

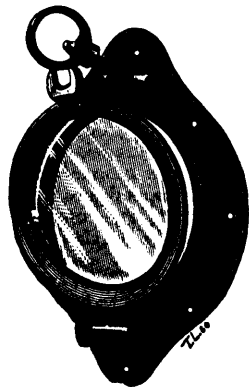
limit of lock dimensions, viz., length, 200 ft.; width, 45 ft.; depth of water on the sills, 9 ft., the enlarged locks are 270 ft. in length, 45 ft. in width, with 14 ft. of water on the sills, accommodating vessels 255 ft. long and 44 ft. wide. As an index to the carrying power of the new canal works, it may be observed that a typical vessel, the propeller Aragon, whose length is 247 ft. and width 42½ ft., has passed through the enlarged Welland canal, drawing 14 ft. of water and carrying 2,212 tons of corn. The through route between Montreal and Port Arthur, at the head of Lake Superior, now open as a 14 ft. navigation, comprises 73 miles of canal, with 48 locks, and 1,150 miles of river and lake waters, a total of 1,223 miles. To Duluth the total distance is 1,357 miles, and to Chicago 1,286 miles. The approaches to the canals and the channels, through the intermediate river reaches are well defined, and are lighted with gas buoys, admitting of safe navigation, if in the hands of competent pilots, both by day and night. The Soulages canal is well lighted throughout by electricity, and will next season be operated by the same power; contracts have been made for electrical installation for similar purposes on the Cornwall and Lachine canals.

The time has not yet arrived, though probably it is not far distant, for appraising the full value of the Canadian through canal system from Lake Superior to tidewater. The decrease for 1900, noted in the case of the canals of the state of New York, was shared by the Canadian route, and probably the causes were, in some respects, similar. The facilities for the passage of vessels of large tonnage are now, it is true, in good working order, but any great increase in traffic cannot be looked for until the last contractor's dredge has been moved out of these waters, and the full system of channel buoying and lighting has been completed, as time and experience may show its requirements; further, until the pilots acquire the necessary experience and confidence (a point the importance of which can hardly be over-estimated), and lastly, until shipowners build in greater numbers the larger type of vessel which this route is capable of accommodating. The advantages, however, of the Canadian route are so enormously preponderant, that appreciation of its commercial value is simply a question of time. Considerable progress has been made with the improvements at Port Colborne, the Lake Erie entrance of the Welland canal. These improvements comprise the deepening of the approach to the canal to 22 ft., and the construction of two docks, with piers, 200 ft. wide, upon which grain elevators will be erected for the transference of grain to vessels adapted to the canal navigation, when required. A breakwater, about a mile long, is being constructed across the entrance to the harbor, and the area so contained will be dredged out, thus greatly increasing the accommodation, and ensuring safety at this important point. The deepening of the approaches to the Sault Ste. Marie canal is being carried on at the lower entrance. The present depth of these approaches is limited to the accommodation of vessels of 17½ ft. draught; they will be deepened to 21½ ft., thus enabling the depth of the lock, which is the same as that of the U.S. lock on the other side of the river, to be utilized to its full extent.

The construction of the new works for the improvement and extension of the Trent canal system is proceeding. When the present contracts are completed, a 6 ft. navigation will be afforded from Lake Simcoe to Heely's falls, about 160 miles, leaving the portion between Heely's falls and Lake Ontario, and the portion from the head of Lake Simcoe to Georgian bay still to be dealt with; the total distance between the Bay of Quinté and Georgian bay is about 192 miles.

During 1899 and 1900, under special appropriations voted by parliament, surveys have been conducted on the upper River Ottawa with a view to ascertaining the feasibility and probable cost of constructing a canal system, which will give a 14 ft. navigation from Georgian bay down that river to Montreal, a scheme proposed many years ago and lately

revived by private parties with considerable energy. The engineer in charge, H. A. F. Macleod, reports that the canal can be constructed at an estimated cost for a 14 ft. navigation of \$23,898,000, and for a 20 ft. navigation of \$72,627,000. The distance from Georgian bay to Montreal is set down at 430 miles.



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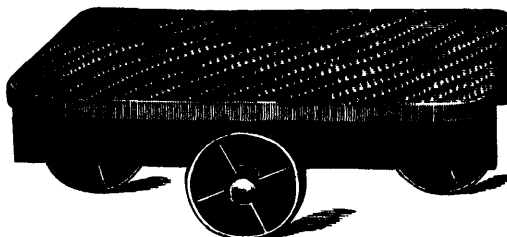
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