(No Model.)

C. B. ELLIOTT.

SWIVEL PULL-OFF FOR OVERHEAD WIRES.

No. 476,193. Patented May 31, 1892.

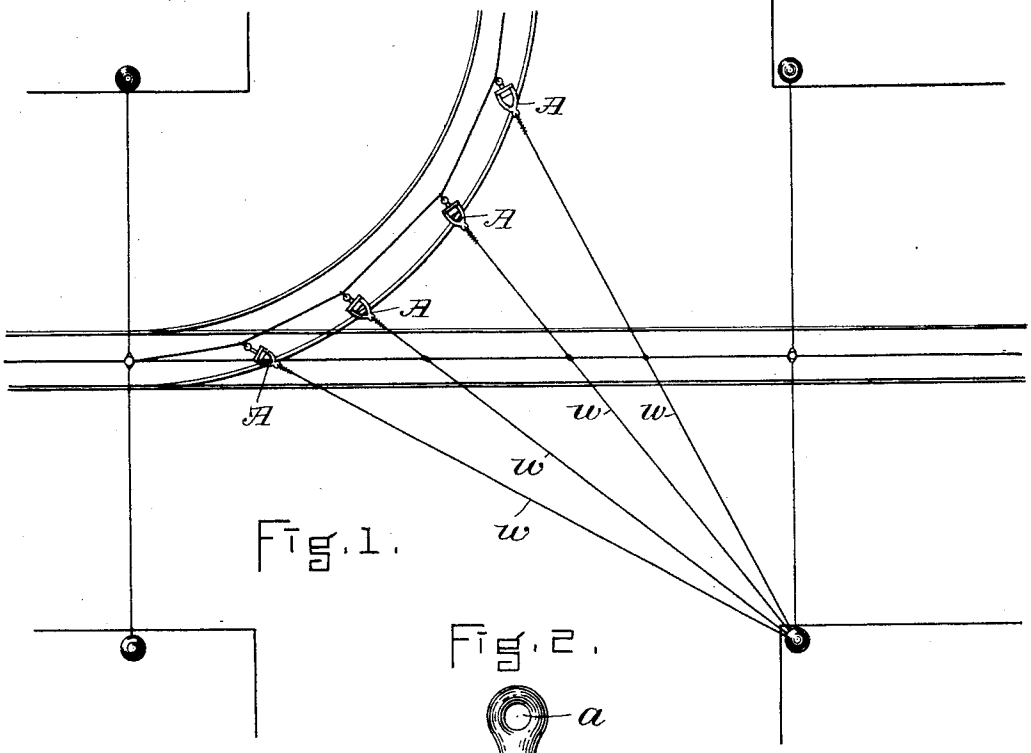


Fig. 1.

Fig. 2.

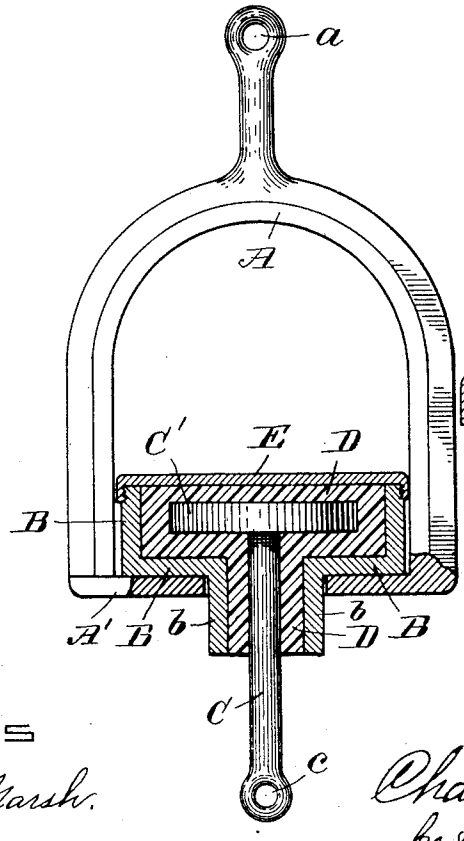


Fig. 3.

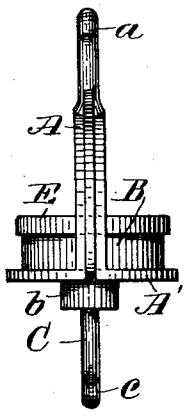
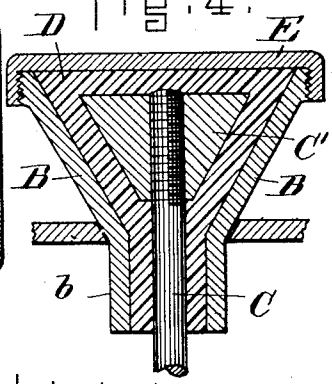


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SWIVEL PULL-OFF FOR OVERHEAD WIRES.

SPECIFICATION forming part of Letters Patent No. 476,193, dated May 31, 1892.

Application filed November 30, 1891. Serial No. 413,492. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. ELLIOTT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Swivel Pull-Offs or Curve-Hangers for Overhead Work on Electric Railways, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention is designed to furnish improved swivel-hangers or pull-offs for use at curves in overhead work on electric-railway lines and the like.

My improved hangers not only insulate the trolley-wire or other line, but enable the members of the supporting device to be adjusted with relation to each other by partial or complete rotation.

My invention is embodied in a metallic or other suitable shell having a tubular neck of reduced diameter, such shell and neck inclosing a body of insulating material, within which is a hanger having a stem extending through said neck and a head within said shell too large to enter or pull through the neck and insulated therefrom by the interposed body of material, these devices being combined with a stirrup or swivel hanger adapted to engage with and be adjusted relatively to said parts.

In the drawings, Figure 1 is a diagram representing a curve in an electric-railway line and illustrating the use of my improvements. Fig. 2 is an elevation of part of the stirrup and a central section through other parts of the apparatus. Fig. 3 is a side view, on a reduced scale, of the same devices. Fig. 4 is a broken section showing a modification.

The stirrup A, which forms the larger member of the hanger, has at one end a loop or eye *a* or other suitable termination for connection with the guy-wire *w* and at its other end an annular portion A′ in a plane at right angles to the arms of the casting or body of the stirrup. This annular part has an open center, through which projects the neck *b* of a shell or casing B, the bottom of which rests against the inner face of the annulus A. Within the body and projecting through the neck of said shell or casing is the other member of the hanger or pull-off device, such member having the stem C, the enlarged head C′, and the terminal loop or eye *c* or equivalent connecting means. Between this head and stem and the surrounding parts of the shell I interpose a body of insulating material D, preferably a low grade of rubber compound vulcanized within the shell and around the parts C C′. The head C′ is too large to pass through the neck *b*, and the position of the parts is such that the insulating material is held fast and tightly compressed between such head and the bottom of the shell. A broad cap E may cover the insulating material and is represented as screwed down upon the walls of shell B.

In the modification shown in Fig. 4 the parts are differently shaped. The shell and inclosed head and insulating material are shown of tapering form, and the stem screws into and out of the head, so that the extent of its projection may be varied. With this tapering form the inner hanger and the body of material D, in which it is embedded, may be readily introduced into the shell after vulcanization, and the pressure on such material compresses it on all sides. The yoke or stirrup is broken away in this figure, a portion of its annular part only being shown.

With the construction herein described the insulated hanger and the shell within which it is inclosed may swivel or be adjusted relatively to the stirrup by a rotary or partial rotary movement without disconnecting the parts.

I claim as my invention—

In a swivel pull-off or curve-hanger for electric railways, the stirrup or exterior hanger having arms A and annular portion A′, in combination with the shell B, having tubular neck *b*, of reduced diameter, extending through said annular part, the interior hanger C C′, held centrally within said shell and neck, and with the interposed body of insulating material D, said hangers being adapted to be supported and strained from opposite directions, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 15th day of October, A. D. 1891.

CHAS. B. ELLIOTT.

Witnesses:
A. H. SPENCER,
ELIHU G. LOOMIS.