

**PANAMA AND THE CANAL
TO-DAY**

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THE ISTHMIAN CANAL COMMISSION.

(See page 142.)

PANAMA AND THE CANAL TO-DAY

AN HISTORICAL ACCOUNT

OF THE CANAL PROJECT FROM THE EARLIEST TIMES WITH SPECIAL REFERENCE TO THE ENTERPRISES OF THE FRENCH COMPANY AND THE UNITED STATES, WITH A DETAILED DESCRIPTION OF THE WATERWAY AS IT WILL BE ULTIMATELY CONSTRUCTED: TOGETHER WITH A BRIEF HISTORY OF THE COUNTRY AND THE FIRST COMPREHENSIVE ACCOUNT OF ITS PHYSICAL FEATURES AND NATURAL RESOURCES.

BY

FORBES LINDSAY

Author of "Panama, the Isthmus and the Canal," etc.

WITH FIFTY-THREE ILLUSTRATIONS FROM RECENT
PHOTOGRAPHS, AND FIVE MAPS



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**Electrotyped and Printed by
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DEDICATED
TO MY FRIEND
J. E. Durham
IN APPRECIATION OF HIS STERLING CHARACTER
AND AMIABLE PERSONALITY

211711



PREFACE

THE construction of the Canal recently entered upon its final stage. Up to this time the plans have been frequently changed; but it is hardly possible that any important modifications can be made in future. The present, therefore, appears to be a peculiarly appropriate time to publish an account of the work which has been done and a description of the plans upon which it will be finished.

In the past few years a widespread interest in the country of Panama has been evinced and capital, in constantly increasing volume, has turned to it as a field for investment. In the section of the book devoted to the interior I have given an account of the resources of this little known region, derived from careful personal investigation and information gained from experts.

In this volume I employ the word "Panaman" in place of "Panamanian." The latter, although it has the endorsement of Amer-

ican officials, is a clumsy and unscholarly construction. There is no more ground for it than there would be for "Americanian," or "Canadianian."

I acknowledge with sincere thanks my indebtedness to Colonel Goethals and several members of his staff for numerous courtesies and facilities extended to me in examining the work. I have always found the Commission willing to afford every assistance to investigators,—even though they approached the task in an inimical spirit,—and to furnish them with all the information and material available.

I wish also to acknowledge the courtesy of the War Department in permitting the use by me of the Department's new official map of the Republic of Panama.

The pleasure of my visit to Chiriqui was largely due to the kind attentions of Don Lorenzo Obaldia, for whom I shall always entertain a feeling of warm regard.

F. L.

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PART I
THE CANAL



PANAMA AND THE CANAL TO-DAY

CHAPTER I

THE DREAM OF THE STRAIT

WE are on the eve of the consummation of five centuries of effort to find or make a direct westerly route from Europe to the Orient. The task which the oldest kingdoms of Christendom essayed and failed to accomplish, is nearing its completion at the hands of the youngest of nations. When, a few years hence, the Panama Canal shall be opened to the fleets and the merchant marine of the world, the dream of Columbus to sail from Spain to Cathay, with his prow ever pointing into the eye of the setting sun, will have become a possibility.

Among the ancient Greeks the theory was entertained that the shores of Asia might be reached by a comparatively short sail to westward from the mainland of Europe. But it was

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not until the fifteenth century that navigators and the sovereigns, upon whom they necessarily depended for the means and permission to make distant expeditions, were sufficiently impressed with the idea to put its truth to the test. Columbus was only one of many who, in his time, believed that the lands visited by Marco Polo could be arrived at by a voyage to the west, and that an open passageway lay between them and the countries of Christendom. Columbus alone, however, among the adventurers of his day, seems to have had the courage of his conviction. His ideas on the subject were very vague and faulty, being derived from the rude maps of the day and from the wild conjectures of others, and often based upon mere imagination. His conception of the size of the world was widely at variance with the truth and, like the ancients, he imagined the distance between Europe and Asia to be several thousand miles less than it actually is. When, after having persuaded Ferdinand and Isabella to support his venture, he embarked on his first voyage to America, it was with the confident expectation of gaining the eastern shores of the Old World in less than two weeks' time. The discovery of one after another of the

islands of the West Indies did not disconcert him nor dampen his ardor. He took it for granted that they were outposts of the mainland which he sought. He describes them as "the Islands discovered in the Indian Sea," in his report of the voyage to his royal patrons. The developments of the second voyage only confirmed and amplified these delusions, from which the great explorer was never freed. Cuba, along the southern coast of which only he sailed, was readily accepted by him and by his officers as a part of the mainland of Asia, and, when his next expedition touched the shores of South America, near the delta of the Orinoco, the land was unhesitatingly pronounced to be another portion of the same continent. This self-deception Columbus sustained and increased by his too-ready habit of confusing the names of places mentioned by the Caribbean Indians with those referred to by Marco Polo in his account of his Oriental travels. Columbus set out upon his last and fourth voyage with the design of discovering a strait which should enable him to pass through Terra Firma, as he had named the mainland of South America, to India. And here was the first nebulous idea of the Panama Canal. Accord-

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ing to Gomara, Columbus, on this occasion, discovered the " River of Crocodiles, which is now called Rio de Chagres, which hath its springs near the South Sea, within four leagues of Panama." Had the intrepid navigator sailed up that river he might justly have been accorded the distinction of having been the first explorer of a trans-Isthmian canal route. He died without realizing the true import of his great discoveries, and still believing that his momentous cruises had been in the seas and along the coasts of Asia.

In the meanwhile, Vasco de Gama, sailing under the flag of Portugal, had rounded the southern point of Africa and reached the Malabar Coast of India, returning safely toward the end of 1499. This exploit stimulated Spain to renewed efforts to discover a western passage. Amerigo Vespucci made important discoveries along the coast of South America which he, like Columbus, believed to be the continent of Asia. On the first map to show America, that of Waldseemüller, published in 1507, a narrow strait between the continents is shown in place of the existing isthmus. In the book which accompanied this map, Waldseemüller credits Vespucci with the discovery of the newly de-

picted region and suggests that it should be named the Land of Amerigo, or America. The claim was not a justifiable one, but there is good authority for the statement that Alonzo de Ojeda, with Vespucci as the pilot of his expedition, landed upon the mainland of South America within a year of the occasion when Columbus discovered the land near the delta of the Orinoco. Amerigo Vespucci made two more voyages during the succeeding ten years in a search for the strait. At this time many other adventurers were engaged in the same quest, or in the hunt for gold, large quantities of which were secured by the early comers without the trouble of mining for it. The natives held it in no great value and readily exchanged it for articles of European manufacture of trifling value.

The decade following the last voyage of Columbus was a period of eager exploration by navigators of various nations. The coast of the Americas, from Labrador to Brazil, was scoured in the hope of finding a waterway to the ocean beyond. With continued failure, it began to be believed that no such channel existed. This view was greatly strengthened in 1513, by the discovery of the Pacific Ocean. Vasco Nunez de Balboa was one of the early govern-

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ors of the Province of Darien. He had married the daughter of one of the Indian chiefs and was on the best of terms with the natives. From them he learned of a vast sea, only a few days' march beyond the mountains, that divided the continent. He collected a force of Spaniards and Indians and sailed to a point near Caledonia Bay, whence he was informed the crossing could be most easily effected. The route adopted is the shortest passage from ocean to ocean, although it does not pass over the divide at the lowest level. Progress through the dense jungle was difficult. It was nineteen days after starting when, on September 25, Balboa saw the Pacific Ocean from the summit of the divide. Four days later he entered the water and formally claimed the "South Sea," as he called it, in the name of the King of Spain.

Meanwhile, Balboa had been the subject of the usual intrigues at the Court of Spain, and, at the time of his great discovery, Pedrarias was preparing to sail for Terra Firma with authority to supersede him as governor. The news of Balboa's important exploit did not reach Ferdinand until after the new governor had sailed, but a royal warrant was immedi-

ately issued confirming the former in his position and conferring upon him the additional honor of Adelantado of the lands upon the new sea that he had discovered. This order was doubtless delivered to Pedrarias and he seems to have kept it to himself, after the high-handed manner of viceroys in the American possessions of Spain at that period. The first act of Pedrarias on landing in America was to order Balboa's arrest and trial on a charge of treason. The result was an acquittal, and for a while the rivals, each with a formidable body of followers at his back, maintained an armed truce. At length Pedrarias resorted to subterfuge in order to get his enemy into his power. He was aware of Balboa's keen desire to explore the coast southward on the other side of the continent, prompted by the stories of the Indians, who declared that a country abounding in gold and other precious metals lay far away to the south. Pedrarias feigned a revulsion of feeling toward Balboa and assured him of his future friendship, at the same time giving his consent to the proposed expedition.

With the wonderful energy that characterized him, Balboa set about carrying out his cherished project, which involved nothing less than

a journey to Peru. Suitable trees for the construction of vessels were to be had only on the Atlantic side, or at least that was the impression of the commander. He conceived and carried out the daring task of fashioning all his material at the starting point of his former expedition and conveying it overland to the point of departure. This stupendous undertaking was accomplished with the aid of thousands of Indians. After months of labor the timbers were put together on the Pacific shore, and the fleet was on the eve of departure, when a messenger from Pedrarias reached Balboa with an urgent request for his return. Leaving his followers with the ships, the impatient leader hurried back to Aclas. He was seized at the instant of his arrival, put through a hurried trial by a court composed of the governor's creatures, and beheaded.

Balboa was the first of a numerous line of able men who fell victims to the jealousies and differences that kept the Conquistadores constantly embroiled with one another and at odds with the Crown. If we may judge from what he accomplished in the few years that were afforded him, Balboa was one of the most able of that group of remarkable men who contrib-

uted so greatly to the brilliancy of Spain's history at this period. He appears to have been more humane than the majority of his fellows. That he was more ingenuous and less self-seeking may be inferred from the ease with which Pedrarias outwitted him. His bravery, resource, and fortitude under misfortune were frequently exhibited in the course of a romantic and eventful life.

Twenty years after Vasco de Gama rounded the Cape of Good Hope Ferdinand Magellan made his famous voyage through the strait that bears his name and demonstrated the existence of a continuous waterway between Europe and the Orient. This feat rather stimulated than retarded the efforts to find a more direct passage, but thenceforth the search was mainly confined to the isthmian section of the American continents, where it had been definitely ascertained that the oceans lay least widely apart. Under the directions of Cortez, de Soto, de Cordova, and others, these explorations were carried on, and, although the principal object of them was never attained, they led to important discoveries and resulted in the establishment of overland routes from the Atlantic to the Pacific. The most important of these was

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the post road, constructed about 1521, between the old city of Panama and the settlement of Nombre de Dios on the Pacific Coast. At the close of the century the latter terminal was abandoned and one at Porto Bello took its place. Fifty years before this change was effected a route for light draught boats had been established from Nombre de Dios up the Chagres to Las Cruces; thence by land to Panama. This line of communication was in use at the time that the gold seekers from the United States made the journey to California by way of the Isthmus, and many of them travelled by the Chagres route.

The line of communication between Panama and the Atlantic port rapidly grew in importance after the conquest of Peru. Vast quantities of gold and silver were transported over it by the relays of horses that were constantly kept in service for the purpose. On the other hand large shipments of various commodities for the use of the colonists and articles to be bartered with the Indians were carried over the same road, and from Panama distributed to the settlements in the north and south. In time the trade of Panama extended to the main land of Asia and the Spice Islands of the Pacific.

The search for a strait, which Cortez took up after he had completed the conquest of Mexico, led to the discovery of facilities for the transit of the Isthmus in the Tehuantepec region. A route was established up the Coatzacoalcos, across the divide, and down the farther slope to the Pacific. Terminal ports were created, and, in a few years, a considerable trade was built up with the mother country on one hand and the countries of eastern Asia on the other. At the same time the explorations of Davila paved the way for interoceanic traffic in the Nicaraguan country.

Meanwhile the idea of a ship canal had already arisen in more than one mind, and each successive failure to find a natural channel connecting the oceans added to the advocates of an artificial waterway. Alvaro de Saavedra, a kinsman and follower of Cortez, seems to have been the first to broach this proposal. What a daring project it was we can better understand than did the men who originally entertained it. In fact, it is doubtful whether they had anything like a just appreciation of the difficulties in the way of consummating it. Even though no more than an eight-foot channel had been attempted, the excavation through the divide

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would have presented a stupendous task in those days.

It is said that as early as 1520 Charles V ordered the Isthmus of Panama to be surveyed, with a view to ascertaining the best route for a canal across it. There is no record of this mandate having been carried out, and, indeed, it would have been no easy matter at that time to have made even the roughest kind of survey of the region in question. The mere passage across it, through the virgin forest, involved weeks of toil and danger. In the following decade the ship canal scheme was widely discussed and Saavedra made detailed plans for it in 1529. Five years later the King of Spain issued a more definite decree regarding the matter, and one more easy to comply with. This required that the territory between the head of navigation on the Chagres and the Pacific should be carefully examined by men of experience, to ascertain the feasibility of connecting the navigable waters of the river with the ocean. This was done, and the governor, Pascual Andagoya, reported that the difficulties in the way were insurmountable. He expressed the opinion that it would be practically impossible to construct a canal through the Isthmus at that or any other

point, and declared that the undertaking would exhaust the richest treasury in Christendom.

Nothing further was done in pursuit of the project during the remainder of the reign of King Charles, and the accession of his son Philip to the throne, at the close of the century, marked the inception of an entirely new policy towards the Spanish possessions in Terra Firma. Philip shrewdly decided to leave well alone. He realized that the stream of precious metals that then flowed into the coffers of the Crown from America would not be increased by improved methods of shipping, and that the contemplated facility for direct communication by water to the farther coast of the continent would be of greater benefit to other nations than it would to Spain, by enabling the former to reach the sources of supply with comparative ease. So strongly did King Philip maintain this view, which we must admit was a sensible one, that he strictly forbade all public advocacy of the mooted waterway and prohibited all exploration in connection with it. At about this time the navigation of the Atrato was opened up, and led to the discovery that the upper reaches of that river were comparatively near to the Pacific littoral. This, of course, suggested a

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canal at that point, and it began to be talked about. Knowledge of the project no sooner came to the King than he ordered the navigation of the river to be abandoned and the penalty of death to follow disobedience.

For two centuries after the death of Philip II the attitude of the Crown of Spain toward water communication between the two great oceans remained adverse. Discussion of the subject could not, however, be suppressed, and explorers in the Isthmian region could not fail to consider it in connection with the new surveys that were constantly being made. Any new light that may have been cast upon the question in this manner was promptly extinguished. All maps and documents bearing on the point which reached the mother country were jealously guarded from the public, and stowed away in vaults from which the majority of them never emerged.

During the reign of King Philip the activities of English privateers and pirates became a serious detriment to the commerce of Spain. Their attacks upon the vessels carrying treasure from the Isthmus at length led to the temporary abandonment of the Panama-Porto Bello traffic and the substitution of the route by

way of Cape Horn. Only brief respite was gained by this measure, however. The freebooters promptly transferred the scene of their operations to the Straits of Magellan and beyond. Sir Francis Drake inflicted on the Spanish fleet in the South Sea a series of blows that practically destroyed it. For a short while a return was made to the Panama line of transit, but that of Nicaragua soon took its place. Little was gained by this change, for in the middle of the seventeenth century English adventurers began to lead raiding parties against the Spanish posts in Nicaragua, and before the end of the century trade in that region was destroyed.

In the meantime the diversion of the Spanish shipping from the lower Isthmus had laid the settlements there peculiarly open to attack. The opportunity thus afforded attracted the attention of Henry Morgan, the most daring and unprincipled buccaneer of his day. In 1671, encouraged by the success of an attack made a few years previous, he reduced Porto Bello and then marched across the isthmus and captured Panama. The city was sacked and burned to the ground. It was never rebuilt on the original site, and Spanish commerce at this point died at the hands of a brutal pirate.

The repeated success of the English in their attacks upon the Spaniards by land and at sea stimulated their aggression. Jamaica had been seized, and attempts were made at settlement in Nicaragua. Just before the close of the seventeenth century a Scotchman named William Paterson, the same who founded the Bank of England, launched an ambitious project, involving a colony in Darien and the ultimate establishment of a trade route between the oceans. The ill-fated enterprise, which was authorized by an act of the Scottish Parliament and sanctioned by King William of England, was known as the Darien Expedition. Three ships carried a party of colonists, numbering one thousand two hundred, from Leith to the New World. The site chosen for the settlement was near the old city of Aclas, where Balboa was executed, and the point from which he began his journey across the Isthmus. The proximity of the oceans in this locality was a decided advantage, but otherwise the situation was ill-chosen. The Indians in that section were implacably hostile to the whites, and have ever remained inimical. The location was very unhealthful and disease attacked the unfortunate colonists as soon as they landed. In eight

months' time their number had been reduced to a few hundred, and this remnant of the expedition, which started out with such great promise, abandoned the colony and returned to Scotland. On the way they passed, without being aware of it, two ships bringing a reinforcement of emigrants. These landed at the deserted settlement under discouraging conditions, which rendered them even more ready prey to the climate than had been their predecessors. They were reduced in force and weakened by sickness when the Spaniards sent a military detachment to dislodge them. The settlers made a gallant resistance and repulsed this attack, but they had neither the strength nor the heart to repeat the effort when another body came against them shortly afterwards. They surrendered, and were allowed to embark in their vessels and sail for their native country. Thus the much vaunted Darien Expedition, which its promoter declared would make Great Britain the "arbiter of the commercial world," came to an end, with the loss of two thousand lives and much money.

During the century following Paterson's disastrous venture little was done towards promoting interoceanic communication and inter-

est in the question of a ship canal seems to have waned. A royal commission, authorized by the Crown of Spain, surveyed the Nicaraguan route more thoroughly than had been done before. The report was decidedly unfavorable, but two British agents who had accompanied the expedition represented to their government that a waterway in that region was quite feasible, and that the undertaking would not be attended by extraordinary difficulties. This secret report no doubt influenced Great Britain, when war was declared against her by Spain in 1780, to send an invading force into that part of the Spanish possessions. Horatio Nelson, then a post captain, had charge of the naval operations in connection with this expedition. In a despatch from the scene he made the following statement, which betrays the purpose of his superiors and shows his own appreciation of the importance of a trans-Isthmian waterway: "In order to give facility to the great object of government I intend to possess the Lake of Nicaragua, which, for the present, may be looked upon as the inland Gibraltar of Spanish America. As it commands the only water pass between the oceans, its situation must ever render it a principal post to insure passage to

the Southern Ocean, and, by our possession of it, Spanish America is divided in two." This plan was entirely frustrated, not by the Spaniards, who were overcome at every point, but by the climate. The force had entered upon the campaign in the rainy season and the men fell victims to fever in appalling numbers. Of the full complement of Nelson's ship, the "Hinchinbrook," two hundred in number, all but ten were buried in Nicaragua, or soon after the arrival of the expedition in Jamaica. Nelson himself suffered a long illness, that enfeebled him for years and permanently impaired his health.

Up to the close of the eighteenth century, no actual progress had been made toward the establishment of water communication between the Atlantic and the Pacific. The discussion of the subject had been vague and the plans proposed quite impracticable. Of the numerous surveys that had been made, not one threw any valuable light on the matter. Indeed, they rather befogged the consideration of the subject by disseminating the wildest theories and the grossest falsehoods regarding the conditions. As late as 1788, Manuel Milla, a Spanish engineer, surveyed the Darien route and reported to



PANAMA FROM THE SEA.



was made by Balboa. The governments of the United States, Great Britain, and France were most active in these explorations, some of which were promoted by private individuals, or companies.

In 1866 the Senate called upon the Secretary of the Navy for all the information at his command, relating to rail or water routes across the Isthmian territory between Tehuantepec and the Atrato River. In response, Admiral Chas. H. Davis made a report in which nineteen canal and seven road projects were enumerated. The eight routes in Nicaragua were pronounced impracticable, and the opinion was expressed that "it is to the Isthmus of Darien that we are first to look for the solution of the great problem of an interoceanic canal." It should be understood that at that time the term "Isthmus of Darien" was used to include what is now the country of Panama.

Following the succession of General Grant to the Presidency, a number of expeditions were sent to the Isthmian country by the Government and a great deal of valuable data was collected. In 1875, the Secretary of the Navy assigned Captain E. P. Lull, with A. G. Menocal, a civil engineer, to the task of investigating the

possibilities of a canal along the line of the Panama Railroad. After a careful survey, a line forty-one and seven-tenths miles in length was recommended, which, in the main, followed the course that was ultimately adopted by the French.

An Interoceanic Canal Commission had been created, with the authority of Congress, in 1872. After a careful study of all the data available, this body unanimously reported in 1876 as follows:

“ The route known as the ‘ Nicaragua route,’ beginning on the Atlantic side at or near Greytown; running by canal to the San Juan River; thence . . . to . . . Lake Nicaragua; from thence across the lake and through the valleys of the Rio del Medio and the Rio Grande to . . . Brito, on the Pacific coast, possesses, both for the construction and the maintenance of a canal, greater advantages and offers fewer difficulties from engineering, commercial and economic points of view than any one of the other routes shown to be practicable by surveys sufficient in detail to enable a judgment to be formed of their respective merits.”

The year before this report was issued an irresponsible speculator, named Gorgoza, had

secured from the Colombian Congress a concession for a canal through the San Blas country in which the Atrato and Tuyra Rivers were to be utilized. A number of speculators and politicians were attracted by Gorgoza's proposition and a company was formed under the title of "*La Société Civile Internationale du Canal Interocéanique.*" Count Ferdinand de Lesseps, whose fame as the projector and constructor of the Suez Canal was then undimmed, General Etienne Türr, and his brother-in-law, Lieutenant Lucien Napoleon Bonaparte Wyse, were the most distinguished of the early promoters of the scheme.

Lieutenant Wyse was despatched to the Isthmus for the purpose of surveying the proposed route. It was not found satisfactory, nor was any feasible alternative route discovered in the territory covered by the concession.

In this dilemma Wyse turned to the Panama route, but a serious obstacle was in the way. The contract of the Panama railroad with the Colombian Government gave to the former the exclusive right of transit in that territory. ~~Nevertheless, Wyse proceeded to Bogotá and~~ laid before the authorities there a proposition to commence work on a canal through the Isth-

mus of Panama in two years' time and to finish it within twelve years after the date of commencement. He secured a concession conditional upon his obtaining the consent of the Panama Railroad to it.

At this time there was pending before the Legislature of Nicaragua a bill to authorize the construction of a canal in that territory by another French company. After carrying his point at Bogotá, Wyse went to Nicaragua and succeeded in defeating the efforts of his rivals to gain a concession. He then went on to New York and effected an agreement with the Panama Railroad Company.

Whilst Wyse was engaged in these negotiations, Lieutenant Reclus made a perfunctory survey of the proposed route. On the return of these officers to Paris, they submitted a roseate report to their principals and the *Société Civile* promptly adopted the route.

The contract with the Colombian Government provided that whatever route the *Société* might propose should have the endorsement of an international body of engineers and other scientists. In accordance with this requirement, De Lesseps convened at Paris in May, 1879, the "International Scientific Congress." It con-

sisted of one hundred and thirty-six members, of whom seventy-four were Frenchmen. The body was largely composed of men friendly to De Lesseps and his scheme. Fewer than fifty of them were engineers, or scientists, a greater number being speculators and politicians. De Lesseps presided over the gathering and dominated its proceedings.

Fifty-four members were appointed by De Lesseps, who nominated all the committees to consider the question of the route. At the outset considerable opposition to the line chosen by the promoters was shown. The San Blas route was advanced by one of the American delegates; the Darien route by another. The partisans of De Lesseps showed the deepest resentment at the opposition and a pronounced disinclination to submit the matter to open argument. They made it so plain that they intended to carry their point, regardless of every consideration but their own interests, that a number of the members of the committee declined to take further part in the proceedings. Immediately after their withdrawal, the remainder of the body cast a vote in favor of the Panama route and the Congress ratified it without debate, although in the final

declaration not more than one hundred of the members went on record.

The methods of the promoters in this Congress created the distrust of the foreign governments that had interested themselves in the project and even aroused unfavorable public opinion in France. De Lesseps was acutely alive to the bad impression that had been made and promptly set about counteracting it. In September, 1879, he went to the Isthmus and made an investigation. Although he was not an engineer, his opinion in the matter carried great weight, on account of the prestige attaching to him as the builder of the Suez Canal. He confirmed the favorable reports of Wyse and Reclus and published plans for a canal at sea level to be twenty-eight feet deep and to cost \$132,000,000.

In the meantime, adverse feeling against the French project had grown in official circles and amongst the business men of the United States. Prominent capitalists and engineers, including Admiral Ammen and Lieutenant Menocal, the official delegates to the International Congress, organized the Interoceanic Canal Company, with the design of constructing a waterway at Nicaragua. In the spring of 1880, the latter

officer secured a concession from the Nicaragua government, on the condition that work should be commenced within two years.

De Lesseps, realizing the great importance of propitiating the Government of the United States and securing the good will of its people, visited New York and Washington in March, 1880. He was treated as a distinguished guest and cordially received by President Hayes, but the latter shortly afterwards sent a message to the Senate in which he gave it as his opinion that an interoceanic canal by any route should properly be controlled by the United States, and that the United States could not consent to the surrender of the control of such a waterway to any European power. This was a direct slap at De Lesseps' programme, which involved a canal whose neutrality should be guaranteed by a concert of European nations. The Frenchman was shrewd enough to yield on this point with seeming cordiality, but he set about trying to secure his ends by less direct processes. An American board was created, with prominent men composing its personnel, and some of the leading banking houses of the United States were engaged as fiscal agents. Large sums of money were placed at the disposal of these agen-

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cies for the purpose of influencing public opinion through the medium of subsidized newspapers. The immediate result was a campaign against the adoption of the policy advocated by President Hayes and an organized opposition to the Nicaraguan project.

CHAPTER III

THE PANAMA RAILROAD

WITH the sack and abandonment of the old city of Panama, which is described elsewhere in this volume, its once great commerce expired. The new site enjoyed no such facility as the "paved road," which had connected Panama Viejo with its Atlantic port. The need of convenient interoceanic communication was recognized before the discovery of gold in California made it urgently desirable. In 1848, John L. Stephens, W. H. Aspinwall, and Henry Chauncey applied to the government of New Granada for a concession to operate a transit line. It was granted two years later, by which time developments in the newly acquired territory of the United States upon the Pacific coast had created a promising outlook for what, at the time of its inception, was generally regarded as a wild enterprise. At best the undertaking was a hazardous one, fraught with enormous difficulties and beset by innumerable uncertainties.

In 1849, surveys were made for a railroad, and it was decided, though why it is difficult to understand, to locate the Atlantic terminus on the Island of Manzanillo. In May, 1850, the work of construction was commenced. "No imposing ceremonies inaugurated breaking the ground. Two American citizens, leaping, ax in hand, from a native canoe upon a wild and desolate island, their retinue consisting of half a dozen Indians who clear the path with rude knives, strike their glittering axes into the nearest tree; the rapid blows reverberate from shore to shore, and the stately cocoa crashes upon the beach. . . Thus, unostentatiously, was announced the commencement of a railway, which, from the interests and difficulties involved, might well be looked upon as one of the grandest and boldest enterprises ever attempted."¹

Then commenced a splendid fight against tremendous obstacles, — a long, wearing struggle with unfamiliar conditions that was to end triumphantly five years later. A two hundred ton vessel brought Chief Engineer Totten and his assistants to the Isthmus. The craft was an-

¹ "Handbook of the Panama Railroad," F. N. Otis. Out of print.

chored off Manzanillo and furnished the headquarters of the force. For a long time it was impossible for them to sleep on shore and they made their home on the boat. Here they were able to escape the mosquitoes that harassed them through the day, but the cockroaches which swarmed over the ship were hardly less annoying. The country through which the line had to be carried was wild and covered with jungle. The way had to be cut through the tangle of vegetation, and in this work the men were exposed to the attacks of noxious insects and reptiles. Often they had to labor waist-deep in the mire of swamps. The construction had been begun at the beginning of the rainy season, and, for the following eight months, heavy downpours and humid heat were added to the other difficulties. Not one of the party escaped the wasting *calentura*, as the jungle fever of Panama is called. Soon they were all thin and pallid, but not one gave in until he had reached the last extremity of endurance.

It was as daring a piece of engineering work as the world has ever seen, and it was carried out with superb heroism. The eldest of these men, Col. G. M. Totten, was a veteran in experi-

ence, though not more than forty-five years of age. His youngest assistant, James L. Baldwin, was barely thirty but he displayed such remarkable ability and enterprise that it was not long before he became the right hand man of his chief. It was Baldwin to whom the extremely arduous task of locating the track was entrusted. Plunging into the wilderness with a small band of Indians and two or three American aides, he accomplished the work in a surprisingly short time.

Among the engineers who were conspicuous for the part they took in this pioneer undertaking, were J. C. Trautwine and J. J. Williams. It is claimed for each of them that he had the honor of breaking the first ground, but however that may be, both did their fair share in the trying labors that ensued.

Parties of gold-seekers had already begun to cross the Isthmus on their way to California, and the work on the road was pushed with feverish activity in order to meet the needs of this traffic as soon as possible. When the contracts were placed for the construction it was hoped that the line might be completed in two years. But the calculations had been made, and necessarily so, without any definite knowledge

of the work to be accomplished or the expense of doing it. The contractors experienced unexpected difficulty in securing suitable labor. The natives of the country were not equal to the labor, either in the matter of intelligence or physique. The cost proved to be vastly in excess of the estimates. At the end of the second year, instead of having the road finished, the contractors had reached the end of their resources and threw up the sponge.

This was a severe blow to the directors of the Company, but they did not falter in their purpose. The bankrupt contractors were promptly released, and the construction was taken into the hands of the Company. Enthusiastically backed by the officers, the engineers attacked the task with redoubled zeal, but they were constantly retarded by unexpected setbacks, and the climate was a perpetual obstacle. Every kind of labor available was tried. Whites from the United States, though picked for their stamina, quickly succumbed under the trying conditions. Negroes were little better. A contingent of Chinese was enlisted in the work. They soon sickened, and a large proportion of them committed suicide in despair. So many laborers were constantly on the books of the

hospitals that in order to keep things moving with anything like satisfactory expedition it was necessary to employ a force three times as great as that actually engaged on the work. The mortality during five years was slightly more than 6,000.

On the first day of October, 1851, the single track was opened to Gatun, a distance of seven miles from the starting point. A few weeks later it happened that two steamers carrying passengers bound for California by the Isthmian route, were caught in one of the northers that frequently strike the Atlantic coast of Panama at that time of the year, and were obliged to take shelter in Navy Bay. This occurrence gave the new railroad its first business and a valuable advertisement. The passengers, who should have been landed at the mouth of the Chagres, were brought ashore at Manzanillo, and the railroad company undertook their transportation to Gatun. There was not such a thing as a passenger coach on the Isthmus, but the voyagers and their baggage were carried on flat-cars and construction trucks and transferred to boats which took them up the river to Las Cruces.

The traffic over the finished portion of the



FOREBAY AND LIFT SILL, LOOKING SOUTH, FROM EAST WALL, GATUN LOCKS, MARCH 15, 1910.



line increased steadily, encouraging the Company and furnishing it with funds for the construction. In a few months, the rails had reached Barbacoas, the half-way point. Here the Chagres had to be crossed. A contract had been made for a bridge, but after about a year's work the contractor abandoned the undertaking and the Company was obliged to assume it. When this vexatious delay had been overcome, the work went forward briskly and without any further serious mishaps. On the 27th of January, 1855, the last rail was laid and the railroad, which has had a remarkable history, was opened throughout its length. It had cost \$140,000 per mile, or a total of \$7,000,000. The next question was, would it pay?

At the moment that well-deserved success attended the efforts of the Company, its coffers were empty and its prospects appeared to be dark. Its funds had been exhausted in the task of completing the road, and the greatest difficulty was experienced in securing an adequate equipment of motive power and rolling stock. But the directors were full of hope and courage, and good fortune rewarded them from the outset. With poor and limited facilities for handling traffic it was shrewdly determined to

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put the tariff rates at what were believed to be prohibitive figures for all but the most urgent business. The first rate sheet issued was as follows:

FOR PASSENGERS	
First class	\$25.00 gold
Steerage	10.00 gold

FOR FREIGHT	
Personal Baggage	\$0.05 per pound
Express	1.80 per cubic foot
Ordinary First class50 per cubic foot
Second class	1.50 per 100 pounds
Mails22 per pound
Coal	5.00 per ton

The Company was fully prepared to make considerable reductions in these rates as soon as it should be on its feet and in a position to handle all the business offering. To its surprise, however, the extraordinarily high charges did not prove to be in any degree prohibitive. The traffic demand was so great and insistent that the schedule was adopted as permanent and it remained in force for more than twenty years. Money began to pour into the Company's treasury in a steady stream. Improvements were made all along the line, terminal wharves and other needful structures were erected, and the road was furnished with ample cars and engines.

Almost immediately dividends on the original fifty thousand shares were paid, and soon amounted to twenty-four per cent, while large sums were carried to the sinking fund. In the early years of the Company's operation its stock came to be regarded as one of the very best investments in Wall Street. It ran up to more than one hundred per cent over par and had such stability that, although a stock dividend of forty per cent was declared to cover the amount of earnings that had gone toward the construction of the road, the shares sold the following day without decline. In fact, during the first ten years of its history, the road's prosperity was marvelous. The management, under the presidency of David Hoadley, was strictly honest, and conservative, perhaps to a fault. The business world became accustomed to look upon the Panama Railroad as one of the most prosperous enterprises in existence and one whose prosperity was fixed upon an unshakable foundation.

During the ten years ending with 1861 the total receipts exceeded \$11,000,000. A large proportion of this sum was used in improvement, but quarterly dividends of six per cent were paid and the stock issue was raised to

seventy thousand shares, making the capital \$7,000,000, whereas it had originally been \$5,000,000. It was confidently expected by the public that the natural increase in traffic would result in corresponding increase in profits.

There were, however, two or three serious drawbacks to the continuance of the road's remarkable prosperity. The chief of these was the fact that the contract made with the Government of New Granada was for a very short period, when the character of the enterprise is considered. The concession was to expire at the end of forty-nine years from 1848, and it had been agreed that on the expiration of the first twenty years after the opening of the line, the Government of New Granada could take possession of it by making a payment of \$5,000,000; or, if the Government should waive that option, at the end of thirty years it might secure the property by making a payment of \$4,000,000; or at the end of forty years of \$2,000,000. With the expiration of the term of the concession, the road and all its assets were to pass to the Government of New Granada free.

Before half of the first term had expired, the

enterprise had established itself as the best paying railroad in the world. The directors were fully alive to the advantage of securing unhampered possession of it, and the Government of Colombia, which had succeeded New Granada, was equally appreciative of the value of its reversionary interest in the property. There was no doubt about Colombia's availing herself of the first option to acquire the line and its appurtenances.

With this dread contingency in view, Colonel Totten and William Nelson were sent to Bogotá as representatives of the Company to negotiate a new contract at any cost. After several months of dickering, an agreement, superseding the old one, was signed by the interested parties in August, 1867. It was not as favorable as had been hoped for, but considering that Colombia clearly had the whip hand of the situation, the Company's representatives probably did as well as was possible.

The new franchise had a life of ninety-nine years from the date of its execution, but a number of additional obligations were imposed by it. One million dollars in gold was paid at once as a *douceur*, and the annual payment of \$250,000 in gold was stipulated for during the

continuance of the concession. The Company was bound to "extend the railroad on the Pacific side to the islands of Naos, Culebra, Perico, and Flamenco; or other place in the Bay of Panama where there may exist a permanent depth of water for large ships." This was an onerous condition that could only be carried out at the expenditure of many millions. The contract also provided for the recession of the Island of Manzanillo, on which Colon stood. The original agreement conveyed it to the Company in perpetuity; under the later terms it was to be restored to the Government at the same time that the road should revert. There was also a provision for the carriage of Government troops and munitions free. This did not, at the time, appear to be of considerable consequence, but in later years it proved to be a heavy burden, as, for instance, in 1903, when, with only 4,633 first-class paying passengers, there were transported 6,601 troops who rode free.

When it became known in New York that the Panama Railroad had weighted itself with such heavy liabilities, the shares dropped from three hundred to eighty in a few days. This was the beginning of evil days. Other unfortunate cir-

cumstances shortly arose. In 1862, Congress had passed an act authorizing a railroad and telegraph line across the continent. For years the project languished, but at length it was taken up by men of energy and determination with the result that in May, 1869, the last rail of the "Overland" was laid at Promontory Point.

This development robbed the Panama Railroad of the best of the California business on which its prosperity had been built up. But there remained an even richer source of profit in the trade of Central and South America. This was obviously the most desirable field for the directors of the road to cultivate, and an opportunity to secure a good hold upon it shortly occurred to them.

For some time the Pacific Steam Navigation Company had complained that their business on the Pacific Coast was hampered by the lack of adequate facilities afforded by the Panama Railroad, whose share in the division of rates for through traffic was unsatisfactory to the steamship company. When the loss of the California traffic became assured, Colonel Center, the superintendent of the railroad, probably acting without the authorization of

his directors, met the Manager of the Pacific Steam Navigation Company and made an agreement covering the matters in which both corporations were interested. This provisional contract provided that the rates for passages and freight should be made by the company with whom the business originated, and the total charge should be divided equally between the Panama Railroad and the steamship companies on either side of the Isthmus.

Colonel Center had reason to believe that the officers of his company would be delighted with the result of his negotiation, for the agreement was equitable and quite advantageous to the railroad, while it involved the extremely desirable feature of an amicable alliance with the Pacific Steam Navigation Company. That corporation was one of the most prosperous and best managed in the world. Its business was well-established and free from competition. It had twelve good vessels running between Panama and Valparaiso, and calling at twenty-eight intermediate ports.

When the tentative agreement that had been arrived at between Colonel Center and Manager Petrie was laid before the directors of the Panama Railroad, they flatly declined to en-

dorse it, declaring that their company would collect such charges as they might see fit to make, and would not submit to dictation in the matter from any source. This suicidal action can only be accounted for on the supposition that the officials of the Company were ignorant of the resources of the Pacific Steam Navigation Company and believed that the management of the latter would be obliged to concede the point insisted upon. In this they were utterly mistaken. As soon as the ultimatum of the railroad company was made known to the steamship company, it began preparations for conducting its business independently. In 1868 regular voyages were commenced by its vessels between Liverpool and Valparaiso, and later extended to Callao. By 1874 a fleet of fifty-four boats, with a gross tonnage of 120,000 tons, was operating on this line. The smaller vessels only were sent to Panama and they carried no more than was necessary. The large repair shops and coaling station were removed from the Island of Toboga to Callao. Thus an opportunity was thrown away which the Panama Railroad never had a chance to recover. There is no doubt that had the agreement with the Pacific Steam Navigation Company been ef-

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fectured the fortunes of the road would have been greatly influenced for the better.

The year 1868, that in which the Pacific Steam Navigation Company began running its ships round Cape Horn, saw the prosperity of the Panama Railroad reach high water mark. The following statement was made in the annual report for that year.

Total receipts from all sources	\$4,337,668.48
Total expenses, including the new Colombian subsidy	\$2,030,185.52
Four quarterly dividends of six per cent each on \$7,000,000	1,680,000.00
Surplus	627,482.96
	\$4,337,668.48

It is questionable whether any railroad ever made such a showing as this. Upwards of four millions earned in a year by forty-seven miles of single track, netting more than one hundred per cent profit!

At the end of a few brief years a great change was indicated in the directors' report. The annual statement for 1871 showed:

Total Receipts	\$1,284,418.98
Total Disbursements, exclusive of dividends	997,875.44
	\$286,543.54

This was a pitiful falling off, but there was worse to come.

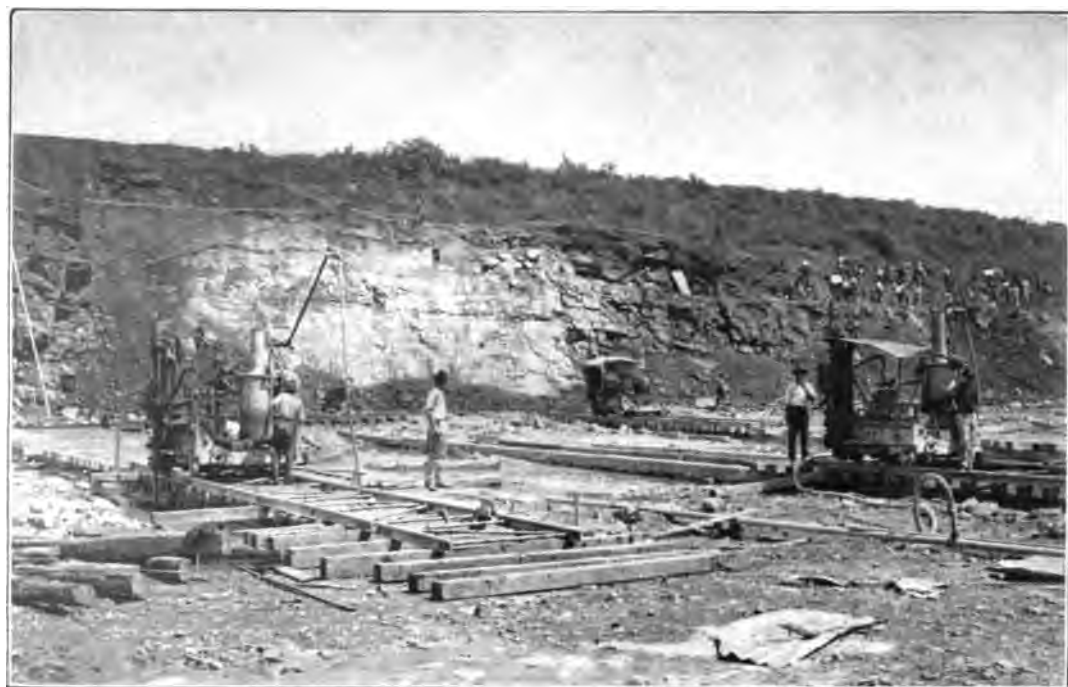
In the following year, the Panama Railroad fell into the hands of an adventurer in the field of finance, who commenced his meteoric career by marrying an heiress while the steward of a Hudson River steamboat. Alden B. Stockwell saw the stock of the road declining, and conceived the idea that it would be a likely property to acquire and loot. Early in 1872 he secured a large number of the shares and a sufficient proportion of the voting proxies to elect himself president of the company. For several years thereafter the securities of the corporation were manipulated by Wall Street speculators without regard to the interests of the property, or the shareholders. In 1874, Russell Sage was the president, and, soon after, Trenor W. Park obtained control. The last named held a majority of the shares at the time that the line was transferred to the Panama Canal Company.

The total receipts of the road from 1851 to 1898 were \$94,958,890.36 and its total expenditures \$57,036,234.46. On a capital of \$7,000,000 it had paid dividends aggregating \$37,922,655. Splendid as this showing is, it might have been very much better if the directors had exercised more foresight, and but for the gross misman-

agement, during the seven years of French control.

When the French canal project was launched, the railroad company was in a position of extraordinary advantage. Its consent was necessary to the granting of the canal concession by New Granada. Its line paralleled the proposed channel and the French were obliged to transport their supplies over it at the regular rates. This was such an enormous tax on their treasury that they were forced to buy the road at the price asked for it by the shareholders. It was a providential opportunity to dispose of a fast deteriorating property at fancy figures. For 68,534 of the 70,000 shares the Canal Company was forced to pay \$18,094,000, or at the rate of \$250 a share. But this was not all, for a dividend of fifty-two per cent was paid shortly before the transfer, and a treasury fund of \$1,700,000 was retained by the sellers.

In 1904, all the property of the French canal company passed to the United States by purchase. Of the amount paid, \$6,800,000 was allotted as the pro rata value of the railroad. Omitting the fact that the line is a necessary adjunct to the construction of the Canal, the price paid for it was low. The assets, aside



pensive building was put up near La Boca. The preparation of the grounds, the building, and the roads thereto, cost upwards of \$150,000.

“ The way money has been thrown away is simply astonishing. One canal chief had had built a famous pigeon house while I was on the Isthmus lately. It cost the company \$1,500. Another man had built a large bath-house on the most approved principles. This cost \$40,000. Thousands and tens of thousands have been frittered away in ornamental grounds, for all had to be *beau*, utility being a second consideration.”¹

The following figures are taken from the report of Mr. Armero, a Colombian officer, which was made up to June 30, 1886, that is to say about four years after work was actually commenced:

“ Excavations of 14,000,000 cubic metres, \$28,000,000; material purchased, \$22,000,000; combustibles, \$3,800,000; explosive material, \$1,300,000; purchase of Panama Railroad, \$18,685,088; encampments on the line, \$9,000,000; Central Hospital of Panama, \$5,600,000; Hospital at Colon and ambulances, \$1,400,000;

¹ Five Years at Panama. Wolfred Nelson, M. D. Out of print.

stables, \$600,000; carriages and horses for employees, \$215,000; servants for employees, \$2,700,000; mules and wagons, \$125,000; buildings for offices, private residence for the manager, country seat for the same, grounds, etc., \$5,250,000; parlor car for the same, \$42,000; sanatorium at Toboga, \$465,000; indemnity to commissioners (sent to Panama at the Canal Company's expense to report on the canal), \$2,000,000; indemnity to contractors (for company's failure to carry out certain contracts), \$2,300,000; wages of employees on the line, \$5,000,000; offices at New York, Paris and Panama, \$8,400,000; police on the encampments, \$2,300,000; pharmaceutical staff, \$4,800,000; interest at five per cent on capital, \$30,000,000. Total, \$154,509,088."

The inexpert eye may, without difficulty, see graft sticking out all over these figures. Actual excavation accounts for less than one-fourth of the total expenditure, which considerably exceeds De Lesseps' estimate for the complete work. The essential expenses amount to a comparatively small proportion of the whole. Wages of employes on the line amount to less than two-thirds of the sum expended on the offices

Briefly stated, De Lesseps proposed a canal at sea level with a uniform depth of 27½ feet. Its length was to be 45½ miles, extending from Colon to Panama. A large tidal basin was to be constructed at the Pacific end to counteract the effect of the difference between the tidal oscillations in the two oceans. This waterway was to be finished in eight years from the time of the organization of the Company.

With a permanent staff of engineers upon the ground, reliable information regarding the undertaking began to accumulate, and it all pointed to the conclusion that the task was very much greater than the promoters had imagined it to be. Nevertheless, De Lesseps adhered to his original estimates until 1885, two years after the inception of the construction. At a meeting of the shareholders in that year, he asked for an extension of the time to July, 1889, and increased his estimate of cost to \$120,000,000. But, at this time, barely one-tenth of the required excavation had been made and it needed no great mathematical skill to calculate that at the same rate of progress and expenditure, the work would occupy twenty years and cost a fabulous sum. Moreover, the methods of financing and the extravagant management of affairs had



NEGRO QUARTERS, COLON.



excited adverse criticism. The papers which had not been subsidized became savage in their attacks upon the enterprise, and a general lack of confidence was exhibited. The additional funds that were urgently needed could not be secured from the public and De Lesseps sought the aid of the Government, which had been extended to him in his Suez Canal undertaking.

In May, 1885, the Panama Canal Company petitioned the French Government to be allowed to raise \$125,000,000 on lottery bonds. The petition was not presented to the Chamber of Deputies until a year later. The grant was recommended, but before complying, the Government sent a responsible engineer to the Isthmus, with instructions to make an impartial investigation of conditions. This commissioner reported that, even though the desired Government aid should be given to the Company, it would be practically impossible to complete the work unless the plan should be changed to that of a lock canal. The conclusion was prompted by the consideration that the enterprise was a purely commercial one and would be an utter failure unless the Canal could be completed at a cost that would allow of some return on the money invested.

De Lesseps would not hear of the proposed change and withdrew the Company's petition. He decided to make another attempt to restore public confidence. He gathered a large party of men influential in commercial and financial circles and with them made a visit to the scene of operations. Few of these persons had any technical knowledge, but most of them proved susceptible to the persuasive ability of the promoter. On their return, the enterprise received the endorsements of a number of chambers of commerce and other prominent institutions. This move was so far successful that the stockholders authorized the issue of additional bonds which were subscribed for, and saved the situation for the time being. But the state of affairs continued to grow worse and by the middle of 1887 De Lesseps was glad to abandon his attitude as to the form of the Canal and consent to anything that held out a hope of a continuance of the work.

A plan for a lock canal was hurriedly made and approved by the directors. The line was to conform to that of the original plan. The summit level was to be 49 meters in elevation. The depth was considerably reduced, and the

estimate of cost was placed at figures altogether too low.

The application to the Government was renewed and the Company received permission to issue lottery bonds to the amount of \$160,000,000. These were to draw four per cent interest and to share in semi-annual drawings.

Ordinarily such a proposition would have been attractive to the French people, but the credit of the Company had fallen so low that only one-tenth of the offering was taken up. A second attempt to float the bonds with additional inducements to subscribers proved futile.

The Company had at that time outstanding obligations aggregating the enormous sum of \$350,000,000. Its annual interest charge was in excess of \$16,000,000 and it had not sufficient cash on hand to cover one month's current expenses. It was hopelessly involved, and every effort to raise funds met with failure. On the fourth day of February, 1889, a receiver was appointed to handle the affairs of *La Universelle Compagnie du Canal Interoceanique de Panama*, to give it its official title. The receiver's statement of the receipts and expenditures of the Company from the date of its organization fol-

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lows, the sums being approximately reduced from francs to dollars.

RECEIPTS

Proceeds from the Capital Stock, various loans and bond issues	\$254,338,527
Other receipts from sundry sources	7,933,318
Expenses incurred but not paid	3,668,770
Total amount collected and due by the Company	\$265,940,615

EXPENDITURES

(Outlay on the Isthmus)

Salaries and expenses of management	\$16,540,883
Rents and maintenance of leased property	3,301,070
Purchase of articles and material for consumption	5,847,920
Purchase and transportation of machinery, etc.	23,874,946
Surveys and preparatory work	270,940
Central workshops and management	5,989,577
Various constructions, buildings, and general installation	9,407,705
Work of excavation and works of construction	89,434,225
Purchase of lands	950,655
Sanitary and religious service	1,836,786
Total expenditures on the Isthmus	\$157,224,689

(Outlay at Paris)

Paid for the Concession	\$2,000,000
Paid to the Colombian Government	150,000
Various expenses incurred before organization	4,612,244
Paid to American Financial Group	2,400,000
Interest on various obligations	43,124,272
Amortization transactions	4,505,617
Expenses of floating bonds, loans, etc., commission, advertising, printing, etc.	16,616,841
Paid to agents of the Colombian Government	42,760
Boards of management and direction	1,242,458
Salaries of employees	1,023,444
Home Office and furniture	417,479
Compensation to contractors on cancellation of contract	240,000
Total expenditures at Paris	\$76,375,115

It is not necessary to dwell upon the judicial proceedings that gave the final tragic touch to this dismal failure. Convictions of a criminal nature were secured against the De Lesseps, father and son, but the sentences against them were not enforced. Many other prominent persons, including a number of Senators, Deputies and Government officials, were found guilty of corruption.

Despite the gross mismanagement that characterized the French undertaking, they did a large amount of work. Much of this has been turned to account by our engineers and has greatly lessened our task. In the matter of surveys they were especially thorough during the later years of their operation. The plan which we are following is based on their investigations and the data received from them. Furthermore, the study of their mistakes saved us from falling into similar errors. Their experiments in machinery and methods were also useful to our engineers and a large quantity of their material and many of their buildings have been used by us. In short, the effort of the French to construct a canal paved the way for us and facilitated our task.