CHAPTER VII

THE RECONSTRUCTION OF THE PANAMA RAILROAD

The Panama Railroad, the most valuable instrument to the construction of the Canal acquired by the United States in its purchase from the French on the Isthmus, was within a few months of sixty years of age when the railroad régime in the Canal Zone began. Called into existence largely by the California gold craze of '49, it was the first coast to coast railroad in the history of America; the first all-rail trip between the Atlantic and Pacific had been made on it in January, 1855. The real pioneers of the Panama Canal were the men who cut their way through the jungle, and laid the iron road between the Oceans. It was at a cost of more than 800 human lives and of $8,000,000 in money that the Panama Railroad was constructed.

The Panama Railroad Company was incorporated in April, 1849, under the laws of the
State of New York, "for the purpose of constructing a railroad across the Isthmus of Panama, and of navigating such steam or sailing vessels as may be necessary in connection therewith." The company secured a concession from the Republic of New Granada, which later became the Republic of Colombia, for the exclusive privilege of operating its railroad across the Isthmus, thus prohibiting the government from undertaking, or permitting any person or corporation to undertake, without the concurrence and consent of the railroad company, the construction or working of any canal to unite the Atlantic and Pacific Oceans across the Isthmus of Panama, to the west of the line of Cape Tiburon on the Atlantic and Point Garachine on the Pacific. It was specifically stated in the concession, however, that the exclusive privilege granted to the railroad company did not give it the right to oppose the construction of a canal, except on the actual route of the railroad, while it was given the right to exact an equitable price from the builders of such a canal as indemnification for any damages it might suffer from competition with a water route across the Isthmus.
The Panama Railroad Company paid $250,000 per annum to New Granada for its concession, in addition to transporting over the railroad, free of charge, her mails, soldiers, and government employees. The directors of the company established high charges for the transportation of freight and passengers; and as the railroad long enjoyed a practical monopoly of traffic between the Atlantic and Pacific, it was a big dividend-payer.

When the French company secured its concession from the Republic of Colombia for the construction of a canal across the Isthmus of Panama, its officials realized the importance of controlling the railroad, in order to secure the transportation of the material, supplies, and workmen at reasonable rates, and to prevent the railroad company from exacting an unreasonable payment for the loss it would suffer by reason of competition when the waterway was completed. The Canal Company therefore purchased in the open market 68,888 of the 70,000 shares of the Panama Railroad's capital stock. These shares were a part of the property of the French Canal Company turned over to the United
States when we bought out our predecessors on the Isthmus; and, with a view to securing complete control of the railroad, we then purchased the other 1112 shares from the minority stockholders. The Secretary of War explained the transaction to the Senate, thus: "The Government, of course, while it recognized the obligation to discharge the duties of a common carrier under the charter of the railroad company, was anxious that it might use the railroad as it saw fit to aid in the construction of the Canal. The interest of the outstanding stockholders, of course, was only in securing dividends from an economical operation of the road and management of its finances. They might very well complain, in equity, if the Government, by reason of its owning sixty-nine seventieths of the stock, should ignore their interests and devote the road to the construction of the Canal without regard to dividends." The question whether to surrender the New York charter of the Panama Railroad and operate it and its steamship line solely for the purpose of Canal construction, or to continue it as a New York corporation, taking care of the commercial
traffic it had been handling for so many years, and also using it in the building of the waterway, was one of the first to be considered when the original 68,888 shares of the stock had been transferred to the Secretary of War. It was decided that the Government would not be justified in closing one of the oldest and most important trade routes of the world, upon which so many countries of Central and South America were obliged to depend, and the railroad company was continued under its old charter. The adoption of this policy has been more than justified by the results. Not only has the construction work on the Canal since the reconstruction of the railroad been handled without serious inconvenience to its paid traffic, but the Government has been able, through the medium of the railroad organization, satisfactorily to meet situations that could not have been handled under existing regulations until changed by Acts of Congress.

As soon as the control of the Panama Railroad Company by the United States Government was assured, the directors who had previously represented the interests of the French Canal
Company were gradually retired. When the Second Isthmian Commission, with Mr. Shonts as chairman, took charge at Panama, the board of directors of the railroad comprised the members of the First Isthmian Commission, with William Nelson Cromwell, who had been the fiscal agent of the Government of Panama; Roger L. Farnham, who was connected with Mr. Cromwell's office and was familiar with shipping affairs; Edward A. Drake, who had been for years vice-president of the road; and Señor Obaldia, the Panamanian minister to the Canal Zone. Mr. Taft, who himself named the board of directors, gave his reasons for making these last selections to the Senate. "I did this," he said, "because I thought it was most important to have the Panamanians understand that they would have on the board three of their friends—Señor Obaldia, Mr. Cromwell, and Mr. Farnham—to protect them against the use of the railroad in any way which would be contrary to their legitimate interests. The selection of Señor Obaldia was a courtesy to the people and the Government of Panama, which I have reason to believe was highly
appreciated. Matters of this sort go very much further with a Spanish-American people than they do with an Anglo-Saxon people." When the railroad men took charge in the Canal Zone, the members of the Second Isthmian Commission were substituted for those of the First on the board of directors of the Panama Railroad, and the writer was also made a member.

At the time that the Panama Railroad Company came into the possession of the United States Government, the road was being run under an exclusive contract with the Pacific Mail Steamship Company, which, by through billing, had secured a monopoly of all business north of Panama to San Francisco. The new board of directors decided that this contract was not one that the Government could afford to continue; and notice was given in January, 1905, terminating it in July of that year. In view of this action the steamship company threatened to withdraw their steamers running between Panama and San Francisco; but, after a conference between Vice-President Schwerin of the company, and Mr. Shonts, the former decided to continue to run the line, as he said, "for an ex-
rates from all producing territory clear through to Colon. Under this policy the manufacturer situated on the line of a railroad leading to New York has no advantage whatever over the one situated on lines of railway running to Gulf ports. Each can arrange for his own rates straight through to Colon. We went a step further and adopted the policy of charging the Government on the Commission’s shipments from New York exactly the same rates that are paid by any other shippers from that port locally. Our object in these various acts was to protect the United States Government from any charge of favoritism to any section of the country or to any port.

“If we had made low rates from New York on our own materials it would have been charged that these were less than private capital could afford to grant, and that therefore the Government should install similar service from the South Atlantic and Gulf ports. We should also have been charged with rebating to ourselves as against other shippers, thus violating the law. What we did was to put the Government on a parity with every other shipper, and all sections of the country on exactly the same footing. If by reason of these policies competition among the railways in different sections of the country shall result in rates below a profitable basis the
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The Cut looking towards Eulebra
Government will be the gainer, because it will get the benefit of a reduced cost in the price of its material delivered on the Isthmus. In no case can the Government be a party to any kind of discrimination."

Indispensable as was the Panama Railroad to the digging of the Canal, its road-bed, ballasted in gravel and rock, which was as fine as any in the United States, was about the only part of it that had not outlived its usefulness. It had but a single track and practically no sidings or station buildings; its telegraph line was worn out, as was its signal system; it had no terminals worthy of the name, and its motive power and rolling stock had been obsolete twenty years before. Just after the railroad men arrived on the Isthmus, Mr. Stevens found nine trains derailed in the ditch along the line at the same time. Canal and commercial traffic, local and through, were nearly at a standstill; thousands of tons of through freight were piled in cars and warehouses or on the docks, and some of these shipments had lain undisturbed from three to eighteen months, in many instances even the shipping papers and freight records having
been lost. Had the docks, wharves, warehouses, terminal yards, locomotives, and cars of the Panama Railroad been in good repair, they would still have been entirely inadequate to handle and properly care for the small commercial business the road was transacting. The existing facilities, poor as they were, were rendered less effective by the entire absence of any mechanical appliances on the docks for receiving or discharging cargo from the steamships. The negro laborer was the only power employed; he was at once the hoisting machine and the traveling crane.

Conditions may be imagined when accumulated orders in Washington for Canal material began to arrive in large quantities on both sides of the Isthmus in August and September, 1905. The situation was aggravated while the congestion was at its densest by an increase of fifty per cent. over the year before in the commercial business of the road, and at the moment when it was believed that matters could not possibly be worse an outbreak of bubonic plague at La Boca resulted in two consecutive quarantines, completely closing that outlet for sixty
days. Furthermore the personnel of the Panama Railroad, as it was turned over to the Second Isthmian Commission, had not been educated on modern lines, and was completely paralyzed when confronted by the onerous conditions caused by the congestion of freight.

The modernizing of the road was a tremendous task, but it was accomplished simultaneously with the sanitation of the Isthmus and the erection of comfortable living quarters for the Canal employees and the establishment of a refrigerating system to supply them with wholesome food. The gauge of the railroad was five feet, while the standard gauge in the United States is four feet, eight and a half inches, a circumstance which much reduced the amount of equipment that could be bought ready-made, and greatly increased the cost of essential material and the delay in getting it to Panama. It was necessary to begin at once the construction of new wharves equipped with modern mechanical appliances and of large terminal yards at both ends of the road; of extensive warehouses, of suitable machine shops, and of a modern coal-hoist-
ing plant. The road was double-tracked with 90-pound steel rails, replacing the 56- and 70-pound rails then on the main line; new and more powerful locomotives and larger cars were purchased for both passengers and freight service, 10- and 12-ton flat and box cars being replaced by those of 40-ton capacity, and the bridges on the road strengthened to enable them to bear the weight of the heavier equipment. The records show that during the first six months of the railroad régime in the Canal Zone, there was purchased for the account of the Panama Railroad 500 forty-ton box cars, 12 caboose cars, 10 refrigerator cars, 6 passenger coaches, 24 locomotives, 2 wrecking cranes, 1 locomotive crane, 1 pile-driver, 300-ton track scales, 1 modern hoisting plant and one cantilever crane. The personnel of the railroad was reorganized, and into the more responsible positions were put experienced, energetic, up-to-date railroad men from the United States, where, indeed, the entire complement of yard and train masters, superintendents of transportation, train dispatchers, and master mechanics, and an army of conductors, engineers, and switchmen were recruited.
In 1907 the Panama Railroad was in a condition to bear favorable comparison with the average of the best railroads in the world. In connection with the railroad the telegraph service was brought up to date, and a telephone system established throughout the Canal Zone as perfect as that existing in New York City to-day.

The new, or re-located line of the Panama Railroad, is 47.11 miles long, or 739 feet longer than the old line. From Colon to Mindi, 4.17 miles, and from Corozal to Panama, 2.83 miles, the old line is used but the remaining 40 miles are new road. From Mindi to Gatun the railroad runs, in general, parallel to the Canal, and ascends from a few feet above tide water elevation to 95 feet above. At Gatun the road leaves the vicinity of the Canal and turns east along Gatun Ridge to a point about four and one half miles from the center line of the Canal, where it turns southward again and crosses the low Gatun Valley to Monte Lirio, from which point it skirts the east shore of Gatun Lake to the beginning of the Culebra Cut at Bas Obispo. In the Gatun Valley section there are a number of Fills constructed from the Canal spoil, which
bring the line above the lake level. Likewise, near the north end of Culebra Cut, where the line is located so as to furnish waste dumps for spoil from the Canal, there are several very heavy Fills. Originally it was intended to carry the railroad through Culebra Cut on a 40-foot berm along the east side, 10 feet above the water level, but the numerous slides have made this plan impracticable, and the line is now constructed, on a grade around the Cut, known locally as the Gold Hill Line. Leaving the berm of the Canal at Bas Obispo, the Gold Hill Line cuts through a ridge of solid rock, and gradually works into the foot hills, reaching a distance from the center line of the Canal of two miles opposite Culebra; thence it runs down the Pedro Miguel Valley to Paraiso, where it is only 800 feet from the center line of the Canal. This section of the line is located on a maximum grade of one and a quarter per cent., compensated, and has a total length of nine and three eighths miles. The sharpest curve on the whole line is seven degrees. From the south end of Culebra Cut at Paraiso, the railroad runs practically parallel with the Canal to Panama, with a maximum
grade of 0.45 per cent. Where the railroad crosses the Gatun River, near Monte Lirio, a steel-girder bridge has been erected, the center span of which will be made into a lift span where the Gatun Lake is formed, to permit access to the upper arm of the lake. The Chagres River at Gamboa is crossed on a steel-girder bridge, one quarter of a mile long, with one 200-foot through truss channel span. Numerous other rivers and small streams are crossed on reinforced concrete culverts. Near Miraflores, a tunnel 736 feet long has been built through the hill.

When the railroad men left the Canal Zone there were more than 6000 men at work on the Panama Railroad; terminals, completely equipped, with power cranes at both ends had been established; there were new warehouses, transfer tables and shops, and from that time until the present the road has never failed in handling promptly, not only all supplies and materials for the Canal, but the freight of the Atlantic and Pacific trade that has passed across the Isthmus.
CHAPTER VIII

HOW THE LOCK TYPE OF CANAL CAME TO BE CHOSEN

It is generally conceded among engineers today that the lock type of Canal, such as the railroad men determined to construct across the Isthmus of Panama, is preeminently the one that should have been built, and that to have adopted the so-called sea-level type would have been a calamitous error, in that it would have cost millions of dollars more than the present waterway and would not now be more than half-completed, while it would in the end be far more difficult of navigation. The Government Commission of Inquiry, to investigate all Canal routes, had reported in 1899 recommending the lock type of Canal, and favoring Panama in preference to the Nicaragua route.

The first Isthmian Canal Commission, headed by Admiral Walker, appointed after the acquisition of Panama were prepared to decide
against the lock type of Canal, after receiving a report from its Chief Engineer, John F. Wallace, and recommended a sea-level Canal similar to the one that had wrecked the DeLesseps Company; so that when the Commission, headed by Mr. Shonts, assumed charge it found the greatest confusion in the minds of all as to the best type of Canal, because of the conflicting and contradictory opinions of the above mentioned Commissions.

Mr. Shonts, as soon as he became familiar with the Canal situation, began to urge upon the President the necessity of coming to a conclusion as to the type of canal to be constructed; and, in June, 1905, Mr. Roosevelt invited thirteen of the most eminent civil engineers of the United States and Europe to consider the various plans proposed for the water route across Panama and report their verdict to him. Thus the International Board of Consulting Engineers came into existence. As finally constituted it was composed of eight Americans and five Europeans, as follows: George W. Davis, Major General, U. S. A. (retired), and member First Isthmian Canal Commission, Chairman; Alfred
Noble, Chief of the Board of three engineers appointed by the Pennsylvania Railroad Company to take charge of the construction of the New York Terminal of that Company, including the tunnels under the North and East Rivers; William Barclay Parsons, Chief Engineer, Rapid Transit Commission, New York City, and member First Isthmian Canal Commission; William H. Burr, Professor of Civil Engineering in Columbia University, New York City, and member first Isthmian Canal Commission; Henry L. Abbot, Brigadier-General, U. S. A. (retired); Frederic P. Stearns, Chief Engineer of Metropolitan Water and Sewerage Board of Massachusetts; Joseph Ripley, Principal Assistant Engineer of the Sault Sainte Marie Canal—the chief civil engineer engaged on that work; Isham Randolph, Chief Engineer, Chicago Drainage Canal; William Henry Hunter, Chief Engineer, Manchester Ship Canal, nominated by the British Government; Adolph Guerard, Inspector of Bridges and Highways, France, nominated by the French Government; Eugen Tincauzer, Chief Engineer Kiel Canal, nominated by the German Government; J. W. Welcker, Chief Engineer of
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Waterstaat, nominated by the Netherlands Government; and Edouard Quellennec, Consulting Engineer, Suez Canal.

The law by which Congress ordered the construction of an Isthmian Canal, which gave direction to the deliberations of the International Board, runs thus:

"The President shall then, through the Isthmian Canal Commission hereinafter authorized, cause to be excavated, constructed, and completed, utilizing to that end, as far as practicable, the work heretofore done by the New Panama Canal Company of France, and its predecessor company, a ship canal from the Caribbean Sea to the Pacific Ocean. Such canal shall be of sufficient capacity and depth as shall afford convenient passage for vessels of the largest tonnage and greatest draft now in use, and such as may be reasonably anticipated, and shall be supplied with all necessary locks and other appliances to meet the necessities of vessels passing through the same from ocean to ocean; and he shall also cause to be constructed such safe and commodious harbors at the termini of said canal and make such provisions for defense as may be necessary for the safety and protection of said canal and harbors."
The International Board met at the office of the Canal Commission in Washington, in September, 1905, continuing its deliberations until the following January, in the meantime paying a visit to the President at his summer headquarters at Oyster Bay, and inspecting the site of the Canal at Panama. Mr. Roosevelt told the engineers that two of the prime considerations to be kept steadily in mind in the matter of the canal type were the utmost practicable speed of construction, and practical certainty that the plan proposed would be feasible—that it could be carried out with the minimum risk. "There may be good reasons," he said, "why the delay incident to the adoption of a plan for an ideal canal would be incurred; but if there is not, then I hope to see the Canal constructed on a system that will bring to the nearest possible date in the future the time when it is practicable to take the first ship across the Isthmus; that is, which will in the shortest time possible secure a Panama waterway between the oceans of such a character as to guarantee permanent and ample communication for the greatest ships of our Navy and for the largest steamers on either
the Atlantic or the Pacific. The delay in the transit of the vessels owing to additional locks would be of small consequence when compared with shortening the time for the construction of the Canal or diminishing the risks in the construction."

It was on November 18, 1905, that the International Board of Consulting Engineers reached a final vote, when a resolution in favor of a sea-level canal was adopted by a vote of eight to five, Messrs. Ripley, Randolph, Stearns, Abbot, and Noble being the members in favor of a lock canal. It was not until January 10, 1906, that the Board presented majority and minority reports to the President, and in the meantime the advocates of each plan, in Congress and out, waged war upon the other, the lock canal project being known as the "American canal" as distinguished from the sea-level, or "European canal." Mr. Shonts took an active part in the campaign for the lock canal, and the President finally referred both reports to the Isthmian Commission, of which he was chairman, through the Secretary of War. Early in February Mr. Shonts made a report to the Secretary of War,
concluded in by the other members of the Commission (with the exception of Admiral Endicott) and by Chief Engineer Stevens, approving the lock canal project favored in the minority report of the International Board. On February 19th Mr. Taft transmitted the majority and minority reports of the Board, with that of Mr. Shonts, to the President, accompanied by a letter in which he concurred with Mr. Shonts in recommending a lock canal, and the same day all the documents went to Congress with a brief message in which the President endorsed the views of the Secretary of War and the Chairman of the Isthmian Commission.

In an address before the Chamber of Commerce of Atlanta, Georgia, the following May, Mr. Shonts presented his side of the controversy on the type of canal. The address was published throughout the country and considerably affected the public mind. Having referred to the opportunities of the South, by reason of its proximity to the Canal Zone, for the sale of material and supplies for the construction of the waterway across Panama, and for the development of commerce after its completion, Mr. Shonts, said:
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"But gentlemen, between the time of selling your supplies which will enter into the construction of this canal, and the period when the opening of the canal will result in this great development of your country, a gulf is fixed. How great and wide that gulf is will depend on the type of canal selected. The present commission believes that the type of canal the people of this country want is the one which will provide adequate and safe passage for the largest vessels now on the seas, or which can be reasonably anticipated, and which can be constructed in the quickest time and at the least cost. It has, therefore, recommended the construction of an eighty-five foot level lock canal, for the reasons that, first, in its judgment, it can be completed for about half the cost, and in about half the time, of the so-called sea-level canal; second, because it will be adequate for all the commerce which can reasonably be expected to seek that route during the next hundred and fifty years; third, because if the tonnage should increase beyond such expectation it can be enlarged more cheaply and more quickly than the so-called sea-level canal; fourth, because, from the operating point of view, large ships can be put through more safely and more quickly than through the sea-level; fifth, because, when the interest on the difference in the estimated
cost of construction is added to the estimated cost of operation, the saving to the Government every year will be $2,340,000; sixth, because, when built, it will be a completed canal, completed in every appointment, for all requirements for generations to come.

"The so-called proposed sea-level canal is not, as is popularly thought, a straight, open, and uninterrupted channel through which ships can freely pass from ocean to ocean, but is in the first place equipped with a large tidal lock, the most objectionable and dangerous lock, from an operating standpoint, in use; while the canal itself is a deep, narrow, tortuous gorge, which large ships can not navigate, even according to the estimate of the men who recommend that type of canal, at a greater speed than four miles an hour, and which will contain at times, according to the same authority, a current in one direction of 2.6 miles an hour. Eighteen streams will pour their waters into this deep and narrow chasm, at heights ranging from fifteen to one hundred and thirty feet, creating not only the main current just mentioned, but creating in addition cross currents where each stream enters the canal. I venture to say that no large ship, occupying, as large ships will, 40 per cent. of the prism through which they will pass, can navigate at that speed through and with those currents,
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safely, under its own steam. I venture to say further that in my opinion no ship-owner would permit a large-sized vessel to make the attempt. As a result, it would not be thirty days after this type of canal was finished as planned before Congress would be called on for an appropriation with which to begin the work of enlarging it.

"The lock canal, on the other hand, as recommended by the minority of the consulting board and indorsed by our Commission, will have thirty-five miles of free lake navigation, so that the difference in time of putting large ships through the locks will be more than offset by their speed through the lake portion of their trip, which is more than two thirds the entire length of the canal. The locks, themselves, as planned, will accommodate ships having twenty-five per cent. greater tonnage than the two giant Cunarders now building,¹ and which will be the largest ships in the world, while the double gates provided for each outside lock and the machinery and methods which will control the

¹ The Mauretania and Lusitania. It may be noted, incidentally, as illustrating steamship growth, that these sister ships, in 1906 the giants of the transatlantic service, are of 32,000 tons gross tonnage; 790 feet in length and 88 feet in breadth, and of 60.6 feet in depth. The Vaterland of the North German Lloyd Steamship Company, the giant of to-day is 55,000 tons gross tonnage; is 950 feet in length and 100 feet in breadth, and of 63 feet depth.
movements of all vessels into and through the locks will make an accident to any vessel, no matter what its size, almost an impossibility.

"In regard to its tonnage capacity: no man can estimate with any degree of accuracy the volume of tonnage which will go through the Panama Canal. The only guide we can have is the traffic of the Suez Canal. Taking the development of the traffic in the Suez during the thirty-five years of its existence as a basis, and continuing the same ratio of increase until the year 2000, the volume of traffic passing through that canal will be in that year, in round numbers, 42,500,000 tons; or estimating that the Panama Canal, if constructed on the plans which this Commission has recommended, will be open for traffic in 1915, and estimating that the volume of traffic passing through it the first year will amount to 7,000,000 tons (which is the best guess that experts have been able to make), and applying the same ratio of increase to that traffic which experience has shown to have developed in the Suez, the volume in the year 2000 will have reached 35,000,000 tons. The estimated capacity of the lock canal, as recommended by our Commission, is 50,000,000 tons per annum. Unless the development of the population of the world changes the basis of our estimates, the type of canal we recommend
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will be adequate for all business that may be thrown upon it during the next century and a half."

Before his address at Atlanta, Mr. Shonts had, in March, urged upon the Committee of Inter-oceanic Canals of the Senate, the necessity of acting at once upon the report of the Board of Consulting Engineers, because of the handicap which the uncertainty as to the type of canal imposed upon the Isthmian Commission. "Mr. Stevens to-day has quite a large force of civil engineers," the Chairman told the Committee. "If a certain type of canal is decided on, he has an excess of some kinds of engineers and not enough of others. If the other type is decided on, the position is reversed. We have men who have accepted positions provided a certain type of canal is to be constructed, one man particularly, whom we may lose. And we are very anxious, if a lock canal is adopted, to secure his services, because we think he is the best expert on locks in the world. We have a big force at work and our preliminary work is pretty well along. We are setting up our machinery and doing all we can, but we are uncertain as to continuing
certain lines of work, because if a certain type of canal is decided on that work will be worthless; and we do not want to be criticized. We can not ‘abandon the fort,’ we can not stop working; and we do not want to make any mistakes. I simply want to urge on you before leaving that you do everything possible to hasten the decision regarding the type of canal. I consider it the most pressing practical question before us as a Commission.”

Senator Millard, the Chairman of the Inter-oceanic Canals Committee, was able to appreciate the situation, and the report and recommendations of the Isthmian Commission were taken up at once. Finally on June 21st, the lock-canal project was approved in the Senate; on the 27th the House of Representatives concurred, and on the 29th President Roosevelt affixed his signature and the discussion was over. From that time on the work of construction of the Panama Canal went forward until its completion with a celerity unprecedented in the history of building operations.

In February, 1909, the Engineering News published an editorial on “The Reasons Why
the Lock Plan for the Canal is Preferable to the Sea-Level Plan,” which began thus:

“Three years ago, after long and careful investigation, the United States Government decided upon the lock plan of construction for the Panama Canal. This decision was made in conformity with the weight of the best engineering opinion. We say this advisedly and with all due respect to the engineers on the International Board who, at that time, from such knowledge as was then available, favored the sea-level plan. Secretary Taft and President Roosevelt, in making the final momentous decision in favor of the lock-canal plan, accepted the opinion of such leaders of the engineering profession as Alfred Noble and Gen. Henry L. Abbot, who had given more thorough study to the Isthmian Canal problem than any engineers in this country or elsewhere; of Mr. F. P. Stearns, whose eminence in the field of hydraulic engineering is well-known to every member of the profession; of Mr. Joseph M. Ripley, with his long experience at the Soo Canal and its great lock, by far the greatest Canal in point of traffic and by far the greatest lock in size, to be found in the world; of Mr. Isham Randolph, the engineering creator of the Chicago Drainage
Canal, which ranks with the greatest canals on the globe. Besides these engineers the lock canal plan was supported at that time by the engineers of the Isthmian Canal Commission, Gen. Peter C. Hains, Col. O. H. Ernst, and B. M. Harrod, past-president of the American Society of Civil Engineers. It also received the emphatic indorsement of Mr. John F. Stevens, then chief engineer of the Canal work, and familiar, from close personal contact, with the problems involved in the question as to the relative merits of the two types. We repeat, therefore, that Secretary Taft and President Roosevelt, in making the final momentous decision in favor of the lock canal plan three years ago, acted according to the best advice of the American engineering profession. From that time to the present we believe, the Canal enterprise and the plan on which it is being carried out has deserved and has, we believe, received the general support and approval of American engineers."

Although the Engineering News does not mention the name of Mr. Shonts, his was the executive intelligence that translated mechanical theories into practical facts for the President and the Secretary of War, and forced them upon Congress.
Lock Type of Canal Chosen

In his address to the Chicago engineers, from which I have quoted before, Mr. Cornish elucidated the situation as follows: "It is well known to all of you how quickly Mr. Theodore P. Shonts, the Chairman of the Second Commission, and Mr. John F. Stevens, the second chief engineer, each vested with greater authority than his predecessors, and working harmoniously together, brought order out of chaos, and little can be said now without repetition, but so far as the speaker is aware, Mr. Shonts never had been given credit publicly for winning a certain great victory during a most critical period of Canal history. A majority of the International Consulting Board, appointed by President Roosevelt to investigate, confer, and recommend as to the type of canal which should be constructed, recommended a sea-level canal, whereas a minority report recommended the lock canal. At the present time there are few people but will acknowledge that the final decision in favor of the lock canal was the proper one, but at that time the adherents of the sea-level route were many and powerful and a bitter fight was made by the Press and
in the Senate by the sea-level advocates. Mr. Shonts realized fully the practicability of the lock canal under any condition of traffic reasonably to be expected, and knowing it could be constructed within reasonable limits of time and money, recommended to the President the adoption of the minority report and thenceforth labored unceasingly in behalf of the lock-canal project, furnishing the ammunition and largely directing the fight waged in the Senate which ultimately resulted in the adoption, by the narrow margin of five votes, of the lock-canal plan, and to Mr. Shonts is due the credit, far more than to anyone else, that the United States has to-day a completed lock canal instead of a half completed sea-level canal."
CHAPTER IX

PANAMA IN 1907

"It was hell down there six months ago, but it's all right now." This forceful, if inelegant observation with respect to the Canal Zone was made to Frederick Palmer, war correspondent and magazine writer (and was recorded by him in Collier's Weekly of February 2, 1906), before the railroad men had been on the Isthmus a year, by a returning resident on a ship bound from New York to Panama. When—in accordance with his understanding with President Roosevelt that he might resign from the Isthmian Commission, should he so desire, as soon as he had brought the work on the big ditch to a full headway—Mr. Shonts retired from the headship of the Canal organization, in April, 1907, Panama possessed as few attributes of the infernal regions as most other communities in this sinful world, and under Mr. Stevens,
with whose resignation from the same position as Mr. Shonts a month later, the railroad régime on the Isthmus ended, as under Colonel Goethals since, she has more than held her own in the matter of hygiene, law and order, industry, and the other definite symbols of modern civilization. Indeed, it was an ideal community, from the pragmatist's viewpoint, that had its being in the Canal Zone, for there was no privileged class, no idlers; every adult had a part in the great project that had brought 35,000 men with their families together there.

Right across the ten by fifty mile strip of United States territory along the line of the Canal, there was in 1907 a succession of trim villages containing populations ranging from a few hundred up to five thousand, living in comfortable houses screened from the invasion of mosquitoes, and provided by refrigerator cars with wholesome food, and by modern aqueducts with pure water, where two years before there had existed a jungle with occasional clearings for labor camps, in which the only buildings were sheds like that complained of by young Carroll of McKeesport in an earlier chapter, where
working men slept six in a room, drank rain water, and lived on "meals that would sicken a dog." At Gatun, the site of the great dam which now holds back the waters of an inland lake of 164 square miles, there was a village which had sprung into existence in four months, situated on the hill top, overlooking the quaint native village on the banks of the Chagres River below, which is to-day eighty-five feet under water. The site of Culebra (now the headquarters of the Canal administration), built on bluffs overlooking the great cut and surrounded like an amphitheater by rising slopes of beautiful hills, a town of 5000 inhabitants, had been covered by an impenetrable forest, with scarcely a sign of human habitation, when the railroad men came to the Isthmus. Within a few miles of Culebra, were three other towns each of 5000 inhabitants—Empire, Las Cascadas, and Gorgona, that had existed only as groups of hovels in the wilderness six months before, while by means of refrigerating plants on the government's steamers, a cold storage plant at Colon, and refrigerator cars on the Panama Railroad, there was a continuous line of food supply
between the towns and villages along the line of the Canal and the markets of the United States.

Each one of these towns and villages was supplied with pure water by a modern aqueduct and contained the latest sewerage system, and in each one, in addition to the quarters for the employees of the Canal, there were hotels, mess halls, club houses, and recreation buildings. It was no longer necessary for the men to go to Colon or Panama after working hours to look for amusement that might have been of a questionable kind, for these recreation buildings, each with its gymnasium, its reception, card, and billiard rooms and its assembly hall, managed in conjunction with the Young Men's Christian Association by boards of directors selected from among the employees, provided them with pleasurable occupation outside of working hours. Each of these clubs had its own board of directors, as has been said, but all were under the control, so far as broad principles were concerned, of a general board selected by the Isthmian Commission. The problem of entertainment and recreation, however, was solved in great measure
by the men themselves, who had established societies, fraternal orders, and athletic associations all along the line of the Canal. . . . There were some two thousand American women and children on the Isthmus, and the number was constantly increasing when the railroad régime ended, so that social functions participated in by both sexes were becoming more and more frequent. The Canal Zone was no longer an Eveless Eden.

When the railroad men turned over the administration of affairs on the Isthmus to Colonel Goethals, the cities of Colon and Panama no longer deserved the reproach of being “two of the most forbidding, dirty, and from a white man’s point of view, unhealthy places on earth,” as Mr. Stevens described them on his arrival. In 1907 Panama was the best-paved, the best-watered, and the best-sewered city in Central America or the northern half of South America, and the railroad men had constructed a great reservoir with an abundant supply of pure water, and installed a fire service that on two occasions saved the city from destruction. A reservoir had been constructed for Colon also,
Who Built the Panama Canal?

one with a capacity of 508,000,000 gallons. The main street of Colon had been paved with vitrified brick, and the surface of other streets had been raised and covered with crushed rock.¹

Adjunctive to the main issue on the Isthmus, the construction of the Canal, the state the railroad men created in the Panamanian wilderness lacked none of the essentials of modern civilization. There was a supreme court with a chief justice and two associate justices, a circuit court with three, and a district court with four, judges; there was a prosecuting attorney; there were 19 schools, with a superintendent, 36 teachers, and more than 1600 pupils; there were 17 post offices, with 17 postmasters, 30 clerks, and 22 messengers; there were 14 police stations, a jail, and a penitentiary, with a chief of police, a first and second lieutenant, 11 sergeants, 19

¹ Mr. Stevens corrected the general misapprehension as to this feature of the work of the railroad men in his address before the Oregon Society of Engineers. "Recently I have noticed in local newspapers very flattering comments on the present conditions as regards streets, sewers, and water supply in Colon and Panama," he said. "These are all true, but I want to remark in justice to the engineers in civil life who designed and built these works and wrought these changes, that all this was done prior to the advent of the army engineers, and was not done by the latter, as stated by the article in the press to which I have referred."
corporals, and 159 patrolmen, and also a chief clerk and seven subordinate clerks; there was a fire department with seven stations in the seven principal towns of the Canal Zone, a chief and an assistant chief and 26 paid firemen, as well as 12 volunteer fire departments in 12 towns and villages; there was a division of public works, with 13 inspectors and 16 men in such subdivisions as plumbing, water, sewers, paving, markets, and slaughter houses, and there was a revenue department divided into administrative departments, that took care of customs, internal revenue, and the administration of estates. The prisoners from the penitentiary, averaging about a hundred in number, were engaged in building roads, as a result of which there are more miles of macadamized roads throughout the Canal Zone than in all the rest of the Republic of Panama.

On the work pertaining to the actual construction of the Canal more than 37,000 men—Americans, Europeans, and West Indians—of the total of 43,000 employed up to its completion, were on the Government pay-roll when the railroad men left the Isthmus. Creating a
45-foot channel four miles out of the harbor of Colon, and at work in the three divisions of the big ditch itself, 12,000 men of the department of excavating and dredging were operating three dredges, 63 steam-shovels, 132 locomotives, and more than 1500 cars, removing dirt and rock at the rate of approximately 600,000 cubic yards per month. When Mr. Shonto resigned, every American on the Isthmus was looking forward to the day when the Canal Commission might announce to the world a record of the removal of one million cubic yards of spoil per month. The one million cubic yards proved to be just over the border, for during the final month of the railroad régime the record was 983,000 cubic yards.

Dredging operations were going on from Colon Harbor as far as the Gatun Locks, where excavations were being made for the construction of the three locks in flight, each of these locks being then planned to have a clearance of 1000 feet in length by 100 feet in width, which has since been changed to 110 feet in width. Here the building of the Gatun dam was in actual course of construction. Between Gatun
and the Culebra Cut other than secondary work had not been begun, because Chief Engineer Stevens considered that, as it was only a question of a brief period of time to reach grade at all points, there was nothing to be gained in starting the work three or four years before it was actually necessary, and he thus prevented the locking up of appropriations that might be needed and could be used more advantageously upon other sections of the Canal. At Culebra Cut, not only had the plans been completed for the excavation, but the tracks were laid, the dumps were in existence, and the spoil from fifty-three steam-shovels (the records show that the greatest number of steam-shovels ever used in Culebra Cut was sixty-four) was being moved down grade to them. At Pedro Miguel, the southern terminus of the Cut, preliminary work had already been begun upon the excavation for the lock, and from this point to Balboa surveys were being carried on to determine the most advantageous sailing line in the lake formed by the dam that was to have been built at the latter point.

Supplementing the labors of the 12,000 men
engaged in the actual excavation of the Canal, there were more than 2100 at work in the department of locks and dams; more than 2800 in that of municipal engineering; more than 3500 in that of motive power and machinery, keeping the plant in order; more than 3800 in that of building and construction of houses, stores, and warehouses; more than 2400 in that of sanitation, keeping the malaria mosquito down; more than 2000 in that of labor and quarters, feeding and taking care of the rest, and more than 1200 in that of material and supplies. The chief engineer had 57 clerks in his office; the disbursing officer had 141 subordinates; the examiner of accounts 101, and there were three men in the office of the secretary of the Commission.

Little has been written of the social life of the Isthmus, for the very good reason that nearly every resident and visitor has been occupied solely with business, while the professional writers have been interested principally in the Canal itself. However, a courageous nurse, Miss Bessie Murdock, who went to Ancon Hospital in 1904, has contributed to the Year
Panama in 1907

Book of the Society of the Chagres some personal experiences during the period that Colonel Gorgas was getting together hospital forces second to none in the world and exterminating yellow fever and the railroad men were civilizing the Canal Zone, that give an idea of conditions on the Isthmus other than those more directly connected with the actual digging of the Canal.

After describing the forty-seven mile railway trip across the Isthmus from Colon, Miss Murdock proceeds:

"We got into a brake, a Jamaica negro cracked his whip, and we jolted along over unpaved streets, finally arriving at the gateway leading into the Ancon grounds. On entering, it seemed as if we were being driven through a beautiful but neglected park. Everywhere was the evidence of artistic design in landscape gardening, but so overgrown were the shrubs and plants, and so rank the undergrowth, that little of the original beauty was discernible, and only noisomeness and slimy reptiles were suggested by the luxuriant vegetation.

"One feature, however, made a never-to-be-forgotten impression,—the stately rows of royal
palms with their drooping fronds swaying far above our heads, like steadfast and undaunted sentinels of a community life inaugurated by the French régime, now to be advanced to a completion far exceeding their most sanguine expectations. It was a climb from one terrace to another until we were about half-way up the mountain, finally reaching what was then known as Ward Fifteen, the temporary quarters for the nurses.

"Upon our arrival, preparations for afternoon tea were started, but the wind blew the alcohol flame in the wrong direction, and we were really quite faint when the stimulating brew was at last ready for us. In the meantime, we had been looking about. A large ward was our dormitory. Old rusted iron French beds, with mildewed mattresses and pillows lined the walls. It was a case of first come first served. Each made a dash for what she thought was the best location. A glimpse had been caught of two nice fresh white enamel beds belonging to two nurses who had preceded us by an earlier steamer, and, while we were getting ready what was to be both bedroom and dressing-room for eight persons, we thought enviously of their superior comfort. Fresh linen and mosquito bars, the latter a novelty to us, were supplied from the storeroom, and by the time the six o'clock dinner
was announced we had our house in order and our appetites whetted for our first Spanish meal, with its many surprises, the chief of these being the announcement by Rosina, who appeared with bare feet, attired in a loose bodice, short skirt, and bandana, flourishing a ladle in her hand, which she wiped on her apron as she walked into the dining-room. Each one was assigned to her place at the table, Rosina taking acute notice as to whether or not we understood the etiquette of using the six plates piled in front of each, ignorance on which point relegated the unfortunate one to a low place in her esteem, as not being to the manner born.

"As we sat down to dinner, we were surprised to see lighted candles on the tables, for the sun was still shining brightly. In a very few minutes we understood the reason for this, as there is no twilight in the tropics, and before dinner was finished the room would have been dark without them. The meal consisted of okra gumbo, a fillet of beef, sweet potatoes, Spanish macaroni, shrimp salad, and pineapples for dessert, with very good coffee, the six plates being used in their proper sequence. The cooking was excellent, the service à la Rosina was entertaining, and the inner woman being refreshed, we repaired to the balcony and there awaited developments, the first being an attack upon us
by the much-dreaded anopheles mosquito. In a very few moments one and then another declared that it was impossible to remain outside, as we were being eaten alive by the mosquitoes and sandflies. We sought refuge in the dormitory, and were informed that the best thing to do was to go to bed. Each had a candle, but it was soon found that it was not wise to keep these burning, as they attracted moths and all sorts of flying insects. Yet, in spite of these many difficulties, we were not disheartened, but thoroughly enjoyed the novel experiences.

"The next morning we were told that a patient had died of yellow fever and that there were several other cases in the hospital. Some were frightened at this, but details were assigned, and we went to work. One ward was occupied by white patients, another by negroes, these two being the only wards in use.

"The Sisters of St. Vincent de Paul were in charge, women of much refinement and charm. They had been in complete control of the Hospital during the French régime, and with the incoming of the United States Government it was decided that they should stay on and be a part of the nursing force until the end of the year. They had their own community life, and with their religious services and their rather unusual garb they added much to the
picturesqueness of the surroundings. We were told that these Sisters had done heroic work in the face of great difficulties and poor facilities.

"The hospital, although a marvel of artistic design, well planned and ventilated, was of course destitute of all modern up-to-date conveniences. In its construction, labor-saving and time had not been considered, as the some forty-odd buildings making up the hospital were scattered over a number of terraces, and occupied a very large territory. The buildings were all at that time of one-story, surrounded by 'galleries' of verandas, and roofed with red Spanish tiles. Around these verandas were planted shrubs and plants, all more or less neglected, but showing the French love of beauty and harmony, as well as of the more practical needs of the sick.

"The cleaning and repainting of the wards advanced rapidly. Equipment was placed, and each day showed gratifying progress in the ability to meet the demands of the steadily increasing number of patients. The buildings were without wire nettings, necessitating a mosquito bar for every bed, which made it a little difficult to attend the patients but, when yellow-fever patients were admitted, a wire cage was built about the bed. For those nurses who had to take duty at night, there was no wire cage in which they might seek protection from the
pestiferous mosquitoes, their only relief being obtained by swathing themselves in bandages soaked with oil of citronella.

In the meantime, the grounds were being policed. Whole battalions, armed with machetes were mowing down every green thing that stood in their way. Much regret was felt by us when we beheld the destruction of a noble cedar of Lebanon which stood close by our veranda. If by any chance the overseer did not designate each blade to be spared, these men showed no discrimination. When all was finished, there remained no further entrancing mysteries, but there were revealed to view many pieces of statuary, chiefly figures of saints, which had decorated the grounds, and, being considered innocuous, were, for the time, left in place. For the future, matters were to be conducted on strictly sanitary lines.

"We were yet to have water works and a sewage system installed, up to this time the water supply having been obtained from a small reservoir and overground cisterns which stored the water collected from the roofs. During the rainy season the supply was abundant, but when the long dry season arrived water had to be used in the most sparing quantities, and for days at a time baths of all sorts were prohibited.

"Each week added to the number of our nurs-
ing staff, recruits coming from active service in all parts of the world,—the Philippines, Cuba, Africa, China, Japan, England, and Canada,—each contributing details of value. The increase, of course, necessitated further accommodations, and arrangements were made for taking over the Strangers' Hospital further up the hill, for permanent quarters. This hospital derived its name from the fact that during the French occupancy the only patients admitted were those who were sent in by the foreign consuls. About this time nearly every one in the entire community was afflicted with malaria, and yellow fever had carried off several fine young men.

"Being the only women connected with the work, we valiantly tried, when off duty, to live and surround ourselves with a little of the home life we had left two thousand miles behind. Our first social affair was a card party, and on Hallowe'en, a month later, several charming young bachelors gave a unique little 'evening.' Nothing that was attempted later seemed so original.

"Later on, we ventured into the field of drama, and put on a little play called *The Traveling Delegate*. An all-star cast was selected, but the stage management disagreed on a few technical points, so after many difficulties it was ready for the evening of Thanksgiving. We
were still very dependent on candles, though some favored few had been granted kerosene lamps which were loaned for the occasion and used as foot-lights. A string orchestra from Camp Elliott supplied the music, and when the play was over the 'terpsichorean devotees' tripped gaily until midnight, unmindful of the fact that there had been hanging over the Zone a threat of invasion from Colombia. Ancon had been assigned a special patrol of marines, and several battleships were at anchor in the harbor.

"Early in December, toward the end of the wet season, yellow fever and other forms of sickness became more prevalent, almost causing panic. Had we allowed ourselves to do so, we would have lost heart completely, for death seemed to dominate the situation. But the unselfishness and splendid administrative skill by which our work was arranged made every one feel that we too must do our work courageously, and in the trying days when one of our number was stricken, no one showed the white feather but all stood faithfully to their tasks. There were many anxious days, and not until our trusted yellow-fever specialists said that all danger was passed did we feel any ease of mind.

"Previous to the outbreak of the fever, orders had been issued prohibiting all visiting in the City of Panama. This was indeed a hardship,
as we delighted to wander through its quaint narrow streets, visit its cathedral and churches, rummage through the old Chinese shops and junkshops where much old-fashioned jewelry and many rarities could be obtained for very little, and señoritas were seen in the plazas during the late afternoon.

"Through the kindly consideration of all the officials, much was done to make conditions comfortable and pleasant for us, and our superintendent being a woman who had been prominent at the Court of St. James, our entire corps enjoyed the best social standing. Afternoon tea was frequently honored by the presence of distinguished guests, including British and United States Naval officers, as well as those engaged on the Isthmian Canal Commission. These diversions, however, formed only a small part of the daily life. We were taxed to the utmost in the effort to care for the sick and keep hope and encouragement alive. The *esprit de corps* was excellent.

"Late in the summer of 1904, our first Ancon baby was born, and upon it was conferred the special honor of being baptized 'Theodore Roosevelt.'

"Quiet little romances were going on in our midst, and in December, six months after our arrival, the first engagement was announced,
but it was not until May, 1905, that the first wedding was celebrated. It was a pretty ceremony, and was one of many weddings that followed in rapid succession during the year. "Time with progress was forging ahead, as a special visit to Colon proved. Where we had seen nothing but jungle on our first trip, gray villages had sprung up all along the line of the Canal. The great steam-shovels, acting like human beings, were making much ado, and there was buzzing and humming everywhere. We nurses were no longer respectfully gazed at because we were the only women connected with the work, for women and children were arriving by every boat. Homes were being established and a sense of domestic comfort pervaded the settlements. The advent of women meant the development of social life, and various clubs were organized.

"Before two years were over, we were surrounded by all the modern comforts and conveniences. Telephones buzzed, electric lights were flashed on, and we recognized ourselves as only a part of an ideal community. It would be hard for any one to-day to believe that Ancon had ever gone through a pioneer stage. We were glad to have had a hand in the work of those early days, and although as women we achieved no separate distinction, yet we flatter ourselves that we
played an important part in the building of the Canal."

It was in January, 1907, that, having perfected the machine that was to build the Panama Canal and started it going, Mr. Shonts reminded the President of his promise, made in April, 1905, that when the excavation of the cut between the Oceans was under full headway, the Chairman of the Second Isthmian Commission should be allowed to resign from the Government service. His conduct of Canal affairs, on the Isthmus and in Washington, had enhanced his previous reputation for capacity made in the railroad world before he went to Panama, and the financiers who were planning the combination of the subway, surface, and elevated railway systems of New York into the gigantic organization that now exists as the Interborough Metropolitan Company, knowing of Mr. Shonts' compact with Mr. Roosevelt, had requested him to accept the presidency of the proposed corporation. The position was one involving an infinitely greater demand on his peculiar genius as an organizer and executive than the mere digging of the Canal, now that the work was
salary; was offered the mayoralty of Cristobal at $1800, but declined it with indignation as being unworthy his talent and social standing. He again applied to Governor Magoon for a position and was informed that there were no vacancies. Subsequently he asked to be made Superintendent of Schools of the Zone and was not appointed because Governor Magoon thought his age and temperament unfitted him for the position. Mr. Robinson is an elderly gentleman with nothing to do but to collect rents and to talk to strangers who visit his town, and is the source of many prejudiced reports against the Government coming from the Isthmus.

"The other witness whom we can identify is Mr. John Lundie, and in order to understand his impartiality in the criticism of the Government, I shall, at the risk of prolixity, give a little of Mr. Lundie's history. He is an electrical engineer. He was employed to visit the Isthmus in order to superintend the construction of a plant for the generation of electricity and the manufacture of ice by a private company. Under the treaty made with the Republic of Panama, it became the duty of the United States to construct a water supply and drainage for the city of Panama. The question for the Commission was where it could best secure a
proper supply of water in the quickest time and at the least expense. It found a reservoir, partly constructed, about eleven miles from Panama, immediately on the line of the railroad, and the water, when examined by experts, proved to be, and is, potable. It had the advantage of permitting the use of the right of way of the railway company clear from the reservoir to the city without expense. It permitted the use of the railway for the hauling of pipe and other material necessary in the construction of the waterworks, and the reservoir has now been completed, the pipe has been laid, and water flowed on the Fourth of July last. The water system now extends throughout the city of Panama. Before work was begun a syndicate of Panamanians desired that the water should be brought from a source some sixteen miles from Panama, far off the line of the railway. For this rival project it would have been necessary to condemn nearly all the right of way. The syndicate were interested in the property near where the water supply was and through which the pipe must be run. In their interest a series of articles appeared in a newspaper in Panama attacking the plan for the present water supply in the most vicious and denunciatory terms. These letters were written by Mr. John Lundie, whose assistance was invoked by the syndicate. I make
this statement on the authority of Gen. George W. Davis, then Governor of the Canal Zone.

"Subsequent to this, Mr. Lundie, having made his peace with Mr. Wallace, made formal application to become one of the advisory board of consulting engineers to report upon the proper type of canal. He did this avowedly because it would do him good in his business. Mr. Wallace good naturedly recommended him. Mr. Lundie visited me and urged his appointment with great vigor. He became so persistent in forwarding his own candidacy and so annoying in his importunities that, with your concurrence, I telegraphed to Mr. Wallace at the Isthmus to advise Mr. Lundie, who was then there, that his application for appointment was rejected chiefly on the ground of his undue and improper persistence in seeking a place of this character.

"Just as Mr. Wallace left the Isthmus he appointed this same Mr. John Lundie as consulting engineer, at a salary of $500 per month, to make a report of oils and fuels on the Isthmus, subject to the approval of the Chairman of the Commission. Mr. Wallace’s action was disapproved by Mr. Shonts, and Mr. Lundie was not appointed.

"Mr. Lundie is the chief engineer of the ice and electric plant already referred to. It has a
capital of $250,000 which was furnished partly by Americans and partly by Panamanians. Mr. Lundie understands correctly that the Government expects to erect at Colon its own refrigerating plant, and that it proposes to furnish its own electric light. I believe that Mr. Lundie's company now derives some business from the Government. Mr. Lundie objects seriously to the Government's furnishing its own light and ice, and insists that it is its duty to patronize his company. It was to enter this protest that he wrote to me while I was on the Isthmus. When he found that his arguments upon this point were not thought to be weighty enough to prevent the Government from carrying out its plan, he wrote to you, Mr. President, a letter which exhibits the spleen and insolence of the man and the extent to which prejudice will carry him in making unfounded statements. I append this letter to you, together with his correspondence with me and with the Canal Commission. It is noteworthy in this connection that not only are the statements of fact contained in this letter repeated in the magazine article under discussion, but some of the reckless and impudent vocabulary of the letter appears in the article without change. This makes it quite certain that a copy of Lundie's letter to you was shown to the writer
© J. Pannell 1912  The Gates at Pedro Miguel
of the article. The writer's willingness to draw his facts from such a fountain of manifest malice, injured vanity, and disappointed ambition, as Lundie's letter, completely refutes his good faith in asserting his wish to find and state the truth.

"In the completion of the sewer system the plan carried a part of the sewer in Panama through property controlled by the company of which Mr. Lundie is the chief engineer and at present manager. He objected to the place where the pipe was to be put. The matter was brought to the attention of Chief Engineer Stevens, who went over the matter and insisted that their way was the proper way to go. Mr. Lundie conducted himself in such a way as to create a bitter personal difficulty with Mr. Stevens. The matter was then submitted to the Mayor of Panama, who, upon examination, determined that Mr. Stevens was right, and the pipe was laid in accordance with the views of the Government. This probably explains Mr. Lundie's views, filtered through the writer of the article, that no sewers are needed in Panama, and that the adopted plans are outrageously defective, and also the unfounded statement that the filth of sewerage has backed up in the city of Panama, and that the sewers as constructed do not discharge their proper function."
Mr. Lundie's letter to the President, referred to by Mr. Taft as exhibiting spleen and insolence, ran thus:

"John Lundie, Consulting Engineer,
  52 Broadway, New York City.

"Panama, November 15, 1905.

"My dear Sir:
This letter, if you please, is not an official one to the President, but a private communication to Theodore Roosevelt, the man, whom every honest citizen must admire and honor for his sterling personal qualities.

"In my whole experience as an engineer and a business man (I am exactly your own age) I have never seen such a piece of mismanagement and utter demoralization as exists to-day on the Isthmus of Panama. The United States ought to hang its head in shame at the way in which prodigality, incompetence, insolence, unfair dealing (not to say graft, which is always hard to actually prove), and cowardice permeate the organization of the Canal Commission.

"The fault is not with the rank and file; there are many honest, competent men here. There is, however, every facility for them to become
dishonest and incompetent from laxity in organization.

"Please allow me to be very frank, even in criticizing those in high places, as their influence seems to permeate the whole organization and makes ridiculous men of the highest integrity or business and professional reputation who happen to come under their influence or supervision.

"I understand Secretary Taft arrived on the Isthmus on November 2, and left on the 7th. What was talked over in Panama Government circles and with the Executive Officers of the Commission it would be impertinence for me to discuss. I asked the gentleman for a conference in person and wrote him a letter, to which I received a reply, a copy of which is inclosed with a business communication addressed to you. The reply is a simple turning off of the question involved,—a 'Go away, little boy' response. As to a conference, he had time for a great deal of social entertainment, which perhaps, for aught I know, fulfilled the diplomatic object of his visit. He attended, for instance, receptions and balls (yes! he danced, to the intense amusement of the tittering girls of Panama) on Friday, November 3, and Sunday, November 5, in Panama, and on Monday, November 6, in Colon. Nero fiddled while Rome burned.

"The members of the Commission and the
advisory board arrived at Colon on Wednesday, October 4. Their itinerary was as follows:

"Wednesday, October 4. Special train from Colon to La Boca and return, avoiding the pest-ridden (ha!) city of Panama—all dressed like guys, with white helmets—for ostensibly the purpose of getting a general view of the country.

"Thursday, October 5. Visited site of proposed dam at Bohio on train. There is the best of authority for stating that only one of the party walked as far as the water's edge.

"Friday, October 6. Visited site of proposed dam, Gamboa.

"Saturday, October 7. Visited Culebra cut. Some of the party actually refused to walk through the cut.

"Sunday, October 8. Day of rest!

"Monday, October 9. Visited city of Panama for a few hours and paid respects to President Amador.

"Tuesday, October 10. Received Canal officers at Colon.

"Wednesday, October 11. The cowards sailed away.

"The foregoing refers to the advisory board. The Commission no doubt met in solid deliberation behind mosquito screens.

"During their stay they lived aboard the steamship Havana. They did not dare take
Human Mosquitoes

trips which would necessitate remaining away from their fan-cooled rooms over night. Not a member of the board of engineers, I understand, went to Alhajuela. One Congressional Representative had the nerve, I believe, to make the trip.

"Their actions are beyond comprehension. All honorable professional (save the mark of some) gentlemen. They might as well have stayed at home and studied the data furnished in book form, except for the fact that, to their mental vision, they have now some idea of the country to which the data refers. They were certainly induced by someone, or by reports, to act like a lot of scared cats. Personally I saw none of them, but the descriptions of the cowardice displayed are screamingly funny. I am sure any ordinary business man in Congress would be able to knock their 'academic' report into a cocked hat, if their visit to the Isthmus is the basis of their conclusions. It looks as though this idiotic yellow-fever bugaboo is being used to advantage by someone.

"There is a coarse, incompetent, unprincipled jackass by the name of Shonts, who, under the Secretary of War, seems to dictate the physical and moral tone of what is done on the Isthmus, and the result is pitiful in the extreme. The United States will, under such influence, become
the laughing stock and stink in the nostrils of the whole world. His appointees are of varied stripe, but mostly take after their patron. High salaries do not, of necessity, make big men out of incompetent weaklings (or worse).

"Governor Magoon seems to stand the light of criticism well, appearing to be a man of suavity and integrity. He, however, seems to wish to please the 'men higher up,' to the distortion of his better sense of right and justice.

"Under the present régime the Canal project will become, assuredly, a seething mass of corruption.

"Please take this letter as a confidential communication for your own use. I have no public charges to make, nor is my aim in writing to you to seek any public preferment. My experience in seeking an appointment on the advisory board of engineers was my first, and it will be my last effort to seek public office. Men of my stamp are evidently not wanted. I propose to stand or fall on my personal merits, sticking to private business, but will endeavor to hit a head, when I see it, of a corrupt or incompetent public official.

"Assuredly, sir, it would seem as though the day of the upright, fearless, competent man is giving way to a reign of cupidity and utter lack of moral sense.
Human Mosquitoes

"The man in the White House is beyond reproach. Why such lieutenants?

"It is trusted that you will even stand alone, if necessary, in fighting for the honor of the United States. You will not, however, have to do so, as there is enough of the sterling stuff sweeping miserable time-servers into oblivion, so far as such lies in your power.

"Yours most sincerely,

"John Lundie.

"Hon. Theodore Roosevelt,

"Washington, D. C."

Mr. Lundie's resignation from the American Society of Engineers was accepted soon after the publication of this letter.

Mr. Bigelow did not go unscathed for his part in the dissemination of the slanders of Messrs. Tracy, Lundie, and the others. Two weeks after his article appeared in the Independent, he was summoned before the Committee on Inter-oceanic Canals of the Senate. He was under the impression that his opinion as to the situation at Panama was desired by reason of the fact, as he explained to the Chairman, that he had "made a study of labor conditions in the tropics under fairly cognate circumstances."
Mr. Bigelow was informed, however, by the late Senator Morgan, that he was before the Committee for cross-examination about the *Independent* article.

"That is the proposition," said the grim old legislator, "and I think Mr. Bigelow ought to have every proper opportunity to inform the Committee of the sources of his information and the character of his information, so that the Committee can determine whether Mr. Bigelow has told the truth in his article in the *Independent*. That is my understanding of the purpose of his being here. I would like to remark, also, that I see no purpose connected with Mr. Bigelow's examination that has any possible advantage in it for the construction of a canal. I am interested in the construction of a canal, and I am not interested in the gossip or the opinions of men who circulate about that place or other places for the purpose of making graphic or sensational statements on this question. They have no weight and ought to have no weight with the Committee. We have to investigate the facts ourselves."

Mr. Bigelow proved a stubborn and unsatis-
factory witness with regard to the truth of his article on canal "mismanagement," evading many questions and declining to answer others on the ground that his information was confidential, and attempting learned disquisitions on minor points of inquiry. He further complicated matters on the question of his own veracity, by volunteering the statement, when reminded that the Committee wanted only facts from him: "Here is a fact—the fact that many engineers of distinction have declined the offer of the Government to take charge of the work on the Canal," and then being able to name but one engineer who had thus "declined the offer"—who, it transpired afterward, had never received it.

At one point during Mr. Bigelow's examination he endeavored to dignify his unfortunate position by making it appear that there had been a controversy between himself and the Secretary of War as to conditions at Panama, upon which issue the following extract from the record bears:

"Senator Simmons. Mr. Chairman, so far as I am concerned, I do not care anything about the controversy between Mr. Bigelow and Mr-
Taft or Mr. Stevens. I want to know what he saw down there.

"The Chairman. That is what we want to know, Mr. Bigelow—what you saw during the time you were at Panama.

"Senator Simmons. And I want to know why he accepted certain statements that he put in this article as true, that the Committee may determine whether those statements are reliable or not.

"Senator Hopkins. And I wish, Mr. Chairman, to disclaim on the part of the Secretary of War that there is any controversy between him and this gentleman.

"The Chairman. I have not understood that there was.

"Senator Hopkins. There is no controversy. This gentleman has written an article relating to the condition in Colon. He is called here to give the facts relating to the matter, so that we can make a more thorough investigation than his article would warrant. Instead of doing that, he has broken off and made a statement here regarding a number of eminent engineers, as he claims, who have declined service for specific reasons enumerated by him. I insist that the witness, after going that far, shall be compelled to give the names of those men. The Committee is entitled to it and the public is entitled
to it. No man should be permitted to make a general statement of that kind without furnishing the information that will enable us to either contradict or confirm his statement."

Mr. Bigelow still continued his refusal to give authorities, either for the information contained in the *Independent* article, or for his statement with regard to the engineers of distinction who had declined the Government's offer to take charge of the work on the Canal; and, after Senator Morgan had warned him that his conduct made him amenable to the criminal courts of the District of Columbia, he was dismissed from the witness stand. The Senate did not consider it worth while to carry the matter any further, however.

It was only two weeks after Mr. Shonts delivered the address already referred to before the hardware men in Washington that a New York newspaper which, for some unknown reason, was opposed to the adoption of Panama as the route of the Isthmian Canal, and which persistently expressed that position during the time that the country was in debate on the matter, devoted two columns to an article under head-
lines running thus: "Clergy Raise Moral Issue on Isthmus—Importation by Canal Officials of Negro Women Raises Storm of Protest—Ministers Will Make an Appeal,—They Will Urge that the Bringing in of Women be Stopped at Once," which conveyed the impression, as it was afterward formulated on the floor of the Senate, that "a cargo of women had been brought to Colon, under the authority of the Canal Commission, to be distributed up and down among the laborers on the Isthmus for immoral purposes."

On this occasion the Canal officials had learned of the nature of the newspaper article before it appeared, and were prepared for its immediate refutation. Nevertheless, the investigation required lengthy correspondence by cable and mail, and meant unnecessary work for the President, the Secretary of War, the Chairman of the Commission, and the Governor and chief of police of the Canal Zone; and, although the facts in the matter had been cabled by Governor Magoon to Mr. Shonts, who was in Washington, on November 20th, while the article did not appear until November 25th, it received wide circulation, eminent moralists in and out of
the National Legislature and the pulpit being unduly agitated before the lie was nailed. Governor Magoon's statement of the facts on which the newspaper sensation was built was based on a report made to him by Chief Engineer Stevens, which in turn was founded on one made by Chief of Police Shanton. "These women consist largely of the wives of laborers who had preceded them, coming to our work," telegraphed the Governor to Mr. Shonts, "and were sent here on the request of their husbands, some coming to fill positions as servants in white families and some as laundresses and chambermaids, for which there was a demand; and all were brought with only the above objects in view, precisely as white women have come from the States under similar conditions to join their husbands and as nurses, etc. Nearly every one of these families was known personally to our representative in Martinique, and care was taken to include only those who came for legitimate purposes, and to my belief the selection was justified by the results. You can hear any sort of a rumor on the Isthmus, and the one you referred to is entitled to just as
much credence as any of them—none at all. At the same time it must be borne in mind that the situation as regards social and family relations among the island blacks differs entirely from that which obtains among white people generally. Thousands of men and women in these islands live together their lives long and never go through the marriage ceremony, but they are recognized as man and wife, and all their family relations are based upon the above arrangement. In fact, the proportion of illegitimate children (illegitimate according to our standard) in some of the largest and most populous islands is 80 per cent. Still, the families so constituted form the unit of the social and political life of the islands, and from their point of view, from which it is entirely proper to judge them, are entitled to just as much respect as our people who happen to be born and live in another country and under different conditions. You can absolutely and unqualifiedly deny any other purpose in bringing these women to the Isthmus excepting an absolutely legitimate and honest one. Our effort is to establish our blacks as well as whites in old home relations, so that a
feeling of stability and contentment with consequent better work will result." 

Chief of Police Shanton made a thorough canvas of the 295 women who had been brought from Martinique to the Isthmus. His report showed that 126 of them were married and living with their husbands; 36 were in domestic service, 48 employed as servants in the Isthmian Commission hotels, 24 working in the Commission's laundries, 51 living with unmarried men, under the same conditions as in their native country, while 10 were unemployed. "As a class," the Chief of Police reported, "these women are neat, clean, and industrious, and the records of this department show that none of them has been arrested for any cause whatever." Most of the women were from 30 to 50 years old, few being under 30, at which age a woman may be called elderly in the Tropics. They had been selected from more than 1500 who presented themselves to the Isthmian Commission's labor agent at Martinique, who satisfied himself that each woman had a natural protector working on the Canal, either a husband, father, brother, or sister, before permitting her to take the trip
to Panama. The neutralizing of the poison disseminated by the mosquito who gave birth to the Martinique women canard—if I may be permitted to take more than one liberty with metaphor in the same sentence—involved a long report by the Secretary of War to the President; correspondence between the Secretary and Senator Lodge and between Mr. Shonts and Senator Allison; and the examination by the Secretary of Chief Engineer Stevens and J. W. Settoon, the agent of the Canal at Martinique, (the latter coming all the way to Washington for that purpose), aside from the investigation on the Isthmus and the letters and cables exchanged between Mr. Shonts and Governor Magoon. Nor should the anguish of pious souls in the United States, over the vision of sin at Panama, which they were forced to contemplate for many days before the real facts transpired, be forgotten.

Mr. Bigelow commented on the Martinique women episode in his *Independent* article. "The correspondent of the New York *Herald* at the Isthmus is an ornament to his difficult and honorable calling," Mr. Bigelow opined, "and his
letter of November 18th, which arrived in time to flavor the Thanksgiving sermons of many American pulpits, is a document which our Washington officials should occasionally refer to when preparing an address on the elevating influences of ‘American rule over alien races.’"

In October, 1905, before the *Herald* or the *Independent* sprang their sensations, the American newspapers had published dispatches from Panama, holding up the Canal Zone police to the public gaze as a band of ruffians. The true story of the affair was told in the following cable from Governor Magoon to Mr. Shonts:

"French steamer *Versailles* arrived Colon Harbor Saturday, September 30, with 579 passengers from Martinique and 300 Colombians destined for work on Canal. Panama health regulations require immigrants to be vaccinated. Two hundred Martiniques refused and remained on vessel, declaring they must be given free return to Martinique. Agent steamship line appealed the French Consul for assistance in inducing them to land. Consul persuaded 75 to be vaccinated, but his efforts with remainder counteracted by voodoo doctor. Consul then requested Panama police to assist ship’s officers..."
in relieving vessel. It is customary for the Zone police stationed at Cristobal to assist Colon police in handling crowds of passengers going from docks to railway train, and chief of Colon police called on Zone police officer at Cristobal for the usual assistance. A sergeant and eight policemen went to dock. Shortly after their arrival the men came off the ship with a rush, seeking to avoid vaccination by getting away. In checking the rush the Panama and Zone police used their clubs. No one was seriously injured. The men were vaccinated and taken to Corozal, and all but one are at work to-day."

On this occasion it was necessary for the State Department to make representations to the French Vice-Consul in charge at Colon, since the alleged victims of police brutality had arrived on a French steamer, and there was also an investigator on the Isthmus, involving correspondence between Secretary Taft, Mr. Shonts, and Governor Magoon.

Aside from manufactured sensations, some newspapers discouraged the work of the Canal-builders in editorial articles and correspondence from the capital, making no direct accusations
for fear of libel suits, but insinuating that graft and incompetency were rise at Panama, and that investigation would show up the members of the Isthmian Commission as a set of rascals. A typical article of this nature appeared in the New York Herald of January 1, 1906, announcing in a dispatch from Washington that Congress was to make an investigation, as follows:

"The Spooner law gave the President the widest latitude in spending money. The President took the responsibility. Perhaps he fell into a trap. Most men would have hesitated about accepting it. Not so Mr. Roosevelt. He was so eager to have the credit in history of having constructed the Canal that he leaped into the ditch, so to speak, and a fine opportunity is now open to Congress.

"The 'lid' is to be taken off at Panama, all the expenditures are to be uncovered. If the men acting as agents of the President have been prodigal with the money of the United States Government, the President and his Secretary of War, in whom he vested supreme authority, are answerable. Yet while most of this money was being expended and things yet to be exposed in Congress were being done,
the President was resting at Oyster Bay, and his Secretary of War was on the other side of the world, conducting a tour of statesmen to the Philippines.

"The most vivid flashlight let in on the Panama situation is that Mr. Root has been called in to give advice as to the nature of the statement which shall be made to Congress. The unrest over the outlook has been growing ever since it became known that Senators were busily engaged in inquiring about certain important purchases by the Canal Commission and into the manner in which these purchases were made. Indeed, the report in Washington is that the friends of Mr. Roosevelt are of the opinion that it will be necessary to throw responsibility upon subordinates and to say many things were done without his knowledge. This is what the Senate would like to have the President do, because it would enable the enemies of the Administration to point to this as an example of incapacity. Panama matters may be satisfactorily explained, and if anyone can get out of an awkward position Mr. Roosevelt can."

On the publication of the President's message to Congress, which conclusively proved Mr. Bigelow's article in the Independent to be
altogether unworthy of credence or respect, the *Herald* printed another dispatch from Washington, calculated to lead those who had not read the documentary evidence in the case to believe that it cast discredit upon the Isthmian Commission. The dispatch ran thus:

"Chairman Shonts of the Canal Commission was very emphatic to-day in his declaration that he would not resign because of anything Secretary Taft said in his letter to the President accompanying the report of the Commission."

As Secretary Taft's letter upheld Mr. Shonts' conduct of affairs in the Canal Zone in every particular, it may be left to the reader to decide what was the object of the *Herald* in endeavoring to lead the public to believe that he had been censured. On the same day that this misleading and dishonest dispatch appeared in the *Herald* that newspaper also published the following editorial:

"The Englishman who, arriving in a Mexican port December 31, 1879, and sailing on January 1, 1880, wrote a book on 'Mexico in '79 & '80,'
is recalled by Secretary Taft's statement that the writer of a recent voluminous criticism on Canal affairs arrived on the Isthmus on November 30th and sailed the following day.

"Sensitiveness to comment upon canal affairs, however, is betrayed in this ponderous reply to a condemnatory article at a time when two Committees of Congress are to undertake an exhaustive investigation of the whole subject. One is tempted to ask why Secretary Taft has not attempted to refute other and more deliberate charges of mismanagement on the Isthmus.

"The Herald's special correspondence has chronicled the paralyzing congestion of traffic as well as the disgraceful unsanitary conditions of Colon and the importation of a shipload of negro women, who by no means were the 'wives of workmen' as asserted. At any rate on the eve of a rigid investigation of the entire position on the Isthmus, the long and elated explanation of Secretary Taft would seem superfluous."

As the very document upon which the Herald's editorial was based absolutely refuted both the charge with regard to "disgraceful unsanitary conditions" at Colon, and that of the importation of women into Panama for immoral purposes, the obvious inference is that the writer
of the article either had not read the report he criticized, or that he had some reason for willfully and maliciously perverting the facts in the matter. It may be remarked that at that period the congestion of traffic on the Panama Railroad was being rapidly overcome.

The Herald's articles are typical of those that appeared in other newspapers during the railroad régime at Panama. They are scarcely worthy of notice so long afterwards, except as they show what nuisances the human mosquitoes were to the earlier canal-builders,¹ the more particularly in view of the circumstance that all the world knows to-day that the history of the Panama Canal is one of administrative

¹ Since writing this chapter I have been shown a letter written by a Canal employee to a friend in New York in April, 1906,—in which he perhaps confounds a part of the American press with the American people,—thus indicating of the effect produced on the workers in Panama by unfounded criticism at home. "I enjoyed Mrs.—[his wife's] visit, although it was very short," wrote this employee, "and know that she goes back with the determination to return to the Isthmus, believing that it is something of a health resort. As a matter of fact, I do not think there is a place on the face of the globe that has been more lied about than the Isthmus of Panama. But the American people don't want to believe anything good of it, or of those who see fit to undertake the battles down here. However, we are going ahead regardless, and making a name that we have no reason to be ashamed of."
triumph from the advent of the Second Isthmian Commission to the completion of the work, and that in spite of the fact that nearly $400,000,000 has been spent in its construction there has been but one charge of grafting made against an official and that long after the railroad régime ended.1

How the newspaper attacks upon the Canal builders reacted upon the public mind may be learned from an account of the gossip on ship and shore at Panama and on the way, furnished by Lindsay Denison, who went to the Isthmus for Everybody's Magazine in February, 1906, with a letter from President Roosevelt giving instructions to every Government official and employee in the Canal Zone to show the journalistic investigator everything that was going on there, whether it reflected upon Mr. Shonts' administration or not. "For fourteen days, sailing down the West Central American coast," wrote Mr. Denison, "we had listened at table and in the smoking-room, as well as in coffee-factors' offices, hotel courts, and on street

1 See Appendix, page 400, "President Roosevelt's Endorsement of the Railroad Men."
corners ashore, to grisly, slimy tales of scandal at Panama. The climate was deadly as that of the S. P. C. A. dog-killing chamber; the Isthmus was full of yellow fever concealed by the United States hospital authorities; the fumigation squad of the sanitary department was an incendiary band which went about deliberately carrying out a plan to set fire to the cities of Panama and Colon and thus wipe them off the map; at Panama the American-built waterworks were full of sewage, at Colon they had gone dry; the Zone police were a band of negro cut-throats, who were likely to rise up at any moment and massacre every white man on the Isthmus; graft was everywhere; every member of the Isthmian Canal Commission was 'getting his bit'; the pay of laborers was being held back purposely so that the paymasters might force from the helpless Jamaicans a liberal rebate in consideration of being paid at all; food little better than swill was being served to the Americans in the Isthmian Commission's eating-houses to the tremendous profit of the commissary officers; disabled steam-shovels were lying idle along the railroad all across the Isthmus, while
article in *Everybody's Magazine* he cabled an inquiry to the superintendent of the Panama Railroad, as to his reasons for transporting freight in the manner deplored by Mr. Denison, to which message he received a tranquilizing reply.

While Mr. Bierd, as superintendent of the Panama Railroad, was awaiting material for the reconstruction of the line, Mr. Shonts assigned to him the duty of unloading two shiploads of timber from Oregon—a part of a 5,000,000-foot order—that lay one and a quarter miles from the Panama terminus of the railroad on the Pacific Ocean, and could come no closer without danger of grounding. For the sixty years that the Panama Railroad has been in the carrying trade, all freight has been lightered in, in lighters of six-foot draft, from one to three miles from shore to what is now Balboa, then called La Boca, the Pacific terminus of the road, where cargoes were transferred from ships to cars, and vice versa, for the run across the Isthmus. Under this system, vessels, whose depth of draft did not prevent, lay under the lee of Naos Island, one and one half miles from shore, where the railroad had
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built shelters for its laborers, who went to and fro in rowboats. The mean tide at this point is twenty-two and one half feet, and the French had done enough dredging to bring merchandise ships of from sixteen to twenty-two feet draft to La Boca, when the tide was at its height. These ships were allowed to ground when the tide went out, and loading and unloading was done under difficulties.

The two timber-laden ships, of deep draft, sailed under English register and were underwritten at Lloyd’s; under the terms of their insurance they were obliged to lie afloat at all times, or the insurance was invalidated. The timber with which they were loaded was for bridge and dock construction, and was brought in in two sizes, a foot square and twelve by eighteen inches, the largest turned out, to be worked up into anything from planking to joists. Mr. Bierd realized that to unload this timber more than a mile from shore, since it could not be lightered in, would be to run the risk of heavy loss in the event of a storm. He therefore went through the form of asking their masters if they would bring the ships in with the tide, grounding them
Who Built the Panama Canal?

As soon as the situation became apparent, steps were taken to expedite the work. The English owners offered to assume their insurance in behalf of the United States Government if they would allow the vessels to be unloaded. It required eleven days to go through the necessary formalities, and then the ships were grounded one thousand feet from shore. Piles and anchor chains were now procured, and four large rafts constructed, onto which the timber was unloaded by the use of the ships' derricks when the tide was out, to be floated in with the rising tide and packed ashore by negroes. Two more shiploads of timber were unloaded in the same manner, a labor of some two months. It is not to be wondered at that a few pieces of timber were lost in the course of unloading some hundreds of thousand feet. Perhaps it is not to be wondered at either that the fact gave rise to reports that millions of feet of lumber were being encouraged to float out to sea, so that more might be bought, to the profit of grafting members of the Canal Commission and lumber dealers.

President Roosevelt took an effectual method
of silencing the enemies of the Canal, and the slanderers of the canal-builders, when, in December, 1906, he sent a special message to Congress presenting the results of his three-day visit to the Isthmus the previous month, and proving his statements as to the progress of the work accomplished by appending no less than twenty-five photographs, each measuring 10 by 7½ inches, taken at Panama under his supervision. It was the first time a President of the United States had ever sent an illustrated message to Congress; and, while both Houses were somewhat aghast at the innovation, it accomplished its purpose. Mr. Roosevelt's references to the human mosquitoes are contained in the following extracts from the document that enlightened legislators and the public:

"Corozal, some four miles from La Boca, was formerly one of the most unsanitary places on the Isthmus, probably the most unsanitary. There was a marsh with a pond in the middle. Doctor Gorgas had both the marsh and pond drained and the brush cleared off, so that now, when I went over the ground, it appeared like a smooth meadow intersected by drainage ditches."
The breeding places and sheltering spots of the dangerous mosquitoes had been completely destroyed. The result is that Corozal for the last six months (like La Boca, which formerly also had a very unsanitary record) shows one of the best sick rates in the Zone, having less than one per cent. a week admitted to the hospital. At Corozal there is a big hotel filled with employees of the Isthmian Canal Commission, some of them with their wives and families. Yet this healthy and attractive spot was stigmatized as a 'hog wallow'\(^1\) by one of the least scrupulous and most foolish of the professional scandal-mongers who from time to time have written about the Commission’s work. . . .

"I visited the Mount Hope reservoir. It is a lake over a mile long and half a mile broad. I forward herewith a photograph of this lake, together with certain other photographs of what I saw while I was on the Isthmus. Nothing but a cataclysm will hereafter render it necessary in the dry season to haul water for the use of Colon and Cristobal. One of the most amusing (as well as dishonest) attacks made upon the Commission was in connection with this reservoir. The writer in question usually confined himself to vague general mendacity; but in this case

\(^1\) It was Poulteny Bigelow who likened Corozal to a hog wallow.
he specifically stated that there was no water in the vicinity fit for a reservoir (I drank it, and it was excellent), and that this particular reservoir would never hold water anyway. Accompanying this message, as I have said above, is a photograph of the reservoir as I myself saw it, and as it has been in existence ever since the article in question was published. With typical American humor, the engineering corps still at work at the reservoir have christened a large boat which is now used on the reservoir by the name of the individual who thus denied the possibility of the reservoir's existence.¹

"My examination tended to show that some of the departments had (doubtless necessarily) become overdeveloped, and could now be reduced or subordinated without impairment of efficiency and with a saving of cost. The Chairman of the Commission, Mr. Shonts, has all matters of this kind constantly in view, and is now reorganizing the government of the Zone, so as to make the form of administration both more flexible and less expensive, subordinating everything to direct efficiency with a view to the work of the Canal Commission. . . .

"It is not only natural, but inevitable, that a work as gigantic as this which has been under-

¹ The boat was named Poulney Bigelow.
taken on the Isthmus should arouse every species of hostility and criticism. The conditions are so new and so trying, and the work so vast, that it would be absolutely out of the question that mistakes should not be made. Checks will occur. Unforeseen difficulties will arise. From time to time seemingly well-settled plans will have to be changed. At present 25,000 men are engaged on the task. After a while the number will be doubled. In such a multitude it is inevitable that there should be here and there a scoundrel. Very many of the poorer class of laborers lack the mental development to protect themselves against either the rascality of others or their own folly, and it is not possible for human wisdom to devise a plan by which they can invariably be protected. In a place which has been for ages a by-word for unhealthfulness, and with so large a congregation of strangers suddenly put down and set to hard work, there will now and then be outbreaks of disease.

"There will now and then be shortcomings in administration; there will be unlooked-for accidents, to delay the excavation of the cut, or the building of the dams and locks. Each such incident will be entirely natural, and, even though serious, no one of them will mean more than a little extra delay or trouble. Yet each,
when discovered by sensation mongers and retailed to timid folk of little faith, will serve as an excuse for the belief that the whole work is being badly managed. Experiments will continually be tried in housing, in hygiene, in street repairing, in dredging, and in digging earth and rock. Now and then an experiment will be a failure; and among those who hear of it, a certain proportion of doubting Thomases will at once believe that the whole work is a failure. Doubtless here and there some minor rascality will be uncovered; but as to this, I have to say that after the most painstaking inquiry I have been unable to find a single reputable person who had so much as heard of any serious accusations affecting the honesty of the Commission or of any responsible officer under it. I append a letter dealing with the most serious charge, that of its ownership of lots in Colon; the charge was not advanced by a reputable man, and is utterly baseless. It is not too much to say that the whole atmosphere of the Commission breathes honesty as it breathes efficiency and energy. Above all, the work has been kept absolutely clear of politics. I have never heard even a suggestion of spoils politics in connection with it.

"I have investigated every complaint brought to me for which there seemed to be any shadow
of foundation. In two or three cases, all of which I have indicated in the course of this message, I came to the conclusion that there was foundation for the complaint, and that the methods of the Commission in the respect complained of could be bettered. In the other instances the complaints proved absolutely baseless, save in two or three instances where they referred to mistakes, which the Commission had already itself found out and corrected.

"So much for honest criticism. There remains an immense amount of as reckless slander as has ever been published. Where the slanderers are of foreign origin I have no concern with them. Where they are Americans, I feel for them the heartiest contempt and indignation; because, in a spirit of wanton dishonesty and malice, they are trying to interfere with, and hamper the execution of, the greatest work of the kind ever attempted, and are seeking to bring to naught the efforts of their countrymen to put to the credit of America one of the giant feats of the ages. The outrageous accusations of these slanderers constitute a gross libel upon a body of public servants who, for trained intelligence, expert ability, high character, and devotion to duty, have never been excelled anywhere. There is not a man among those directing the work on the Isthmus who has obtained his position on
any other basis than merit alone, and not one who has used his position in any way for his own personal or pecuniary advantage."

Since Mr. Roosevelt’s special message to Congress in December, 1906, there has been little adverse criticism of the conduct of affairs in the Canal Zone, although in the summer of 1908, he found it necessary to send Mr. Taft, then President-elect, with a board of seven engineering experts, to the Isthmus, to investigate a report sent from Panama by a newspaper correspondent to the effect that the Gatun dam had collapsed, and this in spite of the fact that there was at the time no dam there to collapse.

From this it may be seen how exactly parallel to the activities of the mosquito in disseminating disease have been the ignorant or dishonest performances of journalists in creating doubt, suspicion, and trouble in connection with the Panama Canal affairs.

Just as the former alights on a diseased integument and obtains and carries away the virus which may infect a whole healthy community, so the latter, by giving publicity to morbid and
malignant rumors initiated by those suffering from pecuniary disappointment, ignorance, or disillusioned ambitions, have been able to infect public opinion throughout the country to a serious extent. And the entomological parallel holds true especially when we consider the extreme disproportion of cause and effect, and take note of the immense amount of mischief done by agents of absolute insignificance in themselves.

These pests may well be called "Human Mosquitoes."
CHAPTER XI

M. BUNAU-VARILLA AND THE REVOLUTION IN PANAMA

In naming the French as one of the controlling factors to bring about the existence to-day of a waterway across the Isthmus of Panama, the fact should not be lost sight of that to Philippe Bunau-Varilla, more than to any other individual Frenchman, is recognition due in the celebration of this, the greatest of all material triumphs of man over nature. M. Bunau-Varilla, who, at the age of twenty-six, was supreme director of the French Company at Panama, after strenuous efforts to save the project to France when the administration of its affairs became a national scandal, not only fought with incredible energy and almost single-handed the battle in the United States whereby the Nicaragua canal project was defeated in favor of the present route, but he personally directed the conduct of
the revolution that created the Republic of Panama and made the Canal possible.

How the French engineer took the matter of the divorce of the Isthmus from Colombia out of the hands of the Panamanians, as told by him in *Panama: The Creation, Destruction, and Resurrection*, to which I have previously referred, is an illuminative footnote to history, and is particularly interesting in view of the charge that President Roosevelt fomented that small but important uprising against the Government at Bogota, and of the circumstance that Congress proposed to compensate Colombia for her losses. It was purely by accident that M. Bunau-Varilla arrived in New York on September 22, 1903, for it was at the last moment before sailing that he had decided to accompany Mme. Bunau-Varilla, who was on her way here to visit the family of the late John Bigelow, and her husband had intended to take the next boat back to France. On September 23rd the Hay-Herran Treaty between the United States and Colombia lapsed, owing to its non-ratification by the latter country, and M. Bunau-Varilla reached New York just in time to intercept Dr.
Manuel Amador, a prominent resident of Panama, afterwards President of that Republic, who had come to the United States as the representative of a group of citizens who were intent on revolution in the event that the treaty was not signed, but who had failed to accomplish the purpose for which he had been sent and was about to return to his own country. Dr. Amador told M. Bunau-Varilla that he and his associates in Panama had been led to believe, (through the efforts of Captain Beers, of the Panama Railroad) by a prominent American lawyer who professed to be on intimate terms with President Roosevelt, that the Government of the United States would assist them by the use of money and its army and navy to render the Isthmus independent of Colombia.

"Our friends then decided to delegate two of their number to go to Washington in order to reach a final understanding," said Dr. Amador. "I was one of the two delegates. But I was forced to go alone—the other one, being, at the last moment, unable to come. As soon as I arrived I was received with open arms by the persons whom Captain Beers had seen."
I was to go to Washington to see Mr. Hay, Secretary of State, in order to conclude the final transaction. But suddenly the attitude of the person who was to take me to Washington entirely changed. Whenever I went to see him strict orders had been given to the effect that he was not in. I had to install myself in the hall, to camp there, and, so to speak, besiege his office. Nothing resulted from it. And there I am. All is lost. At any moment the conspiracy may be discovered and my friends judged, sentenced to death, and their property confiscated. I at first decided to return to Panama to share their fate. But I am hesitating. If my friends are shot I prefer to devote my life to avenging them on the man who will have been the cause of their deaths."

"Dr. Amador," M. Bunau-Varilla replied, "you are telling me a very sad story, but why do you withhold the name of the man who thus promised you the gold of the American Treasury—the Army and the Navy of the United States? This childish proposition bears the stamp of the man who formulated it. There is but one person in the United States capable
of expressing himself thus—William Nelson Cromwell. He has a habit of speaking of the highest persons of the State in the way you just described to me. What! You believed in such empty talk? With your imprudence you have, indeed, brought yourselves to a pretty pass."

"Alas!" returned Dr. Amador; "if we had been only dropped, but the case is much worse. I have just received a letter dated the 14th of September from one of our associates, Jose Agustin Arango. He says in it that the cablegram 'disappointed,' which I had sent after realizing my failure had leaked out. He telegraphed to the man you have just named on the 10th of September asking him to tell me not to correspond any more by the same channel, but to send my telegrams henceforth through Captain Beers. It was a pressing duty to transmit me this essential warning, upon which depended the safety of my friends. Well, it is incredible, it is monstrous, but nothing was said to me. I have been thus exposed unwittingly to the danger of giving up my friends to death, when it required merely the lifting of a finger to ensure their safety."
Dr. Amador went on to inform M. Bunau-Varilla that the leading men of Panama believed that the rejection of the Hay-Herran Treaty by Colombia would stop all activity on the Isthmus, ruin its inhabitants, and within a few years transform it again into a virgin forest. "There is to-day only a weak Colombian garrison at Panama," he said. "Moreover, these men, who had been living for many years on the Isthmus, have ceased to count as foreigners to us. Our emotions, our aspirations, are theirs. Their general, Huertas, a valiant soldier, who has his troops well in hand, is himself shocked at the way Colombia is behaving towards Panama. A revolution would to-day meet with no obstacle. But the Colombians have the command of the sea; their ships' crews are loyal. We must first, therefore, acquire a fleet to prevent Colombia from overwhelming with her troops the province of Panama. Besides that, we want arms. It was to obtain ships and arms that I have come here. Our first envoy, Captain Beers, had been assured, and the same pledge was repeated to me when I came, that the United States would give us all the money
we needed to buy arms and ships and to pay the troops."

"How big a sum do you consider necessary?" M. Bunau-Varilla inquired.

"We need $6,000,000," replied Dr. Amador.

The meeting between the Panama delegate and the eminent engineer ended with Dr. Amador's promise to remain in the United States, while the resourceful Frenchman endeavored to formulate a plan of action whereby the proposed revolution might be accomplished. In his book M. Bunau-Varilla analyzes the situation thus:

"Two days after my arrival in New York I had thus in hand the threads of the revolutionary plot hatched on the Isthmus. The confession of Dr. Amador showed me, likewise, that the man who had encouraged, then abandoned, him (whose name, Cromwell, was publicly revealed in 1912 by the documents of a Committee of Congress), had been powerless to interest the Washington Government in this plot. His absolute defection at the very moment when Amador expected to be led by him into Mr. Hay's office was significant. Evidently he must have sought by every means in his power to
induce the Washington Government to encourage the conspirators under one form or another. If he had suddenly turned completely round it was because he himself had received a flat refusal. He had felt himself incapable of fulfilling, even partially, the rash promises he had made first to Captain Beers and afterwards confirmed to Amador. He had then withdrawn, had abandoned the unfortunates who had trusted him, and henceforth affected to have had no connection with them.

"From these circumstances, as material as they were certain, resulted a fact extremely important for the study of the future and the preparation of events. They showed that the American Government explicitly refused to have anything to do with a revolution on the Isthmus.

"This conclusion was certain. It was thoroughly proved by what had happened, as is a mathematical truth by a lucid demonstration.

"But this attitude of Mr. Roosevelt's administration might itself be dictated by two different and entirely opposite considerations.

"It might be the result of a desire to have done with the whole Panama question in order to begin on the Nicaragua proposition as soon as the Colombian Congress should be dissolved.

"It might also result from the very natural desire to avoid any dishonorable connection
with the agents of an insurrection in a country with which America was at peace.

"To have a clear understanding of the future, it was essential for me to know as soon as possible which of these two hypotheses was the true one.

"The first hypothesis was not an unlikely one. On every side the failure of the Hay-Herran Treaty had produced a new blossoming of the hopes of the Nicaragua party. The Spooner Law gave an explicit mandate to the President of the United States to construct the Nicaragua Canal, if he could not obtain a satisfactory treaty for the Panama Canal. Public opinion still held for Nicaragua. Great popular papers like the New York American, or aristocratic papers like the New York Herald, were still carrying on strenuous warfare against Panama."

A series of fortunate accidents, by which, as M. Bunau-Varilla says, "the inmost thoughts of President Roosevelt were revealed to me," enabled him to solve the problem. Just before leaving Paris for America the Frenchman had written an article that was published in the Matin, suggesting that, in the event of the non-ratification of the Hay-Herran Treaty by
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Colombia, the United States might,—under her treaty with New Granada, signed in 1846, which gave us the "right of way or transit across the Isthmus of Panama by any mode of communication that may already exist or that may be hereafter constructed,"—dig a ditch across Panama in spite of the opposition of the Bogota Government. M. Bunau-Varilla had sent this article to President Roosevelt.

A few days after his meeting with Dr. Amador, M. Bunau-Varilla was led by a chance remark of his friend, William H. Burr, professor of civil engineering at Columbia University, to seek an interview with the other's colleague, John Bassett Moore, professor of international law and diplomacy in the same institution, and he was able to draw the inference from their conversation, although the professor did not assert the fact, that the President had discussed the Matin article with him. The Frenchman was convinced by this circumstance that President Roosevelt still adhered to the Panama, rather than the Nicaragua, Canal route, else why should he have brought the New Granada treaty to Professor Moore's attention? This view was
corroborated in Washington, in October, by Roosevelt himself, as thus related in *Panama*:

"We conversed about the *Matin*. I was awaiting an opportunity to bring up the Panama subject. Mr. Loomis having cited the publication of the famous *bordereau* in the Dreyfus affair as being among the great achievements of *Le Matin*, I jumped at the opportunity. The bridge was found; I crossed it. ‘Mr. President,’ I said, ‘Captain Dreyfus has not been the only victim of detestable political passions. Panama is another.’

‘Oh, yes,’ exclaimed the President, suddenly interested, ‘that is true; you have devoted much time and effort to Panama, Mr. Bunau-Varilla. Well, what do you think is going to be the outcome of the present situation?’

"It was then or never. I could by my answer know exactly what the President had in mind. I remained silent for a moment, and I pronounced the following four words in a slow, decided manner:

‘Mr. President, a revolution.’

"The features of the President manifested profound surprise. ‘A revolution,’ he repeated mechanically. Then he turned instinctively towards Mr. Loomis, who remained standing,
impossible, and he said in a low tone, as if speaking to himself: 'A revolution! . . . Would it be possible? . . . But, if it became a reality, what would become of the plan we had thought of? . . .'

"I had an intense desire to say to him: 'Mr. President, the plan of which you had thought is coercion of Colombia, based on the Treaty of 1846, as interpreted by Professor Bassett Moore. I have supported this idea in a letter to him, and added to it the doctrine of the expropriation of sovereignty for reasons of international utility. The letter was directed to him, but it was for you, Mr. President, and you must have read it.'

"Of course I remained mute, and I concealed my joy at hearing the interrogation which had escaped from the mouth of the President. He quickly recovered himself, and asked: 'What makes you think so?'

"There was no interest in going further. I answered: 'General and special considerations, Mr. President. As you know, the revolutionary spirit is endemic on the Isthmus. There is almost a certainty of seeing an endemic disease spread violently when the circumstances favorable to its development have reached their maximum. Colombia has decreed the ruin of the people of the Isthmus. They will not let things go any further without protesting according
to their fashion. Their fashion is—revolution. I have furthermore certain special indications that corroborate these general considerations.'

"The conversation ended there. I had no desire to say more, and the President on his side did not care to hear more.

"I left the private office of the President finally in possession of all the elements necessary for action.

"I had at last the direct confirmation of the inductions which thus far I had drawn solely from pure reasoning: the President of the United States was holding firm for Panama.

"If a revolution were to generate new conditions favorable to the acquisition of the Canal Zone by the United States, President Roosevelt would immediately seize the opportunity.

"I was henceforth certain of this capital point, as certain as if a solemn contract had been signed between us. No word had been pronounced, no concealed meaning had been attached to any sentence which could constitute a tie between us. His liberty was as complete as my own.

"I left Washington, having extracted the first and most essential of the unknown quantities from the problem confronting us. I had the basic thought of the American Government as to the application of the Spooner Law, without having said anything or heard
anything in confidence or under the guarantee of secrecy."

It now remained for M. Bunau-Varilla, as he says, "to discover the second unknown quantity,"—how to create a successful revolution at Panama, without the financial co-operation of the United States, and without the express promise of her military support. The great and apparently insurmountable obstacle was the obtaining of the $6,000,000 demanded by Dr. Amador and the necessary armament. The solution of the problem flashed upon M. Bunau-Varilla during his journey back to New York. It was that the treaty of 1846 gave to the United States the right, and imposed on her the duty, of turning any belligerents away from the line of transit—the Panama Railroad. All costly machinery of war to be purchased by Panama would, therefore, be useful solely to protect the insurrection in the western part of the province, near the frontier of Costa Rica. Why not give as territorial limits to the new Republic, at all events at the outset, the watersheds of the Chagres and the Rio Grande? M. Bunau-
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Varilla reflected. In the basin of those two rivers, the common watershed of which was the summit of the Culebra, there were no inhabitants who did not live within gunshot of the line of communication between the oceans, and once Panama's independence was assured and the treaty with the United States ratified, the Republic would have $10,000,000 with which to wage war on Colombia and conquer the rest of the province.

It was only with the greatest difficulty that Dr. Amador was brought to comprehend the feasibility of this plan of campaign, and not until the Frenchman had promised him $100,000 out of his own pocket to pay arrears of wages to the soldiers who would take part in the proposed insurrection. The Panamanian representative would not at first believe that the proposition did not come from the White House, and as to the $100,000 loan, he, in the words of M. Bunau-Varilla, "certainly saw the shadow of one of those mysterious treasures of the American Secret Funds, which exist in fiction, but nowhere else."

M. Bunau-Varilla concluded his first inter-
view, after his visit to the President, with Dr. Amador, by dismissing the other with these words:

"Dr. Amador, if you close your eyes, you will see nothing. You came on the 23d of September in despair to ask me for support. Friday, October 13th, I offer it to you. If you refuse it, well and good. I have nothing more to say."

However, Dr. Amador called on M. Bunau-Varilla early the next morning.

"I have been thinking all night, and I have discovered that I am nothing but a fool," he said. "I have understood. Pardon me, I shall obey."

M. Bunau-Varilla told the Panamanian to prepare to leave for the Isthmus by the next boat, sailing Tuesday, October 20th, and he himself returned immediately to Washington to see John Hay, the Secretary of State, to whom he was introduced by an old friend, Assistant Secretary of State Francis B. Loomis.

Mr. Hay's views as to a canal across the Isthmus of Panama coincided with those of M. Bunau-Varilla; he saw in its opening a great service to the human family. Together they
deplored the blindness of Colombia in refusing to ratify the Canal treaty, and his visitor told the Secretary of the efforts he had made to show her rulers the light and how he had been baffled.

"When all the counsels of prudence and friendship have been made in vain," M. Bunau-Varilla concluded, "there comes a moment when one has to stand still and await events."

"These events," inquired Mr. Hay, "what do you think they will be?"

"I expressed my sentiments on the subject to President Roosevelt a short time ago," replied M. Bunau-Varilla. "The whole thing will end in a revolution. You must take your measures, if you do not want to be taken yourself by surprise."

"Yes," said Mr. Hay, "that is unfortunately the most probable hypothesis. But we shall not be caught napping. Orders have been given to naval forces on the Pacific to sail towards the Isthmus."

Having thus obtained information at first hand as to the attitude of the President and the Secretary of State with regard to Colombia
and Panama, M. Bunau-Varilla was prepared to act. To quote his own words:

"The interview with Mr. Hay would have removed my last hesitations if hesitation had been any longer possible. The Secretary of State had not feared to say that a revolution was expected in Washington, and that the United States had taken military precautions. They were probably the consequence of the formal assertion of opinion I had made to President Roosevelt, an assertion which the rumors current in the press entirely corroborated. It only remained for me to act. The United States would have a sufficient military force in the neighborhood of the Canal if the revolution broke out. I felt no doubt as to the only question which could burden my conscience: the security of the men who were to risk their lives on my word."

M. Bunau-Varilla prepared for the Panamanians a proclamation of independence, an outline for a constitution, a program of military operations, and a cable code, with which he dispatched Dr. Amador to the Isthmus on the
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Tuesday following the interview with Secretary Hay, and with the express stipulation that he (M. Bunau-Varilla) should be entrusted with the diplomatic representation at Washington of the new Republic, when it should come into existence.

The successful and bloodless revolution of Panama is a matter of history, but the forceful and energetic part played in it by M. Bunau-Varilla, who directed operations from New York at the crisis, is written for the first time in Panama: The Creation, Destruction and Resurrection, and the story is too long and its intricacies too great for reproduction here. Of that revolution was born the Hay-Bunau-Varilla Treaty and the Panama Canal.

M. Bunau-Varilla thus states the case:

"With the ratification on February 23, 1904, of the Hay-Bunau-Varilla Treaty, I had won the last battle and assured the resurrection of the great French undertaking.

"It was fifteen years two months and nine days after December 14, 1888, that fatal day when its destiny was handed over to the powers of destruction, by a financial error which had
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deceived the hopes of France, and had deprived her of the fruit of the expense of so many efforts, of so much blood and of so much money.

"During all this long period I could say that I had never forgotten for one single day the duty I had assumed of vindicating French genius by the triumphs of its immortal creation.

"I had not been able to convince my country, which had been deceived by impious sons. She had banished the child which she had brought forth, but I had succeeded in having it adopted by a friendly nation.

"I had preserved her offspring from the shameful death which so many passions, let loose from every quarter of the horizon, had prepared for it."

For his services at Panama the French Republic conferred upon M. Bunau-Varilla the Cross of Officer of the Legion of Honor. Secretary Hay wrote to him: "It is not often given to any man to render such a service to two countries and to the civilized world as you have done"; Theodore Roosevelt declares in his autobiography: "One of the foremost men in securing the independence of Panama, and the treaty which authorized the United States to build the Canal, was M. Philippe Bunau-Varilla, an eminent French
engineer formerly associated with De Lesseps; his services to civilization were notable, and deserve the fullest recognition"; President Obaldia of Panama, on the death of Dr. Amador, after he had been President of the new Republic, wrote thus to the Frenchman who had helped them in time of need: "Our people will keep eternally engraved in their memory your fruitful services, and will put in a preëminent place the names of Amador and your own. The national gratitude gives them the title of 'Benefactors of Panama.'"

M. Bunau-Varilla came from Paris to be present in Panama, on the occasion that the first ocean steamship went through the completed Canal—the third of last August. A letter he wrote to the editor of the Sun the following day not only shows the spirit with which the French met the greatest calamity of all time, but emphasizes the ghastly incongruity existing in the lapse of Europe into savagery simultaneously with the opening in the new world of the great waterway that is the last word in human progress. The letter runs thus:

"Yesterday was a day of glory!"
"I have sailed across the continental divide on
the first ocean steamer, the *Cristobal*, which crossed the Isthmus of Panama from the waters of the Atlantic to the waters of the Pacific.

"It was not the inaugural trip, which is to take place on the fifteenth, and for that reason the ship did not go through the channel from Balboa harbor to the deep water of the Pacific.

"But for the engineer, if not for the authorities and for the public, it was indeed the ringing of the bell which announced that the dream of ages had become a fact. And this bell has rung in the first year of the fifth century since the discovery of the Pacific!

"It was a day of glory also for the American nation which generously gives this great waterway to the world without any special privilege for herself or her citizens and without any mercenary consideration in view.

"It was a day of glory for the great engineer, Colonel Goethals, who carried to successful issue the stupendous enterprise.

"It was a day of glory also for the genius of the French nation, which first attacked the great task, which discovered all the technical solutions of a problem hitherto considered as impossible of realization.

"In spite of the yellow fever, in spite of all the obstacles then in the way, accumulated by nature and man, it would have been easy for
the French to open their Canal in 1891 had not the money been wanting in 1888. If the Canal had been in the hands of a Government with unlimited financial resources, instead of being in those of a private corporation, the credit of which became extinct in 1888, the Panama Canal would have been a fact twenty-two years ago.

"Yesterday was therefore a day of glory for the French genius because it was the day of the vindication of the aim for which it has so long and so stubbornly fought. It was a day of glory for Ferdinand de Lesseps and for his noble and generous son, Charles de Lesseps, who was the real head of the old company and who can alone witness the long-hoped-for day of victory.

"I had yesterday the supreme joy of seeing this glorious vindication when months only separate me from the thirtieth anniversary of my departure from France for the service of this great conception.

"But with this supreme joy was mixed yesterday another sentiment.

"As an echo to the cheers saluting the victory of Man over the American Cordillera I thought I heard the distant rattle of the French mitrailleuses defending the holy soil of the Fatherland against the German aggressors.

"On the same day when was ended the great
war initiated by the French Genius against Nature for the benefit of Mankind, another great war was begun, the war against the intolerable German military arrogance and autocracy.

"And the day that war began I was not in France to do my duty! I was in Panama.

"Since the beginning of my official connection with the Panama Canal it has caused me an unceasing series of moral hardships, sufferings, and trials.

"Never was the trial so cruel, never was the tribute paid by me to the great enterprise so costly, as on the very day of the final triumph.

"On that day, which I have been awaiting for thirty years, I was separated by five thousand miles from my place of duty in France. I have been expecting for forty-four years to fulfill that duty, and the service of the Panama Canal has prevented me from fulfilling it on the day of call.

"What a tragic coincidence, but also what a symbol of hope!

"What an auspicious and happy fact, the beginning of that war for the vindication of the dignity and power of France on the very day her Genius receives the most complete vindication, thanks to the magnificent performance of her historical friend, the United States of America!
"On my return to Panama, after passing through the Canal, my grief was alleviated by a cablegram. My son and my son-in-law had gone to the front! If I am not there to take my share of the peril, they will do both their duty and mine, while I am hastening to their side.

"Yes, indeed, it was a day of glory!"

The gallant Frenchman arrived in New York from the Isthmus on August 12th, going direct from the Panama steamship pier to that of the French line, whence he embarked that same day for his imperilled country to take his place among her defenders at the front.