

A rail collector has been included in the fittings of the car. This is used when the vehicle is taken in or out of the central depot and where no overhead negative wires are provided. It consists of a skate hinged at the rear end of the vehicle, and is provided with means for raising and lowering, so that when the negative trolley is out of action the electrical circuit may be completed through the ordinary

by either foot pedal or hand lever, with ratchet device for retaining the brake in the one position.

The motors have a capacity of 20 b.h.p. at 525 volts, and a speed of 1,050 revolutions per minute, equivalent to a speed of 10 miles per hour. They are of the Siemens type, series wound with shunted fields, provided with commutating poles, and having wool waste oil lubrication. The con-

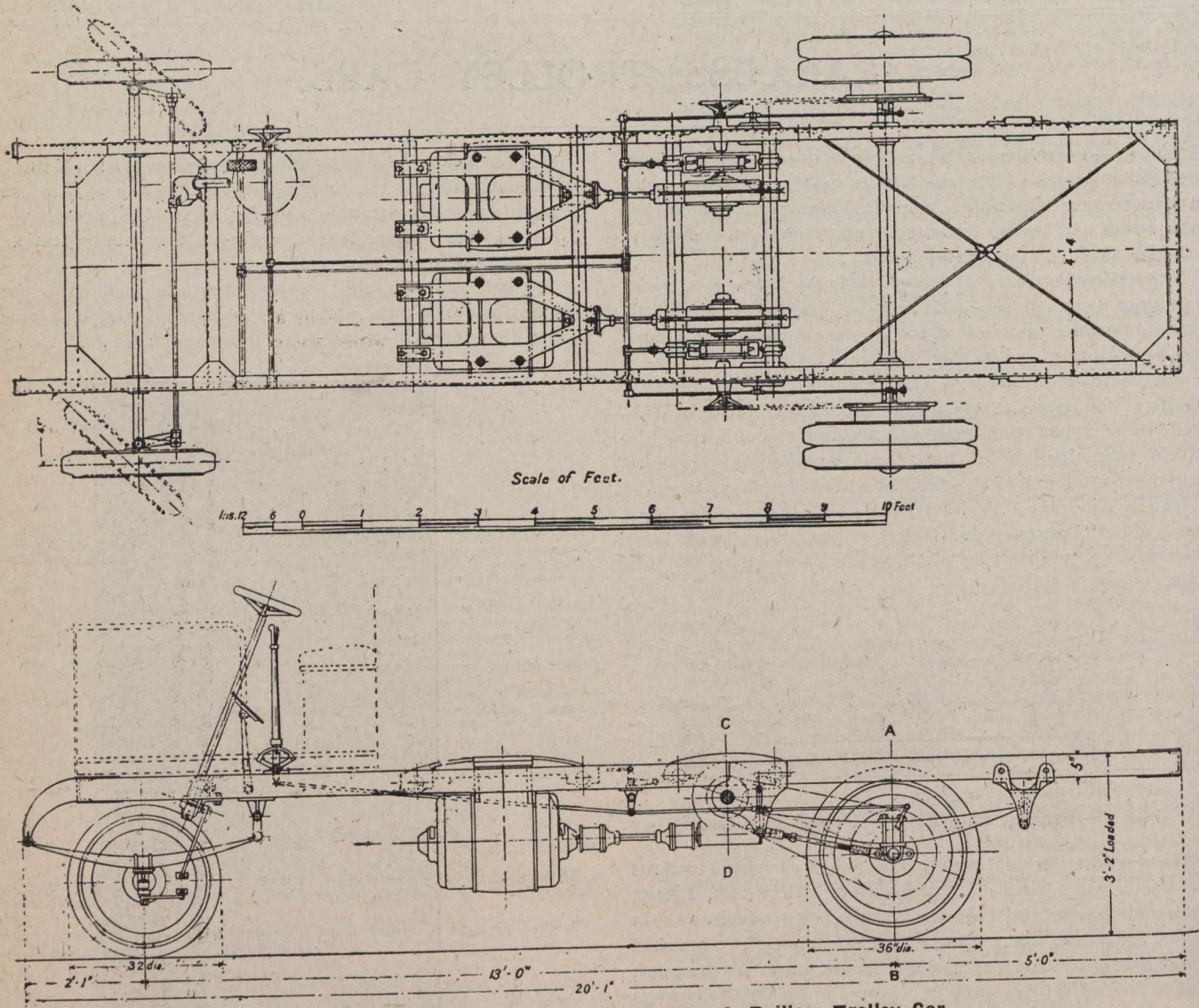


Fig. 4.—Plan and Side Elevation of Chassis of Railless Trolley Car.

tramway rails, and thus allow the car to proceed along any existing tramway route. The arrangement allows a maximum deviation of five feet.

The cars are of similar construction to the ordinary tramway type in many particulars, as may be gathered from an examination of Fig. 3. The general mechanical make-up is clearly shown in Fig. 4 and Fig. 5. It will be seen that two motors supply motivity to the rear wheels. The motion is transported by means of double reduction worm-wheel and chain gearing, the former working in an oil bath. Each chain is of the roller type, protected by a case giving easy access to chain and wheel, and the latter is case hardened. The power cables are run in screwed conduit tubing filled in with bitumen.

The wheels are fitted with solid rubber tires, the rear wheels supporting two each.

Two mechanical brakes are provided, one being connected to the counter shaft and operated by a foot pedal, and the other consisting of drum brakes on the rear wheels, operated

troller is of the Siemens series-parallel magnetic blow-out type, provided with special arrangements for cutting out either motor as desired, but having no provision for rheostatic braking. The main barrel has nine positions in addition to the off position, and the reversing barrel six.

GRAND TRUNK IN THE UNITED STATES.

Tenders have been requested by the Grand Trunk Railway Company for the construction of roadbed and buildings of the Southern New England railway, which will bring the Grand Trunk Company from Palmore, Mass., to Tidewater in the city of Halifax, N.S. The contracts call for completion of everything in connection with extension of the road on or before December 31st, 1913. The company officials expect to have trains running over the new road before the end of this year.