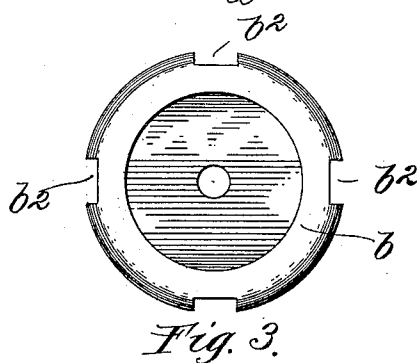
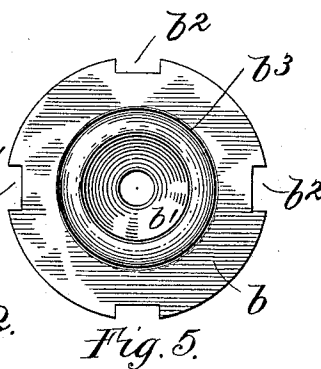
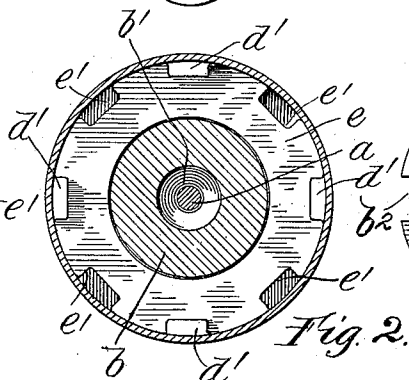
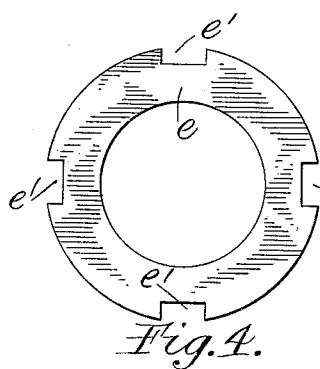
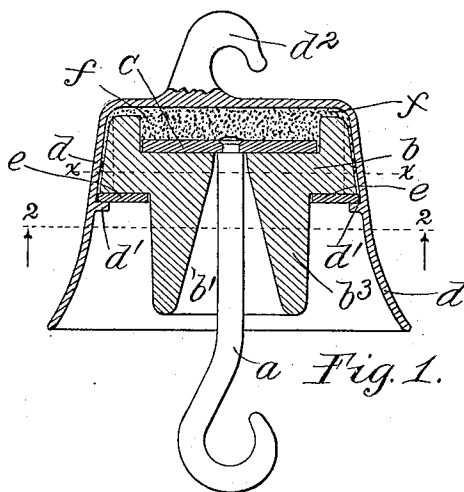


(No Model.)

E. P. WARNER.
INSULATED HANGER.

No. 593,625.

Patented Nov. 16, 1897.



Witnesses:
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UNITED STATES PATENT OFFICE.

ERNEST P. WARNER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN ELECTRIC COMPANY, OF SAME PLACE.

INSULATED HANGER.

SPECIFICATION forming part of Letters Patent No. 593,625, dated November 16, 1897.

Application filed March 8, 1897. Serial No. 626,501. (No model.)

To all whom it may concern:

Be it known that I, ERNEST P. WARNER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Insulated Hangers, (Case No. 63,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an insulated hanger, and is particularly applicable to hangers such as those from which arc-lamps are suspended.

The object of my invention is to provide a hanger which shall combine perfect and complete insulation with simplicity in construction and consequent small cost of manufacture.

In accordance with my invention the hook from which the lamp is suspended is provided at its upper end with a flat retaining-piece, preferably a metallic disk, which is supported by its engagement with a glass or porcelain insulator. The latter is retained within and protected by a bell-shaped hood of cast-iron, a hook being formed upon the top thereof by which it may be hung. The glass insulator rests upon a ring which is supported by lugs within the hood. The disk or retaining-piece upon the end of the hook is made of such diameter that it cannot pass through the hole in the ring. Thus if, as frequently happens, the glass insulator should be broken and fall the hook is saved from falling by the engagement of the disk or retaining-piece with the ring, through which it cannot pass. Serious damage by breakage and short-circuiting is thus avoided. The spaces between the parts within the hood are preferably filled and the parts firmly held by some insulating material, such as sulfur, which is introduced while in a liquid or plastic state and permitted to solidify, making a tight joint.

One form of my invention is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation of an insulated hanger constructed in accordance with my invention. Fig. 2 is a sectional view taken along line 2 2, Fig. 1. Fig. 3 is a detail plan view of the glass or porcelain insulator. Fig. 4 is a detail view of a ring which

I preferably employ to support the insulator within the hood. Fig. 5 is a bottom view of the glass insulator.

Like letters refer to like parts throughout the several figures.

The hook *a*, from which the lamp is to be suspended, is thrust through the funnel-shaped mouth *b'* of the glass insulator *b* and is then riveted, as shown, to the metallic disk *c*, which prevents its withdrawal.

The bell-shaped hood *d* is provided with lugs *d'* *d'*, cast upon its inner surface, and the glass insulator *b*, together with its supporting-ring *e*, have slots *b² e'*, respectively, in their peripheries which register with said lugs. A hook *d²* is cast integrally with the top of the hood *d*, by which it may be hung.

In assembling, the insulator *b* and ring *e* are placed together and slipped past the lugs *d'* *d'* into the hood, whereupon they are slightly rotated, so that the slots *b² e'* no longer register with the lugs *d'*, thus preventing the withdrawal of the insulator and ring from the hood.

To complete the joint and prevent relative movement of the parts, the hanger is now inverted and supported upon the curved end of the hook *a*, while melted sulfur or the like is poured into the slots in the insulator, filling the interstices, as shown at *f*, and rising about as high as the dotted line *xx*, whereupon it is left to solidify, the hanger being then completed.

The insulator *b* is provided with a neck *b³*, extending downward for some distance about the shank of the supporting-hook *a*, so that should moisture collect upon the glass insulator in spite of the hood *d* the spark would have to traverse so great a space upon the surface of the glass that it cannot persist.

The diameter of the metallic disk *c*, to which the hook *a* is secured, is preferably made larger than that of the hole in the ring *e*, so that the disk *c* cannot pass the ring *e*, which is of iron, and consequently the arc-lamp or whatever is hung upon the hook would not be allowed to fall even should the glass insulator be completely broken, as sometimes happens.

In practice I have found these hangers very efficient, having dipped them in water and tested them still wet under a pressure of thou-

sands of volts, finding that the insulation bears up perfectly under the strain.

Those skilled in the art may suggest modifications which might readily be made without departing from the spirit of my invention; but while I have shown in the drawings and described the form which has seemed to me the best adapted for its purpose I do not wish to be understood as limiting myself to the precise construction shown; but,

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

1. In an insulated hanger, the combination with a metallic hood, of lugs formed upon the interior thereof, a metallic ring supported by said lugs, a glass insulator retained in position within the hood by said ring, a hook, the shank whereof passes through said insulator and a disk secured to the end of said shank and supported by said insulator, said disk being of such diameter that it cannot pass through the ring, substantially as and for the purpose described.

2. In an insulated hanger, the combination with a metallic hood, of a glass or porcelain insulator, a ring supported upon the inside of

said hood upon which said glass insulator rests, and a hook, the shank whereof passes through said insulator, and having a retaining-piece upon its upper end resting upon the glass insulator, the retaining-piece being of such size that it cannot pass through the ring, substantially as and for the purpose described.

3. In an insulated hanger, the combination with a metallic hood, of a glass or porcelain insulator supported upon a ring within said hood, a hook, the shank whereof passes through said insulator, a retaining-piece upon the upper end of said shank and resting on said insulator, said retaining-piece being of such size that it cannot pass through the ring, and insulating material introduced while in a liquid or plastic state into the spaces between the hood and the parts, and permitted to solidify, substantially as described.

In witness whereof I hereunto subscribe my name this 9th day of January, A. D. 1897.

ERNEST P. WARNER.

Witnesses:

D. W. C. TANNER,
GEORGE L. CRAGG.