

Marine Department

Accident to Gates of Lock 22, Welland Canal, Near Thorold, Ont.

By Emile Low.

One of the most serious accidents in the history of the Welland Canal occurred on June 20, about 3.30 p.m. at Lock 22, near Thorold, Ont., when the Canadian Government survey steamboat, *La Canadienne*, bound up from Lake Ontario to Lake Erie, and just entering the lock, ran into the upper gates and opened them. The subsequent rush of water dismounted both the upper and lower

22.7 ft., depth 10.9 ft. She had just passed out of lock 21, some 800 ft. below, and was entering lock 22. The lower gates of this lock were open, and were within the gate recesses, being held in place by the automatic gate hook. Along the lock walls are concrete snubbing posts; every vessel passing through the lock must have two men to attend to the snubbing line, one end being made fast to the ves-

also were torn from their fastenings and followed the vessel and upper gates into the canal below.

The boys who were drowned by the wave of water, had been playing on the bank of the equalizing basin to the left of the canal just below lock 22. Two out of five, succeeded in saving themselves, but three were carried away.

Of the accompanying illustrations, figs.

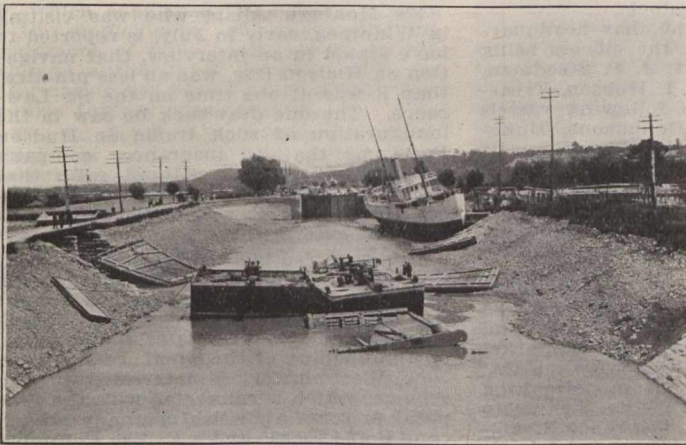


Fig. 1. Looking Down Stream from Lock 22 to Lock 21. *La Canadienne* stranded on Right Bank.

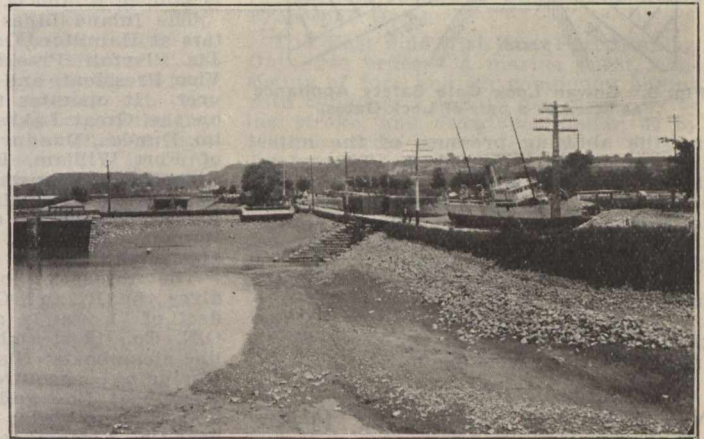


Fig. 2. View from Waste Weir across Equalizing Basin towards Lock 21

gates, wrecked the steamboat and a number of scows in the canal below, and drowned three boys who were near the canal bank.

The numbering of the canal locks begins with no. 1, at Port Dalhousie, on Lake Ontario, and extends southward to Port Colborne, on Lake Erie. The lock at Port Colborne, no. 26, is a guard lock,

sel or to its capstan forward, and the other end to one of the snubbing posts. It seems that at the time of the accident the lower end of the snubbing line was in place around the snubbing post on the lock wall but its other end had not been securely enough fastened to the vessel, so that it did not hold as the vessel moved forward. The result was that the headway of the vessel was not checked

1 to 3, show the appearance of the canal prism just below lock 22 after the accident. The stranded vessel is lying on the right bank; its side was damaged, possibly by striking the bank, and the vessel sank. At the time the photographs were taken, the canal prism had been emptied, as an aid in finding the bodies of the drowned boys and for recovering the displaced lock gates of lock 22. These

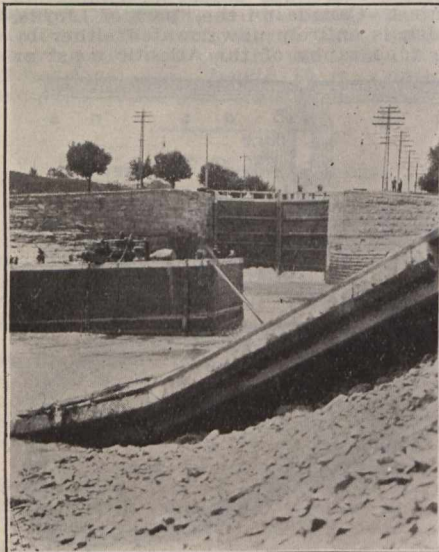


Fig. 3. Lower Gates of Lock 22, Replaced.

and lock 25 is at the northern end of the long Lake Erie lever, which ends a short distance south of Thorold. At the latter point the descent to Lake Ontario begins, skirting the escarpment between the two lakes.

La Canadienne was proceeding up through the canal on an inspection trip from Lake Ontario points to Duluth. She is a steel vessel, length 154.3 ft., breadth

and she struck the left hand leaf of the upper gate, opening the gate and allowing the water of the upper level to pour into the empty lock chamber.

The in rushing water lifted the upper gates off their sockets and carried them with the vessel into the canal below the lock. At the same time, the holding mechanism of the lower gates, being too weak for the rushing water, these gates

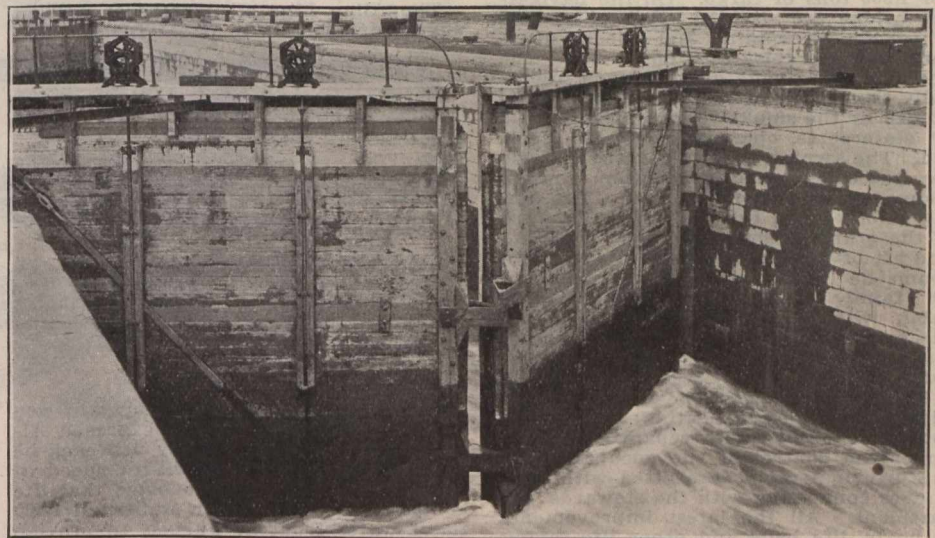


Fig. 6. Gowan Safety Appliance on a Lock Gate.

gates are seen lying on the banks in fig. 1, while in fig. 3, the lower gates are shown after they were put back in place, one of the upper gates still lying on the canal bank in the foreground. The sketch plan, fig. 4, exhibits the locality.

A device for minimizing the risk of accident in case of boats striking the lock gates has been installed at lock 24, and is being fitted to lock 21. This is the Gowan