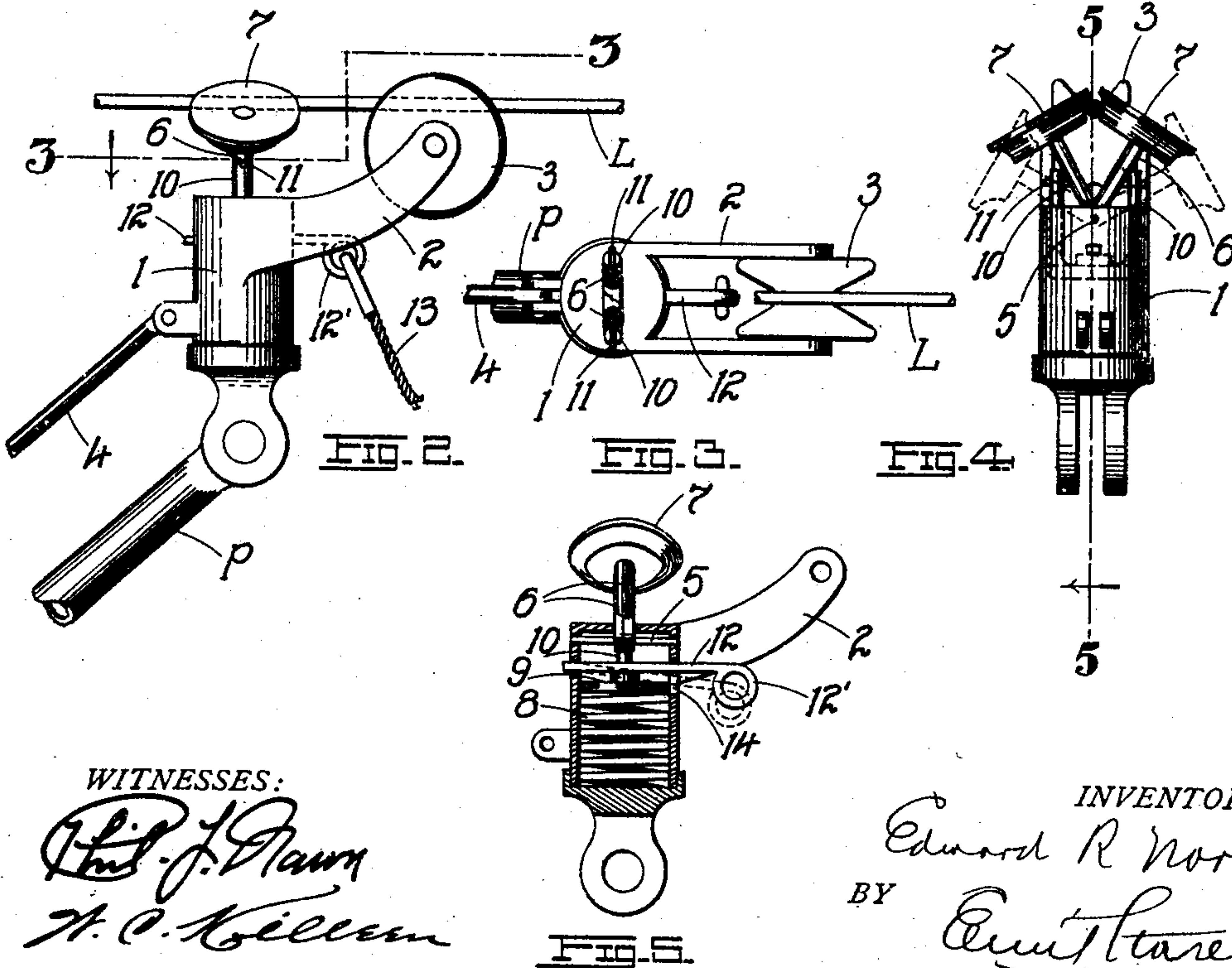
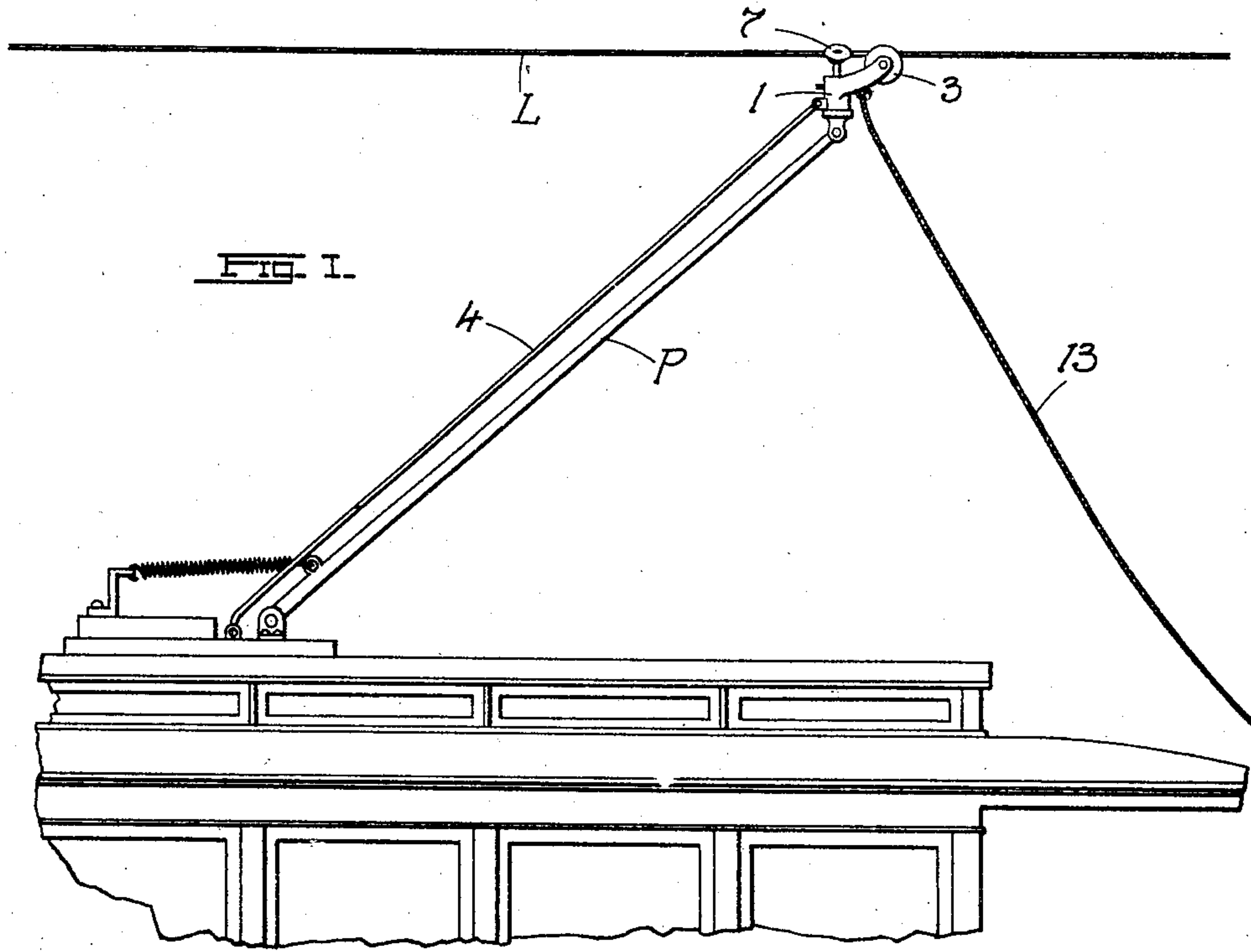


No. 782,756.

PATENTED FEB. 14, 1905.

E. R. NORTH.
TROLLEY GUARD.

APPLICATION FILED MAY 6, 1904.



WITNESSES:

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EDWARD R. NORTH, OF WEBSTER GROVES, MISSOURI.

TROLLEY-GUARD.

SPECIFICATION forming part of Letters Patent No. 782,756, dated February 14, 1905.

Application filed May 6, 1904. Serial No. 206,671.

To all whom it may concern:

Be it known that I, EDWARD R. NORTH, a citizen of the United States, residing at Webster Groves, in the county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Trolley-Guards, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in trolley-guards; and it consists in the novel construction of guard more fully set forth in the specification and pointed out in the claim.

In the drawings, Figure 1 is a side elevation of my invention. Fig. 2 is an enlarged side elevation thereof. Fig. 3 is a horizontal section on line 3 3 of Fig. 2. Fig. 4 is a front elevation thereof, and Fig. 5 is a vertical section on line 5 5 of Fig. 4.

The object of my invention is to construct a guard which will effectively hold the trolley to the wire and one which in case of accidental displacement will automatically grip the wire as the trolley is being replaced.

In detail the invention may be described as follows:

Referring to the drawings, P represents the trolley-pole, and L the line-wire. Pivottally coupled to the end of the pole is a casing 1, from which projects rearwardly an arm 2, carrying the trolley 3. The front of the casing is pivottally coupled to the upper end of a link 4, whose lower end is pivoted to the roof of the car, the purpose of this connection being to always preserve a vertical position for the casing, no matter what may be the relative elevation of the wire L above the car. Pivoted about a pin 5 in the top of the casing are arms 6 6, whose upper ends carry the bevel gripping-disks 7 7, between which the wire L is hugged. Within the casing 1 is confined a spring 8, on which rests a plate or disk 9, from which project upwardly a couple of stems 10 10, engaging the outwardly-projecting pins 11 11, carried by the arms 6 6. The expansive

power of the spring forces the disk 9 and stems 10 upwardly, the latter in turn forcing the arms 6 6 toward one another, and hence causing the bevel-peripheries of the gripping-disks 7 7 to hug the wire. Mounted above the disk 9 within the casing in such a way as to oscillate in a vertical plane is a lever 12, to whose terminal eye 12' is attached the rope 13. The rear end of the lever 12 is free to play in a vertical slot 14 of the casing, and in case the trolley should accidentally jump the wire (which it seldom can do with the present device) the conductor by pulling on the rope 13 depresses the lever 12, (dotted position, Fig. 5,) thereby compressing the spring 8 and depressing the disk 9. The depression of the latter permits the arms 6 6 and disks 7 7 to part or separate, so that the ready replacement of the device back on the wire is possible, (dotted position of parts, Fig. 4.) The release of the rope at once permits the spring to close the gripping-disks 7 7 against the wire, and the device is thus restored.

Having described my invention, what I claim is—

A trolley-guard comprising a casing, a trolley-wheel carried thereby, a pair of arms pivoted in and projecting above the casing, disks at the free ends of said arms, a spring confined within the casing, a plate resting on said spring, stems projecting from the plate, pins projecting from the arms and engaging the stems, a vertically-oscillating lever mounted above the plate and adapted when depressed to depress the plate and compress the spring, and a link coupling the casing to the roof of the car, the parts operating substantially as, and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD R. NORTH.

Witnesses:

EMIL STAREK,
W. C. KILLEEN.