CHAPTER XVI

PAST ISTHMIAN PROJECTS

The digging of an Isthmian Canal was a dream in the minds of many men in Europe and America from the day that Columbus found two continents stretched across his pathway in his endeavor to discover a western route to India. On his last voyage, as he beat down the coast of Central America, here naming one cape “Gracias a Dios” and there another “Nombre de Dios,” testifying his thanks to God and his reverence for His name, he touched the Isthmus near the present Atlantic terminus of the Panama Canal. He little dreamed that some day ships 500 times as large as his own would pass through the barrier of mountains which Nature interposed between his ambitions and India.

The idea of a canal through the American Isthmus was in the mind of Charles V of Spain as early as 1520. In that year he ordered surveys to ascertain the practicability of a canal connecting the Atlantic and the Pacific. His son, Philip II did not agree with him about the desirability of a trans-Isthmian waterway, holding that a shipway through the Isthmus would give to other nations easy access to his new possessions, and in time of war might be of greater advantage to his enemies than to himself. He invoked the
Bible to put an end to these propositions to dig a canal across the American Isthmus, calling to mind that the Good Book declared that "what God hath joined together let no man put asunder."

The policy of Philip was continued for about two centuries, although in the reign of his father many efforts had been made in the direction of a ship waterway across the Isthmus. In fact, ships crossed the Isthmus nearly four centuries before the completion of the canal. About 1521 Gil Gonzales was sent to the New World to seek out a strait through the Isthmus. He sailed up and down the Central American coast, entering this river and that, but failing of course to find a natural waterway. Not to be outdone, he decided to take his two caravels to pieces and to transport them across the Isthmus. He carried them on the backs of Indians and mules from the head of navigation on the Chagres River to the ancient city of Panama. There he rebuilt them and set out to sea, but they were lost in a storm. Still determined to make the most of his opportunities, Gonzales built others to take their places and with these made his way up the Pacific coast through the Gulf of Fonseca to Nicaragua, where he discovered Lake Nicaragua. A few years later another explorer made a trip across Lake Nicaragua and down the San Juan River to the Atlantic.

Cortez, the conquistador of Mexico, at one time was ordered to use every resource at his command in a search for the longed-for strait. He did not find it, but he did open up a line of communication across the Isthmus of Tehauntepec, following prac-
tically the same line as was afterwards followed by Eads with his proposed ship railway.

From those days to the time when the United States decided that the canal should be built at Panama and that it should be made a national undertaking, one route after another was proposed. In 1886, immediately after the French failure, the Senate requested the Secretary of the Navy to furnish all available information pertaining to the subject of a canal across the Isthmus, and Admiral Charles H. Davis reported that 19 canal and 7 railway projects had been proposed, the most northerly across the Isthmus of Tehauntepec and the most southerly across the Isthmus of Panama at the Gulf of Darien, 1,400 miles apart. Eight of these projects were located in Nicaragua.

In 1838 the Republic of New Granada, which then had territorial possession of the Isthmus of Panama, granted a concession to a French company to build a canal across the Isthmus. This company claimed to have found a pass through the mountains only 37 feet above sea level. In 1843 the French minister of foreign affairs instructed Napoleon Carella to investigate these claims. That engineer found no such pass and reported the claims to be worthless. He, in turn, advocated a canal along the route followed by the present Panama Canal, with a 3-mile tunnel through Culebra Mountain and with 18 locks on the Atlantic slope and 16 locks on the Pacific slope. He estimated the cost of such a canal at $25,000,000. The first formal surveys of the Panama route were made in 1827 by J. A. Lloyd. He recommended a combination rail and
water route, with a canal on the Atlantic side and a railroad on the Pacific side.

The first serious proposition to build a Nicaragua Canal was made in 1779 when the King of England ordered an investigation into the feasibility of connecting the Nicaraguan lakes with the sea. A year later Capt. Horatio Nelson, destined to become the hero of Trafalgar, headed an expedition from Jamaica to possess the Nicaraguan lakes, which he considered to be the inland Gibraltar of Spanish America, commanding the only water pass between the oceans. His expedition was successful as far as overcoming Spanish opposition was concerned, but a deadlier enemy than the Don decimated his ranks. Of the 200 who set out with Nelson only 10 survived, and Nelson himself narrowly escaped with his life after a long illness.

In 1825 what now constitute the several countries of Central America were embraced in one federation — the Central American Republic. It asked the cooperation of the American people in the construction of a canal through Nicaragua. Henry Clay, then Secretary of State, favored the proposition, and, in 1826, the Federation entered into a contract with Aaron H. Palmer, of New York, for the construction of a canal through Nicaragua capable of accommodating the largest vessels afloat. Palmer was unable to command the necessary capital and the concession lapsed. A few years later an English corporation sent John Bailey to Nicaragua for the purpose of securing a canal concession. He failed to get the concession but was later employed by the Nicaraguan Govern-
ment, which again had become independent, to determine the most feasible location for a canal across Nicaragua.

The United States Government became deeply interested in Isthmian Canal projects during the Forties of the last century. The extension of the national domain to the Pacific coast made the building of an Isthmian Canal a consideration of prime importance to the United States, and made it a dangerous policy to allow any other country to acquire a dominating hand over an Isthmian waterway. The result was that the American Government advised the British Government that it would not tolerate the control of any Isthmian Canal by any foreign power. This later brought about the Clayton-Bulwer treaty, which made neutral the proposed Nicaraguan Canal.

In 1849 Elijah Hise, representing the United States, negotiated a treaty with Nicaragua, by the terms of which that country gave to the United States, or its citizens, exclusive right to construct and operate roads, railways, canals, or any other medium of transportation across its territory between the two oceans. The consideration exacted by Nicaragua was that the United States should guarantee the independence of that country — a consideration that was then paramount because of the effort being made by Great Britain to gobble up the “Mosquito Coast” as far east as the San Juan River. The United States was not ready to give such a guarantee — although a half century later it did give it to the Republic of Panama — and the Hise treaty failed of ratification in the Senate.
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A little later Cornelius Vanderbilt became interested in a canal and road across Nicaragua under an exclusive concession running for 85 years. Modifications of this concession permitted the Vanderbilt Company to exercise exclusive navigation rights on the lakes of Nicaragua. As a result the Accessory Transit Company established a transportation line from the Atlantic through the San Juan River and across Lake Nicaragua, thence by stage coach over a 13-mile stretch of road to San Juan del Sur on the Pacific.

In 1852 Col. Orville Childs made a report to President Fillmore upon the results of his surveys for a Nicaraguan Canal; and, if the United States, in 1902, had elected to build the Nicaraguan Canal, the route laid out by Childs would have been followed for all but a few miles of the entire distance. In 1858 a French citizen obtained from Nicaragua and Costa Rica a joint concession for a canal, which contained a provision that the French Government should have the right to keep two warships on Lake Nicaragua as long as the canal was in operation. The United States politely informed Nicaragua and Costa Rica that it would not permit any such agreement — that it would be a menace to the United States as long as the agreement was in force. Upon these representations the concession was canceled.

In 1876 the first Nicaraguan Canal Commission created by the American Congress made a unanimous report in favor of a canal across Nicaragua, after it had investigated all the proposed routes from eastern Mexico to western South America. It asserted that this route possessed,
both for the construction and maintenance of the canal, greater advantages and 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.

When the first French Panama Canal Company began its work all other projects fell by the wayside for the time being, just as all other plans for interoceanic canals were abandoned when the United States undertook the construction of the present canal. After that company failed, however, the Maritime Canal Company of Nicaragua was organized in 1889 by A. G. Menocal, under concessions from the Government of that country and Costa Rica. The Atlantic end of this canal, as proposed by the Maritime Canal Company, was located on the lagoon west of Greytown. The Pacific end was located at Brito, a few miles from San Juan del Sur. This canal company built three-fourths of a mile of canal, constructed a temporary railway and a short telegraph line, but soon thereafter became involved in financial difficulties which led to a suspension of operations. Even to this day the visitor to Nicaragua may see many evidences of the wrecked hopes of that period for whatever town he visits he finds there Americans and Europeans who went to Nicaragua at the time of the opening of the work of building a canal by the Maritime Canal Company. They expected to find a land of opportunity. But, with failure of the canal project, they found themselves in the possession of properties whose value lay only in staying there and operating them.
When the first Isthmian Canal Commission, in 1899, undertook to investigate all of the proposed routes across the connecting link between North and South America, it placed on the Nicaraguan route alone 20 working parties, made up of 159 civil engineers, their assistants, and 455 laborers. The entire work of exploring the Nicaraguan route was done with the greatest care. The depth of the canal, as adopted by the commission, was 35 feet and the minimum width 150 feet. The locks were to be 840 feet long and 84 feet wide, and of these there were to be eight on the Pacific and six on the Atlantic side. This canal was to be 184 miles long. At the Atlantic end there was to be a 46-mile sea-level section and at the Pacific end a 12-mile sea-level section, while the water in the middle 126-mile section was to be 145 feet above the water in the two oceans. It was estimated that it would cost $189,000,000 to build the Nicaraguan Canal.

Although the distance between the Atlantic and Pacific ports of the United States would have been more than 400 miles shorter by the Nicaragua Canal than by the Panama Canal, it would have taken about 24 hours longer to pass through the former than through the latter, so that, as far as length of time from Atlantic to Pacific ports was concerned, the two routes would have been practically on a par. The total amount of material it would have been necessary to excavate at Nicaragua approximates, according to the estimates, 228,000,000 cubic yards. This would have been increased, perhaps, by half, to make a canal large enough to accommodate ships such as
will be accommodated by the present Panama Canal.

The three great trans-Isthmian projects may be said to have been: The Panama Canal, the Nicaraguan Canal, and the James B. Eads ship railway across the Isthmus of Tehauntepec. The latter proposition seems to be the most remarkable, in some ways, of them all. In 1881, James B. Eads, the great engineer who built the Mississippi River bridge at St. Louis, and whose work in jetty construction at the mouths of the Mississippi proved him to be one of the foremost engineers of his day, secured a charter from the Mexican Government conveying to him authority to utilize the Isthmus of Tehauntepec for the construction of a ship railway from the Atlantic to the Pacific. His plan called for a railway 134 miles long, with the highest point over 700 feet above the sea, and designed to carry vessels up to 7,000 tons. He calculated that the entire cost of the railway would not be more than $50,000,000. His plan was to build a railroad with a large number of tracks on which a huge cradle would run. This cradle would be placed under a ship, and the ship braced in the manner of one in dry dock. Heavy coiled springs were to equalize all stresses and to prevent shocks to the vessel. A number of powerful locomotives would be hitched to the cradle and would pull it across the Isthmus. Although the proposition was indorsed by many authorities, it seems to anyone who has crossed the Isthmus of Tehauntepec that it was a most visionary scheme.

If one can imagine a ship railway across the
Allegheny Mountains between Lewiston Junction and Pittsburgh on the Pennsylvania Railroad, or between Washington and Goshen, Va., on the Chesapeake & Ohio Railroad, he will have a very good idea of the difficulties which would be encountered in building such a railway. The present Tehauntepec railroad is 188 miles long. When crossing the Cordilleras there are numerous places on this road where the rear car of the train and the engine are traveling in diametrically opposite directions. The road is well-built, and, as one crosses the backbone of the continent, and beholds the engineering difficulties that were encountered in building an ordinary American railroad, he can not help but marvel at the confidence of a man who would endeavor to build across those mountains a shipway large enough and straight enough to carry a 7,000-ton ship. Yet Captain Eads estimated that his shipway could be constructed in four years at one-half the cost of the Nicaraguan Canal; that vessels could be transported by rail much more quickly than by canal; that in case of accident the railway could be repaired more speedily; and that it could be enlarged to carry heavier ships as business demanded.

He declared that he did not think it would be as difficult to build a ship railway across the Isthmus of Tehauntepec as to build a harbor at the Atlantic entrance of the Nicaraguan Canal. His confidence in his project was such that he proposed to build a short section of the road to prove its practicability before asking the United States to commit itself to the project. Commodore
T. D. Wilson, at that time Chief Constructor of the United States Navy, declared in a letter to Captain Eads that he did not believe the strains upon a ship hauled across the Isthmus, as Eads proposed, would be greater than those to which ocean steamers are constantly exposed. Gen. P. T. G. Beauregard, of Confederate Army fame, declared that a loaded ship would incur less danger in being transported on a smooth and well-built railway than it would encounter in bad weather on the ocean.

A prominent English firm offered to undertake the building and completion of the necessary works for placing ships with their cargo on the railway tracks of the trans-Isthmian line, declaring that they had no hesitation in guaranteeing the lifting of a fully loaded ship of 8,000 or 10,000 tons on a railway car to the level of the railroad in 30 minutes, if the distance to be lifted was not over 50 feet. The death of Captain Eads ended this picturesque project.

A proposition once was made to build a canal across the Isthmus of Tehauntepec. This would have required 30 locks on each side of the Isthmus of 25 feet each, and these locks alone would have cost, on the basis of the locks at Panama, perhaps as much as the whole Panama Canal.

One of the narrowest parts of the Isthmus is that lying between the present Panama Canal route and the South American border. Three routes were proposed in this section, known as the Atrato River route, the Caledonia route, and the San Blas route. It was found that a canal built along any one of these routes would require a
The estimated cost of building a tunnel 35 feet deep, 100 feet wide at the bottom, and 117 feet on the waterline, with a height of 115 feet from the water surface, the entire tunnel being lined with concrete 5 feet thick, would approximate $22,500,000 a mile. The cost of building a canal along one of these routes would have been greater than that of building either the Nicaragua Canal or the Panama Canal.

The question of an Isthmian Canal will probably be forever set at rest at no distant date. In an effort to forestall for all time any competition in the canal business across the American Isthmus, negotiations are now under way whereby the United States seeks to acquire the exclusive rights for a canal through Nicaragua, just as it now possesses exclusive rights for a canal through the Republic of Panama. The conclusion of the work at Panama will end the efforts of four centuries to open up a shipway from the Atlantic to the Pacific across the American Isthmus.