

### New Steel Elevator at Fort William.

In our issue of February 19, we gave a description of the new steel grain storage tanks and elevator under construction. We give this week a cut showing how the elevator and storage tanks will look when completed. The Buffalo Express gives the following information about this great plant:

Another mammoth elevator destined to control a substantial share of the grain trade of the lakes is rapidly being pushed to completion at Fort William, Ont., on the Kaministiquia River, one mile from Thunder Bay, an arm of Lake Superior. A Buffalo firm, the Steel Storage and Elevator

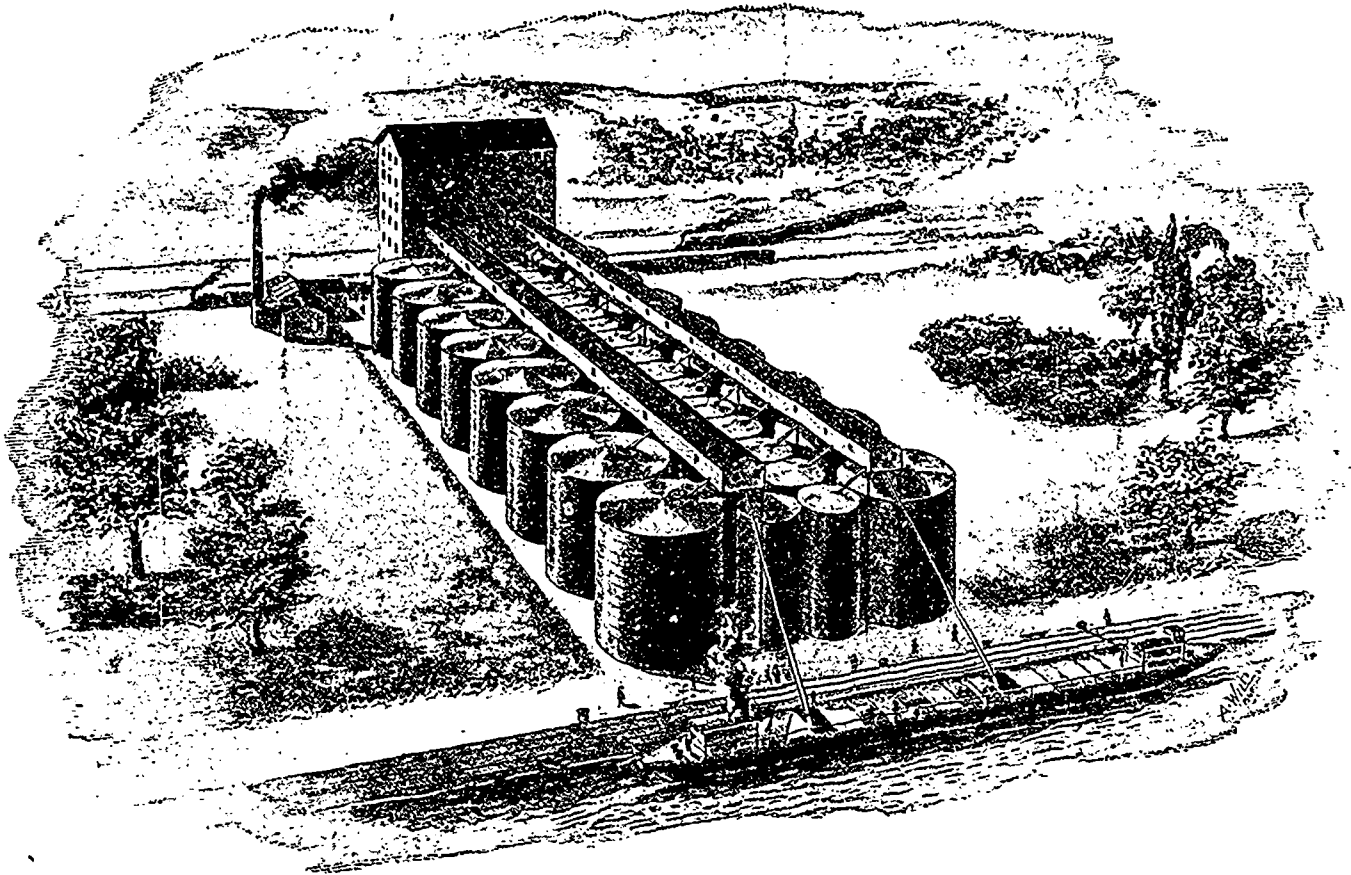
storing the grain. No insurance will be carried and hence the saving in seven years will pay the first cost of the elevator.

The greater and most important feature of steel elevators, however, is the separation of the storage department from the machinery for weighing and transferring grain. This allows the construction of separate tanks of various capacities to suit any condition. The tanks are constructed of homogeneous steel, and by close riveting an air-tight tank is obtained. While air is essential to the life and growth of vegetable matter it forms, at the point of maturity in grain, the direct and active agent that not only induces fermentation but begins decay.

The theory for counteracting the deleterious influence is to enclose these products at maturity in steel tanks, from which the common air may be excluded. By common air is meant

The Canadian Pacific experts hence insisted on air-tight tanks. Their elevator building proper is built of structural steel, with one-quarter inch steel plate floors, supported on "I" beams, the steel frame being covered with heavy corrugated steel. It contains the scales, steel circular gannets, steel elevator legs, power shovels, rappers, warehouse, separators, steel spouting, transmission machinery and fixture for the weighing and transferring of grain from cars to tanks or direct to vessels.

Two belt galleries run over the top of the tanks. They are built of steel and contain two belt conveyors, each with trippers for distributing grain to various tanks, or direct to vessels. The shipping capacity is 40,000 bushels per hour. The unloading capacity is 400 cars per day. The boiler and engine house is built of Lake Superior stone, with steel truss



NEW STEEL GRAIN STORAGE PLANT AT FORT WILLIAM.

Construction Co., has the contract. The elevator is being built for the Canadian Pacific Railway company, which handles from 25,000,000 to 40,000,000 bushels of grain yearly at Fort William. The grain comes from the Manitoba grain fields by rail and is transferred to vessels at Fort William for shipment to eastern points.

The Canadian Pacific now has three wooden elevators, each holding 1,250,000 bushels, at Fort William. The new elevator is all steel and has a capacity of 3,000,000 bushels, equaling the Great Northern elevator's capacity. The great electric elevator here in Buffalo was built by the same contractors. The contract for the Canadian Pacific elevator was let last August by P. Alex. Peterson, chief engineer of the Canadian Pacific. He insisted that the new elevator should be fire-proof with air-tight tanks for

the free atmosphere, composed of 22 parts oxygen and 78 parts nitrogen, reposing or existing in various degrees of density and temperature. It is only necessary to shut these products from contact with this free common air, because they have within themselves the means of their own preservation and the destroying influence of the air that may be contained within the steel tank is counteracted by the admixture of the elements from the products in store, for when common air, by the admixture of foreign gases, is changed in composition, it is as harmless to destroy as it would be impotent to aid the growth of these products.

Air-tight tanks prevent mixing, heating, rotting or shrinking of grain in store. The expensive process of airing and cooling the grain is abolished and there is no opportunity for ravage of weevil, rats or thieves.

roof, and contains one 400-horse-power condensing engine; three boilers 66 inches by sixteen feet, with all the necessary pumps and fixtures. The power is transmitted from the engine to the steel house by a 400-horse power manilla rope drive. Tunnels constructed of stone under the tanks contain the belt conveyors for transferring grain from the tanks to the steel building where the grain is weighed and shipped to vessels by means of the conveyors in the steel galleries over the tanks; dock spouts being attached to the end of the galleries for receiving the grain from the belt conveyors. There are 16 steel tanks 58 feet in diameter by 60 feet high and 32 tanks 29 feet in diameter by 60 feet high. The tanks are ranged side by side the smaller tanks in a double row flanked on each side by a row of eight big tanks.