 1908, amounting to $366,005,341, an increase of $69,800,972 is noted as compared with the preceding year. Cereals, as usual, occupy first place on the list, the quantities of the leading items shipped being given as follows: Wheat, 3,636,294 tons; maize, 1,711,804; linseed, 1,055,650; oats, 440,041; barley, 19,905. Products of pastoral industries furnish the export list with 180,815 tons of beef, 78,846 tons of mutton, 94,839 tons of hides, 175,538 tons of wool, and other important articles in lesser quantities. The recent receipt in New York markets of large shipments of Argentine oats calls special attention to the country's development in this culture. The estimated production for the year was 420,000 tons, a gain of 263,000 tons being anticipated over 1907, which estimate was exceeded by nearly 73,000 tons. The total production in 1906 was only 53,137 tons.

BOLIVIAN TRADE WITH THE UNITED STATES.

Figures furnished the International Bureau of the American Republics by the Minister of Bolivia in the United States, Señor Don IGNACIO CALDERÓN, show total exports from the port of New York to Bolivia during the month of January, 1909, of $98,000. These figures if maintained throughout the year will restore United States-Bolivian trade values to their former status. The decline in 1908 to $687,307 from $1,502,622 in 1907, reported for shipments to Bolivia by the United States Bureau of Statistics, was a natural outcome of world-wide economic conditions, from which the results of January's commerce seem to augur a speedy recovery. The country's adoption of the gold standard in December, 1908, is an important measure with direct bearing upon the status of Bolivia in foreign markets.

BRAZILIAN FINANCES AND INDUSTRIES.

In an appropriation of $140,268,923 to meet the current expenses of the nation during 1909 the Brazilian Government increased its estimate by $5,600,000 over the preceding year. The bulk of this sum represents increased expenditures in the Departments of the Treasury, Navy, War, and Industry. In the latter connection many bounties are provided for the encouragement of native industries, while State legislatures have also



(*Photo by Harris & Ewing, taken February 19, 1909*)

PRESIDENT ROOSEVELT AND HIS CABINET.

HONORABLE HERBERT G. SQUIERS,

Envoy Extraordinary and Minister Plenipotentiary of the United States in Panama.

taken measures to promote local enterprises in new directions. The United States Consul-General at Rio de Janeiro reports a noteworthy development in the industrial life of the Republic, many factories for the production of articles formerly imported having been established in consequence of the wider application of electricity to manufacturing. Flour milling and kindred industries, silk culture, the extension of irrigation systems, the application of advanced agricultural methods, and similar energizing measures indicate the purpose of the country to keep pace with the progress of the world along industrial lines.

THE CENTENARY OF CHILEAN INDEPENDENCE.

The celebration of the one hundredth anniversary of the independence of Chile in 1910 is to be signalized by many public works of importance, prominent among which is the erection of national edifices and the opening of new streets and avenues in the capital. For these purposes it is recommended that the sum of $800,000 be appropriated. In connection with Chile's general development it is of importance to know that the most recent report on the nitrate beds of the Republic, which form the basis of her export values, states that there are undeniably 4,843,000,000 Spanish quintals of nitrate of soda in sight, which, with an annual exportation of 35,000,000 quintals, is sufficient to supply the entire consumption of the world for one hundred and thirty years.

EXPLORATIONS IN COLOMBIA.

A graceful tribute to the well-known achievements of the President of Colombia, in the line of scientific research, was paid by the recently adjourned Congress at Santiago, Chile, in the designation of General REYES as Honorary President. The explorations through Colombian territory made by the REYES brothers have been supplemented by extended journeyings on the part of the present Executive to remote sections of the Republic and a complete investigation of possibilities and resources. Reports made by consular officers of the United States at Colombian posts indicate vast areas of still unexploited wealth, a notable account of the Sinu River district having been recently made by Consul MANNING at Cartagena.

MESSAGES OF THE NEW PRESIDENT OF CUBA.

A spirit of progress and good will is breathed in all the published utterances of the new Cuban Executive. President GOMEZ, on taking office, has surrounded himself with capable advisers and has expressed himself as desirous of carrying on the work of national advancement along

(*Photo by Harris & Ewing*)

MONS. H. PAULEUS SANNON,
Envoy Extraordinary and Minister Plenipotentiary from Haiti in the United States.

lines of policy of proven value. His references to the administration of Hon. CHARLES E. MAGOON have been marked by an appreciation of the onerous nature of the task undertaken, while at all times he urges his countrymen to uphold his hands toward the light of continued development.

THE PRESENT ADMINISTRATION IN HONDURAS.

Under President DÁVILA, conditions in Honduras, as reported on by the United States Consul at Tegucigalpa, have shown a progressive movement. Imports for the fiscal year 1907–8 were $500,000 in excess of the preceding twelve months, and though government statistics indicate a slight decline in export valuations, it is noted that shipments to the United States alone figure for nearly $3,000,000 in the calendar year 1908, according to consular statements. Works of public improvement have been inaugurated and commercial treaties entered into for the furtherance of trade development.

MEXICAN RAILWAY AND MARITIME TRANSPORT.

With the operation of the railway merger of Mexican railways, effective from midnight on the last day of January, 1909, a most important step for the control of public utilities was taken by the Mexican Government. The extent of road under the working of the merger is 7,012 miles, in addition to which there are 265 miles of track on the Veracruz-Pacific route and 206 miles of the Tehuantepec National which are controlled by the Government. Of the board of directors, twelve reside in Mexico and nine in New York. This progressive move is part of the general effort being made throughout Mexico to arrange for the adequate land and sea transport of products. New lines of railway are being opened in the interior and on the west coast to meet the requirements of new steamship connections either established or projected. Additional steamers are being put upon services already operating and branch connections are being made over new land routes.

PUBLIC UTILITIES IN PANAMA.

The Panama Government is taking measures to adequately exploit the resources of the country by the granting of concessions, the establishment of telegraph and telephone lines, opening new steamship services, and making such revisions of the tariff as the economic condition of the Republic demands.

(Photo by Harris & Ewing.)

HONORABLE GEORGE EVERETT ANDERSON,

Consul-General of the United States in Rio de Janeiro, Brazil.

THE CONSUL-GENERAL OF THE UNITED STATES IN RIO DE JANEIRO, BRAZIL.

The Hon. GEORGE EVERETT ANDERSON, Consul-General of the United States in Rio de Janeiro, Brazil, was born in Bloomington, Illinois, on August 20, 1869. He was educated in Shurtleff College, Upper Alton, of that State, and in 1899 the Wesleyan University, of Bloomington, conferred on him the degree of Bachelor of Laws In 1895 he married Miss MARY A. KUMLER. In 1904 Mr. ANDERSON commenced his consular career as Consul-General at Hangchow, China, and from there he was transferred to Amoy, China, in 1905, where he remained until the beginning of 1906. On February 13th of that year he was transferred to Rio de Janeiro as Consul-General. Mr. ANDERSON is a member of the Mercantile Club, of Amoy, China, and the City Club, of Rio de Janeiro. In 1905 he published a book entitled "American Commerce in China."

THE DEPARTURE OF DR. LUIS F. COREA.

Dr. LUIS F. COREA, who for more than ten years has been Envoy Extraordinary and Minister Plenipotentiary of Nicaragua in the United States, on January 28, 1909, presented his letters of recall to President ROOSEVELT. During the time Doctor COREA has represented his country as a member of the Governing Board of the International Bureau, and as delegate from Nicaragua to the Second and Third Pan-American Conferences, he has invariably shown the greatest interest in the welfare of the Bureau, which has always counted him as one of its strongest friends and supporters. Doctor COREA may rest assured that his whole-hearted services to this Institution will not be forgotten, and wherever he may go, either in an official or private capacity, he will carry with him the best wishes of the Bureau and the BULLETIN.

BOOK NOTES

It is "the noblest Spaniard who ever landed in the Western World," Bartholomew de las Casas, that forms the subject of a new and valuable biography by Francis Augustus MacNutt (G. P. Putnam's Sons: New York and London), the translator and editor of that fine work, "The Letters of Cortes." Not less noteworthy is the more recent volume in which the life, apostolate, and writings of Las Casas, the defender of the liberties of the American Indians against foreign oppression, are commented on by a skillful and appreciative critic. With his brethren of the Order of St. Dominic, Fray Bartholomew carried on an unflagging crusade against the subversion of aboriginal rights, although his up-bringing and environment had been such as to amply justify any arrogance or proslavery ideas. That his forensic abilities were of no mean order is evidenced by the expressed opinion of an opponent in debate, describing him as "most subtle, most vigilant, and most fluent, compared with whom Homer's Ulysses was inert and stammering." With such an advocate, it is little wonder that his selection to plead the cause of the natives before his most Catholic Majesty, King Ferdinand, was followed by his being commissioned by Cardinal Ximénez, regent of the Kingdom, to draft a project of laws which should sufficiently protect the Indians and secure fair government in the colonies. His subsequent contests against adverse influences both at home and in the colonies of "Hispaniola, Cuba, San Juan, and Jamaica and the mainland," his retirement to the seclusion of a Dominican monastery and his return to the world of men to serve in behalf of the oppressed, his refusal of the richest bishopric of the New World, in Peru, and his acceptance of the poorest, in Guatemala, the concessions obtained through his unceasing and energetic representations on behalf of the Indians, and the edifying close of his career at the age of 92 in Madrid, are detailed with enthusiasm and historical accuracy. In an age when many of his contemporaries fell into disfavor he enjoyed the confidence of three most remarkable sovereigns, all of whom received his fearless admonitions, not only with docility but with the response of cordial admiration. His *Brevissima Relación de la Destrucción de las Indias*, the best known of all his writings, is reproduced in the volume under review. This work, first issued in 1552, was translated into various European languages and aroused a tempest of indignation against the Spanish colonial system in the Americas, and its contents were made to serve in religious and political controversies of the sixteenth and seventeenth centuries. His last treatise, written at the age of 90, was in defense of the Peruvians, and

his last negotiation in behalf of American interests was the restoration of the Audencia of the Confines to Gracias á Dios, whence it had been transferred to Panama, thus leaving the whole of the former province with no superior tribunal for the administration of justice. The scenes of his labors, of which a map is published, include northern South America, Central America, and the West Indies.

If any proof whatever is needed of the marvelous advances made in the Amazon River Valley and along its tributary, the Rio Negro, it can be easily found by taking a retrospective glance over that mysterious country as it was scarcely two generations ago. A fascinating opportunity to enjoy a truthful pictnre of this kind is given in a narrative just published by MACMILLAN & Co. (1908), "Notes of a Botanist on the Amazon and Andes," by RICHARD SPRUCE, Ph. D., edited by ALFRED WALLACE, O. M., F. R. S. Two volumes. RICHARD SPRUCE was one of the best known and esteemed botanists of the last century. He gave his life to a passionate study of the flora, first of England, then of the Pyrenees, and finally of the tropical regions of the Amazon, the Rio Negro, that part of the Orinoco which is separated from the latter river by only a slight divide, the Madeira to the foothills of the Andes, and of the Andean slopes both east and west, ending his long residence in equatorial America at Guayaquil. SPRUCE was a thorough student and scholar. His contributions to the knowledge of plant life will always insure him a grateful remembrance among not only European but also Brazilian botanists. These "travel notes" are merely the addenda to his more elaborate technical work on the plant life of this region, but they themselves contain abundant reference to plants, specimens, and terminology. They offer interesting reading to those who are both botanists and travelers. The fascination about the book, however, lies in the wonderful stories of life, habits, and characteristics along these rivers, from 1849, when the author first landed in Para, to 1860, when his last boxes of prepared specimens were loaded at Guayaquil for England. He met blood-sucking vampires; he found mud-eating children who were hung to the rafters to keep them away from their favorite food; he sojourned for weeks at a time with Indians quite as uncivilized in their way as the Central African savages discovered by STANLEY. But the interesting feature, to readers of the BULLETIN at least, is the astonishing contrast between SPRUCE'S Amazon and that Brazilian country to-day. At that time Manaos was merely the barra of the Rio Negro, a mud village and simple trading post; now it is a city of 50,000 souls, with trolley cars, an opera house, regular steamer connections, and a foreign trade above $50,000,000 annually. Such

contrasts are startling, and the lesson to be learned from them should be taken seriously to heart by the cynics who assert that the Amazon has no future. If these changes have taken place within fifty years, what must be expected within the next generation?

A very noteworthy feature in the development of the republics of Latin-America is the increasing list of publications which deal with the political formation, geographic divisions, resources, commerce, and finance of each, issued as a kind of annual review, not unlike, but more expensive than, the various almanacs so popular in the United States. The latest to make its appearance in the Columbus Memorial Library is "The Mexican Yearbook, 1908." This is published by McCorquodale & Co. (Limited), 40 Coleman street, London, E. C., and circulated by Brentano, New York and Paris. Its authors are not named, but the book comprises within its 1,034 pages much historical, statistical, and fiscal information, compiled from official and other records. This is the first year of publication, but it is promised "to be continued annually," and it is hoped that this promise will be fulfilled. As it is issued under the auspices of the Department of Finance, the stamp of authority is given to the immense array of figures and statistics quoted. The two divisions of the Yearbook embrace 25 parts, 4 plates, and 23 maps. Every possible subject is discussed, and the latest available data are in every case made use of. The tariff is given in full, the railroads are elaborately discussed, and each State has a separate section devoted to it. It is pleasing to note also that a carefully prepared index aids wonderfully a speedy reference to the contents. Omissions are bound to occur in such a comprehensive undertaking, and attention is called to the fact that the article coal has practically no mention. This should be corrected in the next issue, because the Mexican coal supply is reaching such a point that attention is more and more attracted to it.

The origin of the Aztec and kindred tribes of Mexico will always be an interesting, although simply an academic question. The natural religions of the world like to ascribe the origin of man to one line of progenitors only, and sentiment also leans that way, because it is thereby much easier to recognize the common traits of human nature as innate to one stock, rather than as developed by circumstance on heterogeneous species. Science, however, has rather set its face against the desire to believe that the Indians came from Asia, and where no satisfactory explanation was offered on the one hand, science merely said that proof was altogether lacking on the

other. Mr. T. S. Denison has convictions. He not only asserts that the Mexicans were a migratory tribe from Asia, but he thinks he has demonstrated his point. His book, "The Primitive Aryans of America" (T. S. Denison, 163 Randolph street, Chicago), brings together a multitude of facts, theories, and philologic analogies, and makes out a strong case of the relationship between the Aztecs and the Aryans. The scientific value of the book must be decided elsewhere, but certainly it provides interesting material for anyone who has a desire to theorize on ethnic and linguistic problems.

The University of Chicago Press (Chicago) and T. Fisher Unwin (London, 1 Adelphi Terrace) have just issued "Modern Constitutions," as edited by Prof. Walter Fairleigh Dodd. This is a collection of the fundamental laws of 22 of the most important countries of the world, with historical and biographical notes, in two volumes. Of direct interest to the Bulletin are the constitutions of the Argentine Nation (Republic), the United States of Brazil, the Republic of Chile, the United Mexican States (the Republic of Mexico), and the United States. Other governments are mentioned, such as Austria, Switzerland, Japan, etc., but their constitutions are of only comparative value to students of Latin-America. The work is admirably done, and being almost altogether formal—historical notes and the direct translations—offers no ground for criticism. It is an unfortunate oversight, however, that, while giving due credit to J. I. Rodriguez, who did so much in this same direction for readers of constitutions, Professor Dodd neglects to signify that Doctor Rodriguez's work was done officially while he was Librarian and Chief Translator of the International Bureau of the American Republics.

It is interesting to note that juvenile literature has recently found in South America a pleasant field in which to exploit the adventures of the heroes who flourish so perennially. These heroes are always the same and indeed quite commendable in their way. They are manly boys, whether on an expedition across the western plains of the United States, in the bush of Australia, or on the veldt of Africa. The latest activities of the boys of books take place in South America. "A U. S. Midshipman Afloat," by Lieut. Commander Yates Stirling, Jr. (The Penn Publishing Company, Philadelphia), is an American story, about two Academy graduates who get mixed up in a plot and a revolution in a fancifully named republic. "Roughriders of the Pampas," a tale of ranch life in South America, by Capt. F. S. Brereton (H. M. Caldwell Company, New York and Boston), is an

English story of the early days of settlement along the River Plate. Both are exciting, and both are wholesome as well as absorbing from a boy's standpoint. The authors must be congratulated on their success in this regard, and from the viewpoint of mature years it must be added that the character of the Latin is painted in honest colors, no attempt being made, as was unfortunately too frequently the case in many tales of Texas, to glorify the Yankee far above his fellows.

The Minister of Promotion (*Ministro de Fomento*) of the Republic of Peru has just issued, through the Division of Statistics, Engineering Section, a large volume of 300 pages called "*Reseña Histórica de los Ferrocarriles del Perú* (Historical Review of the Peruvian Railways), 1908." It is thorough, comprehensive, and trustworthy. Every detail of railway construction, operation, cost, maintenance, and traffic is annotated and in many instances tabulated. Wherever it is of advantage, photographs and diagrams are introduced, and at the end of the book is a large map of the Republic, explaining the lines in actual operation, those surveyed, those projected, and those which must in the future be extended across the country to make effective the progressive policy of the Government. This publication is open for consultation by any visitor to the Columbus Memorial Library, and should be of great value to all students of the general and special problems of railway expansion.

Primarily designed for the purpose of a Protestant propaganda in the Republic, the book on "Peru: Its Story, People, and Religion," by GERALDINE GUINNESS (Morgan & Scott, London), is characterized by studies of national life which are apt to escape the less single-hearted commentator on Peruvian customs. Many typical observances are shown to have had their inception in the racial commingling brought about by the Spanish conquest of the Incas and the subsequent ingrafting of Romanism upon native religions. The survival of the Temple of the Sun in a Dominican monastery and the transformation of the Palace of Virgins into the convent of Santa Catalina are outward and visible signs of the interrelation, but the writer sees in many habits of family and communal life distinct traces of pre-Spanish days overlaid with the religious practices inculcated by the present dominant church influence. The book is of value especially to students of religions and social movements, but has many charming accounts of Peruvian scenery and physical environments which will delight the more casual reader.

Under the title "The Continent of Opportunity" (Fleming H. Revell Company: New York, Chicago, Toronto, London, Edinburgh), a traveler's impressions of present-day conditions in South America are portrayed. The writer, FRANCIS E. CLARK, visited the countries described in the interests of the Christian Endeavor movement early in 1907, starting from Panama, going down the west coast, across the Andes, and then northward through the Republics of the east coast. His appreciation of the subject is found in his statement that South America can not be treated as a whole, but that each one of the eleven Republics visited has its own individuality and its own interesting history and development. It is from this viewpoint that the history, possibilities, resources, intellectual and religious life of each country are reported on, the volume being a valuable addition to informatory literature.

The Brazilian State of Para has just issued an ambitious quarto volume—"*Album do Estado do Pará*"—to celebrate its history, natural resources, and great industrial wealth. The publishers (CHAPONET, JEAN CUSSAC, 7 Rue Bleue, Paris) have done full justice to the subject, and produced a sumptuous book, well printed, handsomely illustrated, and attractive. The text is in three parallel columns, Portuguese, French, and English. There are carefully prepared tables of statistics and a large map covering the whole State. As the book is to a great extent official, it furnishes much information that is relatively new and has hitherto been unavailable.

"Explorations in the Departments of Peten, Guatemala, and Adjacent Region," Volume IV, No. 2, is the title of a large quarto recently received by the Columbus Memorial Library from the Peabody Museum, Harvard University, Cambridge. The author is TEOBERT MALER. The text embraces studies of the prehistoric settlements of the Maya Indians, their records left in magnificent ruins in Guatemala, and practical traveler's notes on present-day conditions in the country. This volume is but one in a series of inestimable value to the study of the archæology of Latin America published by the Peabody Museum.

The publication of a new book on South America by MARIE ROBINSON WRIGHT presages many enjoyable hours to be employed in its perusal. The "Old and New Peru" (George Barrie & Sons: Philadelphia) amply fulfills the anticipations raised, and while adequate attention is given to the past glories of the Inca Empire, it is rather toward the new Republic, prosperous and energetic along modern

(Reproduced from "Explorations in Guatemala and adjacent regions.")

A WORK OF THE PREHISTORIC PEOPLE OF GUATEMALA.

The original of this stela is 10½ feet high by 5 feet wide and about 16 inches thick, being part of the ancient ruins found in the department of Peten, Guatemala, where are located the principal relics of prehistoric races in Central America. The country has been recently explored by Teobert Maler for the Peabody Museum of American Archæology and Ethnology of Harvard University.

lines, that interest is directed. Apart from its great literary value, the volume is a fine example of the bookmaker's art, and the many illustrations with which it is embellished demonstrate the beauty and picturesque features of the country described. A more extended review of this work will appear in the April issue.

The fifth year of the "Exporters' Encyclopædia for 1909," published by the company at 78–80 Broad street, New York, has just been added to the Library of the Bureau. This book is consulted daily by the staff in working out many problems of commerce and transportation, and it should prove useful to all those who come at all in touch with foreign shipping. There are steamship routes, tables of equivalent weights and measures, shipping rules, consular regulations, etc., for the guidance of both merchants and importers.

With its number for 1909 "Hazell's Annual" has now reached its twenty-fourth year of issue, and maintains its established standard of excellence. It differs from the usual American almanac in that all the facts given are arranged in alphabetical order. In addition to this agreeable system, the book has a very comprehensive index. For ready reference and trustworthiness on most subjects Hazell is in constant use in the Bureau.

WHAT IS IN THE MAGAZINES

THE history and progress of the manufacture of meat extract, with special reference to the great Liebig factories in Uruguay and the Argentine Republic, have been made the subject of a special report by a commission appointed by the "Lancet," a journal of British and foreign medicine, surgery, obstetrics, physiology, chemistry, pharmacology, public health, and news. This valuable statement concerning the leading and oldest established industry of this type embodies facts which came under the personal observation of experts, while the analyses inserted were made in the Lancet laboratory of products taken fresh from the factory and of samples collected at random in the open market. It was in 1865 that the first serious attempt was made through the instrumentality of Baron JUSTUS VON LIEBIG to prepare an extract of meat in countries where the breeding and rearing of cattle might be economically carried out. These conditions were found in the great grassy plains of the Argentine Republic, Urugnay, and Paraguay, and in 1868 the company bearing the name of its founder farmed 28,494 acres, the total herd of horned cattle reared numbering 12,000. In 1908 pasture land comprised no less than 1,302,386 acres with 224,406 head of cattle. Prohibitive measures are taken against the incorporation of any but the healthiest animals in the herds. Of great estancias or grass farms, the Liebig Company owns seven in Uruguay, ten in the Argentine Republic, and nine in Paraguay, besides ten others under rental. On these estates rearing and selection is carried on. The killing season commences in January or at the end of December and ends in June, the total number of cattle slaughtered in 1907 being 252,630. At the factories at Fray Bentos and Colon, in Uruguay and the Argentine Republic, respectively, slaughtering and extract processes are attended to. Inspection at Fray Bentos is under the direction of a company's expert, while at Colon the Argentine Government has a representative from the Cattle Inspection Department to certify as to the health of the animals and the general sanitary conditions of the factory. The unfailing water supply of these countries is a valuable asset in their industrial development, and the periodical analyses made and certified to show the chemical qualities and fitness for manufacturing purposes. A description of the processes by which the finest portions of meat are reduced to the concentrated extract discloses the care and nicety of the various requisite operations, three days being consumed in reducing the flesh to the concentrate which is shipped to markets all over the world.

CHARLES WELLINGTON FURLONG, F. R. G. S., supplements his account of his trip to the "cold land of fire" ("Harper's Monthly Magazine," November, 1908) by a narration in the February, 1909, issue of that publication, of his experiences "amid the islands of fire," as he describes the Fuegian Archipelago. To the north of the Magellan Strait is the mainland known as Patagonia, while to the south lie the islands of Tierra del Fuego, desolate, cheerless, dangerous, yet one of the wonderful regions of the globe. The islands are the mountain tops and plateaux of the half-submerged southern extremity of the Andes; the waterways between are swift, icy currents of the southern oceans flowing through sunken Andean valleys. To the south the archipelago ends in that "monster leviathan" of rock, Cape Horn. The inhabitants of these islands, formerly occupants of the mainland, have retreated before the oncoming white man, and even in the southernmost town in the world the Yahgan founders have been superseded in the possession of their village, Ushuaia, which is now the center of a penal colony of the Argentine Republic. Save for the settlement at Ushuaia, two sheep ranches, three lumber camps, and an abandoned mining camp and a few isolated settlers, these regions are weird and deserted. Accommodations were procured on a small sloop, trading in the sheep of the islands, and an expedition made to some of the obscure inlets which the Yahgans choose for their temporary abodes, their nomadic instincts making it hard to locate them. Impressions at close range of these Fuegians, to whom some have attributed scarcely the ordinary instincts of human beings, are entertainingly recorded, while pictorial reproductions of types and localities bring these distant points of the American continent within the mental focus.

In its series "The Romance of the World's Great Rivers," the "Travel Magazine" for February, 1909, prints the third paper on the Amazon, written by Sir MARTIN CONWAY. Apart from the wonderful tropical beauty of the Amazon basin, its economic worth lies in the fact that the best native India rubber in the world is found here. This gigantic river system has been more or less explored, but it is only now that accurate surveys are being made as the needs of commerce and international politics demand. The sources are countless, and its tributaries divide and subdivide at the outer area like the web of a gigantic leaf. With such volume does it finally rush into the sea that it is said that 300 miles from its mouth a vessel lowered into the ocean will bring up fresh water, while such is the breadth of its vast channel that long after one has entered the actual river, land is not visible on either hand. Nothing can be imagined more romantic than the forest stretches of the narrower river branches. Giant

trees overarch them, and great creepers twining up their trunks open out aloft into a carpet covering that makes the river course one of everlasting twilight. Of this wonderful upper carpet surface of the Amazon forest, Sir MARTIN predicts marvelous color effects when it shall be viewed in an air voyage of the future. Illustrations made from the photographs by Dr. G. F. HASTINGS amply justify the enthusiastic accounts of the beauties of the region.

A study of the features of a sea-level canal at Panama which would render it desirable and feasible, with the work already done serving as a basis, is published in the January number of the "Bulletin of the American Institute of Mining Engineers, 1909." Presented by HENRY G. GRANGER, Cartagena, Colombia, the situation is summarized as follows: The scheme of a lock-canal through the Isthmus of Panama was adopted, as is well known, on two principal grounds—namely, the greater expense of a sea-level canal and the longer time required for its construction. Of these, the latter is believed to have been more influential. In the supposition that further developments have diminished the weight of both arguments and that the question of a change of plan is imminent, the purpose of the paper is to advocate such a reconsideration and to propose methods of constructing a canal at sea level in less time and at perhaps no greater cost than will be required for the remaining work on the lock canal. The writer has evidently given the matter careful thought and his status in the engineering world is evidenced by many signed appreciative comments on his enterprises by engineers of renown.

A critical analysis of the Panama Canal in 1908 was made by Dr. VAUGHAN CORNISH, of the Royal Geographical Society, his observations being afterwards recorded in the "Geographical Journal" for February, 1909, subsequent to their presentation for discussion before the society. Doctor VAUGHAN finds that alike for the student of science and of affairs there is at present no place more interesting than the Isthmus of Panama. Tribute is paid to the successful carrying out of the task of sanitation on the Isthmus and various engineering works necessitated by construction work are seriously considered. Much of the work of the French companies consisted in the dredging out of sea-level channels at each end of the canal, whereas the principal American work has been rock excavation in the Culebra cut. The arrival of spoil trains for the removal of excavated débris is scheduled at intervals of about three minutes and everything gives way to the "dirt" train, as it is this dirt which stands between the American nation and the realization of its long-cherished scheme. By the end of June, 1908, the cut was half made, and the year 1915 is given as the date for the first passage of steamers between the oceans at Panama.

In discussing the "conditions in Cuba as revealed by the census," in a paper read before the American Association of Geographers, on January 2, 1909, and published in the February issue of "The National Geographic Magazine," HENRY GANNETT calls attention to the very rapid rate of increase to be noted in regard to the population of the Republic in the interval between 1899 and 1907. From 1,572,797 the number of inhabitants had grown to 2,048,980, a rate of increase in eight years of not less than 30 per cent, indicating an increase of 39 per cent per decade. It is in the rural districts that the increase has been most remarkable. The foreign-born population forms about 11.2 per cent of the total. Of this element, four-fifths were born in Spain and less than 3 per cent in the United States. The wage-earning element embraces 37.7 per cent of the whole population and the public schools have produced excellent results since their organization. Of the population 10 years of age and over, 56.6 per cent can read, the proportion of literates being much greater in the city than in rural districts.

With a backward glance at the achievements of the Yankee skipper of sixty years ago, who swept on the grand circle from New Bedford almost to the African coast, bending back from Sierra Leone to cut into the south equatorial current just below Cape St. Roque, GEORGE AGNEW CHAMBERLAIN, American Consul at Pernambuco, calls attention in "The World To-Day," for February, 1909, to the fact that no merchant ship of any description flying the American flag entered the port of Pernambuco during 1907. This port, which lies tucked under Cape St. Roque, is famous in the annals of the Dutch and Portuguese as possessing one of the safest and oddest harbors on earth. It is not, however, so much of the port of Pernambuco that the article in reference treats as of the lack of development of the merchant marine of the United States in proportion to progress in other directions, and it is this vulnerable point in the country's equipment that he characterizes as "the nation's heel of Achilles."

Continuation is made in the "Bankers' Magazine" for February, 1909, of the valuable series of papers prepared by Señor Don JOAQUIN D. CASASUS on the credit institutions of Mexico; mortgage banks and their methods of operation being dealt with by this eminent authority. These banks are distinguished from other institutions of credit by the issue of an evidence of indebtedness which is redeemable at long terms, bears interest, and is called a mortgage bond. They are particularly essential in the enterprises of so essentially an agricultural country as Mexico, and have received preferential attention on the part of the Mexican legislature. The operations which enable the banks to guarantee the obligations of agriculturists or manufacturers

make it possible for the important industries represented to receive the same benefits ordinarily enjoyed by mercantile enterprises. In the Latin-American section of the magazine are many important comments and notes on finance and industries.

In his paper on "survey work on the frontier between Bolivia and Brazil," as printed in "The Geographical Journal" for February, 1909, Maj. P. H. FAWCETT, the chief Bolivian commissioner for the survey, states that while South America, which is unmistakably the country of the future, is little known in the interior at the present time, the line of progress is being laid out in many directions. Railways are creeping up from the south, and their tentacles are clutching the wild interiors of Brazil and Bolivia; the Madeira route and the Northwest Railway from San Pablo to Corumba are under construction; movement and trade on the navigable rivers are increasing. This advance is making more acute the question of boundaries, and the research of frontier commissions should furnish interesting additions to the geographical and ethnological history of the world and at the same time bring Europe more in touch with the peoples of the great American continent.

An attractive account of the lands "where the Caribs live" is written by M. A. HAYS for "The Travel Magazine" for February, 1909, the people having been originally residents of the Windward Islands, removing afterwards to islands off the Central American coast and thence migrating to the mainland. Their habits of thrift and cleanliness are evidenced by the settlement at Livingston, Guatemala, where the Caribs occupy the north end of the town. All along the coast from Belize to Puerto Barrios and on down to Puerto Cortez and Limon, where the steamers come for their cargoes of bananas, are villages and settlements from which in smooth and rough seas the natives put out their mahogany dories laden with the desired fruit.

The February, 1909, number of "The National Geographic Magazine" has for its initial article a description of "kaleidoscopic La Paz, the city of the clouds," of Bolivia, by HARRIET CHALMERS ADAMS. Although nearly two and a half miles above the level of the sea, La Paz is reached by a descent into a narrow valley over a steep serpentine road from the plateau where the railway line ends. From the heights, save on the edge of the canyon, no glimpse of the city is to be obtained, but on closer acquaintance its picturesque quaintness and gayly dressed inhabitants are objects of delight to the traveler. Many photographic reproductions of the local scenes and types cause the reader to share the enthusiasm with which Mrs. ADAMS speaks of her stay in the city of the Cholos.

A student of economics will be interested in the paper published in "The World's Work," for February, 1909, by ELISHA HOLLINGSWORTH TALBOT, on the American invasion of Mexico over the industrial route. It is shown that there are now more than 30,000 citizens of the United States operating in Mexican banks, mines, railway enterprises, and other industrial ventures. It is, however, in agriculture that the greatest influence is felt, the changed conditions being indicated in the application of modern methods to exploiting the products of the soil with profitable results. Many individual experiences are told exemplifying the possibilities of success in a new field.

In its consideration of present conditions in the Canal Zone, the "Scientific American," for February 6, 1909, estimates the cost of the great work now in progress there at not less than $300,000,000, but regards the commercial and military prestige attained by its completion and operation as ample return for the outlay of time and capital. A brief recapitulation of the principal engineering features involved in building the canal is given and the preliminary work of sanitation is outlined.

An interesting résumé of a report made by Mr. CHARLES C. EBERHARDT, formerly American consul at Iquitos, concerning the Indians of Peru, forms part of the subject-matter of the "Overland Monthly," for February, 1909. Through intermarriage with whites, disease, and wars, these Indians are fast disappearing, and the story of their customs and characteristics is of value to the ethnological student.

"The Mining Journal" for January 30, 1909, continues its review of British mining enterprises in Latin America in twenty-five years, the mines of South America being considered. Colombia, Venezuela, the Guianas, Chile, Peru, Bolivia, Ecuador, Brazil, the Argentine Republic, Paraguay, and Uruguay are all covered in the report, with the estimated output of all mines under British registration.

In its survey of the world the "Independent" for January 28, 1909, makes reference to the annual report of Governor MAGOON concerning Cuban affairs, labeling it as probably his last word on the subject. Public order and financial stability furnish an earnest of future prosperity in the island republic, the administration of whose affairs is now in the hands of its own people.

More legends of the City of Mexico are narrated in the "Harper's Monthly Magazine" for February, 1909, by the skillful pen of THOMAS A. JANVIER. Stories of the "Alley of the dead man," the "Altar of pardon," and the "Custom house of Santo Domingo" are added to the series on Mexican folk-lore, of which so little is known by the general reader.

LATIN-AMERICAN NOTES

The Argentine Government will build a post-office at San Juan, to cost $100,000.

A French mining syndicate has purchased the Calçoene gold mines, in the State of Pará.

The revenue derived from the export tax on rubber for the fiscal year in the district of Acre, Brazil, will amount to about $3,900,000.

The President of Brazil has issued a decree, through the "*Diario Official*" of December 19, approving the revised bankruptcy law recently enacted.

The street railway system of Porto Alegre, State of Rio Grande do Sul, Brazil, was recently purchased by the Anglo-South American Public Works Company of London for £150,000.

The report of the Minister of Public Works of Brazil for the year 1908 shows that 94,000 immigrants arrived in the country during that period, 41,500 of whom entered through the port of Rio de Janeiro.

The Haitian Government has extended for a term of two years the concession granted to Messrs. Emile Gabriel and Helvetius Manigat for lighting the cities of Port au Prince and Cape Hatien by electricity.

Mexico exported, in 1907, 2,200 tons of chicle, which is used largely in the manufacture of chewing gum. This article is the product of the Zapotillo tree (*achras zapota*), and is gathered from incisions in the bark, similar to the manner of gathering rubber.

The Ecuadoran Government has awarded to M. Bérard, a French architect, the prize for the best plan for the proposed city of New Guayaquil, which is to be the terminus of a railroad now under construction.

Chile exported, in 1907, 1,314 tons of "panama wood," or the bark of the so-called soap tree, which is an excellent substitute for soap, especially in demand by dyers. This tree grows extensively in the forests of Chile.

The whaling industry is growing rapidly in the Argentine Republic, the principal operating company being the *Compañia Argentina de Pesca*, which has a fleet of specially built steamers in service. Chile is also largely interested, having exported, in 1907, 135,520 kilos of whale oil.

Tannin is found in South America, partly in the bark or stem and partly in the fruit or seeds of the trees. Quebracho wood of the

Argentine Republic contains the largest percentage, both in the bark and stem, and this valuable product is found also in the Lingue, Ulmo, and Algarobilla wood.

Buenos Aires is one of the most cosmopolitan cities of the world, both as regards population and the press. There are newspapers printed in almost every language of the globe. Probably the only Syrian newspaper in America, *The Assudk*, is issued in this city.

In January, 1909, Manaos, Brazil, was visited by H. B. M. S. third-class cruiser *Peloras*, this being the first time a British man-of-war has ascended the Amazon to such a distance. The U. S. gunboat, *Wilmington*, several years ago reached Iquitos, on the Amazon in Peru, which is a thousand miles farther than Manaos.

The Chilean Government has created a chair of Seismology in the University of Chile, for the study of earthquakes and other natural phenomena, and at various points along the coast has established seismic stations. The well-known European specialist, Prof. Fernando Montessus, has been invited to fill this post, which he has accepted.

A recent report from Manaos, Brazil, states that the roadbed of the Mareira-Mamoré Railway is ready to receive the rails for a distance of 50 miles, and that the bridge across the Santo Antonio River is about completed.

Dr. Fritz Krause, the distinguished ethnologist, has just returned from a year's travel among the Indian tribes of Brazil, especially along the Aragnaya River in the State of Goyaz. He brought back with him a great many photographs and phonograph records, as well as a collection of useful articles in common use by the natives.

The best paying gold mine in North and South America is the Esperanza, at El Oro, Mexico, which paid its owners during the year 1908, $1,180,000, and since its incorporation the sum of $9,427,500, or 419 per cent on a capitalization of $2,250,000. The property is controlled by United States and British investors.

THIS MONTH IN PAN-AMERICAN HISTORY

March 1, 1519.—The Spanish "*conquistador*," HERNANDO CORTÉS, lands on the coast of Mexico with 700 men, on an expedition to conquer that country.

1870.—Death of Don FRANCISCO SOLANO LOPEZ, second President of the Republic of Paraguay.

March 2, 1807.—The celebrated poet, historian, and writer, Don ANDRÉS LAMAS, born at Montevideo, Uruguay. His literary productions were first published in a newspaper entitled "El Sastre," in Montevideo, in the year 1836.

March 3, 1540.—ORELLANA, a Spanish explorer, descends the Amazon River from Peru to its mouth, being the first white man to navigate the said river in its entire length.

1857.—Death of Admiral BROWN, who commanded the Argentine Navy in the war against Spain, at Buenos Aires.

March 4, 1681.—KING CHARLES II grants the territory which is now the State of Pennsylvania, United States of America, to WILLIAM PENN for the foundation of a Quaker colony.

1789.—The First Congress of the United States of America convenes at New York City, N. Y.

1861.—Inauguration of ABRAHAM LINCOLN, the sixteenth President of the United States of America, at Washington, D. C.

March 5, 1534.—Don FRANCISCO PIZARRO, the Spanish "*conquistador*," founds the city of Arequipa, Peru, on his return from Cuzco, where he had subdued the Indians.

March 6, 1828.—The first Minister of the Republic of Chile to the United States of America, Don JOAQUÍN CAMPINO, arrives at Washington.

1877.—A treaty of extradition is signed between the Argentine Republic and the Republic of Paraguay.

March 7, 1808.—KING JOHN, of Portugal, having abandoned his country owing to the invasion of French troops, arrives at Rio de Janeiro, Brazil.

March 8, 1325.—Tenochtitlan, or the City of Mexico, was founded by the Aztecs, the latter name being derived from Mexitl or Mexl, the name of the favorite god of the Aztecs.

March 9, 1441.—Don AMERICO VESPUCIO, who accompanied COLUMBUS in his voyages, born at Florence, Italy. The continent discovered by COLUMBUS was named "America," after Vespucio, owing to the fact that he was the first to publish maps and descriptive literature of the new continent.

March 10, 1526.—The Spanish explorer and "*conquistador*," FRANCISCO PIZARRO, discovers the coast of Quito, Ecuador

March 11, 1542.—ALVAR NUÑEZ CABEZA DE VACA, having been appointed governor of Paraguay by the KING OF SPAIN, disembarks at Santa Catalina, Brazil, traveling from there overland to Asuncion, Paraguay. He thus covered some 400 leagues of practically unexplored and unknown country, being en route one hundred and thirty days.

March 12, 1760.—JOÃO ALBERTO CASTELLO, a Portuguese, brings the first coffee plant to Brazil, which he had carefully preserved through a long and stormy voyage.

March 13, 1892.—A treaty of reciprocity is signed between Nicaragua and the United States of America.

March 14, 1870.—A convention is signed between Brazil and the United States of America at Rio de Janeiro, appointing Sir EDWARD THORNTON, the British minister in Washington, as arbitrator to settle the outstanding differences and claims of the citizens of the latter country.

March 15, 1826.—Gen. SIMON BOLIVAR, the Liberator, elected the first President of the Republic of New Granada (now divided into the Republics of Colombia, Venezuela, Ecuador, and Panama).

1882.—Inauguration of the continental exposition at Buenos Aires, Argentine Republic, held under the auspices of the Industrial Club.

March 16, 1789.—The North American captain of industry and promoter of numerous railways on the west coast, WILLIAM WHEELWRIGHT, born at Newburyport, Mass., United States of America. WHEELWRIGHT was the founder of the Pacific Steam Navigation Company, and also the first to establish a regular transport line along the Pacific coast.

March 17, 1814.—Admiral BROWN, in command of the Argentine fleet, defeats the Spanish fleet and takes possession of the island of Martin Garcia, in the River Plata.

March 18, 1776.—The British troops evacuate the city of Boston, Massachusetts, United States of America.

1781.—JOSÉ GABRIEL TUPAC-AMARU, a descendant of the Incas, who led the Indian revolt against the Spanish dominion and oppression in Peru, is executed with 8 other members of his family at Cuzco.

March 19, 1823.—EMPEROR ITURBIDE (AUGUSTIN I. of Mexico) abdicates the throne.

March 20, 1729.—The first diamond mines in Brazil are discovered at Sezzo Frio.

March 21, 1847.—The Republic of Guatemala declares its separation from and independence of the Confederation of the Central American States.

March 22, 1850.—Inauguration of the first steamship line between Brazil and Europe.

March 23, 1531.—PIZARRO, having established a colony at Panama, sails southward for the purpose of conquering Peru, the wonderful domain of the Incas, of which he had heard ever since he landed on American soil.

March 24, 1783.—Spain recognizes the independence of the United States of America.

March 25, 1809.—The citizens of La Paz, Bolivia, depose the Spanish authorities and establish a Provisional Governing Board as the beginning of the struggle for independence.

1816.—The first Congress of the United Provinces of South America (now the Argentine Republic, Uruguay, and Paraguay) convenes at Tucuman.

March 26, 1845.—Spain recognizes the independence of the United States of Venezuela.

March 27, 1512.—PONCE DE LEON, in search of the fountain of perpetual youth, discovers Florida and takes possession of it for the KING OF SPAIN.

March 28, 1747.—Benjamin Franklin propounds the single fluid theory of electricity in his famous letters to Collinson.

March 29, 1890.—The first Pan-American Congress resolves to create the International Bureau of American Republics at Washington, D. C.

March 30, 1816.—Gen. Simon Bolivar, having succeeded in fitting out 6 ships, sails from Aguin, Haiti, with 250 men to free his country from the Spanish yoke.

1905.—Promulgation of the present constitution of the Republic of Nicaragua.

March 31, 1818.—The Argentine man-of-war *La Argentina*, having blockaded the harbor of Manila, Philippines, for two months and during that time captured 16 Spanish merchant vessels, leaves the island.

1903.—Ratifications of the reciprocity treaty between the Republic of Cuba and the United States of America are exchanged at Washington.

INAUGURATION DAY IN THE AMERICAN REPUBLICS

THE inauguration of a President is the greatest objective manifestation of republicanism. This ceremony, wherever it takes place and as often as it occurs, demonstrates that the principle of hereditary government is not recognized by the people of the country. It shows, also, that the office of President is restricted to no class, that it can be held by any duly qualified citizen of the Republic, and that the head of the nation is such only by and for the sake of the law.

The inauguration of GEORGE WASHINGTON, the first President of the United States, expressed the great principle that the chief executive officer of the nation is the people's choice, but it was unique in the history of the country in that his election was practically unanimous, the other candidates having been proposed rather to illustrate the elective system than on account of any opposition to the national hero. Moreover, according to the Constitution at that date, the candidate receiving the second highest number of votes was to be chosen Vice-President, and therefore such a candidate was necessary to meet constitutional requirements. The ceremony took place on April 30, 1789. There being at that date no permanently established seat of government, WASHINGTON took the oath of office as President of the United States in the gallery of the old City Hall at the corner of Wall and Nassau streets, in New York City. This oath was administered

by ROBERT R. LIVINGSTON, Chancellor of the State of New York, in the presence of both Houses of Congress and a vast multitude of citizens. WASHINGTON was dressed in a plain suit of dark-brown cloth and white silk hose, all of American manufacture. He never wore a wig, but his ample hair was powdered and dressed in the fashion of the day, clubbed and ribboned. After taking the oath of office he kissed the Bible, and with closed eyes uttered reverently the formal

INAUGURATION OF PRESIDENT LINCOLN, MARCH 4, 1861.
Ceremonies at the east front of the Capitol, where the new President takes the oath of office.

phrase, "So help me, God." The Chancellor said, "It is done," and then turning to the people he shouted, "Long live GEORGE WASHINGTON, the first President of the United States." The shout was echoed and reechoed by the people. A universal holiday in honor of the event was celebrated.

JOHN ADAMS, the second President of the Republic, was inaugurated in the old Statehouse, Philadelphia. The ceremony took place on

(Photo by Underwood & Underwood.)

STATUE OF WASHINGTON ON WALL STREET, NEW YORK CITY, MARKING THE SITE WHERE THE FIRST PRESIDENT TOOK THE OATH OF OFFICE.

MOUNT VERNON, PRESIDENT WASHINGTON'S MANSION ON THE POTOMAC RIVER.

Among the many historical relics which are here exhibited is the key to the Bastille, presented to Washington by General Lafayette. In the gardens of Mount Vernon estate are several trees planted by the former, also one planted by Dom Pedro II. Emperor of Brazil. The remains of President Washington and Mrs. Martha Washington, his wife, rest in a modest mausoleum a short distance from this residence.

(*Photo by Clinedinst taken March 1, 1909*)

VIEW OF THE COURT OF HONOR ON EXECUTIVE AVENUE IN FRONT OF THE WHITE HOUSE.
This is the Principal Feature of the Inaugural Decorations

March 4, 1797, the oath being administered by the Chief Justice of the Supreme Court, a constitutional regulation that has ever since been in force. This ceremony, too, was very brilliant; it was attended by throngs of people from Philadelphia and its environs, who while paying tribute to the head of the nation took this opportunity to show their reverence for WASHINGTON, now become a private citizen. THOMAS JEFFERSON, the third President, was the first to be inaugurated in Washington, now designated as the capital of the Nation. He was escorted by a body of militia and a procession of citizens to the Capitol, and the day was celebrated throughout the city.

From that day the city of Washington has demanded that the inauguration be a ceremonial worthy of the event. The dignity of the

INAUGURATION OF THE PRESIDENT OF THE ARGENTINE REPUBLIC.

Reception at the Government House to the new Chief Magistrate, and a review of national troops stationed at the Capital.

occasion has required that it should be celebrated with fitting pomp, and as one President succeeded another, the social features of this inauguration have been more and more emphasized. When JAMES MADISON assumed office, in 1809, the citizens of Washington and the Members of Congress held a festival ball in his honor. This function has increased in formality and elaborateness with the passing of years and the Nation's growth in size, wealth, and influence. The formal ceremony connected with the administration of the oath of office takes place out of doors on the east portico of the Capitol, whither a procession of citizens, soldiers, and other organizations escorts the President-elect. People from all over the country have come to the city to

INAUGURATION OF PRESIDENT ROOSEVELT—THE GRAND ARMY OF THE REPUBLIC ESCORTING THE PRESIDENT-ELECT TO THE CAPITOL TO TAKE THE OATH OF OFFICE AND DELIVER HIS INAUGURAL ADDRESS.

(Photo by Leet Bros., taken the night of March 1, 1909)

VIEW OF PENNSYLVANIA AVENUE AT NIGHT, SHOWING THE SPECIAL ILLUMINATIONS IN HONOR OF THE INAUGURATION OF PRESIDENT TAFT.

attend the event, which is now recognized as of national and international importance, both socially as well as politically.

ABRAHAM LINCOLN, even in spite of the clouds that had gathered about him, was inaugurated with great ceremony. A strong military escort was provided, and with this and a number of civic societies, together with a long line of carriages filled with government officials, a stately and dignified procession, passed along the Avenue to the Capitol. Here the President-elect was escorted to the platform erected upon the eastern flight of steps, the inaugural address was delivered, and the Chief Justice administered the oath. The procession then re-formed and proceeded to the White House. The day was bright and sunny, as if nature had enrobed herself in spring. The

REVIEW OF PERUVIAN CAVALRY ON THE MAIN PLAZA OF LIMA, PERU,
In front of the Government Palace, on the occasion of the inauguration of the President.

people were keyed to the highest pitch of enthusiasm, and the loyalty of the Nation showed itself at every stage. In the evening a grand ball was given, which was attended by foreign ministers, heads of departments, and by as brilliant a society as ever gathered in Washington.

THEODORE ROOSEVELT was his own successor in the inauguration of 1905, as was the case with several other Presidents, and, therefore, the ceremony differed somewhat from the expected procedure. He left the White House as President and returned to it in the same capacity. Consequently, there could be no divided interest manifested by the people gathered in Washington. In addition to this he went into his second term with the greatest majority of votes ever given

INAUGURATION OF PRESIDENT ROOSEVELT—THE PRESIDENT IS DELIVERING HIS INAUGURAL ADDRESS.

INAUGURATION OF PRESIDENT ROOSEVELT—VIEW OF A PORTION OF THE INAUGURAL PROCESSION EXTENDING ALONG PENNSYLVANIA AVENUE FROM THE TREASURY BUILDING TO THE CAPITOL. THE PRESIDENTIAL REVIEWING STAND IS ON EXECUTIVE AVENUE, IN FRONT OF THE WHITE HOUSE, ABOUT THREE BLOCKS BEYOND THIS POINT.

to a President of the United States, and the country was determined, therefore, to show its appreciation by as magnificent a function as had ever been held. The day was beautiful, and the parade was one of the most extensive that ever marched along Pennsylvania Avenue. The number of persons in attendance was estimated in the hundreds of thousands, and enthusiasm for American institutions had never shown itself so powerfully or so unanimously.

Succeeding inaugurations have accentuated the people's wish to mark the ceremony as one distinctive in contemporary history. The processions and parades have been carefully prepared, so that now the function can be compared in brilliancy to any pageant in the Old World. Every such event attracts larger and more enthusiastic crowds, and the city of Washington prides itself on the fitness of the decorations and the hospitality with which it welcomes and entertains its visitors on this gala day.

In Latin America the inauguration of a President is an occasion of equal import. The temperament of the people lends itself with facility to the celebration of such a ceremony, and their republicanism is manifested with equal spirit and sincerity. Perhaps their artistic sense of proportion and their somewhat more continuous military experience add a charm and a symmetry occasionally lacking in the United States. At any rate the function as witnessed in any of the capitals of Latin America, when a President assumes the chief office in the gift of the people, is quite as interesting and as full of significance.

Music and the military band lend their services; the beauty of the scene is enhanced by the picturesque settings, and a romantic feature in most of the Republics is the presence of a characteristic populace. It would assuredly be of interest for travelers who may have opportunity to visit the capital of a Latin American Republic at the beginning of a presidential term, to arrange their plans so that this fascinating ceremony may be enjoyed.

SR. DON JOSÉ FIGUEROA ALCORTA, PRESIDENT OF THE ARGENTINE REPUBLIC

SR. DON ISMAEL MONTES, PRESIDENT OF BOLIVIA.

A list of inauguration days in Latin America, with photographs of the present incumbents of the presidential office, has been prepared as a feature of the March BULLETIN having special pertinence.

Argentine Republic.—Dr. MANUEL QUINTANA was inaugurated as President of the Republic in Buenos Aires, the capital, October 12, 1904, for a term of six years. The oath is

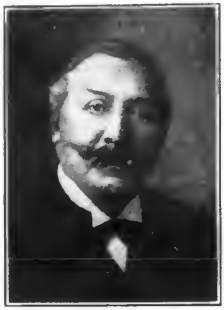
administered by the President of the Senate in the presence of the Congress. (President QUINTANA died March 12, 1906, and, according to the Constitution, the Vice-President, Dr. JOSÉ FIGUEROA ALCORTA, assumed the duties of President.)

DR. AFFONSO A. MOREIRA PENNA, PRESIDENT OF UNITED STATES OF BRAZIL.

Bolivia.—Col. ISMAEL MONTES was inaugurated President of the Republic in La Paz, the capital, August 4, 1904, for a term of four years. This is also the anniversary of the declaration of independence of Bolivia, and as such is one of the great national holidays. President MONTES is now acting as designated by Congress in the place of Dr. FERNANDO E. GUACHALLA, who was elected to the office but died before he could assume its duties in August, 1908. Since then Dr. ELIODORO VILLAZÓN has been selected for the office and will assume the presidency on August 6, 1909.

SR. DON PEDRO MONTT, PRESIDENT OF CHILE.

Brazil.—Dr. AFFONSO A. MEREIRA PENNA was inaugurated November 15, 1906, in the capital, Rio de Janeiro, for a term of four years. This date is the national holiday of Brazil, marking as it does that day on which the peaceful change of the monarchy into a republic was made. The oath of office is taken before Congress or the Federal Supreme Court.



GENERAL RAFAEL REYES, PRESIDENT OF COLOMBIA.

SR. DON. CLETO GONZALEZ VIQUEZ, PRESIDENT OF COSTA RICA.

Chile.—Señor DON PEDRO MONTT was inaugurated as President in the Capital, Santiago, on September 18, 1906, Chile's independence day, for a term of five years. The oath of office is administered by the President of the Senate.

Colombia.—Gen. RAFAEL REYES was inaugurated January 1, 1905, in Bogota, the Capital. His term of office was fixed at ten years, and he will therefore be President until 1914. His successor, however, will be elected for the normal term of four years. The oath of office is taken before the President of Congress.

Costa Rica.—The President is Dr. CLETO GONZALEZ VIQUEZ, who was inaugurated May 8, 1906, for a term of four years. His oath is taken before Congress, assembled in the capital, San Jose.

GENERAL JOSÉ MIGUEL GOMEZ,
PRESIDENT OF CUBA.

Cuba.—This Republic has only just inaugurated its second President, Gen. JOSÉ MIGUEL GOMEZ, the ceremony taking place in the capital city, Havana, January 28, 1909, and the oath being administered before the Supreme Tribunal of Justice. One interesting feature connected with this ceremony was the fact that Judge MAGOON, who has been acting as Provisional Governor, delivered to President GOMEZ the complete control of the island before his taking the oath of office. The two dignitaries stood on the balcony of the Government Palace and were greeted by the entire enthusiastic populace of the capital, Havana. President GOMEZ during the day shook hands with 50,000 persons. A tender touch was added to the occasion, which was the birthday of MARTÍ, one of Cuba's heroes and martyrs, when Congress as one of its first acts voted a substantial pension to MARTÍ's widow.

GENERAL RAMÓN CÁCERES,
PRESIDENT OF THE DOMINICAN REPUBLIC.

GENERAL ELOY ALFARO,
PRESIDENT OF ECUADOR.

Dominican Republic.—Gen. RAMÓN CÁCERES is the President and assumed office in Santo Domingo, the capital, on July 1, 1908, for a term of four years. The oath of office is taken before Congress.

SR. DON MANUEL ESTRADA CABRERA,
PRESIDENT OF GUATEMALA.

Ecuador.—Gen. ELOY ALFARO is the President and was inaugurated in Quito, the capital, January 1, 1907, for a term of four years. The oath is administered before Congress or the Supreme Court of Justice.

Guatemala.—Dr. ESTRADA CABRERA was inaugurated March 15, 1905, for a term of six years in Guatemala City, the Capital. His oath is taken before Congress. Here, as in other Latin American Republics, the respected title of address in many formal offices is that

of *ciudadano* (citizen) to indicate the republicanism of the office or function performed for the state.

Haiti.—Gen. NORD ALEXIS was inaugurated May 15, 1902, for a term of seven years, but on December 17, 1908, Gen. A. F. C. SIMON was selected to act as provisional president. The oath of office is taken before the National Assembly in the Capital, Port-au-Prince. The 15th of May is by the Constitution set as the limit for the office of every elective term, and the incoming President must be chosen before that date, in secret ballot, by a two-thirds majority of the members present in the National Assembly.

GENERAL ANTOINE F. C. SIMON, PRESIDENT OF HAITI.

GENERAL MIGUEL R. DÁVILA, PRESIDENT OF HONDURAS.

Honduras.—Gen. MIGUEL R. DÁVILA was inaugurated President in the Capital, Tegucigalpa, April 18, 1907, for a term of six years. The presidential term according to the Constitution began January 1, 1905, but President DÁVILA will be the incumbent until this normal term expires.

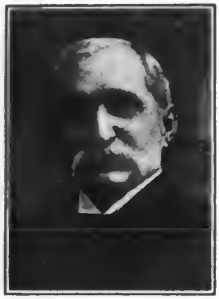
GENERAL PORFIRIO DÍAZ, PRESIDENT OF MEXICO.

Mexico.—Gen. PORFIRIO DÍAZ was inaugurated in Mexico City, the Capital, on December 1, 1904, for his seventh term in the presidency. This is his sixth consecutive term, his first and second having been separated by the occupancy of President GONZALEZ. Since President DÍAZ's last election the term of office has been extended to a period of six years, although previously it was for only four years. The oath of office is taken before Congress. During the last Congress provision was made for the election of a Vice-President, an office not provided by the original Constitution.

SR. DON JOSÉ SANTOS ZELAYA, PRESIDENT OF NICARAGUA.

Nicaragua.—Gen. JOSÉ SANTOS ZELAYA was inaugurated April 17, 1906, in Managua. The presidential term of office is for six years and begins on January 1 of the elective period. President ZELAYA will therefore retain the Presidency until January 1, 1912. The oath is taken before the National Assembly.

Panama.—President J. DOMINGO DE OBALDIA was inaugurated February 17, 1908. The oath of office is taken before the President of the National Assembly in Panama, the Capital City.



SR. DON DOMINGO DE OBALDIA, PRESIDENT OF PANAMA.

Paraguay.—Señor EMILIANO GONZALEZ NAVERO was appointed President in July, 1908. The presidential term is for four years. The oath is administered by the President of the Senate and in the presence of Congress, in Asuncion, the Capital City. The Vice-President assumes office at the same time and is bound by the same oath. The date of beginning the presidential term is the same as that of the promulgation of the accepted Constitution, which was signed November 25, 1870.

DR. AGUSTO B. LEGUÍA, PRESIDENT OF PERU.

Peru.—Dr. AGUSTO B. LEGUÍA was inducted into office September 24, 1908, in Lima, the Capital, for a term of four years. Besides the President there are two Vice-Presidents.

GENERAL FERNANDO FIGUEROA, PRESIDENT OF EL SALVADOR.

Salvador.—Gen. FERNANDO FIGUEROA was inaugurated March 1, 1907, in the Capital, San Salvador, for a term of four years. At the same time a Vice-President was elected, both receiving a majority vote of the people. There is only one legislative chamber (the National Assembly of Deputies), by and before whom the vote of office is administered.

DR. DON CLAUDIO WILLIMAN, PRESIDENT OF URUGUAY.

Uruguay.—Dr. CLAUDIO WILLIMAN was inaugurated in the Capitol, Montevideo, March 1, 1907, for a term of four years. The oath of office is taken in the presence of the two Chambers of the Legislature (Deputies and Senators), and is administered by the President of the Senate. There is no Vice-President.

United States.—WILLIAM HOWARD TAFT was inaugurated President of the nation in Washington, the Capital, on March 4, 1909. This date has been the legal date for the commencement of every presidential term since the inaugnration of President

ADAMS. The oath of office is administered by the Chief Justice of the Supreme Court, in the presence of both Houses of Congress, usually at the east front of the Capitol, in the open air, a platform being specially erected for the purpose. The retiring President, proceeding from the White House, escorts the President elect from his temporary private residence down the Pennsylvania Avenue, the main thoroughfare, to the Capitol, where the ceremony of inauguration takes place. Then the incoming President is driven back over the same route to his now official residence, the White House, and from a stand in front of this he reviews the procession, consisting of military, civic, and other organizations. A Vice-President is elected at the same time and in the same manner, who shares with the President the honors of the day.

HON. WILLIAM H. TAFT,
PRESIDENT OF THE UNITED STATES.

GENERAL J. VICENTE GOMEZ,
PRESIDENT OF VENEZUELA.

Venezuela.—The present incumbent of the Presidency is Gen. JUAN VICENTE GOMEZ. The constitution was promulgated April 27, 1904. It changes the length of term and procedure for nomination of the President. There are two Vice-Presidents, a Senate, and a Chamber of Deputies.

In each Republic, and in each repetition of the ceremony, there is to be distinguished something characteristic of that particular people, something symbolic of the destiny which that Republic is trying to fulfill; but in all it is essentially the spirit of republicanism that predominates.

No wonder, therefore, that in all Republics this occasion is one of remarkable interest to the people. This has been true throughout history. It is true to-day in those European countries where the elective system is completely in effect; but it is doubly true in America, where there is a unanimity of feeling demanding its perpetuation on the part of 150,000,000 souls.

THE WASHINGTON MONUMENT.

This world-famed monument measures 555 feet and cost $1,300,000 to build. All the States of the American Union, several foreign nations, and different societies of the United States contributed to its erection by suitably inscribed marble blocks.

(*Photo by Harris & Ewing*)

REPRODUCTION OF THE MODEL OF THE STATUE OF COLUMBUS AWARDED FIRST PRIZE ON FEBRUARY 25, 1909.

This is the work of Lorado Taft, of Chicago. It was selected on account of its simplicity, combined with an effective harmonization with its setting in front of the new Union Station. The model shows a grasp of the architectural problems involved, and besides presents a fine characterization of Columbus himself, who, while incidentally a sailor and soldier, was primarily a great thinker. Mr. Taft will receive a contract to erect this statue.

(*Photo by Harris & Ewing*)

MODEL AWARDED SECOND PRIZE OF $500, FEBRUARY 25, 1909.

This is the work of Philip Martiny, of New York. The artist has endeavored to present in an interesting manner his conception of the living Columbus, in a grateful attitude after setting foot on *terra firma*, subsequent to a long and perilous voyage. Behind him stand three of his faithful followers, one of them bearing a flag of Spain. The figures in the basin typify the evolution of navigation, one representing the primitive sailor and the other a mythological Triton.

THE COLUMBUS STATUE AT WASHINGTON

THE act of Congress providing for the erection of a suitable monument to the memory of Christopher Columbus in the city of Washington became a law on March 4, 1907, since which time the site for its location has been selected and models submitted to the commission charged with carrying out the provisions of the law.

The personnel of the commission embraces the chairman of the Senate Committee on the Library of the Fifty-ninth Congress, the chairman of the Committee on the Library of the House of Representatives of the Fifty-ninth Congress; the Secretary of State, the Secretary of War, and the Supreme Knight of the Order of the Knights of Columbus, an organization largely instrumental in securing legislation for the monument.

For the purpose of carrying out the provisions of the act, the sum of $100,000, or so much thereof as may be necessary, was appropriated from the Treasury of the United States and full authority given the commission to select a site and a suitable design.

At the time the bill was enacted Hon. WILLIAM H. TAFT was Secretary of War and chairman of the committee.

It has been practically decided that this memorial shall be placed in the Plaza of the new Union Depot, the building in front of which it is to stand being regarded as the finest edifice of its kind in the world. In order that the same degree of artistic merit might be attained and that this decorative feature might be in perfect consonance with the main structure, artists of national and international renown were requested to submit designs suitable for commemorating the achievements of the great discoverer.

In response, models of great and varied beauty have been presented before the committee, most of them of American workmanship, only two or three among the twenty-one being from foreign sculptors. The difficulties accompanying a choice are complicated by the uniformly high standard of the models and by the desire that the memorial shall rank with others of a similar nature in various countries of America.

Throughout Latin America statues of Columbus in bronze and marble are numerous and of great beauty, but in the national capital of the United States, other heroes have received their fitting tribute

in advance of this "first American." In frescoes, reliefs, and paintings, various incidents of his life have been portrayed by prominent artists, but with the exception of an inconspicuous statue—one of the accessories to Greenough's colossal Washington formerly on the Capitol Plaza—no adequate honor has been given to his memory in sculpture. From the wreck of the *Cristobal Colon*, at the close of the Spanish-American war, a small bronze statue of Columbus was recovered which is an object of interest exhibited at the Navy Department.

The cooperation of the District Government has been obtained in the matter and an appropriation of $25,000 made for municipal aid. If, as is at present thought probable, the memorial is placed in the Union Depot Plaza, it will form part of the harmonious scheme for the beautifying of the city of Washington which has occupied the government for several years, and will be in the forefront of the vista of magnificent buildings and grounds which greets the newly arrived visitor to the District of Columbia.

It is purposed to make the memorial more than a mere statuesque representation of the explorer and his figure is to form part of the scheme for a central fountain dominating the Plaza and facing the Capitol grounds.

(*Photo by Harris & Ewing*)

MODEL OF MONUMENT BY AGUSTIN QUEROL, MADRID, SPAIN, AWARDED THE THIRD PRIZE OF $500, FEBRUARY 25, 1909.

(Photo by Harris & Ewing)

DESIGN SUBMITTED BY HENRY HERING, NEW YORK.

Design Submitted by T. Otto Schweiger, Philadelphia, Pa.

(*Photo by Harris & Ewing*)

Design Submitted by H. Augustus Lukeman, New York.

DESIGN SUBMITTED BY LOUIS WEINGARTNER, BROMSGROVE, ENGLAND.

(Photo by Harris & Ewing)

DESIGN SUBMITTED BY PIERRE FEITU, NEW YORK.

ARGENTINE OBSERVATORY OF THE CARNEGIE INSTITUTION

SOUTHERN OBSERVATORY.

One of the early projects authorized by the Carnegie Institution of Washington was an investigation of the motions of all stars down to the seventh magnitude, including also all stars observed with precision during the first half of the nineteenth century. This work was committed to Prof. Lewis Boss, Director of the Dudley Observatory, Albany, N. Y., and has been in progress for the past six years under his direction at Albany. The early results of the investigation were most encouraging, and in December, 1905, the trustees of the Institution enlarged the extent and possibilities of the work by appropriating a sum of $20,000 a year, to be applicable for ten years, for the completion of the project in accordance with carefully contemplated plans. The work thus authorized was made the purpose of a Department of Meridian Astrometry, with Doctor Boss as director, the distinctive feature of the extended work being the meridian observation of the stars of the Southern Hemisphere not accessible to exact observation at observatories in the Northern Hemisphere.

To carry out this part of the programme, provision has been made to transport to a suitable site in the Southern Hemisphere the Olcott meridian circle belonging to the Dudley Observatory. The trustees of the observatory in 1906 formally sanctioned the proposed use of the instrument, and in other respects have placed the resources of the observatory at the disposal of the Department of Meridian Astrometry.

The use of this meridian circle alternately in the two hemispheres is designed to take advantage of the combination of observations made at Albany with those to be made at the southern station, with a view of securing greater simplicity and probably greater accuracy in the fundamental determination of positions for stars in both hemispheres. The accumulation of observations on the southern sky should also reduce the disparity between the two hemispheres in observed material now existing. This existing disparity is due to

two sources. In the first place, useful observations of precision upon stars in general were undertaken later in the Southern than in the Northern Hemisphere and are relatively far less numerous. In the second place, there are only three or four observatories in the Southern Hemisphere engaged in effective work of this kind, while there are at least 20 in the Northern Hemisphere. It should occasion no surprise that the Southern Hemisphere is entitled to the added support of an increased number of instruments and observers.

Fundamental observations at Albany with the Olcott meridian circle have been continued through 1908, and the plan now is to set up this instrument at the southern station for three or four years, and then, returning the instrument to Albany, to complete the corresponding series of observations there.

The work at the Dudley Observatory has already resulted in the preparation of a "Preliminary General Catalogue" of 6,188 stars, which is in process of publication by the Carnegie Institution, of Washington. For each star of this catalogue the position and proper motion for 1900 are given, together with the elements of precession necessary to reduce the positions to other epochs. Furthermore, the mean epoch of observation for each star, the probable error of the position for that epoch and for 1910, and the probable error of the annual variation are also given. Thus the catalogue is not only designed to place at the disposal of the reader the most reliable position that it is practicable to compute for a given star at any epoch required, but it aims also to afford a good quantitative idea of the degree of confidence to which that position is entitled. This constitutes an innovation upon previous practice, and should be of advantage in more than one way.

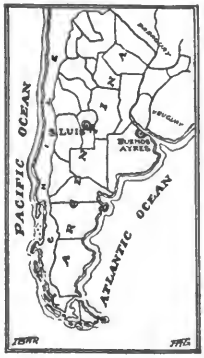
Sufficient progress was attained in the preparations for the establishment of the proposed observatory to permit the dispatch, on August 20, 1908, of a preliminary expedition to Argentina for the purpose of choosing a site and beginning construction. The party consisted of Doctor Boss; Prof. E. H. TUCKER, of Lick Observatory; and Mr. W. B. VARNUM, for many years an assistant at the Dudley Observatory. Professor TUCKER, who will be resident astronomer in charge of the observatory, has secured leave of absence from Lick Observatory during the time required for the work. He was an assistant at the Dudley Observatory twenty-five years ago, was chief assistant for many years at the National Observatory at Cordoba, Argentina, and afterwards became chief assistant at the Lick Observatory.

With regard to this expedition, Doctor Boss reports as follows:

> The expedition had been provided with a favorable introduction to the Argentine authorities by Hon. ELIHU ROOT, Secretary of State, who has evinced a warm personal interest in our enterprise. Aided by this and by the valuable

influence and interest of Hon. WALTER G. DAVIS, Director of the "*Oficina Metcorologica*," of Argentina, and of Dr. L. S. ROWE, of the University of Pennsylvania and temporarily resident in Buenos Aires as a research associate of the Institution, the friendly disposition of the proper officers of the Argentine Government was promptly enlisted in our behalf. I was received in the most friendly manner by the ministers: DE LA PLATA, of Foreign Affairs; NAÓN, of Justice and Public Instruction; EZCURRES, of Agriculture, and others. The Argentine Department of Agriculture, at its own expense, provided us with a large freight car for the prompt transportation of our material to San Luis, where it arrived intact; and also with passenger tickets and accommodations over the Pacific Railroad. The Department of Justice and Public Instruction offered us a site on national property belonging to the Escuela Regional in San Luis, previously examined and recommended by Mr. DAVIS, and this site subsequently proved to be most admirable for the purpose required. In the kindest manner Mr. DAVIS acted practically as our agent in Buenos Aires, executing a variety of commissions in our behalf.

Upon our arrival in San Luis on the morning of September 20, we were met at the station by a party of officials of the Provincial Government of San Luis, including Señor Don JOSÉ GAZARI, acting Governor, Señor Don MODESTO QUIROGA, Secretary of State and Finance, Señor Don JOSÉ ROMANELLA, Mayor of San Luis, and others, together with many prominent citizens of San Luis.



Map indicating San Luis, where the Southern Observatory is to be located.

In order that we might be quartered near the possible site of our future operations it had been arranged that we should enjoy the hospitality of the Escuela Regional, which is under the direction of Dr. C. L. NEWTON. This proved to be a very convenient arrangement. The site offered by the National Government was inspected on the day of our arrival and definitely accepted on the following day. It is located on the domain of the Escuela Regional, as already stated, and its altitude is approximately 2,500 feet above sea level. It is about 1 kilometer from the principal plaza of the city, but in a position sufficiently isolated from buildings. It is also within convenient reach of the water supply of the city. This site and its immediate surroundings constitute a widespreading plain extending to the base of the San Luis Mountains about 3 kilometers to the northeast. These mountains add a most attractive feature to the landscape. Owing to the extremely dry climate of the Province of San Luis, the terrain supports only a scanty covering of vegetation, except in places where resort is had to irrigation. The plot upon which the new observatory is to be located is under irrigation and covered with a luxuriant growth of alfalfa. The effect of this is greatly to protect the soil from undue variations of radiation—a feature that is naturally of great importance in astronomical operations. The subsoil here offers very great advantages for the construction of piers for the instruments. Underneath the covering of rich vegetable mold is a stratum of sandy loam, of from 3 to 5 feet in thickness. Underneath this again is a layer of gravel of nearly equal thickness, and below that a dry, hardened clay. Nothing better as a foundation for the transit-circle piers could be imagined.

Within less than a week after our arrival the true meridian was established by observation with a small theodolite, the foundations of the building were staked out, contracts for building material were made and the selected site of the observatory, covered with piles of brick, broken stone, sand, and other material, presented a busy scene. Plans for the observing room, and of the building designed for offices and quarters for the staff of observers, had been prepared previous to our departure from Albany. The transit-circle house is to be constructed of brick with a wooden roof, and contains a single room 22 by 23 feet. The office building of brick with galvanized-iron roof is to be approximately 80 by 60 feet in exterior dimensions, with a large interior court, or patio, in the usual Spanish-American fashion. This building is to be of one story and of the simplest construction. Detailed description of the arrangement of buildings and instruments may well be deferred until a future occasion. On October 5, in the presence of a small party of officials and friends, the first stone of the foundation was laid with simple ceremonies.

During the whole of my stay in San Luis the authorities of the city and province and the leading citizens generally evinced the most cordial interest in our plans. In particular, Señor Don MODESTO QUIROGA, Provincial Minister of State and of Finance, was unremitting in his attentions and assistance. Dr. C. L. NEWTON, Director of the Escuela Regional, was constantly engaged in the performance of valuable services in our behalf in addition to the hospitality which he dispensed in behalf of the National Government. Señor Don JOSÉ ROMANELLA, Mayor of San Luis, facilitated our operations in valuable ways. In a word, everyone whom I met seemed to feel a keen interest in the success of our enterprise and anxious to assist it in any way that offered an opportunity.

Professor Boss returned to New York on November 11, 1908, and on January 20, 1909, he set sail again for Argentina, accompanied by Mr. ARTHUR J. ROY, chief assistant; Messrs. SANFORD and ZIMMER, assistants, and Messrs. FAIR, GIBBLE, and DELAVAN, recorders. With this staff was taken the Olcott meridian circle belonging to the Dudley Observatory, together with its extensive subsidiary apparatus, clock, chronographs, etc., a photometer, and other needful apparatus. On arrival at the new observatory the meridian circle is to be installed at once upon the massive concrete piers prepared for its reception, duly adjusted, and tested. The work of observation is to begin at once, and it is estimated that the programme of observation, which has been carefully studied and arranged, can be completed within three or four years. The instrument will then be returned to Albany for the purpose of completing the corresponding observations to be made there.

Arrangements have been perfected for the prompt computation of the results derivable from the observations. One computation will be carried on at San Luis preliminary to the more elaborate one to be executed at Albany.

VICE-PRESIDENT ZAYAS PRESIDENT GOMEZ
GROUP OF OFFICIALS ACCOMPANYING PRESIDENT GOMEZ TO THE PALACE
AFTER BIDDING GOODBYE TO GOVERNOR MAGOON.

Illuminated Arch in Havana, Commemorating the Restoration of the Republic of Cuba.

BRAZIL'S GREETING TO THE NEW CUBAN GOVERNMENT

AMONG the festivities connected with the installation of a new government in Cuba, the dinner given by Mr. NABUCO, the Brazilian Ambassador to the United States, to Vice-President ZAYAS and the members of the Cuban Government was the occasion of special interchange of courtesies between the Republics of Latin America.

During the course of the banquet Mr. NABUCO tendered, in the following graceful language, the unanimous congratulations of American countries to the incoming administration:

In the name of Brazil and the other States of Latin America represented here, I salute the Republic of Cuba on the happy restoration of its own government. We all come from Washington, which means that our Governments, while expressing for Cuba their good wishes as a sister Republic, wish also to honor the loyalty and sincerity with which the United States has fulfilled its word that the intervention had no other purpose than to establish on an unshakable basis the independence of this people. And because we all come from Washington, it is a pleasure for us to congratulate our dear colleague there, Señor QUESADA, for seeing rewarded in so complete a manner the noble sacrifice he made of remaining at his post during the period of the intervention in order not to authorize the slightest suspicion that his country could cease for a moment to exist.

In her last struggle for independence Cuba has sometimes expressed surprise that her cause did not arouse in all Latin-America the same enthusiasm it aroused in the United States. I do not know if this is a fact; at least it is not so with regard to Brazil; but if it were correct about any isolated point of Latin-America it could be easily explained. In part it should be attributed to the pathetic impression caused among the nations of Spanish descent by Spain's heroic effort to keep her last plot of land in this New World, which she discovered and which she peopled with nations taken from the best of her blood. But principally the explanation of such a fact, which would form an exception in the whole history of the independence of our continent, would be the fear that Cuba, winning her independence with the help of the United States, would eventually lose her character as a Latin nation. This fear was unfounded. If in our days the patriotic races have nothing to fear for their nationality even under the yoke of conquerors decided to deprive them of it by any possible means, what would an American nation have to fear in that respect from another American nation, chief of all from the one that represents the highest degree of political liberty ever attained in the world?

I believe the United States responsibility in creating this nation and its pride in the help it has given Cuba are the greatest benefit that could have come to the Cuban people. The lesson of the intervention will be for this Republic in the course of her history only as one of those recollections of childhood which give the right direction to one's whole life. Owing to that intervention, the Cuban patriots have acquired the true sentiment of national responsibility, and as that sentiment is really the only palladium to which can be attached the destiny of the nations I congratulate Cuba for having acquired it within so short a time from its independence.

I have heard Mr. MAGOON compare favorably the first ten years of Cuban independence with the first ten years of the United States independence. Surely a better comparison for Cuba could be drawn with the infancy of all other Latin nations in America.

I drink to President GOMEZ with absolute confidence that the Government of Cuba by the Cubans will never more be interrupted in the future of this beautiful island. Making my own the wishes in a letter yesterday received from a distinguished colleague of mine in Washington, the Italian Ambassador, I will say with him to free Cuba:

"Ad multos annos, ad multa saecula."

Doctor ZAYAS replied to the toast in the same spirit.

1 2 3 4 5 6 7

GENERAL RAFAEL REYES, PRESIDENT OF THE REPUBLIC OF COLOMBIA (IN THE CENTER BACKGROUND), PRESIDING AT A MEETING OF HIS MINISTERS OF STATE.

1. General M. M. Sanclemente, Secretary-General to the President of the Republic; 2. Don Emiliano Isaza, Minister of Public Instruction; 3. General Marceliano Vargas, Minister of State; 4. His Excellency, General Rafael Reyes, President of the Republic; 5. Dr. Francisco José Urrutia, Minister of Foreign Relations; 6. General Victor Calderón, Minister of War; 7. Dr. Nemesio Camacho, Minister of Public Works.

PRESIDENTIAL WORK IN COLOMBIA

A PROMINENT Colombian, who has recently returned to the United States from Bogota, has provided the BULLETIN with a description of the work and methods of Gen. RAPHAEL REYES, which is quoted below. In view of the efforts President REYES is making to develop his country and of the growing attention which the world is giving to its progress and possibilities, this sketch is especially interesting.

Our contributor writes:

"Many comments have been made pro and con as to how Colombia is governed under the administration of Gen. RAFAEL REYES.

"To maintain peace at all hazards, to suit the man to the place rather than the position to the man, regardless of political affiliations, to appease political hatred, to foster material improvements, to keep the postal and telegraph service in the greatest state of efficiency possible in so far as the condition of the country permits, to maintain proper equilibrium in the finances of the State, promptly meeting all public obligations, including the payment of interest on the foreign debt, and to preserve the good and friendly relations of the Republic with foreign countries, while endeavoring to settle in a peaceable but honorable manner the disputes existing with some of them, constitute, it may be said, the most salient and notable features of the present administration of Colombia.

"But there is a phase of this work that though hidden and silent is, nevertheless, quite important, inasmuch as it represents the foundation of a building which, sunk in the earth and invisible to the public eye, constitutes the base that supports the structure illuminated by the sun.

"Thus may be characterized the methods of order and diligence regulating the work of the Executive who represents in the country the axis on which the public administration turns.

"General REYES, as a rule, commences his daily work at 4 o'clock in the morning and ends it at midnight. In these twenty hours of daily labor the period devoted to his personal recreation hardly represents an hour's carriage drive at 5 o'clock in the afternoon and the time he occasionally has to spend in banquets and receptions, which never last later than 11 o'clock. It should, furthermore, be stated that at these dinners and receptions the most rigid decorum, which

THE PRESIDENT OF COLOMBIA AND THE DIPLOMATIC CORPS REVIEWING TROOPS FROM THE BALCONY OF THE PRESIDENTIAL PALACE AT BOGOTA, JANUARY 1, 1909.

characterizes the whole life of the President, is maintained. The President of Colombia never wears a uniform. Before retiring for the night he outlines his programme for the following day, noting with the greatest care and minuteness the disposition of each hour and minute of his time and providing for all matters to be considered and interviews to be granted. He begins his daily toil by dictating his correspondence, continuing in this work from 4 to 6 o'clock every morning. A copy of his programme is sent each night to his private secretary and to his aid-de-camp so that only those persons mentioned for interviews are allowed to see the President.

North side of the San Carlos Palace, Bogotá, Colombia, which contains the offices of the Ministry of Foreign Affairs of the Republic. The historic window which shows the memorial stone is the one from which Liberator Simon Bolívar escaped from attempted assassination, September 25, 1828.

"Three cabinet meetings are held every week, and the President never decides any public matter without previously submitting it to the cabinet for proper decision. Each member presents weekly a memorandum of the disbursements to be made by his department during the following week, and a special meeting is held every week with the Secretary of the Treasury, who furnishes a statement showing the balance available in the national treasury. Based on this data the cabinet decides the orders of payment to be issued for the following week, in conformity with the appropriations made by Congress,

so that no draft can circulate without being countersigned and unless there are funds available for its payment.

"All departmental matters that are not purely administrative are decided at cabinet meetings.

"The President receives telegraphic notice every Monday concerning the receipts and expenditures of government depositories throughout the country, stating the balance on hand, together with a statement of the exports and imports through each port of the Republic, in this manner accurate data for preparing national statistics being furnished.

"The minutes of the cabinet meetings are published weekly in a special pamphlet, which is extensively distributed, so that nothing is concealed from the public.

"The President grants interviews to everyone, provided the proper application is made beforehand. Unless the matter to be considered is an important one, the interview is as brief as is consistent with the courtesy characteristic of the man.

"The President frequently makes personal visits to different sections of the country, generally accompanied by one or more members of his cabinet, these visits being noted for the great activity and rapidity with which he travels and for the large amount of work he performs, correcting such deficiencies in the administration as he detects on his way when he comes in direct communication with the authorities and the people of the remotest sections of the country. The practical results of these visits have been the improvement of the means of communication to such an extent that in the last four years a greater number of kilometers of railroads has been constructed than during the preceding twenty years. The President has also devoted special attention to the development of agriculture.

CUBA IN THE TRADE WORLD

AN impromptu address delivered by the Minister from Cuba in the United States, Señor GONZALO DE QUESADA, at the banquet of the National Board of Trade in Washington, D. C., on January 20, 1909, outlines the present status of the island Republic in the world of commerce and economics. Reproduction is made of this valuable statement as of pertinence in connection with the recent inauguration of a new Cuban President.

Señor QUESADA said:

MR. CHAIRMAN, LADIES, AND GENTLEMEN: As the indefatigable JOHN BARRETT, to whom "No" can not be said, was bringing me here to-night with but twenty hours' notice to speak, the first words I heard as we entered this room were those of that distinguished statesman, Vice-President FAIRBANKS: "We believe in America." And it is not only your countrymen who believe in the United States, but every republic of this continent, and every hopeful struggling people on the face of the earth.

To-day, not far from the shaft which immortalizes the memory of the father of his country, in your State Department, that is not inspired in trickery or established for the submission of people, but to maintain friendship with all nations, there assembled for the purpose of saying good-by to your illustrious Secretary of State, the Honorable ELIHU ROOT, the governing board of the International Bureau of the American Republics, the free and independent sisters of this hemisphere, to bid godspeed to one of the greatest public men who has ever held that office, and who has done more to consolidate the excellent commercial and political relations of this country by his friendly visit to Latin America three years ago than all his predecessors. First, there arose the Ministers of Colombia and Panama to thank him for having settled the long-standing differences of their nations; they were followed by the representative of Bolivia, who greeted in the person of ELIHU ROOT the embodiment of American fair play, and lastly, it was my privilege to respond on behalf of my grateful country, the Republic of Cuba, that island that for three-quarters of a century shed its blood and gave the best that it had in order to be independent and be able to say: "We are the children of WASHINGTON and LINCOLN." My eyes were dimmed and my heart throbbed as I declared to the Secretary of State that while the triumphs of his statesmanship would be recorded in the annals of American history, in the same way and just as long will his name live in the annals of Cuban history.

If other countries believe in America, the Republic of Cuba above all has confidence in the United States. We believe in you, because, as your chairman

has rightly said, the helping hand of the United States was extended to us. You did not go to our land to become the despoilers of our rich and fertile territory. You did not go there to take advantage of our weakness after we had fought and bled and had exhausted our strength, neither to enslave us nor to make us your dependency, but to proclaim to all the world, which expected you to remain in the island: "No, we did not come here to conquer; we came here to aid in the work of giving liberty and independence to the last colony of the New World."

You kept your word, and Cuba became independent and entered upon her new government with all hope of success. She has had her missteps; she has made her mistakes, but the work was done and the lesson has remained, and the United States retaining, with the consent of the Cuban people, the right when the child suffered a fall to lift it from the ground and continue to teach the child to walk. That is what you have done, and though your heroic deeds may fill many pages, though your ships may carry the enormous wealth of this country all over the earth, though you will increase your power with your hundreds of millions of inhabitants, and your flag make peaceful conquests everywhere, and you settle by arbitration all the questions between nations, yet, above all, the everlasting glory of the United States will be in that it has not only given birth to a new republic—her child—but that it has strengthened that child to live and become, not a jewel of an imperial crown, but the proud daughter of her love.

Mr. Chairman and gentlemen, you must pardon me if I have not spoken of that subject which is very interesting to you—the commercial relations between Cuba and the United States—but, as I take it, you love patriotism before commerce, before gain, before wealth, and I have appealed to that patriotism, so that from now on you will always, as in the past, remember that your thought and your wishes should be for the success of my country, which is so thankful to you for all your benefits and kindnesses.

You helped Cuba with your blood, you helped her with your treasures, and your women helped her with your prayers, and the best way now to help Cuba is to create in that island conditions of tranquillity; and tranquillity can only result from prosperity, and prosperity can only come by closer commercial relations with the United States.

We have heard to-night from the lips of my friend, Secretary Loomis, his picture of the Orient; from Sir Charles Ross as to the possibilities of your trade with your neighbor on the north, and I shall be followed by the trumpet tones of John Barrett, who is making Latin America so well known throughout the country, and who will depict to you the inexhaustible field of Latin-American commerce, of the Director of the International Bureau of the American Republics, so much appreciated by each one of them that I am afraid we shall have to create a confederation of states for his benefit, in order to make him its president.

Yet, let me tell you that the Republic of Cuba, with two million of inhabitants, has a total commerce with the United States, always increasing, which represents the not small sum of $208,000,000 a year. The reciprocity treaty, which was made five years ago (a treaty in which some of our friends did not believe, and in which there are still some who do not believe), made our importations into this country increase about 30 per cent, but made your exportations to the Island of Cuba increase at the same time over 80 per cent, and to-day of the total imports of the Island of Cuba over 50 per cent come from the United States, while before that reciprocity treaty, no matter what its

enemies contend, those importations from the United States into Cuba did not exceed 15 to 20 per cent.

The reciprocal relations between the two countries should be strengthened. If Cuba can not sell to you her sugar and her tobacco; if she can not provide the sweets for your ladies and your children, and give you that tobacco which soothes your hours of study and of worry. Cuba can not buy from you your machinery, your manufactures, your breadstuffs, and your agricultural products. The same principle is true in the island of Cuba as in every other market. If you do not buy from her you can not sell to her. For that reason you must give Cuba a chance in your markets. Even admitting that Cuba sends her sugar here, and that a very few of the sugar producers in this country think their interests are hurt, you must remember that in Cuba there are about two hundred million dollars of American capital invested in sugar and tobacco plantations and in other Cuban farms, in mines, in banks, in railroads, and in industrial enterprises, and that a large part of the profit derived from them finds its way to American pockets.

Our Chairman has just spoken about the new President to be installed. I have, gentlemen, the honor to-night to read to you (and I am sure you will receive it in the same spirit in which it is dictated) the first official declaration of General GOMEZ, the President of Cuba, which he addresses to this National Chamber of Commerce. It reveals the feelings of the Cuban people, and I am indeed proud to see that the President of Cuba has recognized the importance of this convention and the high honor that you have done me in inviting me to this banquet. General GOMEZ thus expresses himself:

"Having been informed that the Chamber of Commerce of the United States, through their representatives, have had a convention and are celebrating a banquet to-night, where you are invited to speak on the commercial relations with Cuba, I earnestly beg you to declare in my name that the future Government of Cuba will devote all its attention to the development of the most cordial relations with the great and generous American people. You will tell them that special consideration will be given by me and my Government to the commercial relations between both countries, which should be as close as if they were those existing between one and the same people. In order to obtain this result Cuba is ready to make all efforts and is disposed to all sacrifices in the confidence that the American Chambers of Commerce will use their prestige and influence so that their aims shall be reciprocal."

Gentlemen, this is the message that General GOMEZ has directed me to transmit to you, and my closing words are that he, like myself and the Cuban people, have absolute confidence that the American Chambers of Commerce, representing progress and enlightenment, and the desire to extend, with their commercial relations, sincere and amicable political relations, will help Cuba in this new trial for her life and her independence, so that she may be free and prosperous and always the pride of the American people.

The President: Gentlemen, I propose three cheers for the new President of the Republic of Cuba, General GOMEZ. [The audience rose and gave three cheers.]

Gentlemen, the United States feels proud, and the National Board of Trade grateful, that Cuba, through her representative here, should tell us of her appreciation of what we have done for that island. It is the most delightful thing in the world to be appreciated, and we feel that what we have done is only what we ought to have done for a neighbor at our gates. Mr. Minister, will you kindly convey to your President the thanks of this great board of trade, and say to

him that we wish you every prosperity in the world forever, and that you, like us, shall be free and one of the great republics of the world.

Gentlemen of the National Board of Trade, I have asked our secretary in answer to that splendid cablegram from the President of Cuba to send a reply, and he will read to you our cablegram, which we will send at once. If there are any objections please state them before it is sent. Will the secretary kindly read the cablegram?

The secretary read as follows:

"The National Board of Trade, with great appreciation, accepts your cordial greeting through Minister QUESADA, and reciprocates your desire for the closest commercial and friendly relations between the two Republics. It also expresses the sincerest hope for the future prosperity and success of Cuba and its patriotic people."

MUNICIPAL ORGANIZATION IN THE LATIN-AMERICAN CAPITALS

SANTIAGO DE CHILE.

SANTIAGO lies at the head of the great central valley of Chile on the Mapocho River. To the west, the Cordillera of the Coast stretches north and south, a range of hills and low mountains parallel with and near to the Pacific.

This range now represents the worn-down remnants of what was once a great mountain system and the oldest land in the southern half of South America.

To the east rises in magnificent grandeur that great fold of the earth's crust known as the Cordillera of the Andes. The Andes are new mountains, with their angularity and roughness unworn and unsmoothed by long-continued action of the elements. Between the two cordilleras, the old and the new, lies the central valley of Chile, shut off at the north by a spur of the Andes extending to the coast. At the foot of this spur lies Santiago.

By railway from Valparaiso one arrives at the capital unexpectedly. After leaving Llai-llai the line runs through a more or less barren country, rough and rocky, and then suddenly from out of this wilderness the train enters a long street between walls and houses, and the traveler finds himself almost in the center of a large city and at the beginning of the most beautiful street in that city.

This street, the Alameda, is one of the beautiful avenues of South America. It is a fine, broad driveway planted with a double row of gigantic poplars and lined for its greater length with fine buildings. The promenade in the center is set with statues erected to the memory of the heroes of the war of independence, San Martin, O'Higgins, Freire, Molina, Carrera, and others.

The most notable natural feature of Santiago is the hill or rock of Santa Lucia, 300 feet in height, which rises almost from the heart of the city. On Santa Lucia, Pedro de Valdivia established his stronghold, and around its base he founded the first town in Chile, which he named after the patron saint of Spain. The town was laid out in squares, as it is to-day, with the lines running east and west and north and south.

A VIEW OF SANTIAGO, CHILE.

The capital of Chile was founded in 1541 by Pedro de Valdivia. It lies on a fertile plain on the banks of the Mopocho River, near the foot of the Andes, at an elevation of about 1,800 feet above sea level, and has a population of nearly 400,000 inhabitants. It is connected by rail with Valparaiso, 42 miles distant, which is its seaport. Santiago is noted for its beautiful parks and the splendid architecture of its buildings.

To each of VALDIVIA'S followers was given one square for a garden and upon which to build his house. After the conquest, for four hundred years Santa Lucia remained what it was in VALDIVIA'S time, a bold and unsightly rock rising out of the midst of the growing city.

After it ceased to be a stronghold and refuge from the Indians, it had no use until about a hundred years ago, when it began to be used as a Protestant cemetery. Near the close of the nineteenth century Santiago determined to convert this unsightly eminence into the beautiful park it is to-day. The necessary expense was borne, not alone by the Government and the municipality, but, in a large measure, by private contribution. The scheme included not only the beautification of Santa Lucia, but also the laying out of other parks, the broadening and repaving of streets, and, what was the greatest work of all, the rebuilding of the Alameda de las Delicias, the Via Appia of Santiago. Cousiño Park, one of the most popular retreats in Santiago, is named after Don LUIS COUSIÑO, who donated the park of 330 acres to the city.

Beginning in 1872, under the administration of Don BENJAMIN VICUÑA MACKENNA, the improvement of Santiago has been continued down to the present time.

When Santiago was merely a Spanish colonial village on the banks of the Mapocho River, the Alameda de las Delicias was the ordinary main highway leading to the town. Much of the land over which the road passed was low and marshy, and for a distance it occupied what had been the bed of a small branch of the Mapocho. As late as fifty years ago it was an ill-kept and most unattractive thoroughfare, paved with rough, uneven, and ill-set stones. To-day it is a broad avenue, 350 feet wide and nearly 3 miles long, extending across the city from the hill of Santa Lucia to the Central Railway Station. Trees and flowers are everywhere interspersed with fountains, statuary, and other works of art.

Two of the most noted pieces of statuary are the equestrian statues of SAN MARTIN and O'HIGGINS. The celebrated liberator, General JOSÉ SAN MARTIN, who led the patriot army across the Andes in the cause of Chilean independence, is represented holding in his hand the standard of liberty, the horse thrown back on his haunches. General BERNARDO O'HIGGINS, "the bravest of the brave," is shown with sword extended at arm's length in air, his horse in the act of leaping some obstacle on the battlefield of Rancagua.

Santa Lucia is now one of the most remarkable parks in existence. The whole hill presents one mass, almost bewildering, of grottoes, terraces, stairways, stucco work of all kinds, planted with a luxuriant growth of semitropical vegetation through which paths wind in and out to shady nooks or observation points. The view from any one of these points is most attractive. At the foot, the city with a popula-

VIEW OF A SECTION OF THE PLAZA DE ARMAS, SANTIAGO, CHILE, SHOWING A PORTION OF THE CAPITAL CITY IN THE DIRECTION OF SANTA LUCIA HILL, A POPULAR BREATHING PLACE AND PROMENADE FOR THE INHABITANTS OF THE CITY.

PLAZA DE LA INDEPENDENCIA, SANTIAGO.

The plaza, which is also known as Plaza de Armas, is the promenade of Chilean society, where an excellent band furnishes music in the evenings. The building to the right is the municipal palace, and the statue on the left represents America receiving the baptism of fire of independence.

tion of 400,000 stretches out around the hill and on both sides of the Mapocho, with parks large and small relieving the geometrical regularity of rectangular crossings. Through the whole cuts the broad Alameda lined with stately and beautiful buildings with the broad promenade down the middle masked in a floral wealth of almost tropic luxuriance.

To the east and northeast, seemingly almost within touch, rise 17,000 feet in air the rugged and overpowering Andes, jagged, scarred, snowcapped, and awe inspiring. To the west the low coast range shuts off the ocean, and to the south, spreading out until lost in the distance, lies one of the garden spots of the world, the rich Central Valley of Chile. There appear to be no foothills; the Andes rise abruptly from the plains, making the picture as seen from the crest of Santa Lucia the more perfect and satisfying.

Among the most striking buildings in Santiago are: La Moneda, the residence of the President of the Republic, in which are located also the offices of several of the Government departments; the national Congress Hall, a modern construction of vast size and magnificent architecture; the Intendancy of the province and the city hall, in which are installed the principal offices of local administration; the cathedral, which has been completely reconstructed and adjoining which is the archiepiscopal palace, the residence of the Metropolitan of Chile; the post-office, a modern and handsome building; the National Library, a large edifice covering 22,000 square feet, containing about 15,000 volumes; the Palace of Justice, in which the Supreme Court, the Courts of Appeal, and several minor courts and offices are located; the Army Building, the headquarters of the army, and also the barracks of the President's guard of honor.

Other public buildings are the Municipal Theater, one of the best in America; the Palace of the Exposition, the University, the Ordnance Building, Medical School, School of Arts and Trades, Astronomical Observatory, Home for Orphans, Insane Asylum, Agricultural Institute, National Conservatory of Music, and the Catholic Seminary.

Near the Cousiño Park is the racing park, one of the most popular meeting places in the city.

The Agricultural School Farm, one of the most interesting and valuable centers of instruction, covers 320 acres and was founded in 1842. Connected with the school farm are several institutes—the botanical garden with four large conservatories containing several thousand plants; the agricultural institute, which has under its charge the higher branches of agriculture; the agricultural training school, whose principal aim is to create specialties in agriculture, having, with other dependencies, departments of viticulture and vinieulture; vaccine institute, veterinary institute, and laboratories devoted to

SENATE CHAMBER OF THE CHILEAN CONGRESS.

The Capitol of Chile is considered one of the handsomest public structures in South America. It is rectangular in shape, measuring 250 by 256 feet and occupying the entire square. The painting shown in this view represents the meeting of the First Congress of Chile, at which the Constitution was framed and adopted.

agricultural chemistry and vegetable pathology. Agricultural instruction is free and is supported by government.

Mining instruction is given in the university and in a special school devoted to training mine superintendents.

Industrial instruction in most branches has been very highly organized both in the university and in the School of Arts and Trades. This institute is one of the most important in the country. The *Sociedad de Fomento Fabril* has founded and manages schools of industrial drawing, modeling, and electricity. A commercial technical institute has over 500 pupils.

THE UNIVERSITY OF CHILE, SANTIAGO, CHILE.

This government institution was founded in 1843, with Don Andres Bello, a philologist of world-wide reputation, as its first president. The courses of study in its several schools cover a period of five to seven years.

The university offers instruction through faculties of law, medicine, and engineering. Courses in law and engineering are five years each; medicine is a six years' course. The School of Medicine in particular enjoys a very high reputation in all Latin-American countries. The Institute of Pedagogy is for the preparation of teachers in schools of secondary instruction and the two normal schools for teachers in primary schools.

The Board of Public Hygiene has charge of matters of sanitation. The Institute of Hygiene, directed by the board, is divided into five departments—hygiene and statistics, chemistry and toxicology, microscopy and bacteriology, seroterapathy, and disinfection. In

The Capitol of Chile is considered one of the handsomest public structures in South America. It is 256 feet and occupying the entire square. 250 by 256 feet and occupying the entire square. The painting shown in this view represents the meeting of the First Congress of Chile, at which the Constitution was framed and adopted.

THE ALAMEDA, SANTIAGO, CHILE.

The boulevard extends some distance along the foothills of the Andes, forming a magnificent driveway and promenade in one of the most beautiful and desirable residence sections of the capital. Formerly it was lined with two rows of massive poplars. Recent improvements caused the destruction of many of these giants, although other trees planted in their stead are rapidly restoring the avenue to its former beauty.

addition there are special departments of public health having charge of matters pertaining to infectious diseases, vaccination, and chemical study and analysis of food products.

One of the most important establishments for securing instruction is the National Institute, with a roll of about 1,500 matriculates.

Private and church schools supply instruction to about 30,000 pupils a year, and instruction in the fine arts is given in the School of Fine Arts and in the Conservatory of Music.

Military instruction is given in the Military School, which corresponds to West Point in the United States, and where young men in preparation to become army officers are educated; also in the War

THE NATIONAL LIBRARY OF SANTIAGO, CHILE.

The library contains more than 150,000 volumes and manuscripts, and circulates about 40,000 volumes annually. To the left is a statue of Don Andres Bello, first president of the National University of Chile, who, although born in Venezuela, spent most of his life in Chile working for the intellectual uplift of its people.

School, attended by army officers of all grades and where the higher branches of military art are studied; in the Target Practice School, which is specially devoted to practice and instruction in ballistics, and the School for Non-commissioned Officers, where young men are prepared for the lower grades of army command.

The city of Santiago is a municipality in the Department of Santiago, Province of Santiago.

The idea of communal autonomy, so common and basic, not only in the political economy of Greece and Rome, but also in that of the Teutonic and Slav races of the north and east of Europe, has had

SOLDIER OF A CHILEAN CAVALRY REGIMENT ON A WAR FOOTING.

The military organization of Chile is modeled after the German army, and German instructors are employed with this end in view. The active army in time of peace consists of sixteen battalions of infantry, six regiments of cavalry, and seven regiments of artillery, with auxiliaries. All able-bodied citizens of Chile are obliged to serve, liability for which extends from the eighteenth to the forty-fifth year.

but scant hold in Spain since the Roman colonial period and until very recent times. It never had any foothold whatever in the Spanish colonies. As said by Señor AUGUSTIN CORREA BRAVO, one of the leading jurists of Chile, in his Commentaries on the Law of Municipal Organization:

> In Chile, as in all the old Spanish colonies, the commune was unknown until established by law. From the earliest period of the conquest the system of *encomiendas* prevailed in our country, by virtue of which the conquerors divided among themselves the land and the people inhabiting it, thereby making impossible those groupings of small proprietors and of local interests which elsewhere formed the base or were the actuating cause of the municipality. Nor was the period of political and social reconstruction which followed independence the most appropriate for promoting the organization of the commune, and the isolated efforts made in this direction were unfruitful. The habits and unprogressive customs of the colonial period continued under the new régime.

The first law in Chile having to do with the organization and attributes of municipalities was promulgated November 8, 1854, and this law was enacted for the express purpose of bolstering the system of administrative centralization against which complaints were more or less openly made. By virtue of this law all municipal services were under the immediate direction of intendentes and governors, the immediate agents of the President of the Republic. The municipal councils which had been provided for in the constitution (Art. 113) were treated as purely consultive.

The law of September 12, 1887, gave a new organization to municipal affairs and stripped the intendentes and governors of a part of the attributes they had before enjoyed. This law marks the effective establishment in Chile of municipal as opposed to centralized government of cities.

Following this law came the present organic act, the law of December 22, 1891, which is the charter and constitution of all city government in Chile. Article 2 of this act provides that the city of Santiago shall be divided into ten sections or wards (*circumscripciones*) which shall elect each three municipal councilors who together shall compose the municipal council.

The three councilors in each ward form a local board having certain local powers and duties mainly in connection with elections.

Municipal councilors are chosen by popular election. They must be citizens of at least five years' residence in the municipality, must have no interest in national or municipal contracts or supplies, and must hold no other public office or commission. The council from among its members elects three alcaldes, fixing the order of precedence among the three; also a secretary and treasurer.

PALACE OF CONGRESS, SANTIAGO, CHILE, ONE OF THE PRINCIPAL PUBLIC EDIFICES NOTED FOR THEIR IMPOSING ARCHITECTURE.

The powers and jurisdiction of the council are of the fullest. The entire government of the city is in its hands subject only to the constitution and the organic act of December, 1891.

The municipal revenues are derived from a personal tax levied for school purposes, a personal-property tax, a tax on sale of liquors and tobacco, a license tax on industries and professions, revenues derived from city property, and an annual grant from Congress.

THE MAGUEY PLANT OF MEXICO

SISAL is an almost forgotten town in Yucatan. Its foundation is one of the myths of the Mayas Indians, but it long antedates the city of Merida, which lies inland from Sisal and was founded by the Spanish in 1542. Sisal was once a prosperous seaport, enjoying the primitive trade that spread along the coast, but when, in 1871, better facilities were needed the enterprising merchants of Merida determined to make use of the nearer harbor of Progreso, and they therefore built a railway to this place. The Government of Mexico raised Progreso to a port of entry, and Sisal gradually sank into such insignificance that to-day it is scarcely on the map. Sisal has the glory, however, of having given its name to one of the most interesting and important industries of Mexico and America.

Sisal, henequen, ixtle, or istle are words having their origin in the ancient Mexican Indian tongue. They prove the age of this primitive fiber so genuinely and picturesquely American, and in a more accurate sense they establish the use of the term "century plant"—a plant centuries old—as applied to that family of which one very important member is the maguey.

Sisal hemp or grass is a product of a plant indigenous to Mexico which the natives discovered. At first only the crude dry fiber was employed to bind together the mud and thatch of their huts, but later the shreds within the leaves were utilized until finally threads, cords, and ropes were regularly manufactured. It has been explained that the mighty masses of stone still in excellent existence in the ruined cities in the interior of Yucatan could never have been moved into place if the native Mayas had not possessed this precious fiber, and traces of its varied uses among them are plainly visable to-day. When the Spanish conquerors suffered from a scarcity of cable or cordage they began to rely upon the sisal of the Yucatan Indians, and thus a knowledge of this product was extended to Europe, toward the end of the eighteenth century. For years its commercial value was almost ignored, but gradually, as other fibers became more costly and sisal proved its value, it made a permanent place for itself as an article of export.

Henequen is another name given to the same product of the maguey, and this has a recognized trade significance, but it has not

displaced sisal in commercial nomenclature, for, although henequen is exported from Mexico, it is lost or concealed under the term sisal or ixtle or Tampico fiber when imported into the United States. Some distinction must be made between istle and sisal. They come from plants of the same botanical genus, yet they are produced in dif-

GROUP OF AGAVE WISLIZENI.

There are more than 150 recognizable species of the genus agave in the arid and semiarid portions of the southwestern part of the United States, the table-lands of Mexico, and the adjacent mountain slopes, some of which thrive at sea level and others up to elevations of 10,000 feet. In the flowering season the unique plant shown in the cut sends up a high stalk, the top of which is covered with a cluster of beautiful golden flowers that break the monotony of the plain.

ferent parts of Mexico and have different characteristics, depending, probably, upon the process of manufacture and the climatic surroundings under which the agave grows. Ixtle and allied fibers or products come from central and northern Mexico. Sisal or henequen is descriptive of the fiber made and exported from Yucatan; it is also the commercial term applied to the product of the same magney

transplanted to Cuba, Central and South America, many West India Islands, and Florida. Pita is a similar fiber, but its production is chiefly confined to Brazil and is not noted as an item of import into the United States. The name palma pita, and even lechugilla has, however, been of late applied to an ixtle made from a small maguey shrub growing in the northern uplands of Mexico.

The manufacture of all these fibers has become a well-developed, modern industry. The Maya Indians had methods of extracting from the plant the coarser fibrous structure, and in some respects no

TEQUILA PLANTATION, JALISCO, MEXICO.

The species of agave that produces the intoxicating Mexican beverage known as "tequila" is cultivated extensively in the State of Jalisco, Mexico. The alcoholic liquor is distilled from the fleshy base of the plant, and in some parts of the Republic is known by the names of *huila* and *comitecco*. The leaves of this plant contain a valuable fiber.

great improvement has been accomplished by machinery. They devised a knife with which the outer covering of the leaf is removed, and certain tricks of utilizing the threads are still retained as giving the best tensile results. Nevertheless, there was a great need for a suitable machine to clean the fiber rapidly and economically as the growth of the plant increased and the demand for its product spread throughout the world. The Yucatan State Government offered a reward for the invention of an apparatus that would accomplish its work better and with greater rapidity than the hand contrivances of

(Photo by Waite—Mexico City.)

THE MAGUEY IN FULL BLOOM.

This flower, the century plant of northern greenhouses, has a much more beautiful growth in its native habitat than can be produced elsewhere. The central stalk springs upward at the rate of 2 or 3 inches a day, sometimes to the height of 25 feet, and then throws out a cluster of wonderful golden blossoms.

the Indians. This reward was secured by a Franciscan friar, who called his device a *raspador*. This machine is still performing useful service, although several more recent and somewhat simpler machines have become popular. In Yucatan the production of fiber has assumed immense proportions, and the city of Merida—one of the most modern and progressive in Mexico—is as well known for its fiber plants as Lynn, Mass., for its shoes. Through the port of Progreso, shipments are made to all portions of the world, although the bulk of the product comes to the United States.

As yet sisal or henequen, ixtle or pita, is sent from the country in what may be called the "raw" state. After the leaves are cut down

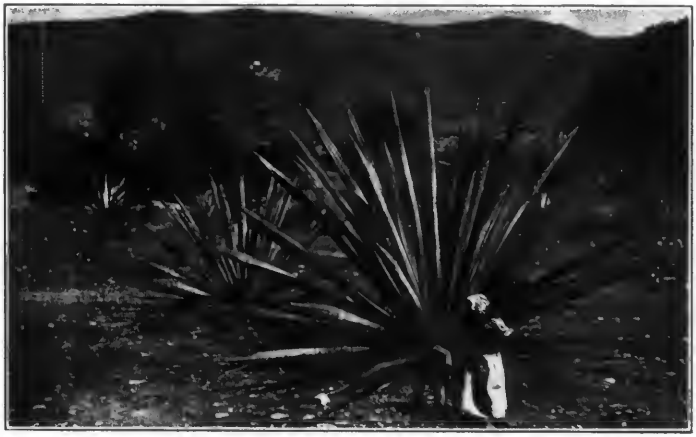
CUTTING LEAVES OF SISAL AGAVE IN YUCATAN, MEXICO.

This highly useful fiber-producing agave is cultivated extensively in the thin soil of the limestone regions of the States of Yucatan and Tamaulipas, Mexico, the former State exporting sisal hemp or henequen to the value of about $20,000,000 annually. The workmen are gathering the fiber leaves to send to the mill for treatment and extraction of the fiber.

and the tough spiney covering removed, the threads within are extracted in bundles; these bundles are then bleached and dried in the sun and air; finally they are pressed into bales, each weighing approximately 400 pounds, and in this shape the fiber is sent abroad. Its further manufacture into rope, cordage, and cable is usually left to the importer in America and Europe, although there is a brisk local industry in supplying the Mexican neighborhood demand with rope for immediate need.

Maguey is the valuable plant from which all these fibers come. But the maguey is an *agave*. The agave is akin to the *aloe*, and they

all belong to the family of the *Amaryllidaceæ*, closely related to the lilies. The *agave* is not a cactus, however much it resembles the latter, with its spines and thorny points. The *agaves* are natives of America. Agave means noble in Greek, or in certain uses it has the sense of the Latin word *gaudium*, joy. There are about 150 specimens of this genus, although botanists have bestowed upon them more than twice that number of names. These are most numerous in the arid and semiarid tablelands of Mexico, but they are found wild and will grow on the low coastal plains of the tropics, as well as at altitudes of 10,000 feet. The geologic formation of the soil has a direct influence on the character of the agave, for the sisal thrives in



THE MAGUEY PLANT OF NORTHERN MEXICO.

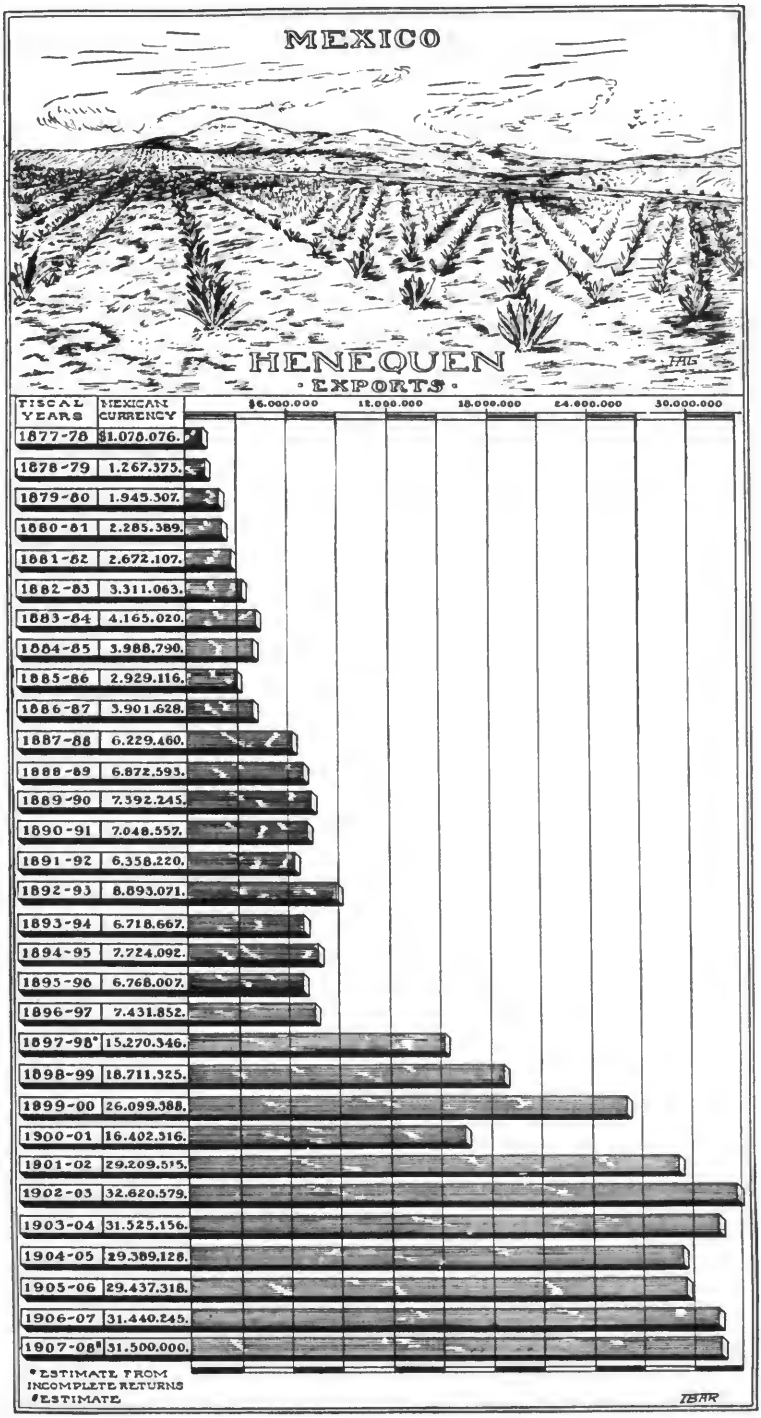
The maguey of the northern portion of Mexico, known as *manso largo*, produces the drink known as "tequila" and "mescal." Its spines are thinner and less pulpy than the maguey manso or tame maguey, which, in the opinion of experts, is the most productive of the different cultivated varieties.

Yucatan, the lechugilla in northern Mexico, and the most famous maguey of all comes to fullest blossom only in the States of Mexico, Hidalgo, Puebla, Tlascala, Morelos, Querétaro, and Apám.

All agaves require years before flowering, and this has given rise to the popular name of "Century plant." The *Agave americana* is the species best known, and this has been introduced and acclimated in practically every country on the globe. The leaves are rigid, each broadly attached at the base and terminating in a strong, horny spine. These leaves may be long and slender, with smooth edges, or long and fleshy with heavy, claw-like spines set at intervals on the edges. The plant may vary in height from 12 inches to 12 feet, and in diameter

from 1 foot to 10. The plant blooms but once, and gives all its life to the perpetuation of itself through this climax. This stage appears, according to the climate and soil in which the vegetation goes on, at from the eighth to the fourteenth year. This is the critical period in the life of the maguey, even from the horticulturist's point of view, because at this age the bloom begins to show itself, and if left to nature that wonderful result so much admired in the century plant takes place. From the center there springs a single stalk that grows at the rate of several inches a day. When the full bloom is attained, which is often 25 feet above the ground, a magnificent blossom of yellow flowers is spread out. All the vitality of the plant is given to this blossom, and when it fades, its seed mission having been accomplished, the giant plant withers and the new generation takes its place.

The maguey, or agave, has many more uses than the production of fibers. The juice of the young leaves is mildly irritant, and in ancient times was applied as a native mustard plaster, or employed to cauterize and cleanse wounds. The strong terminal thorns served to pierce the tongue or ears in certain expiatory ceremonies, or in more wholesome ways they acted as the modern needle. From the slender flower stalks were made lance shafts, and the larger ones are still used by the natives as rafters for their houses or fences for their farms. The large hollow leaves are found as thatch for Indian huts, or when dry they provide a cheerful fuel for winter nights. The clothing woven from the native fiber is unsurpassed to-day, and long before the European invasion the Indians had devised from the leaves a tough paper, upon long narrow sheets of which were painted in brilliant colors their pictured historical records. Some of these still exist, and both in color and texture seem to be little affected by the lapse of centuries. At present cardboard and even fine white letter paper is manufactured from the fiber, characterized by unusual toughness and durability almost to the degree of parchment. There are also species of agave which contain an abundant supply of saponin, and the fleshy parts of the leaves and roots when rubbed up in water make a good soap. This is known to the Mexicans as "Amole;" the women prize it for washing their hair, which it makes both soft and glossy: it is free from alkali, removes stains from delicate fabrics; it is said to set colors, and does not shrink flannels. The heart of some of the species is nutritious enough for an emergency food, and in some parts of Mexico and the United States the fleshy bases have from time immemorial been prepared and eaten by mountaineers. In fact the "mescal agave" has, by its use as food, given its name to the "Mescalero Indians," and in many places remote from civilization roasted mescal is still sold as a toothsome relish.


MEXICO
HENEQUEN
· EXPORTS ·
FISCAL YEARS
MEXICAN CURRENCY
$6.000.000
12.000.000
18.000.000
24.000.000
30.000.000
1877-78 $1.078.076.
1878-79 1.267.375.
1879-80 1.945.307.
1880-81 2.285.389.
1881-82 2.672.107.
1882-83 3.311.063.
1883-84 4.165.020.
1884-85 3.988.790.
1885-86 2.929.116.
1886-87 3.901.628.
1887-88 6.229.460.
1888-89 6.872.593.
1889-90 7.392.245.
1890-91 7.048.557.
1891-92 6.358.220.
1892-93 8.893.071.
1893-94 6.718.667.
1894-95 7.724.092.
1895-96 6.768.007.
1896-97 7.431.852.
1897-98* 15.270.346.
1898-99 18.711.325.
1899-00 26.099.388.
1900-01 16.402.316.
1901-02 29.209.515.
1902-03 32.620.579.
1903-04 31.525.156.
1904-05 29.389.128.
1905-06 29.437.318.
1906-07 31.440.245.
1907-08# 31.500.000.
*ESTIMATE FROM INCOMPLETE RETURNS
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IBAR

Thus it is seen that the agave is a universal provider. It even provides a drink for mankind, and perhaps this drink is the most famous if not the most useful product of the maguey.

Every primitive race has its peculiar drink. The ambrosia of the Greeks, significant of immortality, as the word indicates, was supposed to be used only by the gods; it was both food and drink, and was probably more the product of the imagination than of the art of man. This was not so, however, of the mead used during the middle ages by the Scandinavians, nor of the beer of the Teutons. These drinks have become popular and are manufactured the world over. Many wines, known by the names of the cities or districts in which they were originally made, such as sherry (Jerez), port (Oporto), tokay, or champagne, are probably best produced there, but they have nothing essentially restricting them to their early home. In Central Africa many tribes have peculiar drinks flavored by local plants, but after all they are characteristic in only a general sense; they can be made elsewhere, and the plant can be cultivated in an alien soil if popular taste so demands. The American Indians treated their discoverers to alcoholic concoctions both agreeable and nauseating.

Pulque is quite different from all others in this respect, in that it is made from a native Mexican plant, in the way inherited from prehistoric days. Neither the name nor the product are found anywhere else on earth, and the maguey, from which it comes, although capable of transplantation, flourishes so as to yield its juices only within a relatively small area on the highlands of Mexico. Pulque, therefore, has been and forever will be national, more so than any of the food products consumed by man.

Pulque is a Mexican (Indian) word, and is the fermentable juice of the heart of the *Agave mexicana*, and the Republic of Mexico is the only place on the globe where it is extracted and used. The traveler who extends his tour to Mexico only as far as the city itself receives an erroneous idea of the cultivation of the maguey and of the appearance or taste of pulque as it is drawn from the plant, and he misses one of the most unique sights of that land of beauty and productivity. The maguey grows in the federal district, but it must be seen on the immense pulque haciendas farther away before a realizing sense of its enormous industrial importance is obtained. Passing across the plateau on which the City of Mexico lies are miles upon miles of maguey farms, the plants stretching in uniform rows into the distance as far as the eye can see. Nature has designed them to derive sustenance from this periodically arid soil, and although it is rich in nourishment for all vegetable life, yet its alkalinity is too great, without more careful irrigation than nature has provided, for other plants than the maguey or cactus.

(Photo by Waite—Mexico City.)

MAGUEY HACIENDAS IN THE VALLEY OF MEXICO.

The rows of magney plants stretch for miles in parallel columns across the plateau, and from the hills above look like giant hedges.

(Photo by Waite—Mexico City.)

THE TLACHIQUERO.

The man who extracts the juice from the heart of the maguey plant is called the tlachiquero, a native aboriginal word, distinctive of the work he has to do. He carries his tube on his back, and is generally accompanied by his faithful donkey, who is both his companion and burden bearer.

(Photo by Waite—Mexico City.)

THE CULTIVATED PULQUE PLANT.

The magney manso, or cultivated pulque plant, just as it is ready to bloom. This is a type of the M. Mexicana, indigenous to the plateaus of central Mexico.

The cereals will grow where the soil can be properly cultivated, and in such circumstances corn often displaces maguey, but otherwise the latter alone is profitable.

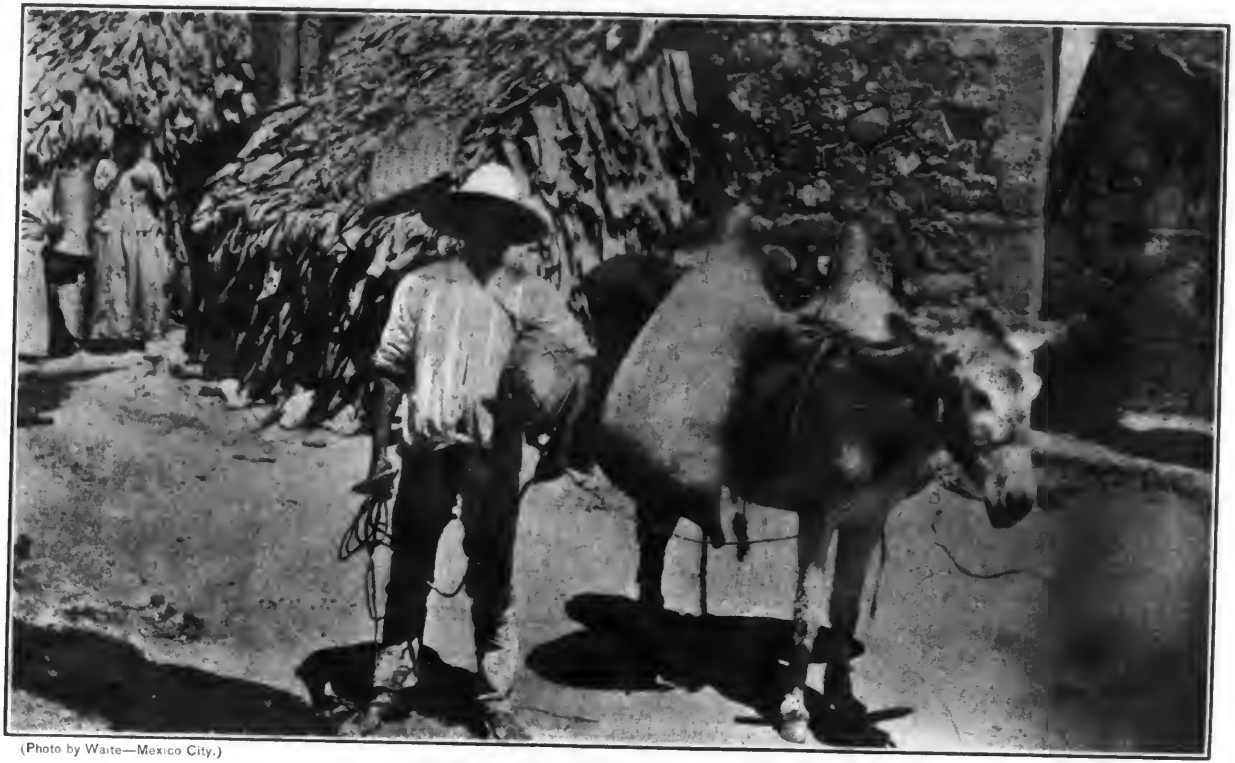
The *agave mexicana* is a large plant, measuring 5 to 10 feet across, with a score or more of huge, thick spines—the leaves—that spring to a height of 6 to 10 feet from base to tip. This is cultivated from small shoots which are protected with much care, and finally, at

(Photo by Waite—Mexico City)

EXTRACTING THE PULQUE.

The tlachiquero inserts his *acocote*, a tube made from a gourd with a hole at each end, into the incised heart of the plant and sucks into it the secreted sap.

the age of 2 or 3 years, are transplanted to the regular rows of the hacienda, and established at intervals of about 10 feet. After they have become permanently located, the mature plants require six to ten years, according to their particular surroundings, before they reach the stage of blossom. On the pulque plantations, however, this beauty is sacrificed to a more utilitarian product. The juices necessary to the life of the blossom are just the liquor from which



(Photo by Waite—Mexico City.)

PIGSKINS FULL OF PULQUE LOADED ON A DONKEY.

The donkey is driven through the rows of magney and halted at the side of the tlachiquero. When the extracting tube, or *acocote*, is full, he inverts it over the pigskin, into which the pulque runs. The skin is so prepared that the shape is well retained, and when distended with fluid looks comically like the animal from which it was taken.

the drink is made. Consequently the trained hacendado watches the plant at this age and when he detects the changes in the leaves which precede the blossom, the incipient stalk is destroyed. This is called castrating. A long incision is then made in the heart or central thickened portion, and the tender leaves of the unopened leaf cluster cut away, the opening being scraped out to form a cavity, into which the juices of the thick, fleshy, expanded leaves slowly filter. This sweetish, slightly acid liquor is known as *aguamiel*.

The maguey, in most favorable circumstances, will yield its sap for a period of six to eight months, furnishing to the gatherer a quantity varying from 3 to even 9 quarts a day, but its life is not eternal. It dies with its blossom, and when the bloom is destroyed for the sake of the sap, the plant dies also, as soon as this period of florescence has passed.

The extraction of pulque is a picturesque process, by no means so uncleanly as unobservant travelers would be led to believe. The *tlachiquero* (this is the Mexican name of the man who extracts the juice from the maguey) must be a skilled workman, and although his method seems primitive, it is the result of traditional and long-cultivated habit and has become an art not lightly to be condemned. Modern ideas of sepsis and asepsis are not practiced or understood; it might be possible to introduce a process of gathering such as is followed in the best dairies, but as pulque is not used for the same delicate purpose as milk the need of strictest cleanliness is not so pronounced.

The *tlachiquero* is provided with a utensil called *acocote*, which is the rind of a fruit known by the name of *guaje*. The meat is extracted and the rind allowed to dry; then a hole is made at both top and bottom: at the top there is inserted a tube through which the *tlachiquero* sucks the liquor into the *acocote*, but it does not reach his lips, nor is it during this process befouled in any manner whatsoever. When the *acocote* is full the *tlachiquero* stops with his finger the hole at the bottom and empties the juice into a pigskin carried usually on his back, or on the back of a patient burro standing at his side. The liquor, the *aguamiel*, when first extracted looks not unlike milk, is nearly odorless, and has a peculiar, sweetish taste. This unfermented *pulque* is relatively such a drink as *einfaches Bier* in Germany, good for women and babes, so the natives say, but not bracing enough or even appetizing for the full-grown man. Fermentation takes place very rapidly, even if the *aguamiel* is left altogether to itself, an analysis of the liquor made only a few hours after its secretion showing an alcohol content of 36 per cent; but this natural fermentation is hastened by the addition of older *pulque* already in the active stage. This method takes place when the liquor reaches the place of manufacture or storage called the *tinacal*.

(Photo by Waite—Mexico City.)

EXTERIOR OF A TINACAL.

Here the manufacture of pulque is carried on. Some of these buildings are very ornamental and furnish good examples of the architectural taste of rural Mexico. In the most advanced haciendas small mule-drawn trolleys are run through the maguey estate and the pulque barrels are filled directly on the cars, thus saving one step in the transportation to the storehouse.

The *tinacal* is a low-lying building in the center of the magney estate, accessible by all the avenues that stretch through the rows of plants surrounding it. Once within the *tinacal* the fresh *aguamiel* is poured into vats containing an older liquor already in the active stage of fermentation, called *punta*. The process then is left to nature, and the pulque is made.

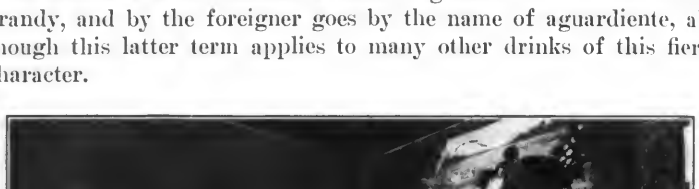
The system of vats, as well as the pig or goat skins and the gourd tubes, are the utensils used since the aborigines invented pulque. They are made of oxhides stretched upon square wooden frames, and surround the walls on the interior of the building. Here, certainly, there is room for improvement in the methods and habits adopted. The vats should be cleaned regularly; they should be protected from the dust and other organic matter that is so easily blown about the open chambers, and the workmen in charge of them should be instructed and compelled to observe the rules of commercial hygiene. Such is not the case, however; little care is taken in any direction, and this is exercised only to the extent of preventing too active a fermentation leading to putrefaction, when the product would be lost and unsalable. Nevertheless, it is not true, as is sometimes asserted, that the animal smell attached to aged pulque is due to decaying animal matter on the skins of the vats. The smell is sui generis, and would occur if the sap of the maguey were left to its own fermentation unaffected by extraneous organic matter; the process of disintegration is inherent in the liquor itself, as it is a complex, unstable, vegetable compound.

Pulque is therefore a native drink that can never be popularized away from the place of its origin or among people with whom it would be an acquired habit. Consumed within a short distance of the plant from which it is extracted, it is probably as wholesome as any liquor not subjected to exact chemical control. It is said to have recognizable tonic effects, and has at any rate a romantic history which should deter one from condemning it too hastily. But considered as an element in the economic industries of the world, or even in Mexico alone, it will ultimately fall into disuse and disappear, except as a curiosity. This has been the fate of all other unrefined native indulgences. Two factors are contributing to this end; one is the intrinsic nature of the liquor, for it spoils too easily and will not bear transportation to any great distance. So important a fact is this that pulque is practically unknown 500 miles away from its place of manufacture, and all attempts to introduce it to natives in the northern parts of Mexico or to foreigners across the frontier have proved a commercial failure. The bottled stuff sold under the name is a miserable concoction unpalatable to all who have tasted it. The maguey plant does grow elsewhere, being found in every section of Mexico above the damp and low-lying

(Photo by Waite—Mexico City.)

INTERIOR OF A TINACAL.

coast areas, but outside of what may be termed the pulque belt, the heart and sap of the maguey plant are used in the manufacture of other drinks, native, to be sure, but much more on the order of alcoholic liquors in other parts of the world. In the extreme north of the Republic the product is called mezcal; it resembles gin in looks and flavor, but has a very high proportion of alcohol. Farther south, but not quite within the States mentioned, the distillate is called tequila from the town where its manufacture originated: this is similar to brandy, and by the foreigner goes by the name of aguardiente, although this latter term applies to many other drinks of this fiery character.



The second factor tending to overcome the native predilection for pulque is the efficient control which the national government is exercising over both the manufacture and sale of the drink. It has been the habit of the venders, both wholesale and retail, to adulterate pulque; this might be done by preservatives to give it longer life during which it could be offered to the consumer, or extraneous ingredients would be added to increase the already powerfully intoxicating effects of the crude pulque. Both of these conditions the Government is taking determined steps to overcome, and probably the enforcement of regulations similar to the pure-food laws in the United States will greatly modify the drink as it reaches the consumer. In another sense the sale is being restricted, for the rule to-day is that in the cities only a certain number of *pulquerias*—pulque shops—are allowed to take out licenses, the regulation applying either with regard to population or to districts of measured area. Besides all this, education and the energizing effect of industrial life will gradually turn the native against pulque and arouse a taste for a more wholesome and civilized luxury.

INTERIOR OF A TINACAL.

The vats into which the fresh *aguamiel* is poured are made of ox-hide. Fermentation is then allowed to go on, but no protection from extraneous matter is considered necessary. The bad odor that makes pulque notorious is first noticed here, but this is not due to the animal skins in which it is retained, as this effect comes from the addition of rennet used to modify fermentation, and from foreign substances falling into the liquor through lack of protection.

DRINKING PULQUE IN A VILLAGE STREET.

The native Mexican Indians claim pulque as their ancestral beverage. In the country it is drunk, fresh and comparatively pure, as commonly and with no worse results than beer in Germany. In the large cities, where pulque is adulterated and the per cent of alcohol is decidedly higher, its inordinate consumption is being checked.

THE HISTORY OF THE TRANSANDINE RAILWAY

THE first interoceanic railroad across South America, which will unite the Atlantic and Pacific and Buenos Aires and Valparaiso, is now rapidly approaching completion, and the entire line will be opened to passengers and public traffic not later than the spring of 1911. The final construction of the highest tunnel, which will be 3,030 meters, or 9,941 feet, long, through the Cumbre or Uspallata Pass of the Cordillera

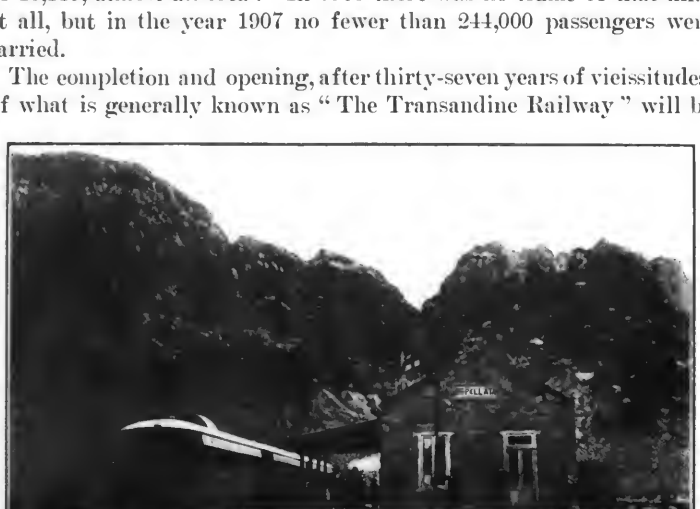
SLEEPING CAR, TRANSANDINE RAILWAY, ARGENTINE REPUBLIC.

On the trip from Buenos Aires to Las Cuevas, requiring nearly forty-eight hours, modern and commodious sleeping cars are attached to trains for the convenience of travelers.

of the Andes, has now progressed so far that in the Chilean section 868 meters, or 2,848 feet, have been perforated, while from the Argentine side the total perforation is 546 meters, or 1,791 feet, making the entire length on both sides 1,414 meters, or 4,639 feet, of heading already bored through. There still remain 1,616 meters, or 5,302 feet, a little more than one-half, to be perforated. During 1908 the second section on the Chilean side was opened and now reaches a place called Portillo, 18½ kilometers, or 11½ miles, nearer to the Argentine frontier from rail head. This reduces the time occupied

by the through journey by more than an hour: passengers starting from Buenos Aires at 8.20 a. m. one day will arrive at Valparaiso at 10.39 p. m. on the following day—in all about thirty-eight hours. The gross traffic receipts have risen, in the course of a year, from $215,545 to $291,765, being an increase of over $75,000, which is at the rate of more than 35 per cent. The passengers show an increase of 46,145, almost all local. In 1903 there was no traffic of that kind at all, but in the year 1907 no fewer than 244,000 passengers were carried.

The completion and opening, after thirty-seven years of vicissitudes, of what is generally known as "The Transandine Railway" will be



USPALLATA STATION, ARGENTINA, ON THE LINE OF THE TRANSANDINE RAILWAY.

This station is at an altitude of 5,600 feet above sea level, and situated about midway between Mendoza, the westernmost city of importance in the Republic, and Las Cuevas.

an event of transcendent importance in the industrial and commercial evolution of the world. This line, together with its two links, the Buenos Aires and Pacific and the Argentine Great Western, will unite the metropolis of the Argentine Republic with that of Chile by means of a highway of steel 1,429 kilometers, or 888 miles, long, which will traverse the extensive wheat fields of the Argentine pampas or prairies, pass through the thriving vineyards of western Argentina, and, starting from Mendoza City, in the Argentine Republic, continue for the first 20 kilometers, or 12½ miles, westward through the vineyards and orchards of Mendoza Province. Gradually the low shrubs and trees characteristic of the slopes of the mountains appear and are followed by 225 kilometers, or 140 miles, of the sublime and

VIEW OF VILLA JARDIN AND THE ANDES MOUNTAINS ON THE TRANSANDINE RAILWAY IN THE ARGENTINE REPUBLIC.

Villa Jardin is a railway station in the grape-producing section of the Argentine Republic. The climate is dry and bracing, and the district is well known throughout the Republic as a health resort. It is on a plateau about 4,000 feet above sea level. In the distance is a range of the highest Andes.

lofty Cordillera of the Andes as far as the Chilean town of Los Andes, whence, conveying the traveler over a distance of 125 kilometers, or 78 miles, through the smiling and fertile valleys of Chile, the western terminal at Valparaiso on the Pacific is reached.

It is a self-evident fact that the realization of this project, the dream of half a century, will be of the greatest practical utility. Even in its present uncompleted state it has already reduced the time required for the journey between Buenos Aires and Valparaiso, and vice versa, to a matter of less than forty hours, which time it is to be hoped will ultimately be reduced to twenty-nine. The rapidity of transportation by this new route will be better understood when one bears in mind that the voyage between Valparaiso and Buenos Aires, via the Strait of Magellan, by steamer, requires ten days.

While the Transandine railroad route will be of inestimable benefit to the sister Republics of Chile and Argentina in promoting their intercontinental and overland domestic commerce, still greater benefits will accrue to both countries as regards their international relations. The railway will shorten the distance between western Europe and Australia by about 1,000 miles and effect a saving of about nine days in its connection with Europe, and the journey to the eastern ports of the United States will be materially shortened, while Argentina will have an equal advantage in rapidly reaching the west coast of South America.

The history of the Transandine Railway may be said to date back to 1860, when the North American captain of industry, WILLIAM WHEELWRIGHT, forwarded to the Royal Geographical Society of London a paper prepared by him showing the practicability of a transandean railway from the port of Rosario, Argentina, on the Parana River, 304 kilometers, or 189 miles, above Buenos Aires. The route proposed by Mr. WHEELWRIGHT, from Rosario to the Chilean port of Caldera, was about 900 miles long, and extended in a northwesterly direction across the Argentine Republic and over the pass of San Francisco into Chile. If the railway had been built, the western or Pacific terminus would have been placed about 10 degrees north of Valparaiso.

It was not until thirteen years later, or in 1873, that the first practical steps for connecting Buenos Aires and Valparaiso by rail were taken. Two brothers, Messrs. JOHN and MATTHEW CLARK, obtained in that year a concession from the Argentine Government to construct a railway from Buenos Aires across the Republic as far as the western or Argentine-Chilean frontier, in the Cordillera of the Andes. Just what route should be selected was the subject of much controversy. A southwesterly route, which should touch Chilean territory through some one of the lowest passes of the Andes, found not a few advocates, because the engineering problems to be solved

AVALANCHE SHED, TRANSANDINE RAILROAD.

Portions of the mountainous sections of the road are exposed to possible destruction by landslides and avalanches of snow. After severe storms great quantities of mud, softened by the rain, slip down the mountain sides to the track, causing delays and much damage. The sheds serve as a protection by carrying the débris over the track.

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would be easy and the cost of construction comparatively light. An alternate route was that suggested by WHEELWRIGHT, namely, in a northwest direction and over the pass of San Francisco, whence it might be expected that the Chilean Government would cause the line

A MOUNTAIN SCENE ON THE TRANSANDINE RAILWAY.

The scenery along the line of the mountainous sections of this railroad is as fine as can be found anywhere in the world. The higher peaks of the snow-covered cordillera are constantly in view and an ever-changing panorama of mountain, valley, and gorge is presented to the traveler.

to be continued as far as the port of Caldera, on the Pacific. The decision was finally reached that the principal goal to be attained was to establish railroad connection between Buenos Aires and Valparaiso by the shortest route that should be found available. These

"CHRIST OF THE ANDES"—STATUE MARKING THE BOUNDARY LINE BETWEEN CHILE AND THE ARGENTINE REPUBLIC.

This unique statue was unveiled March 13, 1904, with impressive ceremonies. It stands at an elevation of 14,450 feet above sea level. The carriages in the foreground are transporting passengers over the pass between railroad terminals in the two republics. When the Andean tunnels under construction are completed, though the traveler will miss much beautiful scenery, he will be able to cross the continent at any period of the year, instead of being limited to the South American summer, from November to May, as at present.

two great South American seaports lie almost on the same parallel of latitude, Valparaiso being slightly farther north. The line would therefore extend almost due west and traverse the level pampas or prairie region as far as the city of Mendoza, which lies at the foot of the eastern slope of the Argentine-Chilean Cordillera of the Andes. Here, starting with an elevation of 719 meters, or 2,359 feet, the 182 kilometers, or 113 miles, of the transandine portion of the railroad would begin, and, following closely the old historic mountain trail of the "Camino de los Andes," steadily ascend the Cordillera toward the summit of the Cumbre Pass, which is 3,842 meters, or

STONE REFUGE HOUSE IN THE ANDES.

Houses of this character have been built at short intervals along the dangerous parts of the highways over the Uspallata and other frequented passes of the Chile-Argentine Andeal Range, the first one having been erected in 1791 by Governor Ambrosio O'Higgins. Violent storms sometimes overtake travelers crossing the mountains, and refuge is afforded in these houses until the fury of the tempest abates.

12,605 feet, above sea level. Here operations on the Argentine side would cease.

The Government of Chile, it was expected, would cooperate in the construction of the transandine railway by causing operations to be commenced on the Chilean side of the Cordillera at the town of Santa Rosa de Los Andes, which is 800 meters, or 2,625 feet, above the Pacific. From this point heavy engineering, including tunneling, would have to be done for a distance of 75 kilometers, or 47 miles, up the western slope of the Cordillera, until the Chilean section of the culminating tunnel through the Cumbre Pass, at a height of 10,460

feet above sea level, should be perforated and should connect with the Argentine section. This accomplished, the transandine section of the proposed transcontinental railway between the Argentine Republic and Chile would be complete, and it would be an easy matter to connect at Los Andes with the existing Chilean railroad, 125 kilometers, or 78 miles, long, between that point and Valparaiso.

In selecting the route already described for the projected transcontinental railway trunk line of 1,429 kilometers, or 888 miles, across South America from the Atlantic to the Pacific, sentiment and patriotism have played as large a share as utilitarian and practical reasons. The transandine region in the heart of the Cordillera presents mountain scenery of a grandeur and beauty beyond description. From the summit of the Cumbre Pass, on the natural international frontier of two great Latin-American Republics, a wonderful panorama can be seen. Across the Chilo-Argentine dividing line, Mount Aconcagua, a weird mass of black basaltic rock and of dazzling snow is sharply outlined against the blue of the Andean sky. The height of this peak has been estimated by the German savant, Guessfeldt, to be 6,970 meters, or 22,867 feet. Even in what is known as the open season, from November 1 to April 30 (the spring and summer of the South Temperate Zone), the journey on foot or mule back over the 175 kilometers (109 miles) of the Cordillera, from one Republic into the other, is attended with much discomfort and difficulty. The undertaking becomes well-nigh impossible in the depth of the austral midwinter, in August and September, when terrific storms rage throughout the Cordillera and the passes are blocked by tremendous snowdrifts and avalanches.

Historically this entire Chilo-Argentine Cordilleran wilderness is replete with dramatic and human interest. It was from Mendoza, during the latter half of January, 1817, that two great South American commanders, General San Martín, an Argentine, and General O'Higgins, a Chilean, conducted a well-equipped and armed expedition, composed of 5,000 Argentines and Chileans, westward across the Cordillera, over the summits of the Cumbre and Los Patos passes into Chile, effecting the transit within three weeks, and on the 12th of February surprised and routed a Spanish royalist army at the crest of Chacabuco. After little more than a year's campaigning the two liberators won the brilliant battle of Maipu, April 5, 1818, and emancipated Chile from the rule of Spain. Eighty-five years later, in March, 1904, at the summit of the Cumbre Pass, nearly 13,000 feet above sea level, Chile and Argentina participated in the imposing unveiling of the bronze statue of "The Christ of the Andes," erected as a solemn pledge of perpetual peace between the Republics and as a memorial of having happily terminated three-fourths of a century of vexatious boundary disputes by submitting

their differences to impartial international arbitration instead of to the dread arbitrament of war.

When the interoceanic railroad between Buenos Aires and Valparaiso shall have been completed at the close of 1910, or the begin-

SALTO DEL SOLDADO (SOLDIER'S LEAP) BRIDGE, CHILE.

During the early struggles for independence a Chilean soldier, pursued by the enemy, escaped by leaping his horse across this chasm. It is along the line of the Transandine Railway, at an elevation of 4,140 feet above sea level. The bridge is of masonry and spans one of the deepest gorges on the line.

ning of 1911, thirty-seven years will have elapsed since the CLARK brothers took the first steps toward its practical realization. As in all great undertakings, success has been achieved only by overcoming

many obstacles and delays. Active operations were rendered difficult for seven years, owing to financial and political complications. What may be called the first link of the transcontinental railway system was the section built by the Argentine Government in 1880 from Villa Mercedes to Mendoza, a distance of 357 kilometers, or 222 miles. This line is called the Argentine Great Western. The CLARK brothers, on their part, in 1883, constructed what has been misnamed "The Buenos Aires and Pacific Railway"—that is, the division between Buenos Aires and Villa Mercedes, which is 689 kilometers, or 428 miles long. In 1886 the Buenos Aires and Valparaiso Transandine Railway Corporation of London, England, secured a concession from the Argentine Government, which authorized them to extend railroad construction from Mendoza City up through the Cordillera of the Andes as far as the Chilean frontier. This British company, with a capital of £500,000, or $2,435,000, and an annual subsidy of £83,370 ($406,012), obtained control of the CLARKS' Buenos Aires and Pacific Railway, and also, in 1887, bought out their rights in the Argentine Great Western.

As regards the transandine division of the projected railroad—that is, the Andean and Cordillera region between Mendoza and Los Andes, a distance of 257 kilometers, or 160 miles—the gauge 1 meter, or 3.28 feet track, was adopted as the most suitable. The old mountain trail, "Camino de los Andes," leading to the summit of the Cumbre Pass, was selected as the most direct and as the shortest route. The works were commenced early in 1887, and in February, 1891, the first four Argentine sections—Mendoza to Uspallata, 92 kilometers, or 57 miles—were opened to public service. In May, 1892, the fifth Argentine section to the Rio Blanco was completed. In December, 1893, the sixth section was also available for trains from Mendoza up to Punta de Vacas.

On the Chilean side the works were commenced and carried up to the Salto del Soldado, 27 kilometers, or 17 miles, from Los Andes, up to which point trains then ran. The total length of the line to connect Mendoza and Los Andes was 257 kilometers (160 miles), leaving a gap of 72 kilometers, or 45 miles in 1903, over which the railway was yet to be constructed.

The construction operations were of a heavy nature, requiring elaborate works in cuttings, both in gravel and rock, and extensive defenses to protect the line against river floods. The most difficult engineering to be executed was in the remaining portion of the route leading up to the summit of the Cumbre Pass (3,842 meters, or 12,605 feet), where the Cordillera must be pierced by a series of great tunnels, and the "Abt system" of cogs and racks must be used for the safe and expeditious running of trains.

Natural obstacles and other circumstances rendered further progress so slow that by July, 1903, the railway was completed from the Argentine side only as far as Puente del Inca, and on the Chilean up to Salto del Soldado, the distance between these two terminals being 72 kilometers, or 43 miles. The construction of the line on the Chilean side from the starting point, Los Andes, was for several years under the superintendence of Messrs. JOHN and MATTHEW CLARK, who, in 1893, finding their own financial resources too limited for the undertaking, secured some assistance from the Congress of Chile. In

ROAD TO JUNCAL, CHILE.

The fine, broad mountain road to Juncal, Chile, on the line of the Transandine Railway, near the Uspallata Pass, follows the course of the turbulent Aconcagua River to Los Andes, and before the construction of the railroad was the great overland highway from Chile to the Argentine Republic. This road leads to the Salto del Soldado (Soldier's Leap), where it is said a Chilean cavalryman of the war of independence leaped his horse over a yawning chasm in order to escape capture by the enemy.

March, 1900, a judicial sale of the Chilean section of the uncompleted railway, known as "CLARK'S Transandine Railway," was made to the Chilean hypothecary creditors for $1,600,000 Chilean currency. The Government of Chile agreed to take over the property for the same amount and to undertake the continuation of the construction. On August 23, 1901, a deed of sale was signed with the Transandine Construction Company, represented by WILLIAM R. GRACE & CO., of New York and London, whereby the Bank of Chile, the Commercial Bank of Chile, and EDWARDS & CO. relinquished all their legal rights in the railway in favor of the company named. With a view to expediting

HOTEL AND CONSTRUCTION BUILDINGS AT JUNCAL, CHILE.

Juncal is 7,290 feet above sea level, and is the present terminal of the Transandine Railway on the Chilean side. It is also the headquarters of the construction company which is boring the tunnel to complete the line. The hotel affords accommodation to travelers who oftentimes are obliged to spend a night in the mountains while journeying from ocean to ocean.

matters a law was enacted in February, 1903, empowering the President of the Republic to contract by public tender for the construction of a railway of 1 meter (1.09 yards) gauge from the city of Los Andes to the summit of the Cordillera, there to join the railway of the same gauge in course of construction from Mendoza, Argentina, to the summit of the Cordillera. By the terms of Article II the Chilean Government guaranteed for the term of twenty years 5 per cent interest on a sum not to exceed £1,500,000 ($7,209,750). For the payment of the guaranty the line was to be divided into three sections, the value of each of which would be considered as follows:

SECTION 1. From Los Andes to Juncal, 20 per cent of the total value of the line.

SECTION 2. From Juncal to Portillo, 35 per cent of the total value.

SECTION 3. From Portillo to the junction with the Argentine line, 45 per cent.

The operation of the guaranty was to commence from the time that each section was completed and provided with the necessary rolling stock.

On December 15, 1903, bids were opened at Santiago, Chile, and the contract was awarded to the firm of W. R. GRACE & Co., of New York and London, the Chilean Government granting a guaranty of 5 per cent annually on $6,569,775 for a term of twenty years.

From this date the progress of the Transandine Railway was accelerated. On June 30, 1906, the first section of the line on the Chilean side, from Los Andes to Juncal, a distance of 51 kilometers (nearly 32 miles), was accepted and taken over from the contractors by the Government, and an issue of £278,100 of debentures at 5 per cent was made to provide in part for payment of this section. Work on the second section, from Juncal to Portillo, was approaching completion by the summer of 1908, and it was then estimated that the third Chilean section, from Portillo to the junction with the Argentine line, would be completed by June, 1910. According to the latest information from the most authentic sources, the entire Transandine Railway system is expected to be completed and open to through public traffic not later than March, 1911, and as the remaining construction work in the Cordillera has recently been intrusted to the well-known contractors, Messrs. WALKER & Co., it may confidently be expected that uninterrupted and rapid railroad connection between Buenos Aires and Valparaiso will be established before that time.

ACONCAGUA RIVER, CHILE.

The Aconcagua River rises on the south side of Mount Aconcagua, the highest known peak on the Western Hemisphere, and flows into the Pacific Ocean 12 miles north of Valparaiso. The upper section rushes through narrow mountain passes and rapidly descends into the beautiful Aconcagua Valley. As it crosses the mountain range the Transandine Railway follows the windings of this river for long distances.

NORTH AMERICAN CAPTAINS OF INDUSTRY IN LATIN AMERICA

COL. GEORGE EARL CHURCH.

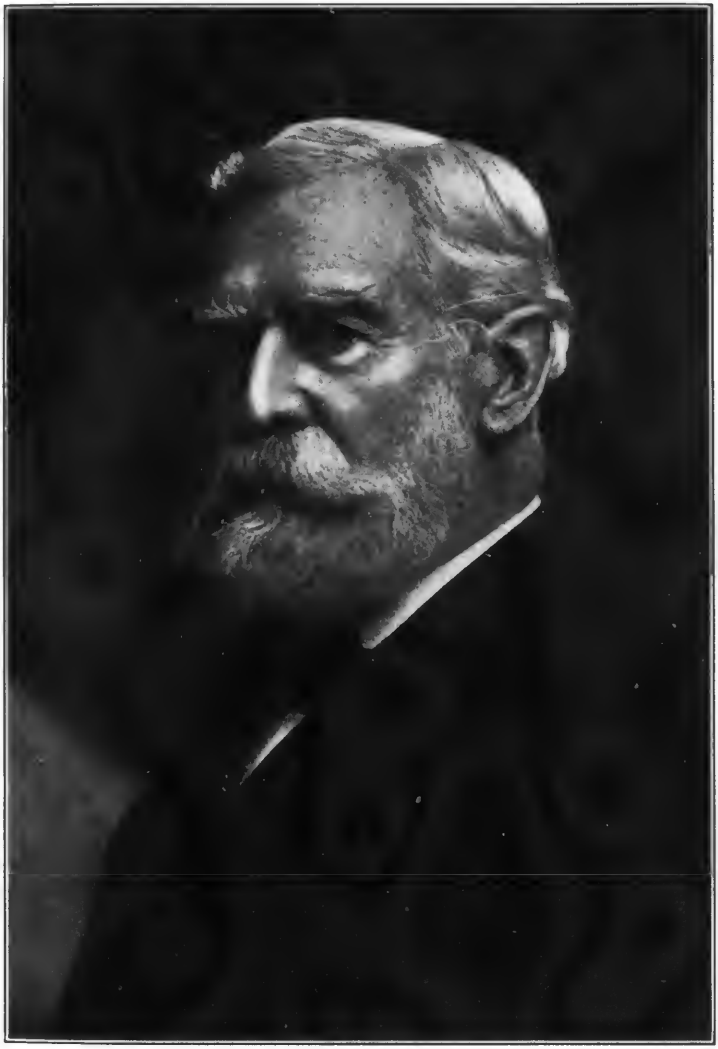
AMONG the men who have figured prominently in connection with Spanish and Portuguese America none has had a more interesting and varied experience than Col. GEORGE EARL CHURCH, the subject of this sketch.

Colonel CHURCH was born December 7, 1835, at New Bedford, Massachusetts, of Puritan ancestry, and it is said that "he carries in his veins the bluest blood of New England." In the male line he is directly descended from RICHARD CHURCH, who, in 1632, went from Oxford, England, to Plymouth, Massachusetts, where he married ELIZABETH WARREN, whose father, RICHARD WARREN, came to this country on the *Mayflower*, and was an ancestor of General WARREN, who fell at Bunker Hill. One of the sons of RICHARD CHURCH was Capt. BENJAMIN CHURCH, the famous colonial leader against the Indians during KING PHILIP'S war. His heroic exploits are matters of history.

On the female side he is a lineal descendant of a daughter of EDWARD WINSLOW, who reached Plymouth on the *Mayflower* and was three times elected governor of the colony, and through his mother he is directly connected with the PEASE family of Yorkshire, England, well known as having built the first steam railway in England, with GEORGE STEVENSON as chief engineer.

Colonel CHURCH'S father died when his son was quite young. In his eighth year his mother removed to Providence, Rhode Island. Here he attended the public schools, and at the age of 14 held high rank in the senior class at the high school.

In his seventeenth year he decided upon civil and topographical engineering as a profession, and after being employed for some time on surveys for a State map of Massachusetts obtained a position on a New Jersey railway, but was soon after transferred to one of the railroads under construction in Iowa as assistant engineer. Later he was resident engineer of the Hoosac tunnel, but when this great work was suspended for a time he returned to Iowa as chief assistant engineer on the location of a long line of railway in that State, although at that time he was but 21 years of age.



COLONEL GEORGE EARL CHURCH.

The financial crisis of 1857 having put a stop to the work, young CHURCH then accepted an offer to carry out a railway project in the Argentine Republic as chief engineer, but on arrival in Buenos Aires found the country in such a disturbed condition that the work had to be postponed. The Government, however, almost immediately appointed him member of a scientific commission under orders to explore the southwestern frontier of Argentina and report on the best system of defense against the fierce inroads of the Patagonian and Araucanian savages and allied tribes from the Andean slopes.

The members of the commission had a most exciting experience; in nine months they rode more than 7,000 miles, and with a covering force of 400 cavalry fought two severe battles with the savages. One fight (May 19, 1859) was a night attack on the expedition by 1,500 picked warriors belonging to six different tribes, and was a complete surprise. Naked, and mounted bareback upon their splendid horses, with their long lances in line and swinging *boleadores*, the savages bore down in a magnificent charge by moonlight. For three hours it was a hand-to-hand contest where no quarter was given nor asked. The savages were finally beaten off after they had stripped the expedition of all of its cattle and horses and leaving it in a starving condition.

In Buenos Aires the newspapers gave an account of the capture of Mr. CHURCH and of his having been burned to death at the stake.

In 1860, Mr. CHURCH surveyed and located the Great Northern Railway of Buenos Aires and continued in its construction and the practice of his profession until the civil war broke out in the United States. At the first rumor of the impending conflict he wrote to the Secretary of War at Washington offering to return home and go before the final examining board at West Point, with the stipulation that, if he passed the examination, he was to be commissioned a second lieutenant in the United States engineering corps. The Secretary answered that the offer could not be accepted on account of the regulations governing that military institution. On receipt of this response Mr. CHURCH gave up his position in Buenos Aires and embarked for New York on an American schooner. Reaching home, he was commissioned as a captain in the Seventh Rhode Island Infantry and sent to the front. During the war he served successively as captain, lieutenant-colonel, colonel, and brigade commander, especially distinguishing himself at the great battle of Fredericksburg, where his regiment was terribly cut to pieces. He entered the fight as a captain and came out of it as lieutenant-colonel in command of the remnant of his regiment. Afterwards promoted to the colonelcy of the Seventh Rhode Island, he was sent to the Virginia peninsula and was present at the siege of Suffolk by LONGSTREET, and later commanded a brigade in a raid for the tearing up of the Norfolk and

Petersburg and Seaboard and Roanoke Railways, which was successfully accomplished after several hot skirmishes. He was then placed in command of the fortifications of Williamsburg until the term of his regiment expired.

Arriving in New York Harbor by sea on the second day of the great New York riots, he offered to land his regiment and help quell them if Governor SEYMOUR would permit him to fire bullets instead of blank cartridges. This condition being rejected, the ship continued its voyage to Rhode Island, where the regiment was accorded a splendid reception.

Later on Colonel CHURCH was appointed to the command of the Second Rhode Island Infantry, but was never sworn into service, as the regiment, much reduced in members in many battles, was not again recruited to sufficient strength before the close of the war. He then, as chief engineer, built the Providence, Warren and Fall River Railway, which presented some difficult engineering problems.

GEORGE EARL CHURCH
At seventeen years of age.

After the close of the civil war, it became important to the United States Government to learn the disputed whereabouts of the liberal government of Mexico and its prospects of making headway against the imperial forces of MAXIMILIAN. A United States Minister, Mr. CAMPBELL, had been appointed for this purpose, but, on reaching the Rio Grande frontier, had found it too dangerous to cross into Mexico, owing to the disorganized condition of the country, and returned without accomplishing his mission. Under these circumstances Mr. ROMERO, Mexican Minister at Washington, in consultation with General GRANT, arranged with Mr. JAMES GORDON BENNETT, Sr., to appoint Colonel CHURCH as special war correspondent of the "New York Herald," to obtain the desired information regarding President JUAREZ and his Government. Colonel CHURCH had only a short time previously written "A Historical Review of Mexico and its Revolutions," which Mr. ROMERO had caused to be laid on the desk of every Senator and

Member of Congress, and had sent to the State Department with the request that it be filed as the best review of Mexican history ever written.

Colonel CHURCH left Washington with a letter from General GRANT to General SHERIDAN, then commanding at New Orleans. The latter passed him on to General REYNOLDS, whose headquarters were at Brownsville, on the Rio Grande, who gave him a letter to the Mexican General CARVAJAL, in command at Matamoros, on the opposite side of the river. Within half an hour of the termination of his long interview with the Mexican commander, he found himself in the focus of an uprising headed by the celebrated bandit CARRALES, who assaulted the town, drove Governor CARVAJAL across the frontier into Texas and made himself master of the province of Tamaulipas and its capital, Matamoros.

COL. GEORGE EARL CHURCH IN 1865.

Colonel CHURCH, after an interview with CARRALES, continued his journey inland under many difficulties, among which, when crossing northeastern Durango, he had a running fight with 82 Apache savages, who killed 126 Mexicans along his track, until at the end of three days, he took refuge in a small town. He finally reached the city of Chihuahua, where he found President JUAREZ and his *entourage* and a little army of about 2,000 men. He was cordially received, and from that moment his relations with the President, the Minister of War, General YGNACIO MEJÍA, and the other members of the cabinet were of the closest. He shared their fortunes in their march southward to Durango, Zacatecas, and San Luis Potosi and remained with them until the capture of MAXIMILIAN.

The day before the memorable assault of Zacatecas by MIRAMON this imperialist general, incensed at Colonel CHURCH having treated him severely in his "Historical Review of Mexico" above mentioned, sent him word that if he captured him he would shoot him in the plaza. He nearly made his threat good, for the next day at the head of his cavalry he chased him 45 miles across country before midday,

the Colonel during the battle having given his own fast horse to President JUAREZ to insure his safety.

After the capture of MAXIMILIAN, Colonel CHURCH's mission was ended, but anticipating the fate that awaited the misguided Emperor, he set out for Washington, rode 600 miles overland in six days, crossed the Gulf of Mexico during a "*norther*" which nearly wrecked the little United States tugboat in which he took passage, and reaching his destination made representations to Mr. SEWARD at the State Department which he hoped might save MAXIMILIAN's life—but without the desired result.

Before leaving Mexico, he was offered by the Government a large grant of land in southern Coahuila as recognition of his services to the liberal cause, which he, however, declined.

Next Colonel CHURCH occupied a position on the editorial staff of the "New York Herald," which, judging from his trenchant leading articles, must have been most congenial to him.

But the fates had other work in view for him, for after the lapse of several months a letter of introduction from President JUAREZ was presented to him by General QUINTIN QUEVEDO, who had been accredited to Mexico as Minister of Bolivia to congratulate the Government on the downfall of the Empire. He was afterwards to proceed to New York to enlist the services of some competent person to open Bolivia to commerce by way of the river Amazon. On behalf of his Government, General QUEVEDO invited Colonel CHURCH to undertake the great enterprise, and after considerable study of the project and several consultations with Mr. BENNETT he accepted. It required no ordinary consideration, and involved among other tasks the cutting of a canal or the building of a railway through a tropical forest to avoid about 250 miles of falls and cataracts of the river Madeira, the main branch of the Amazon, in the very heart of South America, 1,600 miles from the sea. The entire valley of the river Madeira was then a vast wilderness, unpopulated except by a few nomadic tribes of savages who made it their hunting ground. Mr. NEVILLE B. CRAIG in his "Recollections of an Ill-fated Expedition to the Headwaters of the Madeira River in Brazil," says:

> In view of the political and financial condition of Bolivia, the ignorance of the outside world in regard to her natural resources, the fact that the obstructions were mainly in the Empire of Brazil, and the great distance of the scene of operations from civilization, it was evident that the execution of the project involved titanic labors and demanded the services of a man possessed of a rare combination of qualities. He must be familiar with South America, its languages, its history, and its people. He must be a civil engineer of great technical and executive ability. The negotiations with the two Governments immediately interested in the enterprise required that he should be a gentleman of high social standing, and in order that his representations might carry weight

in the great financial centers of the world, it was essential that he be well known as a man of high personal character and unflinching integrity. Extraordinary as were these requirements, the Bolivian Government was fortunate in being able to secure, for the work of organization, the services of a man fully prepared to meet all the exigencies of the situation. This remarkable person, whom we have several times had occasion to mention previously, was Col. GEORGE EARL CHURCH, whose name is to-day familiar to all persons of intelligence and education from Panama to Patagonia, and whose life for nearly half a century has been largely devoted to a study of the physical geography and commercial development of South America.

For ten years after accepting the invitation of Bolivia, Colonel CHURCH bent his tireless energies to the accomplishment of the enterprise. In 1868 he went to the Rio de la Plata en route to Bolivia that he might study how far a Plata outlet for Bolivian trade might rival the one projected via the Amazon. While engaged in this he stopped for three months in Uruguay, where he laid out and prepared the site for a marine slip. He alone and with but one servant rode several thousand miles overland to La Paz through Argentine Republic and Bolivia. The northern provinces of Argentina were at that time infested with predatory bands of dispersed revolutionists.

At La Paz he was warmly welcomed and soon received the necessary concession for the opening of a route to the sea via the river Amazon. He then hurried on to New York by way of Peru and Panama; but getting no financial encouragement in the United States went to Europe.

One of the stipulations of his concession was that Bolivia should negotiate with the Empire of Brazil the right to construct a railway on its territory to avoid the falls of the Medeira River, but after fruitless efforts of more than a year's duration the Government requested Colonel CHURCH to undertake the task. He accepted, but proceeded first to La Paz, where he obtained modifications in his concession, and negotiated with the Government a contract for the issue of a Bolivian loan in aid of the undertaking. He then crossed the Andes to the Pacific and went to Rio de Janeiro via the Strait of Magellan. The United States Minister, HENRY T. BLOW, under instructions from Washington, presented him at once to the EMPEROR DOM PEDRO II, who evinced the greatest interest in the project, and, although in the midst of a grand reception incident to the close of the Paraguay war, held a very long conversation with the Colonel to learn his views of the assistance which Brazil should render. Sir GEORGE BUCKLEY MATHEW, C. B., the British Minister, also gave excellent service in all the negotiations required in Brazil.

At the end of three months, in April, 1870, Colonel CHURCH sailed for New York with the desired railway concession from Brazil. Meantime he had obtained a charter from the United States Govern-

ment for the organization of the National Bolivian Navigation Company, of which he became president. Proceeding to London he there organized the Madeira and Mamoré Railway Company (Limited), and became its chairman. To this company he transferred his Brazilian concession. He then negotiated the Bolivian loan for £1,700,000, out of the £2,000,000 authorized, and contracted with a very powerful English company to build the Madeira and Mamoré Railway, but subject to the examination of the line by an English engineer. With him Colonel CHURCH again went to Bolivia via the Andes and reported to the Government, giving an account of what he had done, and the Congress then in session at Sucre, the southern capital, confirmed the loan and works contract.

From Sucre, Colonel CHURCH, with the English engineer, rode north to Cochabamba, and thence to Santa Cruz de la Sierra, about 600 miles from the Pacific coast, accompanied by Col. LEOPOLD MARKBREIT, the United States Minister. Here, at the headwaters of the Mamoré branch of the Madeira affluent of the Amazon, Colonel CHURCH fitted out a canoe expedition to descend these rivers. Saying adieu to his friend MARKBREIT, he embarked on his long and perilous voyage of 2,500 miles. Reaching Trinidad, the capital of the Department of the Beni, he reorganized his expedition and continued on to the cataracts of the Madeira. Among these his canoe was wrecked and he nearly lost his life, and at the cachuela of Bananeiras, at great risk, he saved the lives of 16 Indians wrecked in the midst of the rapids half a mile from the shore.

At the last fall, San Antonio, he was met by a large iron steam launch, which was intrusted to the Bolivian, JUAN FRANCISCO VELARDE, who, with herculean labor, took her up the 250 miles of falls, dragging her overland for 3 miles, and launched her upon the waters of the Mamoré River. This launch had been built in England by Colonel CHURCH for exploration purposes. The descent of the Amazon being accomplished, the colonel embarked for Europe.

The report of the English engineer being found satisfactory, the loan was successfully floated in London, and the contract price of the railway put in trust to cash engineers' certificates as the works proceeded.

After raising all the capital necessary to carry out his plans, Colonel CHURCH again returned to Bolivia to consult with the Government and devise means to facilitate the work of the English contractors for the railway. How these sent a large engineering staff and *only a few laborers* to the site of the railway, how they made a failure to push the works forward, and ultimately abandoned them and threw the whole undertaking into the chancery courts, are admirably and lucidly related by Mr. CRAIG in his work previously cited.

It was a battle royal which lasted several years, in which Colonel CHURCH stood to his guns alone and unaided, and won the suits as fast as they could be brought to trial against the dilatory tactics of his opponents. Throughout this almost interminable contest he could count on one friend—Brazil—which loyally clung to him throughout. The EMPEROR DOM PEDRO II was stanch and loyal to him to the last, and by his private letters and public acts gave him constant encouragement. When in the courts, those hostile to the enterprise claimed that it ought to be abandoned and its funds distributed among the bondholders "because they were insufficient to build the railway," Colonel CHURCH cabled to Brazil asking the Empire to guarantee £400,000 sterling to add to the railway fund if required to complete the works. The Government gave the guaranty without the slightest delay, such was its faith in the man who headed the undertaking.

These lawsuits terminated, and the court having ordered the money to be applied to the railway works, Colonel CHURCH's companies concluded a contract for them with Messrs. COLLINS BROTHERS of Philadelphia, but, while they were vigorously carrying out their contract, and had 1,200 men employed on the line, the bondholders commissioned a Mr. RICHARD READER HARRIS, an English King's counsel, to proceed to Bolivia to get the concessions of the National Bolivian Navigation Company revoked by the Government.

President DAZA, then in power, yielded, canceled the concessions, and as a result new suits were brought in the chancery court. In the first instance Colonel CHURCH won, but lost in the appeal court. He then carried the case to the House of Lords, where the whole undertaking was broken up and its funds distributed among the bondholders. According to the decision of the law lords Bolivia still owes more than 50 per cent of the nominal value of the loan. Other disasters followed as a sequence, for the war which Bolivia, in alliance with Peru, undertook against Chile only two years later found Bolivia with no commercial contact with the world except through her Pacific port of Cobija, or through the port of Arica. Chile closed these at once, and Bolivia was unable to obtain ammunitions of war through any other channel. Consequently she lost her entire Pacific coast and became a Mediterranean country.

Furthermore, on the Amazon side, she has since lost, for lack of the existence of the Madeira and Mamoré Railway, her immensely valuable territory of the Acre, the richest rubber region of the world. After a long struggle to retain it she ceded it in 1903 to Brazil, the latter, as a partial compensation, agreeing to build the said railway.

This grand work is now in progress, a considerable mileage is already completed, and we may hope to see the entire line, which means so much to the whole Amazon Valley and the political equi-

librium of South America, opened to traffic within the next two years under the energetic American contractors who have undertaken its construction.

Colonel CHURCH was next assigned as United States commissioner to report on Ecuador, and he was at the same time charged by the English bondholders of that country to readjust its foreign debt. He crossed the Chimborazo Pass of the Andes and made Quito his headquarters for a period of three months. During his stay he examined much of the northern part of the country as far as the frontier of Colombia on behalf of a group of London capitalists, who empowered him to pledge them to the extent of £3,000,000 to build a railway to connect Quito with the northwest coast of Ecuador in event he found the project to be a good one, though handicapped by the political condition of the country.

Colonel CHURCH's report to the United States Government, as commissioner, was published as a special message to Congress by President ARTHUR. The Colonel then took up his residence in London and engaged in railway construction in the Argentine Republic.

In 1891 he represented the American Society of Civil Engineers at the London Congress of Hygiene and Demography. In 1895 he went to Costa Rica commissioned by its bondholders to readjust its foreign debt. At the same time he examined and reported on the Costa Rica Railway. In 1898 he was president of geographical section of the British Association, where his paper on "Argentine Geography and the Ancient Pampean Sea," attracted much attention and was pronounced by "The Times" to be "the most scientific paper ever read before that section."

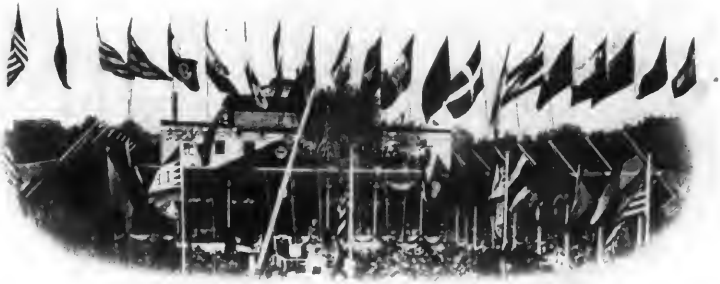
For many years Colonel CHURCH has been a member of the council of the Hakluyt Society, and also of the Royal Geographical Society, having been vice-president of the latter for a period of four years, being, it has been said, "the first man not a British subject ever admitted to the honor of a seat on its council." Among his most important publications in the "Journal" of the society, besides the one above mentioned, are "Interoceanic Communication on the Western Continent;" "Bolivia by the Rio de la Plata Route;" "South America, an Outline of its Physical Geography;" "The Acre Territory and the Caoutchouc Region of Southwestern Amazonia," and "Desiderata in Exploration in South America." He is also the author of several important and extensive articles in the last edition of the "Encyclopedia Britannica."

Among other learned societies, Colonel CHURCH is a member of the Royal Historical and of the Royal Anthropological Institute of Great Britain and Ireland, and it is perhaps due to his love for the pursuits of the latter nature that he is now devoting all of his spare time to the study of the South American aborigines. This leads us

to hope that he may ultimately publish a work on this extremely intricate subject.

In 1908 he was elected a corresponding member of the "Instituto Historico e Geographico de São Paulo," Brazil, an honor which, it is said, he especially esteems, owing to the rare talent and knowledge exhibited in the valuable papers read before that institute.

Colonel CHURCH has the honor also of being a companion of the first class of the Loyal Legion of the United States, and despite his long residence abroad there is no better or more loyal American.



THE FLAGS AND COATS OF ARMS OF THE AMERICAN REPUBLICS

COSTA RICA.

THE history and significance of the national banner and coat of arms of Costa Rica are described as follows by His Excellency, Señor JOAQUÍN B. CALVO:[a]

It is unnecessary to state that the first flag that fluttered in Costa Rica was that of Spain, and that consequently her shield was that of the mother country; but it should be stated that later on she had her own shield, conceded to Cartago August 17, 1505. This shield was divided in two parts; the first contained a lion rampant, in a red field, with a crown at the head, and three bars sangre, and the lower part a golden castle in an azure field; and for the orle, six black eagles in a field of argent, having for crest a large golden crown with the inscription "Fide et Pace."

After independence the first flag of Costa Rica was the Mexican, in virtue of her annexation to the Empire of Iturbide; but, as it appears, it was not hoisted, but placed under a load of tobacco dispatched to Nicaragua.

The first flag proper, white, with a red star in the center, was decreed May 1, 1823, and sworn to June 8 of the same year.

Afterwards came the flag of the Central American Federation, composed of three horizontal stripes—two blue and a white one between. Still later, President CARRILLO, April 21, 1840, decreed that the flag should consist of three horizontal bands, the top and bottom white, and the center azure, upon which should be pictured the arms of the State, consisting of a radiant star,

[a] The Republic of Costa Rica, by JOAQUÍN B. CALVO, Minister of Costa Rica to the United States. Chicago and New York, 1890, pp. 40–42.

placed in the center of a celestial background, with the inscription at the circumference, "State of Costa Rica." Finally, upon the country assuming fullness of power, the flag which we have to-day was decreed.

It consists of five horizontal bars, the outer ones blue, the next white, and the central red and of double width.

The first shield, decreed May 13, 1823, was a star encircled with the inscription, "Costa Rica Free." The second, decreed October 27, 1824, represented a circle of mountain chains and volcanoes, denoting the position and security of the country; and in the center an arm and the left half of a breast, indicating that it gives a heart to its brethern and maintains an arm in defense of its country.

The shield of Central America represented five volcanoes and at the left the rising sun; using also for the money an oak tree, bordered with the inscription, "Libre crescn fecunda" (free she may grow fruitful).

On September 28, 1848, were decreed the present arms and colors, and since then the shield has been composed of three volcanoes, joined and placed between two seas, with a ship at each side, showing that she has ports in both oceans; at the left, the sun rising, which denotes the youth of the Republic; at the top, five stars, representing the five provinces in which she is divided. Encircling the shield, three flags; on each side pikes, rifles, and branches of laurel; and at the bottom, a cannon and a horn of plenty for the riches of the country. In the upper part extends a scarf upon which is inscribed "America Central," and below, "Republic of Costa Rica," denoting that the latter is part of the former.

The last decree referred to in Señor CALVO's book has been amended by Section II of the Decree of the Constitutional Congress of Costa Rica, dated November 27, 1906, which reads as follows:

SEC. II. The coat of arms shall represent two volcanoes and an extensive valley between two oceans with a merchant ship sailing on each of them. On the extreme left of the line that marks the horizon a rising sun shall be represented. There shall be on the upper part of the shield two myrtle palms half covered and joined by a white wide ribbon containing the following inscription in golden letters: "República de Costa Rica." The field between the peaks of the volcanoes and the myrtle palms shall contain five stars of equal size and arranged like an arch. The crest of the shield shall be a blue ribbon interlaced in the shape of a crown and bearing in silver letters the inscription "América Central."

COSTA RICA.

NATIONAL HOLIDAYS OF AMERICAN REPUBLICS

COSTA RICA.

THE historical events associated with the annual celebration of September 15, 1821, the independence day of Costa Rica, are intimately connected with similar occurrences in the sister Central American Republics of Guatemala, Honduras, Salvador, and Nicaragua, all of which, together with Costa Rica, constituted under the old Spanish régime "*the Kingdom of Guatemala.*" This portion of the Western Hemisphere shared in the great Latin-American revolutionary movement of 1810 against the yoke of Spain. During the next ten years ineffectual conspiracies and attempts at insurrection in various parts of Central America were rigorously suppressed and the ringleaders severely and cruelly punished.

The peculiar isolation of Costa Rica at that period rendered her more tranquil than the neighboring provinces of the Guatemalan Kingdom, but the effects of centuries of Spanish misrule were nevertheless painfully apparent in the Costa Rican territory. It was not until the very close of the eighteenth century, in the reign of CARLOS III, one of the most enlightened sovereigns of Spain, that vexatious monopolies and onerous taxes were abolished and freedom of trade and commerce extended to the hitherto neglected and impoverished province. From that date the country began to prosper and to develop its remarkable natural resources, and laid the foundation of the present extensive Costa Rican coffee industry. Thus, for a considerable length of time, the Costa Ricans remained loyal to the mother country and indeed the discipline of their own militia contributed in maintaining the dignity of law and the continuance of public tranquillity. The attitude of the people of Costa Rica was therefore at first one of expectancy rather than active sympathy with the general Latin-American struggle for independence, but the reactionary conduct of the last Spanish governor of the province inclined them more and more toward complete political separation from the mother country.

From 1818 to 1821 events occurred in the four other provinces of the old Kingdom of Guatemala which plainly indicated that complete independence from Spain was about to be achieved for the whole of Central America. In the first-named year the cruel Captain-General BUSTAMENTE was superseded, and Don CARLOS URRUTIA,

a man of mild disposition, became his successor. URRUTIA's advanced years rendered him incapable of coping with the unsettled state of affairs which confronted his administration, and he yielded the reins of government to the subinspector of the army, Don GABINO GAINZA, a person of weak character. It was easy to win the latter over to the wishes of the independent party, and he readily consented to act as the chief executive of the new Guatemalan or Central American nation. Thus when a revolutionary junta met in Guatemala City and proclaimed the independence of Central America on September 15, 1821, GAINZA acquiesced in the action taken.

It was not until the 13th of the following October that tidings of this memorable event were brought to the city of Cartago, Costa Rica. The Costa Rican separatist party acted with great discretion. A session of the ayuntamiento or city council was held on the 15th, and a decision was reached to take no further action "*until the clouds of the day should be cleared away.*" This decision induced the ayuntamientos of the province to send duly authorized representatives, in order that after comparing all opinions they might agree upon what was considered best.

In consequence, on October 20, there met in Cartago, with the ayuntamiento of that city, those of San José, Heredia, Alajuela, Barba, Escasu, and Ujarraz, and while were gathering those of the rest of the towns, a provisional delegate was appointed to represent them.

On the night of October 28, new communications were received in Cartago from Guatemala and from Leon, Nicaragua, in view of which Don JOSÉ SANTOS LOMBARDO and other citizens took possession of the quartel at dawn of the 29th, fearing that Governor CAÑAS might resist the people, who declared absolute independence of Spain, and celebrated the event with music and firing in the streets. That day the ayuntamiento, public functionaries, and numerous citizens met; Costa Rica was declared free and independent of all governments, with absolute liberty and exclusive possession of her rights, and that she should remain neutral and govern herself for herself alone until events should determine what course she should pursue, remaining by the act separated from LEON, to which she had been subject in ecclesiastic and hacienda matters.[a]

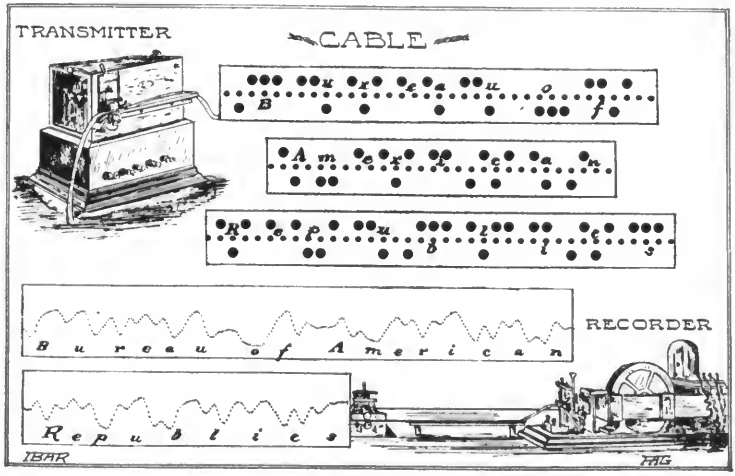
The rule of Spain was now at an end, but Costa Rica, together with the rest of Central America, was induced to unite her destinies with the ephemeral "Empire of Mexico," under General ITURBIDE, and, subsequently, in 1824, consented to enter "the Republic of Central America," with ample guaranty for the maintenance of Costa Rica as a free and sovereign state. Upon the dissolution of the Central American Union in 1840, Costa Rica became a separate Latin-American Republic.

[a] "The Republic of Costa Rica," by JOAQUÍN B. CALVO. Chicago and New York, 1890, Part II, pp. 245 and 246.

THE LATIN AMERICAN CABLE

NO invention of modern times has awakened such world-wide and merited interest as the electric telegraph, and its subsequent application to the submarine cable has done more to bring the civilized countries in closer relation than any other medium.

SAMUEL F. B. MORSE invented the telegraph in 1832; but it was not until 1844, when the first line was built between Washington and



Reproduction of a cable tape spelling the words "Bureau of American Republics" as transmitted (above), and the same words as received (below).

Baltimore, a distance of 40 miles, that he was enabled to demonstrate the practicability of his invention.

In 1858 the first Atlantic cable was laid by CYRUS W. FIELD and extended between Newfoundland and Ireland, a distance of over 1,900 miles; but after it had been in operation but three weeks, several hundred messages having been exchanged, the cable parted and eight years passed before another was successfully laid.

The "New York Evening Post," under date of August 5, 1858, when the first cable was landed, printed the following leading editorial of the event:

> Such [the landing of the cable] is the startling intelligence which reaches us just as we are going to press. We find it difficult to believe the report, for

recent events have prepared for us a very different result, and yet the dispatch comes to us through our regular agent, who would not deceive us. He may have been imposed upon, but that is quite unlikely. If the few coming hours shall confirm the inspiring tidings, and the cable is landed and in working condition, all other events that may happen throughout the world on this day will be trifles. To-morrow the hearts of the civilized world will beat to a single pulse, and from that time forth forevermore the continental division of the earth will in a measure lose those conditions of time and distance which now mark their relations one to the other. But such an event, like a dispensation of Providence, should be first contemplated in silence.

On August 16, 1858, the first message was sent from Queen VICTORIA to President BUCHANAN, and was the beginning of a new epoch in the transmission of human intelligence. Through years of disappointment, hardship, and difficulty in laying, the cable has gradually passed through many stages of development and improvement until to-day it is an institution of absolute accuracy, and indispensable to the interests of every nation.

Since the laying of the first cable the system has rapidly extended, until now practically all lands and continents are joined together. In 1880 there were about 51,000 miles of cables in operation in various parts of the world. To-day there are over 250,000 nautical miles of cable laid and working. Practically all the important South American business centers are telegraphically connected, and numerous additional extensions are being contemplated.

The east coast of South America is reached at Pernambuco by the Eastern Company's cables as far as Azores or Lisbon, and from thence by the Western Company via St. Vincent. The French Government has laid a cable to Senegal, which is met there by the lines of the South American Cable Company. A German company (subsidized by Government) also has a route to Brazil via Teneriffe.

Communication with South America via the Cape Verde Islands and Brazil has been most satisfactory. On April 3, 1896, a cable message consisting of 7 words was sent from New York to Pernambuco and an answer of 7 words received in two hours and twenty minutes. Another message occupied just one-half minute in transmission, New York to Havana, and one-half minute, Havana to New York, for a reply. A 20,000-word cablegram was sent from Vancouver to London with remarkable rapidity and accuracy; indeed, almost without an error. On the occasion of a speed trial between Manchester, England, and Victoria, British Columbia, a cablegram was sent and a reply received in ninety seconds, the total distance by the wires, out and return, being 13,000 miles.

The cable of the Central and South American Telegraph Company was opened for traffic in August, 1907, and has been the means of bringing Latin-American countries in direct communication with the United States. This cable extends from New York via Guantanamo

to Colon and connects with a line across the Isthmus of Panama and thence to the South American Coast System. No part of the cable touches on foreign territory, and the United States Government is particularly interested in its operation, as the landing ends can be secured in an emergency, precedence given, if necessary, to government business, and in case of war the cable absolutely controlled.

In laying the cable south of Cuba the great depth of 3,000 fathoms was reached, and the steamship *Mexican*, employed in the work, is a vessel of but 223 tons and 175 feet long, formerly engaged as a packet ship, plying between Liverpool and London. By this line the Mexican and South American Cable Company is given a triplicate system, and it also provides a direct cable system between Europe, the United States, and Chile. The cable company is also increasing its facilities between Valparaiso and Buenos Aires by erecting a new line of Siemens poles with two copper wires, in order to provide for the increased traffic that will necessarily follow.

The Valparaiso-Iquique cable was laid on January 27, 1906. On August 14, 1906, service between Iquique and Valparaiso, Chile, was suspended, and upon investigation it was discovered that a whale had become entangled in the cable. The April, 1906, Bulletin of the New York Zoological Society states that the cable in which the whale was entangled weighed in air, while wet, 1,715 pounds per nautical mile, and had a breaking strain of 6.06 tons. The cable's weight in salt water was 1,005 pounds per nautical mile.

When the trouble with the cable was discovered tests from Valparaiso and Iquique placed the break about 13 miles from the latter place. On August 16, 1906, the repair ship *Faraday* left Iquique for the position of the break and commenced grappling in 342 fathoms, with 500 fathoms of rope out. The cable was hove up, cut, and tested to Iquique. The end was buoyed and the ship grappling farther out picked up the cable, which came in badly twisted and with increasing strain. A large whale was brought to the surface completely entangled in the cable. The ship made soundings in the vicinity, which showed a depth of 415 fathoms (2,490 feet, nearly one-half mile). It is extremely doubtful whether an air-breathing animal could go as deep as 400 fathoms, and as that depth is much below the limit of pelagic life, on which most whales feed, it is not likely that the whale would penetrate such a depth. Total darkness, moreover, prevails in depths of 400 fathoms. At first sight it seems unlikely that the whale entangled in this cable could have remained eight months without complete disintegration or being gradually consumed by small forms of life on the bottom. The deep sea, however, is intensely cold, the temperature being close to the freezing point of fresh water, and the carcass, unless actively attacked by bottom life, might be expected to last longer than in the warmer surface waters.

CABLE LINES OF THE AMERICAN REPUBLICS.

The logical conclusion is that it became entangled during the laying of the cable, eight months before, when there was considerable length of it in suspension. The twisted condition of the stiff and heavy cable about the animal shows that the energy expended in the vain effort to free itself must have been enormous.

Efforts have been made repeatedly to compel the companies to reduce the seemingly exorbitant rates; but efficient service is much more to be desired, and cable companies are accordingly entitled to tolls commensurate with the services rendered, which are admittedly of a first-class character and rendered with a view to the general advancement of all that makes for the higher development of commercial and social interests.

In nearly every instance of cable interruption the cause of trouble is beyond the control of the company, and to-day the repair department of a cable company is so complete as to reduce to a minimum the chances of suspension of service.

RUSSELL HASTINGS MILLWARD.

American Legation at Managua, Nicaragua.

ARBITRATION TREATY BETWEEN THE ARGENTINE REPUBLIC AND BRAZIL

ON DECEMBER 5, 1908, the Minister for Foreign Relations of the Argentine Republic and the Envoy Extraordinary and Minister Plenipotentiary of Brazil to the former Government effected in Buenos Aires the exchange of ratifications of the treaty of arbitration signed by the plenipotentiaries of both countries at the city of Rio Janeiro on September 7, 1905.

By the terms of this important treaty, the high contracting parties agree to submit to arbitration all controversies that may arise between them and that may not be settled by direct negotiations or by other means of adjusting amicably international litigations, provided that said controversies do not affect the constitutional principles of either country. In each case the high contracting parties shall sign a special protocol setting forth the points to be decided and prescribing the extent of the powers of the arbiter or arbiters, and the form of procedure to be observed. The designation of the arbiter of arbiters shall be made in said special protocol or in a separate instrument. If it be stipulated that the question shall be submitted to an arbitration tribunal, each contracting party shall appoint one arbiter, and both parties together by agreement shall select a third arbiter, who shall thereby be the president of the tribunal. In case of a disagreement over the designation of the third arbiter, both Governments shall request the President of the Swiss Confederation to appoint the president of the tribunal.

The deliberations of the tribunal shall take place in the presence of the three arbiters. The concurrent vote of the two arbiters first selected shall settle the question, but if they disagree the President or third arbiter shall cast his vote with the one or the other, or render his own decision, which shall be final. The contracting parties agree to observe faithfully and to comply with the award, which shall settle the litigation and prescribe the time within which it shall go into effect.

The treaty shall be in force during ten years, counting from the date of the exchange of ratifications; and if it be not denounced within the last six months of said period it shall remain in force for successive periods of ten years.

SUBJECT-MATTER OF CONSULAR REPORTS

REPORTS RECEIVED TO FEBRUARY 15.

Title.	Date of report.	Author.
ARGENTINE REPUBLIC.		
Report of the Bank of the Argentine Nation on the grain outlook.	Dec. 10	Alban G. Snyder, Consul-General, Buenos Aires.
Arrival of seagoing vessels at Buenos Aires during November, 1908.	Dec. 15	Do.
Trade Notes: New traffic regulation, Buenos Aires Philatelic Society, street-railway statistics, importation of silk-worm eggs, registry of trade-marks, municipal loan, naval-construction programme, American theater company, American race horses, importation of railway material in 1908, agricultural machinery imports.	Dec. 19	Do.
BRAZIL.		
Improved live stock	Dec. 1	George E. Anderson, Consul-General, Rio de Janeiro.
Mail-order business	Dec. 29	Do.
Budget for 1909	Jan. 1	Do.
Shipping service	...do....	Do.
CHILE.		
Increased duty on condensed milk	Dec. 8	Alfred A. Winslow, Consul, Valparaiso.
Cement industry	Dec. 22	Do.
Railway supplies wanted	Dec. 30	Do.
COLOMBIA.		
New law regarding public lands	Dec. 23	Isaac A. Manning, Consul, Cartagena.
New machine for manufacturing saddle blankets.	Dec. 27	Do.
Classification of photograph films and plates	...do....	Do.
Reduction of export duties on cocoanuts in the islands of San Andres de la Providencia.	Dec. 30	Do.
Declared exports from Cartagena to the United States in 1908.	Jan. 2	Do.
Market for refrigerators	Jan. 6	Do.
Salt mines, rentals and proposed new systems of treatment.	Jan. 7	Do.
Duty on raw cotton	Jan. 8	Do.
CUBA.		
Improved hotel accommodations. Steamship connections with Jamaica.	Jan. 13	Henry M. Wolcott, Vice-Consul, Santiago de Cuba.
Commercial importance of eastern Cuba	Jan. 26	Do.
DOMINICAN REPUBLIC.		
Agricultural implements in the Republic	Jan. 14	Ralph J. Totten, Consul, Puerto Plata.
Short-paid letters	Jan. 23	Do.
ECUADOR.		
Receipts of cocoa at Guayaquil from 1900 to 1908, inclusive.	Jan. 14	Herman R. Dietrich, Consul-General, Guayaquil.
HONDURAS.		
Trade, commerce, etc., in 1908	Dec. 31	William E. Alger, Consul, Tegucigalpa.
MEXICO.		
Railroad consolidation	Jan. 6	Clarence A. Miller, Consul, Matamoros.
New irrigation project in lower Rio Grande Valley.	...do....	Do.

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REPORTS RECEIVED TO FEBRUARY 15—Continued.

Title.	Date of Report.	Author.
MEXICO—continued.		
New building material	Jan. 6	Clarence A. Miller, Consul, Matamoros.
Summary of annual statement of the national railway lines of the Republic.	...do	Do.
Opportunity for trade in hats	Jan. 7	William W. Canada, Consul, Veracruz.
Feathers, feather beds, and feather pillows in the Republic.	Jan. 8	C. Piquette Mitchel, Vice and Deputy Consul-General, Mexico City.
Rubber clothing and overshoes in the Veracruz district.	Jan. 9	William W. Canada, Consul, Veracruz.
Educational system of the State of Tamaulipas.	Jan. 14	Clarence A. Miller, Consul, Matamoros.
Commercial and industrial review of the Manzanillo district in 1908	...do	Arminius T. Haeberle, Consul, Manzanillo.
Tariff changes	Jan. 16	William W. Canada, Consul, Veracruz.
New steamship service between France and Coatzacoalcos. Abolition of the personal tax in Orizaba.	Jan. 18	Do.
Industrial and trade notes of Saltillo	Jan. 21	Thomas W. Voetter, Consul, Saltillo.
Advertising American goods	...do	Do.
Report on commercial relations of the Durango district for 1908.	Jan. 22	Charles M. Freeman, Consul, Durango.
Railway appliances, velocipedes, push cars, etc., in the Veracruz district.	Jan. 23	William W. Canada, Consul, Veracruz.
Names of railway companies operating in the State of Veracruz and territory contiguous thereto, with location of principal offices.	...do	Do.
Exports from the Ciudad Porfirio Diaz district to the United States in 1908.	Jan. 25	Luther G. Ellsworth, Consul, Ciudad Porfirio Diaz.
Tampico freight steamers	...do	P. Merrill Griffith, Consul, Tampico.
Wax from the candelilla plant	...do	Do.
Commerce and industries of the Aguascalientes district in 1908.	Jan. 29	W. D. Shaughnessy, Consul, Aguascalientes.
PARAGUAY.		
Report of Board of Directors of the Paraguay Central Railway for year ended June 30, 1908.	Nov. 23	Edward J. Norton, Consul, Asuncion.
SALVADOR.		
Statistical studies, second series, published by the Government.	Jan. 16	Arthur Hugh Frazier, Consul-General, San Salvador.
VENEZUELA.		
Decree modifying the tariff law, and annulling a former decree.	Jan. 4	James W. Johnson, Consul, Puerto Cabello.

BRITISH CAPITAL IN SOUTH AMERICAN MINES.

A review of British mining enterprises covering twenty-five years, from 1880 to 1904, inclusive, appearing in "The Mining Journal" for January, 1909 (London), gives the total British capital invested in South American mines during that period as £62,915,920. This sum covers operations on the part of 472 companies, distributed as follows:

Number of companies.	Country.	Capital.	Number of companies.	Country.	Capital.
94	Columbia	£7,357,585	25	Bolivia and Ecuador	£3,923,600
61	Venezuela	15,508,707	66	Brazil	5,764,215
26	British Guiana	1,120,316	39	Argentine Republic	4,773,220
19	French and Dutch Guiana	1,750,757	4	Paraguay, Uruguay, etc.	577,000
122	Chile and Peru	19,733,020	16	West Indies	2,308,500

ARGENTINE REPUBLIC

THE MINING INDUSTRY.

The great mineral deposits of the Argentine Republic have as yet scarcely been touched. Indifference in the exploitation of this important industry may be largely attributed to the lack of available capital, the difficulties encountered in the transportation of the product, and the scarcity of fuel in the mineral zones of the country.

Official statistics show a remarkably small value in the exportation of mineral products. From 1903 to 1907, inclusive, the exports of ores from the Argentine Republic were valued at $1,910,912 gold, or a yearly average of about $382,000 gold. Nevertheless there has been a considerable increase in the exports of mineral substances since 1905, as compared with previous years. Copper bullion and ores form the principal items of the mineral exports of the country, the shipments of copper bullion having increased from 200 tons in 1906 to 731 tons in 1907, and the exports of copper ores from 419 tons in 1906 to 851 tons in 1907.

The republic commenced the exportation of marble in 1895, with shipments aggregating 291 tons. The exports increased gradually until in 1901 the shipments consigned abroad amounted to 1,169 tons. Since that date, up to 1908, the exports of marble remained stationary, and during the latter year considerably declined. Other mineral exports of the nation, in the order of their importance, are borate of lime, tin, iron, and wolfram. Salt is also exported in small quantities. In 1906 salt to the quantity of 127,082 hectoliters was mined in the southern territories of the Republic, and 67,402 hectoliters in 1907, all being sent to Buenos Aires for distribution and sale. At the present time the salt produced in the country is not sufficient to supply the demands of local consumption.

As to the future of the mining industry of the Republic, it is well known that there are many petroleum springs and salt beds in the country, as well as rich mines of coal, copper, silver, and iron, which are as yet practically unexploited. In addition to the vast mineral deposits already mentioned the country contains large quantities of alum, borax, turf, hydraulic lime, mica, graphite, etc., which by the judicious employment of capital and labor may be profitably exploited and developed on a large scale.

BOLIVIA

ADOPTION OF THE GOLD STANDARD.

The Republic of Bolivia has adopted the gold standard, in accordance with an act of Congress, promulgated by President ISMAEL MONTES on December 31, 1908. English and Peruvian pounds, valued at 12.50 *bolivianos* each, and half pounds, valued at 6.25 *bolivianos* each, will circulate in Bolivia and are unlimited legal tender in transactions of all kinds.

The President of the Republic will have coined and issued, as the needs of the nation may require, silver coin to the value of 4,000,000 *bolivianos* and nickel coin to that of 1,000,000 *bolivianos*. The silver coin will be in denominations of 50 and 20 cent pieces, the former weighing 10 grams and the latter 4 grams, both ten-twelfths fine, with a variation of 3 milligrams in weight and three-thousandths in fineness. The nickel coins are to be of the denominations of 5 and 10 cent pieces, of a weight of 2 and 5 grams, respectively, made of an alloy of three-fourths copper and one-fourth nickel. Both the silver and nickel denominations are subsidiary coins, the first being a legal tender up to 12.50 *bolivianos* and the second up to 1 *boliviano*.

The Government will exchange English pounds for this subsidiary coin at the rate provided for in the law of November 30, 1904, and the silver coin now in circulation will be taken in exchange at the same rate.

ORIGIN OF IMPORTS, 1907.

In a report furnished his home Government by the British Consul at La Paz, the leading countries of origin for the imports received in Bolivia during 1907 are stated to have furnished the following values:

Germany, $863,000; Great Britain, $697,000; Peru, $526,000; United States, $450,000; Chile, $428,000; France, $335,000; Italy, $172,000; and Belgium, $171,000.

Total import values for the year were $15,159,000.

EXPORT DUTIES ON COPPER AND BISMUTH.

The Government of Bolivia has imposed an export duty, effective January 1, 1909, on copper and bismuth shipped abroad. The duty on copper in bars and ingots is 70 *centavos* ($0.28) per Spanish quintal (101 pounds), provided the value does not exceed £50 per ton. Copper ore of a greater value than £50 per ton will pay the following export duties:

	Bolivianos.		*Bolivianos.*
From £5 to £60	0.80	From £81 to £90	1.10
From £61 to £70	0.90	From £91 to £100	1.20
From £71 to £80	1.00	From £101 and over	1.30

The export duty on barrillas or copper concentrates is 60 per cent of the duty on copper in bars and ingots.

The export duty on bismuth in bars and ingots is 2 *bolivianos* ($0.80) per Spanish quintal (101 pounds), provided the value per ton of the ore does not exceed £160. If the value is in excess of £160 a ton the duty will be as follows:

	Bolivianos.		*Bolivianos.*
From £161 to £170	2.20	From £201 to £210	4.00
From £171 to £180	2.60	From £211 to £220	4.50
From £181 to £190	3.00	From £221 and over	5.00
From £191 to £200	3.50		

The export duty on barrillas or concentrates of bismuth will be 70 per cent of the amounts specified in the foregoing table.

Bismuth metals, not concentrated nor treated, are exempt from the payment of export duties.

The Secretary of the Treasury of Bolivia will fix fortnightly the rate for the payment of export duties on copper and bismuth exported from the Republic.

REDEMPTION OF MUTILATED BANK NOTES.

An executive decree of the President of Bolivia issued under date of December 22, 1908, provides that the bank notes torn in halves, now in circulation, shall be redeemed within a period of thirty days from that date in order to avoid the affixing of a 5-cent stamp on each half of the bank notes that continue to circulate. Formerly, owing to the lack of small change in some localities of the Republic, a custom grew up of dividing bank notes into two parts, and especially was this true of bank notes of the denomination of one *boliviano*. These half bank notes tended to take the place of subsidiary coin. In order to remedy this difficulty and to prevent the circulation of parts of bank notes or bank notes in bad condition, the Government decided to require that a stamp be affixed to all bank notes in circulation divided into halves after the date referred to. To facilitate the withdrawal of these mutilated bank notes from circulation the Government has supplied a nickel coinage sufficient to meet the demands for small denominations of money required for use in retail transactions.

BRAZIL

PROVISIONS OF THE BUDGET LAW FOR 1909.

The law governing Brazilian appropriations during 1909, based upon estimated receipts during that period, as published in the "*Diario Official*," fixes expenditures in the six departments of the Government at 75,390,272 *milreis* gold and 330,352,781 *milreis* paper, or a total of $140,268,923. To meet these expenditures, receipts are calculated as 79,694,198 *milreis* gold and 274,238,000 *milreis* paper, or $125,782,952 from ordinary sources of revenue, added to which $13,631,880 are estimated as extraordinary receipts, making a total of $139,414,832, a deficit of $854,091 being indicated.

Reporting on these figures, United States Consul-General ANDERSON, at Rio de Janeiro, states that the appropriations are about $5,600,000 in excess of those covered for 1908, most of the increase being credited to the Departments of Treasury, Navy, War, and Industry.

In the Department of Justice and Interior the sum of $10,901,441 is to be expended; of Foreign Relations, $1,797,977, the slight increase made representing increased salaries and new consular posts; of the Navy, $16,568,217, representing an increase of about $1,225,000; of War, $18,799,863, an increase of about $1,000,000, part of which is to be expended in the construction of a new department building; of Transportation and Industry, $31,822,205, an increase of about $500,000, and covering railway construction, extension of telegraph lines, postal service, and industrial bounties; of the Treasury, $47,152,925 for ordinary purposes and $13,226,690 for special expenditures, making a total of $60,379,215, an increase of about $3,000,000, and covering the payment of interest abroad, as well as general government expenses not otherwise provided for.

The estimated receipts from the principal sources of revenue are as follows: Import duties, $79,659,000; wharf and light-house dues, $246,000; 20 per cent of the export duties on Acre rubber, $3,900,000; internal revenue, $23,577,900; excise taxes, $10,486,500; extraordinary revenues, $4,330,366. Receipts to be applied to the redemption of the paper money are estimated at $6,773,186; those to be applied to the sinking fund for redemption of railway bonds are estimated at $836,400; fund for amortization of internal loans, $924,000; while the proceeds from the tax destined to the port-improvement fund are estimated at $5,004,000.

The President is authorized to issue, in anticipation of the revenue, Treasury notes to the amount of $12,000,000, which is an increase of $4,500,000 over the amount authorized in last year's budget. A revision of the tariff and custom-house laws is also authorized.

COAL FOR RAILWAYS.

The Department of Transportation of the Federal Government of Brazil has let its annual contract for coal for the use of the Central of Brazil Railway with the Brazilian Coal Company.

The specifications upon which bids were received call for 80,000 tons of coal for the half year commencing January 1, 1909, of which 10,000 tons may be American coal, which is approved by the government authorities upon test, but the bulk of which is to be of Cardiff coal, from mines approved by the British Admiralty, and of certain fixed grades. The placing of this contract is effected after advertisements over a period so short that bids could not be received from the United States.

IRRIGATION COMMISSION AND WORKS.

The commission in charge of the irrigation works in the northern States of Brazil has about completed its investigation of the river valleys of the State of Rio Grande do Norte, and has now taken up its headquarters at Marangnape, in the State of Ceara, to continue its investigation of the rivers of this State. In the State of Rio Grande do Norte, in addition to removing the obstructions in the Maxarangnape River and building the Sant'Anna reservoir at Pao dos Ferros, the commission has submitted to the Department of Public Works plans for dams or reservoirs at various points, the water to be stored for irrigation purposes.

The commission has submitted plans for reservoirs in the State of Ceara, and also recommends the establishment of granaries and warehouses for the storage of fodder at certain points in this region.

A project now before Congress, besides opening up and improving river navigation, aims also at the agricultural irrigation of parched lands, the reclaiming of swamps, and the preventing of inundations by the regulation of the water courses, and, besides turning the rivers into highways, it holds out the promise of making its dams across the rivers serve as bridges for the local traffic. Naturally, also, it aims at utilizing the water powers. The financial and economic aspects of the project are interesting. The company to be formed to carry out the works on account of the Government will be charged with the collection of rates established by law for all services rendered to those who make use of the canals and bridges, or whose lands are benefited by the regulating of the water supply. For its intervention

in the collection of these rates the company will charge the Government a percentage. In Egypt similar contributions suffice, not only to pay working expenses and interest charges on the cost of the works, but also to cover all other public expenditure. The Brazilian Government will only have the right to order the execution of works where they are sure to prove remunerative—that is, where their influence on the local agriculture will be such as to enable it to support the contributions. The company, which will be the intermediary in the collection of the rates to pay for the upkeep and the interest service of the cost of the works it executes, will also doubtless acquire on a large scale the lands to be benefited by the works; and the resale of these lands after the improvements will form one of the company's chief sources of profit. There will thus be formed a circle of interests, closely united, that will result in great advantages to the country without any risk to the exchequer.

BRAZILIAN RAILWAYS.

The total length of railways in operation in Brazil at the close of 1908 was 18,625 kilometers (11,572 miles), there having been added during the year 1,019 kilometers (about 633 miles), which exceeds the amount added in any previous year. Of the total new mileage added, 487 miles are federal-owned lines and 146 are state owned. The extent of lines built in the different States was as follows:

	Miles.		Miles.
São Paulo	274	Bahia	17
Minas Geraes	135	Ceara	12
Parana	87	Pernambuco	10
Para	62	Rio de Janeiro	4
Santa Catharina	32		

In his report on railway enterprises in the Republic of Brazil, the Minister of Transportation and Industry gives the total length of lines in operation on January 1, 1908, as 10,938 miles, while in process of construction there were 2,057 miles, and 4,150 miles surveyed and approved.

In transmitting this data to the United States Government, Consul-General George E. Anderson, at Rio de Janeiro, states that the figures, while showing a little less mileage of completed road than has been announced heretofore, are accurate.

The Government has approved, with certain modifications, the final survey of a section 143 miles long of the São Francisco-Parana branch of the São Paulo-Rio Grande Railway. The company is required to submit a new survey of the section of the line along the Negro River, making the line follow the left bank instead of the right bank of this river, as in the present survey.

The central commission in charge of the survey and construction of railways has prepared a general railway map of the Republic.

ON THE ROAD TO THE SUMMIT OF CORCOVADO, RIO DE JANEIRO, BRAZIL.

The trip to the top of this hill is made direct from the city by means of a railway of the Riggenbach system. This line is 2¼ miles long and climbs 2,080 feet. Corcovado is the great show place of Brazil and affords one of the most beautiful views to be found in the world.

VIEW OF AVENIDA CENTRAL, WITH MONROE PALACE ON THE LEFT, RIO DE JANEIRO, BRAZIL.

The avenue and buildings were in course of erection when the photograph was taken, and show the scale on which the beautifying of the city is being carried on. The Monroe Palace is a reproduction of the Brazilian Building at the St. Louis Exposition, which was designed by the distinguished native architect General Souza Aguiar. It was named in honor of President Monroe, of the United States.

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INDUSTRIAL DEVELOPMENT.

United States Consul-General GEORGE E. ANDERSON reports from Rio de Janeiro a notable development of industrial life in the larger cities of Brazil, shown in the manufacture locally of many articles of ordinary consumption which were formerly imported. This is particularly the case as regards clothing, certain food products, small agricultural machinery, and furniture. While the output of these enterprises does not more than meet the demand in the home market, the movement gives employment to native labor, retains money which formerly went abroad, and makes for the general economic advancement.

The manager of a local electric power company in Rio de Janeiro states that within eighteen months his company had made contracts for power aggregating about 1,080 horsepower with enterprises taking from 10 to 20 horsepower each. This represents about 80 small manufacturing establishments whose operation has been made possible by the general introduction of electric power. The same results of its use are reported for São Paulo and Bahia.

The introduction of power and the development of these small industries has led to a demand for electrical and other machinery, of which the United States is receiving its share of orders.

MILLING INDUSTRY IN THE STATE OF RIO DE JANEIRO.

The Legislature of the State of Rio de Janeiro, for the purpose of developing the wheat and flour-milling industry in that State, has passed an act granting special privileges to those engaging in the manufacture of flour. To the first company which shall establish a flour mill in that State is granted exemption from the payment of the export tax on wheat flour for ten years, and the free cession of public lands for the cultivation of wheat. The Federal Government will be asked to grant free entry to all material used in the construction of the milling plant, as well as to all machinery imported for use in the cultivation of wheat.

To enjoy these privileges the company must sign a contract with the state government and submit the plans and estimates of the mill within thirty days from the signing of the same, and begin the construction within sixty days and finish the same within two years from the date of the approval of the plans by the state legislature.

The concessionaire is also required to establish and maintain an experiment station for the cultivation of wheat as well as a school for millers. The company will be required to cooperate with the state government in its efforts to develop wheat cultivation in this State by distributing annually 10,000 kilograms of wheat among the farmers.

MANDIOCA FLOUR TRADE.

The National Agricultural Society of Brazil, a semigovernment organization having its seat in Rio de Janeiro, has issued a short monograph upon the possibilities of the cultivation of the mandioca plant which amounts practically to a public appeal for its more general cultivation. To stimulate the trade it is offering prizes of $300, $180, and $120 for the best 5 tons or more of flour of mandioca delivered in the European market by next March, as determined by the quality, the cost of production, and the total quantity. The export value of the flour from Brazil in 1906 amounted to about $440,000, while in 1907 it fell to about $220,000. The occasion for this decrease appears to be in the fact that the flour can not be produced here for the prices which foreign markets can afford to pay. The occasion for the higher cost of production is the economic condition of the country generally, the high cost of living making it impossible to produce profitably many things which under more normal conditions could be produced cheaply in abundance.

PROMOTION OF SILK CULTURE.

An earnest effort is being made by the Government to stimulate the production of silk in its limits, as the following indicates:

The last national budget contained provision for bounties not only to the producer of cocoons, but to persons establishing silk factories under certain conditions. The irregular cultivation of the silkworm which has continued in Brazil for many years has given promise that under favorable conditions the industry in the country might amount to something. The Federal Government has endeavored to supply such conditions, and several of the state governments, notably those of Minas Geraes and São Paulo, have given notable support to the movement. What sort of success will be the result of the movement is doubtful, for while the silk industry in the country is given the protection of a tariff which averages probably the highest in the world in its silk schedule, and while the climate in general seems to be very favorable to the growth of the food and the care of the eggs of the silkworm, there is a lack of suitable labor properly located to give the necessary attention to the production of silk.

In reviewing the results of the work so far done by the Federal Government during the past year the Hon. Miguel Calmon du Pin e Almeida, Minister of State for Industry, Transportation, etc., gives the regulations under which the bounties offered by the Federal Government were paid, wherein it seems that the Government paid a milreis (about 30 cents) per kilo (2.2 pounds) to the producers of cocoons who presented their claims therefor. The Government also paid premiums of $600, $300, and $150 for the fields of not less than

2,000 trees of the mulberry which best met the conditions laid down therefor. The Government also offered a premium of $15.000 to the two first silk-weaving factories of certain grade using Brazilian silk exclusively in their manufacture. Of the work accomplished the minister says:

As the committee to award and distribute the premia referred to in the law, Drs. J. Soares, jr., Domingos Sergio de Carvalho, and A. Gomes Carmo were named, such persons already having had some occasion to show some interest in the matter of granting the bounties asked, among which was that of $6,750 asked by Mr. Amilcar Savassi, manager of the Rodrigo Silva colony in the State of Minas.

The annual production in this colony has been, according to information given by the above committee, about 4,500 kilos (9,900 pounds) on an average in the most recent crops, it being estimated, however, that in the season from September, 1907, to April, 1908, the output would be increased to 7,000 kilos (15,400 pounds), thanks to means wisely adopted by the State of Minas to stimulate production. Besides the cultivation of the trees and the silk works for cocoon production there exists in such colony a factory supplied with the principal requirements of an establishment for the preparation and weaving of silk, there being especially machines for the manufacture of embroidery, elastics, sewing silks, stockings, shirts, shawls, and the like. The manager of the colony also maintains large nurseries for the growth of tree plants for distribution by the agriculturists and municipal organizations of the State.

INDUSTRIAL NOTES.

By a presidential decree of December 3, 1908, the "*Société Général de Construction*" has been authorized to operate in Brazil. The capital stock of the company is fixed at $10,000,000. The corporation has for its special object the construction of the port-improvement works of Rio Grande do Sul, but it will also engage in the building of railways, tramways, and public works in general. The company has its headquarters at Paris.

By a decree of November 26, 1908, "The Bahia Rubber and Fibre Plantations (Limited)," has been authorized to operate in Brazil. This company has a capital stock of £150,000, with headquarters in England. The company will acquire the Schindler's estate, situated in the State of Bahia, and will cultivate rubber of all kinds, cocoanuts, and textile plants, and manufacture and trade in the same. It will also acquire and work coal, iron, and tin mines, as well as other mineral substances, and will undertake the construction of public works, negotiate loans, make investments of capital, etc.

There has been organized at Santos a company known as "*Companhia Santista de Transportes*," which proposes to establish a freight and passenger transportation service in that city. In addition, it will undertake the importation of automobiles on commission. The capital stock of the company is fixed at 500,000 *milreis*, in shares of the value of 500 *milreis* each. The company has been organized to operate for a period of twenty years.

STATE OF PIAUHY.

Among the northern States of Brazil, Pianhy is one of the richest in resources, and has the best climatic conditions. It has an area of 116,515 square miles, with a maximum length of 900 miles and a maximum breadth of 270 miles. It is larger than Italy or Austria. Notwithstanding it lies near the equator, the climate is agreeable and healthful, especially in the southern part of the State. Its population is estimated at 435,000 inhabitants, or 1.44 per square kilometer.

The principal industry of the State is cattle raising, though agriculture is beginning to be developed to some extent. The soil is very rich and admirably adapted to the cultivation of the cereals, tobacco, sugar cane, cotton, fruits, etc. The valleys of the Gurgueia and Urussuhy rivers, affluents of the Parnahyba River, are remarkable for their fertility. The forests of the State abound in rubber trees of the variety known as *maniçoba* and resinous plants. Among the minerals found in this State are nitrate, copper, mercury, aluminum, gold, silver, lead, rock crystal, kaolin, and different kinds of clays.

The exports in 1907 were valued at $3,560,000.

The principal port of the State is Tutoya, at which the vessels of the Brazilian Lloyd and of the English and German lines make regular calls. Another port of importance is that of Amarração. The Parnahyba River is navigable as far as the city of Floriano, a distance of 412 miles from Tutoya.

The capital of the State is Therezina, situated on the right bank of the Parnahyba River. It has a population of 30,000 inhabitants. The other principal cities of the State are Parnahyba, União, Amarante, Floriano, Campo Maior, Barras, Itamaraty, Marvão, Livramento, Oeiras, and Jeromenha.

Surveys are being made for two railway lines across the State, one connecting Therezina with the railway which is being extended from the port of Camocim, in Ceara, to Ipu; the other line is in the southern part of the State, connecting the valley of the São Francisco with the Parnahyba.

AURIFEROUS ALLUVIALS OF THE UPPER AMAZON VALLEY.

Sir Martin Conway, in a recent paper read before the Royal Society of Arts of England, gave some valuable and interesting information concerning his explorations over the eastern slope of the cordillera of the Andes and the auriferous alluvials of the Upper Amazon Valley. This intrepid explorer, in his research through the mountain chains, table-lands, and valleys of the Peruvian-Brazilian Andes, more than once came across or heard of places in the region of perpetual snow where gold-bearing veins of quartz were exposed.

Most of these auriferous treasures were practically inaccessible, so far as their working and practical exploitation are concerned.

The explorer, however, arrived at the conclusion that somewhere at a very high level on the eastern face of the towering Andes a considerable body of gold ore exists, and that a much larger body formerly existed. This conclusion was confirmed when he discovered that all four of the principal tributaries of the Upper Beni, or Kaka River, bring down gold in their gravels. These rivers, in order from south to north, are the Coroico, the Challana, the Tipuani, and the Mapiri. On each of them the natives are accustomed to wash gold out of the gravels at numerous points, and they set up riffles at certain places before the rainy season to entrap the gold that is brought down by the floods year after year.

The Tipuani River may be taken as typical. This river takes its rise at the crest of the cordillera. Near its headwaters, at a place called Yani, strong veins of gold-bearing quartz have long been known to exist in the mountain sides, and they have been and still are intermittently worked by the natives in the simplest fashion, the ore being hacked out where it looked most promising, fragment by fragment, broken up by rolling a bowlder about on it, and the product washed by hand. The extension this source of gold may have in the high cliffs and recesses of the mountains at the head of the Tipuani Valley is not known, but it has been known since the days of Pizarro that all the way down that river some gold can be obtained out of almost every pan of gravel that one washes.

It is thus seen that the eastern slope of the Brazilian-Bolivian Andes for a distance of many miles yields gold in all its river gravels, and this gold must originally have come from the heart of the range itself. Twenty-one streams, tributaries of the Inambari River, have been found to bring down gold, and fifteen of them are regularly frequented by Indian gold washers. In all this mountainous region there are signs of ancient operations, and tradition asserts that it was from the upper tributaries of the Beni and Inambari rivers that the Incas obtained their vast supply of the precious metals, and the modern Indian believes he is continuing the old habits of his ancestors when he descends to these valleys to pan for gold.

Knowing that gold exists in considerable quantities in these regions, the question naturally occurs, Why has it not been extracted on a large scale and by the use of modern machinery and methods? One reason is the difficulty in the transportation of machinery to the placers and mines. Another is the great height of the Andes in this vicinity, the crest rising to altitudes of from 21,000 to 22,000 feet, and the height of the passes seldom falling below 16,000 feet. The great obstacle, however, is the rainy season. A high table-land, some 2,000 feet lower than the crest of the cordillera, extends to the east of the

water parting for a distance of 40 miles, the buttressing foothills then descending in another 40 miles to the great Amazon Valley, a few hundred feet above the level of the sea. During the rainy season the torrents which descend the slope are carried through a tortuous country full of impediments, and the great volumes of rain which fall with violence on the mountain sides must be carried away through narrow water courses. Such is the volume of water poured in upon these streams and rivers, that sometimes they rise as much as 50 feet within two or three hours, washing away banks, carrying down bowlders, and forming temporary obstructions or dams, which pile up the water behind them until they break, flood the valleys, and carry desolation and destruction in their paths. During the wet season the hills also become saturated, numerous landslides are produced, and mud avalanches are formed which scour the gullies and ravines and destroy everything in their course. The installation of machinery in such a mountainous and uncertain region is exceedingly difficult, if not impossible. The only successful way is to go far enough down into the valleys to escape the turbulence of the streams, and even then installing modern machinery and maintaining it in operation is a most difficult and serious problem. The ancient operation of hand panning has been the only method that has given satisfactory results in the exploitation of the gold of these streams up to the time of the exploration referred to.

The most important placer described by Sir MARTIN CONWAY is the basin of gold-bearing gravel below Guanay, reached by descending the Beni or Kaka River. This placer has been exploited to a considerable extent. The Incahuara basin, on the Beni River, and the gold-bearing gravel found on the banks of the Inambari River are other rich deposits referred to by Sir MARTIN. The gold from these deposits is obtained in the form of a black sand, and samples assayed ran over 80 ounces to the ton.

The region described is enveloped in a dense tropical forest, which makes prospecting difficult except along the banks of the rivers between the levels of high and low water. The principal gold fields referred to are from 1,000 to 2,000 feet above the level of the sea and the climate is salubrious all the year around. The southern limit of the gold-bearing district in question is probably about the latitude of Mount Illimani, its northern boundary extending far beyond the Inambari Valley. This vast territory is one of the richest and least developed parts of the world, and it is to be hoped that the gold industry which has already begun in those valleys may be attended with great success. Roads are being built through the Andes, and the question of transportation is rapidly becoming less formidable day by day, and in time the great gold-bearing district of the eastern Andes, in Bolivia, Peru, and Brazil, will be actively exploited.

THE PLACING OF PUBLIC CONTRACTS.

United States Consul-General ANDERSON, of Rio de Janeiro, in discussing the system of contract letting by the Government, states that it is impossible to secure any such business in Brazil without resident agents.

Indeed, under Brazilian law and under the policy of the Brazilian Government no bids for supplying material to the Government or doing work for the Government can be received legally by a department of the Government except from concerns which are authorized to do business in Brazil. To bid in its own name an American concern must go through all the legal formalities of establishing a branch house in this country. As a matter of fact, all such contracts as the one noted, both for railroads and all other governmental enterprises or enterprises controlled in any way by the Government, are given local concerns, which, of course, in many, if not in most, cases are merely representatives of foreign interests furnishing the materials or financing the work in the first place.

The fact that it is necessary to do business through such agents, however, is by this very fact brought out most strongly. Not only can and do such agents secure business which otherwise would escape the notice of American concerns interested, but, as is herein indicated, they are the absolutely necessary means of dealing with the Government or other interests concerned. Within a short time bids have been advertised for contracts for leasing the South of Minas Railway and for the construction of certain small branches; for certain steel materials for repairs on motive-power machinery on the Central of Brazil Railway; for an electric outfit for the station of the Central of Brazil Railway at São Paulo; for supplies for the Brazilian army; for supplies for several other departments of the Brazilian Government. All these bids called for were to be submitted within a time limit making it impossible for American competitors to bid for them. Had this not been the case, however, American concerns could not have filed bids without having been registered to do business in this country. The more practical way would be to deal through local agents who are properly registered.

There is a very considerable amount of business in many lines to be had through contracts of the sort indicated and which Americans now fail to secure because of their lack of good agents in this country.

AMAZON STEAM NAVIGATION COMPANY.

The report of the Amazon Steam Navigation Company, covering a period of eighteen months ending June 30, 1908, states that after adding to the reserve fund the sum of £20,000, the company has a surplus of £50,086, including £4,158 brought forward from the preceding fiscal year. The company paid a dividend of 2 per cent

in January and 3 per cent in June, 1908, making a total expenditure in dividends of £25,261, thereby reducing the surplus to £24,825. The directors of the company had under consideration the payment of an additional dividend of 4 per cent, thus making a total for the eighteen months of 9 per cent, or an annual dividend of 6 per cent. The profit and loss account was increased during the period noted by £4,852, while the amount carried to the account of the fund for the amortization of the floating debt during this period was £67,594. The fleet of the company represents a capital of £311,618.

CHILE

CENTENNIAL CELEBRATION OF NATIONAL INDEPENDENCE.

In a special message to the Federal Congress the President of the Republic of Chile has recommended that 2,500,000 *pesos* (about $800,000) be appropriated for the purpose of celebrating the centennial of Chilean independence in 1910. The committee appointed to draft a programme recommends that the exhibit of arts and crafts be held in the new Palace of Fine Arts; that the agricultural exhibit take place at the Quinta Nacional, and that the exhibit of industry, commerce, and education be held in a building to be constructed for the School of Mines in the Quinta Normal. The committee recommends the erection in Cousiño Park, Santiago, of the Centennial Building, in which the exhibit of the Historical Museum of the Republic will be held. The opening of several streets and avenues is also recommended in honor of the occasion, as is also the erection of a statue to Camilo Henriquez, the founder of Chilean journalism. In addition to the foregoing celebration and erection of buildings, which will take place in the capital of the Republic, the committee recommends the construction of buildings in the north and south of Chile in commemoration of the event. Chile declared its independence from Spain on September 18, 1810.

TARIFF LAW OF THE REPUBLIC.

It has been decreed by the President of Chile and the Superintendent of Customs has been advised that the present tariff valuations shall remain in effect without change during the year 1909.

CEMENT INDUSTRY.

A native company capitalized at $500,000 has begun the exploitation of the cement industry in Chile, an extensive plant having been put in operation at Calera a few miles from Valparaiso, where large deposits of the requisite material are found. The capacity of the

THE BAY AND TOWN OF TALCAHUANO, CHILE.

Talcahuano, a city of about 15,000 population, in the southern part of Chile, is an important shipping point and the naval base of the Republic. The harbor is well fortified and protected, providing anchorage for ships of the largest tonnage. The naval station contains a dry dock for the repair of war and merchant vessels. Talcahuano is the outlet for the enormous product of the adjacent territory and the scene of great commercial activity.

LAJA FALLS, CHILE.

The wonderful Falls of Laja, known as the Niagara of Chile, which have a drop of 106 feet, occur in the river of the same name, an affluent of the Rio Bio. Its source is in Lake Laja, near the Antuco Volcano.

plant is about 100,000 barrels per annum, which, in the opinion of United States Consul ALFRED A. WINSLOW, will supply the normal demand of the country. In 1906, imports of cement amounted to 250,000 barrels, and though the 1907 receipts were 480,000 barrels, it is considered that this figure was abnormal by reason of the extensive improvements necessitated by the earthquake of August 16, 1906, and it is not likely that imports for 1908 will be more than 200,000 barrels.

A Danish firm is in charge of the installation and the opening of the plant was made the occasion of a local holiday, the attendant ceremonies being participated in by the President of the Republic and many prominent business men.

BIDS FOR RAILWAY SUPPLIES.

The Director-General of Chilean railways has asked bids for railway supplies, to be opened in his office on April 24, 1909, at Santiago, the supplies to be delivered as follows: One-third in July, one-third in October, and the remaining third in December of the same year. The articles must be furnished in accordance with plans and conditions to be had on application to the office of the division superintendent either at Valparaiso or Santiago.

THE PORT OF VALPARAISO IN 1908.

In 1908 the 387 steamers and 18 ships that touched at the port of Valparaiso, Chile, unloaded 715,304 packages, and loaded 762,900 packages in 1908. Packages to the number of 2,500 were reembarked, and 1,874 were sold for storage during the period referred to.

COLOMBIA

BUDGET FOR 1909.

The proposed expenditures of the budget of the Government of Colombia for the fiscal year 1909 amounts to $14,000,000, and consists of the following items:

Department of Interior	$2,933,848
Department of Foreign Relations	200,000
Department of Finance and Treasury	6,037,652
Department of War	2,200,000
Department of Public Instruction	850,000
Department of Public Works	1,778,500
Total	14,000,000

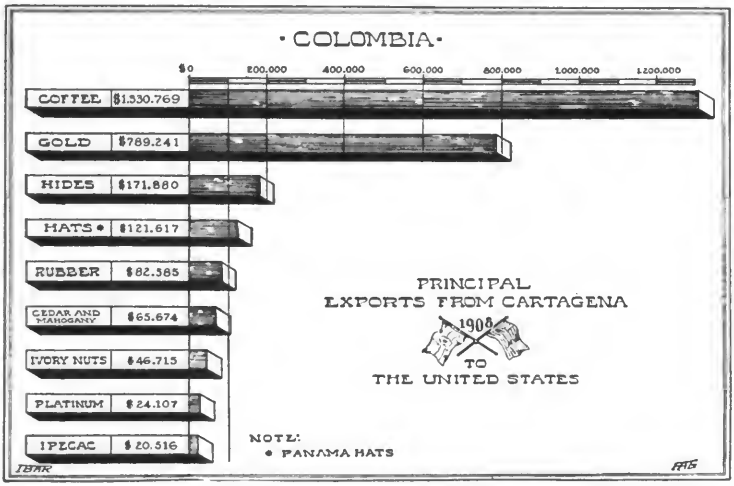
The receipts are estimated at over $16,000,000, which leaves a surplus of $2,000,000 as a guaranty of the legal value of paper money.

The wonderful Falls of Lajia, known as the Niagara of Chile, which have a drop of 106 feet, occur in the river of the same name, an affluent of the Rio Bio. Its source is in Lake Lajia, near the Antuco Volcano.

EXPORTS FROM CARTAGENA TO THE UNITED STATES, 1908.

In reporting on the exports to the United States from Cartagena for the year 1908, United States Consul Isaac A. Manning states that in the grand total of $2,686,753.13 a decrease of about $130,000 is to be noted in comparison with the figures for the preceding year. This is in the main attributable to the diversion of all gold coming down the Magdalena during the first quarter of the year to the port of Barranquilla.

The principal item shipped from Cartagena to the United States was coffee, valued at $1,310,769, and showing a gain of 170,000, gold ranking next with $789,241.33, followed by hides, $171,860.67; hats, $121,617.16; rubber, $82,585.93; cedar and mahogany, $65,674.89; ivory nuts, $46,715.21; platinum, $24,107.10; and ipecac, $20,516.17; no other single articles reaching a valuation of $10,000.



In comparison with the preceding year, shipments of hats showed the small decline of about $4,000; cedar and mahogany, something over $7,000; platinum, ipecac, and rubber exports also showing decreased export values.

On the other hand, a gain of about $15,000 is noted in exports of ivory nuts, while in regard to hides it is stated that their shipment to the United States has greatly increased since the removal of the government monopoly, as is demonstrated by comparing the year's shipments of $171,860.67 with those of 1907, when $49,995 covered the clearances for that country.

The decline in the shipments of platinum from $93,539 in 1907 is partly explainable by the decrease in price and by the withdrawal by the Colombian Government of the right of filing on platinum ground.

SALT EXPLOITATION IN THE REPUBLIC.

The Colombian Government is taking active measures to thoroughly exploit the salt deposits of the Republic and has had agents in Germany and Austria studying the development methods employed in those countries with a view to making such practical application of them as may be feasible in the works at Zipaquira.

Salt mining is a government monopoly in Colombia, the gross output from which in 1907 was valued at $525,620. Consul Manning, reporting from Cartagena to the United States Government, states that from a reliable source he is informed that during 1908 the output of the Galera Zamba works amounted to 98,000 bags of 62½ kilograms each, worth $382,000, while those of Magdalena, Santa Maria, and Rio Hacha yielded about 120,000 bags, valued at $480,000, a total valuation of $862,000, the net returns to the Government revenues exceeding one-half of the gross product.

None of the salt produced in the country is refined or ground, being sold in crude form to retailers, some of whom have it ground for table use, but a small quantity is shipped abroad.

EXTENSION OF THE LEASE OF THE SUPIA AND MARMATO MINES.

The Government of Colombia has extended to an English syndicate for a period of twenty years the lease of the Supia and Marmato mines, in the Department of Caldas, at an annual rental of £3,200 per year. The syndicate agrees to survey the mines, make plans of the same, and erect corner stones. According to the terms of the contract, students designated by the Government from the Government Mining School at Medellin are to be admitted to the works of the mines for the purpose of learning in a practical manner the operations carried on and the processes used in the exploitation of the mines. The mining machinery of the syndicate will be admitted to the Republic free of duty, and utensils and tools for the use of the mines may be brought into the country free of duty for a period of one year. Salt, coal, asphalt, emerald, and platinum mines are exempted from the terms of the contract.

COSTA RICA

ISSUE OF MUNICIPAL SANITATION BONDS.

The Department of Finance of the Republic of Costa Rica resolved on January 9, 1909, to issue two series of municipal sanitation bonds in order to raise funds with which to improve the sanitary conditions of San José, capital of the Republic, and the municipalities of Heredia, Santo Domingo, and Barba. Both of these bond issues, which bear interest at the rate of 12 per cent per annum, payable quarterly on the 15th of January, April, July, and October of each year, are redeemable by the State in 1925, although they may be called in sooner at the option of the Government. The issue for the sanitation of San José consists of 4,000 bonds, and that of the other municipalities mentioned of 1,500 bonds, both issues being of the denomination of 100 *colones* ($46.50) each. Forty-five per cent of these bond issues were to be offered to the public for subscription in January, February, and March, 1909, and the remainder will be open to subscription in monthly installments of 10 and 15 per cent until the entire amount has been disposed of.

CUBA

PERSONNEL OF THE CABINET OF PRESIDENT GOMEZ.

The Department of State of the United States has been informed through the Cuban Chargé d'Affaires *ad interim* at Washington that in entering upon the discharge of his executive office on January 28, 1909, President José Miguel Gomez and Vice-President Alfredo Zayas had associated with them the following personnel:

Secretary of State, Señor Justo Garcia Velez; Secretary of Justice, Señor Luis Octavio Diviño; Secretary of Government, Señor Nicolas Alberdi; Secretary of the Treasury, Señor Marcelino Diaz de Villegas; Secretary of Public Works, Señor Benito Lagueruela; Secretary of Agriculture, Industry, and Commerce, Señor Ortelio Foyo; Secretary of Public Instruction, Señor Ramon Meza; Secretary of Public Health, Señor Matias Duque; and Under Secretary of State, Señor José Ramirez de Estenoz.

VOLCAN DE IRAZU, COSTA RICA.

This volcano occasionally gives evidence that it is not yet extinct. It has an altitude of 10,600 feet above sea level, and from its summit alone, throughout all the Americas, can both the Atlantic and Pacific oceans be seen. At the foot of Irazu is the important city of Cartago, the late capital of the Republic, and now important as the location of the newly established Central American Court of Justice.

THE MILITARY BAND, SAN JOSE, COSTA RICA.

This organization is much appreciated by the residents of the capital, as evidenced by the popular demand for public concerts. It is strictly military and forms part of the standing army of the Republic. The Government employs a director-general of music, whose duty it is to give instruction in this art and raise the standard of efficiency of similar governmental organizations throughout the country.

CACAO INDUSTRY IN 1907–8.

It is reported through the British legation at Havana that the cultivation of cacao in Cuba during the fiscal year 1907–8 was exploited on 1,137 plantations with 1,960,246 trees, as compared with 745 plantations with 1,860,300 trees in 1906–7.

Production declined, however, from 9,380,900 pounds to 6,023,700 pounds by reason of a scarcity of rain, but when this quantity is compared with the output of 3,122,600 pounds in 1902, the growing importance of the industry is apparent.

Exports during the last six months of 1907 amounted to 3,286,730 pounds, valued at $477,000, over half of which was shipped to the United States; France, Spain, and Germany taking 983,759, 277,346, and 241,206 pounds, respectively. The quantity sent to Great Britain shows a steady decrease.

THE DREDGING OF SAGUA INLET.

An appropriation of $100,000 has been made by the Cuban Government to be expended in the preliminary work in connection with dredging the inlet which leads into the harbor of Sagua. It is estimated that the total cost of the work will be about $2,000,000, it being desired that a channel of 30 feet in depth be provided in order to allow vessels heavily laden with sugar and molasses to have free exit from the port.

Further improvements are projected in the Sagua district looking to the dredging and straightening of the river as far up as Sagua la Grande, as well as such measures as may be necessary to prevent or minimize the annual overflow of the stream.

A number of firms are bidding for the work, among them being United States, German, and Cuban companies. February 4, 1909, is the date fixed for opening the bids.

COST OF TOBACCO PLANTATIONS.

United States Consul Max J. Baehr, of Cienfuegos, reports concerning the cost of production of tobacco in Cuba.

Taking 1 acre of land as the basis of calculation, in the province of Santa Clara the cost of labor in producing tobacco is as follows:

For the preparation of sufficient ground to produce enough young plants for 1 acre of land	$13
For their cultivation, weeding, and watering	10
For preparing the soil of 1 acre of land for the reception of the young plants	14
For the planting of the young plants	5
This figure is based on the fact that 1 man can plant 2,400 plants per day, that 1 acre takes 12,000 plants, thus necessitating employment of 5 men in order to plant this quantity in one day, at the rate of $1 per day.	
After the planting, the weeding and cultivation of 1 acre up to the cutting time comes to	50

For cutting the tobacco crop of 1 acre	$30
Explained as follows: An acre of land is supposed to yield under ordinary conditions 300 cujes, or poles from which the tobacco leaf is hung, and to fill each pole costs 10 cents labor.	
Now the tobacco is ready for the drying house, and after being cured awaits the final work of selecting, heading, bundling, and baling.	
These 300 cujes should yield under ordinary conditions 6 bales of 150 pounds each; they are headed, selected, bundled, and haled at the rate of $10 per bale, or	60
Total cost of labor	182

Thus it is shown that 1 acre of land can produce 900 pounds of tobacco at the cost of $182 for labor, or 20.22 cents Spanish silver, per pound. It will also be interesting to know the total cost of production, for which purpose the following items should be added:

Labor		$182.00
1. The cujes, or poles, 300, at $4 per hundred	$12.00	
2. The cost of the drying house	50.00	
Total	62.00	
As this house and the poles are calculated to last four crops, only one-fourth of the figures can be taken into consideration, or		15.50
3. The cost of a yoke of oxen and the necessary implements for cultivation, at the rate of usefulness for four years:		
1 yoke of good oxen	$100.00	
Implements for cultivation	20.00	
Total	120.00	
One-fourth		30.00
4. Cost of seed for raising young plants		3.00
Total cost of production		230.50

OBSERVATIONS.

A Spanish silver dollar is worth 86 cents United States currency at the present rate.

The present market price for good light tobacco is $70 Spanish gold, and if it is of heavy material or what is called "tobaco de partido," $50 per bale, so that for the sake of calculation the medium price of $60 per bale should be taken.

Time occupied in the production of tobacco from seed to bale, six months.

These figures represent the total cost of production of tobacco on 1 acre of land—900 pounds of tobacco, at a cost of $230.50 Spanish silver, or 25.61 cents per pound.

DOMINICAN REPUBLIC

GENERAL AGRICULTURAL INSPECTORS.

The duties of the general agricultural inspectors, who are chosen by the Government of the Dominican Republic with the greatest care and because of their fitness for the work intrusted to them, are to educate farmers in the best methods of agriculture, to promote the development of agriculture in all its branches, and to collect agricultural statistics for the use of the nation. These inspectors closely cooperate on their trips of investigation with the governors of the provinces, remaining in each place long enough to properly perform their duties and to enable them to give the required attention to the cultivated and natural products of that part of the Republic. As a special and important branch of the Department of Agriculture, the stock-raising industry of the country receives the particular attention of the inspectors.

Apiculture is another branch of agriculture to which the inspectors carefully and assiduously devote their efforts, indicating in detail to the apiculturists the best methods of producing and conserving bees, and advising farmers to engage in that lucrative, useful, and interesting industry.

Monthly reports are made by the inspectors to the Department of Agriculture, and tillers of the soil are advised concerning the most suitable stock to be raised and the most desirable products to be cultivated in the different sections of the Republic. The bad results of the heedless destruction of forests are dwelt upon by the inspectors, and the planting of trees on the margins and at the headwaters of brooks and streams, especially where the land has been denuded of its timber, is strongly recommended and encouraged. The inspectors also give valuable information concerning the diseases of animals and plants, and the most effective means of preventing and combating them.

ECUADOR

CONCESSION OF WATER RIGHTS TO THE GUAYAQUIL AND QUITO RAILWAY COMPANY.

On December 20, 1908, an important contract was made by the Government of Ecuador with the Guayaquil and Quito Railway Company, under the terms of which a concession was granted for the

use of the waters of the Chimbo, Chanchan, Columbe, Ambato, and Cutuchi rivers for the purpose of obtaining electric power for the use of the railway and for industrial and other purposes. In order to facilitate the operations of the company in the construction of the required works and the purchase and installation of the necessary machinery, the Government has authorized the daily appropriation of 1,400 *sucres* ($700) from the gross earnings of the railway company for deposit in any bank of the Republic as a sinking fund to pay the interest on the amount to be raised by the negotiation of a loan for the termination of the works and electric installations referred to in the contract. The collection of the 1,400 *sucres* daily is not to commence until the railway begins to operate by electric power. The works and installations contemplated for the exploitation of the railway by electric power must be completed within two years from the dates of the requisite contracts. The material it may be necessary to import in order to carry out the conditions of the contract may enter the Republic free from the payment of federal and municipal duties. Mr. ARCHER HARMAN represented the railway company in the concession referred to, which must be submitted to and approved by the Congress of Ecuador before it becomes binding on the parties thereto.

CACAO PRODUCTION IN 1908.

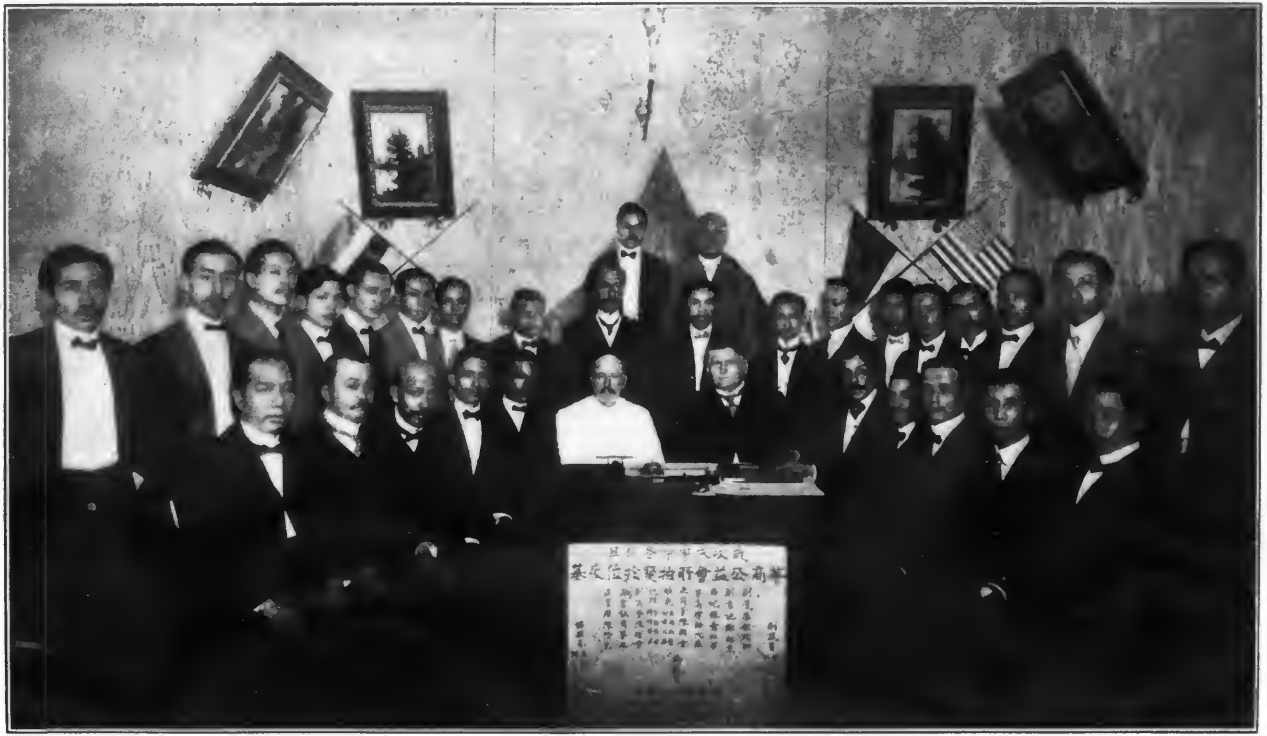
Information furnished by United States Consul-General HERMAN R. DIETRICH from Guayaquil indicates that the cacao crop of Ecuador for 1908 establishes a record, being 9,607,500 pounds in excess of the previous highest output of 53,588,200 pounds in 1904.

Exportations through the port of Guayaquil during the year amounted to 365,607 sacks, or approximately 64,000,000 pounds, valued at $6,400,000, and stocks on hand in the warehouses at the opening of the year 1909 were estimated to be 971,500 pounds.

Receipts of cacao for shipment through the port are given as follows for the three years:

	Pounds.
1906	45,690,500
1907	39,826,900
1908	63,195,700

The Minister of Ecuador in the United States has addressed his home government calling attention to the great importance to the adequate exploitation of cacao, and proposing the calling of a congress to be participated in by the various producing countries to report on the best methods of culture and marketing of the product.



HON. WILLIAM C. FOX (IN WHITE), UNITED STATES MINISTER TO ECUADOR, AND HON. H. R. DIETRICH, UNITED STATES CONSUL AT GUAYAQUIL, SURROUNDED BY REPRESENTATIVE CHINESE IN ECUADOR, WHO ARE NOW ACCORDED THE DIPLOMATIC PROTECTION OF THE UNITED STATES WITH THE CONSENT OF THE GOVERNMENT OF ECUADOR.

EXPORTS FROM GUAYAQUIL IN 1908.

Besides the large shipments of cacao from Guayaquil during 1908, other items, as reported by the United States Consul-General at the port, included 68,241 hides of meat cattle, weighing 1,338,000 pounds and valued at $135,000; 4,964,000 pounds of coffee for $273,000; 3,400,000 pounds of vegetable ivory, $102,000, and 470,000 pounds of rubber, $235,000.

Exports of hides were made to the following countries: United States, 54,982; Great Britain, 6,114; France, 4,265; Germany, 2,880.

HAITI

LICENSE TAXES.

The Haitian Government has recently revised the law relating to taxes imposed upon those exercising professions or engaged in commerce in the Republic. The law is made very strict and all those who, after receiving a notification in writing from the Government, still continue to violate it, will be subject to a fine of from 20 to 100 *gourdes*, and their places of business summarily closed.

HONDURAS

MESSAGE OF PRESIDENT DAVILA.

The President of Honduras, in a message addressed to the National Congress on January 1, 1909, shows that during the year 1908 the Government was actively engaged in works of public improvement, one of the most useful of which was the making of permanent but costly repairs to the important bridge that connects Comayagüela with Tegucigalpa at an outlay of about 100,000 *pesos*. Special attention was given to the construction of wagon roads and the bridging of streams, and considerable sums were spent in the repair and construction of public buildings in different parts of the Republic. The Federal Government financially assisted various municipalities in the construction of bridges, roads, and other municipal improvements, and everything possible was done to extend more and more the telegraph system of the nation into the provinces. New telegraph offices were established, and a school of telegraphy for both sexes was founded by the Government. The Post-Office Department also extended and bettered its service, and increased the number and efficiency of its personnel.

(Courtesy of Collier's Weekly)

VIEW OF THE NEW CATHEDRAL IN COURSE OF CONSTRUCTION IN PORT-AU-PRINCE, HAITI (TAKEN IN JANUARY, 1909).

(Courtesy of Collier's Weekly.)

PICTURE OF THE RECENTLY COMPLETED MARKET HOUSES IN PORT-AU-PRINCE, HAITI (FROM A PHOTOGRAPH TAKEN IN JANUARY, 1909).

Honduras is a country rich in minerals and abounding in fertile agricultural lands, but these great sources of natural wealth can not be developed to their fullest extent without the proper means of interior and foreign communication. With a view to bettering and increasing the means of communication in the Republic, the Government has granted concessions for the navigation of rivers, and made contracts for the construction of railway lines on the Atlantic coast, the most important of which is the contract entered into with JAMES P. HENDERSON for the building of a railway from Trujillo Bay or Lake Guaimoreto to Juticalpa, with a branch line to Tegucigalpa. The railway from Puerto Cortez to La Pimienta, has been leased, subject to the approval of Congress, to WASHINGTON VALENTINE, and the lease of the wharf at Puerto Cortez, has been extended.

For the purpose of encouraging the development of the agricultural resources of the country, the Government granted, in 1908, some agricultural concessions, and, in accordance with the contract with ANTONIO BERNAL, a practical school for the cultivation of tobacco was established in the District of Danli.

The debt of the Republic on July 31, 1907, was 3,634,019.62 *pesos*. Since that time it has been increased by 966,438.17 *pesos*, less payments in the fiscal year 1907–8 to the amount of 585,199.64 *pesos*, so that the total debt of Honduras on July 31, 1908, was 4,015,285.15 *pesos*.

ECONOMIC CONDITIONS IN 1908.

A valuable report made by the United States Consul at Tegucigalpa, Mr. W. E. ALGER, on conditions in Honduras during 1908, gives the import values for the fiscal period ending July 31, 1908, as $2,829,979, as compared with $2,331,398 in the preceding year; exports for the two years being valued at $1,834,060 and $2,012,407, respectively.

The figures given are government statistics, and Mr. ALGER calls attention to the fact that data compiled at the consulate for the calendar years give much larger totals, as shipments to the United States alone in 1908 figure for nearly $3,000,000, as against $1,591,351 reported on Honduran export lists.

On the trade lists of the Republic, distribution of imports and exports is as follows for 1907–8:

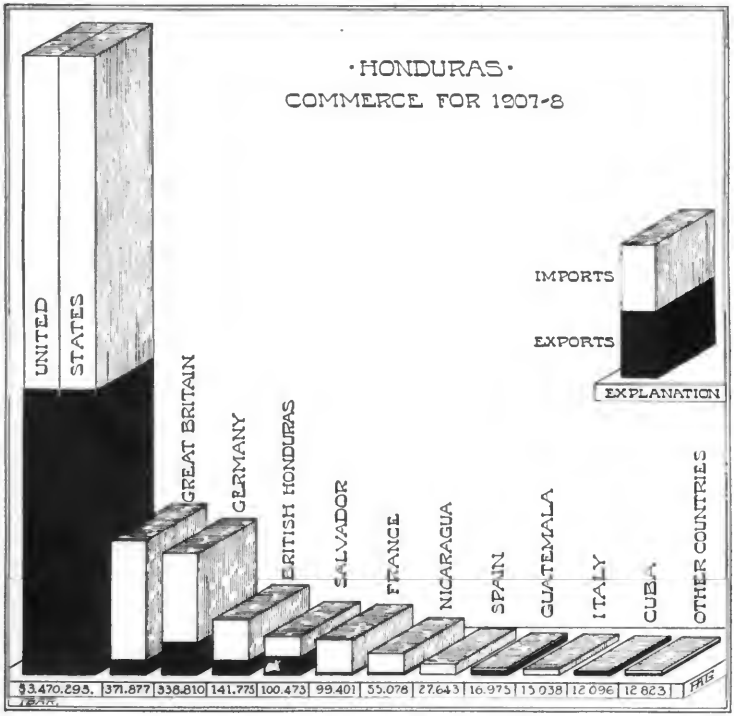
EXPORTS.

Countries.	Amount.	Countries.	Amount.
United States	$1,591,351	Nicaragua	$1,889
Guatemala	12,320	Great Britain	32,131
Cuba	12,096	Costa Rica	3,333
Germany	90,160	France	1,861
British Honduras	33,040	Mexico	1,480
Salvador	54,399		

IMPORTS.

Countries.	Amount.	Countries.	Amount.
Austria	$345	Jamaica	$851
Belgium	3,531	Mexico	1,119
British Honduras	108,735	Netherlands	1,358
Canada	239	Nicaragua	53,189
China	1,176	Panama	50
Costa Rica	638	Peru	225
Ecuador	224	Salvador	46,074
France	97,540	Spain	27,643
Germany	248,650	Sweden	11
Guatemala	4,655	Great Britain	339,746
Italy	15,038	United States	1,878,942

The classification of exports includes animal products valued at $197,135; vegetable products for $1,050,420; minerals, $578,939; and manufactures, $7,516.



In the first class are hides for $72,569; cattle, $65,038; cheese, $31,682; deerskins, $15,641; and mules, $10,186 as the five leading articles.

Under vegetable exports, bananas for $768,508 take first rank, followed by coffee, $77,058; cocoanuts, $75,866; mahogany, $36,271; rubber, $30,272, sarsaparilla, $22,037 and woods to the value of over $30,000.

In minerals, cyanide products figure for $204,862; ore for $167,360; coined silver, $98,280; silver in bars, $85,912; and gold, $18,360.

Straw hats are the leading item under manufactured exports, being valued at $3,949, the other items including postage stamps, returned good, and various articles.

Tariff rates remained the same and exchange for the year averaged for the United States, 155 per cent; London, 153; Paris, 151; and Hamburg 149.

Many concessions were granted for railroad construction and the exploitation of natural resources, so that while, on the whole, the year showed no remarkable economic gains, the outlook for the future is promising.

Banana plantations, by reason of atmospheric conditions, decreased their output to 4,310,538 bunches as compared with over 5,000,000 bunches in the two preceding years.

Supplementary to the above data, the Bureau of the American Republics has received through Mr. JOSEPH DARLING, of the Gulf Refining Company, an interesting article furnished by ROBERT A. WILSON, of San Pedro Sula, covering the general details of the first year of President DÁVILA'S administration of Honduran affairs, as follows:

One of President DÁVILA'S first official acts upon his accession to the Presidency early in 1908 was a formal notification to all officials of his Government that the strictest integrity in the administration of their offices would be insisted upon, and that all persons dealing with the Government should be treated with fairness and courtesy. This was followed by the appointment of a high class of officials generally throughout the Republic, and an invitation to foreign capital and the better class of foreign immigrants to come into the country, coupled with the assurance that every inducement compatible with the public interests would be afforded.

During the first year of his administration, the Government devoted much of its attention to the transportation question. This involves the settlement of the foreign debt, the extension of the transcontinental railroad to the Pacific side, the construction of cross roads and branches, and the building of some 71 miles across the Republic, constituting the Honduras link in the Pan-American road, which now connects the northern portion of the continent with the southern border of Mexico.

The first step in the construction of the extension of the transcontinental road was reached in August, 1908, when the completed portion of this road passed from national control into the hands of the Valentine Syndicate of New York, and the awarding of a contract for the extension will carry with it a readjustment of the foreign debt of the Republic.

Early in 1908 the Vaccaro Company of New Orleans completed and opened to public traffic the first 32 miles of the road they have been constructing into the banana lands near Ceiba. A syndicate of Chicago capitalists obtained a concession to build a railroad from Truxillo, on the Caribbean, to Tegucigalpa, a distance in all of some 350 miles. It has been financed in the United States. Material for the construction of this road is now arriving, and work is now about to begin. This road passes through a section of choice river bottom land near the coast, and further back taps the mining fields of the Olancho.

Another American company has obtained a concession to construct a railroad from Tela, on the Caribbean, to a point on the Comayagua; another company to build from Omoa on the Guatemala frontier through the Chemilicón Valley and the pine forests near the Aguan River; and still another to build a short line in the vicinity of Tela. Under the terms of the lease of the transcontinental road to the Valentine syndicate, 25 miles of branch lines are to be constructed through the Sula Valley, and work on the first of these little lines will be commenced at once, connecting the Ulua River, near Progreso, with the main line at a point near San Pedro Sula. There is every reason to believe that railroad construction work will be active at many points throughout the Republic in 1909.

In November, 1908, the Ulua River was thrown open to navigation as far as Progreso, a distance of some 125 miles from its mouth. The first of the freight and passenger steamers to run on this river is now making regular trips. It is owned and operated by the Monte Vista Steamboat Company of New York. This boat was built by American workmen, entirely out of wood growing along the river, and the interior is all the finest mahogany. It is 131 feet in length, draws 28 inches, and carries two barges, each with a capacity for 5,000 bunches of bananas. It has ten private state rooms, with running water and bath, is electric lighted throughout, and carries an ice plant. The steamer connects with the ocean steamers at the mouth of the river, and makes the trip down in less than six hours. This is the first modern steamboat to make its appearance in this portion of Central America. Plans for the opening to navigation of several other rivers in the Republic are now under the consideration of the Government.

At Puerto Cortez the filling up of the lowland and the conversion of the place into a modern seaport was begun in the summer of 1908 by the Grace syndicate, and this work is now proceeding rapidly, with the assistance of two steam shovels, trains of cars, and a large force of American workmen. In a very short time Puerto Cortez, with its fine harbor and beautiful scenic effects, will rival any port in the Caribbean. It is the intention of the Grace syndicate to erect a first-class tourist hotel near the beach, and eventually have this point included in the route of high-class tourist travel.

In the mining field, three notable events have taken place during 1908. At Minas de Oro the Antigua Gold-Copper Company of New Orleans has struck a ledge of high-grade free-milling gold ore, now over 26 feet wide. The contact walls are clearly defined, running up on the face of the cut 35 feet, with its depth not yet determined. Over 500 tons of very rich ore have already been taken out of the open cut, which has been run into the face of the mountain. At Macuelizo, two days from San Pedro Sula by mule, another American company has made a very rich discovery of free-milling gold rock, and they are now erecting their stamp mill. This rock pans high and gives a superior coarse gold, which is sold at San Pedro Sula at $18 per ounce silver. The third important happening in the mining field for 1908 is the discovery of a deposit of graphite within 12 miles of San Pedro Sula. The extent of this deposit is not yet determined, but it is of a superior grade. It is now being rapidly developed by a New York company.

In the agricultural field the actual opening of the Ulua to transportation has been the signal for a decided movement. Seven large American companies, besides innumerable individual planters, are now at work. Some large transactions have lately taken place in fruit lands at different points, and a big proposition in timber has just been taken over by some Philadelphia people, while a Louisiana company is about beginning operations on a pine and turpentine proposition near Puello.

During 1908 an arrangement was effected with the New Orleans Butchers' Association to supply that market with Honduras cattle. Before this arrangement can become effective a modification of the sanitary regulations of the United States, which prohibit the importation of cattle from Central America, will have to be made. The herds here are free from disease. The matter is now before the Secretary at Washington, and it is believed that this prohibition will be removed when the condition of the cattle here becomes known.

During 1908 the Government granted a concession to an American syndicate for the establishment of a bank, with branches throughout the Republic. This has been actually financed and branches have already been opened at several points. The Government also decided to open at once an agricultural school at Danli, which should have an excellent influence.

REPORT OF THE SECRETARY OF INTERIOR AND JUSTICE.

The report of the Secretary of Interior and Justice of Honduras to the Congress of the Republic for 1907–8 shows that one of the most important works accomplished by the General Bureau of Statistics during the fiscal year was the compiling of a second edition of the Politico-Territorial Division of the Republic, the work being divided into three parts. The first part treats of the political division of Honduras in accordance with the Federal Constitution and laws of the municipalities, and contains historical and statistical data relating to the antiquity of the towns, and gives the approximate distances between the capitals of the departments and those of the districts; the second part contains an alphabetical list of the names of all the towns of the Republic, and the third part is an appendix of the judicial divisions of the country.

With reference to the Government Printing Office of Honduras, the report states that from April, 1907, to July, 1908, that office issued 21,780 books, 49,472 pamphlets, 1,698,350 official newspapers, and 3,718,516 copies of miscellaneous and other matter. The books and pamphlets bound during this period numbered 292,548. The receipts for the printing office for the sixteen months in question were 96,565.31 *pesos*, and the expenditures 70,027.91 *pesos*, or a net gain from the operation of the office during the period mentioned of 26,357.40 *pesos*.

TREATY OF COMMERCE WITH NICARAGUA.

With the object of encouraging commerce between Honduras and Nicaragua, the duly authorized representatives of the two Republics celebrated, under date of November 4, 1908, at Tegucigalpa, Honduras, a treaty of commerce, subject to the ratification of the federal congresses of the respective nations. Under the terms of this treaty, national and agricultural products, and domestic manufactures of the countries in interest, with the exception of those products on which there is a government monopoly, are allowed to enter the terri-

tories of the respective republics without the payment of duties, and special provisions are made for the free exchange of live stock between the two countries. The treaty is to remain in force for ten years from the date of the exchange of ratifications.

MEXICO

FOREIGN COMMERCE, FIRST FIVE MONTHS, 1908–9.

The foreign commerce of the Republic of Mexico for the first five months of the fiscal year 1908–9—that is to say, from July to November, 1908, inclusive—amounted to $148,604,441.13 silver, made up of imports to the value of $60,042,946.56 and exports amounting to $88,561,494.57, as compared with $213,405,717.95 silver, consisting of imports valued at $103,486,944.18 and exports aggregating $109,918,773.77, during the same period of 1907–8, or a decrease in imports and exports of 41.98 and 19.34 per cent, respectively, in the first five months of 1908–9 as compared with the same period of 1907–8.

The imports and exports by grand divisions for the first five months of the fiscal year 1908–9 are shown in the following table:

Grand divisions.	Imports.	Exports.
	Pesos.	*Pesos.*
Europe	25,670,308.47	22,197,195.15
Asia	891,546.14	.....
Africa	35,801.78	.....
North America	33,013,631.48	65,106,959.74
Central America	15,941.75	450,696.68
South America	234,195.95	38,774.00
West Indies	53,412.61	767,869.00
Oceania	128,137.38	.....
Total	60,042,946.56	88,561,494.57

BUDGET EXPENDITURES AND ESTIMATES.

As transmitted by the Minister of Finance to the National Congress, the estimates of expenditures for administrative purposes of the Mexican Government show a decline of $7,104,914.62 silver for 1909–10 as compared with the appropriations made for the preceding fiscal year, the two sums being $96,935,402.11 and $104,040,316.73, respectively.

The expenses of all the branches of Government service, with the exception of the divisions known as legislative, executive, foreign relations, rural police, and public debt, are estimated on a lower basis.

(Photo by Waite—Mexico City.)

CROSSING THE TROPIC OF CANCER, MEXICO.

The Tropic of Cancer divides Mexico into two nearly equal geographical parts, the north temperate and torrid zone sections. A large portion of the hot belt, however, enjoys a very temperate climate, due to the high altitudes of the mountains and plateaus.

(Photo by Waite—Mexico City.

AN ARTESIAN WELL, CITY OF MEXICO.

The greater portion of the city's water supply is obtained from natural springs and artesian wells. The latter number nearly 1,100, yielding about 3,800 gallons of water per minute.

STATUS OF THE PUBLIC DEBT.

The report of Minister LIMANTOUR, concerning the financial situation of the Mexican Republic at the close of the fiscal year 1908, shows that the net diminution of the public debt (principal only considered) during the preceding 12 months amounted to $2,654,546.15. The totals, including interest, on June 30, 1907, and June 30, 1908, were $444,536,789.30 and $441,564,733.49.

RAILWAY TRAFFIC IN 1907–8.

Transport conditions in Mexico are extensively reported upon by the Minister of Finance, Señor Don JOSÉ YVES LIMANTOUR, in his recent review of the economic situation in the Republic. He gives the number of passengers carried by the various railroads of the country during 1907–8 as 10,747,128, as compared with 10,000,031 in the preceding fiscal year, and freight shipments are stated as aggregating 10,042,144 tons and 9,124,040 tons in the two periods, respectively.

The gross earnings of the lines were as follows:

Railways.	Passenger traffic.		Freight traffic.	
	1906–7.	1907–8.	1906–7.	1907–8.
Mexican	$1,959,081	$2,043,658	$5,073,009	$5,411,023
National	3,071,970	3,168,959	11,518,432	11,106,800
Central	7,800,269	8,405,822	21,628,450	25,288,077
International	883,214	953,747	7,341,817	7,052,754
Interoceanic	1,104,686	1,195,387	5,236,693	5,604,857
Veracruz—Pacific	389,280	366,594	553,627	608,700
Tehuantepec	312,632	302,331	1,511,512	2,860,942
Total	15,521,132	16,436,498	52,863,540	57,933,153

MANZANILLO AND THE WEST COAST OF MEXICO.

In the completion of the railway line between Manzanillo on the coast and Guadalajara in the Mexican State of Jalisco, the final link of which was opened to traffic in December, 1908, the United States Consul at Manzanillo, Mr. ARMINIUS T. HAEBERLE, sees the prospect for immense development on the west coast of the Republic. Colima, a small but richly resourceful section of the country, is thus provided with an Atlantic outlet for its products through the distant port of Tampico on the Gulf, while the importance of its Pacific port, Manzanillo, is immensely enhanced.

Increased exports of native products, including hats, rice, and sugar are reported since the opening of the rail connection to the coast, and large shipments of wheat are being received via Guadalajara and Zapotlan. Steamship communications with Pacific ports and those of China and Japan are being inaugurated and Man-

zanillo, as a port of entry, will receive much merchandise which formerly had to be forwarded overland from Tampico, if proper advantage is taken of the opportunity offered to producers on the west coast of America.

THE MUNSON STEAMSHIP LINE CONTRACT.

The Munson Steamship Line to Cuba and Mexico has contracted with the Mexican Government for a steamship service of at least two round trips per month between ports of the United States on the Atlantic coast or Gulf of Mexico and one or more Mexican Gulf ports. The company must own its own vessels, or, if necessary, and upon obtaining permission from the Department of Communication and Public Works, may lease vessels for a period of six months.

The company agrees to transport the mails of the Mexican Government free of charge, as well as to carry on each trip, free of cost, government freight not exceeding 10 tons. The Government agrees to dispatch the vessels of the company in the ports of entry or clearance at any hour desired, except on national holidays, and the company has the right to load or unload its freight at any empty warehouse in accordance with the customs regulations. An authorized representative of the company must be kept in the City of Mexico to treat with the Mexican Government on all matters relating to its contract. The company has deposited 3,000 *pesos* in the bonds of the public consolidated debt as a guaranty for the faithful performance of the stipulations of the contract. The contract will remain in force for three years from January, 1909.

TERMINALS OF THE TEHUANTEPEC RAILWAY AS PORTS OF CALL.

The French steamship company *Compagnie Générale Transatlantique* is reported to have inaugurated a regular freight service between France and Puerto Mexico, the Atlantic terminal of the Tehuantepec Railway, the first steamer to arrive early in March, 1909. The immediate service is to be monthly, with two 5,000-ton steamers, and later, passenger steamers to touch at French ports and at Havana, Puerto Mexico, Veracruz, and Progreso will be put on the line.

The Italian Navigation Company, of Genoa, is also preparing a schedule to Puerto Mexico.

The completion of the dredging of the harbor has made it possible for ships of the deepest draft to touch at the port.

It is from this port that the shipments of Hawaiian sugar are made over the isthmian route. The first cargo arrived at Salina Cruz, the Pacific terminus of the Tehuantepec road, in January, via the American-Hawaiian Steamship Company. The sugar was loaded from the ship's hold to cars of the railway company, moved across the isthmus to Puerto Mexico, and transshipped to New York.

Three steamers per month are scheduled to arrive at Salina Cruz, with an average cargo of 12,000 tons each, and it is anticipated that over 375,000 tons of sugar will be handled during the year over the Tehuantepec Railroad. Additional ships are to be put on between Honolulu, San Francisco, and Salina Cruz in accordance with the traffic demands.

PRESERVATION OF ARCHÆOLOGIC MONUMENTS.

The Department of Public Instruction and Fine Arts, of Mexico, is taking active measures to secure the preservation of the archæologic monuments of the Republic. Stringent orders have been given to prevent the excavation, alteration, or transportation of said monuments, except under the authority of the aforesaid department, and their exportation is prohibited. An inspector has been appointed to look out after the interests of the Government in this respect and to prevent the violation of the law.

NICARAGUA

NEW LINE OF STEAMERS TO SEATTLE.

A new line of German steamers has been established to ply between Corinto, Nicaragua, and Seattle, Washington, touching at the principal Central American ports of the Pacific coast and at San Francisco. A monthly service will be maintained. The line is owned by Diedrichsen, Jebse & Co., Hamburg.

EXPORT DUTY ON COFFEE.

A Nicaraguan decree issued on November 24, 1908, reestablishes the general tax on coffee exported from Nicaragua at 40 cents American gold per hundredweight. The decree provides:

ARTICLE 1. The tax of 40 cents American gold for every hundredweight of coffee exported through the custom-houses of the Republic is reestablished.

ART. 2. All of the requirements of the regulations established by the decrees of January 26, 1894, and October 22, 1904, are put into force and the decree of February 24, 1907, is annulled.

ART. 3. The bonds for the exportation of coffee will be sold strictly for American gold or for commercial sight drafts.

On February 24, 1907, a decree was issued placing the export tax at 2 *pesos* (Nicaraguan paper) per hundredweight. The rate of exchange at which the existing 40-cent gold exportation bonds would be accepted was fixed by the decree at 630 per cent. In the meantime exchange has increased, until on November 24, 1908, it stood at 980 per cent.

At the foregoing rate it requires $3.92 in Nicaraguan currency to purchase 40 cents in American gold, which practically results in an increase in the export tax of $1.92 over the recent rate of $2 Nicaraguan currency.

The decree last issued also reestablishes that of January 26, 1894, which provides for a special tax of 50 cents on all coffee exported through San Juan del Sur. However, by far the greatest part of the coffee produced in Nicaragua is exported through Corinto. At the present market price, namely, $6.50 per hundredweight, the tax of 40 cents amounts to a little more than 6 per cent of the local value of the product.

United States Consul OLIVARES, at Managua, states that the tax will be keenly felt by coffee growers and exporters in Nicaragua.

In a report made by Consular Agent WILLIAM H. DE SAVIGNY the following figures were submitted, representing a careful estimate of the present coffee crop, together with a comparison with former annual yields in the famous Matagalpa and Jinotega sections, the quality of whose product ranks with the best in the world. The amount of coffee produced in 1907 was 30,000 hundredweight in the shell, while the estimated amount for 1908 is 15,000.

The foregoing sections have in the past been known to produce, jointly, a crop amounting to 50,000 hundredweight in the shell. The heavy decrease in this season's yield is to some extent due to the damage wrought by the terrific storm which visited Nicaragua in October last.

PANAMÁ

CENSUS OF THE REPUBLIC.

The Congress of the Republic of Panama has appropriated $85,000 to be used in defraying the expenses of the next census. The preliminary work of the census, which will be taken by provinces, has already begun. The Bureau of General Statistics is charged with the performance of the work.

ARTICLES PLACED ON THE FREE LIST.

On December 26, 1908, the President of Panama promulgated a law authorizing the free admission into the Republic of the following articles: Fine live stock for breeding purposes coming from Jamaica, the United States, and Europe; ice, guano, live plants, seeds, slips (*barbados*), and cuttings (*mugrones*); coal; gold coin of a fineness equal or superior to that issued by the commonwealth; newspapers

MARKET SQUARE, PANAMA.

The public market of Panama City is a private enterprise, and the building is one of the best to be found in all Central America, being built of steel and covering a floor space of nearly 32,000 square feet. It stands on the busiest portion of the bay shore and is supplied with wharves which permit small boats to unload their cargoes from the neighboring coast towns direct to this central distributing point.

GOVERNMENT BUILDING, PANAMA.

This is one of several modern public buildings erected in Panama during recent years. Others are the handsome palace for housing the governmental departments and the new modern theater, both of which were completed but a few months ago.

and printed books sent through the mails; raw material for the manufacture of candles and soaps; irrigation machinery for farms and plantations; articles imported by municipal corporations for the use of schools or for the improvement or embellishment of towns; goods or articles for the exclusive use of religious or benevolent societies and institutions; merchandise for the personal use of the members of the diplomatic corps; goods or articles, machinery, provisions, etc., imported by the Isthmian Canal Commission in conformity with the treaty made between the United States and Panama on November 18, 1903, for the construction of the canal; effects or articles, machinery, supplies, etc., imported by the Panama Railway Company in accordance with article 117 of the contract of July 5, 1867, and articles exempted from the payment of duties in accordance with contracts now in force.

NEW TELEGRAPH AND TELEPHONE LINES.

The National Assembly of Panama has authorized the President of the Republic to complete the double-wire telegraph line from Panama to Santiago de Veragnas and to have the following telegraph lines constructed: From Panama to Colon; from Colon to Portobelo; from Portobelo to Santa Isabel; from David to Chiriqui Grande; from David to Alanje, Boqueron, Bugaba, and Gualaca; from Penonome to Ola; from Santiago to San Francisco y Santa Fe; from Agua Dulce to Calobre; from La Mesa to Cañazas; from Los Pozos to Las Minas, Pocri, Pedasi, and Tonosi.

The Executive has also been authorized to construct the following telephone lines: From Panama to Corregimiento de Pacora and to the Cheopo district, and from Capira, Chame, San Carlos, Anton, Penonome, Santiago, Sona, Horconcitos, David, and Las Tablas to their respective ports. Wireless telegraphic communication is to be established between Colon and Bocas del Toro. An appropriation of $100,000 has been made and placed at the disposal of the President for the purpose of enabling him to carry out the work referred to.

DUTIES ON IMPORTED CATTLE.

The law of December 3, 1908, imposes a duty of $20 and $15 per head on steers and cows, respectively, imported into the Republic of Panama. The same law authorizes the President to reduce these duties 50 per cent whenever he deems that the price of meat in the Republic justifies him in doing so. The aforesaid duties apply to slaughtered cattle, as well as to cattle on the hoof. In the case of the former, four quarters is considered a complete animal, or 400 pounds when the beef is imported in pieces less than quarters. Fine cattle for breeding purposes, imported from the United States, Europe, and Jamaica, are admitted free of duty.

NATIONAL NAVIGATION COMPANY'S SUBVENTION.

For the purpose of developing the coastwise trade of the Republic, the Federal Congress has granted to the National Navigation Company of Panama, a subvention of 4 per cent per annum on the invested capital of the company, provided the amount of said capital does not exceed $300,000. The Executive has been authorized to make a contract with the company for carrying the mails between ports of the Pacific coast, the consideration for this service not to be more than $1,250 per month, the company to make such number of round trips as the President of Panama may deem desirable, and to transport up to one ton of government freight free of charge, the excess of government freight to be paid for at a discount of 40 per cent from tariff rates. Persons traveling in the vessels of the company at the expense of the Government are entitled to a discount of 50 per cent from the regular rates.

ELECTRIC LIGHTING IN PANAMA.

The Government of Panama has contracted with the Panama American corporation to furnish electric light to the city of Panama, for eleven hours each night, at the rate of $23.45 per month for each arc light, and $2 a month for each incandescent light used. Should the company fail to furnish light to the city for thirty consecutive days, without sufficient reason, the concession will be forfeited.

MORTGAGE AND LOAN BANK.

The National Congress of Panama has empowered the President of the Republic to place at the disposal of the Mortgage and Loan Bank the amount lacking to complete its capital of $500,000. The bank has also been authorized to issue interest-bearing bonds or certificates, secured by mortgages on urban and rural property, to run for such period of time as the board of directors may determine. These bonds will be payable to bearer, and possession of same is sufficient proof of ownership. The bank may also receive interest-bearing deposits in such manner as the board of directors may determine, and is authorized to discount the vouchers of government employees. No loan on urban property shall be made to any one person in excess of $9,000, and loans on rural property to any one individual must not exceed $7,000.

CARE OF HISTORIC BUILDINGS.

An appropriation of $1,000 has been made by the National Assembly of Panama for the preservation of the historic castles of Chagres and Portobelo, and the Basilica de Nata. They will be maintained in their present form without modifying the style of their construc-

tion. A watchman has been appointed to care for the castle of San Lorenzo of Chagres.

CIVILIZATION OF NATIVE TRIBES.

The National Assembly of Panama has authorized the President, in cooperation with the head of the Catholic Church in the Republic, to use all means possible for the civilization of the savage tribes of native Indians who inhabit parts of the country. The methods to be used in the accomplishment of this end are the employment of Catholic missionaries, supported by the Government, the appointment of school-teachers to conduct schools in the regions referred to, and the establishment, by means of contract, or otherwise, in convenient places and under the supervision of the Government, of villages that will serve as missionary posts and centers of communication with the native Indians. Concessions of land will be granted to families, or individuals, who settle as colonists at places designated by the Government, and these colonists and the families of native Indians who become civilized will be assisted by the Government, in so far as may be necessary, with tools, stock, seeds, and other indispensable articles. Fifteen scholarships in the School of Arts and Trades in the city of Panama, will be given to natives of the coast of San Blas and Darien. The Congress will furnish the funds necessary to carry into effect the purposes of this law.

PARAGUAY

INDUSTRIAL VALUE OF CURUPAY WOOD.

The wood of the curupay tree, which grows in great abundance in eastern Paraguay, is hard and very durable, being extensively used for ties, piles, construction, and hydraulic timber. It is not so well known as the quebracho or ironwood, but in many particulars it equals and even surpasses it in industrial value. As it does not contain so much tannic acid as the quebracho, its use as railroad ties does not cause the corroding of the iron spikes used in laying the cross ties, while at the same time its durability is as great as that wood.

A sufficient quantity of tannin is present, however, in curupay bark to render it a valuable agent in tanning work, and its commercial value in the United States and Europe is well known and appreciated. From 14 to 26 per cent of tannin is ascribed to the bark by "*El Economista Paraguayo*," which urges an active propaganda for the product among railway and tanning companies.

The tree also yields an excellent gum similar to gum arabic, though its commercial value is not yet fully established.

PERU

RAILWAYS PROJECTED AND IN OPERATION.

In a consideration of the advantages that would accrue to the Republic of Peru through the construction of a great coastal railway, the "South American Journal" for December 19, 1908, states that the very close approximation of the Cordillera of the Andes to the western coast line of South America renders such construction peculiarly difficult and costly. The opening of the Panama Canal will undoubtedly give an immense impetus to all kinds of enterprises on the Pacific seaboard, and coastwise railways for the transport of cattle and produce would prove remunerative and economically valuable.

The future of the mountain lines is bound up in the immense mineral wealth of the Cordillera, which is still largely undeveloped, owing to difficulties of transport. Of the two most important railway systems of the country, the principal is the Central, which starts from Callao and runs eastwardly to Oroya, a distance of 100 miles as the crow flies, but to reach which point an additional 40 miles of winding is necessary. Thence a branch line proceeds to the north to the celebrated Cerro de Pasco copper mines, and another branch goes in a southeasterly direction for about 75 miles, following the Mantaro Valley, reaching Huancayo on the road to Ayacucho still further to the southeast. The building of the Huancayo-Ayacucho connection is part of the intention to ultimately extend the line to Cuzco, the ancient capital of Peru, which lies some 150 miles to the southeast.

The other important railroad is the Southern, which runs from Mollendo, on the coast, through Arequipa to Puno, on Lake Titicaca, a distance of over 300 miles, from which point it connects with a line of steamers running to the Bolivian lake port of Guaqui. From Juliaca, near the shores of Lake Titicaca, a branch, running northwest for about 125 miles to Sicuani, has been open for some years, and is in process of extension to Cuzco. The rails reached Cuzco on September 13, 1908, so that the linking up of the Central and Southern systems will need only some 300 miles of track from Huancayo to Cuzco.

Other railways in operation comprise spurs running from minor ports for comparatively short distances up the various river valleys and are used for transporting rice, cotton, and sugar to the coast. The building of a line from Lima to Huacho received government approval a few years ago, and several sections of coast lines have been surveyed and projected, but so far the competition of transport by sea has proved an obstacle to effective work.

A VIEW IN THE MINING REGION OF INTERIOR GUATEMALA, SHOWING THE CHARACTERISTIC TOPOGRAPHY OF THE COUNTRY.

THE BULL MONUMENT, ERECTED ON THE PASEO DE LA REFORMA, GUATEMALA CITY, DURING THE PRESIDENCY OF REINA BARRIOS, AS PART OF THE SCHEME OF ORNAMENTATION OF THIS BOULEVARD, WHICH IS THE PRINCIPAL THOROUGHFARE OF THE CAPITAL CITY.

Private feeder lines belonging to the sugar haciendas are very numerous and in the aggregate quite as important as the small trunk line they connect with.

Of the two leading railways, the Central depends mainly on the traffic of the mines and the Southern on through traffic with Bolivia. Timber, coke, machinery, etc., for the various mines and smelters it serves form the staple up traffic of the Central, while the transport of minerals, in which the district is marvelously rich, covers the down trade. The table-lands of the sierra are capable of raising much agricultural produce, but the market is at present limited, and while an abundance of good coal is found in the higher Andean regions it can not compete with seaborne coal after paying the cost of transport to the coast.

GOVERNMENT STUDENTS ABROAD.

An executive decree of January 2, 1909, provides for the annual appointment of four Peruvian professional students to complete their studies abroad. Two of these must be graduates of the School of Engineering and two of the National Agricultural and Veterinary College, the selection to be made from students who have a knowledge of the rudiments of the English language, whose deportment is good, and who have obtained the highest grades in their studies at the institutions named. The Government will pay a salary to the appointees referred to, and their traveling expenses from Peru to the foreign country and return. After the expiration of the two years mentioned the appointees will return to Peru and enter the service of the Government at the same salary they have received during the period of their appointment, and will serve the Republic for an equal length of time.

CONSULAR CONVENTION WITH THE NETHERLANDS.

The consular convention which the representatives of the Governments of Peru and of the Netherlands, signed in Lima on September 26, 1907, the full text of which was published in the "*Diario Oficial*" of the Republic, under date of July 18, 1908, has been ratified by the respective governments and is now in force. The convention is for a period of five years and provides for the admission of Peruvian consuls, vice-consuls, and consular agents in the colonies of the Netherlands, and extends to them the privileges and immunities accorded to the most favored nation.

SALVADOR

CONSULAR INVOICES NOT REQUIRED FOR PARCELS POST.

United States Minister H. PERCIVAL DODGE transmits from San Salvador a copy and a translation of a decree of the Government of Salvador, dated December 16, 1908, suspending the decree of September 26, by which it was provided that all postal parcels be accompanied by consular invoices. The latter decree was to go into effect on January 1, 1909.

POSTAL REGULATIONS.

The full text of the new postal rules and regulations of Salvador, promulgated November 3, 1908, is published in the "*Diario Oficial*" for December 23, 1908. The post-offices of the Republic are divided into four classes, those of the first class being Santa Ana, San Miguel, Sonsonate, Santa Tecla, Cojutepeque, and San Vicente.

UNITED STATES

TRADE WITH LATIN AMERICA IN 1908.

Import values on the part of the United States during 1908 are officially reported by the Bureau of Statistics as $1,116,449,681, as compared with $1,423,169,820 in 1907, while exports for the two periods amounted to $1,752,833,247 and $1,923,426,205, respectively.

The share of Latin America in this trade was as follows:

	Imports.		Exports.	
	1907.	1908.	1907.	1908.
Central American States:				
Costa Rica	$5,281,877	$4,004,629	$2,840,539	$2,196,459
Guatemala	4,243,795	1,903,911	2,310,593	1,743,839
Honduras	2,477,586	1,946,838	1,809,039	1,540,280
Nicaragua	1,202,878	1,031,131	1,790,598	1,297,163
Panama	1,680,953	1,447,525	18,665,323	16,799,630
Salvador	1,191,701	1,033,350	1,592,473	1,404,573
Total Central American States	16,078,790	11,370,384	29,008,565	24,981,941
Mexico	56,895,722	42,854,972	67,711,315	46,463,041
Miquelon, Langley, etc	161	1,688	57,280	34,381

	Imports.		Exports.	
	1907.	1908.	1907.	1908.
West Indies:				
British	$12,880,220	$10,972,009	$12,138,434	$12,068,469
Cuba	92,429,267	79,114,972	52,543,849	42,451,224
Danish	436,490	391,889	703,293	674,938
Dutch	381,388	265,009	716,460	687,531
French	48,562	53,397	1,520,898	1,405,107
Haiti	1,220,420	447,186	3,145,853	3,500,775
Dominican Republic	3,310,918	5,279,477	2,519,774	2,723,408
Total West Indies	110,707,265	96,523,949	73,408,561	63,511,452
SOUTH AMERICA.				
Argentine Republic	16,171,129	13,155,468	30,111,672	33,519,955
Bolivia		385	1,502,622	687,307
Brazil	85,036,070	81,039,224	21,002,566	16,973,977
Chile	17,944,580	12,491,122	11,439,821	5,373,911
Colombia	6,466,429	6,897,493	3,169,382	3,690,014
Ecuador	2,835,395	2,196,131	1,884,107	1,814,434
Falkland Islands	16,916	1,499	606	998
Guiana:				
British	350,792	821,282	1,826,146	2,018,462
Dutch	834,721	787,386	623,056	599,439
French	27,128	29,753	262,580	347,698
Paraguay	7,261	16,347	170,893	55,229
Peru	7,098,298	5,857,221	6,876,217	5,815,495
Uruguay	2,902,085	2,106,943	3,971,001	3,134,691
Venezuela	7,590,139	7,028,180	2,771,739	2,566,022
Total South America	147,680,943	132,431,434	85,612,408	76,597,635

NATIONALITY OF CANAL EMPLOYEES.

Publication is made in the "Star and Herald," of Panama, for January 18, 1909, of an executive order providing for the employment of citizens of Panama in the service of the Canal Commission on the same basis as those of the United States.

It is stated that the order of February 8, 1908, has been amended to provide that the employment by the Isthmian Canal Commission of skilled laborers, clerks, and others who have been heretofore known as gold employees, shall be restricted to citizens of the United States and Panama, except in cases where the labor or service required may not be obtainable under these classifications. Foreign employees now upon the pay rolls are not to be affected by this order, save that in the event of any reduction of force United States and Panama citizens shall receive preferential consideration.

VENEZUELA

THE ZULIA RIVER OPENED FOR COLOMBIAN COMMERCE.

An executive decree of the Venezuelan Government of December 21, 1908, opens the Zulia River to commerce with Colombia. Foreign commerce may now be sent, via Maracaibo, Venezuela, in transit for points in Colombia tributary to the Zulia River, and Colombian prod-

ucts may be exported via the same route, all former decrees and regulations of the Government of Venezuela concerning the subject having been repealed.

TRANSPORTATION OF SALT IN NATIONAL VESSELS.

A telegraphic circular, issued by Gen. JUAN VICENTE GOMEZ, President of the Republic of Venezuela, on December 22, 1908, instructs the administrators of the custom-houses at Puerto Cabello, La Guaira, Tucacas, La Vela, Maracaibo, Guanta, Puerto Sucre, Pampatar, Carúpano, Ciudad Bolívar, and Cristobal Colón, to give, from date, Venezuelan sailing vessels the preference in the shipments of salt.

TARIFF MODIFICATIONS.

An executive decree of Venezuela, issued on December 28, 1908, places, on and after that date, the following articles in Class VI of the customs tariff, thereby making them dutiable at the rate of 2 *bolivars* 50 *centimes* per kilogram: Chintz, percales, nainsook, sateen, poplin (cotton), cretons, calicoes, carlancanes, brilliants, malvinas, Japanese cloth, lustrings, striped cotton fabrics which have more than 13 threads in the warp in a square of 5 millimeters, cotton merino, and colored cotton flannel, muslins, crape, linó, rengue, bareje, grenadines, organdy, zephyr, clarin, dulce sueño, tarlatan, muité, Holland batiste, cotton batiste, white or figured, smoothed, worked, or embroidered, in bolts or pieces for dresses, etaminas, and any other similar fabrics not included in other classes that serve for women's suits. Matches of all kinds, except "*estrellitas*" or Bengal matches, are also placed in Class VI. The original provision contained in No. 416 of the tariff law, which was modified by decree of November 17, 1908, remains in force with regard to tinder boxes and flints or wicks for tinder boxes.

A decree of January 5, 1909, provides that tallow and other ordinary grease for making soap, tallow prepared for candles, stearic and oleic acid, pure unmanufactured stearin, and commercial stearin shall in future be classified according to the customs tariff in force.

On and after January 11, 1909, wheat in the grain, wheat flour, and cracked wheat or grits imported into the Republic shall pay duty according to Class III, or at the rate of 25 *centimes* of a *bolivar* per kilogram.

PORTS OPENED TO COMMERCE.

An executive decree of December 31, 1908, provides for the opening of the Venezuelan ports of Carúpano, Cristobal Colón, and Puerto Cabello, on and after January 1, 1909, to operations connected with the transfer of imports and exports from the other ports of the Republic in accordance with the customs laws now in force.

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PIER AT POCITOS, URUGUAY.

Pocitos is a seaside resort and watering place near Montevideo, where the inhabitants of that city spend their summer vacations. The suburb contains many fine private residences owned by the well-to-do people of the capital. One of the prettiest sights in the world is a *dia de moda* at Pocitos, when the streets are crowded with fine equipages and the promenades thronged with beautiful and handsomely gowned women.

VIEW OF CARACAS, VENEZUELA, FROM "EL CALVARIO" HILL.

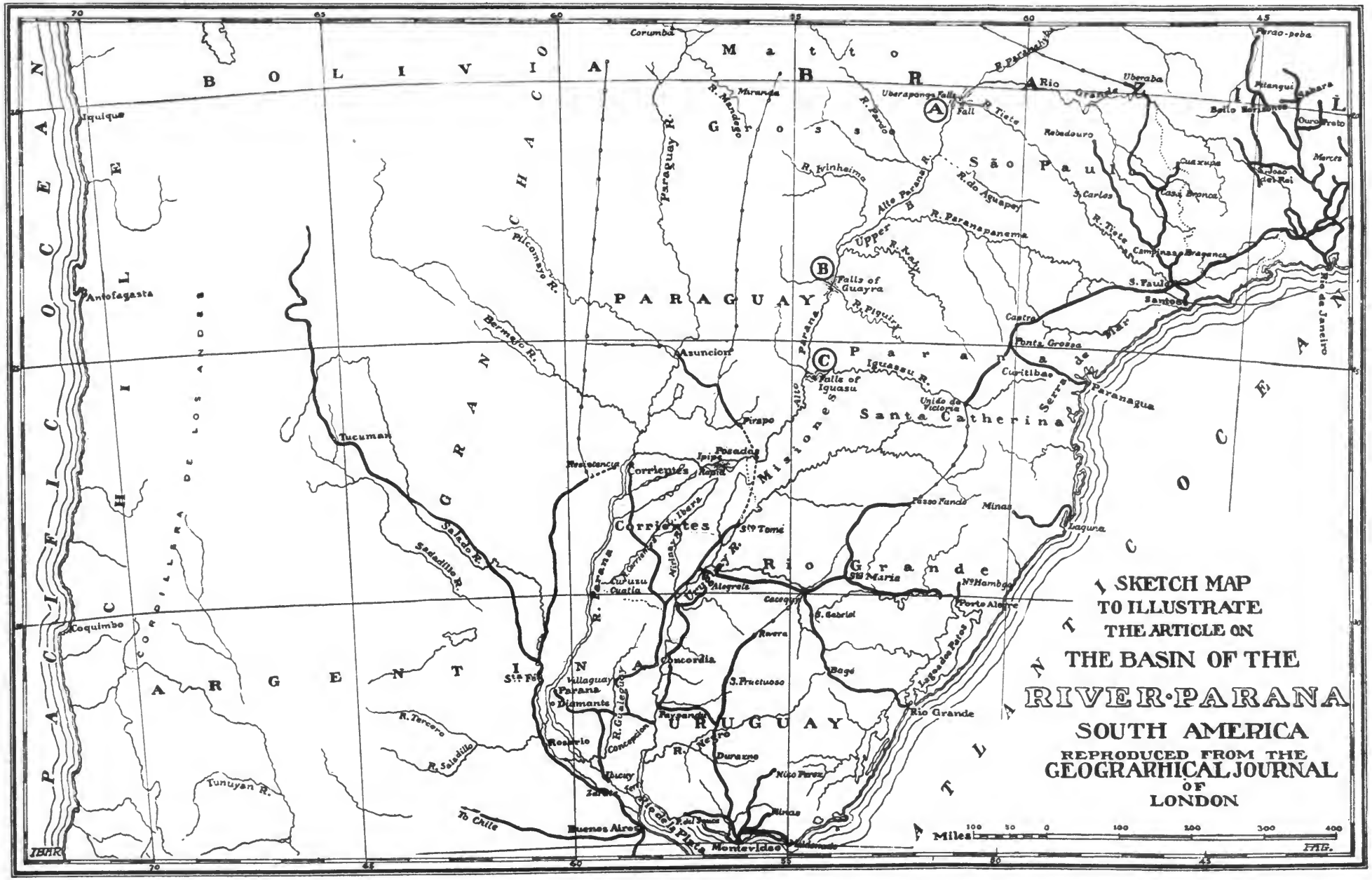
Practically the entire city can be seen from the summit of this hill, which only a few years ago was an arid height. It is now irrigated and ornamented with fountains, statues, trees, and tropical plants, and is traversed in all directions by excellent carriage drives.

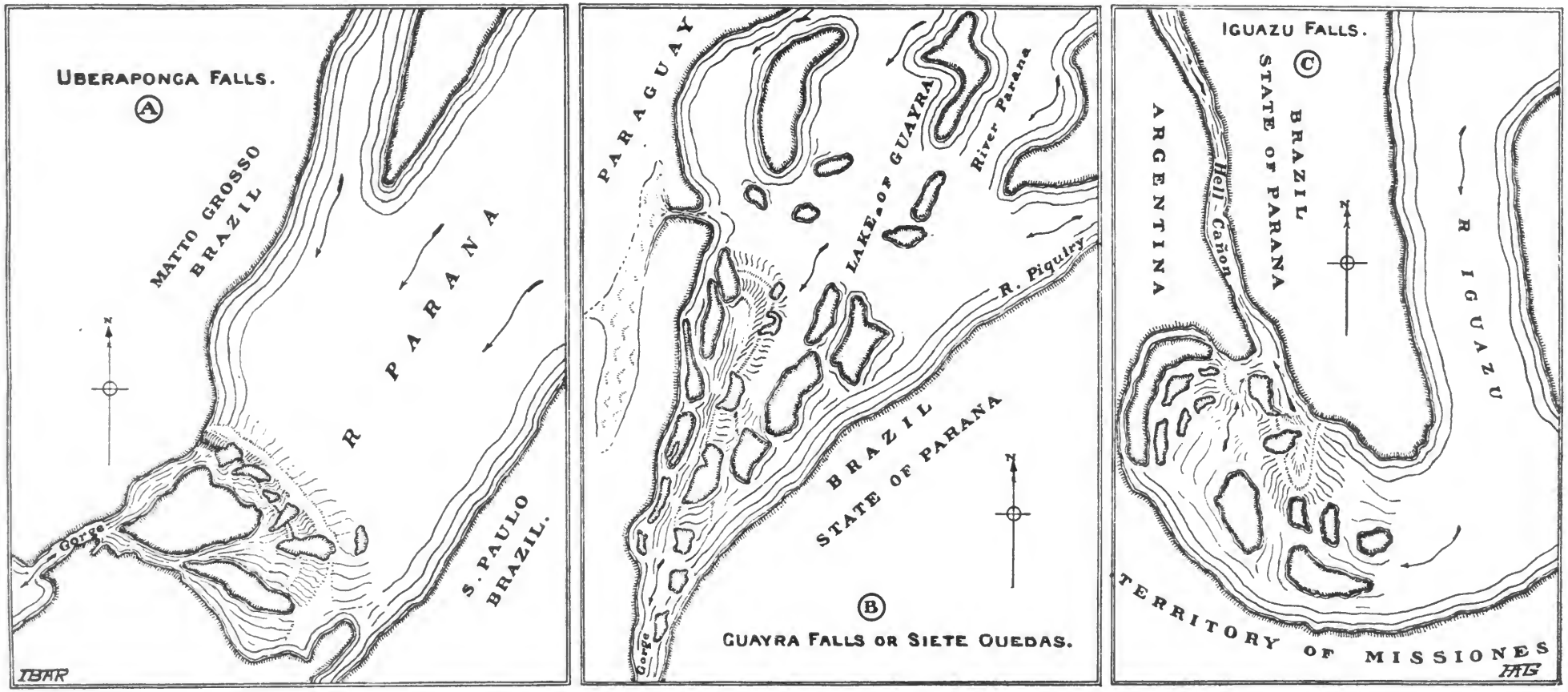
THE EMBASSIES AND LEGATIONS OF THE LATIN-AMERICAN REPUBLICS IN WASHINGTON

1—LEGATION OF THE ARGENTINE REPUBLIC (1800 MASSACHUSETTS AVENUE, N. W.).
2—BOLIVIAN LEGATION (1633 SIXTEENTH STREET, N. W.).
3—BRAZILIAN EMBASSY (1758 K STREET, N. W.).
4—CHILEAN LEGATION (1529 NEW HAMPSHIRE AVENUE).
5—COLOMBIAN LEGATION (1728 N STREET, N. W.).
6—COSTA RICAN LEGATION (1329 EIGHTEENTH STREET, N. W.).
7—CUBAN LEGATION (THE WYOMING).
8—LEGATION OF THE DOMINICAN REPUBLIC (THE BENEDICT).
9—ECUADOREAN LEGATION (1614 I STREET, N. W.).
10—GUATEMALAN LEGATION (THE HIGHLANDS).
11—HAITIAN LEGATION (1429 RHODE ISLAND AVENUE).
12—MEXICAN EMBASSY (1415 I STREET, N. W.).
13—NICARAGUAN LEGATION (2003 O STREET, N. W.).
14—PANAMA LEGATION (THE HIGHLANDS).
15—PERUVIAN LEGATION (THE BACHELOR).
16—SALVADOREAN LEGATION (THE PORTLAND).
17—URUGUAYAN LEGATION (1529 RHODE ISLAND AVENUE).

THE UNITED STATES BATTLESHIPS "MAINE" AND "MISSISSIPPI" ENTERING HAVANA HARBOR ("MAINE" LEADING) AT 11 O'CLOCK A. M., MONDAY, JAN
THE "MAINE" HAS JUST CONCLUDED THE NATIONAL SALUTE OF TWENTY-ONE GUNS TO THE NEW GOVERNMENT, AND (IN THE LOWER F
WHICH IS TO BE INSTALLED ON ALL THE BATTLESHIPS OF THE UNITED STATES NAVY.

, JANUARY 25, 1909, TO PARTICIPATE IN THE CEREMONIES ATTENDING THE INAUGURATION OF THE PRESIDENT OF CUBA, GEN'L JOSÉ MIGUEL GOMEZ.
/ER RIGHT HAND CORNER) CABAÑAS FORTRESS IS RETURNING THE SALUTE. THE "MISSISSIPPI" IS EQUIPPED WITH THE NEW STYLE MILITARY MAST


SKETCH MAP
TO ILLUSTRATE
THE ARTICLE ON
THE BASIN OF THE
RIVER·PARANA
SOUTH AMERICA
REPRODUCED FROM THE
GEOGRARHICAL JOURNAL
OF
LONDON
BOLIVIA
PARAGUAY
ARGENTINA
URUGUAY
Matto Grosso
São Paulo
Santa Catherina
Rio Grande
Corrientes
Misiones
Pacific Ocean
Atlantic Ocean
Cordillera de los Andes
Gran Chaco
Buenos Aires
Montevideo
Asuncion
Rio de Janeiro
Miles



THREE GREAT FALLS
OF THE
PARANA BASIN

Reproduced from the Journal of the Royal Geographical Society of London.

Sincerely Yours

Wm H Taft