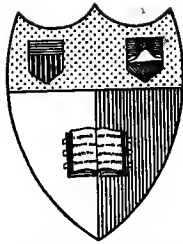


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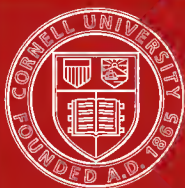
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ISTHMUS OF PANAMA.

HISTORY

OF

THE PANAMA RAILROAD;

AND OF THE

PACIFIC MAIL STEAMSHIP
COMPANY.

TOGETHER WITH A

TRAVELLER'S GUIDE AND BUSINESS MAN'S HAND-BOOK
FOR THE PANAMA RAILROAD,

AND

THE LINES OF STEAMSHIPS CONNECTING IT WITH EUROPE, THE UNITED
STATES, THE NORTH AND SOUTH ATLANTIC AND PACIFIC
COASTS, CHINA, AUSTRALIA, AND JAPAN.

BY F. N. OTIS, M. D.

WITH ILLUSTRATIONS BY THE AUTHOR.

NEW YORK:

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1867.

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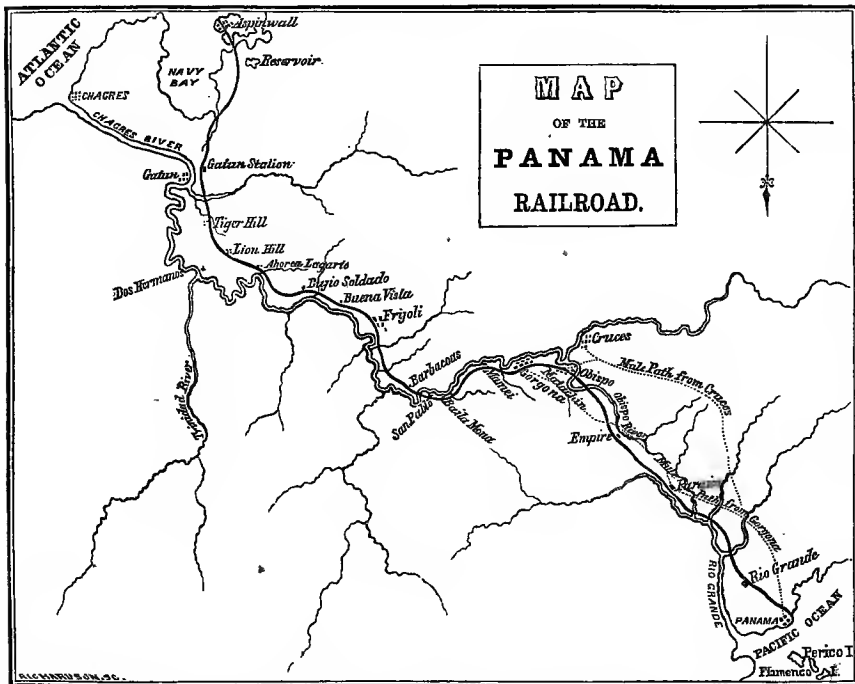
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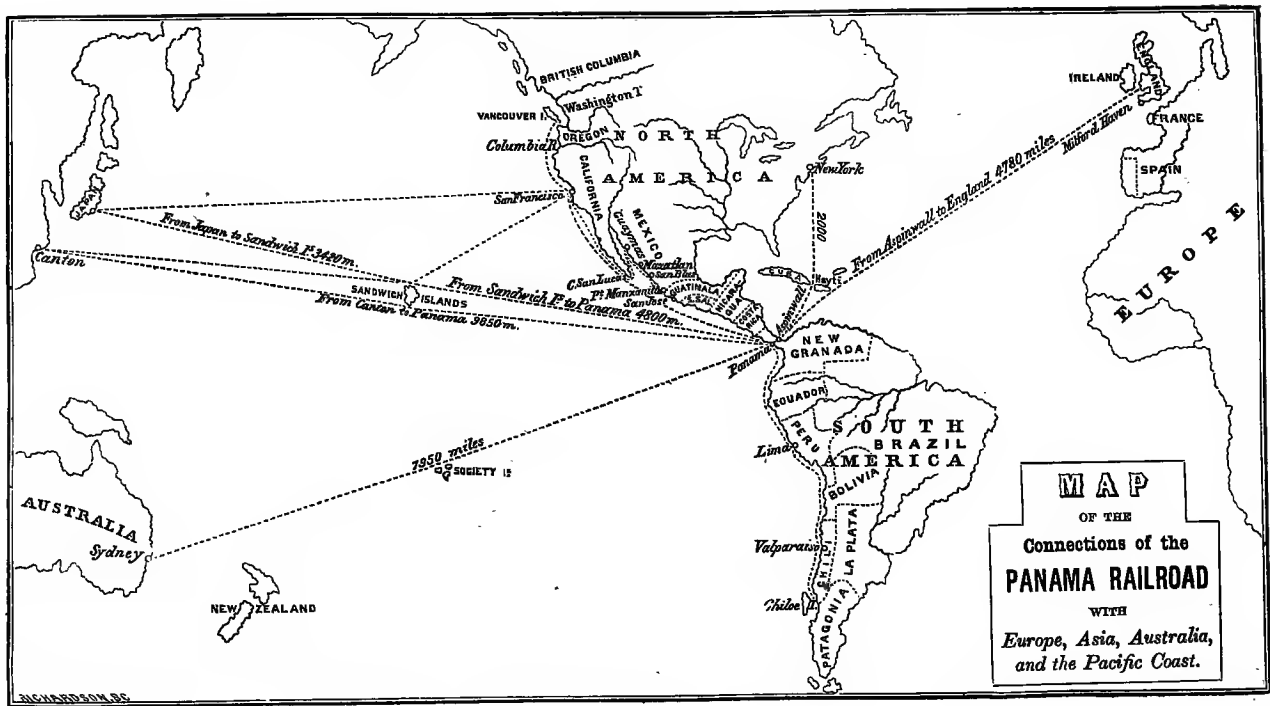
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MAP
 OF THE
Connections of the
PANAMA RAILROAD
 WITH
Europe, Asia, Australia,
and the Pacific Coast.

INTRODUCTION.

PURSUANT to a resolution offered by the Hon. Henry Clay, of Kentucky, in the Senate of the United States, in the year 1835, the President, General Andrew Jackson, appointed Mr. Charles Biddle, formerly of Philadelphia, then of Tennessee, as a commissioner to visit the different routes on the Continent of America best adapted for inter-oceanic communication, and to report thereon, with reference to their value to the commercial interests of the United States.

Mr. Biddle, accompanied by Dr. Gibbon, of Philadelphia, sailed from that port for St. Jago de Cuba, to gain preliminary information regarded to be important. Thirty years ago there existed few conveniences for an approach to the Isthmus of Panama. An occasional packet then plied between St. Jago de Cuba and Kingston, in the Island of Jamaica, and from thence some small vessel of the British navy conveyed a monthly mail to Chagres, which there crossed the Isthmus to the city of Panama for distribution on the Pacific coast. Mr. Biddle visited and remained for several months at these different points, in order to approach the objects of his mission with the best information attainable from merchants or travelers who had interests on the proposed routes or knowledge of their peculiarities. After gaining what information he was able at these points, Mr. Biddle proceeded to Chagres, then the only Atlantic port of the Isthmus, and pursued his journey up the Chagres River to Cruces, the head of boat navigation, making careful observations of the country through which he passed, with the view of its possible selection as the proposed rail-

way route. From Cruces the party traveled on muleback to the port and city of Panama, which at this time was in a thoroughly dilapidated condition, maintaining a merely nominal trade with the neighboring Pacific ports, and even this wholly by means of foreign ships. The object of Mr. Biddle's visit being made known to the leading citizens of Panama, every facility was afforded by them for advancing his enterprise. The people of Gorgona cut a new road through the woods to communicate by portage with the head of the Rio Grande, which opens into the Pacific north of Panama. His varied means of information soon persuaded Mr. Biddle of the great importance of this route to the commerce of the United States, as well as to that of the Continents of America on each ocean, and Europe.

After a residence of several months in Panama, he decided to accompany the senators and members of Congress from the two provinces of the Isthmus to the seat of the national government at Bogota. Don José Obaldia, one of the representatives, exerted himself actively in promoting the enterprise, and was efficiently aided by the others. The perfect acquaintance of Señor Obaldia with the English language enabled him to be of much service to Mr. Biddle, which, together with his acknowledged influence among his countrymen, as well as with foreign residents at Bogota, certainly aided greatly in effecting the final arrangements.

Mr. Biddle had decided before he left Panama to offer propositions to the government of New Granada for a decree authorizing a company to construct a railroad across the continent through the Isthmus. A small Peruvian schooner conveyed the travelers to the mouth of the Buenaventura River, some 500 miles south of the Isthmus. Light canoes, manned by Indians, negroes, and boatmen of mixed blood, conveyed the party, with their servants and baggage, to the base of mountains near the Pacific, over which all were obliged to be carried in bamboo chairs on the backs

of Indians, over almost perpendicular passages entirely inaccessible to mules. After several weeks of slow movement through a beautiful but thinly-settled country, the travel-worn and weary adventurers reached the city of Bogota. General M'Affee, of Kentucky, then Charge d'Affaires of the United States, promptly received the Americans into his house, and assisted to promote the views of Mr. Biddle, who at once proceeded to frame an application for a railroad privilege across the Isthmus of Panama, and which, without loss of time, was offered to the attention of the Congress by the representatives from the States of Veragua and Panama. After protracted delays, a law or decree finally passed both houses of legislation, making large grants of public lands, and conveying many important privileges to certain citizens of the United States in the event of their establishing a railroad across the Isthmus at Panama. The decree was regarded as sufficiently favorable to incline the capitalists of the United States, Europe, and New Granada to promote the success of the undertaking.

Mr. Biddle left the capital with an official copy of the decree granting the right to build a railroad across the Isthmus of Panama. After descending the Magdalena River to Carthagena, he reached the United States during the eventful year of 1837, at a period when a monetary crisis had deranged every facility or disposition for such an investment. Mr. Biddle considered the advantages of the Panama route to be superior to all other routes between the two oceans. He regarded his success in New Granada sufficient to warrant him in omitting farther investigations. The visit to the Central American and Tehautepec routes was abandoned, although he was urgently solicited to undertake an inspection of both. Mr. Biddle died soon after his return from the Isthmus, without making any official report to the government.

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G. M. Totten,

Engr'd by F. Halpin from a Photo. by Fredricks & Co.

HISTORY

OF

THE PANAMA RAILROAD.

IN ancient or in modern times there has, perhaps, been no one work which in a few brief years has accomplished so much, and which promises for the future so great benefit to the commercial interests of the world, as the present railway thoroughfare between the Atlantic and Pacific Oceans at the Isthmus of Panama. A glance at its geographical position can not fail to discover to the most casual observer that, situated as it is midway between the northern and southern, and alike between the eastern and western hemispheres, it forms a natural culminating point for the great commercial travel of the globe. Wise men in every enlightened nation had seen this for centuries, and had urged the importance of free interoceanic communication at this point; but its lofty and rugged mountain ranges, its deep and pestiferous morasses, seemed almost equally to defy the skill of the engineer and the physical endurance of the laborer. Even the possibility of opening such a communication by the government exercising jurisdiction over that portion of the isthmus through which it should pass had never been seriously entertained; but New Granada had long and earnestly challenged the more powerful nations of the world to break down this barrier to commerce and civilization, and reap the richest benefits which might result therefrom. England had looked toward the project with longing eyes, but quailed before the magnitude of the

labor. France had done more—surveyed and entered into a contract to establish it; but too many millions were found necessary for its completion, and it was lost by default.

Events at last occurred which turned the attention of the American people to this transit, viz., the settlement of the northwestern boundary, by which we came into possession of Oregon, and the war with Mexico, which added California to our possessions. But, while the accession of these territories was of the highest importance to us in a national point of view, their distance rendered them almost inaccessible to the class of emigrants who usually settle our new domains, as well as inconvenient to the proper administration of law and government. Still, urged on by that pioneering spirit which seems inherent in the blood of the American, and invited by the prolific soil and genial climate of these distant possessions, and a prospect of a new and enlarged field for commercial pursuits, large numbers of our people migrated thither around Cape Horn. Congress, however, in 1848, in order to render these countries more accessible, authorized contracts to be entered into for the establishment of two mail lines of steam-ships, the one from New York and New Orleans to Chagres, and the other to connect with this by the Isthmus of Panama, from Panama to California and Oregon. The inducements to invest in these projects were not sufficient to attract the favorable attention of capitalists, and the contracts were taken by parties without means, who offered them for sale, and for a long time without success.

Men were at last found bold enough to venture upon the enterprise. Mr. William H. Aspinwall secured the line on the Pacific side, and George Law that on the Atlantic. In the Atlantic contract there was comparatively little risk, and a promise of almost immediate remuneration, as it connected with the cities of Savannah and New Orleans, and terminated at the portals of the Pacific Ocean. But the

Pacific contract was looked upon by the generality of business men as a certain sequestration of a large amount of property for an indefinite time, with a faint prospect of profit; and the wonder seemed to be that so sound a man as Mr. Aspinwall should have engaged in it. But it soon became evident that he expected no great profit from the steam-ship line *per se*; but that, with those enlarged and far-reaching views for which he is so justly noted, this line was only a part of the great plan which he had conceived, the remainder being embraced in the bold design of a railroad across the Isthmus of Panama; and at this time he, with Mr. Henry Chauncey and Mr. John E. Stephens, entered into a contract with the government of New Granada for the construction of that work. Mr. Chauncey, like Mr. Aspinwall, was a large-minded and public-spirited capitalist, whose integrity and straightforwardness were undoubted. Mr. Stephens possessed an experience in the country through which the road was to pass, and a knowledge of its geography and its inhabitants, gained by practical study and observation. These three gentlemen were associated together for the prosecution of this great enterprise, and shortly after, Mr. Stephens, accompanied by Mr. J. L. Baldwin, a skillful and experienced engineer, made an exploration of the route, and decided upon its entire feasibility, dissipating the fears entertained by many that no line could be established without such heavy grades as would interfere materially with the paying character of the undertaking by the discovery of a summit gap no more than three hundred feet above the ocean level.

A formal contract was then entered into with the government of New Granada, on the most favorable terms, for the exclusive privilege of constructing a railroad across the Isthmus of Panama. Among the most important concessions by the terms of this contract was one guaranteeing that all public lands lying on the line of the road were to



RUNNING THE LINES.

stock company, under which one million dollars of stock was taken—the original grantees having previously transferred their contract into the hands of this company. A large and experienced party of engineers, under the command of Colonel G. W. Hughes, of the United States Topographical Corps, were sent down, in the early part of 1849, to survey and locate the line of the road. The result of their work not only confirmed the previous reconnoissance in regard to the entire practicability of the railroad, but another summit gap was discovered by Mr. J. L. Baldwin, thirty-seven feet lower than that previously established by him, and a line was run from ocean to ocean, not exceeding fifty miles in length. The Pacific terminus of the road was located at the city of Panama, on Panama Bay, and the Atlantic terminus at Navy Bay, on the Atlantic shore.

The character and geographical position of the country through which the line of the road had been carried was such as might well have made the hardest projectors shrink from attempting its construction. The first thirteen miles, beginning at Navy Bay, was through a deep morass, covered with the densest jungle, reeking with malaria, and abounding with almost every species of wild beasts, noxious reptiles, and venomous insects known in the tropics. Farther on, though some of the land was so fair and beautiful that the natives called it *Paraiso*, the greater part of the line was through a rugged country, along steep hill-sides, over wild chasms, spanning turbulent rivers and furious mountain torrents, until the summit-ridge was surmounted, when it descended abruptly to the shores of the Pacific Ocean.

Situated between the parallels of 8° and 9° north of the equator, a sultry tropical heat prevailed throughout the year, nearly half of which time the country was deluged with rains that, if they would not seriously damage the works, were certain to impede their progress, and add greatly to the arduous character of the undertaking. The whole

isthmus, though covered with the most luxuriant vegetative growth, possessed little or no timber sufficiently durable to be of use in the construction of a permanent work. The native population, composed of a mongrel race of Spaniards, Indians, and Negroes, were too indolent and unaccustomed to labor to be depended on to any great extent. The resources of the country were entirely inadequate for the support of laborers. Men, materials, and provisions were to be transported thousands of miles. And yet, despite all these obstacles, the dim glimpses of which had, at a previous time, caused European capitalists to shrink back with fear, our bold operators at once, and earnestly, pushed forward this stupendous enterprise.

In the early part of 1849 a contract was entered into with Messrs. George M. Totten and John C. Trautwine for the construction of the road. The services of these gentlemen had been solicited by the Company, not only on account of their previously established reputation as skillful and successful engineers, but from having only a short time before been engaged upon a work of considerable magnitude in a neighboring province—the “Canal del Dique,” connecting the Magdalena River with the Caribbean Sea at Carthagena: they had, consequently, a large experience in the character and resources of the country, and the conditions necessary to the success of such a project. The contractors at once proceeded to the Isthmus with a large force, and commenced the final location of the road.

Basing their operations upon the reconnoissance of Colonel Hughes and party, a native town called Gorgona, on the Chagres River, about thirty miles from the Atlantic, was selected as a point for the commencement of the work. This place was chosen on account of the facilities it afforded for communication with the Atlantic by the River Chagres (which was supposed to be navigable to this point for vessels of light draught), by which men, materials, and stores



PARAISO.

could be transported to a central point on the proposed road; and, on the completion of the Pacific section, traffic between the two oceans could at once be established, while the Atlantic section might be completed at the leisure or convenience of the Company. To this end, two steam-boats of very light draught were dispatched to Chagres for the navigation of the river. It was soon ascertained, however, that it was impossible to make use of these boats (drawing only from fourteen to eighteen inches of water), and that even the native bongoes and canoes were capable of the service only by great labor and exposure. In addition to this, the rush of California travel, which was then directed through this river as far as Gorgona, had so raised the hire of the native boatmen that the expense of river transportation was enormously increased. It was therefore determined to change the point of beginning to the Atlantic terminus of the road.

Mr. Trautwine, after a careful survey of the whole line of coast from the mouth of the Chagres to the harbor of Porto Bello, had located this terminus at the island of Manzanilla, on the eastern shore of the Bay of Limon, or Navy Bay, where the city of Aspinwall now stands. It was also found that, instead of a secluded and rarely-visited region, where laborers and materials such as the country afforded were comparatively inexpensive, as was the case when the contract was framed, and had been time out of mind, it was now swarming with emigrants from all parts of the globe *en route* for the land of gold. The conditions under which the contract was entered into were changed, the whole *morale* of the country had assumed an entirely different aspect, and it was evidently impossible to continue the work under the arrangement agreed upon. A fair representation of these things being made to the Company by Messrs. Totten and Trautwine, they were released from their obligations as contractors, and retained as engineers, the Com-

pany having determined to take charge of the construction themselves.

The plan of commencing at the Atlantic terminus being approved, Colonel Totten left for Carthagena to make arrangements for procuring an increased supply of laborers. Mr. Trautwine, in company with Mr. Baldwin, as chief assistant engineer, then proceeded to Manzanilla Island with a small party, and commenced clearing in the month of May, 1850. This island, cut off from the main land by a narrow frith, contained an area of a little more than one square mile. It was a virgin swamp, covered with a dense growth of the tortuous, water-loving mangrove, and interlaced with huge vines and thorny shrubs, defying entrance even to the wild beasts common to the country. In the black, slimy mud of its surface alligators and other reptiles abounded; while the air was laden with pestilential vapors, and swarming with sand-flies and mosquitoes. These last proved so annoying to the laborers that, unless their faces were protected by gauze veils, no work could be done, even at midday. Residence on the island was impossible. The party had their quarters in an old brig which brought down materials for building, tools, provisions, etc., and was anchored in the bay.

Thus situated, with a mere handful of native assistants—most of the original forty or fifty having previously deserted on account of the higher wages and easier life promised them by the Transit—Messrs. Trautwine and Baldwin struck the first blow upon this great work. No imposing ceremony inaugurated the “breaking ground.” Two American citizens, leaping, axe 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 an-

nounced 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.

Work upon the island was now fairly commenced. A portion was cleared, and a temporary store-house erected from the materials on board the brig. On the 1st of June Colonel Totten arrived from Carthagena with forty natives of that province as laborers for the work: these were descendants of the old Spanish slaves, a peaceable and industrious race, who, from having been employed on the works in Carthagena for several years, proved a valuable accession to their forces. Mr. T. was accompanied by Mr. John L. Stephens, the president of the Company, who was on his return from Bogotá, where he had been to obtain some important revisions in the contract. With their increased corps the clearing progressed rapidly; but the rainy season soon setting in, the discomforts to which they were subjected were very great. The island was still uninhabitable, and the whole party were forced to live on board the brig, which was crowded to its utmost capacity. Here they were by no means exempt from the causes which deterred them from living on shore, for below decks the vessel was alive with musquitoes and sand-flies, which were a source of such annoyance and suffering that almost all preferred to sleep upon the deck, exposed to the drenching rains, rather than endure their attacks. In addition to this, most of their number were kept nauseated by the ceaseless motion of the vessel. Labor and malarious influences during the day, exposure and unrest at night, soon told upon their health, and in a short time more than half the party were attacked with malarious fevers. Having neither a physician nor any comfortable place of rest, their sufferings were severe. At this time the hull of a condemned steam-boat—the Telegraph—lying at Chagres, was purchased, and sent down as a resi-

dence. This proved a vast improvement upon the accommodations afforded by the brig, but still annoyance from the insects was at times almost insupportable.

In the latter part of June Mr. Totten again left for Carthagena to procure more men, and Messrs. Stephens and Trautwine returned to New York to digest farther plans of procedure. The work was left in charge of Mr. Baldwin, who continued the clearing with his crippled forces until the latter part of the following month, when Mr. Totten returned with fifty more laborers. Surveys of the island and adjacent country were now pushed vigorously onward. It was in the depth of the rainy season, and the working parties, in addition to being constantly drenched from above, were forced to wade in from two to four feet of mud and water, over the mangrove stumps and tangled vines of the imperfect openings cut by the natives, who, with their *machetas*, preceded them to clear the way. Then, at night, saturated and exhausted, they dragged themselves back to their quarters in the Telegraph, to toss until morning among the pitiless insects. Numbers were daily taken down with fever; and, notwithstanding that the whole working party was changed weekly, large accessions were constantly needed to keep up the required force. The works were alternately in charge of Messrs. Totten and Baldwin, one attending to the duty while the other recuperated from his last attack of fever. In the month of July Mr. Trautwine returned with a surgeon—Dr. Totten, a brother of the colonel—and several assistant engineers. About fifty Irishmen also arrived soon after from New Orleans.

The line had already been located for two and a half miles, and decided upon for two miles farther. It was so laid out as to strike a range of small hills half a league from the terminus, when it again stretched into the deep morass. The distance now required to be traversed from the work to the terminus was so great, and attended with so much



THE FIRST SHANTY.

fatigue and loss of time, that it was determined to erect a shanty for Mr. Baldwin and party in the swamp. The lumber for this was dragged on the backs of the men for more than three miles. Here was erected the first dwelling-house, built of rude boards, high upon the stumps of trees, to raise it above the waters of the swamp; and in the heart of this dank, howling wilderness our hardy pioneers took up their abode.

Large parties of mechanics and laborers were now constantly arriving from Jamaica, Carthagena, and the United States, so that the quarters on board the hulk were no longer adequate to house them. The insects had greatly diminished in numbers as the clearing progressed, and shanties were erected on the high ground before alluded to for the accommodation of the laborers. In August, 1850, the work of construction was commenced at this place. Another station was also established eight miles distant, opposite to the native town of Gatun, on the bank of the Chagres River, which was navigable to this point; and two of the Company's vessels arriving, laden with machinery, building material, and stores, they were debarked here, and the work of piling and grading was carried on from this station toward the terminus. The number of men now employed on both stations was between three and four hundred, among whom were many mechanics. The construction and surveys for a time progressed with vigor, and comfortable dwellings and hospitals were erected; but sickness, caused by exposure to the incessant rains, working waist-deep in the water, and in an atmosphere saturated with malarious poison, soon made such sad inroads among them that, in a few weeks, more than half their number were on the hospital records, and, either frightened by the fevers or seduced by higher wages offered on the California Transit, so many of the remnant deserted that the work came to a pause. Here the bravest might well have faltered, and even turned

back from so dark a prospect as was then presented to the leaders of this forlorn hope; but they were men whom personal perils and privations could not daunt, whose energy and determination toil and suffering could not vanquish. Even in this apparent cessation of labor they were not idle; but, pushing off into the neighboring islands and provinces, they collected recruits in such numbers that but a few weeks had passed before the work was again forced onward. Colonel Totten now assumed the direction of the work, and Mr. Center, the vice-president of the Company, repaired to the Isthmus to co-operate with him in the rapid advancement of the enterprise, so that by December over a thousand laborers were employed. With the commencement of the dry season the sickness abated, the hospitals were soon cleared, and by April, 1851, a large portion of the road between the terminus and Gatun was completed. The line had been located to Barbacoas, sixteen miles farther on, while Mr. J. C. Campbell, chief assistant engineer, was actively employed in extending the location toward Panama, and work had been commenced at several intervening points.

Docks had been constructed at Navy Bay, and vessels were almost daily arriving from Jamaica and Carthage with laborers, and from New York with stores, machinery, and materials for the road. On the first day of October, 1851, a train of working cars, drawn by a locomotive, passed over the road as far as Gatun. In the following month two large steam-ships, the Georgia and Philadelphia, arrived at the open roadstead of Chagres with passengers from the United States *en route* for California *via* the Chagres River Transit; but the weather was so tempestuous that, after several lives had been lost in attempting to effect a landing, they were forced to take refuge in the harbor of Navy Bay. It was then proposed that, instead of waiting for fair weather in order to return to Chagres, the passengers should be

transported over the railroad to Gatun, from whence they could proceed up the river in bongoes as usual. There was not yet a single passenger car on the road: an accident like the present had never been included in the calculations of the Company. Every objection was, however, soon overruled by the anxious emigrants, over one thousand in number, who were then disembarked and safely transported on a train of working cars to the Rio Chagres at Gatun.

At about this time the affairs of the Company in New York looked very dark and unpromising. The first subscription of one million dollars of stock was expended, and the shares had gone down to a low figure. The directors were obliged to keep the work moving, at an enormous expense, on their own individual credit. Never since the commencement of the undertaking had its supporters been more disheartened; but on the return of the Georgia to New York, carrying news that the California passengers had landed at Navy Bay instead of Chagres, and had traveled over a portion of the Panama Railway, its friends were inspired with renewed hope, the value of its stock was enhanced, and the steadfast upholders of the work were relieved from the doubts and anxieties that had well-nigh overwhelmed them.

Up to this time the settlement around the terminus at Navy Bay had been without a distinctive name: it was now proposed by Mr. Stephens, the president of the Company, that it should commemorate the services of one of the originators and unswerving friends of the road. On the 2d of February, 1852, it was formally inaugurated as a city, and named ASPINWALL. The works during this season progressed with rapidity, for great numbers of laborers were constantly arriving, and the mail-steamers, which now came regularly to Navy Bay, as regularly, on their return, carried away the sick and disabled. By March the road was completed to a station on the Rio Chagres called Bujio Sol-

dado, eight miles beyond Gatun, and passenger trains ran in connection with every steamer; by the 6th of July it was pushed on to Barbacoas, at which point the course of the road was intersected by the Chagres River, making a total distance from the city of Aspinwall of twenty-three miles.

Thus far the work had cost much more than was anticipated. In the hope of constructing the remainder more economically, it was decided by the Board of Directors to complete the road from Barbacoas to Panama by contract. Accordingly, an agreement was entered into with Minor C. Story, as principal, to complete the work. The death of the lamented president of the Company, Mr. John L. Stephens, took place at this time. From the very inception of the original contract he had devoted to the enterprise his active and intelligent mind with a zeal that knew no faltering. Much of his time had been spent amid the dangers and hardships of the wilderness through which it was projected, and his loss was deeply deplored by the Company. Mr. William C. Young was appointed his successor.

The work under the contract for construction had been commenced by the attempted erection of a bridge across the Chagres River at Barbacoas. The river at this point was about three hundred feet in width, flowing through a deep and rocky channel, and subject to sudden and resistless freshets, often rising forty feet in a single night: the bridge was nearly completed when one span was swept away. Work was again commenced upon it, as well as upon several sections of the road between this point and the Pacific terminus. At times there was a force of several hundred men employed; but they were mostly Irish, unable to endure the effects of the climate, and, being also badly cared for, their numbers were soon so thinned by sickness and death that the contractor found himself unable to accomplish any part of the contract for the price agreed upon. The work faltered, and at last stopped almost entirely; so

that when a year had expired not only was the bridge still unfinished, but not a tenth part of the work under the contract was completed, and the Company were obliged again to take the enterprise into their own hands, and carry it on by the same system pursued before the unfortunate contract was entered into. Mr. Young now resigned the presidency, and Mr. David Hoadley (the present president) was appointed his successor—a gentleman who deservedly enjoys the respect and confidence not alone of the Company which he represents, but also of the entire commercial community.

Valuable time had been lost from the delay occasioned by the non-fulfillment of the late contract. Not disheartened, however, the Company now redoubled their exertions, determined, if possible, to retrieve the error. Their working force was increased as rapidly as possible, drawing laborers from almost every quarter of the globe. Irishmen were imported from Ireland, Coolies from Hindostan, Chinamen from China. English, French, Germans, and Austrians, amounting in all to more than seven thousand men, were thus gathered in, appropriately as it were, to construct this highway for all nations. It was now anticipated that, with the enormous forces employed, the time required for the completion of the entire work would be in a ratio proportionate to the numerical increase of laborers, all of whom were supposed to be hardy, able-bodied men. But it was soon found that many of these people, from their previous habits and modes of life, were little adapted to the work for which they were engaged. The Chinamen, one thousand in number, had been brought to the Isthmus by the Company, and every possible care taken which could conduce to their health and comfort. Their hill-rice, their tea, and opium, in sufficient quantity to last for several months, had been imported with them—they were carefully housed and attended to—and it was expected that they would prove

efficient and valuable men. But they had been engaged upon the work scarcely a month before almost the entire body became affected with a melancholic, suicidal tendency, and scores of them ended their unhappy existence by their own hands. Disease broke out among them, and raged so fiercely that in a few weeks scarcely two hundred remained. The freshly-imported Irishmen and Frenchmen also suffered severely, and there was found no other resource but to reship them as soon as possible, and replenish from the neighboring provinces and Jamaica, the natives of which (with the exception of the Northmen of America) were found best able to resist the influences of the climate. Notwithstanding these discouragements, and many others too numerous to be narrated within the compass of this brief sketch, the work continued to advance, so that by January, 1854, the summit-ridge was reached, distant from the Atlantic terminus thirty-seven miles, and eleven miles from the city of Panama.

Simultaneously with the operations toward the Pacific, a large force was established at Panama, under the superintendence of Mr. J. Young, one of the Company's most efficient and energetic officers, and the road was pushed rapidly onward, over the plains of Panama, through the swamps of Corrisal and Correndeu, and up the valley of the Rio Grande, to meet the advancing work from the Atlantic side; and on the 27th day of January, 1855, at midnight, in darkness and rain, the last rail was laid, and on the following day a locomotive passed from ocean to ocean.

The entire length of the road was 47 miles 3.020 feet, with a maximum grade of sixty feet to the mile. The summit grade was $258\frac{64}{100}$ feet above the assumed grade at the Atlantic, and $242\frac{7}{10}$ above the assumed grade at the Pacific terminus, being $263\frac{9}{10}$ feet above the *mean* tide of the Atlantic Ocean, and the summit-ridge two hundred and eighty-seven feet above the same level. Commencing at the city



ANCIENT BRIDGE AT OLD PANAMA.

of Aspinwall, on Limon or Navy Bay, the Atlantic terminus of the road, latitude $9^{\circ} 21' 23''$ N. and longitude $79^{\circ} 53' 52''$ W., the road skirted the western shore of the island of Manzanilla for about three quarters of a mile, then bent to the east, and crossed the channel which separates the island from the main land at a point nearly central of the breadth of the island, thence around the southern and eastern shore of Navy Bay until it reached the small river Mindee, cutting off a bend of this river about one thousand feet from its mouth; then it stretched across the peninsula formed by this bay and the River Chagres up to the mouth of the River Obispo, one of its branches, seldom, however, following the tortuous course of that stream, but cutting across its bends, and touching it only at intervals of two or three miles. The line continued upon the right or easterly bank of the Chagres as far as Barbacoas (twenty-five miles from Aspinwall), where it crossed that river by a wooden bridge six hundred and twenty-five feet in length; from thence it followed the left bank of the Chagres to the mouth of the Obispo River, thirty-one miles from the Atlantic terminus, leaving the native town of Gorgona on the left. After striking the Obispo, the line followed the valley of this stream to its head in the summit-ridge, which it reached $37\frac{3}{8}$ miles from the Atlantic and $10\frac{1}{2}$ miles from the Pacific terminus. The lower part of the valley of the Obispo, being crooked and bound in by precipitous hills, compelled the line to cross the stream twice within the first mile, when it passed the summit-ridge by a cut one fourth of a mile in length and twenty-four feet in depth, and then struck the head waters of the Rio Grande, which flows into the Pacific Ocean. Following the left bank of this stream, and descending by a grade of sixty feet to the mile for the first four miles, the line crossed the rivers Pedro Miguel, Caimitillo, and Cardenas, near their entrance into the Rio Grande; thence it stretched across the savannas of Corrisal and the

swamps of Correndeu, and cut through a spur of Mount Ancon, leaving the main elevation to the right, and reached the Pacific Ocean at Playa Prieta, the northern suburb of the city of Panama.

Four tracks were laid at the Atlantic and three at the Pacific terminus, and the line of the road was well supplied with sidings and machinery for reversing locomotives. A machine shop one hundred and fifty feet long by fifty wide, stocked with first class machinery, sufficient to do all the repairs required for the road, was in operation at Aspinwall; also a blacksmith's shop, containing six suitable forges, and a brass foundry, with a small cupola for iron castings. There was also a car-repair shop, one hundred feet long by eighty feet wide, a freight-house and passenger depôt at either terminus, and suitable buildings for the accommodation of the employes of the Company.

A pier of four hundred and fifty feet in length was constructed at the Panama terminus, which gave greatly increased facilities for embarking and landing passengers and freight, and a steam-tug was substituted for the lighters and small boats which had been previously used for transportation between ship and shore, a distance of two and a half miles. The Company owned, by purchase, fourteen acres of land, having a front of five hundred feet on the bay. The Company also obtained by purchase, in connection with the Pacific Mail Steam-ship Company, a group of four islands in the Bay of Panama, about two and a half miles from the city, affording good shelter and anchorage for vessels of the largest class, and well supplied with good springs of water.

But the road at this time, though in *working* order and performing a large and daily-increasing service, was by no means actually completed. Much of the work, especially on the Pacific division, was of a temporary character; streams were crossed on temporary trestles, many of them of timber procured from the adjoining woods, and which it

was known would not last more than six or eight months; deep ravines, requiring embankments from twenty to eighty feet in height (which it was found, from the nature of the adjoining soil, as well as from the amount of work involved in filling them, would delay the laying of the track for many months), were crossed on temporary trestle-work, in order to obtain the advantage of immediate communication between the two oceans by rail, thereby saving the thousands of men, women, and children, who were then crossing the Isthmus every month, the thirteen miles of mule-ride over a dangerous path, as well as the almost incredible hardships and perils to which they were subjected.

The difficulty and expense of keeping the road open in this state was very great; but, while this was safely accomplished, the work, under the energetic and skillful management of Messrs. Totten and Center, rapidly assumed a permanent character; firm and thoroughly secured embankments took the place of the trestle-work; for the temporary bridges were substituted heavy iron substantial structures, with abutments of stone.

Some idea of the magnitude of the bridge and culvert work may be obtained when it is known that the waterways on the route were no less than one hundred and seventy in number, viz., one hundred and thirty-four culverts; drains, and bridges ten feet and under, the remaining bridges ranging from twelve to six hundred and twenty-five feet in breadth.

The iron bridge across the Chagres at Barbacoas may be taken, for its great strength and durability, as the type of all like structures on the line of the road. This bridge was composed of six spans of over a hundred feet each, built of boiler iron, with a top and bottom chord two feet in breadth and one inch in thickness, and joined together by a web of boiler iron nine feet in height at the centre and seven feet at the ends. The track was laid on iron floor-girders three feet apart, and the whole structure supported by five piers

and two abutments of hewn stone twenty-six feet wide and eight feet in thickness, increasing in the proportion of an inch to the foot down to their foundations, which were constructed of piles and concrete.

The ballasting, which was, however, previously well under way, was carried on and completed throughout the entire line of the road in the most substantial manner, and the rapidly decaying spruce, pine, and native wood ties were removed, and replaced with ties of *lignum-vitæ*, imported from the province of Carthage. Additional buildings for the accommodation of freight and passengers were erected at the Pacific terminus, to meet the wants of a greatly increased business, and at the Atlantic terminus new and commodious wharves were built, besides a massive stone warehouse three hundred feet long by eighty wide, the stone taken from quarries along the line of the road. Large and commodious station-houses, for the use of the local superintendents, were erected at intervals of four miles along the entire line, and an electric telegraph was established between the termini for the use of the Company. These, besides many other improvements, in reducing grades* and straightening curves, were accomplished

* TABLE OF THE GRADES FROM ASPINWALL TO PANAMA.

Rate of grade per mile in feet.	Length of grade in feet.	Rate of grade per mile in feet.	Length of grade in feet.
Level.	123,539	24.82	418
2.64	1,000	26.40	13,600
5.28	1,900	30.00	8,868
7.92	1,500	30.25	1,936
8.45	2,500	31.68	1,100
9.24	3,100	34.15	1,400
10.56	13,313	36.00	2,200
12.14	2,600	36.96	2,396
12.41	4,300	37.49	1,916
13.20	6,500	38.54	1,707
15.10	2,100	46.20	3,430
15.84	3,700	47.30	3,250
17.42	200	52.80	6,300
19.01	1,400	58.87	3,355
20.60	4,900	60.00	20,107
21.12	4,595		71,983
23.25	2,052		179,199
	179,199		251,182



during the two years following the opening of the road in 1855, involving an additional expenditure of nearly two millions of dollars. This great expenditure was not, however, incurred without satisfactory proof that the enterprise would equal, in its pecuniary advantages, all the calculations which had been made in regard to its increase of revenue. Up to the opening of the road in 1855, that is to say, from the running of the first passenger train in 1852, the amount received for the transportation of passengers and freight was \$2,125,232 31.

From 1857 the Company were actively engaged in establishing every needful arrangement and improvement which was found necessary to facilitate the perfect working of the road. Side tracks at either terminus were added to meet its increased requirements; the wharves at Aspinwall were improved and covered, and substantial bulk-heads were erected over a considerable portion of the frontage of the port. Much of the low ground on the island was filled in and laid out into streets, and many buildings erected. In addition to this, an immense reservoir was in process of construction on the site of a natural basin some two miles distant, from which water was to be conveyed in iron pipes to Aspinwall for the use of the town and shipping; and a substantial iron light-house, sixty feet in height, and furnished with a Fresnel light, was substituted for the wooden structure at the western side of the entrance to the port. At Panama the wooden pier was replaced by one of iron four hundred and fifty feet in length, and steam-tugs for towage, and several iron launches, each of one hundred tons burthen, were added to the facilities for the transshipment of goods between ship and shore. These were the principal works and improvements up to January, 1859, when the construction account of the road was closed, showing its entire cost up to that date to have been eight millions of dollars.

The *gross earnings* of the road up to that time amounted

to eight millions one hundred and forty-six thousand six hundred and five dollars.

The running expenses, together with depreciation in iron, ties, buildings, etc., amounted to \$2,174,876 51, leaving a balance of \$5,971,728 66 as the legitimate returns for the money invested in the road in a period of seven years, during the first of which but twelve miles were in operation, the second twenty-three, the third thirty-one: only for the last four years was the road in use throughout its entire extent.

Out of these receipts, the directors of the Company, having paid the regular interest on all mortgage and other bonds, a ten per cent. dividend to stockholders in 1852, one of seven per cent. in each of the years 1853 and '54, and one of twelve per cent. for every succeeding year, showed a balance of \$529,041 50, besides a sinking fund of \$153,395 83, and no floating debt.

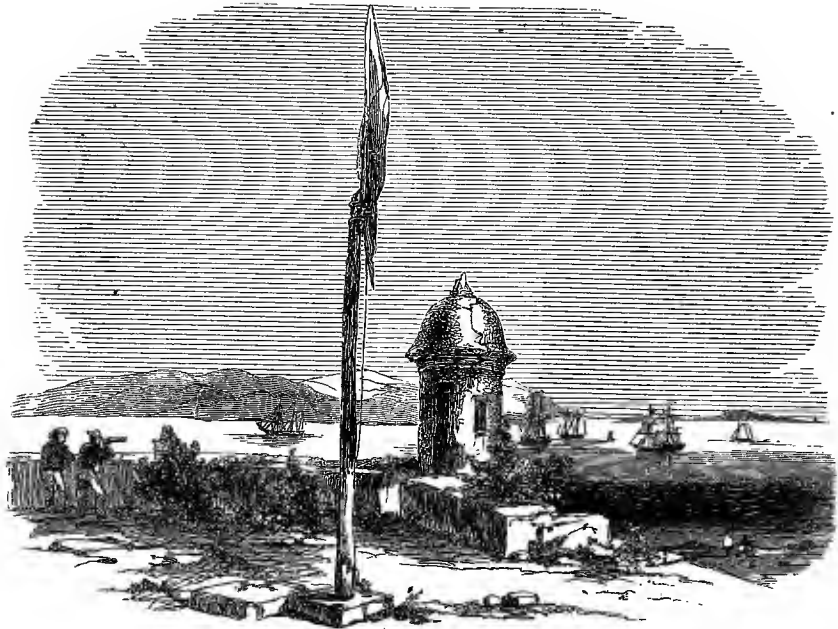
The increase in the receipts from the commencement of the road was as follows:

From December, 1852, 12 miles open,	} \$73,266 32.
To " 1853, 23 " "	
From 1853 to 1854, 31 miles open,	\$131,143 91.
From 1854 to 1855, opening of the entire road,	\$645,497 29.
From 1855 to 1858 showed an increase of	\$416,006 84; and
From 1858 to 1859, an increase above that of	\$419,477 93.

(For a particular statement of items of expenditure and income, see Appendix B, page 61, et seq.)

HEALTH OF THE ISTHMUS.

It may interest the general reader to know that more than four hundred thousand passengers have been transported over the road during the thirteen years ending in December, 1867, and it is not known that a single case of sickness has occurred in consequence of the transit since the entire opening of the road in 1855. The diseases contracted by persons in transit previous to that time were of a purely ma-



VIEW FROM THE RAMPARTS, LOOKING TOWARD THE SITE OF THE ANCIENT CITY.

larious character, and identical with the intermittent (fever and ague) and bilious fevers of the Western States, always found resulting from great exposure and fatigue, so often unavoidable while the transit was performed upon mules and in open boats, occupying from two to five days, the traveler frequently obliged to live upon the vilest food, and sleep upon the wet ground or in the but little less comfortable huts of the natives; the comfortable railway carriage, and the passage from ocean to ocean reduced to *three hours*, having fully demonstrated a *perfect* immunity to the traveler from all those varieties of sickness long popularly recognized under the head of *Panama Fever*. The sanitary condition not only of Aspinwall, but of the country along the entire line of the road, has also been improved by the filling in and draining of the swamp and low land to such a degree that the congestive forms of fever among the laborers and residents which, during the earlier days of the road, were the chief causes of mortality, are now rarely met with, and the whole line of the transit will, in point of healthiness, compare favorably with many of the equally recent settlements in the Western States.

SAFETY TO PROPERTY.

The amount of specie conveyed over the road from 1855 to 1867 was over seven hundred and fifty millions of dollars, *without the loss of a single dollar*; and during the same period there were sent over the road some 300,000 bags of mail matter (the greater part of which consisted of mails between the Atlantic States and California), not one of which was lost. And of the many thousands of tons of freight which have been transported over the Panama Railroad since it was first opened, the losses in transportation, by damage and otherwise, has been comparatively trifling.

SOURCES OF BUSINESS.

Erroneous impressions in regard to the sources from whence the business of the Panama Railroad is derived prevail extensively even among intelligent business men and members of our national councils, many regarding it as entirely dependent upon our trade with California. The fact seems to be overlooked that while California has a population estimated at only 500,000, the population of Central America is over 2,000,000; and that that portion of South America, whose only means of communicating with the Atlantic is either by the Isthmus of Panama or around Cape Horn, contains nearly 8,000,000, and that regular and direct steam marine communication exists between those countries and the Panama Railroad.

The fact that up to the establishment of the Isthmus Railroad the trade of South and Central America had been carried on almost exclusively with Europe (that between the United States and those countries being estimated at less than ten per cent. of the whole) has prevented its magnitude and importance from being fully appreciated by the American people.

Careful estimates, however, show that the value of the trade of these countries to and from the Atlantic exceeds \$60,000,000 per annum. The managers of the Panama Railroad Company, from its earliest existence, were aware of that important circumstance, and looked confidently to the business of those regions already existing, and that which would undoubtedly be developed by the facilities afforded by the railroad, as one of the surest elements in its ultimate and permanent success.

It was not lost sight of that the European trade (as far as European influence extended) would cling tenaciously to its circuitous track around Cape Horn, fully aware that, when the business was turned into the direct route across

the Isthmus, a large portion of the trade would be inevitably directed to the nearer markets of the United States; notwithstanding this, the Company rested in the conviction that the shortening of the distance from three thousand to more than four thousand miles for the South American markets, and more than five thousand for the Pacific Central American, besides the avoidance of the well-known perils of Cape Horn, must bring much of the most valuable merchandise across their road so soon as those countries were able to avail themselves of its advantages. The South American states, Chili, Peru, Bolivia, and Ecuador, were put in immediate connection with the road by a British line of steam-ships, which was organized some time previous to the opening of the road, and which, up to that time, had been mainly dependent upon the coastwise trade. The business resulting fully justified the expectations of the Company; but the Central American states had at that time no means of connection with the road. Their Pacific ports had been so long shut out from remunerative commercial relations that they could not at once realize the advantages the Isthmus railroad offered over the tedious and expensive land-route to the Atlantic; they required to be lifted from the ruts along which they had been creeping and groaning for ages, and placed upon this great commercial highway.

This was accomplished in 1856 by the Panama Railroad Company, who at that time organized a line of steam communication with all their ports from Panama to San Jose de Guatemala.

This departure from the legitimate business of the road was not made until the directors had vainly exhausted every available means in their power for the establishment of an independent company. But the development of the Central American trade was so manifestly for the interest of the Isthmus transit, and so certain to follow the establish-

ment of such a line, that they finally decided to identify its interests with those of the road. In the latter part of 1856 the first vessel was dispatched under the command of Capt. J. M. Dow. The returns from the monthly voyages of the "Columbus" soon proved the wisdom of the measure, for in less than two years the cargoes of merchandise brought from those states for transportation over the road often exceeded half a million of dollars, while a large amount of foreign merchandise found its way to those countries by the same channel.

In 1858, the business over the road from the South and Central American states exceeded in value *nine times* the freighting business of California *via* the Isthmus, and by 1860 less than *one fifteenth* of the freighting business of the road was due to the California trade,* the remaining fourteen fifteenths consisting mainly of shipments from the United States, British manufactures and other goods shipped direct from England for South and Central America, and the produce of those countries in return, such as indigo, cochineal, India-rubber, coffee, cocoa, deer-skins and goat-skins, besides orchilla, pearl-shells, tobacco, balsams, Peruvian bark, ores, straw hats, etc., etc.

When it comes to be considered that in the California trade large amounts of goods and merchandise for Oregon and Washington Territory and the British Possessions are included, likewise occasional shipments from China and the Sandwich Islands, and that it is still in its infancy, the importance of the South and Central American trade to the Panama Railroad may be in a measure appreciated. The conveyances by which the business of the Pacific coast finds its way to and from the road are,

1st. By the Pacific Mail Steam-ship Company, plying tri-

* The California trade over the Panama Road has increased since 1860 to such an extent, that now (1867) about one third of its business is due to that source.



monthly between New York, Panama, Mexico, California, Japan, and China, with a fleet of twenty-five large steam-ships.

2d. The General Transatlantic Company (Compagnie Générale Transatlantique), running between St. Nazaire, France, the West Indies, Mexico, and Aspinwall, with a large fleet of powerful steam-ships.

3d. The West India and Pacific Steam-ship Company, limited—running between Liverpool, England, the West Indies, the western coast of South and Central America, and Aspinwall, with a large and well-appointed fleet of steam-ships.

4th. The Royal Mail Steam Packet Company, running semi-monthly between Southampton, England, the West Indies, the eastern coast of Mexico, South and Central America, and Aspinwall, with a fleet of nineteen large steam-ships.

5th. The Panama, New Zealand, and Australian Royal Mail Company, limited—running between Panama, New Zealand, and Australia.

6th. The British Pacific Steam Navigation Company, running between Panama and the ports of New Granada, Ecuador, Peru, Bolivia, and Chili.

7th. The Panama Railroad Company's Central American line of steam-ships, running between Panama, Nicaragua, Costa Rica, Salvador, and Guatemala.

8th. The California, Oregon, and Mexico Company's line of steam-ships, running between San Francisco, California, and Mexico, and between San Francisco and Portland, Oregon, and the Island of Vancouver.

Besides the steam lines are,

1st. The Bremen and Aspinwall line of sailing vessels, monthly.

2d. The Bordeaux and Aspinwall line of sailing vessels, quarterly.

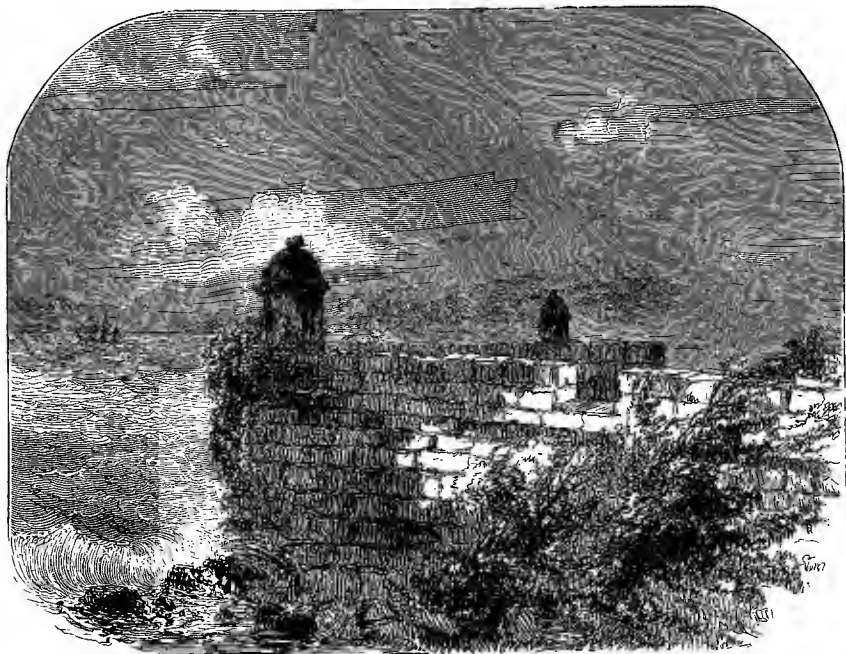
3d. The Panama Railroad Company's line of sailing ves-

sels from New York to Aspinwall—seven vessels: five barks and four brigs.

4th. Five ships a year from Boston to Aspinwall.

CHARACTER OF THE SERVICE PERFORMED ON THE ROAD.

As early as the year 1855 daily trains were established each way over the road, requiring in its then imperfect state from five to six hours for the transit. As the character of the road improved, a corresponding improvement took place in the time-table, and for the past seven years the passage has been uniformly and safely accomplished in three hours, or even less, when the exigency of the case required it. The rolling stock of the road has always been most ample. Fifteen hundred passengers, with the United States mails, and the freight of three steam-ships, have not unfrequently been transported over the road during a single half day. The engines, some fourteen in number, are of the first class, averaging twenty tons burden; the passenger-cars are large and commodious, and built for convenience and comfort, especially with reference to the climate; the cars for the transportation of the mails and treasure are entirely of iron. The usual freight-cars are built to carry not only the ordinary freight, but the heaviest and coarsest materials—large quantities of gold and silver ore, timber, anchors, and chains of the largest size, cannon shot and shells, iron-work in pieces of twenty-five tons, heavy machinery, guano, whale-oil, etc., more or less of which are daily passing over the road. The arrangements for the loading and unloading of cargoes are unusually perfect; double tracks run from the main road down the different wharves to the very ship's side, and the lading process is so effectively managed that frequently less than two hours pass between the *arrival of the largest ships*, laden with from two to three hundred tons of merchandise, besides the baggage of from four to eight hundred passengers, and the *departure of the trains* for Panama bearing the entire freight.



SOUTHEASTERN RAMPART.

PANAMA RAILROAD COMPANY.

Financial Statement for the Year ending December 31st, 1852.

Gross receipts to December 31st, 1852.....		\$250,161 81
Amount credited Construction Account for proportion of running expenses.....	\$ 65,000 00	
Sundry expenses, mule hire for troops, etc.....	8,999 32	
Dividend No. 1, 10 per cent. on \$1,467,720.....	146,772 00	
New Granadian government proportion of dividend.....	4,403 16	225,174 48
Balance to credit of Income Account.....		<u>\$24,987 33</u>

Statement for the Year ending December 31st, 1853.

Balance to credit of Income Account, December 31st, 1852		\$ 24,987 33
Gross receipts to December 31st, 1853		322,428 13
		<u>\$347,415 46</u>
Amount charged for running expenses.....	\$113,949 99	
Dividend No. 2, 5 per cent. on \$2,194,062.....	109,703 10	
New Granadian government proportion of dividend	3,291 09	226,944 18
Balance to Income Account, December 31st, 1853.....		<u>\$120,471 28</u>
Dividend No. 3, 3½ per cent. on \$2,716,572	\$95,080 02	
New Granadian government proportion of dividend.....	2,852 40	97,932 42
Balance to credit of Income Account.....		<u>\$22,538 86</u>

Statement for the Year ending December 31st, 1854.

Balance to credit of Income Account, December 31st, 1853	\$	22,538	86
Gross receipts to December 31st, 1854.....		453,572	04
		<u>\$476,110</u>	<u>90</u>
Amount charged for running expenses.....	\$	116,542	37
Dividend No. 4, July, 3½ per cent. on \$2,832,000.....		99,120	00
Interest on bonds, due July 1st, on \$2,168,000, at 3½ per cent.		75,880	00
“ on bonds, due January 1st, on \$2,125,000, at 3½ per cent.		74,375	00
New Granadian government proportion of dividend.....		2,543	63
		<u>368,461</u>	<u>00</u>
Balance to Income Account, December 31st, 1854.....	\$	107,649	90
Dividend No. 5, January, 3½ per cent. on \$2,875,000	\$	100,625	00
New Granadian government proportion of dividend.....		3,018	75
		<u>103,643</u>	<u>75</u>
Balance to credit of Income Account.....	\$	4,006	15

Statement for the Year ending December 31st, 1855.

Balance to credit of Income Account, December 31st, 1854.....			\$4,006	15
Gross receipts to December 31st, 1855			1,099,069	33
			<u>\$1,103,075</u>	<u>48</u>
Amount charged for running expenses.....	\$	284,156	00	
Dividend No. 6, July, 6 per cent. on \$3,743,000.....		224,580	00	
New Granadian government proportion of dividend.....		6,737	40	
Interest on bonds due July 1st, \$1,257,000, at 3½ per cent.....		43,995	00	
“ on sterling mortgage bonds, with commission and exchange		53,466	78	
“ on bonds due January 1st, \$468,000, at 3½ per cent.		16,380	00	
“ on sterling mortgage bonds, with commission and exchange.....		77,770	00	
Office expenses to January 1st		8,918	00	
Interest on bonds converted		8,210	00	
		<u>724,213</u>	<u>18</u>	
Balance to Income Account, December 31st, 1855	\$	378,862	30	
Dividend No. 7, January, 6 per cent. on \$4,532,000.....	\$	271,920	00	
New Granadian government proportion of dividend		8,157	60	
		<u>280,077</u>	<u>60</u>	
Balance to credit of Income Account	\$	98,784	70	

Statement for the Year ending December 31st, 1856.

Balance to credit of Income Account, December 31st, 1855.....			\$98,784
Amount of earnings received to credit same, to December 31st, 1856.....			1,284,639
United States Post-office Department—mail-service for quarter ending December 30			42,204
Earnings in December, for which returns have not been received, and uncollected freight on the Isthmus			27,500
Royal Mail Steam Packet Company—freight on foreign treasure not yet adjusted.....			6,398
			<u>\$1,459,525</u>
Deduct interest on sterling bonds (£450,000), including exchange and commission	\$155,540		
“ on convertible bonds, 1st July, \$283,000—3½ per cent.....	\$9,905	}	18,655
“ “ “ 1st Jan., 250,000 “ “	8,750		
Running expenses, per returns of chief engineer and superintendent.....			323,788
Office expenses			22,266
New Granadian government proportion of mail receipts.....			10,000
			<u>\$530,249</u>
Dividend No. 8, paid July 1st	\$283,020	}	291,510
New Granadian government proportion, 3 per cent.....	8,490		
			821,759
Balance to credit of Income Account, December 31st, 1856.....			<u>\$637,766</u>
Dividend No. 9, declared January 5th, on \$4,750,000, at 6 per cent.....	\$285,000	}	293,550
New Granadian government proportion, 3 per cent.....	8,550		
Balance to credit of Income Account after dividends.....			<u><u>\$344,216</u></u>

Statement for the Year ending December 31st, 1857.

Balance to credit of Income Account, after dividend, January 5, 1857.....		\$378,394 42	
Receipts from December 31st, 1856, to December 31st, 1857, viz.:			
From passengers.....	\$698,250 18		
" freight.....	354,437 78		
" do.—treasure.....	122,076 60		
" mails.....	112,058 12		
" baggage.....	16,591 03		
" miscellaneous.....	2,405 89	\$1,305,819 60	
			\$1,684,214 02
Deduct interest on first mortgage sterling bonds (£450,000), with exchange and commission.....	\$155,540 00		
" second " " (£56,250), for 6 mos. ".....	9,720 00		
" convertible bonds, 1st July...\$223,000, at 3½ per cent.....	\$7,805 }	13,405 00	
" " " 1st Jan....\$160,000, " ".....	5,500 }		
Running expenses.....	348,387 00		
Estimated depreciation in iron, ties, etc.....	40,000 00		
Loss on steamers Columbus and Panama.....	50,000 00		
Office expenses.....	22,250 00		
New Granadian government proportion of mail receipts.....	10,000 00		
		\$649,302 00	
Dividend No. 10, July 6th, on \$4,770,000, 6 per cent.....	\$286,620 00 }		
New Granadian government proportion do., 3 per cent.....	8,596 60 }	295,218 60	\$944,520 60
Balance to credit of Income Account, December 31st, 1857.....			\$739,693 42
Dividend No. 11, January 4th, on \$4,840,000, 6 per cent.....	\$290,400 }		
New Granadian government proportion do., 3 per cent.....	8,712 }	\$299,112	
Amount appropriated to Sinking Fund.....	50,000		349,112 00
Balance to credit of Income Account after dividends.....			<u>\$390,581 42</u>

Statement for the Year ending December 31st, 1858.

Balance to credit of Income Account, after dividend, January 4th, 1858.....			\$392,855 91
Receipts from December 31st, 1857, to December 31st, 1858:			
From passengers.....	\$743,573 27		
“ freight—merchandise.....	432,455 73		
“ “ treasure.....	147,853 78		
“ mail transportation.....	100,000 00		
“ baggage.....	18,509 76		
“ miscellaneons, wharfage, light money, etc.....	3,683 73		
Earnings in December, for which returns have not been received, estimated.....	60,000 00	\$1,506,076 27	
		<u>\$1,898,932 18</u>	
Deduct interest on first mortgage bonds (£450,000), with exchange and commission.....	\$153,860 88		
“ second “ “ (£129,375), “ “ “.....	28,470 28		
“ convertible bonds, July 1st, \$77,000, at 3½ per cent.....	\$2,695 }	3,850 00	
“ “ “ Jan. 1st, \$33,000, “ “ “.....	1,155 }		
Running expenses.....	386,234 39		
Equipment Account.....	13,523 13		
Depreciation in iron, ties, etc.....	40,000 00		
Office expenses.....	22,750 00		
New Granadian government proportion of mail receipts.....	10,000 00		
	<u>\$658,688 68</u>		
Dividend No. 12, June 30th, on \$4,923,000, at 6 per cent.....	\$295,380 00		
New Granadian government proportion, 3 per cent.....	8,861 40		
Appropriated to Sinking Fund, June 30th.....	50,000 00	354,241 40	\$1,012,930 08
Balance to credit of Income Account, December 31st, 1858.....			<u>\$886,002 10</u>
Dividend No. 13, Jan. 3d, 1859, on \$4,967,000, at 6 per cent.....	\$298,020 00		
New Granadian government proportion, 3 per cent.....	8,940 60		
Appropriated to Sinking Fund, Jan. 3d, 1859.....	50,000 00		<u>\$356,960 60</u>
Balance to credit of Income Account after dividends.....			<u>\$529,041 50</u>

Appropriated to cover depreciation in iron, ties, buildings, etc.....	40,000 00	
New Granadian government proportion of mail receipts.....	10,000 00	795,748 34
		<u>\$1,664,805 86</u>
Dividend No. 14, paid July 1st, on \$4,967,000, 6 per cent.	\$298,020 00	
“ “ 15, payable January 3d, 1860, on \$4,973,000, 6 per cent.....	298,380 00	
New Granadian government proportion, 3 per cent., on ditto.....	17,892 00	
Appropriated to Sinking Fund	100,000 00	714,292 00
		<u>\$950,513 86</u>
Surplus income after dividend, January 3d, 1860.....		
Balance as above.....		\$950,513 86
Sinking Fund and accumulations		260,962 21
		<u>\$1,211,476 07</u>
Out of which the Company have paid during 1859,		
For stock in North Atlantic Steam-ship Company	\$500,000 00	
“ steamer Guatemala.....	150,000 00	
On account of bonds, due December 1st	550,000 00	
	<u>\$1,200,000 00</u>	
All the Company's interest in steamers is covered by marine insurance excepting the Columbus, valued at \$25,000.		
The cost of the road, per Construction Account, closed January, 1859, is.....		\$8,000,000 00
Against which there are,		
Capital stock	\$4,973,000 00	
Convertible bonds	27,000 00	
Sterling bonds, due 1865.....	1,250,000 00	
“ “ “ 1872.....	1,150,000 00	
	<u>\$7,400,000 00</u>	

Statement for the Year ending December 31st, 1860.

Balance to credit of Income Account, after dividend, January 3d, 1860, per statement.....	\$950,513 86	
Add excess of receipts over estimate for portion of December.....	10,227 55	
		\$960,741 41
Deduct payment for portion of sterling bonds retired in December, 1859, the balance having been paid from the Sinking Fund.....		442,830 13
		\$517,911 28
Surplus after dividends of 1859.....		
Receipts from December 31st, 1859, to December 31st, 1860:		
For passengers	\$688,378 74	
“ freight, merchandise (including baggage).....	618,578 04	
“ “ treasure.....	128,946 38	
“ mail transportation.....	50,000 00	
“ miscellaneous, wharfage, light money, interest, etc.....	14,972 66	
“ earnings uncollected, or for which returns have not been received, estimated.....	50,000 00	\$1,550,875 82
		\$2,068,792 10
Deduct interest on sterling bonds (£540,000), with exchange and commission.....	\$186,468 45	
“ “ convertible bonds, \$24,000, at 7 per cent.....	1,680 00	
Running expenses, including materials, repairs, subsistences, labor, etc.....	406,050 55	
Equipment Account, new cars, etc.....	\$17,019 32	
Permanent improvements (paid for out of Income Account, Construction being closed):		
New wharves.....	20,072 13	
Water-works	15,204 16	
Dredging machine.....	18,489 96	
Stone-breakers and engines.....	5,000 00	75,785 57
Office expenses	22,904 73	
New Granadian government proportion of mail receipts.....	10,000 00	\$702,889 30
		\$1,365,897 80
Dividend No. 16, paid July 2d, 1860, on \$4,976,000, 6 per cent.....	\$298,560 00	
“ “ 17, payable January 2d, 1861, on \$4,976,000, 6 per cent.....	298,560 00	
New Granadian government proportion of do., 3 per cent.....	17,973 60	

Paid trustees of Sinking Fund, July, 1860.....	50,000 00	} 100,000 00	\$715,093 60
Appropriated to " " December, 1860	50,000 00		
Surplus after dividends of 1860.....			<u>\$650,804 20</u>

GENERAL STATEMENT.

Assets: Construction Account			\$8,000,000 00
Cash in bank.....			204,920 52
Loans on demand			127,455 75
Amounts due from agents and others.....			93,088 52
Cavan Brothers & Co., London			49,557 31
Sinking Fund			50,369 06
Real estate on the Isthmus and islands in the Bay of Panama.....			69,431 97
Stock in North Atlantic Steam-ship Co.....			500,000 00
Steamer Guatemala (cost \$155,000), valued at.....			130,000 00
“ Columbus (cost \$50,500), “ “			25,000 00
Steam-tugs and launches in the Bay of Panama (cost \$50,500), valued at			25,000 00
Interest in sailing vessels (cost \$41,000), valued at.....			28,000 00
			<u>\$9,302,823 13</u>
Liabilities: Capital stock.....	\$4,976,000 00		
Sterling bonds, with exchange	2,466,237 78		
Convertible bonds.....	24,000 00		
Book accounts	44,900 60		
Dividend declared and payable Jan. 2d, with New Granadian government proportion...	307,546 80		
Trustees of Sinking Fund, appropriation not invested.....	50,000 00		
Undivided earnings from road.....	\$650,804 20		
“ “ of steamers, sailing vessels, tugs, and launches (after			
“ “ . deducting depreciation).....	183,333 75		
“ “ bonds redeemed.....	600,000 00—1,434,142 95		<u>\$9,302,823 13</u>

Jos. F. Joy, *Secretary.*

Statement for the Year ending December 31st, 1861.

Balance to credit of Income Account, after dividend, January 2d, 1861, as per statement.....	\$650,809 20	
Add excess of receipts over estimate for part of December.....	35,615 31	
	<u>\$686,424 51</u>	
Less amount carried to credit undivided earnings account.....	650,809 20	
	<u>\$35,615 31</u>	
Receipts from December 31st, 1860, to December 31st, 1861 :		
For passengers.....	\$694,414 36	
“ freight, merchandise.....	630,996 32	
“ “ treasure.....	134,144 26	
“ mails.....	11,515 47	
“ interest, wharfage, light money, etc.....	23,789 28	
“ earnings for a portion of December, estimated.....	45,000 00	
	<u>\$1,539,859 69</u>	
	<u>\$1,575,475 00</u>	
Deduct interest on sterling bonds, £540,000 with exchange and commission.....	\$180,951 08	
“ “ convertible bonds.....	1,505 00	
Working expenses, including materials, repairs, subsistence, labor, and salaries, etc.....	396,192 14	
Office expenses.....	23,014 89	
New Granadian government proportion of mail receipts.....	10,000 00	
	<u>611,663 11</u>	
	<u>\$963,811 89</u>	
Net earnings for the year.....		
Dividend No. 18, paid July 2d, on \$4,976,000, 6 per cent.....	\$298,560 00	
“ “ 19, payable January 2d, on \$4,981,000, 6 per cent.....	298,860 00	
New Granadian government proportion of do., 3 per cent.....	17,922 60	
Paid trustees of Sinking Fund, July, 1861.....	\$50,000 }	
Appropriated to “ “ December, 1861.....	50,000 }	
	<u>100,000 00</u>	
	<u>\$715,342 60</u>	
Surplus after dividends of 1861, to credit undivided earnings account.....	<u>\$248,469 29</u>	

GENERAL STATEMENT.

Assets: Construction Account.....		\$8,000,000 00
Cash in bank.....		250,966 77
Loans on demand.....		261,942 10
Cavan, Lubbock & Co., London.....		102,774 14
Investment in United States 7.30 per cent. Treasury notes.....		100,580 00
“ “ Company's sterling bonds, 1865.....		34,369 15
North Atlantic Steam-ship Company, representing five ninths steamers Baltic and Atlantic.....		277,777 78
Sinking Fund, invested.....		150,369 86
Amounts due from agents and others.....		72,981 08
Steamers (valued) Guatemala, \$115,000; Columbus, \$20,000.....		135,000 00
New steamer Salvador, payments on account.....		80,580 54
Interest in sailing vessels, valued at.....		24,000 00
Steam-tugs and launches in the Bay of Panama, valued at.....		35,000 00
Real estate on the Isthmus and islands in the Bay of Panama, cost.....		68,446 99
Coal Account, amount on hand.....		8,742 02
		\$9,603,530 43
Liabilities: Capital stock.....	\$4,981,000 00	
Convertible bonds still out.....	19,000 00	\$5,000,000 00
Sterling bonds, amount originally issued for construction.....	3,000,000 00	
Less amount matured in 1859, paid and held by the Company.....	600,000 00	
	2,400,000 00	
Exchange.....	66,237 78	\$2,466,237 78
Book Accounts.....		60,054 40
Dividend declared, payable Jan. 2d, 1862, with New Granadian gov- } ernment proportion..... }		307,825 80
Appropriation to Sinking Fund, December 24, 1861.....		50,000 00
Bonds-redeemed and held by the Company, as above.....		600,000 00
Undivided earnings from road.....	\$899,278 49	
“ “ from sailing vessels, steamers, tugs, launches, etc....	220,133 96	\$1,119,412 45
		\$9,603,530 43

Jos. F. Joy, Secretary.