

(No Model.)

P. C. MACEVOY.
TROLLEY FOR ELECTRIC RAILWAYS.

No. 571,092.

Patented Nov. 10, 1896.

FIG. 1

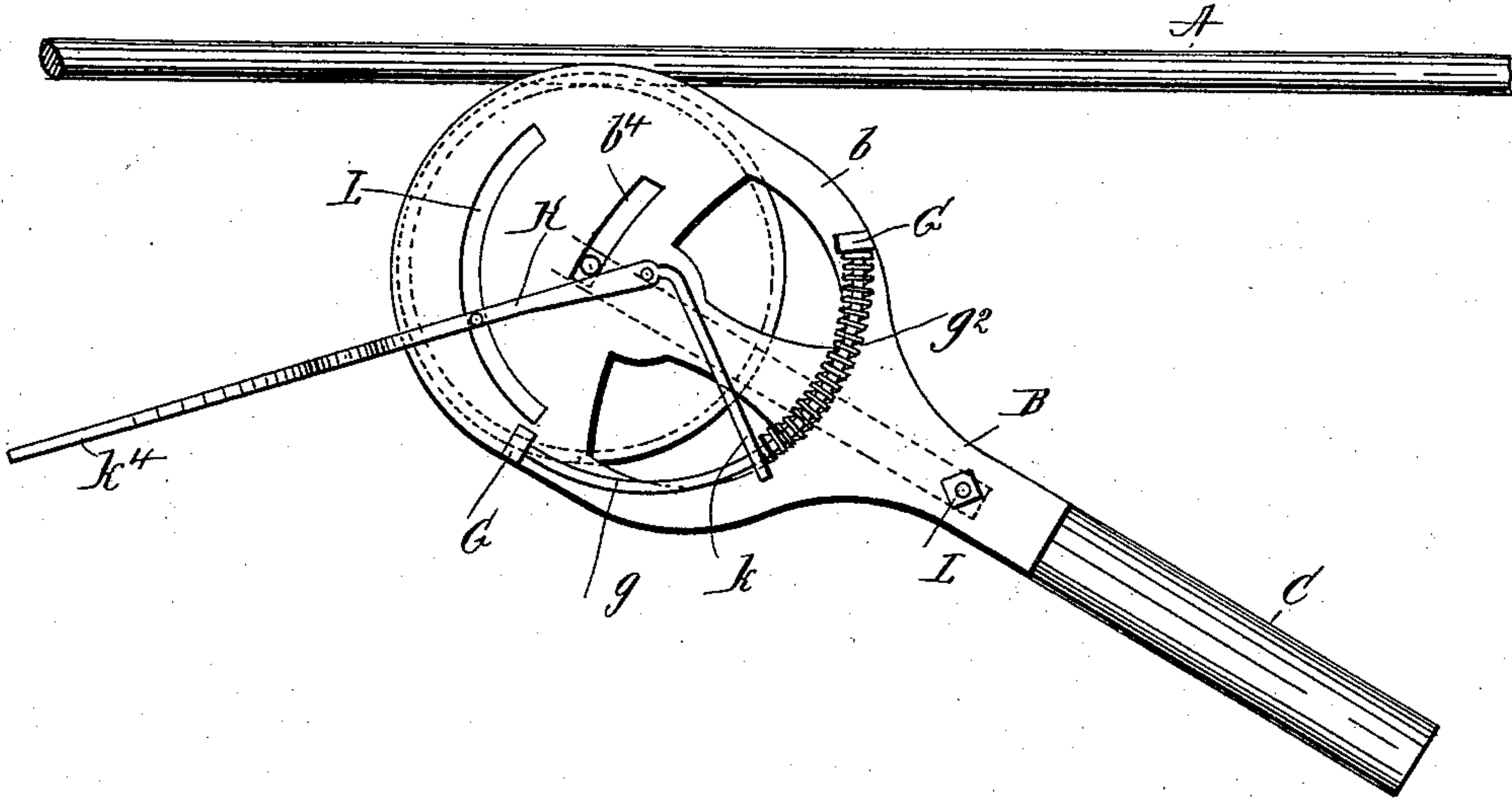
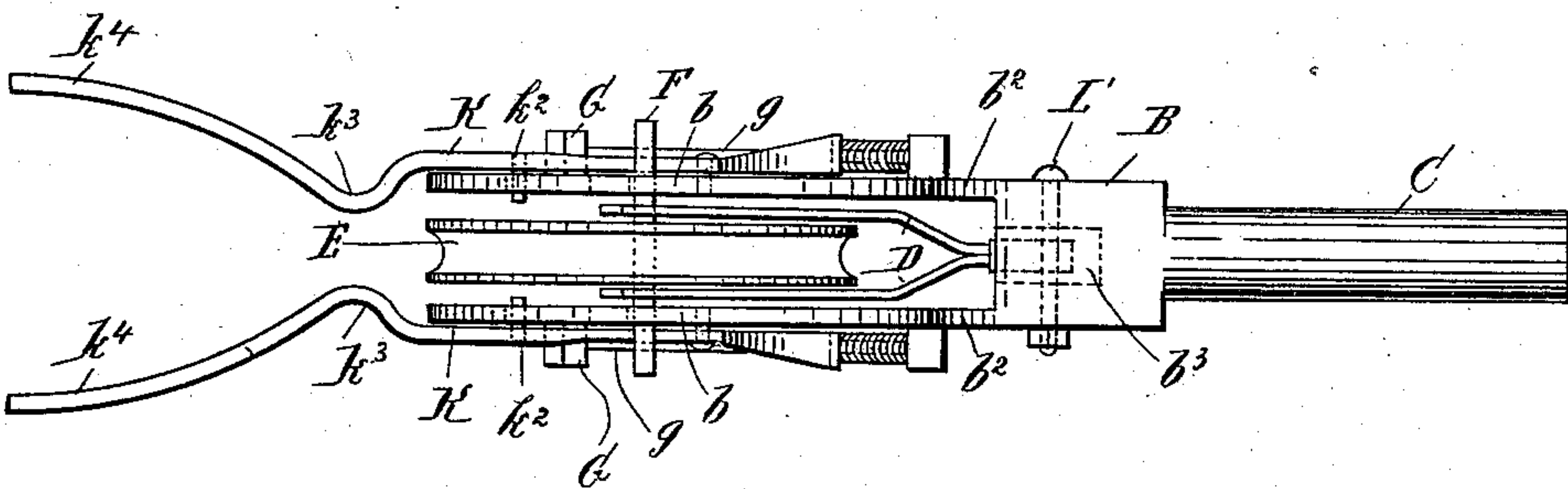


FIG. 2



WITNESSES:

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

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TROLLEY FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 571,092, dated November 10, 1896.

Application filed December 10, 1895. Serial No. 571,621. (No model.)

To all whom it may concern:

Be it known that I, PETER C. MACEVOY, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Trolleys for Electric Railways, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to trolleys for electric railways, and particularly to that class thereof which employ overhead conductors, in which the liability of the trolley-wheel to be detached is very great, such liability being caused by rough roads and the oscillation or jolting of the car as it passes thereover, this oscillation or jolting of the car resulting in the downward movement of the pivoted trolley-arm, which movement results in displacing the trolley-wheel or disconnecting the same from the conductor-wire; and the object of this invention is to provide means for preventing the disconnection of the trolley-wheel from the trolley-wire, which consists in supporting the trolley-wheel in a depressible frame and providing spring-operated guide-arms which are pivotally connected with the supports of said depressible frame, and adapted to be operated thereby; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts herein-
after described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of my improved trolley-support, showing also a section of a conductor-wire; and Fig. 2, a plan view thereof.

In the drawings forming part of this application, A represents an ordinary conductor-wire such as is usually employed in the class of electric railways hereinbefore referred to, and in the practice of my invention I provide a trolley-support consisting of a head B, having a shank C, which is adapted to be

connected with a trolley-arm in the usual or any preferred manner.

The head B is provided with circular plates *b*, which are secured thereto by means of shanks *b*², and formed in the inner end of said head is a cavity or recess *b*³, in which is pivoted a yoke or frame D, between the sides of which is mounted a trolley-wheel E, said trolley-wheel being mounted on a shaft F, which extends through the sides of the frame or yoke D and through curved or segmental slots *b*⁴ in the circular plates *b*.

Formed on the outer sides of each of the circular plates *b*, and on the upper and lower sides thereof, are shoulders or projections G, and secured in place between said shoulders or projections are curved or segmental rods *g*, the convex portions of which are turned in the direction of the head D, and mounted on each of said curved or segmental rods *g* is a spiral spring *g*². Pivotally connected with the central portions of the circular plates *b*, and on the outer sides thereof, are side or guide arms K, the inner ends of which are provided with depending projections *k*, the lower ends of which are provided with openings through which the curved or segmental rods *g* pass, and said side or guide arms are provided with inwardly-directed pins *k*², which are adapted to enter curved or segmental slots L, formed in the circular plates *b*, the convex portions of which are directed outwardly, as clearly shown in Fig. 1, and said side or guide arms are provided with inwardly-directed shoulders or projections *k*³, which are formed by bending said arms inwardly, said shoulders or projections being adapted to extend inwardly over the perimeters of the side plates *b*, and adjacent to the trolley-wheel and beyond these inwardly-directed shoulders or projections the side arms K are curved outwardly, as shown at *k*⁴.

The inner end of the frame or yoke D, by which the trolley-wheel is supported, is pivotally connected with the head B by means of a pin or bolt L', and when the outer end thereof is depressed the shaft F, which passes through the curved or segmental slots *b*⁴, rests upon and depresses the side or guide

arms K, and the depending portions k thereof compress the springs g^2 on the curved or segmental rods g , and the operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings. When the trolley-wheel is in the position shown in Fig. 1 and said trolley is in operation, the wheel will be depressed, as shown in said figure, by the conductor-wire A. If during the operation of the device the trolley should be thrown from the wire A or the wheel disengaged therefrom by reason of the car passing over a rough or uneven track, the side or guide arms K would at once be thrown upward by the springs g^2 and said side or guide arms K would inclose the conductor-wire A and return the trolley-wheel to its proper position in contact with said wire.

In the normal position of the parts, or when the trolley is in operation under ordinary circumstances, the guide-arms K, or the ends k^4 thereof, are depressed, as shown in Fig. 1, this result being produced by the pressure of the conductor-wire on the trolley-wheel, which results in depressing the frame or yoke D and the shaft F and the operation hereinbefore described is automatic, the side or guide arms K being thrown upward by the springs g^2 on the instant that the pressure is removed from the trolley-wheel, and the form of said side or guide arms is such that they always inclose the conductor-wire when the outer ends thereof are thus thrown upwardly, and by means of this arrangement said side or guide-arms always operate to return the trolley-wheel to its proper position in contact with the conductor-wire if by any chance it should be disengaged therefrom.

This invention will be found to be of great value, and the use thereof will be appreciated, especially on dark and stormy nights, when it is almost impossible to see the conductor-wire, and by reason of which the operation of connecting the trolley therewith when it becomes disengaged therefrom is exceedingly difficult.

My invention is not limited to the exact form, construction, and arrangement of parts herein described, and I therefore reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A trolley-support comprising a frame, provided with side plates, and adapted to be connected with a trolley-arm, a depressible yoke, one end of which is pivotally connected with said frame and the other end of which is provided with a shaft on which the trolley-wheel is mounted, and spring-operated side or guide arms connected with said frame, said side or guide arms being adapted to be thrown upwardly when the pressure on the

trolley-wheel by the conductor-wire is removed, substantially as shown and described.

2. A trolley-support, comprising a main frame provided with circular side plates, and adapted to be connected with a trolley-arm, a supplemental frame or yoke one end of which is pivotally connected with said main frame, and the outer end of which is provided with a shaft on which the trolley-wheel is mounted, said shaft being extended through curved or segmental slots formed in said side plates at each side, and spring-operated side or guide arms which are pivotally connected with each of said side plates and which are adapted to be depressed by said shaft, said side or guide arms being adapted to be depressed by the pressure of the conductor-wire on the trolley-wheel, and to be thrown upward, when said pressure is removed, substantially as shown and described.

3. A trolley-support, comprising a frame composed of a head, and side plates connected therewith, a yoke one end of which is pivotally connected with said head and the outer end of which is provided with a shaft, on which the trolley-wheel is mounted, the ends of said shaft being projected through curved or segmental slots formed in said side plates, and side or guide arms pivotally connected with said side plates and provided with depending portions through which are passed curved or segmental rods on which are mounted spiral springs, said segmental rods being supported upon the side plates and said side or guide arms being projected beyond said plates, and being adapted to be depressed by the trolley-wheel, when it comes in contact with the conductor-wire, and being also adapted to be raised so as to inclose said conductor-wire when the pressure thereof, is removed from the trolley-wheel, substantially as shown and described.

4. A trolley-support, comprising a head, which is adapted to be connected with a trolley-arm, and side plates which are secured thereto, a frame or yoke pivotally connected with said head and provided with a shaft, which projects through slots formed in said side plates, a trolley-wheel mounted on said shaft, and side or guide arms pivotally connected with said plates, and adapted to be depressed by said shaft, and means for returning said side or guide arms into an upwardly-directed position when the pressure on the trolley-wheel is removed, substantially as shown and described.

5. A trolley-support comprising a frame which is adapted to be connected with a trolley-arm, and provided with side plates, which form a part thereof, a depressible yoke or frame mounted between said side plates, a trolley-wheel mounted in said depressible yoke or frame, side or guide arms pivotally connected with said side plates, and adapted to be depressed by said depressible yoke or frame, and means for returning said side or

guide arms into an upwardly-directed position, when the pressure on said depressible frame is removed, comprising curved rods or bars which pass through projections formed
5 on said side or guide arms and on which are mounted spiral springs, said curved rods being supported by the side plates, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 6th day of December, 1895.

PETER C. MACEVOY.

Witnesses:

C. GERST,

S. L. HAWKSHURST.