

Intercolonial Elevator at St. John, N.B.

The movement at Montreal a year or two ago to have the Dominion Government build & operate the grain elevators & public warehouses at Montreal instead of turning the sites over to private individuals for exploitation was a failure, so far as that city is concerned. The Government did, however, erect public elevators at Halifax, N.S., & St. John, N.B., the two ocean terminals of the Government Railway System. J. A. Jamieson, of Montreal, the elevator architect & builder, was selected to design both elevators, & he also secured the contract for the construction of the St. John building.

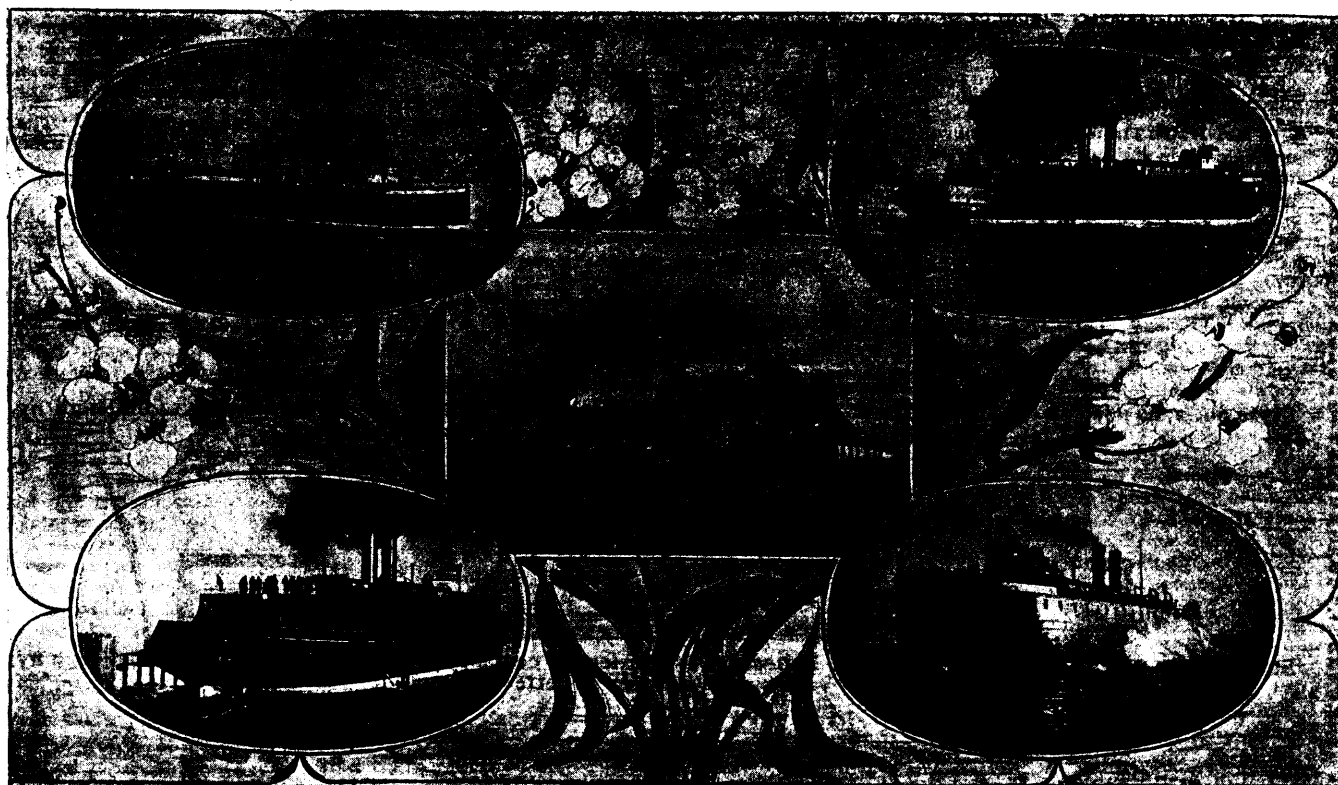
All the machinery & other equipment were manufactured in Canada, from original designs & detail shop drawings supplied by the architect & are the very best that can be made for the purpose. All bearings have genuine turned balls & sockets, are ring oiling & both oil & dust proof, & will run fully six months without

trimming table, buzz planer & joiner, drilling machine, blacksmith shop, etc., & every part of the lumber entering into the construction of the building was framed, machined & manufactured in the mill ready to go together in the building, & the cribbing lumber for the bins was cut accurately to length, marked, & the number of pieces counted, & was all prepared in such a manner that the whole building was practically constructed with a gang of carpenters without any tools whatever, other wise than the necessary hammers to drive nails.

The elevator has a storage capacity of 600,000 bush. Its size on the ground is 96 ft. by 137½ ft., & its height 158 ft. It is equipped with 6 stands of elevators, having an elevating capacity each of 10,000 bush. an hour, & other modern equipments in proportion for receiving & loading grain. So far as known the belt conveyer from this house to the deep water dock is the longest straight run of conveyer on the continent, being over half a mile in length & containing over a mile of belting,

of the weighman, & operated by him without leaving the scales. Above the "distributing floor" is the "scale floor," on which are located six 1,200 bush. hopper scales, & on the floor above this are the garnerers, of which there are 6, holding 1,400 bush. each.

The top floor contains the heads of all the elevator legs & the machinery for driving them. At the discharge point on each of the elevator heads is located a switch valve, which can be operated to discharge the grain into either of two garnerers from each elevator leg, the switch valves being controlled through a steel cable & lever by the weighman on the scale floor. When grain is wanted for shipment it is drawn from the bottom of the storage bins & run through spouts to the sinks & boots, & again elevated by the leg, weighed & spouted to the shipping bins. The shipping bins are situated over the belt conveyer, which carries the grain to the wharf & discharges it into the holds of ocean steamers. This conveyer is an endless rubber belt, 3 ft.



LAKE ERIE AND DETROIT RIVER RY.'S CAR FERRY, SHENANGO, NO. 1.

requiring any additional oil. As there are over 1,500 bearings in this plant the saving in labor & oil & the value of perfect lubrications will be appreciated. All power is transmitted by manilla rope on the continuous wind system & each elevator leg & all machines are driven by a separate drive from the main shaft which is situated in the basement, & set on concrete piers entirely separate from the building, & each drive is furnished with a friction clutch on the main shaft. There are no shafts longer than 8 ft. above the bins, & as there are only two ball & socket bearings on each shaft, no settlement of the bins can cause heating of the bearings. This machinery runs with such complete absence of noise or vibration that it is almost impossible to tell when it is running.

Before starting the work of construction, the contractor fitted upon the ground a complete mill, consisting of timber planer & matcher, large cut-off saw, gaining & sizing machine, boring machine, swinging cut-off saw, bevel-cutting saws, band saw, special

which weighs about 12½ tons. It has a carrying capacity of 17,000 bush. an hour.

The foundations of the elevator consist of 96 concrete piers which rest on bed rock. All around the building a concrete retaining wall was built between the piers. The first story consists of the heavy timber frame, 24 ft. high. It is called the "work floor." The timber used is all of prime quality Georgia pine, planed on all four sides. Through this story are two railway tracks for unloading grain. The automatic power shovels, the car puller for moving cars, & all mechanisms for the general working of the building are located on this floor. From the top of the main frame, extending to a height of 73 ft., are the storage bins, 83 in number, ranging in capacity from 2,000 to 8,000 bush. each. All these bins have hopper bottoms. Above the bins, on the first floor of the cupola, or the "distributing floor," the architect's special system of distributing spouts for running the grain from the different scale hoppers to the bins, is located. It is under the direct control

wide, running on turned clear cedar rollers, with steel shaft through each, the grain being loaded on the belt in a continuous stream through a concentrating hopper. The belt may be loaded to within an inch of the edge without danger of spilling. When the grain reaches the part of the conveyer house above the steamship, the grain is taken off the belt by means of an automatic travelling tripper at any desired point to throw it to any of the different shipping spouts to the steamer's hold. This belt runs in a gallery, which is carried high up on bents across Mill St., over the pond & the railway tracks, & down to the deep water wharf, where the height is 50 ft. above the wharf.

All the lumber used in the construction of the spouting, scale hoppers, garnerers, & leg housing is of clear pine & spruce, kiln dried & planed, the finishing of this work being equal to the best flouring mill practice, & every part is thoroughly dust tight. All the garnerers, scale hoppers & spouting throughout are lined with sheet steel.