

The G.T.R. Elevators at Portland, Me.

The G.T.R. management several years ago saw the advisability and necessity of having a terminal equipped for grain export, and Portland, at the eastern end of the railway, was the choice for location. In 1875 an elevator of 150,000 bush. capacity and a short conveyor system were built. Until C. M. Hays became General Manager of the road in 1896, this small elevator was considered sufficient to handle the Co.'s export business. The new management, however, inaugurated a vigorous policy of increased equipment all through the G.T.R., and the Portland grain exporting facilities received new impetus. It was decided to construct a 1,000,000 bush. elevator and a large conveyor system, which were expected to be adequate for all emergencies for many years to come; this work was completed in 1897. But the development of the Canadian Northwest, with its increased grain traffic, and the completion of a new receiving house at Chicago, soon rendered even this system entirely unable to take care of the great volume of business required of it. It was accordingly decided by Mr. Hays' successor, G. B. Reeve, who was General Manager during 1901, and who continued the policy of his predecessor, to increase the storage capacity of the terminal by an elevator of 1,500,000 bush. capacity and to more than double the extent of the wharf conveyors. The new work was started last year and was completed last spring.

A description of the completed system properly leaves out of consideration the small elevator built in 1875, which, although still operated by the G.T.R., is worked independently of the newer houses. Again, although the latest elevator deserves special mention, neither house can well be described alone, as the two elevators and their wharf conveyors are so connected as to form one system. The system, therefore, as now operated, consists of one elevator of 1,000,000 bush. capacity, 98x219 ft. in size, known as New England elevator no. 2; the new elevator of 1,500,000 bush. capacity, 101x299 ft. in size, known as New England elevator no. 3; and an extensive belt conveyor system which connects the two

elevators and sends out six shipping galleries, each 560 ft. long, along the wharves where ocean steamers are loaded.

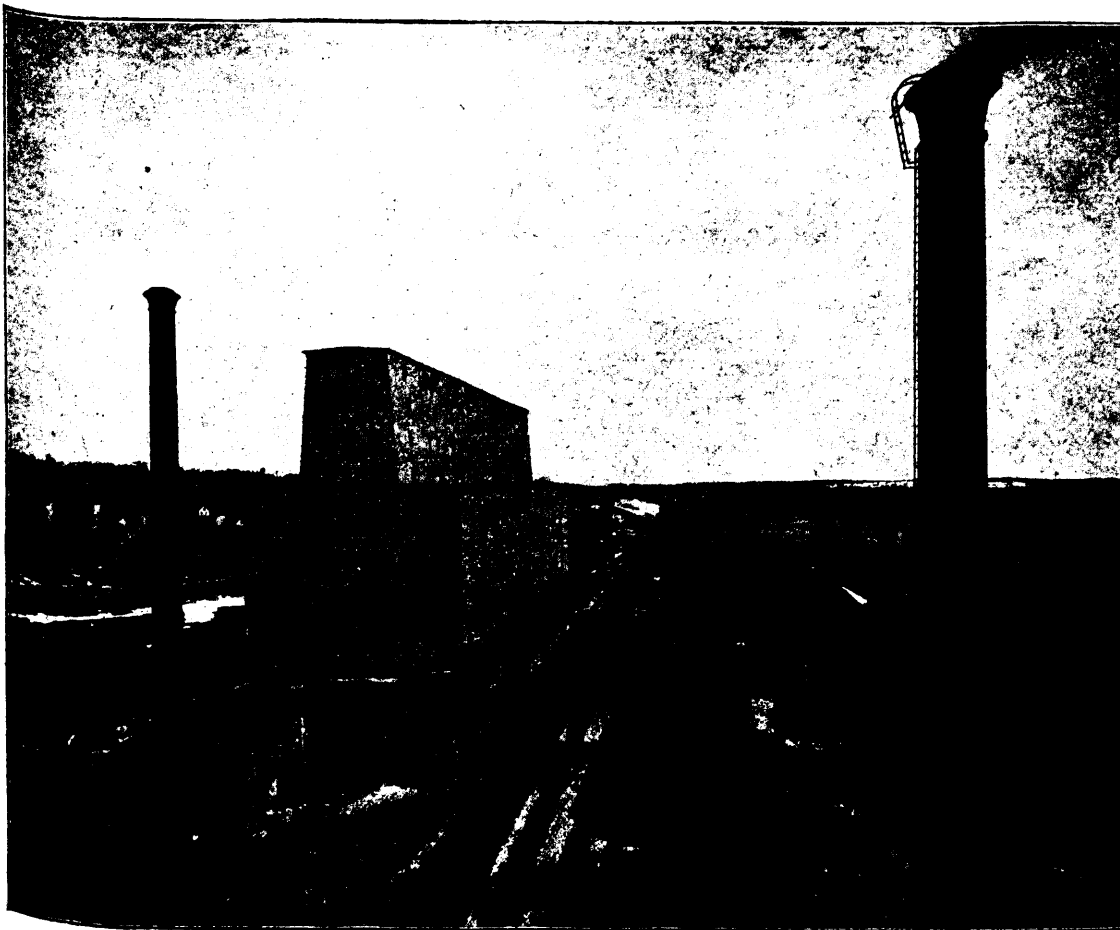
The belt conveyors are the most striking part of the system. From the west end of the side gallery of elevator 3 a belt gallery runs 132 ft. across the yards of the G.T.R. toward the ocean. This gallery ends at a distributing tower from which one gallery runs straight out 560 ft. along one side of the ocean steamers' wharf, and one runs east

along the bulkhead for 600 ft., sending out a shipping gallery 560 ft. long on each side of a large wharf just built by the G.T.R. From the third side of the distributing tower a gallery runs 300 ft. across the tracks to the east end of the side gallery on elevator 2. In this way connection is made with the conveyor system of that elevator. This system, almost a counterpart of the other, consists of a long conveyor on the ocean steamers' wharf, and two on the Atlantic wharf, with the necessary connection along the bulkhead.

Thus it will be seen that on both sides of each of three wharves a shipping gallery runs out along the water, and from any one of these galleries the largest steamer may be loaded. The total length of the conveyor is over a mile, making a system without question the most extensive in existence. Over three miles of rubber belt is used in the belt conveyors of the elevator system. Each conveyor along the wharf is equipped with eight vessel-loading spouts, and elevator 2 has also a spout for loading directly into small coasting vessels lying alongside the house. Seven vessel-loading spouts are placed on the side of each gallery and one at the extreme outer end, so that vessels may load in either position. With this elaborate system of elevators and belt conveyors grain can be taken from any bin in either of the two elevators, and with but one elevation can be loaded into any hatch of any one of six ocean steamers lying along the wharves.



FIGURE 7.—ICE FORMATION, SHUBENACADIE RIVER BRIDGE.



THE G.T.R. CO.'S NEW ELEVATOR AND BELT GALLERIES AT PORTLAND, ME.