

A BRIDGE ENGINEERING FEAT.

An interesting engineering feat performed last fall was the substitution of a new for the old superstructure of the Northwest Miramichi bridge near New-castle, N. B. The Miramichi is a broad tidal river, the two branches of which at this point are crossed by the Intercolonial railroad on single track bridges, originally built about 1870 to 1874, by Sir Sanford Fleming. The problem was to put in the new spans with the minimum delay of traffic and so successfully was it solved that the interruptions of travel were but three or four hours in length. The variation of the river level, due to the tides, was about three feet, and scows were built to take advantage of it. Two scows were used for each truss, both old and new, a Howe truss bridge being built across each pair. About two hours be-

fore high tide the scows and bridge were floated under the span to be taken out and the scows kept from rising too much by the pumping in of water. By high tide the old span had been freed from the rest of the bridge and the water was pumped from the scow, causing the latter to rise and carry the old span with it. Another pair of scows was at hand with the new span, which was at once floated into position and water pumped in until the new structure had settled into place. The new trusses are built on twin false works near one end of the bridge, and upstream. The old spans were landed on trucks running on rails supported by trestle work. When a

span had been rolled back to its proper position on the trestle it was jacked up and the trucks rolled forward ready for the next span. H. D. Bush was the engineer who had charge of the work, which is described by him in an article in the Railroad Gazette for January 23. He made the calculation and plans, however, under the general direction of Manager Phelps Johnson, of the Dominion Bridge Company, Limited, of Montreal, the company that did the work.

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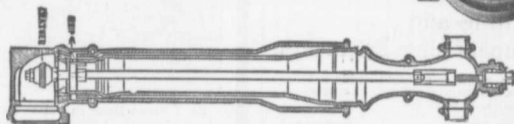
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