

THE ELECTRIC CAR FENDER.

THE photo-engraving herewith represents a fender for electric or cable cars. The sectional platform projecting under the wire cushion is held in the position shown by strong springs, and is by them forced under any movable object which may be on the track in front of the car, while the wire cushion prevents the object receiving a sudden blow from the front of the truck or the fender itself.

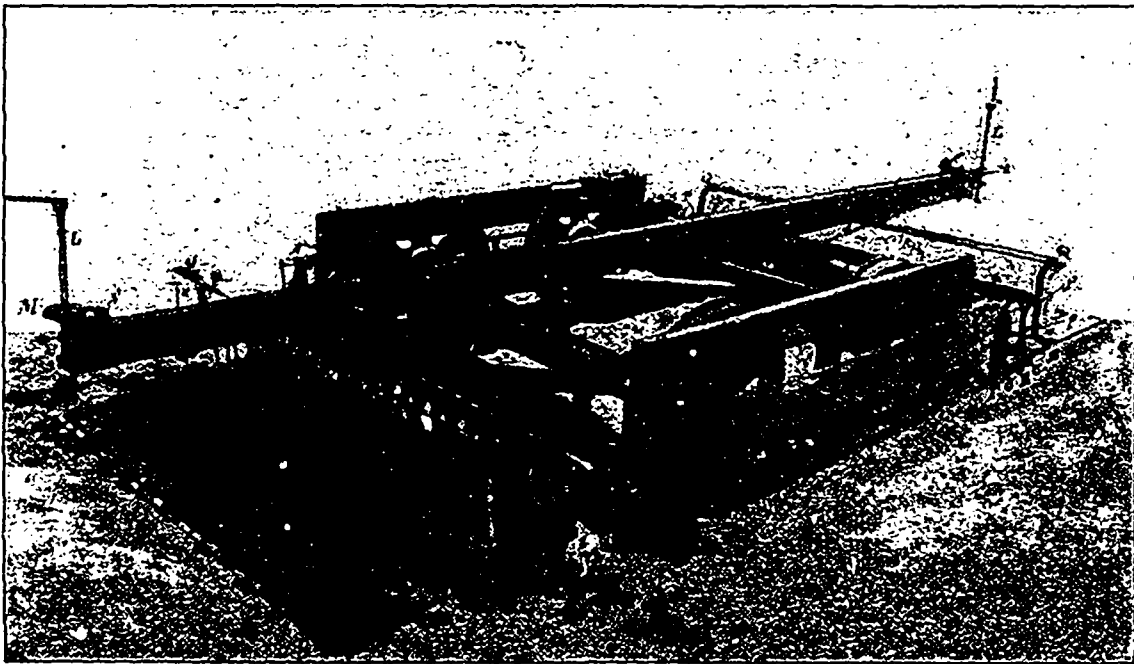
The frame from which the sectional platform is suspended is adjustable and under the immediate control of the motorman by means of the ratchet and chain, and is set by him to just clear the average level of the street between the rails. Should any object be in front of the car, a kick from his foot releases the pawl from the ratchet holding the chain, thus allowing the platform, which is hinged to the truck, to fall, and the ends with the rollers attached to ride on the ground. The platform being in sections, and each having an independent action, the rollers will follow the surface of the ground under them, and, being covered with rubber, will cushion any blow they may give.

Each section is held in position by a strong spring,

"F" are skeleton iron rods, each end drilled (in the same plane and eight inches apart) to receive a bolt; the lower ends are attached, in pairs, to the sockets "C," the upper ends to the main frame "G."

Each finger "B" is thus held in position by two swinging arms "F," which allow it to play back and forth in the same direction as the path followed by the car, and with a motion exactly similar to that of a parallel ruler when being opened and closed, one side being held stationary.

The frame "G" is made long enough to support one finger on the outside of each rail, and consists of two members of such length (on which the lugs supporting the arms "F" are cast), and two cross pieces joining them. These cross pieces extend backwards about a foot from the main frame and are forked vertically, one fork curving downwards, the other upwards; but both ending in hubs which are drilled horizontally for bolts, one for each hub. The lower hub is attached by said bolt to a bracket permanently fixed to the truck or car, and acts as a hinge by which the frame "G" can be raised or lowered. To the upper hub "H" is attached a chain "J" which runs round the chain-blocks "K" and thence forward to the rod "L,"



THE ROCHESTER ELECTRIC CAR FENDER.

but when the strength of the spring is overcome it has a swinging motion, and should the whole or any part of this platform strike a permanent obstruction (a raised crossing, for example), the sections so obstructed will simply rise until above and beyond it, when the springs referred to will force them back to their original position.

An efficient protection for the side of the car is afforded by a swinging frame filled in with wire netting, the same as that hanging over the sectional platform.

"A" are rubber rollers one inch in diameter, and attached to the ends of the fingers "B."

"B" are wooden fingers three inches wide and thirty inches long, clamped tightly, in separate iron sockets "C."

The sockets "C" consist of two bands connected by a rib "D." On each of these bands, on the upper sides, are a pair of lugs drilled to receive the bolts "E," by which the sockets "C" are hinged to the rocker arms "F."

to which it is attached. Rod "L" carries a ratchet "M" controlled by the pawl "N"; the latter is placed convenient to the motorman's foot.

The springs "O" are circular, and are bolted to the upper side of the rear member of the frame "G"; the circle is cut diametrically opposite and the ends thus made press against opposite sides of the rear arms "F," thus keeping the fingers "B" at the greatest possible distance from the frame "G."

From the bolts "P" on each side of the car is a semi-circular iron frame "Q" sustaining a tightly-stretched spring-wire netting "R" vertically about four inches in front of the frame "G," which acts as a cushion for anything sliding up the fingers "B."

A frame carrying a similar netting to "R" is hung on each side of the truck or car by the rods "S."

In practice the fingers "B" are set by the ratchet "M," so that the rollers "A" will just clear the average level of the street between the rails, and will in this position absolutely prevent any person getting