

Electric Railway Department.

New Cars on the Winnipeg Electric Railway.

So successful has the type of car in use on the Winnipeg Electric Ry. proved during the past two years, that a considerable number have been and are being added to the equipment, 40 having been added in 1911, and the same number in 1912, all built in the company's Fort Rouge shops. The fact that the design has in no way been altered in the last two years is proof positive of their particular adaptability to the Winnipeg conditions of operation. The car and its details are shown in the accompanying five illustrations.

In general arrangement, figs. 1 and 2, these cars differ from those to be found under normal conditions of operation, but the severe winters to be considered in the operation of the Winnipeg line demand a modification of conventional designs if the comfort of the passengers is to be considered, and if the traffic is to be handled expeditiously. It will be noticed that the principal point of difference in construction demanded by this severe weather is the arrangement of entrance and exit both through the rear end. The front end is permanently closed to egress except by the motorman, and for his convenience there is a two step metal ladder dropping sheer from the side of the car from the front vestibule door.

A general impression gathered is that the car is rather higher set than conventional practice dictates elsewhere, but any inconvenience in entering or leaving, from the fact that the car body is high, is eliminated by the convenient arrangement of steps at the rear, these being so set into the rear vestibule as to make it possible to have two well proportioned steps, which, in addition to having the vestibule on a lower level than the car interior, makes entrance and egress very easy. The entrance and exit are separated by a pipe post and brass

The interior arrangement of the front vestibule is shown in fig. 2.

The seat cushions and backs are finished in green plush. The interior woodwork finish is in cherry and oak, the outside being finished in cherry sheathing, with the posts, etc., finished in yellow as fig. 1 shows. The deck sashes open by levers from the inside, the front ones opening to the front, and the rear ones to the rear, making ample provision for a good circulation of air through the car, from front to rear, when

truss rods, $1\frac{1}{8}$ in. diameter, with centre turnbuckle, pass up through the end sills of the car along the face of the sills, coming out through the end sill just above the vestibule floor level, where they may be easily got at. The ends of the side sills are also trussed up by means of inside truss rods, shown in fig. 3. Each of these side truss rods is a single length of $\frac{1}{2}$ by 2 in. flat iron, resting on the top of the side posts of the body, as will be noted on the sides in fig. 3, in the notches shown in fig. 4.

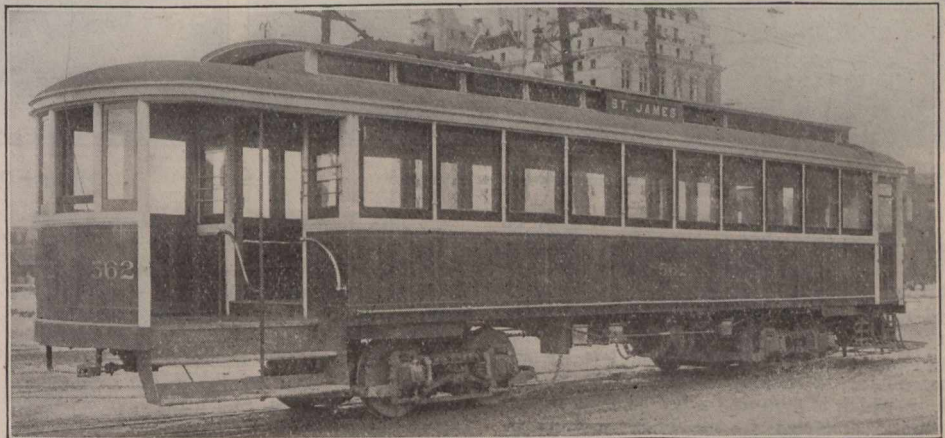


Fig. 1.—Latest Type of Car on Winnipeg Electric Railway.

desired. The heating is from a hot air heater in the front vestibule, from which a pipe passes under the seats on the left side of the car, with outlets arranged at convenient intervals. The interior lighting arrangement consists of 6 lights down the centre of the car and 5 down each side under the deck.

The length of car body is 33 ft., and it

This rod bends downward at the second post from each end, connecting to a $1\frac{1}{8}$ in. rod through a pin connection, the rod coming out through the end sills, just in front of the step side as shown in fig. 1, where the end is accessible for tightening up. The side construction of the car body is shown to advantage in fig. 5, where it will be noted that the frame is thoroughly

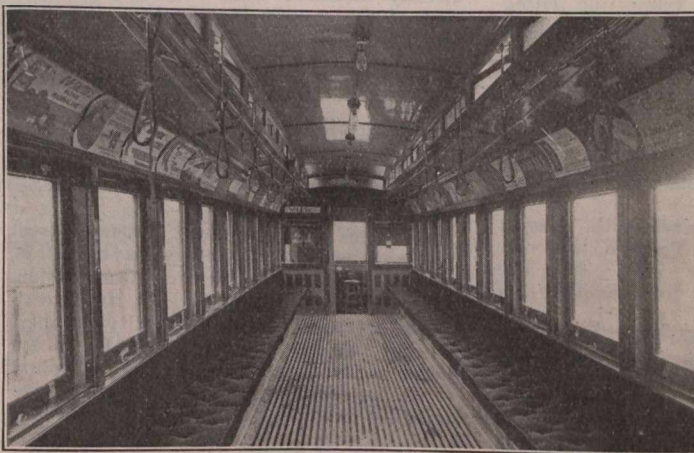


Fig. 2.—Interior of Winnipeg Electric Ry. New Car.

hand rail, the entrance being next the car body and the exit at the rear of the vestibule.

The interior arrangement is shown in fig. 2. The seats are arranged lengthwise of the car, permitting of easier internal movement of the passengers and conductor. From the rear, there is a central wide, double door entrance, whereas at the front there is only a single narrow door for the convenience of the motorman, passengers not having access to the front vestibule.

is 45 ft. over bumpers, with an overall width of 8 ft. $4\frac{1}{4}$ ins., made possible by the wide devil strips used in Winnipeg. The car body frame is built up around two centre sills of 8 in. I beams, filled out with wood fillers in the channel recess on each side of the I beam, and on two 6 by 8 in. wooden side sills. Under the centre of the car, at 7 ft. centres, are two needle beams,—8 in. I beams—on the under side of which, below the sills, are queen posts 3 ins. high, up against which the truss rods bear. These

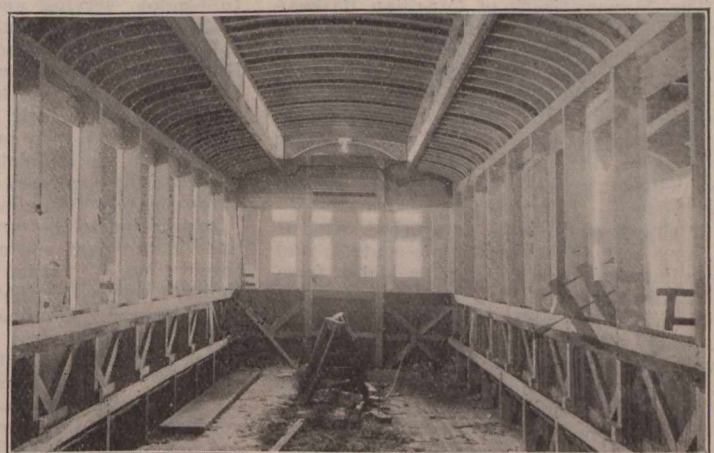


Fig. 3.—Unfinished Interior of New Car.

braced, which with the trusses makes for a very solid construction.

The side posts are $5\frac{1}{4}$ by $2\frac{1}{4}$ ins., to top of each of which is connected a carline, formed of $1\frac{1}{4}$ by $\frac{1}{2}$ in. bar stock. The roof is solidly supported thereby, and in addition, it is trussed under the sashes as shown in fig. 2.

The front vestibule is $3\frac{1}{2}$ ft. deep, and the rear one $6\frac{1}{2}$ ft. deep, both 6 ins. below the level of the car floor. Both vestibules are supported on 5 by 5 by $\frac{1}{2}$ in. angles,