(No Model.)

E. H. JENKINS.

ELECTRIC RAILWAY TROLLEY.

No. 489,481. Patented Jan. 10, 1893.

Fig. 1.

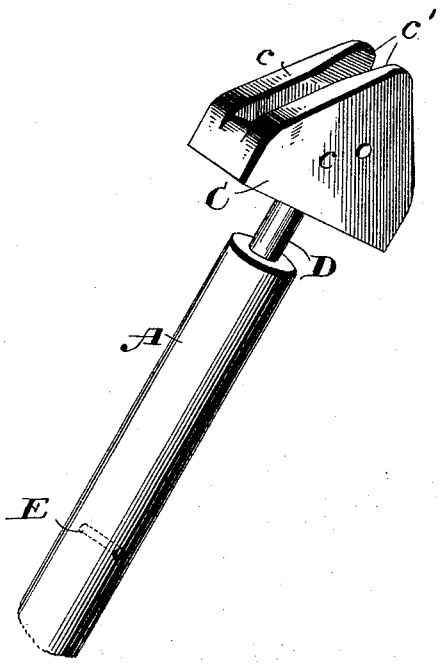


Fig. 2.

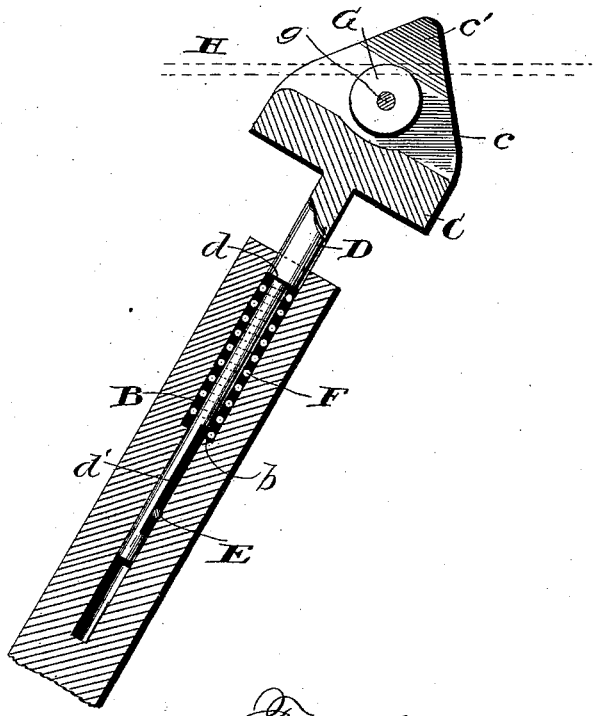


Fig. 3.

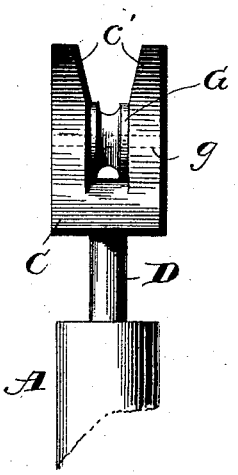
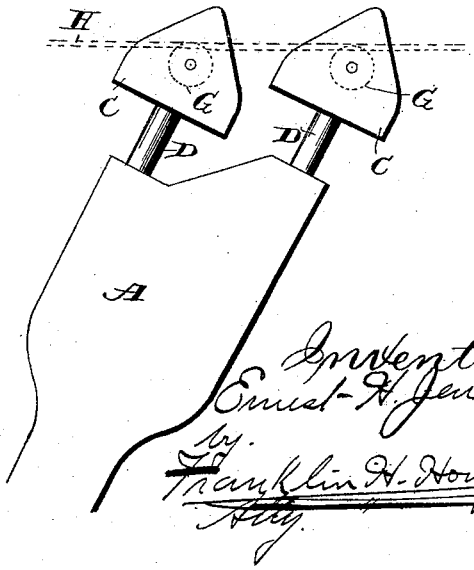


Fig. 4.



Witnesses
C. J. Williamson.
A. L. Hough.

Inventor
Ernest H. Jenkins
by
Franklin H. Hough
Atty.

UNITED STATES PATENT OFFICE.

ERNEST H. JENKINS, OF WINFIELD, MARYLAND.

ELECTRIC-RAILWAY TROLLEY.

SPECIFICATION forming part of Letters Patent No. 489,481, dated January 10, 1893.

Application filed July 20, 1892. Serial No. 440,630. (No model.)

To all whom it may concern:

Be it known that I, ERNEST H. JENKINS, a citizen of the United States, residing at Winfield, in the county of Carroll and State of Maryland, have invented certain new and useful Improvements in Trolleys for Electric-Railway Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates generally to electric railways, and particularly to an improvement in trolleys.

Heretofore considerable difficulty has been experienced in returning the trolley-wheel to the wire after passing a cross-wire or switch, upon account of the trolley pole rocking upon its pivot, thus making and breaking the current a number of times before the wheel becomes firm upon the wire.

The object of my invention is to avoid this difficulty: and with this object in view, it consists in a longitndinally movable bracket, yieldingly supported upon the end of the trolley pole and carrying the trolley-wheel.

My invention consists further in certain details of construction and novel combinations of parts, which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings which form a part of this specification; Figure 1, is a perspective view of the upper end of the trolley-pole provided with my improvements. Fig. 2, is a vertical longitudinal section, and Fig. 3 is an end view of the same. Fig. 4 is a modified form of head or bracket, in which two wheels are used.

In carrying out my invention, I employ a trolley-pole A, which is connected at its lower end to the motor car, as usual, and provided with the ordinary, or any approved appliance for holding said pole in proper position. A longitudinal socket B is formed in the upper end of the trolley pole, said socket being of larger diameter near its outer end; thus providing the upwardly projecting annular shoulder *b* within the socket. A trolley bracket C, is mounted upon the upper end of the trolley pole, said bracket having a shank D depending therefrom, which enters the socket B, formed in the end of the pole. The shank D is reduced in diameter from a point a short distance below the bracket, providing the downwardly projecting annular shoulder *d*, and in the lower portion of the shank, is provided a longitudinal slot *d'*. A pin E is passed transversely through the trolley-pole and through the slot *d'*, securing the shank within the socket, but permitting a longitudinal movement of the same within said socket. A spiral spring F is coiled around the shank D, within the enlarged portion of the socket, said spring being confined between the shoulders *b* and *d*, and when the bracket is depressed, and the shank forced farther into the socket, this spring serves to return the parts to their normal position; the outward movement of the shank being limited by means of the transverse pin E. The bracket C is composed of two parallel wings *c*, *c*, which taper to a point, as shown, and between these wings is journaled the trolley-wheel G upon the shaft *g* passed through the wings. The inner faces of the wings are beveled as shown at *c'* to guide the wire to the trolley wheel.

In operation, the wheel G will be held normally against the conductor wire H (shown in dotted lines); the bracket C will be gradually depressed in consequence of the tapering edges of the wings engaging the cross wire, and the shank will be forced into the socket compressing the spring; the moment the cross-wire has been passed, the spring expands, returning the wheel to the wire, and as the wings project above the wheel and are beveled, there will be no danger of the wheel becoming misplaced, when returned. The outward movement of the wheel is also limited by the pin E, and this pin furthermore serves to prevent the shank from turning within the socket, and thus always holds the bracket and wheel in their proper positions.

It will be seen from the above, that I provide a simple device that will serve to always maintain the wheel in contact with the wire, and which will properly return the same to

the wire when displaced by cross-wires, without rocking the trolley pole upon its pivot, as is now commonly done.

In order to prevent the breaking of the current at the point of crossing of wires, I have found it expedient to employ a modified form of head or bracket, such as I have shown in Fig. 4 of the drawings. In this construction, two trolley wheels are used. It will be at once seen that when a head of this kind is used, that when one of the wheels is crossing the wire, the other wheel will be in full contact with the main wire, thus preserving a constant current.

Having thus described my invention, what I claim to be new and desire to secure by Letters Patent, is;—

1. The combination with the pole having a socket, of the bracket having a shank to fit the same, and slotted longitudinally, the transverse pin, the spring arranged in the socket, and the trolley wheel journaled in the bracket, substantially as described.

2. The combination with the pole having a socket provided with an annular shoulder, of a bracket having a shank provided with an annular shoulder, and slotted longitudinally near its lower end, the transverse pin, the coiled spring arranged between the annular shoulders, and the trolley wheel substantially as shown and described.

3. The combination with the bracket having tapering wings beveled on their inner faces, and carried by a longitudinally movable shank of the trolley wheel journaled between the said wings, substantially as shown.

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

ERNEST H. JENKINS.

Witnesses:

GEORGE W. HESS,

JOHN F. ARNSBERGER.