

INLAND NAVIGATION.—ST. LAWRENCE CANALS.

The navigable distance from Port Colborne to Montreal harbor, is about 400 miles, in course of which there is an aggregate fall of 552 feet,—overcome by canals and lockage as stated in the following paragraphs.

Welland Canal.—This work is 28 miles long, and, by means of 27 locks, overcomes a fall of 330 feet between Lakes Erie and Ontario, including the Falls of Niagara. The locks between Port Colborne and St. Catharines, 24 in number, are 180 feet long, by 26 feet 6 inches wide; the 3 locks between St. Catharines and Port Dalhousie, on Lake Ontario, being 240 feet long, by 45 feet wide;—depth of water on the sills, 10 feet. The cost of this Canal,—exclusive of management and maintenance—is set down at \$6,493,245.

Williamsburg Canals.—These Canals, (now three in number, though originally four—a junction having been formed between two of them,) are $12\frac{1}{2}$ miles long, contain 6 locks, and overcome a fall of $31\frac{1}{2}$ feet. The rapids in the River St. Lawrence are comparatively slight here, and are easily surmounted by passenger steamers; the Canals at Williamsburg are, therefore, only used by upward-bound freight boats. The cost of these works is said to have been \$1,222,904,—exclusive of subsequent maintenance and repairs.

Cornwall Canal.—This work is $11\frac{1}{2}$ miles long, with 6 locks,—overcoming the Long Sault Rapid, which has a fall of 48 feet. Cost of the work, \$1,827,250, exclusive of subsequent maintenance.

Beauharnois Canal.—This Canal was built to overcome the obstruction of the Coteau, Cedar, and Cascade Rapids, which include a fall of $82\frac{1}{2}$ feet. The work is $11\frac{1}{2}$ miles long, has 9 locks, and, exclusive of management, &c., cost \$1,331,788.

Lachine Canal.—This work was required to avoid the well-known Lachine Rapids, which according to some measurements have a fall of $44\frac{3}{4}$ feet; the Canal is $8\frac{1}{2}$ miles long, with 5 locks, their united lift being 42 feet,—the cost, exclusive of maintenance, &c., being \$2,229,774.

Size of Locks.—The locks on the Welland Canal (forming the connecting-link of navigation from Lake Ontario to Lake Superior and the head of Lake Michigan) will admit of the passage of vessels 142 feet long, 26 feet beam, drawing 10 feet water.

The locks on the St. Lawrence Canals proper, (forming a most important part of the navigation between Montreal and the head of Lake Ontario,) are 200 feet long, 45 feet wide, and have a depth of 9 feet water on the sills,—the Cornwall locks being 55 feet wide. Allowing 14 feet for swing of gates, vessels 186 feet long, $44\frac{1}{2}$ feet beam, and drawing 9 feet water, may pass from Montreal to St. Catharines on the Welland Canal.

Carrying Capacity of the St. Lawrence Canals.—Different statements have been made relative to the present capacity of the St. Lawrence Canals. One estimate for through-going lake-craft is that vessels of 300 tons can navigate them, and that with 10 lockages an hour, in a season of 220 days, a maximum movement of

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