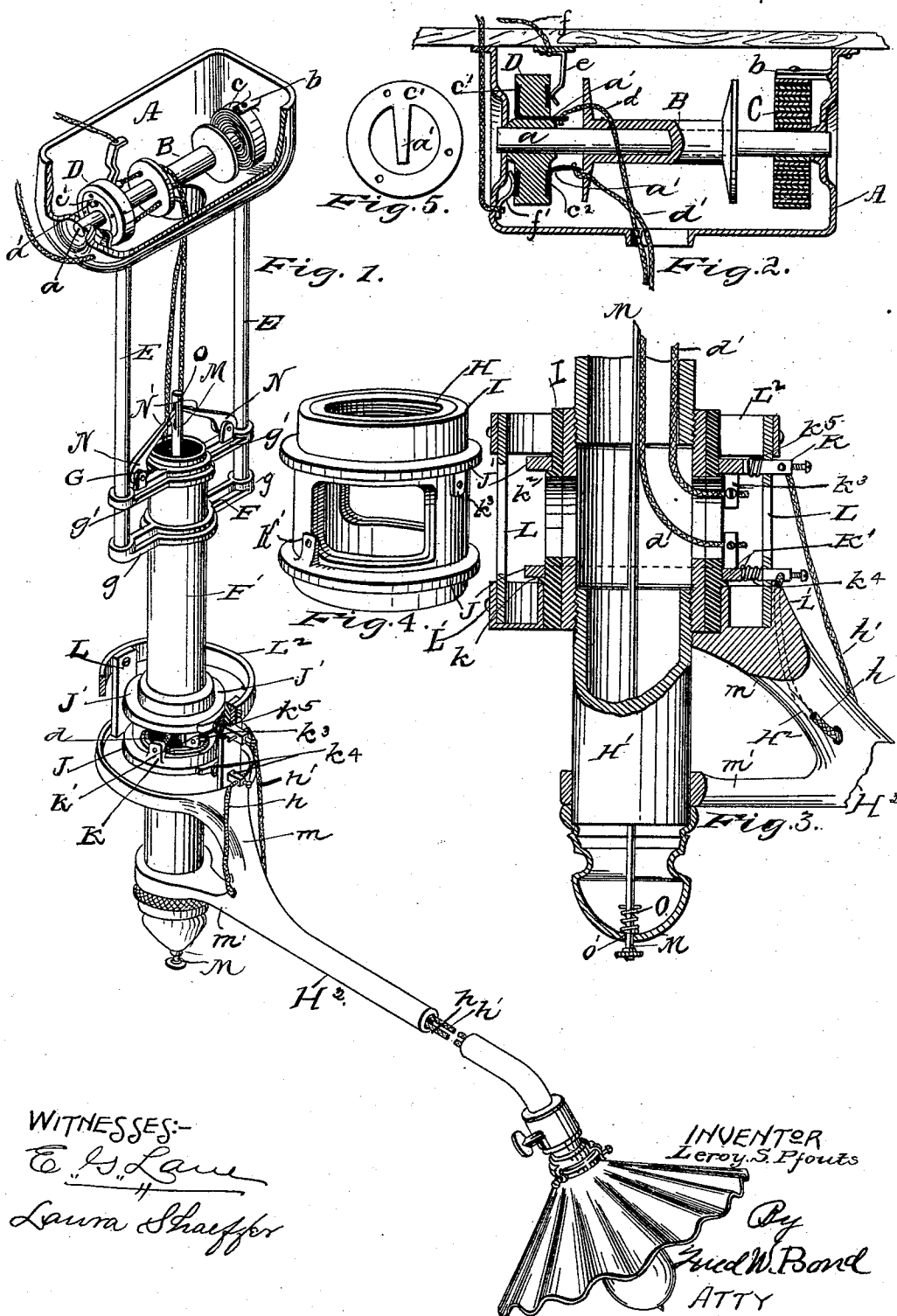


(No Model.)

L. S. PFOUTS.
ADJUSTABLE ELECTRIC LIGHT HOLDER.

No. 487,022

Patented Nov. 29, 1892.



UNITED STATES PATENT OFFICE.

LEROY S. PFOUTS, OF CANTON, OHIO.

ADJUSTABLE ELECTRIC-LIGHT HOLDER.

SPECIFICATION forming part of Letters Patent No. 487,022, dated November 29, 1892.

Application filed February 24, 1892. Serial No. 422,628. (No model.)

To all whom it may concern:

Be it known that I, LEROY S. PFOUTS, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Adjustable Electric-Light Holders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a view showing the hanger properly located and illustrating the feed-wire and return-wires properly attached. Fig 2 is a longitudinal section of the spool-casing, showing the spool and its different parts properly located. Fig. 3 is a view showing the bottom or lower part of the sliding tube and illustrating in section the pivoted arm properly located, also showing longitudinal section of the insulating-collar and its different attachments. Fig. 4 is a detached view of the insulating-collar and its different attachments. Fig. 5 is a detached view of one of the current-connecting bands or disks.

The present invention has relation to electric-light holders; and it consists in the different parts or combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the spool-casing, which may be substantially of the form shown in the drawings or it may be of any other desired form, and in use said casing is securely attached at any desired point in a room or compartment by means of suitable flanges and bolts or rivets.

The casing A is preferably attached to the ceiling; but it may be attached at any other desired point or place without departing from the nature of my invention. To the casing A is journaled the shaft *a*, which shaft is located substantially as shown in Figs. 1 and 2. Upon the shaft *a* is mounted the spool B, which spool is for the purpose of receiving the feed and return wires, which wires are wound and unwound upon the spool. For the purpose of automatically rotating the shaft *a*,

together with the spool B, the spring C is provided, which spring is preferably located as illustrated in the drawings, and one end of said spring attached in any convenient and well-known manner to the shaft *a* and the opposite end attached to a fixed arm or projection *b* or its equivalent. The spool B is so attached that it will rotate with the shaft *a*. Upon the shaft *a* is located the disk D, which disk is formed of any suitable insulating material and is preferably located a short distance from one end of the spool B. To the disk D are attached the annular bands *c'* and *c''*, which bands are formed of any suitable conducting material, copper being preferable. The annular bands *c'* and *c''* are each provided with tongues *a'*, which tongues *a'* are for the purpose of connecting the ends of the feed-wires *d* and the return-current wire *d'*. For the purpose of conveying the current of electricity to the feed-wire *d*, the brush *e* is provided, which brush is so adjusted that it will press or bear against the outer face of the annular band *c''*, said annular band conveying the current from the brush *e* to the feed-wire *d*. It will be understood that the line-wire *f* is to be properly attached, so as to form a contact with the brush *e*. For the purpose of providing a means to convey or ground the return current the annular band *c'* is provided, which annular band is located upon the opposite side of the disk D and the tongue *a'*, extended through the disk D, substantially as illustrated in Fig. 2, thereby conveying the return current through the disk D, which current is conveyed or grounded by means of the brush *f'*.

To the casing A are attached, in any convenient and well-known manner, the pendent rods E, which rods may be of any desired length, reference being had to the height of the room or to the location of the casing A. To the bottom or lower ends of the rods E is attached the yoke or guide F by means of the arm or extensions *g*. The yoke or guide F is for the purpose of assisting in holding in proper position the sliding tube F', which sliding tube moves up and down through said guide or yoke. To the top or upper end of the sliding tube F' is attached the band or collar G, which band or collar is provided with the arms *g'*, said arms being provided

with apertures, which apertures receive the pendent rods E. To the bottom or lower ends of the sliding tube F' is attached the metal collar H, which metal collar is provided with screw-threads, which screw-threads receive corresponding screw-threads located upon the periphery of the sliding top tube F'. To the bottom or lower end of the collar H is attached the hollow tube H', which hollow tube extends a short distance past and beyond said collar H and is for the purpose of providing a means for attaching the arm H², which arm is so attached that it can be rotated upon the hollow tube H'. The arm H² may be of any desired length and is formed hollow for the purpose of receiving and holding the feed and return wires *h* and *h'*.

The insulating-collar I is located substantially as shown in Fig. 4 and, as shown, it is located around the connecting-collar H. The bottom or lower portion of the insulating-collar I is provided with the metal ring J, which ring is held in the desired position by means of the flange *k*, which flange is preferably formed integral with the insulating-collar I.

For the purpose of providing a means for attaching the return-wire *h'* the post K' is provided, which may be substantially of the form shown in Fig. 4, and, as shown, it is provided with an aperture to receive the end of the return wires. The top or upper portion of the insulating-collar is provided with the metal ring J', which metal ring is held in the desired position by means of the flange *k*², which flange is preferably formed integral with the insulating-collar I. For the purpose of properly adjusting the rings J and J' upon the insulating-collar I, the lower ring is formed of such a diameter that it will pass over the flange *k*², and the upper ring J' is formed somewhat in diameter, so that it will rest and be held in proper position by means of the flange *k*². The ring J is provided with the post *k*³, which post is for the purpose of providing a means for attaching the feed-wire *d*. For the purpose of bringing the feed-wires *d* and *h* into contact with each other, the sliding shoe K is provided, which sliding shoe is so attached that its inner end will press or bear against the periphery of the metallic ring J', and for the purpose of holding the sliding shoe in contact with the ring J' the helical spring *k*⁵ is provided, which spring is located around the arm of the shoe K. For the purpose of connecting the return wires *d'* and *h'* together, the sliding shoe K' is provided, which sliding shoe corresponds with the sliding shoe K and is held in contact with the periphery of the ring J by means of the helical spring *k*⁴. For the purpose of providing a means for rotating the sliding shoes K and K' the bars L are provided, the upper ends of which are attached to the collar or flange L², and the lower ends of the bars L are attached to the band or ring L', which band or ring L² is for the purpose of holding in an upright position the bars L. The object and purpose of pro-

viding two bars such as L is to provide a means for properly holding the band or ring L². One of the bars L is provided with apertures, through which apertures the arms of the sliding shoes K and K' pass, said apertures being for the purpose of assisting in holding the shoes K and K' in proper position. To the outer ends of the shoes K and K' are attached the feed and return wires *h* and *h'*. To the outer or lower end of the arm H² is attached in the ordinary manner the electric-light fixtures, which may be of the form shown in the drawings or of any other desired form, style, or kind. The inner end of the arm H² is provided with the branches *m* and *m'*. The upper branch is pivotally connected to the sliding collar I and the lower branch pivotally connected to the hollow tube H', said branches being so attached that the arm is free to rotate in a horizontal plane and at the same time hold the feed-wire *d* and *h* and the return wires *d'* and *h'* in contact with each other by means of the sliding shoes K and K' and the metal rings J and J'.

When it is desired to elevate the light, the rod M is pushed or forced upward, thereby releasing the eccentrics N by means of the arms N', which arms are connected to the top or upper end of the rod M by means of the elongated slot *o* or its equivalent. The bottom or lower end of the rod M is held in proper position by means of the aperture *o'*. For the purpose of causing the arms N' to be automatically forced downward and thereby lock the sliding tube F' at any desired point of adjustment by means of the eccentrics N, the spring O is provided, which spring is located substantially as shown in Fig. 3.

It will be understood that as the tube F', together with its different attachments, is elevated the feed-wires will be wrapped around the spool B, said spool rotating as the sliding tube F' is elevated, rotary motion being communicated to the spool B by means of the spring C and the shaft *a*.

It will be understood that as the spool B and the shaft *a* are rotated the disk D will rotate with the shaft, and by providing the brushes *e* and *f'* a continuous contact is had during the time the disk D is rotated; or, in other words, the current is not cut off or shunted by reason of the rotation of the disk D or during the time the feed or return wires are being wound or unwound upon or from the spool B.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The casing A, having journaled thereto the shaft *a*, the spool B, mounted upon said shaft *a*, the disk D, provided with the annular bands *c*² and *c'*, the wires *d* and *d'*, and the spring C, substantially as and for the purpose specified.

2. The combination of the casing A, having located therein the rotating shaft, an insulating-disk mounted upon said shaft, a spool fixed

to the shaft, a spring fixed to the shaft, the pendent arms E, the sliding tube F, the metal collar H, located within the insulating-collar I, the tube H', and the pivoted arm H², substantially as and for the purpose specified.

3. In an adjustable electric-light holder, a sliding tube having located therein a feed-wire, the insulating band or collar I, provided with conducting-bands, the sliding shoes K and K', the hollow arm pivoted to a hollow tube, and feed-wires located within said rotating tube, substantially as and for the purpose specified.

4. The combination of the winding-spool B, located upon the shaft *a*, the feed-wire *d*, the return-wire *d'*, the arms E, the sliding tube F, provided at its top or upper end with the collar G, having the arms *g'*, and the yoke or guide F, substantially as and for the purpose specified.

5. The insulating-collar I, provided with the metallic bands J and J', the sliding shoes K and K', and the helical spring *k*, substantially as and for the purpose specified.

6. The combination of the sliding tube F, carrying the hollow tube H', the bars L, the band L², the sliding shoes K and K', suitable feed-wires, and the pivoted arm H², substantially as and for the purpose specified.

7. The combination of a sliding tube provided with suitable guide-arms and guide-bars, the eccentrics N, provided with arms N', the rod M, provided with the elongated slot *o*, and the spring O, substantially as and for the purpose specified.

8. The combination of the hollow tube carrying electric wires, the pivoted arm H², provided with branches *m* and *m'*, the bars L, the sliding shoes K and K', and the metallic bands J and J', substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

LEROY S. PFOUTS.

Witnesses:

F. W. BOND,
LAURA SHAEFFER.