

## V

### PUBLIC SERVICE

PUBLIC FINANCE—PUBLIC SERVICE COMMISSION—DEVELOPMENT OF PUBLIC WORKS—REGISTRY OF DEEDS—BOARD OF MEDICAL EXAMINERS—WORKMEN'S COMPENSATION ACT—TIMBER DEPLETION—POLICE DEPARTMENT—PENAL INSTITUTIONS—BUREAU OF WEIGHTS AND MEASURES.

#### Public Finance

By José E. Benedicto Géigel, A.B., LL.B.,

Former Acting Governor and Treasurer of Porto Rico. Former member of the Law Faculty of the University of Porto Rico. Ex-Property Registrar. Former District Judge of San Juan. Past President and Treasurer of the Bar Association.

**Initial Taxation:** The first taxes levied in Porto Rico were levied in 1509. On May 1 of that year Don Juan Ponce de León recommended to Don Nicolás de Ovando, Governor of the West Indies, a system of taxation for the support of the new colony of Porto Rico, the agreement having been made that Ponce should utilize a certain number of Indians for the operation of the gold mines existing in the island. One-fifth of the gold obtained was to go to the King of Spain; two-fifths were to be devoted to the support of the colony, and the other two-fifths were to belong to Juan Ponce de León, who was to pay all the expenses of said undertaking. It is estimated that the amount of gold obtained from 1509 to 1536 was three and a half million dollars, and that the two-fifths devoted to the support of the colony, amounted to about 17,000 dollars a year. In addition to this, land was sold and the proceeds used in defraying the general expenses of the colony.

As may be seen, the first receipts of the government of Porto Rico were obtained from the natural resources of the island, and from the labor of its inhabitants.

**Duties on Imports and Taxes on Mines:** Subsequently, a duty of  $7\frac{1}{2}\%$  ad valorem was placed on imports, and a tax of  $12\frac{1}{2}\%$  on the value of every 20 pounds of salt extracted from the deposits near Cabo Rojo.

When the mines became exhausted at about the beginning of the nineteenth century, the receipts of the government were insufficient to meet expenses, and for this reason the Crown of Spain directed that a yearly sum be sent from the Mexican Treasury to Porto Rico, for the support of its government. This was done till 1810 when

Mexico became an independent republic. It is estimated that the sums so received amounted to \$13,044,077.

**System Established by Don Alejandro Ramírez:** The first real system of taxation in Porto Rico was established by Don Alejandro Ramírez, a notable financier, statesman and public writer, who held the office of Secretary to the Government of Guatemala, and was later appointed Intendente General of Finance of Porto Rico.

His beneficent influence was soon noted and the financial condition of the island improved rapidly. He organized a custom-house system and a system of taxation by virtue of which the inhabitants of each town paid to the central government an annuity in proportion with the production of the town. Other taxes were levied in the course of time, and in 1827, for the first time in its history, the Treasury of the island was able to liquidate all its obligations. Ten years later it contributed to the national government the sum of half a million dollars for the prosecution of Spain's wars.

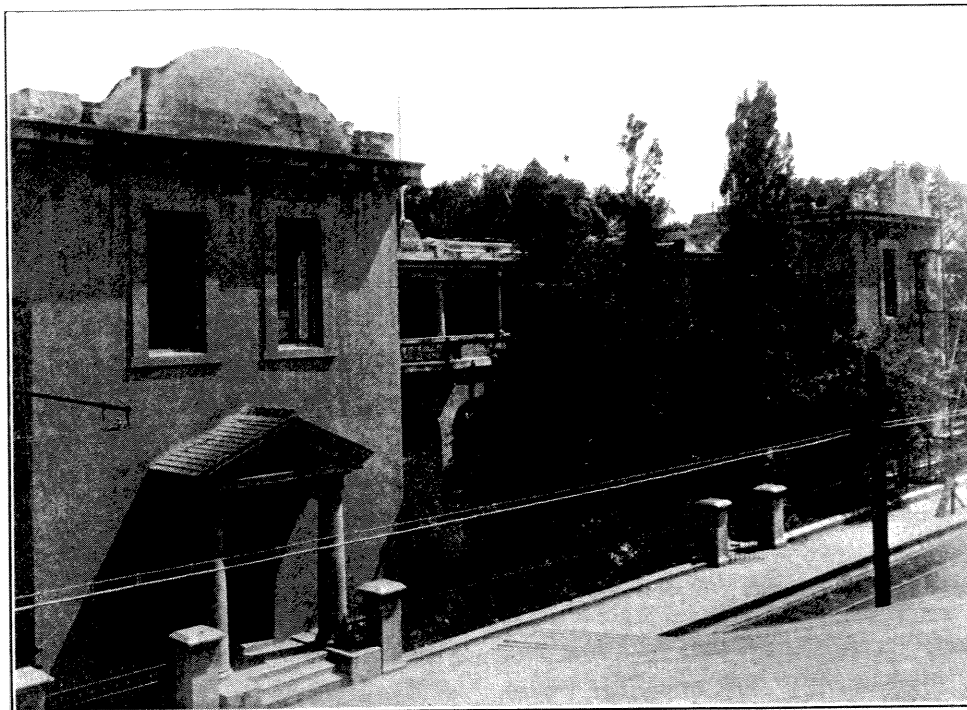
**Sources of Income, 1898:** When the island ceased to belong to Spain the sources of income of the Public Treasury were the following: Customs receipts; Land Tax; Commercial and Industrial Tax; Harbor Fees; Stamped Paper; Postage; Dues on Transfers of Real Property; Lottery Tax, and certain other incidental taxes of slight importance. Total receipts for the fiscal year 1897-98 were \$5,107,093.

**Present Sources of Income:** The laws at present regulating the Department of Finance are substantially the same as were enacted on the establishment of civil government in 1900, under

American domination. But there is the important exception of the Income Tax Act, promulgated later on.

The most important sources of income of the Public Treasury are: Direct taxation on real and personal property; internal revenue taxes; cus-

of \$4,944,752.64, distributed as follows: For support of the different municipalities of the island, \$2,624,261.89; proportional part for the Insular Government, \$414,866.26; for school purposes, \$303,655.69; for redemption of insular loans, \$455,483.64; for redemption of municipal



ESCUELA MCKINLEY, PONCE.—NAMED AFTER THE MARTYR PRESIDENT.

toms receipts, and the income and excessive profits taxes, there also being others of lesser importance.

**Real and Personal Property Taxes:** The proceeds of real and personal property taxes are in the first place devoted to the support of the government in the different towns of the island. A part of said taxes is covered into the general funds of the Insular Government, and the remainder is used in the amortization of insular and municipal loans. The general property tax is \$1.25 on every \$100 of assessed valuation, while the municipalities are empowered to levy special taxes for public works or for the redemption of loans contracted for public works.

**Distribution of Receipts from Property Taxes:** The total assessed valuation of property in Porto Rico for the fiscal year 1921-22, was \$303,200,578.00 on which there was levied a tax

loans, \$968,048.02, and for other amortizations, \$178,437.14.

**Taxes on Articles not of Prime Necessity:** The manufacture of, and introduction into the island, of articles for use and consumption, not of prime necessity, have been taxed certain internal revenue fees which constitute one of the chief sources of income of the Insular Treasury. During the fiscal year 1921-22, total receipts from this source amounted to \$2,706,619.85. Besides, the internal revenue taxes paid in the United States on tobacco and alcohol imported from Porto Rico, are also covered into the Insular Treasury by virtue of a special law to that effect, such taxes having produced during the aforesaid fiscal year, the sum of \$865,727.18.

**Customs Duties:** The custom-houses of the island are operated by the Federal Government, but the proceeds therefrom are covered into the

treasury, \$525,000 having been collected during the year above stated. This figure seems exceedingly small as compared with the great importation of the island, but it must be borne in mind that such importation is chiefly from the United States and is not subject to the customs tariff which is applicable to imports from foreign countries only.

**Income Tax:** When the income tax was levied in the United States, the law was made extensive to Porto Rico, under control of the insular Department of Finance, the proceeds being covered into the island treasury. Subsequently, an Act of the Congress of the United States gave the insular Legislature freedom to enact an income tax law, and under such power the Legislature passed its first law establishing such tax in 1918. Two other laws were later enacted, one in 1919 and the other in 1921. This last law which is now in effect provides for a normal tax of 3% on the net income of individuals, partnerships and corporations, and an additional tax on a progressive scale on net incomes exceeding \$5,000 in cases of individuals, and another tax on the excessive profits of partnerships and corporations whose annual gains exceed 10% of invested capital.

During 1921-22 the public treasury received from these sources the sum of \$4,163,197.84, but this amount should not be taken as an average. The year 1920 was one of exceptional prosperity, profits in all businesses having been very large. It is estimated that for the year 1922-23 the total receipts from income taxes and excess profits will be \$2,500,000.

**Miscellaneous Receipts:** Other receipts of relative importance are derived from the inheritance tax; interest on deposits of public funds in credit institutions; fines and costs; harbor fees, and the insular telegraph and telephone system, which during said year amounted to \$479,514.44.

**Condition of Insular Treasury, June 30, 1922:** The total amount received by the Insular Treasury from all sources in the aforesaid fiscal year was \$9,453,759.03, which sum, added to the surplus remaining from the preceding year, was sufficient to cover all the expenses of the Insular Government and to leave a surplus of cash on hand at the close of business on June 30, 1922, of \$900,588.89.

This was a very satisfactory result, moreover, if it is borne in mind that the island, just as all the rest of the world, has experienced a grave financial crisis due to the rapid fall in the prices of almost all articles and products. It is very worthy of notice that during the fiscal year above mentioned the Department of Finance did not find it necessary to sell property of taxpayers for non-payment of taxes. Not a single sale was made during that year.

**Debt of the Insular Government:** The total debt of the Insular Government on June 30, 1922, was \$11,895,000, represented by bonds of different issues. These obligations have been contracted chiefly for the construction of a complete system of roads connecting all the towns of the island; for the construction of an irrigation system on the southern coast, which has considerably increased the wealth of the district, and for the improvement of the harbor of San Juan.

**Insular Loans and their Redemption:** For the payment of interest on, and the repayment of principal of, the road construction loans, a tax of 15/100 of 1% has been levied on all assessed property in the island. The loans for irrigation works and the interest on such loans, are paid out of the proceeds of a special tax levied on irrigated land, and the obligations contracted for the San Juan harbor works are redeemable from receipts on account of dock, bulkhead and harbor fees.

There is a sinking fund for each of said loans, and the estimates have been so correctly made that the obligations of the government have always been promptly met.

**Credit of the Insular Government:** At the present time nothing is due on account of arrears. The first two bond issues will fall due in 1927 and the third in 1939, and there are already accumulated in the respective redemption funds sums sufficient to meet the payments of principal and of interest to the date of maturity. Porto Rico's credit is firmly established on the market of the United States, and specially on the New York market, where its bonds are sold at a premium. Irrigation bonds in the sum of \$250,000 at 40 years time and 5½% were recently sold at \$113 for each \$100 bond, the sale having been more than satisfactory.

**Municipal Loans and their Redemption:**

The municipalities of the island have also issued bonds for the construction of public works, and it is due to these loans that they have progressed so noticeably as they have during the last few years.

In accordance with law, the Insular Treasury

must withhold from municipal taxes a sufficient amount to pay the interest on these loans and to repay the principal, and the amounts so withheld are covered into a redemption fund which has always been sufficient promptly to meet the obligations of the different municipalities.

## The Public Service Commission

By **Federico G. Pérez Almirot, LL.B.**,

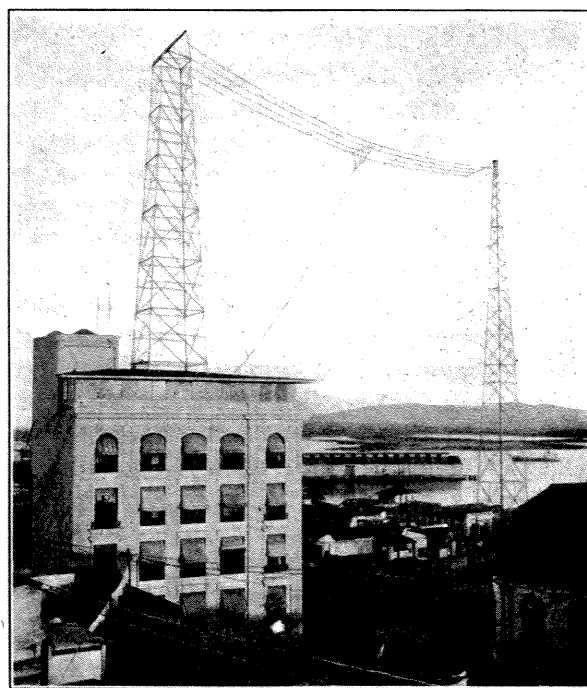
Secretary-Attorney of the Public Service Commission.

**Antecedents:** Prior to the Treaty of Paris, marking the close of the Spanish-American War, and while the island of Porto Rico was under Spanish sovereignty, all matter relative to the granting of franchises, privileges and concessions of a public or quasi-public character were considered and decided through the Overseas Ministry and according to the provisions of the laws then in force applicable to the matter, such as the Law of Railroads (January 10, 1888), the Law of Waters (June 30, 1879), made extensive to Porto Rico by Royal Order of February 7, 1888, and, finally, the Law of Mines (June 6, 1859), amended March 4, 1868. From the month of October, 1898, when the American Military Government was established in the island, to May, 1900, at which time the Foraker Act took effect, such concessions were entrusted to the military authorities, though subject to the approval of the Secretary of War, according to the terms of a General Order issued by the President.

The aforesaid power was vested in the Executive Council on May 1, 1900, by virtue of the provisions of section 32 of the Foraker Act, Congress having reserved to itself the right to amend or modify any franchise granted by the Executive Council with the approval of the Governor. Seventeen years later, or on March 2, 1917, the Foraker Act was repealed to be replaced by the Jones Act; the latter being the law by which we are governed at present. Section 38 of the Jones Act provides for the creation of the Public Service Commission as it has been functioning in Porto Rico ever since its final constitution on October 4, 1917.

**Organization of the Commission:** Said

section 38 of the Jones Act provides that the Public Service Commission shall be composed of the heads of the executive departments of the government, the Auditor, and two commissioners elected by the people at the first general election held under the provisions of the law in question, and at every subsequent election. The Commission, so constituted, is entrusted with the granting of franchises, privileges and concessions of a public or quasi-public nature. The Legislative Assembly of Porto Rico was at the same time granted power to enact laws for the regulation of

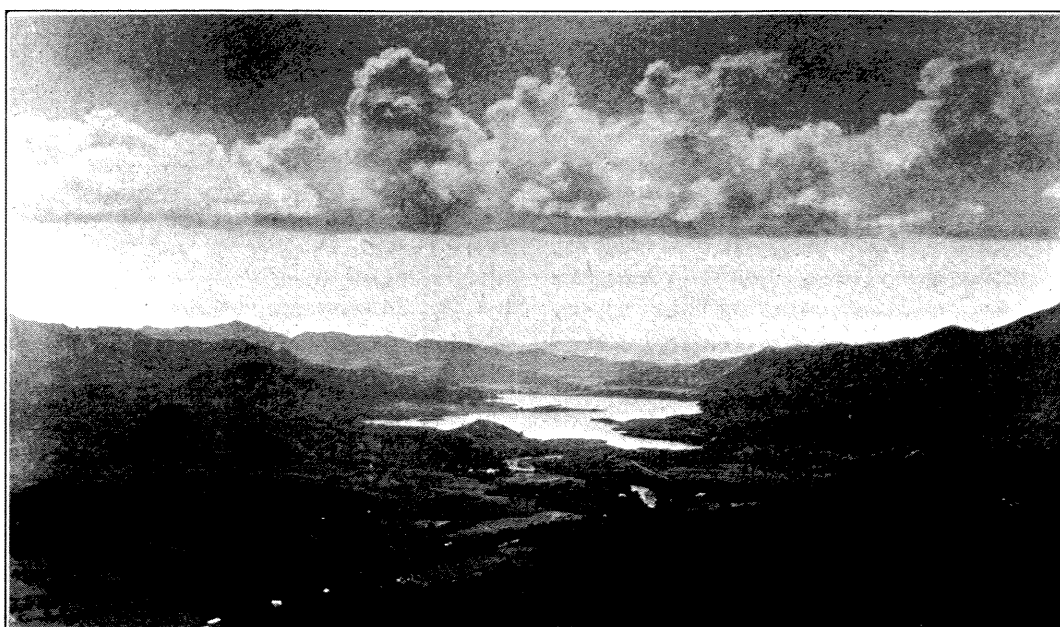


ESTACIÓN TRANSMISORA DE TELEFONÍA INALÁMBRICA.  
SAN JUAN WIRELESS TELEPHONE BROADCASTING STATION.

rates, schedules and services of railway public carriers, laws of this nature to be executed according to adequate regulation.

**First Commission:** The new system having been established after the general election prescribed by law, which was held July 16, 1917, the Commission was organized as follows: Elected members, José G. Torres and Leopoldo Santiago Carmona; ex-officio members, José E. Benedicto, Treasurer of Porto Rico; J. Bonner, Auditor of

ending June 30, 1917, came to a close, but nine months had elapsed from the date of final organization. In this short period of time, the Commission first proceeded to draft its rules and regulations, which were approved October 27, 1917. Since the Act creating the Commission provided that the Legislature of Porto Rico should enact a public service law prescribing the duties of, and procedure to be followed by, the Commission in cases brought before it for con-

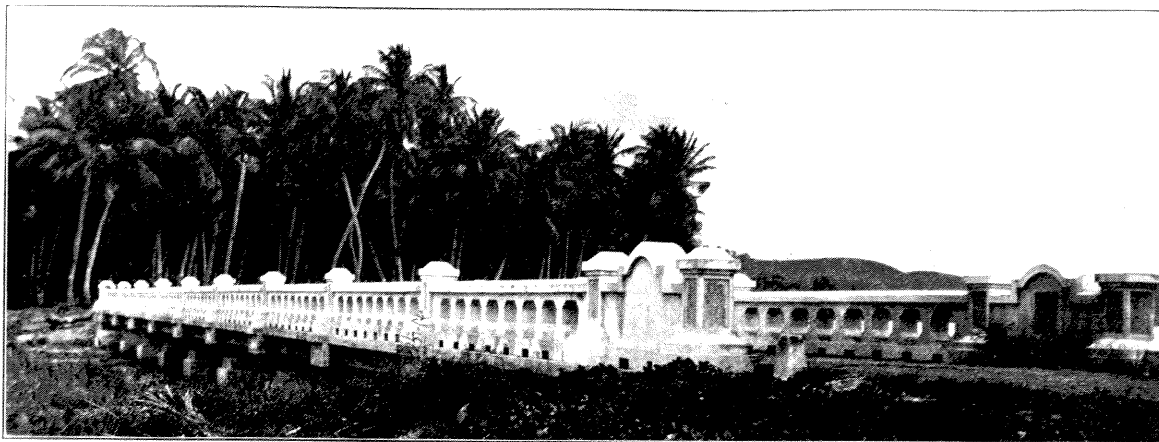


VERTIENTES TRIBUTARIAS Y ESTANQUE DEL GUAYABAL.—SERVICIO DEL RIEGO.  
AN ARTIFICIAL LAKE SURROUNDED BY GREAT NATURAL BEAUTY.

Porto Rico; Manuel Camuñas, Commissioner of Agriculture and Labor; Guillermo Esteves, Commissioner of the Interior; Howard L. Kern, Attorney General of Porto Rico; Paul G. Miller, Commissioner of Education, and Alejandro Ruíz Soler, Commissioner of Health. As soon as the Commission was constituted, it proceeded to elect its officers, the following gentlemen having been elected: Chairman, José E. Benedicto; Vice-Chairman, Howard L. Kern; Secretary, Pablo Berga, and Assistant Secretary, Interpreter and Translator, Filipino L. de Hostos.

**First Tasks of the Commission:** The first period of public as well as administrative labor of this important part of our present government, did not cover a full year, for as it commenced work on October 4, 1917, when the fiscal year

consideration and decision, and since such law was not enacted till December of the aforesaid year, the Commission found itself unable to act until the terms of such legislative measure were known. Hence, during the nine months from October, 1917, to June 30, 1918, the date on which the fiscal year closed, the work of the Commission was not as extensive as desirable. Notwithstanding, during said nine months the Commission held fifty-one meetings, twenty-six of which were public hearings. One hundred and fifty-nine cases of different kinds were presented, such as applications for franchises, complaints, administrative matters, complaints and petitions on matters of increased schedules, approval of rules and regulations and conveyance of franchises. Of these cases one hundred and twenty were decided



ARTÍSTICO PUENTE SOBRE LAS BOCAS DE SANTIAGO, NAGUABO.  
DESIGNED AND CONSTRUCTED BY TWO OF THE ABLEST MINDS OF THE YOUNGER GENERATION, COMMISSIONER OF INTERIOR ESTEVES AND CONTRACTOR F. BENÍTEZ REXACH.

and thirty were left pending for the following year.

**1918-19:** During the succeeding fiscal year, the work of the Commission was more intense, due to the progressive increase in the number of undertakings of a public nature requiring intervention of the Commission. Fifty-four regular meetings and thirty-three public hearings were held. The number of cases brought before the Commission was three hundred and five, distributed as follows: Miscellaneous, 111; franchises, 62; formal complaints, 24; applications for certificates of necessity and convenience, 108. Of these cases one hundred and ninety-nine were decided and one hundred and six left pending.

**1919-20:** The work of the Commission was even more intense during the year 1919-20, as may be seen from the following statistics: Fifty-three franchises were granted, to wit: Lighterage in the different ports of the island, 21; irrigation and industrial purposes, 18; docks, 1; electric plants, 7; launches for the transportation of passengers, 1; docks and lighterage, 1; oil pipes, 1; gas pipes, 1; molasses pipes, 1; belt-line railway, 1. Three hundred and fifty-six cases were filed with the Commission, of which two hundred and seventy-three were decided and eighty-three left pending. The Commission held forty-three regular meetings and nine public hearings.

**1920-21:** The total number of matters filed with the Commission during the fiscal year 1920-

21, was three hundred and fifty-three, of which three hundred and two were considered and decided, while fifty-one remained pending at the end of the year. The cases decided were as follows: Applications for certificates of necessity and convenience, issued to public carrier by motor vehicles, 127; schedules, 37; applications for franchises, 17; formal complaints, 10; approval of transfer and assignment of franchises, 7; tax exemptions, 4; miscellaneous, 75. The franchises granted are classified as follows: Water grants for industrial purposes, 6; for electric plants, 4; for irrigation purposes, 2; lighterage, 2; launches, 1; docks, 1; molasses pipes, 1; cables, 1.

**1921-22:** During the fiscal year 1921-22 the Commission held forty-two regular meetings, of which twelve were public hearings. In addition the Secretary, acting as a special examiner, held several other public hearings.

Of three hundred and fifty-three cases filed with the Commission, two hundred were finally decided, one hundred and fifty-three remaining pending to be disposed of in the succeeding year. Franchises were granted as follows: Docks, 2; lighterage, 1; mines, 1; fuel oil pipes, 1; for irrigation purposes, 1.

One of the most notable events recorded in this year, connected with the improvement of San Juan harbor, is the grant made by the Commission to F. Benítez Rexach for the construction of Pier No. 6, between Turner Street and The San Antonio Dock.

## Development of Public Works

By **Guillermo Esteves Volckers, C.E.**,

Commissioner of the Interior. President of the Association of Engineers  
of Porto Rico.

**A Picture of Progress.** Those who travel through Porto Rico have surely admired from its roads, the beautiful panoramas; the handsome bridges thrown across dangerous streams; the public and school buildings that seem to humble other structures in the towns and villages, and the fine public squares whose fountains indicate the existence of modern water supply systems, while at night the traveler will hardly see a town not lighted by electric power.

The fields also present the finest aspect. Excellent roads run through splendid cane-fields in the coast regions, and in the mountains through the best coffee plantations in the world, thus providing communication with outside markets. On the southern coast, irrigation canals provide water for the cane lands in times of drought, the water being supplied from enormous reservoirs.

Hundreds of ships enter the harbors of the principal ports of the island, either bringing big cargoes of necessities in the life of the country or carrying away treasure in the form of sugar, coffee, tobacco and fruits, the pride of Porto Rico's soil.

**Development of Public Works.** It may be said that public works in Porto Rico progress from day to day. Private initiative contributes greatly towards such progress in the fields and towns by constructing good roads joining the public ones, and by laying out industrial railroad routes opening up new valleys to the sugar industry. Irrigation systems are built and many towns have been and are under process of extension.

**Porto Rican Initiative in this Great Work.** But the traveler can not give Porto Ricans all the credit they deserve through the visible progress of the public works, because he does not know the time in which such progress has been achieved. The work in its present form has not been the achievement of the twenty-two years of American occupation, for between the years 1898 to 1908 very little was

accomplished along such lines. The big job has been done, it may be said, during the last twelve years, about when Porto Ricans began to take charge of such branches of the government as create and further this phase of activities.

**Three Periods or Stages.** In making a general review of the history of the island's public works, we must divide it into three periods. The first is the period of Spanish control; the second comprises the time of the reorganization of the government of the island, and the third is the period from the approval of Porto Rico's first loan of one million dollars in 1906 to the present time.

### FIRST PERIOD

**Directing Bodies.** Let us study the characteristics of these three periods. During the first and up to 1897 the public works were constructed under two administrations: The Provincial Deputation which supervised provincial public works, and the Department of Public works, a dependency of the office of the Overseas Minister, which department was in charge of State Public Works, such as first class roads, public buildings, lighthouses and buoys.

Both managements depended for the accomplishment of their purposes on such appropriations for the construction of public works as were included either in the development section of the national budget of Spain, or in the budget prepared by the Provincial Deputation for provincial public works.

**Cause of the Slow Progress of Public Works.** Those who at present know nothing of these organizations and their mode of operation, and criticize the slight progress made in the matter of public works during Spanish control of the island commit a grave injustice, for they do not stop to consider the fact that all circumstances were against its development. Since Porto Rico's progress depended greatly on such sums as the Spanish

government might appropriate, and since that nation was impoverished, its own most vital public works being undeveloped, it was only by means of tremendous effort that funds could be obtained for said works, some of which cost enormous sums, such as the San Juan-Ponce road, which cost nearly two millions of dollars.

On the other hand, the very limited wealth of the island would not permit of the expenditure of great sums in provincial works.

**The Work Done was Little but Good.** However, though progress was slow during this period the plan was intelligently adopted. The funds appropriated were used in the construction of the most necessary works, and these are a veritable monument to the efficiency of the engineers and their aides who built them. This being so because of the difficulty of the surveys and of the structures, both of which may serve as models to the present day engineers. They have not as yet been equaled because of the high estimates of cost. Few works were carried out during this period, but those that were completed were expensive, beautiful, safe and complete, such as engineering science prompts and requires.

#### SECOND PERIOD

The second period, which dates from the invasion of the island in 1898 which brought the change of sovereignty, to 1907, was one of temporary works construction. In fact, progress was made only in two branches—roads and school buildings.

During this period of eight years about 450 kilometers of roads were opened to traffic. This figure comprises the new construction of 150 kilometers or more and the work done on 300 kilometers, approximately, which the Spanish government had placed in service.

**Construction of Roads and Explainable Deficiencies.** Beginning with the first 100 kilometers constructed in all haste for the use of the invading American army, in which work much personnel of little experience in this class of work was undoubtedly employed, all the work done during this period was necessarily poorly executed, and without thorough study; but it was justified by the necessity of

providing communication as soon as possible to a large number of the towns of the island which were still isolated from the principal coast cities. Up to 1900 these works were done with \$890,000 appropriated therefor by the Federal Government.

**One Type School Buildings.** Very simple one type school buildings were constructed which are still used for the same purpose in the towns of Caguas, Coamo, Aguadilla and elsewhere. (See picture, page 243.)

**Heavy Expense of Improving said Works.** These works, and especially the roads, still cost the people of Porto Rico many thousands of dollars annually, since the macadam must be added to yearly, the curves widened, the wooden bridges replaced by permanent ones, and the grades continually decreased. Had Porto Rico been a country rich in resources, it would have been more scientific and practical to abandon the greater part of these roads in order to make new surveys and construct them in due form. Their completion has been carried on slowly, for which purpose a good part of the funds annually appropriated by the Legislature for maintenance of insular roads has been used.

**Synthesis—Service.** This period may be summarized by saying that public works suffered under the disorganization consequent upon the change of government. The principal purpose then was to render service, the engineering and architectural phases being set aside for the reason that consideration of them would have delayed the work and increased the first cost.

#### THIRD PERIOD

**Commencement of a Bright Era for Public Works.** The third period commenced in 1906, at which time the method of constructing public works by means of small appropriations in the insular budget was abandoned, the Legislature having authorized the first loan of one million dollars and having adopted an insular road construction plan. The acceptance of office in the Department of the Interior (already operating under the civil government) by the distinguished engineer Juan J. Jiménez and other Porto Rican engineers, brought

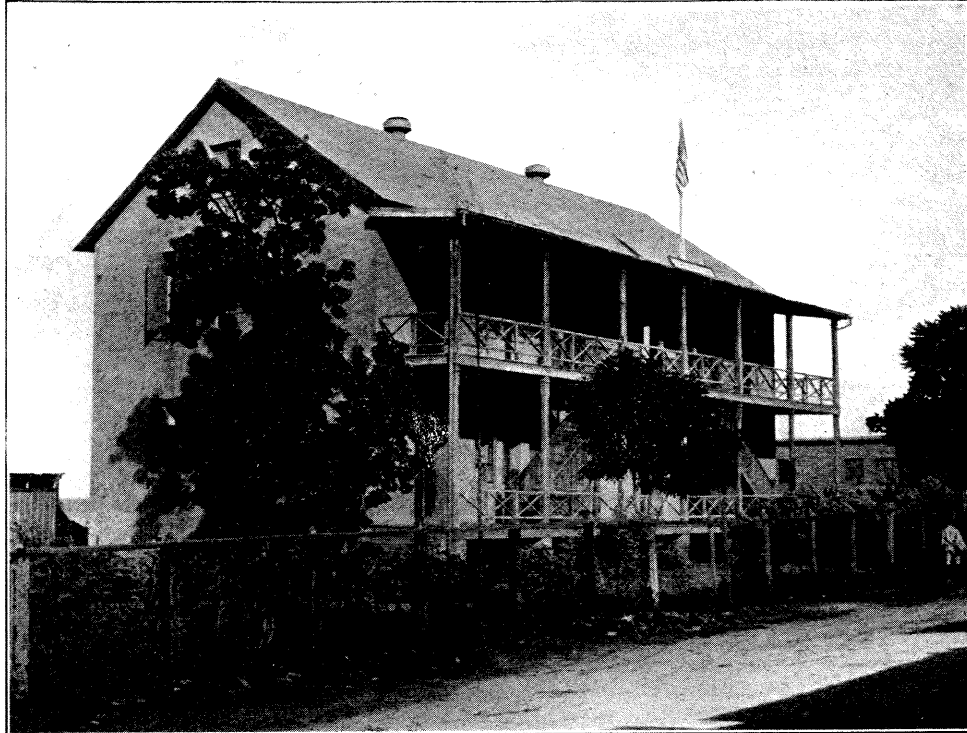


about a reorganization of the Bureau of Public Works, and it may well be said that from that date commenced a new era of solid, well surveyed and properly built roads.

**Office of Municipal Works.** Some time later, in 1911, the Office of Municipal Works was organized in the Department of the Interior. This office was created by the Legislature and

as Commissioner of the Interior of Porto Rico to bring all branches of the department to full development. As everybody on the island knows the Department of the Interior exercises general inspection of all public works of the island.

For the first time in its history the Department of the Interior spent for construction



ESCUELA GRADUADA DE AGUADILLA.—FORMER ONE TYPE SCHOOL BUILDING.

its purpose was to project and direct such municipal works as were built with municipal funds. The benefits derived from this office, so far as they affect the urban progress of the towns, has been truly splendid. The municipalities of the island not having sufficient resources to maintain technical offices with trained personnel for the study, preparation and construction of municipal works, this work has been done by the aforesaid bureau which has not ceased during the last ten years to perform work for the different municipalities of the island.

**All Branches of the Department of the Interior Fully Developed.** During the four years of 1918-1922 the writer had the opportunity,

and maintenance of public works in one year the important sum of three and one-half million dollars, a sum equal to the total sum of the first general annual appropriation acts passed to carry on all services in Porto Rico.

Annual expenditures under supervision of the Department of the Interior increased from about one-half million dollars in 1906, for all public works, to seven times that amount in 1922.

**Causes Permitting this Great Effort.** The author must explain the causes permitting the Insular Government to make such expenditures which were enormous as compared with the annual receipts of the Insular Treasury. He has said before in this article that rapid

progress in insular and municipal public works was impossible so long as the island had to depend on annual budgetary appropriations. This was the case during the former domination, and continued to be so under the present government up to 1906, when the first road loan was authorized.

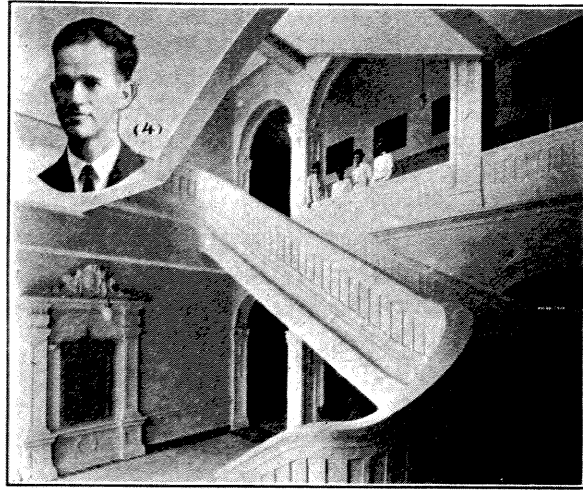
Since at that time Porto Rico counted on a budget of but from three to four million dollars for all services, it was impossible to push municipal and insular works costing nearly twenty-five million dollars, unless the government was willing to do so during a period of fifty or sixty years.

**The Loan System.** The loan method of carrying out public and private works of importance is so current throughout the world that it is useless to deal here with its convenience and the necessity thereof in the development of any region such as Porto Rico, that island which has returned with interest all moneys spent on public works. Evidence of the wisdom of employing it is the increase of the island's wealth, which was assessed at \$180,000,000 at that time and is now assessed at \$305,000,000.

**Progressive Position of the Legislature.** By authorizing the first loan in 1906 and afterwards authorizing the municipalities to issue bonds secured by The People of Porto Rico, it was the island's Legislature which initiated an era of efficient development of the insular and municipal public works. When one thinks of how men representing great interests unanimously and without discussion enacted loan laws that affected directly their finances, one can but take pride in the fact that Porto Ricans in all branches of the government were the principal factors in the development of the island.

**Insular and Municipal Works in 1898.** The change of sovereignty in 1898 found the island's insular and municipal public works in the following conditions: There were 254 kilometers of road constructed and 57 kilometers under construction, which joined the following towns:

Roads constructed: San Juan to Ponce, 134 kilometers; Cataño to Reyes Católicos, 20 kilometers; Mayaguez to Añasco, 9 kilo-



ESCALERAS DEL ALA YA CONSTRUIDA DE LA ALTA ESCUELA DE SAN JUAN, COMO LA IDEÓ EL SR. CARMUEGA, ARQUITECTO JEFE DEL DEPARTAMENTO DEL INTERIOR.

ARCHITECT CARMUEGA, A PRODUCT OF THE MODERN SCHOOL AND THE MODERN SCHOOL, A PRODUCT OF HIS BRAIN.

meters; Mayaguez to San Germán, 14 kilometers; Cayey to Guayama, 26 kilometers; Ponce to Adjuntas, 15 kilometers; Arecibo to Utuado, 4 kilometers; Río Piedras to Río Grande, 25 kilometers; Moca to San Sebastián, 4 kilometers, and Reyes Católicos to Toa Alta, 3 kilometers, a total of 254 kilometers.

**Roads under construction:** Reyes Católicos to Vega Alta, 4 kilometers; Guayama to Arroyo, 7 kilometers; Caguas to San Lorenzo, 2.5 kilometers; San Lorenzo to Las Piedras, 12 kilometers; Ponce to Adjuntas, 2.3 kilometers; Arecibo to Utuado, 6.7 kilometers; Río Grande to Luquillo, 6.7 kilometers; Moca to San Sebastián, 3.5 kilometers; Bayamón to Comerío, 4.6 kilometers; Toa Alta to Corozal, 3.2 kilometers, and Manatí to Ciales, 4.6 kilometers, a total of 57.1 kilometers.

**Present Roads.** According to the last report of the Department of the Interior there now exist 1,334 kilometers of roads constructed and joining all the towns of the island, while 30 additional kilometers are under construction.

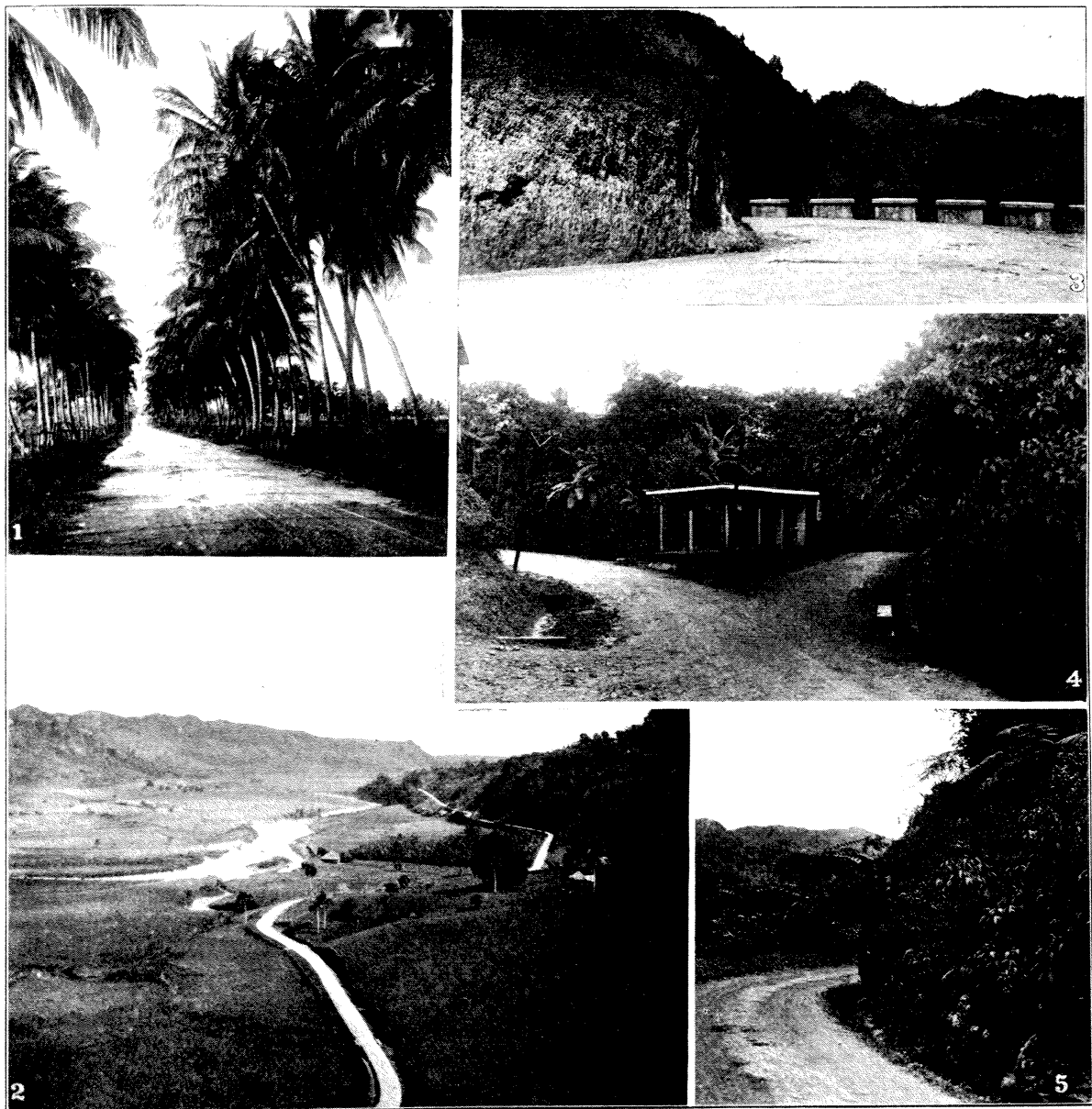
**New Loan of Two Million Dollars.** At its last session the Legislature authorized a new loan of two million dollars to carry out the road building plan approved by said body in 1916. It is figured that this amount will build 200 kilometers of road in addition to the 1,334

already built. The general plan of roads referred to comprises the construction of some 764 kilometers at an approximate cost of six million dollars, to be obtained by means of successive loans of one million dollars a year.

**Municipal Cooperation.** While the Insular Government is carrying out this road work, several municipalities have devoted municipal loan funds to the construction of municipal roads which according to law must be as wide

as third class insular roads. With this co-operation the plan of insular roads will be completed.

**Bridges.** To complete constructed roads there were in service in 1899 some 49 iron and masonry bridges varying in length from 10 to 100 meters. At the close of the fiscal year 1921-22, the island had a total of 179 bridges of about the same lengths, or an increase of 130 bridges. It must be added that



VISTAS FAMILIARES A LA MAYORÍA DE LOS PUERTORRIQUEÑOS.  
VARIOUS SCENES ON PORTO RICO'S NUMEROUS FINE ROADS.



ALTA ESCUELA DE SAN JUAN, EN CONSTRUCCIÓN.—HIGH SCHOOL IN COURSE OF CONSTRUCTION.

these 130 bridges have been constructed over important streams, the excessive cost of such structures not having allowed of their construction when the roads were built in years prior to 1907.

**Municipal Roads.** Although some of the island's municipal roads are, generally speaking, ill-surveyed and unsatisfactorily maintained, since municipalities lack the necessary means to further this work, some towns have improved and increased these necessary means of communication with the remotest districts, the number of registered kilometers in 1898 having increased to 6,881 in 1922.

**Railroads and Privately Owned Public Service Street Railways and Railroads.** Although railroads are not included in public works because they belong to private concerns, they

should be mentioned here because of what they mean in the progress of the island and of their public nature. In 1898 there existed but 230 kilometers of public service railroads and some 67 kilometers for private service. While today these numbers have been increased to 557 and over 1,000 kilometers, respectively.

**Government Telegraph and Telephone Lines and Private Telephone Lines.** Telegraph and telephone service having belonged to the Insular Government from the time of its organization, had in 1898 but 1,240 kilometers of lines, with 41 offices, while at present it has 2,500 kilometers of lines with 60 offices. Privately owned telephone systems comprised 53 kilometers of lines in 1898, while now they own 1,000 kilometers of lines which furnish

communication to all towns by means of modern telephone and telegraph methods.

**Public, Insular, Municipal and School Buildings.** In 1898 there was not a single school building built for that purpose owned by the government. In this branch of Porto Rico's public works results have been astonishing, there existing at present some 550 school buildings owned by our municipalities, their value running from \$2,000 to \$100,000 each. The construction of school buildings has been continuous, some of the municipalities having built all their urban schools, are now engaged in erecting simple but handsome concrete schools in the rural districts.

In 1898 there existed but about 101 buildings belonging to our municipalities, which were used as city halls, market places, municipal jails, hospitals, meat-markets, slaughter-houses, etc. Excluding school buildings, municipalities now own some 300 modern buildings, and it may be prophesied that as soon as the municipal loans are made that number will be greatly increased. The number of insular buildings has increased from 20 in 1898 to 70 in 1922, excluding those built by the Insular Government in the San Juan Laborers' District and the buildings of the Tuberculosis Sanatorium in Rio Piedras, which latter is not yet completed.

**Municipal Aqueducts.** The development of the public works along this line has been surprising. At the time of the change of sovereignty there were seven aqueducts in Porto Rico, those of Mayaguez and Naguabo, built in 1867; Juana Diaz and Guayama, in 1868; Ponce, in 1878; Patillas, in 1892, and San Juan, in 1895, the aqueducts of Mayaguez, Ponce and San Juan being the only ones that rendered efficient service. At present 35 towns in addition to those above mentioned have waterworks systems, this number representing about 70% of the municipalities of the island. Surveys for aqueducts in all the towns without them have already been prepared. It may be averred that before five years have passed all the towns of the island will have modern water supply systems.

**Municipal Sewerage Systems.** The development of such systems has been somewhat slow

as compared with other activities. This is due to the fact that many towns giving preference to school buildings and aqueducts, did not possess sufficient funds to also construct their sewerage system in the urban zone. In 1898 there was but one sole sewerage system in Porto Rico—that of San Juan—built in 1878. This system originally served but the city of San Juan proper, though it has recently been extended to Miramar (Santurce). Eight other towns at present have sanitary sewerage systems, while those of Humacao and Naguabo are nearing completion. These will raise to 15% the number of towns of the island endowed with this public improvement. It is expected that when the new municipal loans are effective nearly fifteen sewerage systems will be constructed in an equal number of towns, all preliminaries for such systems being now completed.

**Municipal and Privately Owned Electric Light Systems.** There were four electric light plants in operation in 1898, all of them belonging to private companies, San Juan, Ponce, Mayaguez and Utuado each having one. Eight towns now have public lighting plants owned by the respective municipalities, and about fifty get their power and light from private concerns, this making a total of some 58 towns employing electricity for lighting purposes, which is almost 80% of the towns and villages of the island.

It may be stated without fear of error that before five years have elapsed all the towns of Porto Rico will have electric light and power in their urban zones.

**Insular, Municipal and Private Docks and Landings.** Although prior to 1898 small landing-places existed in San Juan, Mayaguez and Ponce, it has been during the American domination that very important wharfage facilities have been built, specially in San Juan, where several splendid docks are in operation, the depth of water at such docks being 30 feet. The present number of docks and bulkheads in operation in the island is 13, the greater part of them belonging to private concerns.

**Unquestionable Evidence of Porto Rican Ability.** Such are, generally speaking, the

different activities in which the Insular Government has shared, as regards public works. As is well known the island's lighthouse, mail and certain other services are in the hands of the Federal Government, as in all the States of the Union, their work being carried on without assistance from the local government.

Up to the present time, and especially during the last eight years, Porto Rico has proved its admirable organization in the execution of public works. As proof of this fact, the author may say that its organizations, its work and its experience have served as a basis for the provisional governments of San Domingo and Haiti, on which to organize the new public works offices of those countries. And such organization, such projects and such experience are to a large extent the work of Porto Rican engineers and architects, done just as soon as they were given an opportunity to cooperate in the work of making their island greater.

**Porto Rican Engineers and Architects.** Year after year young Porto Rican engineers and architects graduated from the best American universities return to the island ready to enter government service. Her university has sent forth engineers who have already commenced to stand out among their fellows. In a recent report made by the writer as Commissioner of the Interior, he recommended the creation, in the University of Porto Rico, of a preparatory course for all the technical personnel required by the Insular Government in the development of public works.

**Plans to Further Public Works in Porto Rico.** The department is preparing to enter upon an era of construction unprecedented in the history of Porto Rico. The last Legislature appropriated sufficient funds to carry out these projects, among which are the completion of the plan of roads up to 2,000 kilometers; the carrying out of municipal projects valued at \$5,000,000; the construction of such buildings as the Capitol, the Asylum for the Insane, the Insular Penitentiary and public office buildings in different towns. To convey an idea of the magnitude of these tasks, it is sufficient to say that the department is ready to carry out in the next six years a greater number of public works than the total number of all those constructed between 1898 and the present date.

Preparation of the personnel necessary to do this great task was begun in 1916. They were organized slowly and efficiently, the different works were surveyed and contracts were prepared, so that by 1921 each division of the Department of the Interior was able efficiently to plan and supervise works valued at \$1,000,000.00.

This movement, which represented seven times the activities of the Department of the Interior in 1906, is still insufficient. Once the taxes passed by the Legislature and municipalities are levied, it is the duty of the Insular Government to carry out all the aforesaid projects in the shortest possible time, thus returning in the form of public improvements just value for such aid as our taxpayers lend.



FORTÍN DE SAN GERÓNIMO, SAN JUAN.—STRUCTURES, OLD AND NEW.

## Registry of Deeds

### Brief Historical Review—Aim and Present Organization

Rafael Tirado Verrier, LL.B.,

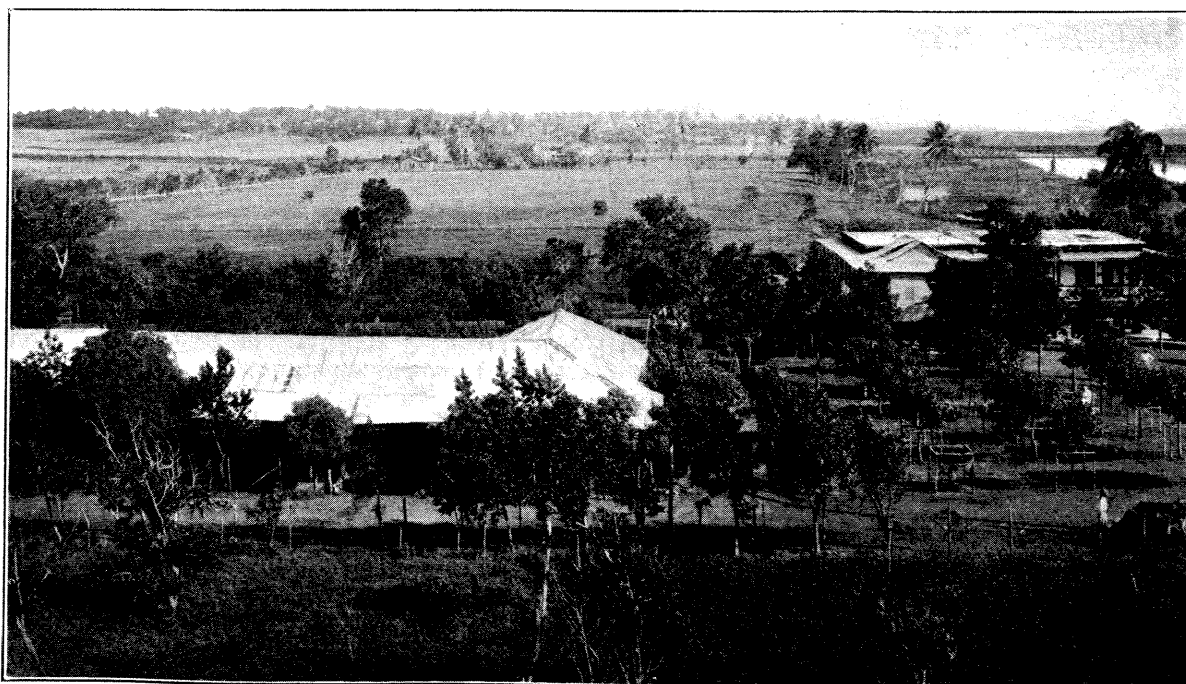
Ex-District Attorney. Recorder of Deeds of San Juan.

**Origin:** Not considering the more or less fortunate experiments of the period of the consolidation and codification of law in the various nations, experiments of limited effective results, due to their being transitory measures with no other aim than overcoming the existing difficulties, we may say that the first methodic and scientific move taken under the necessity of evidencing the status of real estate as a basis of security, what might be called the keystone of the administrative-juridical structure or organism called the "Record of Deeds", lies in the order of the Great Emperor 1st of Castille, Vth of Germany, dated February 10, 1538, which established in Flanders a Register's office. The ever increasing commercial transactions passing beyond the limits of the nation, the assertion of personality and the rights of the municipalities, and other joint causes of diverse nature, as well as the increasing importance of real estate credit and the great chances of bad

faith in order to deceive the creditors, convinced the Emperor of the convenience of a Registry to make deceiving impossible and to afford due protection to property and to creditors.

**Establishment in Spain:** Later, in 1539, through a petition of the courts of Toledo, similar offices were opened in Castille, the said petition becoming law I, title XVI, Book X of the "Novísima Recopilación". In that law were first seen the words Recorder and Registry, as well as the principles of publicity and specialization, which form the basis of the existing mortgage system. It is true that these first dispositions did not allow the Registry all the amplitude that it later came to have; but it represented great progress.

The Mortgage Law, that is, the law of the third parties (and a splendid legislative monument of Germanic origin, masterly and carefully adapted to the Spanish substantive law, which is the basis of ours), is intimately related with the Record of



A MODERN DAIRY AMIDST FERTILE PASTURES.

Deeds. The object of this can be no other than improving, always in harmony with the existing law, the conditions of the real property (either by its own nature, by juridical fiction or legal enactment); promote and consolidate the territorial credit (indispensable element of the material progress of the nations, and therefore in some way of the public order), and prevent as far as possible fraud and deceiving in the transactions.

**Its Introduction in the West Indies:** The Record of Deeds in the West Indies (Cuba and Porto Rico) was organized as it actually is by the law of the first of May 1880, that extended to this island the Mortgage Law, which had been in force in Spain for a long time before, determining everything relative to the place of enrolment, appointment and powers of the Recorders, the inner functions of the Office, and establishing the Rules by which are practiced the inscriptions and notes of all contracts relative to real property or real estate rights.

**Reform:** As practice evidenced the defects consequent to the lack of complete adaptation of the law to the state of real property in these islands, it devolved on the law of July 14, 1893, to reform the Registry, the Mortgage Law and its rules, with sound modifications.

The implantation of the Autonomous Government and the change of sovereignty over this island brought forth several innovations in the substantive and applied law, which in their turn originated a reform in certain particulars of the existing mortgage law and in the Record of Deeds.

**Present Organization and Advantages:** It should be said that actually, the Record of Deeds is entrusted to lawyers with more than five years practice and whose admission is subject to strict competitive tests, that it is under the orders of the Department of Justice, that it first started and was applied under the auspices of competent jurists like Messrs. Ignacio Beyens, José S. Belaval, José Benedicto Geigel, Emilio Pozuelo, Marcial López, Jacinto Texidor, and others, and functions in all

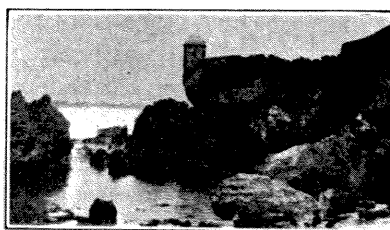
the department centers (San Juan, two offices; Arecibo, Aguadilla, Mayaguez, Ponce, Guayama, and Mumacao), besides the cities of Caguas and San Germán, serves fully the end for which it was created.

The system adopted being a wise combination of those which prevail in several countries that have established the registry, and permits a third party to ascertain at once the following :

1° The complete history of an estate. Each first notarial, judicial or governmental title that enters the Registry, since the first inscription of said estate, being exactly a reproduction of the title as to grantors, price and conditions. Successively and by a rigorous chronological order are recorded the subsequent conveyances of the estate without ever avoiding an intermediate title, as well as the constitution or modification or extinction of any real estate right or lien on the estate (lease, mortgage, etc.) and the judicial order or embargoes or reclamation over property. This, which is the practical operation of the principle of publicity, saves the contractor the troublesome work of running from office to office reestablishing the "series of titles", as must be done in many other countries. The Register being public the interest of third parties consist in studying it carefully.

2° The conviction that every title has been previously and strictly classified as to its legality, that no secret hidden right or conveyance not recorded previously to his, can injure him, and that his right will remain unimpaired over the whole of the mortgaged estate, or over any of its divisions and whoever be its possessor.

Let us remember that the Registry gives information of the beginning and development of commercial corporations; of the claims on ships; of those of agricultural financing; that it is a very important factor of the Government in the revenue matters and of the valuation of wealth and we must agree that said institution is a sure guarantee for commerce and credits.





## Board of Medical Examiners

By Gerónimo Carreras, M.D.,

President of the Board of Medical Examiners. Visiting physician for the State Penitentiary. Member of several professional associations.

**Its Former Function:** Under the Spanish regime the sub-department of Medicine and Surgery was in charge of the legalizing of the practice of medicine and surgery in Porto Rico.

With the change of sovereignty this bureau ceased to operate and its duties were handed over to the Superior Board of Health by a general order, No. 102, issued the 18th of July, 1899, which regulated the practice of Medicine and Surgery, Pharmacists, Dental Surgeons, Embalmers and Undertakers.

On September 30th, 1899, Brigadier General Davis issued general order No. 153, establishing new regulations. In accordance with this order, an Examining Commission composed of three practitioners, graduates of Medicine and Surgery, was constituted. Two graduates of pharmaceutics and one in dental surgery were added to said commission. The Superior Board of Sanitation was in charge of the archives and documents of the Sub-Department of Medicine and Surgery. The Examining Commission held examinations whenever ordered by the Superior Board of Sanitation.

**Foundation of the Present Board and Its Functions:** The present Board of Medical Examiners was created by the law of March 12th, 1903.

The Board is composed of five doctors, named by the Governor with the consent of the Senate who must have been residents of the Island for at least five years prior to their nomination.

The object of this body is the legalization of the practice of Medicine in Porto Rico, for which it is necessary that the candidate must have a de-

gree as a doctor in medicine given by a school or university of well-established reputation, and furthermore, that he pass a series of practical and written examinations before the board, which show his capability as a physician. Examinations are held yearly in April and October and can be answered either in Spanish or in English. The Board is also in charge of the testing of nurses, mid-wives, minor surgeons, optometrists and osteopaths.

In accordance with the law for the practice of Medicine in Porto Rico, the Board must watch over the observation of its precepts.

This Porto Rican Board has no reciprocity with any similar body of the United States and does not extend provisional licenses. The physician-surgeons of the army and navy of the United States are the only ones exempted from the requisites of examination.

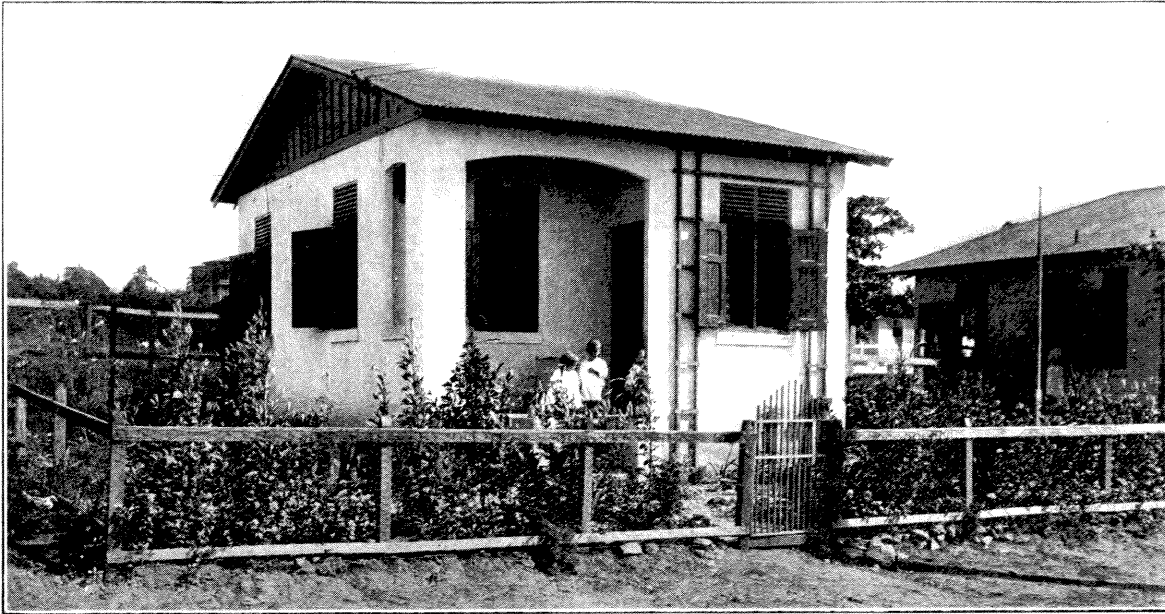
Besides the above mentioned law which rules it and which has suffered many changes, the Board has a code of by-laws for its guidance.

The Board of Pharmaceutics, Dental Surgery and Veterinary Science exist separately in Porto Rico on a similar basis to that of the Board of Medical Examiners.

*Editorial Note:* The first of our valued contributors to pay Nature's tribute to mother earth at the time this book was going to press was the author of the above article—the well-beloved and distinguished physician, Dr. Gerónimo Carrera, whose strong personality and wide medical knowledge were the pride and hope of his family and many friends.

Just as his family has lost his care and aid, so Porto Rico is equally the loser by the departure of one of her most talented, virtuous and patriotic sons.

The Board of Editors of this book desires hereby to express its sorrow at the loss of its good friend, and shares with his family and Porto Rico a heartfelt grief for their inestimable loss.



CASA TÍPICA DEL BARRIO OBRERO.—A PATERNAL GOVERNMENT ASSURES COMFORTABLE HOUSES FOR WORKMEN.

## Workmen's Compensation Act

By Luis Samalea, LL.B.,

Special prosecuting attorney for the Department of Justice; Former President of the Workmen's Relief Commission.

In 1913 the first attempt was made in the island for the enactment of a Workmen's Compensation Act. This does not mean that prior to that year actions were not regulated in Porto Rico's by-laws as to indemnity of laborers for hurts and damages suffered by them.

**Legislative Precedents.** The dispositions contained in articles 1803 and 1804 of the Revised Civil Code relative to the obligations borne from damages due to fault or negligence, ruled the responsibility of employers in case of accidents occurring to laborers; the law of March 1st, 1902, enacted by the Porto Rico Legislature, covering the same matter.

The principles of "voluntary negligence," "responsibility of third persons," and "illegal conduct," were admitted for defense before the judicial courts.

The non-satisfying results of these legislations created general discontent which resulted in the crisis of 1913. In the laboring centers

and in the halls of the old House of Delegates the protests began to be heard, the press also reflecting the dissatisfaction.

**New Effort.** In 1914 the Legislature appointed a commission to study this problem and a year later that commission presented a bill to the Legislature which obtained the approval of the Lower Chamber, but not that of the Executive Council.

**The First Law on Compensations.** Finally, on April 13th, 1916, the first law on compensations was approved. It was, however, optional in character. Employers with less than five laborers who did not handle machinery, domestic servants, office clerks, and all those whose annual salaries exceeded \$1,200, were exempt.

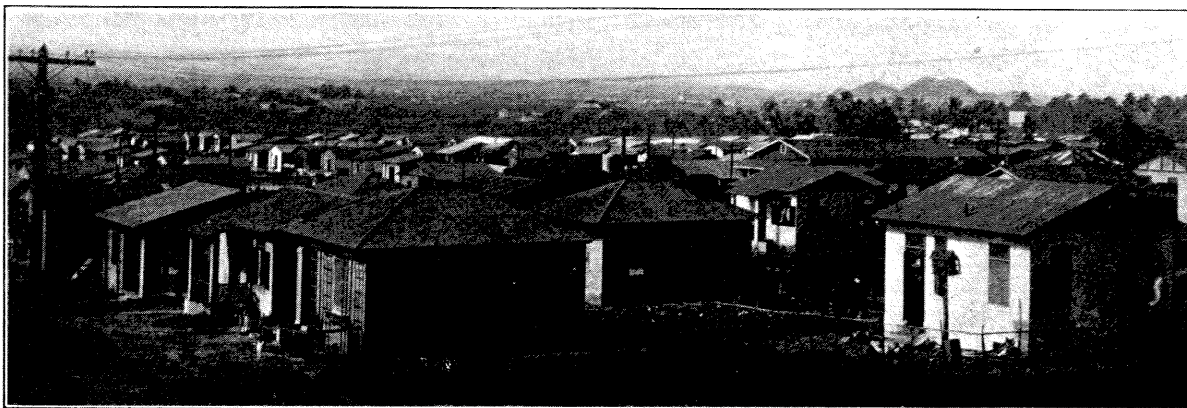
The reports show that 159 employers were registered, protecting 6,500 laborers, and that the commission in charge of the enforcement of the law acted in 492 cases of accidents during the fiscal year 1916-17, paying more than

\$34,000 as compensation; that in the year 1917-18 the number of employers was 198, that of protected laborers 10,580 and the commission functioned in 603 cases, the compensations amounting to \$47,267.19.

**A Compulsory Law.** The optional character of the law was not satisfactory and in 1918 this matter, being brought before the legislators, the law of 1916 was substituted by a new one of compulsory character. The employers of less than three laborers being exempt and the limit of annual compensation for

In the year 1919-20 employers to the number of 1,860 were registered, 97,000 workers were insured and \$284,383.47 paid as compensations. In 1921-22 employers numbering 3,856 were registered, 118,645 workers were protected, 7,078 cases decided and \$328,262.70 paid as indemnifications.

A broader field of action was embraced by the law when it was amended again in 1921 so as to apply its provisions to laborers who might be permanently injured or to their dependents in case of death, due to diseases con-



BARRIO OBRERO INSULAR, SANTURCE.

A BIRD'S-EYE VIEW OF MANY HAPPY HOMES—INSULAR GOVERNMENT'S WORKMEN'S SUBURB.

a worker to be included in the benefits of the law was raised to \$1,500. The compulsory principle of the law was tested before the courts, and the Circuit Court of Boston, dealing with the decision of the Federal Court, revoked one of the verdicts of the latter, thus asserting the compulsory and unexcusable constitutionality of the law of 1918.

When the law was applied to public carriers, a railway company opposed it and the same Boston Court decided that the laborers employed by public carriers were embraced by the terms of the law.

**Evolutions.** In 1918-19, the law being compulsory, 642 employers were insured and 30,000 workers protected; 2,124 cases were decided and compensations amounting to \$134,360.13 were paid, and in June, 1919, the law was extended to the laborers employed in agricultural work where animal power was used and instruments or implements which might cause serious personal injuries.

tracted in the course of their work or employment.

Later the law was extended to the municipal firemen, and it was determined that it not only protects laborers working on fixed and steady terms of compensation with their employer, but also to those working for the person who has contracted with the employer to do certain work, and finally the law declared protection to any employee no matter what the number employed.

In the fiscal year 1922-23 employers numbering 10,250 were insured and about 200,000 laborers protected, cases or claims numbering 15,324 were decided, they amounting to \$454,123.20.

**The Changes of Eight Years.** Few laws of this nature have so rapidly changed. In its eight years of existence it passed from optional to compulsory; it was declared to apply to cases of accidents and diseases, it was extended to all employers, no matter how many laborers

they individually had under their employ, the municipal firemen were included and it was applied to Government employees.

**Great Benefits Derived.** It is easy to assert the benefits from this law. During the time it has been in force, which covers a period of eight years, the statistics show that over \$1,300,000 has been paid as compensations, that urban and rural estate have been acquired through the counsel of the commission by widows and laborers who were totally unfit for work, and that children of laborers are protected up to their majority by a system of pensions.

At present 10,250 employers are insured, against 159 in 1916, and 200,000 laborers are now protected as compared with 6,550 in 1913; the number of cases decided by the commission has increased from 492 in 1913 to 15,324; while against \$34,000 paid in 1913, it was reported that \$454,123.30 was paid in 1921-22.

**The Most Liberal Law in America.** An examination of the law shows it to be the most liberal one in America, and America has the most liberal laws known for the protection against accidents and diseases of its workers.

**The Workmen's Relief Commission.** The enforcement of this law is entrusted to a Commission composed of a president and a permanent commissioner appointed by the Government, and three commissioners elected by popular vote to represent each of the three political parties of the Island.

**System of Taxation.** The levying of taxes for the funds of this body is made on the basis of a percentage of the total salaries paid by the employer, that percentage varying according to the greater or less risks of each industry or work. The Treasurer of Porto Rico is entrusted with the collection of said taxes.

Any decision made by the Workmen's Relief Commission may be brought before the District Court for the district where the accident occurred, and the decision of this Court

may be likewise brought before the Supreme Court of Porto Rico.

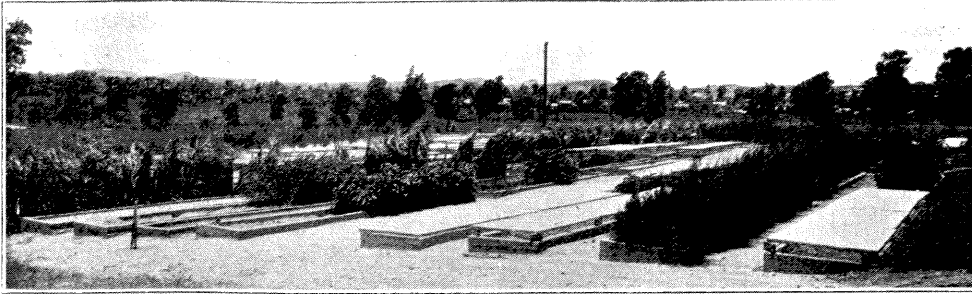
**Division of Accidents.** The accidents are divided into three classes: (a) transitory, the laborers having the right in such cases to medical assistance, medicine and food, hospital service included, and to a compensation of half salary during the time of recovery; (b) partial permanent inability, when, besides the above benefits, the laborer receives an additional compensation not over \$2,500, which will be estimated according to the importance of the injury suffered; (c) total permanent inability, in which the compensation varies from \$2,000 as minimum to \$4,000 as maximum, and (d) death, in which the heirs of the laborer who depend reasonably on his work for their living, receive a sum not less than \$2,000 nor more than \$4,000.

**Cases of Illness.** The cases of diseases are divided in two: (a) transitory, with the same rights as in accidents, and (b) total inability in which cases the indemnification fluctuates between one and three thousand dollars. In cases of death, the law does not clearly determine the compensation, but it states that the dispositions relative to these cases will be applied to those of death by accidents.

**Administrative Expenditures.** The expenses of the administration are paid out of the fund of the Commission and said expenses have never yearly exceeded eleven per cent of the total taxation levied by the Treasurer for that purpose.

**Satisfying Reality in Porto Rico.** That which began as an essay in Porto Rico presently became a satisfying reality; the life of the laborers is protected against all risks and his orphans and widows against helplessness.

**The Only Thing Lacking.** Nothing is lacking except laws on personal security against all risk in the work of the laborers; the so-called "Safety and Security Laws."



VIVERO FORESTAL QUE DISTRIBUYE GRATUITAMENTE MILLONES DE ÁRBOLES.  
SOLVING THE PROBLEM OF REFORESTATION.—INSULAR TREE NURSERY, RÍO PIEDRAS.

## Timber Depletion and the Problem of Forest Production in Porto Rico

By E. Murray Bruner, M.A.,

Forester in Charge Federal and Insular Forestry Service.

**The Pre-Columbian Forest.** There appears every reason to believe that previous to the time of European settlement a forest growth covered practically the entire island of Porto Rico from the coastal plains to the highest mountain tops, excepting, of course, certain relatively small areas, such as natural prairies. The species comprising this original forest cover included many kinds of the most valuable timber trees common to the West Indies and the other countries of the tropics of America. The following named species of well-known tropical American hardwoods were of common occurrence in this pre-Columbian forest: *Acras sapote*, *nispero* (bullet tree); *Amomis caryophyllata*, *malagueta* (bay tree); *Buchenavia capitata*, *granadillo* (yellow sanders); *Bucida bucera*, *ucar* (wild olive wood); *Calophyllum calaba*, *maria*; *Cedrela odorata*, *cedro hembra* (West Indian cedar); *Cocoloba grandiflora*, *moralón*; *Cocoloba rugosa*, *ortegón*; *Colubrina ferruginosa*, *abelluelo* (West Indian greenheart); *Cordia gerascanthus*, *capa prieto* (Spanish elm); *Dacryodes excelsa*, *tabonuco* (candle wood); *Guarea trichilioides*, *guaraguo* (musk wood); *Hymanaea courbaril*, *algarrobo* (locust tree); *Magnolia splendens*, *laurel sabino*; *Mimusops nitida*, *ausubo*; *Petitia domingensis*, *capa blanca* (fiddle wood); *Sideroxylon foetidissimum*, *tortugo amarillo*; *Simaruba tulae*, *aceitillo* (West Indian satin wood); *Thespesia grandiflora*, *Maga*.

The absence of mahogany and pine trees from the original forests of Porto Rico is noteworthy in consideration of the fact that species of both occur abundantly in other islands of the Greater Antilles, and especially in Santo Domingo.

**Timber Famine Follows Forest Depletion.** Forestry history reveals the sad truth that every densely populated country possessed of a great wealth of natural forest growth has brought upon itself the many ill consequences of forest destruction or timber depletion. No country affords a more striking example of this truth than Porto Rico. The original dense forest covers have disappeared alike from the mountain slopes, hillsides, valley lands and coastal plains: So complete has been this forest depletion that there remain today only a few scattered vestiges of the original luxuriant forest cover. As the inevitable consequence of such forest exhaustion Porto Rico is now suffering the most acute timber and wood famine ever experienced by any country in the western hemisphere. Lumbering and its various allied woodworking industries have disappeared, and the island has become entirely dependent upon importations of lumber, construction timbers and other classes of forest materials.

**Forests an Economic Necessity.** Forests are an economic necessity because they produce great quantities of materials which are indispensable to general industry. Wood is in

truth the foundation of manufactures, and is without question the one most useful of all our natural resources. No country which does not have access to a bountiful and continuous supply of forest products can attain a high state of agricultural development and maintain a balanced system of essential and diversified industries.

**Agriculture and Forestry Interdependent.** Agriculture and forestry are bound by a very close tie of kinship, the practice of each being based upon the proper use of the soil. Proper use of the soil involves its classification upon the basis of fundamental value for production. In general, agriculture should be practiced on the better soils, leaving the poorer lands and those subject to serious erosion for the uses of forestry. Forestry and agriculture are interdependent and mutually helpful in various ways. It is in the development of agriculture and closely allied industries that uses are found for the great bulk of forest products. It follows then that agriculture itself and its dependent industries would be most seriously hampered if deprived of essential forest products.

**Beneficial Influence of Forests Upon Climate, Soil and Streamflow.** But in addition to their great productive value, forests exert certain highly beneficial and far reaching influences of a general character which give to them a peculiar public importance of the highest order.

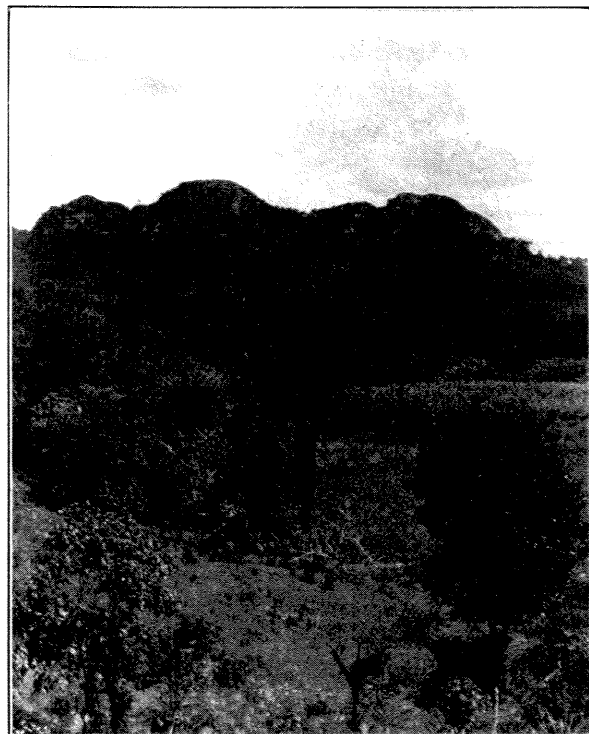
Forest covers tend to exert a favorable influence upon the climate of any region in which they occur, especially if present over extensive areas. In all cases forests not only conserve but constantly improve and enrich the soils in which they grow. But without doubt the most important of these general influences exerted by forests is that upon the flow of streams in mountainous or hilly regions. The forest cover tends to maintain an even and regular flow of the streams throughout the various seasons of the year, and thereby serves to check the occurrence of floods or excessively high waters.

Many streams in Porto Rico destroy growing crops every year and do great injury to valuable agricultural lands by flooding. These

losses could be greatly reduced and in many cases entirely prevented through a system of comprehensive reforestation about the headwaters of the streams and by the planting of carefully selected trees and other plants along the banks of the lower stream courses.

**Relatively Large Non-Agricultural Land Area.** The total land area of Porto Rico is approximately 2,200,000 acres. Out of this total only about one-half million acres, amounting to something like 25%, are under actual cultivation to agricultural crops. About one million acres are ordinarily classified as pasture lands and approximately one-half million more is timber, brush and marsh lands. It is a significant fact, however, that only a relatively small part of this so-called pasture land is improved pasture and actually devoted to the stock raising industry. And it is a no less striking truth that the percentage of the so-called timber and brush lands supporting or producing trees of commercial value is practically negligible.

The truth is that by far the greater part of



ÁLAMOS SILVESTRES DE LA COSTA SUR.—A FINE SPECIMEN OF THE WILD POPLAR TREE.

these one and a half million acres classed as pasture and as timber and brush lands lie economically unproductive at the present time.

**The Forestry Program.** The development of a rational program for the proper use of these million and a half acres of practically idle lands, amounting to 75% of the total

**Development of the Forestry Program Now Under Way.** Under the provisions of an unusually comprehensive forestry law the Porto Rico Forest Service was organized in 1919. Already something like 40,000 acres of public lands have been set aside as Insular Forests in various parts of the Island. The Federal



UN ARCO DE FRONDOSOS MANGOS, SÍMBOLO DEL TRABAJO, CONDUCE A UNA DULCE MORADA, DONDE LA HOSPITALIDAD ES UN CULTO. — A NATURAL ARCH OF MANGO TREES LEADING TO MR. CANTEROS'S COUNTRY ESTATE—GUAYNABO.

land area, is the common problem of agriculture and forestry.

In the formation of such a comprehensive program ample provision should be made for carrying through the following objectives: (a) The extension of purely agricultural development upon the better soils. (b) A largely increased acreage of improved pasture lands. (c) The planting of valuable food producing trees in the greatest practical numbers and the continued extension of the citrus fruit industry. (d) The adoption of a scientific and practical plan for the reforestation of the relatively large proportion of essentially non-agricultural lands not more suitable for other purposes. Practically all farms of any material size contain some areas more suitable for the planting of trees than for the ordinary purposes of agriculture. Every farmer and land owner, therefore, should be encouraged to plant either or both forest and fruit bearing trees on such non-agricultural areas.

Government also administers some 15,000 acres comprised in the Luquillo National Forest. Approved methods of forestry practice are being applied to these Government Forests.

The Forest Service has established a forest nursery and experiment station in which both valuable native trees and desirable species of exotics are tested and are being propagated on a large scale. The young trees propagated in the forest nursery are used for planting on the Government Forests, for various civic improvements such as highway planting and the beautification of city and town plazas, and school grounds, and for general distribution among private land owners.

From the inauguration of the forest nursery the demand for planting stock has been greater than the available supply and is constantly increasing. Every effort is being made, however, to so increase the productive capacity of the nursery that the demand for planting stock may be fully met.

## The Police Department

By Col. William R. Bennett,

Came to Porto Rico in 1898 as a clerk in Quartermaster Department, United States Army. Entered Civil Government Service in 1900, and was for many years Disbursing Officer of the Legislative Assembly and Secretary to the Executive Council, U. S. Marshal from 1915-1922. Appointed Colonel Insular Police, in 1922, which post he now holds.

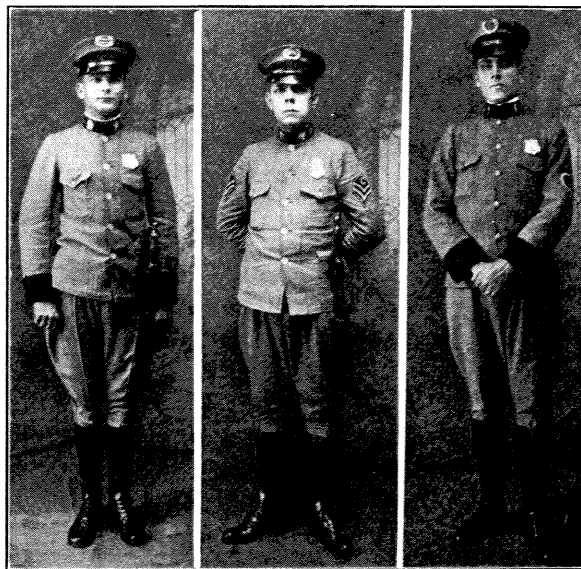
On October 18, 1898, when the Island of Porto Rico was formally taken over by the United States, the Police Force consisted of about 2,000 officers and men organized under what was known as the Civil Guard, the Public Order Police, the Rifle Guard and Municipal Police. Practically its entire membership was made up of Spaniards, there being no native officers and but very few native men in any of the above named organizations.

**Under the Spanish Regime.** Two hundred and sixty officers and men of the Civil Guard were mounted and daily patrolled the main and country roads of the island. The activities and vigilance of these different bodies were such that nothing of political interest or anything approaching *lèse majesté* took place in any part of Porto Rico without being daily reported to the Governor General at San Juan.

**Insular Police Organized.** When the Americans actually assumed charge of affairs on April 11, 1899, the old system of policing was replaced by military police under the command of General Brooke. In January, 1899, while the Island was yet governed by the military, the present "Insular Police of Porto Rico" was organized by Mr. Frank Techter under the direction of General Guy V. Henry, Brigadier General Commanding the District of Porto Rico.

To commence with, Chief Techter had a force of six officers and one hundred guardsmen, which within the year was increased to sixteen officers and three hundred and fifty-five guardsmen, with an officer of the United States Army as Inspector. The work of the Insular Police was confined to the rural districts and towns of less than six thousand inhabitants, the larger cities and towns being policed by organizations known as Municipal Police, though the mayors of all such cities and towns were authorized to call upon the Insular Police for assistance when necessary.

**Responsibility Extended.** In 1902 a law was enacted charging the Insular Police of Porto Rico with the responsibility of the protection



LA POLICÍA INSULAR FIGURA ENTRE LAS MEJORES DEL MUNDO.

"THREE OF THE FINEST"—INSULAR POLICEMEN.

of life and property and the preservation of peace and order throughout the entire Island, including cities, municipalities and rural districts, though the Governor was authorized to withdraw the Insular Police from cities exceeding ten thousand in population when such cities were, in his judgment, financially able to maintain an efficient municipal police force.

The work of the Insular Police was so highly efficient and satisfactory that but one municipality made an effort to replace them and they were never withdrawn from the cities save in the single case of the city of Ponce, and there they were soon restored.

Under that law, the Island was divided into seven police districts, and at the headquarters of each district was stationed a Captain, who commanded the force of the district, one Lieutenant, and as many warrant officers as the



Chief of Police might deem necessary and proper.

The headquarters of the Chief and of the Insular Police Commission were fixed at San Juan, and the entire Force was placed under the command and control of the Chief, subject to the direction of the Governor.

In 1906 a bill was passed amending in certain minor particulars the Act of 1902, providing for a police band and conferring upon the Chief of Police the title of Colonel; and upon the Assistant Chief the title of Major.

In 1908 the law under which the Department now operates was enacted. It was drafted by the Honorable W. F. Willoughby, at that time the Secretary of Porto Rico, and represents one of the most excellent of the many splendid products of that unusually able and patriotic statesman. Under it the police have worked and steadily increased in efficiency for twelve years, and it is destined, with but a very few minor amendments, made necessary by changed conditions, to serve as the police law of the Island for many years to come.

**Further Development.** Since the passage of that law the population of the Island has increased by several hundred thousands, and property values have trebled; then the force had no traffic problem—today there are more than seven thousand motor-propelled vehicles traveling the roads of the Island and crowding its narrow city streets; then there was no prohibition law to enforce—today almost every imaginable kind of craft, handled by crafty seamen and directed and aided by crafty owners and their hirelings ashore, endeavoring to make secret landings of contraband at the Island's almost numberless points of entrance, while on the interior of the Island there are sugar centrals in every district at which molasses (from which rum is easily distilled) may be bought for a few cents per gallon. When one stops to think that two thirds of the Island's area is mountainous, the difficulties of the police in breaking up the traffic are easy to be imagined. In earlier days the Island had no labor problem other than to find work for as many as possible; today much of Porto Rico's labor is organized, and uses freely the

only weapon that labor everywhere claims to have for the enforcement of its demands, and when out on strike it endeavors here, as elsewhere, to see to it that its work is not done by non-union or un-organized labor.

The foregoing is a statement of but a few of the changed and improved conditions in the island's development that have added to the work and responsibilities of the police: her life, under the open market and benevolent hand of Uncle Sam, has been speeded up in all its relations. The police has not only kept the pace, it has so well measured up to all requirements, and so effectively responded to all demands, that it has challenged the admiration of all residents and visitors alike and has been referred to as one of the finest bodies of police in the world.

**Loyalty to the Department.** Each and every officer, and each and every man is proud of his membership in the organization and proud of its past deeds and accomplishments, but they are not satisfied:—Schools of instruction in English, Arithmetic, Geography and History have been recently opened in San Juan, Santurce, Ponce, and Mayaguez, and their opening was welcomed with great joy by officers and men alike. All who could, without a single exception, immediately joined; not one man has been reported as "late"; not one man has been reported for an infraction of the school rules; and not one man has been reported for a lack of interest in his studies. And the same may be said of our pistol practice and physical culture classes, recently organized for the instruction of the force.

Anticipating a return to normalcy in the cost of living, the Legislature at its session in February, 1921, provided for a reduction in all salaries of officials and employees of the Insular Government, effective July 1, 1922. The salaries of the police have never been adequate to their necessities or commensurate with the dignity and requirements of their duties, and the reduction has worked upon them great hardships. But due to their pride in, and loyalty to, the organization, and their faith that the Legislature will eventually deal justly and fairly by them, there have been an

almost negligible number of resignations, though many men have been offered better paying positions, some having been offered positions paying more than double their present salaries.

**Retirement With Pay.** In 1921 retirement was provided for members of the force having served as such for twenty-five years and for those having reached a given age, the age varying from fifty years for the lowest ranking officer to sixty years for the highest ranking officer.

**Relief Fund.** A "relief fund," authorized and provided for under the Willoughby law of 1908, was practically abolished by the Retirement Act. It is now proposed to re-establish it from the proceeds of the sale of tickets to Police Benefit Balls which will be given once a year simultaneously, in the principal cities of the Island, to the end that those who do so much for society, and for whom society has heretofore done so little, may continue in their work, which is often the only work for which they are fitted, by training and experience, without the depressing thought that in case of prolonged illness the only relief possible to them is that of retirement.

It is doubtful if any police force of the United States was ever charged with greater responsibilities or a greater variety of duties than the Insular Police Force of Porto Rico, and its efficiency is so well recognized that it is called upon by every bureau and department of the Insular and Federal Governments requiring the performance of any kind of "outside service" in the cities, towns and rural districts of the Island.

**No Similar Force Elsewhere in the United States.** The States of Pennsylvania, New York, Michigan, West Virginia, Colorado, Massachusetts and New Jersey now have State Constabularies, all organized since the organization of the Insular Police of Porto Rico, but as yet no state in the Union has a force that does the entire policing of the state, cities and rural districts alike, as does Porto Rico.

**Co-operation With the Army.** This article should not be closed without a word concerning the hearty spirit of co-operation now existing between the Insular Police Force and the 65th Regiment of Infantry of the United States Army stationed on the Island and commanded by Colonel Tenney Ross. On occasions during the past, unfortunate incidents of friction have arisen, but the prejudice naturally resulting has now entirely passed away, and today the utmost harmony and good will prevail between both bodies, and the pistol practice class of the police in San Juan is actually conducted by one of the efficient officers of Colonel Ross' staff.

**An Unequaled Record.** In his studies of the democracies of the world, the late Viscount Bryce stated that to his mind it was remarkable that the government of New Zealand, a country of 1,160,000 people, was conducted with but 828 policemen, or one for every 1319 citizens of the state, and one can but wonder what that master writer, thinker and statesman would say to the fact that Porto Rico has for her population of 1,325,000, but 687 policemen, or one for, in round numbers—every 2000 of the Island's inhabitants—a fact which speaks volumes both for the efficiency of her police and the law-abiding nature of her people.



## Penal Institutions and Reform School

By **Martin Ergui,**

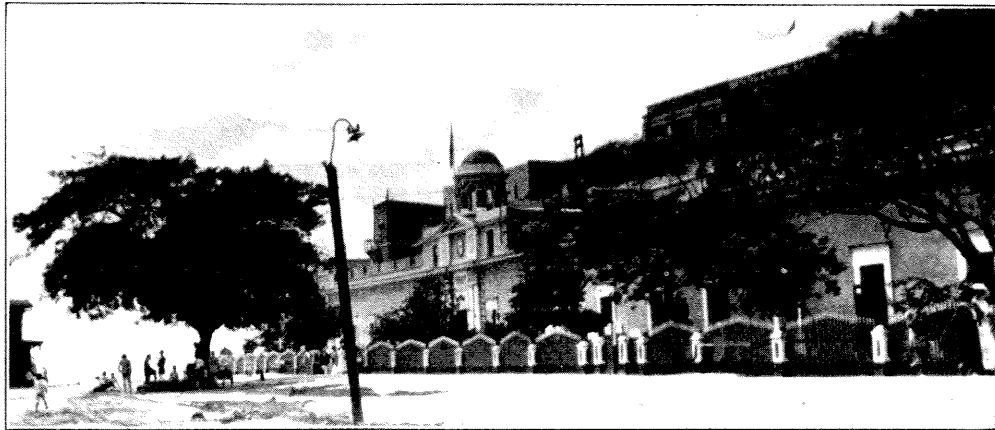
Chief of the Bureau of Prisons and Superintendent of the Department of Justice.  
Representative of Porto Rico at the Prisons Convention of America, held at Columbus, Ohio, in October, 1920.

**Adoption of Modern Methods:** Either because of lack of preparation of public sentiment or of the information necessary to consider and decide the problem of delinquency and of the reform of delinquents in Porto Rico, not until recently had that public need been given careful attention, in a progressive sense, according to the latest methods adopted by penal science in the United States.

The Department of Justice, under whose con-

a tailor-shop and a bakery are all operated in the Penitentiary to give convicts industrial training. For recreation and physical exercise, they have a cinematograph and athletic appliances. Such convicts as are not employed in prison are put to work on the maintenance and repair of roads.

There is a special ward in the Arecibo Jail for all the female convicts of the island, and a primary school for illiterates is run in said ward, as well as a sewing and embroidery class.



PENITENCIARÍA INSULAR.—STATE PENITENTIARY, SAN JUAN.

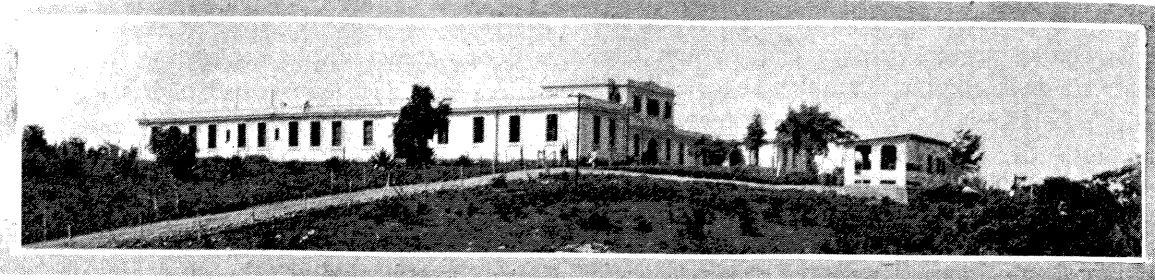
rol the penal institutions of Porto Rico have been since 1917, took up the work of reforming such institutions, and at present they are operated under democratic organization, the chief purpose of which is to awaken in convicts a desire for study and love of work, so that when liberty is obtained, such convicts may feel regenerated and may live as law-abiding citizens.

**Life in Prison:** When a convict enters prison he is examined by the prison physician who attends to such disease as he may have. While in prison convicts learn to read and write. They hear lectures by the prison teachers and by private parties, and for their labor they get a money compensation, of which one part is devoted to a reserve fund while the other is sent to needy relatives. A machine shop, a carpenter shop, a cabinet-maker's shop, a shoemaker's shop,

### **Discipline and Good Time Allowance:**

When the convicts work and observe good conduct, a reduction is allowed in the term of their sentence, which varies in progressive scale from five days a month in sentences not exceeding one year, to ten days a month in sentences of ten years or more. They are also granted pardons after they have served a reasonable part of their sentence and observe good conduct. At present there are 42 convicts on parole.

Notwithstanding the tolerance and humane treatment the aforesaid allowances carry with them, strict discipline is observed, there being no need of resorting to corporal punishment, bread and water, or other tortures which years ago disappeared from such institutions, in order to enforce said discipline. The good treatment given convicts is evidenced by the fact that no bloody



ESCUELA CORRECCIONAL.—CORRECTIONAL SCHOOL, MAYAGÜEZ.

riots take place here as sometimes happens in the penitentiaries of other countries.

**Distribution of Penal Institutions:** The following penal institutions and reformatories exist in the island. A penitentiary at San Juan, the capital of the island, where convicts serve who are sentenced for felony; seven district jails for eight judicial districts. These jails are distributed two in San Juan, for two districts, and one each in Arecibo, Aguadilla, Mayaguez, Ponce, Guayama and Humacao. There is a reform school in Mayaguez for the delinquent children of the island, under sixteen years of age. The jails are used to confine convicts sentenced for misdemeanors.

**Penal Statistics:** According to the official statistics of the Department of Justice for the fiscal year ended June 30, 1922, there were then 1213 convicts in the penitentiary and district jails. The age of the greater number of prisoners fluctuates from 21 to 25 years. Of said prisoners 511 can read and write, 17 can read, and 658 can neither read nor write. Eleven hundred and seventeen are males and 34 females, while 716 are white, 366 mulattoes and 131 negroes. Of the 76 towns of the island those figuring with the greatest number of prisoners are San Juan in the first place, Ponce second, and Arecibo third, the island of Culebra and the town of Las Marías being the only communities not represented in the aforesaid penal statistics.

The population of Porto Rico in 1910 was 1,118,012, and in 1920 it was 1,299,809. In the fiscal year 1910-11 the daily average number of convicts in the penitentiary and district jails was 1,552, while in the fiscal year 1920-21 it was 860, showing the immense reduction of 55.4% in the criminality of those ten years, notwithstanding an increase of 16.2% in population. Of the inhabitants of Porto Rico in 1920, 647,825 were

males and 651,984 were female. Considering the population in connection with the 1,179 male and 34 female prisoners on June 30, 1922, we find that for every 549 men there was one male convict, while there was one female prisoner for every 19,176 women. This speaks highly for the women.

**Reform School:** This school stands in a picturesque spot in the city of Mayaguez, opposite Mona Channel. It is an educational and reform institution for the confinement and the instruction, discipline and industrial training tending to reform delinquent youths. Only those under 16 years of age are admitted, and inmates are placed at liberty not later than when they are 21. Confinement in the Reform School must be upon order of a Juvenile Court or of the Federal Court. On June 30 there were 232 inmates, who are given academic instruction and agricultural and industrial training on the farm and in the shoemaker, carpenter and tailor shops of the school. Music is also taught. The Reform School Band, composed of 40 inmates, is reputed as the best boys' band in the island, and is much sought for promenades, parades, etc., in the different towns of the island. For the recreation and amusement of the inmates the school counts a cinematograph, a park and an athletic field for military drill and exercise.

**Necessary Measures:** Deeming the following measures as necessary for the future, we believe they should be adopted: Construction of a new penitentiary so that a scientific classification of delinquents may be made; amendment of the Penal Code so as to provide indefinite terms of imprisonment within maximum and minimum limits, and the establishment of a reform school for delinquent and abandoned girls, and the organization of a Board of Pardons.

**Bureau of Weights and Measures**

By M. Gorbea Navedo, B.A.,

Public School Teacher. Chief of the Bureau of Weights and Measures.

Porto Rico's progressive legislation could not fail to provide for the investigation of commercial transactions to insure full weight and measure in all purchases and sales. This should not be considered as a reflection on the honesty of the merchants but rather as a proof of the vigilance of the legislature to safeguard the people's interest.

**Creation of the Bureau.** Under the Spanish regime the enforcement of the Weights and Measures laws was entrusted to two employees, the compensation for their services being the fees they collected from the merchants. With the American occupation, the American system of pound, yard, etc., was introduced and legalized, but though we had legislation in our statute books, we had no organ-

ization to apply or enforce same until 1913 when a Bureau was created, especially charged with the enforcement of a law which had just been passed and which governs this matter at present.

**Enforcement of the Law.** This law recognized both systems, the metric and the American as legal, it created a Bureau composed at present of a Chief, Assistant Chief and eight Inspectors, providing also that the work of inspection in each locality be done under the care of the mayor; the Insular Police was also charged with its enforcement and though later on it was found impossible for the Police to do this work of testing, making adjustments of instruments, etc., they still appear, together with the mayor of each municipality, as



PALACIO MUNICIPAL—SAN JUAN.—CITY HALL AND PLAZA BALDORIOTY, WHERE WEEKLY CONCERTS ARE HELD THE YEAR AROUND



PLAZAS DE MERCADO DE BAYAMÓN Y SAN SEBASTIÁN.—  
WHERE CUSTOMERS ARE ASSURED FAIR WEIGHT AND PURE PRODUCTS.

charged with the work of inspection, etc. Though more than half of the towns are unable on account of their small budgets, to appoint a special employee, exclusively for weights and measures service, still in every town one of the employees has been given the additional work of weights and measures inspection in his municipality; each municipality is also provided with a full inspector's equipment.

The wise measure of eliminating the inspection fees and making it illegal for an employee to receive money from the merchants for any work done by him, adjusting instruments or doing light repairs, tends to make the law far more effective than previously.

**Details of the Law.** Our law legalized the American gallon instead of the Imperial and also eliminated the use of dry-measures. The only effective means of controlling the importation of poorly constructed instruments was embodied in the law, that is, the importers or manufacturers of instruments have to submit them to the inspection and test of the Bureau prior to being offered for sale. All packages must be labelled with their net weight or content, thus enabling the purchaser to know how much he is acquiring. Lately a law was passed standardizing the loaves of bread, and requiring the weight and price per pound to appear on the label.

All the stores, even those in the most remote country districts are inspected annually and all instruments tested. The Insular inspectors co-operate with the municipal inspector, watch their work and where these latter cannot, for lack of funds or time, do the in-

spection work, it is done by the Bureau's inspectors. This work includes also the testing of the large capacity scales used throughout the sugar cane zone, tons of weights having to be carried for that special purpose. The inspectors also exercise an active vigilance to insure that the weights as given by the weighers are correct.

**Extending the Scope of the Bureau's Work.**

The Bureau has worked so smoothly and yet enforced this law with such ability, that when a law providing for the testing of electric, gas and water meters used by the corporations was passed in the legislature, the Bureau was charged with its enforcement, though usually such work is placed under the control of the Public Service Commission. This important service is well organized, its technical force consisting of an electrical engineer and two assistant inspectors; who investigate the complaints presented by the consumers, testing also the meters used by the corporations.

Thus Porto Rico, though small and with limited means at its disposal, has still a Weights and Measures Bureau that works and emulates the best organizations of the States, keeping up-to-date with the latest legislation along this line.

