



Hydraulic Lift Lock—Side View.

is estimated that the sum of \$5,000,000 would open up the two outlets, the northern outlet between Midland on Georgian Bay and Lake Simcoe, and the southern outlet between Rice Lake and Lake Ontario, if constructed by the cheaper route, via Port Hope. This waterway would then open up about 1,000 miles of inland shore line, many of the lakes and rivers lying transversely to the line of canal, and it is estimated that 6,000,000 acres of land will lie tributary within ten miles of its wharves.

The Trent Valley route will be 250 miles shorter between the Soo and Montreal than the Welland Canal route, or 500 miles in the return journey, and it is also 1,500 miles shorter in the return trip than the Erie Canal between the Soo and Liverpool, so that the Trent Valley Canal advocates claim that it is the shortest route between the Canadian North-West wheat lands and Europe.

It is a remarkable situation for Canadians to waken up to at this late day, to be told that the Trent Valley Canal follows out the same method adopted in the \$100,000,000 modern German canal system, connecting the coal and steel districts with the North Sea, viz: Length and breadth of lock rather than depth, as it was recognized that by this means bulk could be accommodated more cheaply as also a cheaper means of transportation could be effected. In fact the draft of the German barges is less than those of the Trent Valley Canal will be. The German barges will have a draft of $7\frac{1}{4}$ feet only, but will have a capacity of 1,000 tons. The dimensions of the Trent Valley locks are 134 feet long by 33 feet wide and will have a depth of 8 feet, 4 inches on the sills. The original intention was only to give a depth of 6 feet, but the depth as now arranged for will accommodate barges of 800 tons or 25,000 bushels, a fact which will open the eyes of the Canadian public.

The present Erie Canal which is a mule-power canal and has a capacity to accommodate only 240-ton barges, is now being enlarged by the State of New York at a cost of \$101,000,000, and will only accommodate barges of 1,000 tons capacity. The barges will be 150 feet long, 25 feet wide and 10 feet draught; the depth on the lock sills being 11 feet. It will thus be seen by comparison that the

Trent Valley Canal, which will accommodate barges of 800 tons capacity, will only cost \$9,000,000 when finished, as against the enlarged Erie Canal at a cost of \$101,000,000, plus the cost of the original canal; and the Trent Valley Canal besides will give a route between the North-West wheat fields and Europe 1,500 miles shorter in the return journey.

Another advantage in favor of the Trent Valley route is that it will be much quicker, inasmuch that there will be only 13 miles of actual canal cuttings in the Trent Valley, plus 45 miles on the St. Lawrence Canals, a total of 58 miles, and some 410 miles of river and lake route between Midland and Montreal; whereas by the enlarged Erie Canal between Buffalo and New York there will be actually 257 miles of canal cuttings and 233 miles of lake and river. It having been proven, by experiments made by the late state engineer of New York, Mr. Sweet, C.E., that the same power that will propel a barge 4 miles per hour in the Erie Canal will drive a barge nearly 6 miles per hour in open water, by which it can readily be seen how much quicker the Trent Valley

route is over the new Erie Canal route by this feature alone.

Detailed figures as to probable cost of carriage by Trent Valley steam barge with several tow-barges in consort between Midland and Montreal were submitted to the Royal Commission on Transportation at their recent sitting at Peterborough, made by practical marine men, bear out my contention that grain could be shipped via Trent Valley in a much shorter time and at a cheaper rate than via the new enlarged Erie route.

Besides, as the Trent Valley district will develop by reason of the construction of its canals, the return freight traffic will be greatly increased, thereby much lessening the cost per bushel on grain carried through it.

Hereby the most ardent of ship-canal advocates must admit, that in the action of Germany and New York State, in their adoption of a barge-canal system each at a cost of more than \$100,000,000, the ship-canal idea is exploded.

France and Belgium, too, are forging ahead in the construction of barge canals, and in fact many of the manufacturing countries of the world have realized that in the struggle for trade, barge waterways play a most important part; and yet with all this great movement, Canada, with practically a natural waterway in the Trent Valley, is content to stand idly by and look upon it as a political plaything. Even now in the face of a determined effort to urge completion of this great national work, we find it being again belittled by some selfish power-holders who seek to divert public funds ostensibly for navigation purposes, but really only to enlarge the capacity of their water-powers. This selfish endeavor was turned down by the then Minister of Railways and Canals, two and a-half years ago, who is reported to have told them also that "it was water-power they were after and not navigation"—as per press reports of the conference. The situation in this



Hydraulic Lift Lock—View from Lower Level.