

# The Canadian Engineer

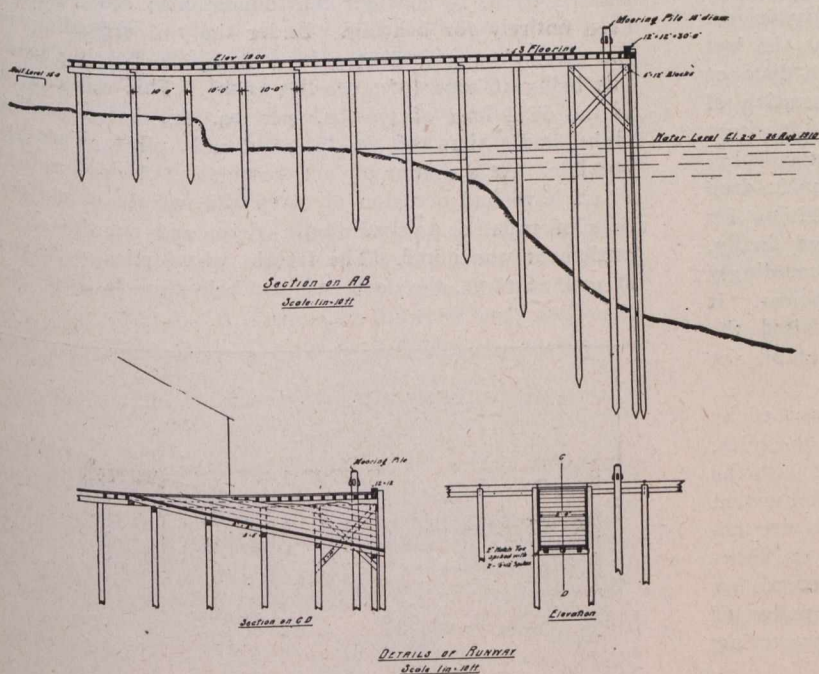
## An Engineering Weekly

### CANADIAN NORTHERN PACIFIC RAILWAY COMPANY'S WHARF AT PORT MANN, B.C.

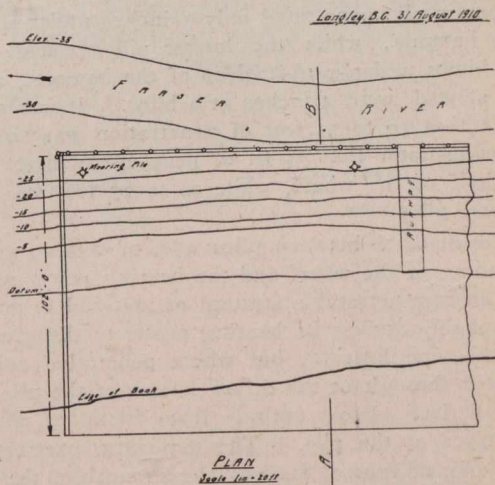
BY W. G. SWAN, C.E.

The Fraser River is by far the greatest highway for fresh water shipping in British Columbia. It is navigable at low water for a distance of 60 miles from its mouth, while at high water it is navigable as far up as the town of Yale, more than 100 miles from the mouth. The river is tidal for 55 miles, at which point very slight rapids, known as the Sumas Riffle, overcome the effect of the tide. The current flows at the rate of seven miles per hour through the Riffle. The average rate of flow on the lower 50 miles of the river is about three miles per hour during the greater part of the year, and five miles per hour during the freshet time of June and July.

Canadian Northern Railway on the Pacific Coast. Seven hundred and fifty acres, or about a third part of the townsite, have already been cleared. The accompanying photograph will give some idea of the natural features of the townsite. The location has been pronounced by prominent landscape artists and engineers to be an ideal one, as it undoubtedly is. Running back from the river, it is level for about half a mile, then there is a fairly abrupt rise of about seventy-five feet, beyond which a uniform slope of two or three feet per hundred is maintained clear to the boundary of the townsite. The area is broken only by three small streams.



CANADIAN NORTHERN PACIFIC RLY  
Drawing of Wharf  
AT PORT MANN, B.C.



The finest agricultural land of British Columbia is, undoubtedly, to be found in the Lower Fraser Valley. The low lying portions, subject to flood at high water, are gradually being reclaimed by the construction of privately owned and government dykes. The corrosion of the bank is, however, the greatest difficulty to be overcome in preserving this splendid soil. Hundreds of acres are washed away annually, and the writer knows of one farm which has, during the past ten years, lost forty acres of first-class farm land. It would require, at the lowest estimate, \$40,000,000 to adequately protect the banks of the Lower Fraser Valley, and to properly confine the river to its present channel. Situated 20 miles from the mouth of the river is the townsite of Port Mann, the future industrial terminus of the

Situated on the waterfront, slightly east of the central portion of the townsite, lie the Port Mann yards, where several miles of track have already been laid. Port Mann wharf stands on the Fraser River opposite the middle point of the yards. The object of this article is a description of Port Mann wharf.

The pardon of the reader is requested for so lengthy an introduction, but in view of the comparatively recent development of British Columbia, it has seemed to the writer that this geographical description might not be amiss.

Before locating Port Mann wharf, two and a half miles of water frontage were carefully sounded, lines of sounding being extended from the shore at short intervals, for 150 ft. into the river. The location selected gives the best water