

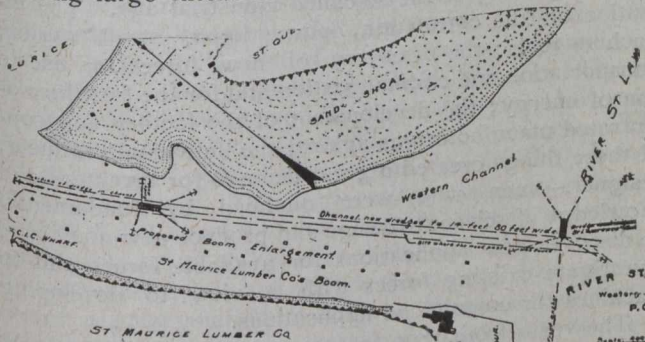
## IMPROVEMENTS AT THE ST. MAURICE RIVER OUTLET—WESTERN BRANCH

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**T**HREE RIVERS is midway between Quebec and Montreal on the St. Lawrence River and takes its name from the three channels forming the outlet of the St. Maurice River flowing a distance of 367 miles across the Laurentide Mountains.

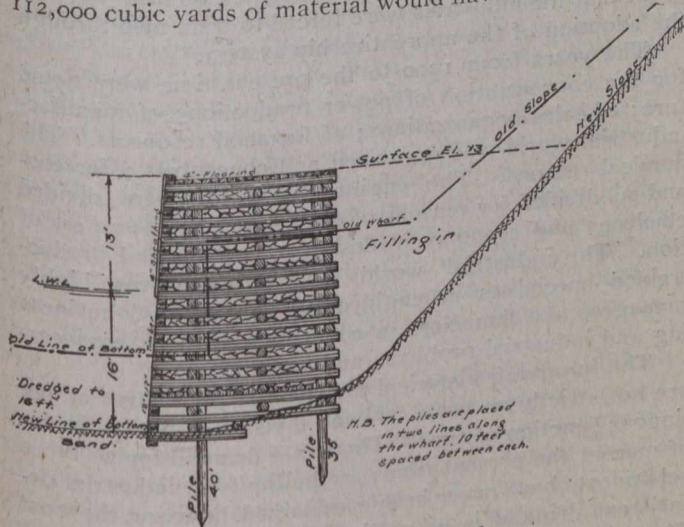
At the outlet of the St. Maurice dredging has been undertaken at various times to remove sand bars which were real impediments to navigation. Furthermore, the industrial need was increasing every year and by recently building large extensions to their plant the Canada Iron



Plan Showing Field of Operation of Dredge

Corporation was confronted with the necessity of getting an easier approach and more ample accommodation for their raw material which comes by Great Lakes steamers from both American and Canadian points. In order to do this, the company undertook the construction of a landing pier and asked for the deepening of the western branch from 6 feet to 14 feet in the main channel. The dredging was carried out by the Department of Public Works, under the direction of the district engineer, H. B. Tourigny, A.M.Can.Soc.C.E.

A preliminary hydrometric survey showed that some 112,000 cubic yards of material would have to be removed,



Cross-section of Wharf

principally sand and clay. A contract was entered into with La Compagnie Generale d'Entreprises Publiques, of Levis, Que., at 9 cents per cubic yard. The work started during the end of October, 1916, but was discontinued during November on account of weather conditions,

45,365 cubic yards having been removed by the elevator dredge "New Welland" in the proposed basin and at the outlet. Work was resumed in August of this year.

The great problem in such dredging is the filling in and the alluvial sand movement every spring. New soundings having been taken during August, 1917, showed that 88,000 cubic yards remained to be dredged

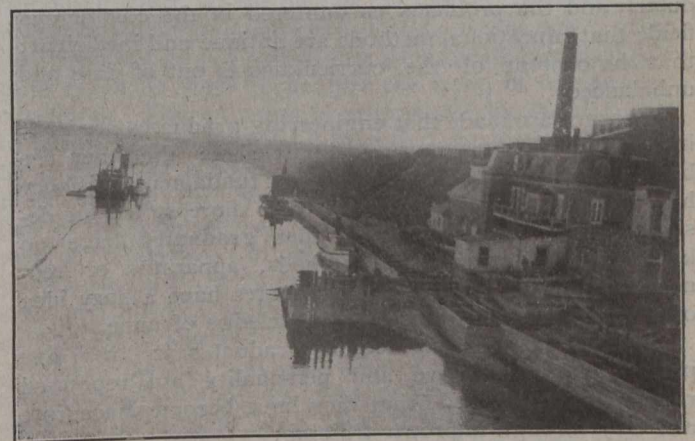


Detail of Crib Work, Page's Wharf

this season, leaving approximately 20,000 cubic yards which can be considered as the result of the filling in during the last freshets.

At the point where the St. Maurice and the St. Lawrence rivers join a large deposit of wood paste was found. This was 6 feet deep by 100 feet long. It is assumed that the paste was driven by the freshets from Shawinigan Falls and Grand Mere, a distance of 25 miles, where there are large paper mills.

As shown on the plan, the dredge has to follow two methods of work. When inside of the river she advances on the full length of wire on her front anchor, but when



Page's Wharf

working in the St. Lawrence River only 80 feet of wire were used on each cut, the guide anchors having to draw the dredge for a distance of 160 feet. It is expected that the work will be completed this fall.

The Canada Iron Corporation, of Three Rivers, has awarded the contract to Mr. Charles Pagé for the building of a crib 260 feet long 22 feet wide with a batter of 1:12 sixteen feet below the low-water mark and thirteen feet above.

The contractor had to remove an old slab quay and prepare the berth to elevation minus 18. That work was sub-let to Captain F. C. Burns, to carry out which he