No. 726,912. PATENTED MAY 5, 1903.

J. P. HEBENDAHL & J. J. GAFFNEY.

ELECTRIC LIGHT HANGER.

APPLICATION FILED NOV. 26, 1901.

NO MODEL.

Fig. 1.

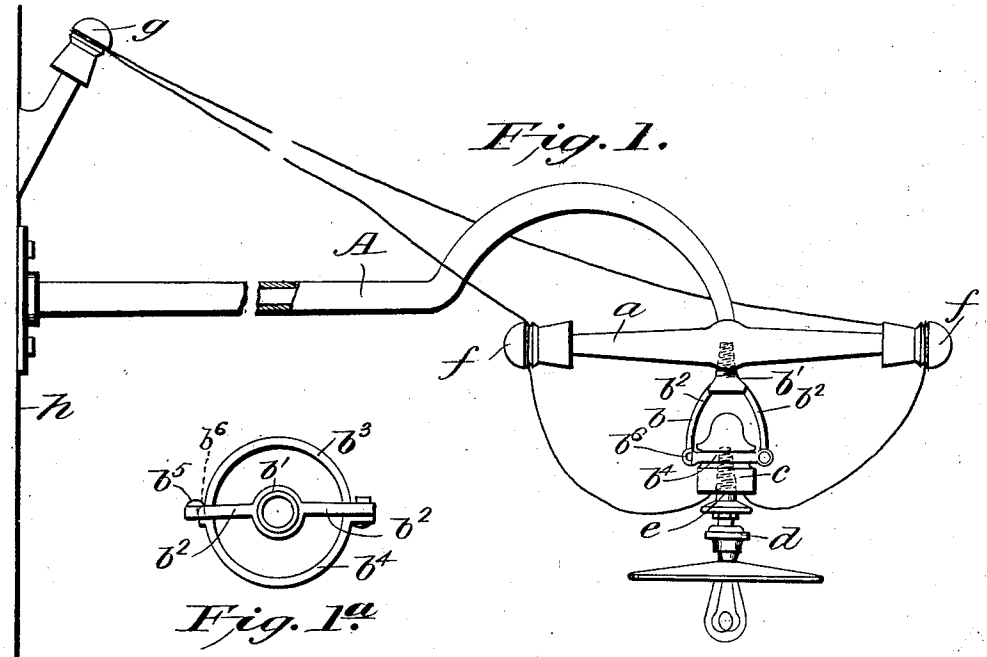


Fig. 1a.

Fig. 2.

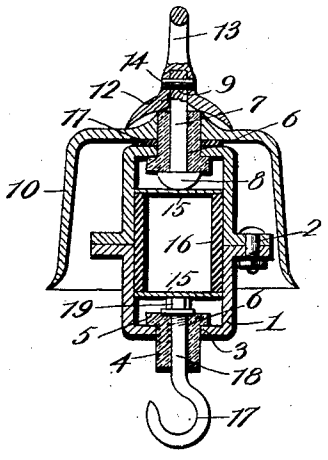
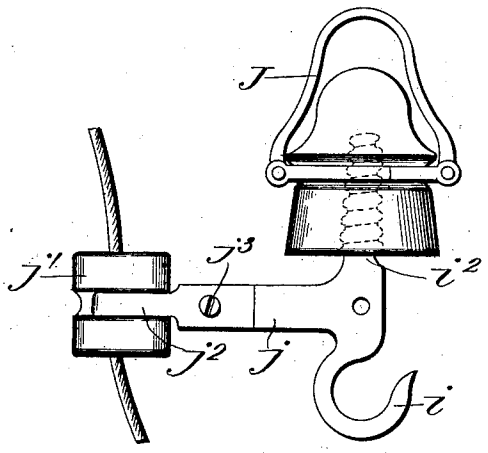


Fig. 3.



WITNESSES:

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No. 726,912. Patented May 5, 1903.

UNITED STATES PATENT OFFICE.

JOHN P. HEBENDAHL, OF ELIZABETH, AND JOHN J. GAFFNEY, OF NEWARK, NEW JERSEY.

ELECTRIC-LIGHT HANGER.

SPECIFICATION forming part of Letters Patent No. 726,912, dated May 5, 1903.

Application filed November 26, 1901. Serial No. 83,726. (No model.)

To all whom it may concern:

Be it known that we, JOHN P. HEBENDAHL, residing at Elizabeth, in the county of Union, and JOHN J. GAFFNEY, residing at Newark, in the county of Essex, State of New Jersey, citizens of the United States of America, have invented certain new and useful Improvements in Electric-Light Hangers and Insulators, of which the following is a specification.

This invention relates to hangers for arc-lamps, trolley or other conducting wires where high voltage is used.

The object of the invention is to produce a hanger in which the current is confined in such manner as to prevent its reaching the pole or bracket from which the hanger is suspended.

Furthermore, the object of the invention is to produce a hanger embracing novel features whereby the depending hook or support on which the lamp or conductor is suspended is separated and insulated from the upwardly-extending connection to the bracket or other supporting device.

Furthermore, the object of the invention is to produce a hanger in which the insulating material is so incased as to exclude rain or snow in order to prolong its durability and to produce a bracket and insulating means which will possess advantages in points of simplicity, efficiency, and inexpensive structure.

With the above and other objects in view the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail reference will be had to the accompanying drawings, forming part of this specification, wherein like characters denote corresponding parts in the several views, and in which—

Figure 1 is a view in elevation of a bracket and lamp with the hanger-insulator embodying the invention applied. Fig. 2 is a vertical central sectional view, partly in elevation, of another form of insulator. Fig. 3 is a view in elevation of a modified hanger and insulator.

In the drawings, A denotes a hollow bracket carrying on its end a cross-arm a, which is screwed or otherwise secured in place. The yoke b, supporting the insulator c, comprises a hollow head b', threaded in the cross-arm, and two integral diverging members b^2, connected by a curved portion b^3, forming one section of the insulating-clamp. The detachable member b^4 of the insulating-clamp has a lug b^5 fitting in an aperture b^6 of one diverging member of the yoke and is bolted to the opposite member after passing around one side of the insulator. By the posts described the insulator is secured to the yoke, and the yoke in turn is readily applied to the cross-arm.

The cut-out plug d has a casing secured to a shank e, and the shank in turn is threaded in the insulator, so that all the points of the lamp are readily assembled. The wires are attached to the insulators f on the cross-arm and are connected to the terminals (not shown) of the plug. The bracket being hollow, the wires may pass through the head of the yoke into the bracket, or they may pass to the insulator g on the pole h.

In the modification Fig. 2 a casing 1 is provided comprising two cup-shaped sections having coinciding flanges which are held together by the bolts 2 or in any suitable manner. The end of each section is provided with a hole 3. Insulators 4, preferably of porcelain, project from the sections of the casing, said insulators having flanges 5 engaging the inner walls of said sections and having recessed ends, as shown at 6. A rod 7 has a head 8 lying in the recess of the upper insulator, said rod passing through the insulator and having its upper end provided with a hole 9. A porcelain hood or protector 10 has a hole to receive the end of the upper insulator 4, and said hood is of such size as to depend sufficiently to prevent rain or snow being driven through the joints of the sections of the casing. The hood is supported by the casing, there being a gasket 11 interposed between the surfaces in order to make a tight joint where the upper insulator projects. The upper surface of the hood is tapered and has fitted thereto the shank 12 of the eye 13, which is engaged by the supporting hook or connection A for suspending the lamp. The shank of the eye has a hole to register with the hole in the rod 8,

and a pin 14, run therethrough, retains the parts assembled.

In order to prevent arcing of the circuit to the rod 8, its head is protected by disks 15 of non-conducting material, and said disks are held in place by the insulating-tube 16, preferably of rubber. A hook 17, on which the lamp or conductor is suspended, has a shank 18 passing through the lower insulator 4, and the shank has a threaded end to receive the nut 19, which is embedded in the recess formed in the inner end of the lower insulator. The nut 19 is also protected against a circuit connection by the insulating-disks 15, and one end of the tube 16 bears thereacross to hold them in position.

By the use of the hanger of the construction described electric currents cannot find a path to the mast-arm or supporting-brackets, and as the construction is such that deterioration of the elements of the hanger is minimized the invention involves advantages of a pronounced character, which will, it is thought, be appreciated by those skilled in the art.

In the modification shown in Fig. 3 the insulator of the same construction shown in Fig. 1 is employed, and the yoke *j* is provided, corresponding in construction with that described in connection with Fig. 1, except the head is omitted. This yoke is designed to be supported by a hook or other device or rigging usually present on mast-arms and other light-supports.

A lamp, which may be of any ordinary construction, is supplied on the hook *i*, having a threaded shank i^2 fitting in the insulator. An arm *j* is formed with the shank and carries an insulating-holder j^2, comprising a strip of metal passed around the insulator j' and secured to the arm by a bolt j^3. The insulator j' is employed for holding the feed-wires and preventing their sagging.

The construction, operation, and advantages will, it is thought, be understood from the foregoing description, it being noted that changes in the proportions and details of construction may be resorted to for successfully carrying the invention into practice without departing from the scope thereof.

Having thus fully described the invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a hanger, a casing, an insulator projecting from one end of the casing, a bolt run through the insulator and extending beyond its end, a hood on the casing, an eye having its shank fitting on the bolt and secured thereto and a suitably-insulated hook projecting from the opposite end of the casing.

2. In a lamp-hanger, a casing, connections projecting from each end of the casing, insulators to which the connections are attached, insulating-disks on the interior of the casing and an insulating-tube separating the disks.

3. In a lamp-hanger, a casing, insulating-tubes extending from each end of the casing; said tubes having flanges and recesses on their inner ends, a hook having a shank extending through the insulating-tube, a nut run on the ends of the shank and lying normally in the recess of the insulator-tube, insulating-disks protecting the nut and shank from electrical currents, a rod projecting from the upper end of the casing through the insulator and head in the rod, insulating-disks protecting the head of the rod from electrical currents, a hood on the upper end of the casing, an eye having a shank fitting in the rod; said shank being flared to fit over the upper surface of the hood and means for attaching the shank of the eye to the hood, substantially as described.

4. In a lamp-hanger, a casing, insulating-tubes extending from each end of the casing; said tubes having flanges and recesses on their inner ends, a hook having a shank extending through the insulating-tube, a nut run on the end of the shank and lying normally in the recess of the insulator-tube, insulating-disks protecting the nut and shank from electrical currents, a rod projecting from the upper end of the casing through the insulator and head in the rod, insulating-disks protecting the head of the rod from electrical currents, an insulating-tube within the casing having its ends bearing on the disks, a hood on the upper end of the casing; said hood having a tapered upper surface, an eye having a shank fitted into the rod, said shank being flared to correspond with the contour of the upper surface of the hood and a pin run through holes in the eye-shank and rod for retaining the parts assembled, substantially as described.

In testimony whereof we affix our signatures, in the presence of two witnesses, this 12th day of November, 1901.

JOHN P. HEBENDAHL.
JOHN J. GAFFNEY.

Witnesses:
WILLIAM N. RAPP,
PEARL FRAY.