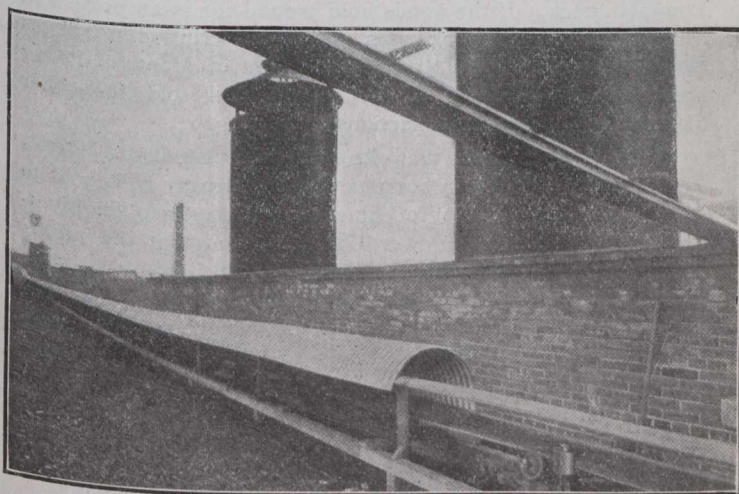


## FOUNDRY CONVEYER SYSTEM OF MASSEY-HARRIS COMPANY, LIMITED.

The Massey-Harris Company, Limited, of Toronto, Ontario, have just completed the installation of a system of conveyers. These conveyers are installed for handling material in connection with their foundry and will greatly simplify and reduce the labor in this part of their plant.

A gravity discharge conveyer-elevator, 46 feet between centres vertically, and with a horizontal run of about 20 feet, is used, and coke is delivered to this by means of a hopper at the base, and is raised to the upper run from which it discharges to a belt conveyer serving the east cupolas, or into a hopper serving the charging cars of the west cupolas. This gravity discharge outfit is a very excellent type of conveyer-elevator for comparatively small capacities and it is used very extensively in coal pockets and fueling systems. It consists essentially of a series of "V"-shaped buckets carried between steel or malleable chains and attached rigidly to the links. The buckets on the ascending run are carried upright, so that the material is carried in the buckets, and on the horizontal runs the buckets push the material along in a steel or concrete trough. This arrangement allows for a very simple discharge at any point by merely opening a gate in the bottom of the upper trough.

The belt conveyer receiving from the gravity discharge is shown in the illustration. This conveyer is 18 inches wide and 350 feet between centres and runs horizontally along the top of the building for the greater part of its length.



Eighteen-inch, 350-foot Belt Conveyer at the Massey-Harris Company.

The method of housing the conveyer, employed by this firm, is shown only partially completed. This method is an inexpensive and yet very effective means of covering the conveyer and is applicable to any gallery conveyer. The drive of this conveyer is located at the head end and delivery is made into a chute serving the cupola charging cars similar to those receiving from the gravity discharge conveyer.

A conveyer independent of the other two is located in the basement of the foundry and delivers sand, coke, and broken stone from the track hopper into several of the storage bins. This is also an 18-inch belt conveyer, 50 feet between centres, driven at the tail end from a five-horse power motor suspended from the ceiling. This motor also drives the 24-inch, 13-foot, apron feeder, which is located on the other side of the basement wall beneath a 12-foot track hopper. At the head end of the conveyer is located a rotary cleaning brush, which cleans the return belt, removing the fine sand and the coke dust, preventing their accumulation on the return carriers and preventing the different materials carried from becoming

mixed one with the other. This cleaning brush is a standard arrangement and is always located at the head end of the conveyer directly back of the head pulley, and is driven from a sprocket on the head shaft. The mechanism is self-contained and dust-proof and may be applied to any size brush and any size of conveyer. A web sprocket is used cast integral with an internal gear which meshes with a pinion on the brush shaft. An adjustable weighted lever arm provides the proper tension for the brush against the belt and automatically takes up the slack as the brush wears down.

This conveying system, consisting of four conveyers, was manufactured by the Stephens-Adamson Mfg. Co., to meet the special requirements of the Massey-Harris Company, Limited. The entire equipment was designed by Mr. Edwin J. Banfield, 120 Adelaide St., West, Toronto, Ontario, who is a special representative of the Stephens-Adamson Mfg. Co. in Ontario.

## THE NEW CANADIAN PACIFIC RAILWAY SHOPS AT OGDEN, ALBERTA.

The main locomotive shop building contains the erecting shop, machine shop, blacksmith shop and boiler shop. The erecting shop will be of the transverse lift-over type, and will contain 35 bays of 22 feet each. Its entire area is served by travelling electric cranes carried on two levels. It is of structural steel frame on concrete foundations. The exterior walls up to window sills are of concrete, and the walls which are carried on steel members of hollow tile plastered. It is heated by indirect fan system distributed by concrete and tile ducts.

The department for making repairs to locomotive tenders, steam shovels, lidgerwoods and other maintenance-of-way equipment, is contained in an L-shaped building, 80 x 340 feet, and is equipped with a high-speed 20-ton travelling crane having two 10-ton trolleys. There will be a depressed track carried along the end of the wheel storage tracks outside, to facilitate unloading and loading wheels and axles. The building is of structural steel frame with steel roof and trusses and its general construction will be similar to the main locomotive shop.

The storehouse and office building is 250 x 60 feet, two stories, with offices at one end three stories high. It contains an electric elevator, vaults and platform scales. It will be parallel with the main building, the space between to be spanned by a high-speed travelling crane, which will handle all material to and from the cars and from the storage place that is provided between the storehouse and the erecting shop. The concrete foundation is carried up to bring the floor of the storeroom to car door height, and the walls above are brick and concrete blocks, supported on concrete foundation walls, the woodwork of heavy timber comprising slow burning mill construction. The building is heated by an indirect fan system, and sprinklers are installed for fire protection.

The oil house, 102 x 40 feet, is similar in construction to the storehouse.

The foundry is 204 x 80 feet, of similar construction to the main building, having two bays, one of these of higher cross section to be served its entire length with high speed travelling electric crane. Jib cranes attached to building columns are provided and so arranged that they may be moved from one location to the other if desired, handled by the travelling crane. In the side bay of lower cross section is provided for core making and snap moulding floor. The charging floors and cupola will be located in the centre of the low bay. The heating is indirect fan system distributing