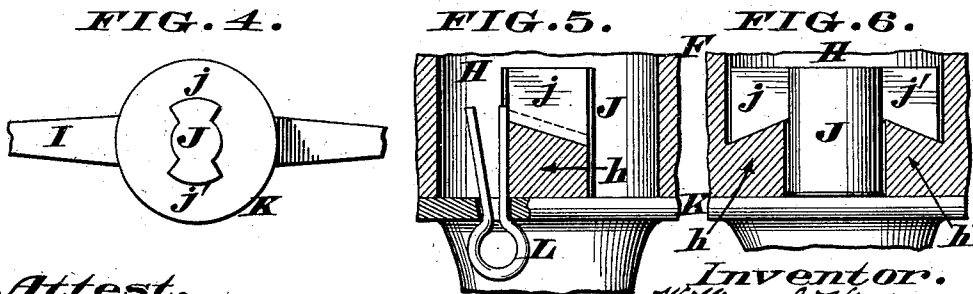
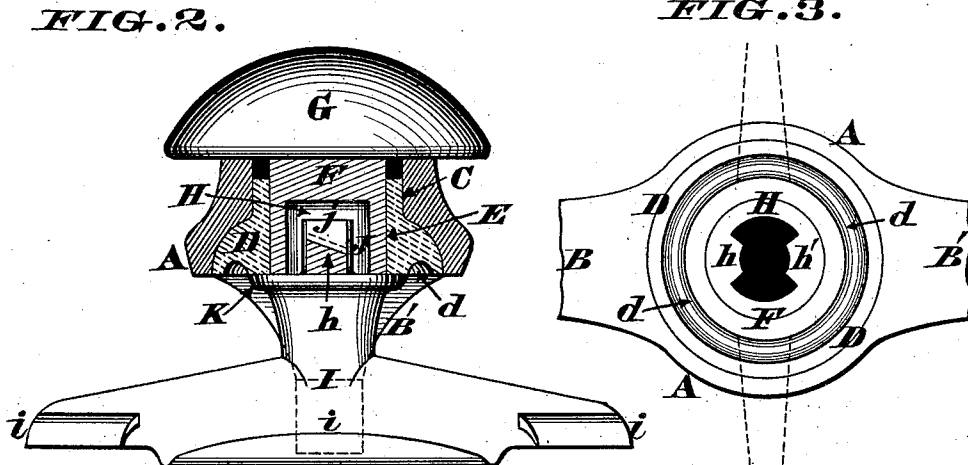
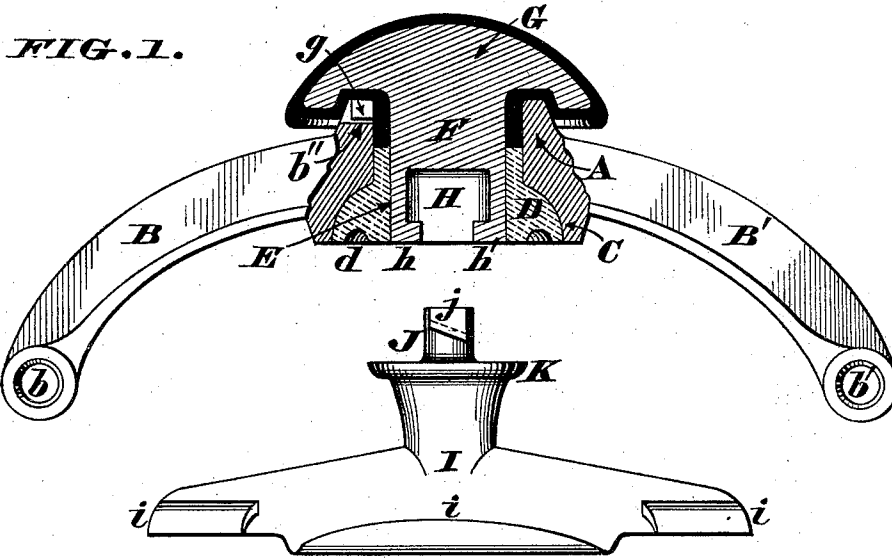


(No Model.)

W. S. KISINGER.
TROLLEY WIRE HANGER.

No. 569,338.

Patented Oct. 13, 1896.



Attest.
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UNITED STATES PATENT OFFICE.

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TROLLEY-WIRE HANGER.

SPECIFICATION forming part of Letters Patent No. 569,338, dated October 13, 1896.

Application filed February 8, 1896. Serial No. 578,500. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. KISINGER, a citizen of the United States, residing at Bantam, in the county of Clermont and State of Ohio, have invented certain new and useful Improvements in Trolley-Wire Hangers; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form a part of this specification.

This invention relates to those insulating-hangers used for supporting line-wires of underrunning trolleys; and my improvement comprises a novel combination of devices wherewith a line-wire holder is very readily and yet perfectly and securely coupled to the yoke, the details of said combination being hereinafter more fully described, and then pointed out in the claims.

In the annexed drawings, Figure 1 is a side elevation of a yoke and line-wire holder separated from each other, the yoke-hub being sectioned and said holder shown in the proper position for engaging therewith. Fig. 2 is a vertical section of the yoke, the holder being coupled thereto and turned around to the proper position for supporting the line-wire. Fig. 3 is a plan of the under side of the yoke-hub and its attachments, the holder being omitted and its position indicated by dotted lines. Fig. 4 is a plan of said holder detached from the yoke. Fig. 5 is an enlarged vertical section of the coupled yoke and holder, a locking device being shown to prevent retrograde turning of the holder-stem. Fig. 6 is an enlarged detail view.

A represents the central portion or hub of a trolley-wire hanger, and B B' are arms projecting from said hub and having perforations *b b'*, to which the span-wires are attached in the usual manner. These arms and hub constitute the "yoke" of the device, and the hub is bored vertically at C to admit an annular non-conducting filling D, the under surface of which has a drip-groove *d*, that prevents water running in toward the center of said filling. Again, this filling is bored vertically, as at E, to admit the cylindrical shank F of a cap G, that rests upon the yoke and is so shaped at top as to shed water away from the hub-bore C.

The lower portion of shank F is chambered out at H, and the entrance to said chamber has a pair of diametrically opposite bearings *h h'*, whose upper surfaces are inclined, as more clearly seen in Fig. 5. Furthermore, these bearings are on the sides of the chamber, and a line drawn through the center of the arms B B' will pass also through the center of said bearings, the location of the latter being more clearly seen in Fig. 3.

I is any approved form of line-wire holder, and *i* are clips for retaining the wire in place.

J is a cylindrical stem projecting upwardly from said holder and armed with a pair of lugs *j j'*, whose under surfaces are inclined to exert a wedging action against the bearings *h h'*.

K is a horizontal circular flange of the holder, the diameter of said flange being about equal to the inner diameter of the drip-groove *d*, as seen in Fig. 2.

In putting up my improved hanger the span-wires, that cross the streets, are fastened to the poles and then to the arms B B' in the usual way, after which act the non-conducting filling D *d* and cap G F are inserted within the hub of the yoke. The trolley-wire holder I is then brought in line with said arms, as seen in Fig. 1, so as to enable its stem J to be passed up into the chamber H of said cap, which is readily accomplished, because the lateral lugs *j j'* of said stem are now in line with the interdental spaces between the bearings *h h'*. The holder is then turned around at a right angle to its former position, as seen in Fig. 2, the result being to cause said lugs to wedge against said bearings and thereby couple the holder to the yoke in a very secure and expeditious manner and without using special tools of any kind. The trolley-wire is next applied to the holder I in the usual way, and as said wire runs at a right angle with reference to the span-wires the natural tendency of this strain is to keep the holder coupled to the yoke; but to prevent the possibility of any displacement some suitable locking device may be used, a simple form thereof being seen in Fig. 5. Here a split spring-key L is passed up through a suitable opening in the flange K, and bears against the larger end of either one of the bearings

h or *h'*. By simply withdrawing this key the stem *J* can be so turned as to disengage its lugs from the bearings and then be pulled directly out of the chambered shank.

5 It is evident that the cap *G* *F* must be insulated from the yoke in any suitable way, but preferably by enveloping it in hard rubber, as indicated in the drawings by the thick black lines. As seen in Fig. 1, this cap may be
10 locked against turning by a lug *g*, entering a notch *b''* of the yoke-hub.

Fig. 6 shows that the lug *j j'* may be undercut inwardly, or toward the stem *J*. Finally, the openings between the bearings *h h'* need
15 not be located in any special position when the key *L* or an equivalent of the same is used.

I claim as my invention—

1. The combination, in a trolley-wire hanger, of a yoke; an insulated member applied thereto, and having a vertical chamber
20 with a pair of inclined bearings at its lower end; and a line-wire holder provided with a pair of inclined lugs that engage over said bearings, for the purpose described.

25 2. The combination, in a trolley-wire hanger, of a yoke; an insulated member *F*

applied thereto, and having a vertical chamber *H* with a pair of inclined bearings *h h'*, at its lower end; a line-wire holder *I* having a pair of inclined lugs *j j'*, that engage over
30 said bearings; and a locking device so applied to said member *F* as to prevent retrograde turning of said stem, in the manner herein described.

3. The combination, in a trolley-wire hanger, of a yoke; an insulated member *F* applied thereto, and having a vertical chamber *H*, with a pair of inclined bearings *h, h'*,
35 at its lower end; a line-wire holder *I* having a pair of inclined lugs *j, j'*, that engage over said bearings; a perforation in said wire-holder; and a split spring-key *L* that passes
40 through said perforation and bears against the larger end of either one of said bearings *h* or *h'*, all as herein described, and for the
45 purpose stated.

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

WILLIAM S. KISINGER.

Witnesses:

JAMES H. LAYMAN,

JAS. A. McDONALD.