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AN EMERGENCY STOP-LOG APPARATUS

NOTES ON THE DESIGN OF THE SYSTEM TO BE USED ON THE TRENT CANAL — APPARATUS INCLUDES AN EIGHTY-FOOT SWING BRIDGE, TRAVELLING CARRIAGE AND WINCH CARRIAGE—ONE-MAN OPERATION.

THIS apparatus, as designed and used on the Trent Canal, is designed primarily to shut off the flow of water through the lock, should the gate be carried away, and also to serve as a coffer dam, should unwatering be necessary. It is an apparatus that is

tion and are provided with double rollers at each end to lessen the friction in raising and lowering. The total weight of each log is 5,800 pounds, and the pull required to raise is about 5,700 pounds at each end, for load and friction.

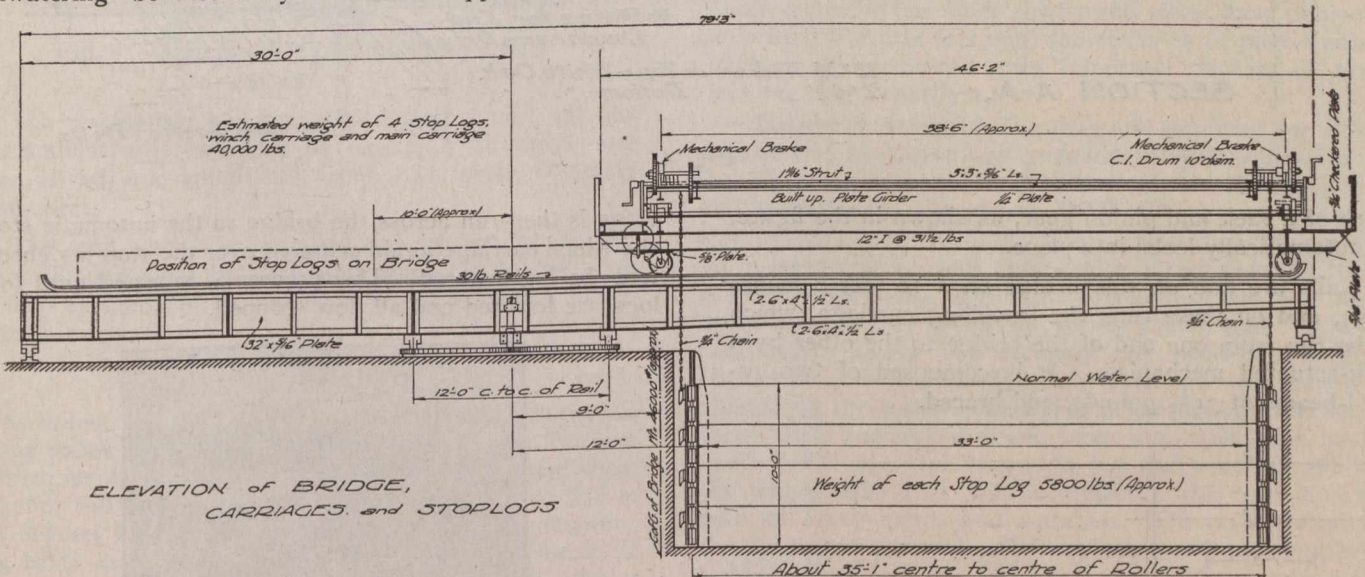


Fig. 1.

seldom used, but it must be instantly available, under all conditions of weather and at any time; hence great precautions were taken in its design to provide for any

The component parts are swing bridge, travelling carriage, winch carriage, and winch, as may be noted in the diagram of Fig. 4 and in the other illustrations.

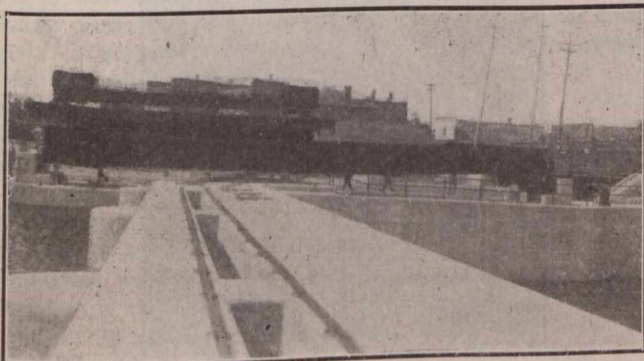


Fig. 2.—Normal Position on Entrance Wall.

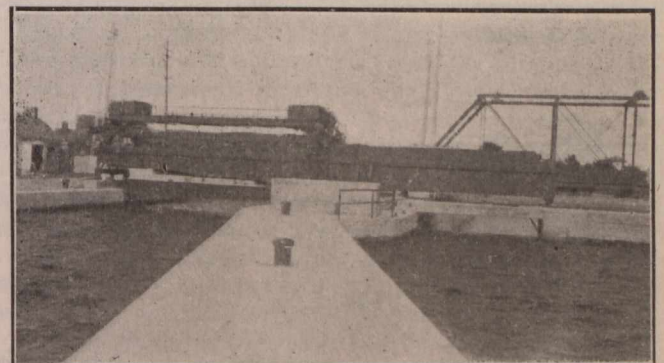


Fig. 3.—Apparatus Swung Across Channel, Lowering Stop-Log.

emergency. Also, as the distance between entrance walls is 33 feet a heavy log was indispensable, and its effect is necessarily carried through the structure.

The swing bridge is pivoted on the upper entrance wall, and is 79 ft. 3 ins. over all. It is composed of 2 plate girders, as shown, spaced 10 ft. 6 ins. centre to

The logs, as shown in Fig. 1, are of a built-up sec-