

Electric Railway Department.

The Montreal Tramways Company's New Shops.

These shops have recently been opened for repair work, although the rolling stock department has been housed in its new offices in the shops for the last 18 months. The shops are situated near the village of Youville, a suburb of Montreal, near the Montreal Park and Island Ry's, Sault au Recollet line, about half a mile beyond the terminus of the St. Denis Street line of the city service.

The site, on Vervais Road, is about 30 acres in extent, with a frontage of 576 ft., and an average depth of about 2,000 ft. The shops are situated about half way back in this tract. The site being off the railway

trolley on a projecting platform adjoining. The runway has a cinder floor.

The building is built of brick throughout, on concrete foundations, with large window spaces on all sides. In consequence, the light penetrates into the centre of the shop at the transfer table. In addition, the skylights in the roof assist materially in making the interior light at all times during the day.

The transfer table runway is spanned by a 70 ft. truss, the nature of which is shown in figs. 1 and 2, and the interior view in fig. 4, the highest part of the building shown being the monitor that runs the full

section of the shop, the length of the car hoist, is chambered out beneath at the same level as, and parallel to, the pit. The hoist screw passes through into this lower chamber, and is supported on a vertical thrust block nut in this chamber floor. On each of the screws, just above the chamber floor, is a worm gear, engaging with a worm on a shaft near the floor, parallel with the pit. The end of the parallel shaft on each side of the pit, mesh with bevel gears on the end of a cross shaft in the pit at the transfer table end. This shaft is an old 12A (30 h.p.) motor. Between each hoist, on the column next to the transfer table,

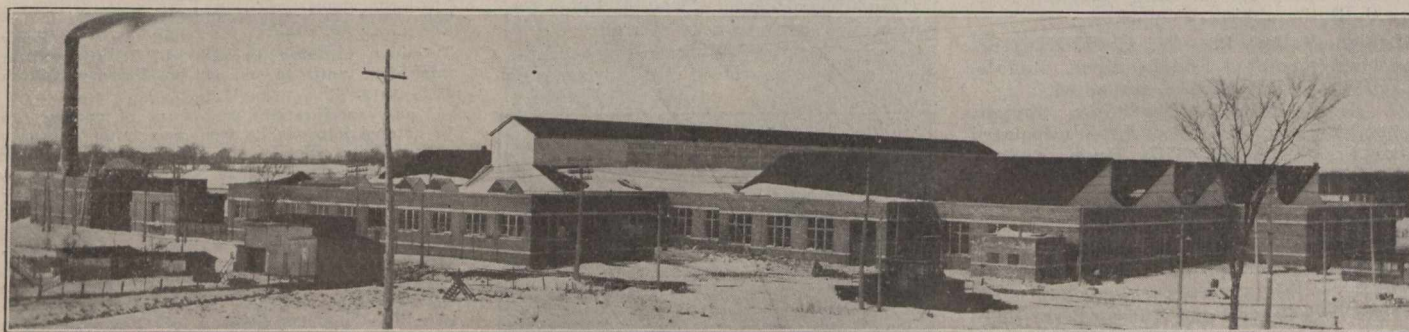


Fig. 1.—Montreal Tramways Co.'s New Plant, viewed from the South.

line, a special spur had to be built along Vervais Road from the St. Denis Street line.

The plant consists of a main building and several minor buildings at points around it, the majority having a direct connection, making an admirable arrangement for intercommunication in cold weather. The plant, looking at the south and north sides, is shown in figs. 1 and 2, respectively, and the plan of the shops and grounds, with approaches, in fig. 3.

The dimensions of the main building are approximately 425 ft. long by 269 ft. wide.

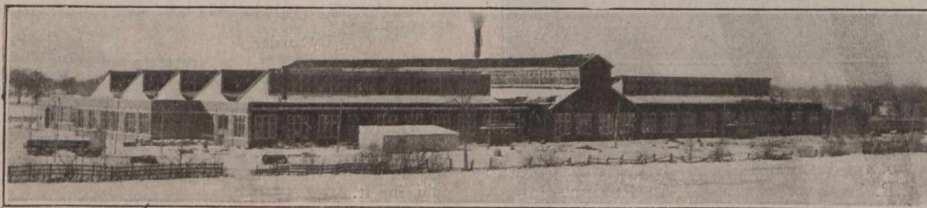


Fig. 2.—Montreal Tramways Co.'s New Plant, looking at the North Side.

Essentially, the main building consists of two units under the one roof, the two sections being separated by a transfer table down the centre between the two parts. In this particular, the shops are unique, the practice of covering in the transfer table not being usual. In the peculiar climatic conditions with which the rolling stock department is called upon to cope, an outside transfer table would be the source of a great deal of trouble from blocking up with snow in winter. The transfer table, fig. 4, 70 ft. 8 ins. wide, operates in a runway 346 ft. long, which contains three standard gauge tracks, laid with 80 lb. rails, on which the table operates. The motive power is a small, discarded electric railway motor, mounted on a projecting platform of the transfer table, and operated by a con-

length of the runway. The sides of the monitor have swing sashes, operated from one end by a shaft.

The front section of the shop is what may be termed the motive power section, as all the repairs to the running gear and motors are attended to in it. This part of the shop is further subdivided into six sub sections—car hoists, overhauling section, wheel and axle shop, blacksmith shop, machine shop, and armature shop, all these several departments centering on the overhauling department, located down the centre of this half of the building.

Cars to be overhauled enter the building by the doors at either end, the principal entry being from the door to the south. Running on the transfer table, a car is quickly spotted on the required repair track, of which there are 14, laid with 80 lb. rails. Twelve of these repair tracks are equipped with car hoists, a construction that is rather novel in Canadian car shop practice. The construction and operating mechanism of the hoist is shown in figs. 5 and 6. The hoists are ranged in a row, just far enough back from the edge of the transfer table runway to give a clear passage way along that side.

On each side of the pit, at 10 ft. centres, is a 30 ft. length of 12 by 5 in. I beam, mounted on the upper ends of two 4 in., $\frac{3}{4}$ in. pitch, square threaded screws. This

there is an old K10 controller, above which is mounted a double throw switch, by which means either of the hoists can be operated at will.

In the use of the car hoists, it is the practice to place a section of I beam across the pit at the ends of the side I beams, under the ends of the cars, as shown in fig. 6, and by raising the screws by the motor the car body can be raised from its trucks and the latter run out, when the car body can again be lowered to a more convenient height for working, or if desired, lowered on shop trucks for removal to the paint or erecting shop, for further repairs, if the nature of the repairs is such that it would not be desirable to await the repair of the trucks before proceeding for final finishing. These car hoists have been found to be of great value in assembling new cars as received from the factory. The bodies, as received on the flat cars, can be raised, the flat car run out and the trucks run into position and the body lowered thereon.

The pits, both under the car hoists and further back in the shop, are of concrete construction throughout. Under the car hoists, there is a supporting wall under the rail, but the balance is chambered along the hoist shaft as mentioned, with a concrete floor, and a reinforced concrete main floor over top. The extension of the pit in the overhauling department is similar in construction, with the absence of the side shaft tunnel chambers. At that end of the pit, there are also steps to the level of the shop floor. The total length of the pits, hoist and overhauling, is 87 ft. 10 ins., with a depth of 4½ ft. Between the hoist and overhauling sections of the pits, there is an uninterrupted passage under the tracks, where the track supporting wall is cut away, permitting access between pits. On the floor of the pit, and running the full length of each, is a 4 ft. gauge track for a small car, on which the motor and