THE CHIGNECTO SHIP RAILWAY,

the rails on the gridiron attained the same level as those on the main line of railway, when, as before explained, the ends of the girders would be seenrely blocked. The ship and cradle would then be hauled off the gridiron on to the railway by powerful hydraulic winches, and after a final adjustment of the blocking, the vessel would be taken in hand by two of the giant locontoives already referred to, and be transported across the isthmus on to the hydraulic lift on the other side, where the converse operations would be effected to enable the vessel to resume her ocean voyage.

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The Blocking of the Vessel.

"Various plans have been proposed from time to time for the quick and efficient blocking of the curved surface of a ship's hull to the flat top of the eradle. Hinged bilge-blocks, hydraulie rams, elastic bags filled with air or water, and many other contrivances have been suggested, but the present universal practice in docking or in launching a ship is to use simple wooden keel and bilge blocks. In docking a vessel, nearly the whole of the weight comes on the keel blocks, and the bilge-blocks are few in number and extend only for about the middle third of the ship's length. In launching a vessel, the weight is transferred from the keel-blocks on to the launching-ways on each side of the same by means of a comple of narrow eradles or bilge-logs, of hard wood packed up to the hull of the vessel by soft wood filling. These eradles earry the ships down the too often imperfectly bedded inclined launching-ways at a speed of some twelve miles an hour. As the vessel is leaving the launching-ways her stern is waterborne whilst the bow is pressing hard on the shore, but yet it is the rarest thing for any mishap to occur to a vessel even under this singularly rough treatment. The best way of blocking a ship on a railway eradle will be quickly determined after a few weeks' experience, but at Chigneeto the method adopted in the first instance will certainly be the well-tried one of timber keel and bilge blocks.

The heavy permanent way.

"Nothing calls for special notice as regards the line of railway. It is, as before stated, a double line of ordinary gnage, but the space between the two lines is five feet wider than usual. Very strong steel rails, weighing 110 lbs. per yard, and exceptionally large sleepers, spaced very closely together, give the required support on the ballast to the héavily laden ship cradle. Near the Amherst end a long and deep moss or bog had to be erossed, and, as the floating system adopted by Stephenson for the original Manchester and Liverpool Railway across Chat Moss would obviously be inappropriate for the heavy loads, of a ship railway, there was no alternate but to form a solid rock embankment across the bog, and this has now been successfully completed. On other parts of the line there is a heavy rock cutting and a river bridge, but beyond these matters there are no works of importance on the line."

Mr. Corthell's Report.

During the construction of the railway Mr. E. L. Corthell, C. E., a distinguished American engineer of Chicago, paid a visit to the Ship Railway for the purpose of ascertaining its merits and to examine into the facilities which Canada could provide for the carrying trade of the West, and, in a letter published in the Toronto *Globe*, he reports as follows respecting the Ship Railway:

"The entire work, in all its general features, as well as in its details, has been very care-"thly studied out, and the material has been properly arranged and well put together for all "of the mechanical work. I also made careful inquiries and obtained reliable data in regard "to the commercial features of this project. There is no question, in my opinion, about the "entire success of this work from a commercial and financial point of view. There is a large "commerce now existing which will certainly seek this shorter and more economical route. "The opening of a line of communication for ships across the isthmus will develop new com-"merce, and I do not hesitate to predict, in view of all that I heard and saw in regard to the "commercial features, that within three years from the opening of the line for business it will "have all it can handle. A Company allied to the Ship Railway Company has been formed

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No question as to commercial success.

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