

OLD CANAL AND LOCKS.

(1855.)

Ground was broken for the work on June 4, 1853. The certificate of its completion was signed by the commissioners on May 21, 1855. The first boat, the steamer Illinois, Captain Jack Wilson, was locked through on June 18, 1855.

The canal was 5,400 feet long, 100 feet wide, and 12 feet deep at an average stage of water. The banks had a slope of 1 vertical to 2 horizontal, and were revetted with stone except in rock cuttings.

The locks were at the eastern or lower end, and were two in number, placed one in immediate prolongation of the other. Each lock was rectangular in plan, 350 feet long by 70 feet wide and 24 feet 8 inches deep, with a depth of $11\frac{1}{2}$ feet of water over the miter-sills, and a lift of 9 feet. The capacity of each lock was 281,750 cubic feet.

The walls were of cut limestone from Marblehead, Ohio, and Malden, Ontario, backed with stone from Drummond's Island, Saint Mary's River.

Water was admitted to the locks through openings in the leaves of the upper gates, by means of butterfly valves. The valves were worked with a rack and pinion. Seven minutes were required to fill the upper lock-chamber, and fourteen to fill the lower. The volume of water in the upper lock when filled to the level of the canal above, amounted to 3,757,000 gallons. The water was let out of the locks by means of valves in the lower lock-gates. Fourteen minutes were required to empty each lock-chamber. Five minutes were required to open or close the lock-gates. The gates were operated by means of a boom, worked by a hand-capstan.

The dimensions of the locks permitted the passage at one time of a tug and three vessels of the size then usual.

There was a guard-gate of the ordinary mitering pattern 2,100 feet above the upper lock-gates.

