(No Model.)

S. O. LARKINS.

HANGER FOR ELECTRIC INCANDESCENT LAMPS.

No. 492,215. Patented Feb. 21, 1893.

Fig. 1.

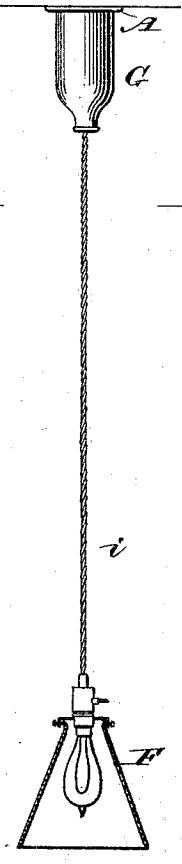


Fig. 2.

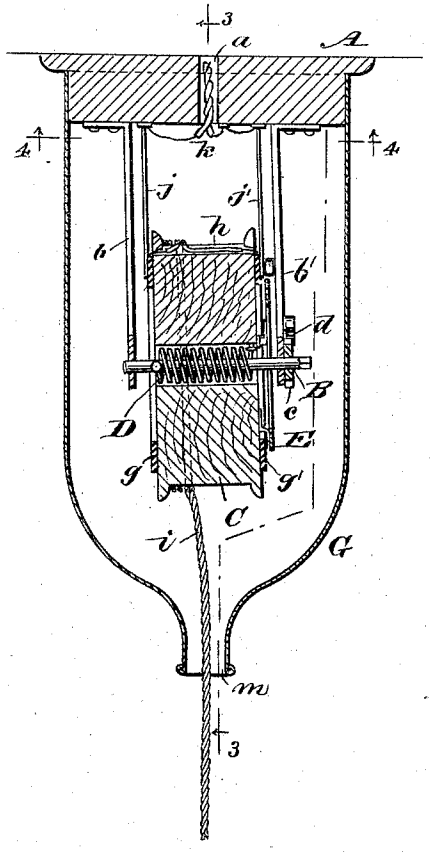


Fig. 3.

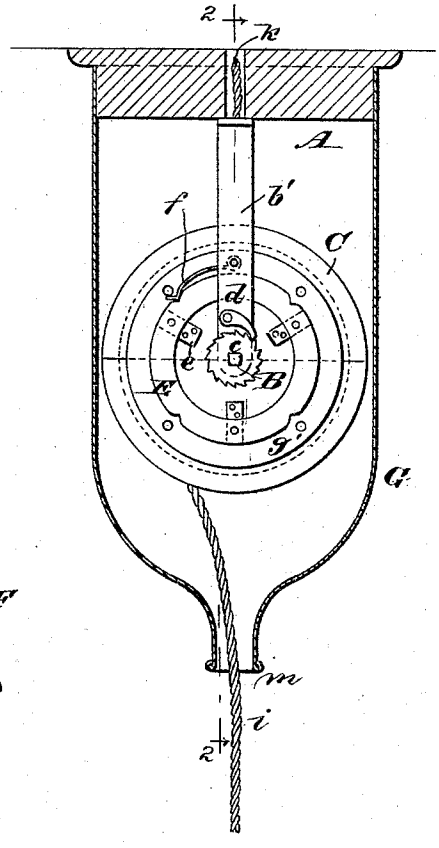
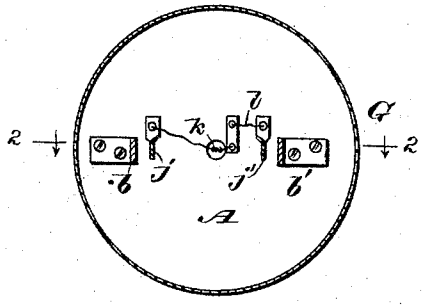


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL O. LARKINS, OF BLAIR, NEBRASKA.

HANGER FOR ELECTRIC INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 492,215, dated February 21, 1893.

Application filed February 17, 1892. Renewed December 17, 1892. Serial No. 455,548. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL O. LARKINS, of Blair, in the county of Washington and State of Nebraska, have invented a new and Improved Hanger for Incandescent Lamps, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation, partly in section, of my improved hanger for incandescent lamps; Fig. 2 is a vertical transverse section, taken on lines 2—2 in Figs. 3 and 4; Fig. 3 is a vertical section taken on line 3—3 in Fig. 2; and Fig. 4 is a horizontal section taken on line 4—4 in Fig. 2.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to provide a simple and effective device for supporting incandescent lamps at any desired height, and which may be adjusted to support lamps and lamp fixtures of different weights.

My invention consists in the construction and arrangement of parts hereinafter described and claimed.

The base-board A, to which the other portions of the hanger are attached is preferably made in circular form and provided with a central aperture *a*. To the said base-board are attached arms *b*, *b'*, which form a slight angle with a perpendicular drawn to the face of the base A, and the arm *b* is made slightly longer than the arm *b'*. In the said arms is journaled a shaft B, upon which is placed the reel C, the said reel being fitted loosely to the shaft B, so that it can turn thereon, and the reel is chambered at the center to receive a helical spring D, one end of which is attached to the reel, the other end being secured to the shaft B. Upon the shaft B is placed a ratchet wheel *c*, and to the arm *b'* is pivoted a pawl *d*, which engages the said ratchet wheel *c*. The end of the shaft B is squared to receive a key for adjusting the torsion of the spring D.

To the side of the reel C, is attached a ring E, by means of offset plates *e*, and in the periphery of the said ring are formed a number of V-shaped notches, and to the arm *b'* adjoining the ring E is attached the detent *f*, which engages a notch in the ring E, and serves to hold the ring and the reel in any desired position. The reel C is made of wood or other insulating material, and to opposite sides thereof are secured the metallic rings *g*, *g'*. In one side of the reel is formed a groove *h*, in which are inserted the ends of the two strands of the flexible cord *i* which supports the lamp F. The ends of the cord extend through elbows in the flanges of the reel, and are attached respectively to the rings *g*, *g'*.

To the base A are attached the contact springs *j*, *j'*, which are in electrical contact with the rings *g*, *g'*. The spring *j* is connected with one strand of the double conductor *k* which supplies the lamp. The spring *j'* is connected with the other strands of the double cord *k* through the cut-out or fusible wire *l*. A casing G, of metal or other suitable material, attached to the base A, incloses the working portions of the hanger, and the lower end of the said casing is contracted, leaving a tubular neck *m* through which the cord *i* passes freely. Arranged in this way, the current entering the hanger passes down the springs *j*, *j'*, to the rings *g*, *g'*, thence through the flexible conductor wound upon the reel C, to the lamp F. The axis of the reel C is inclined to enable the flexible cord *i* to wind upon or unwind from the reel without undue friction.

The torsion of the spring D is such as to practically counterbalance the lamp F and its shade, also the cord *i*. When the lamp and shade are lifted, the spring D revolves the reel and winds the flexible cord *i*, and the detent *f* entering one of the notches in the periphery of the ring E, holds the reel C, and prevents it from turning when the spring D, and the lamp and shade suspended by the cord *i*, nearly or quite balance each other. The lamp is lowered by pulling it down against the resistance of the spring D, thus winding the spring. Should there be a short circuit in the lamp, socket, flexible cord, or hanger, the wire of the cut-out will fuse and thus prevent injury to the hanger.

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

1. The herein described hanger, comprising the base A, two depending arms, a spring actuated reel journaled in the lower ends of said arms and having a pawl and ratchet connection therewith, rings *g g'* on the opposite

ends of the reel and connections with the lamp suspending cord, two springs *j j'* between the lower ends of which the reel revolves with its rings in contact therewith, a notched ring on one end of the reel, and a spring friction pawl engaging the said ring to hold the reel frictionally but release it when the lamp suspension cord is operated, substantially as described.

2. The herein described hanger, consisting in the base A, having depending arms *b b'*, shaft B mounted in lower ends of said arms, a pawl and ratchet mechanism connecting one arm and said shaft, the reel C on the shaft, the torsional helical spring D connected at its ends to the shaft and reel respectively, rings *g g'* secured to the ends of the reel, the peripherally notched ring E offset from one end of the reel, the springs *j j'* depending from the base and contacting with the rings *g g'*, the spring friction pawl engaging the notched ring, and the electric connections for the springs *j j'*, substantially as set forth.

SAMUEL O. LARKINS.

Witnesses:
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