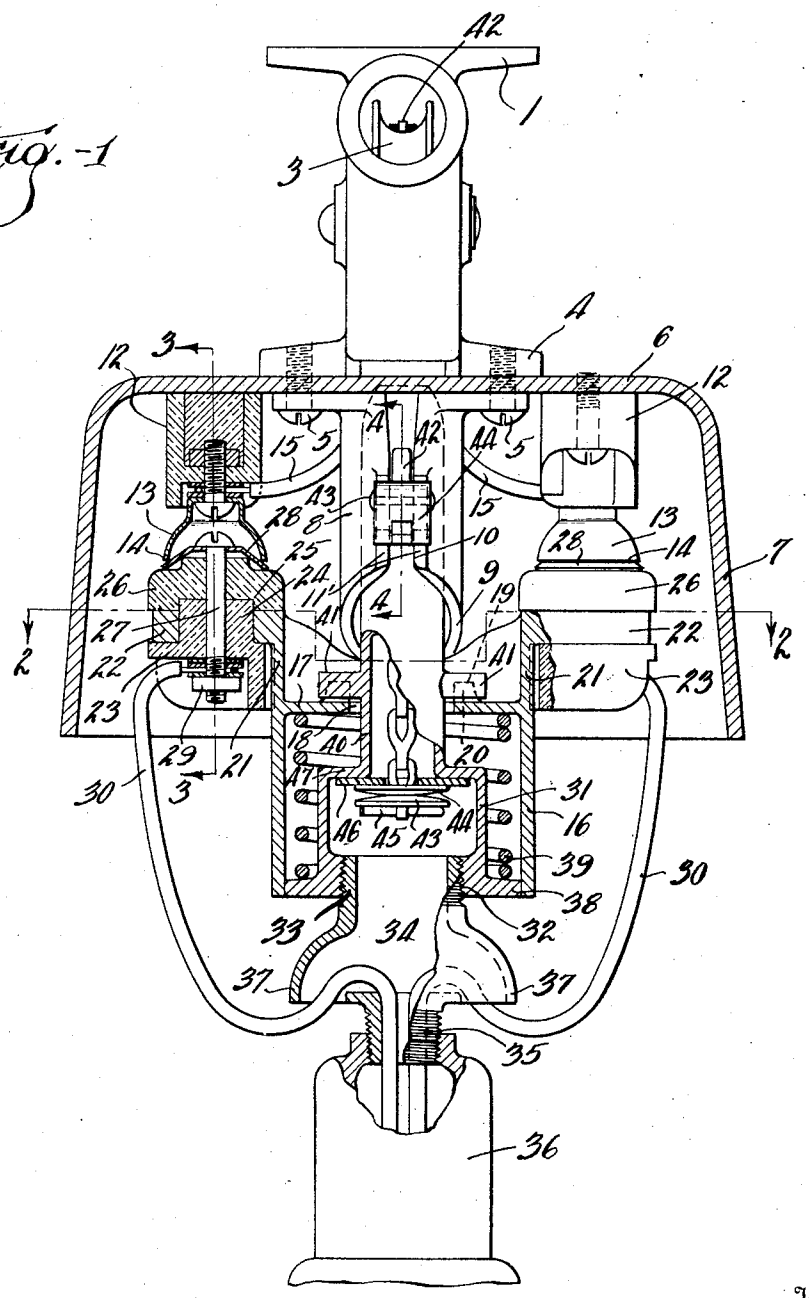
Oct. 22, 1929. A. J. THOMPSON 1,732,622

CONTACT FOR LAMP HANGERS

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Fig. 1



Inventor

Allison J. Thompson

By Brockett & Hyde

Attorneys

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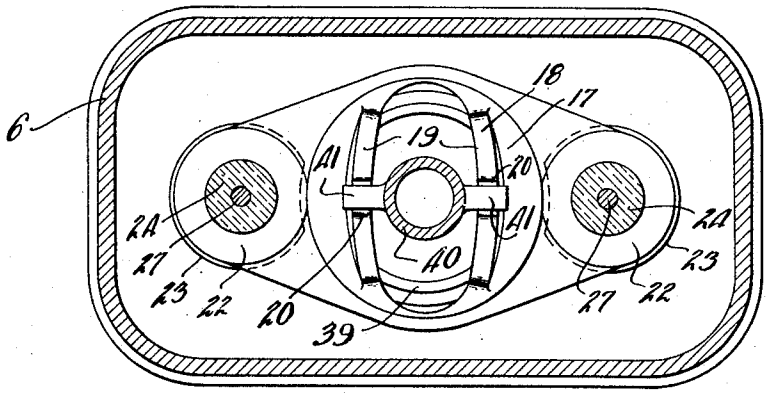


Fig.-2

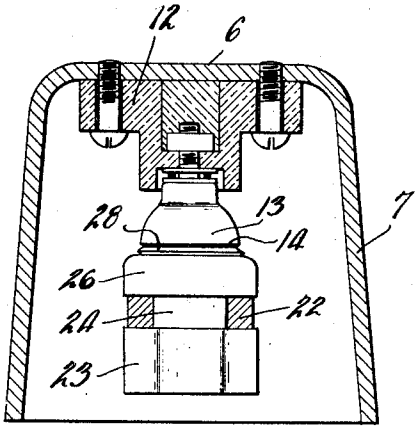


Fig.-3

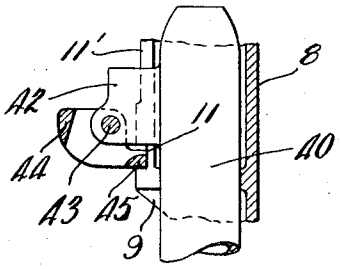


Fig.-4

Inventor

Allison J. Thompson

By Brockett & Hyde

Attorneys

Patented Oct. 22, 1929 1,732,622

UNITED STATES PATENT OFFICE

ALLISON J. THOMPSON, OF CLEVELAND, OHIO

CONTACT FOR LAMP HANGERS

Application filed October 8, 1925. Serial No. 61,379.

This invention relates to lamp hangers used for supporting various types of lamps and is of the type employing a main hanger member carried by a suitable support and a lamp hanger member carrying the lamp and adapted to be raised into latching and contact engagement with the main hanger member and to be lowered to the ground for cleaning and other work upon the lamp.

These devices usually include suitable latching mechanism between the two members and contact mechanism for establishing the electric circuit through the main hanger member and the lamp hanger member to the lamp. The contact devices utilized in these hangers have heretofore been of the type such that corrosion or scale forming on one contact prevented effective and efficient operation of the lamp.

The present invention therefore aims to overcome some of these difficulties by providing the hanger members with contacts so constructed and arranged that when the hanger members are brought together, an edge of the contact of one member engages a surface of the contact of the other member with sufficient force to remove therefrom any scale or foreign substance which would interfere with the making of a proper metal to metal contact therebetween.

The invention is very well illustrated and set forth in the following description, drawings and claim.

Referring to the drawings, Fig. 1 is a view partly in side elevation and partly in vertical section showing the application of the invention to a lamp hanger; Fig. 2 is a section upon the line 2—2 of Fig. 1; Fig. 3 is a section upon the line 3—3 of Fig. 1; and Fig. 4 is a detailed section partly in elevation taken upon the line 4—4 of Fig. 1 and in the direction of the arrows.

In the embodiment shown in the drawings, 1 represents a supporting bracket of the main hanger member, which bracket is adapted to be secured to a pole, arm or other device for supporting the entire mechanism. This bracket 1 preferably forms part of a sheave housing carrying a sheave 3 and also provided with a base flange 4. The mechanism thus far described is well known in the art and forms no special part of the present invention. Secured to the flange 4 by screws 5 is the canopy 6 having the downwardly extending skirt portion 7 open at the bottom. Inside of the canopy 6 and secured in the top thereof is an assembly guide tube 8 of the usual construction with an inclined bottom camming edge 9 which is utilized to direct the lamp hanger member into the proper position. This member is also provided with the usual vertical slot 10 arranged between outwardly extending vertical flanges 11′ one on each side of the slot and provided with latch notches 11 shown in Figure 4. The canopy 6 is rectangular in cross section with rounded corners, as indicated in Fig. 2, and on two sides of the guide tube 8 there are contact supporting insulators each comprising an insulator member 12 carrying a cup-shaped metallic contact 13 with a downwardly extending contacting edge 14 which in some instances would obviously be circular. This contact is connected to one of the incoming or line wires 15. As before indicated, there are two of these contacts and they are adapted to be connected to the line wires which enter the canopy in any suitable manner. The foregoing description completes the structure of the main hanger member.

Cooperating with the main hanger member is the lamp hanger member which includes a contact member and a chain or rope member the former comprising a cylindrical socket 16 provided with a diaphragm or horizontal wall 17 having an oval shaped opening 18. The diaphragm 17, on its upper surface and adjacent the edges of the opening 18 and opposed to each other on the minor axis of said opening, is provided with upwardly extending projections each comprising a pair of cams 19 extending and rising upwardly from the surface of the diaphragm to a notch 20, as shown in Fig. 2. These notches are for the purpose of locking the lamp hanger member itself to the chain or rope member, as will appear.

The socket 16 of the contact member is also provided with a pair of contact supports, each comprising an upwardly extending bracket

21 provided with an outwardly extending eye 22 receiving a lower insulator 23 provided with a boss 24 extending through the eye 22 and engaging in a recess 25 in an upper insulator 26. These insulators are held together by a bolt 27 extending through them and having its head engaging a contact plate 28 on the upper contact member 26. This plate, while it is tapered or partially conical, has its surface engaging the edge 14 of the upper contact whereby any grit or foreign substance collecting on the contact portion 28 will be removed and metal-to-metal contact will result. The bolt 27 is provided with a nut 29 by means of which one of the leads 30 to the lamp may be secured in place.

The chain or rope member comprises a hollow hub 31 having a threaded opening 32 in its bottom for receiving the threaded shank 33 of an adaptor 34. This adaptor has a tubular threaded shank 35 which screws into the lamp member 36. The adaptor 34 is provided with laterally extending downwardly opening tubular projections 37 for receiving the wires which may pass through the threaded shank 35 to the lamp. The hub 31 is also provided with an annular flange 38 engaging a spring 39 which thrusts against the underside of the diaphgram 17 and tends to move the chain or rope member downward within the cylindrical socket 16. Projecting upwardly from the hollow hub 31 is a chain or rope tube 40 rounded at its upper end for ready entrance into the guide 8 and having radially extending pins 41 adapted to engage in the recesses 20.

The rope tube or stem 40 is provided with a fin or flange 42 adapted to pass up through the slot 10 and it is provided with a suitable eye adapted to receive a cotter or other pin 43 upon which is pivoted a gravity latch 44, which is provided with a nose 45 adapted to engage in the recesses or notches 11. The arrangement is such that when the lamp hanger member is raised sufficiently to bring the contacts into engagement, the spring 39 gives and allows the rope member to continue to move upward when the latch will be carried above the notches 11 and when the lamp hanger member is moved slowly the nose 45 of the latch engages in the notches and supports the lamp hanger member. When the lamp hanger member is released quickly, the latch passes the notches 11 and the lamp hanger member descends.

When the lamp and its socket 16 are to be applied to the rope member, the operator passes the lugs 41 through the opening 18 and compresses the spring 39. When the spring is compressed sufficiently to permit the lugs 41 to pass above the diaphragm 17 relative rotation of the socket 16 and the rope member will cause the pins to enter the recesses 20. In this way the lamp and its connected parts are readily releasable from the socket.

The lamp hanger member is raised and lowered by means of a chain or rope 42 extending over the sheave 3 passing down through the tube 8 and through the rope tube stem 40 and into the hollow hub 31 where it is provided with a suitable securing means. The securing means in this instance comprises a pair of convex washers 43 and 44 with their convex sides turned toward each other and with the lower one engaging a pin 45 through the chain or rope and the upper one engaging a larger washer 46 in turn engaging a shoulder 47 formed in the hollow hub 31. This arrangement produces an effective swivel upon the end of the chain or rope for lamp hanger member.

In operation, assuming the parts to be as shown in Fig. 1, the operator pulls upon the rope, causing the rope member to be moved against the tension of the spring 39 until the latch is out of engagement with the notches 11 and quick release of the rope then causes the latch to pass the notches and the lamp hanger member to descend to the ground. To restore the lamp hanger member, the operator pulls upon the rope until the contacts engage when the spring 39 again gives and the latch passes above the notches 11, when a slow release permits the latch to enter the recesses by gravity and the lamp is supported.

I claim—

In a structure of the character described and having a fixed upper member and a movable lower member freely suspended therefrom and arranged to be raised to connection therewith, a contactor on the lower member having a convex contact surface, and a cooperating contactor on the upper member having a downwardly opening concavity to receive a portion of said convex surface, with a circular edge adapted to make circular line contact with said surface, whereby as the lower member is raised to connecting position, side motion thereof will effect impinging action of said surface against said edge, and particles dislodged thereby will move downwards and outwards of said surface.

In testimony whereof I hereby affix my signature.

ALLISON J. THOMPSON.