

"It appears to be a settled conclusion that the little Isthmus of Chignecto is to claim the glory of possessing the first Ship Railway of modern times. Doubtless there are many who do not see the force of this reference to *modern times*, but let us say that as in many other achievements in which the people of the past ages eclipsed us, so it was in transporting vessels overland from sea to sea. Grecian excavations have unearthed the remains of a road which had polished granite in place of rails, and was in use 500 B. C., and for about two centuries later. It was called the 'Diolcus,' and extended from the harbor of Schœnus to the eastern part of Port Lechæum, obviating the danger of Cape Malea. The founder of the 'Swedenborgians'—Count Emanuel Swedenborg—who was also an engineer, designed and put in operation a road twenty miles long, for conveying loaded vessels over the mountainous country between Stromstadt and Idefjal, in Sweden. We cannot say how long this 'rolling-machine' was in use, but in 1718 Charles XII employed it during the war with Russia in transporting cannon and sloops of war."—*Amherst Gazette*, Dec. 11th, 1885.

The alternative project of a Ship Railway at Suez was very thoroughly considered by two prominent engineers, Messrs. Brunles and Webb, of England, who also made surveys and projected a Ship Railway for an interoceanic crossing between the Atlantic and British Honduras.

"A ship, they say, is a structure made to float in the water, buoyed up by a mobile substance, the nature of which not only prevents unequal strains upon the ship from her general weight, but also helps her to resist the internal or bursting strain of her own cargo. Out of her proper element, they argue, all these conditions are reversed.

"In answer to these apprehensions it is enough to say that they are founded in a view of the case which every shipbuilder knows to be altogether inconsistent with fact. A ship afloat is not uniformly buoyed up by the water. On the contrary, especially where there are waves of any magnitude, a ship's support is not only unequal, but incessantly variable as to position. This fact is so well recognized by ship-builders that every sea-going vessel is so built as to be able to bear her entire weight when supported only at the ends, or to withstand the strain of being held up wholly at the middle, with both ends unsupported in the air. If a ship is unable to endure these severe tests she is unfit to battle with the waves. As for the bursting strain of a cargo, with or without a counter pressure of water outside, every ship at sea has to withstand it, more or less completely, with the passage of every large wave; while at the same time she is buffeted with heavy seas, which strike with blows like those of a battering ram. Indeed it would hardly be possible to devise an apparatus capable of subjecting a ship to so frequent and severe horizontal, lateral, and torsional strains as a ship endures in every gale. In comparison with them the strains that would be put upon a ship in transit over a properly constructed railway would be as nothing. On the railway carriage the ship would rest on an even keel, uniformly supported from stem to stern, and as secure from lateral and twisting strains as when cradled in a dry dock; while the forward motion of transit over easy grades would be less trying even than that which ships are constantly subjected to in well-known marine railways connected with ship-yards."—*Scientific American*.

"We do not doubt the commercial advantages of the work. No one can question that if the Isthmus of Chignecto were removed, uniting the waters of the Bay and Gulf, that a tonnage amounting to hundreds of thousands, if not millions, would pass each season, between the continent north of us and the continent south. The Ship Railway is a cheap method of removing the Isthmean obstruction to navigation."—*Amherst Gazette*.

"The work that was to be done by the Ship Railway is to be carried out on a small scale on the French lines which connect Brest and Toulon. Early next month a train will leave Brest carrying on five specially adapted luggage trucks a first-class

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