(No Model.)

W. S. WESTON.

ELECTRIC LAMP HANGER.

No. 326,364. Patented Sept. 15, 1885.

Fig. 1.

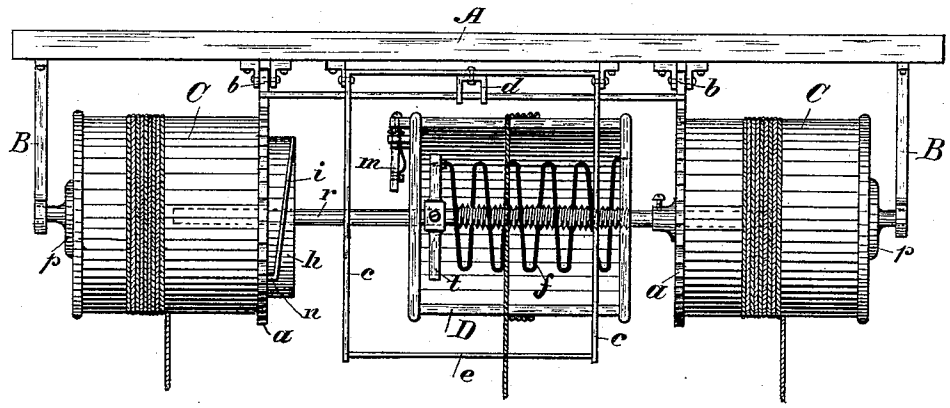


Fig. 2.

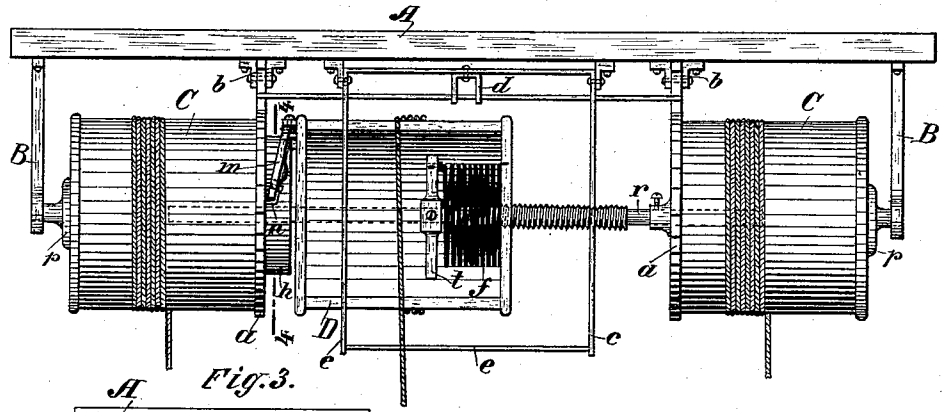


Fig. 3.

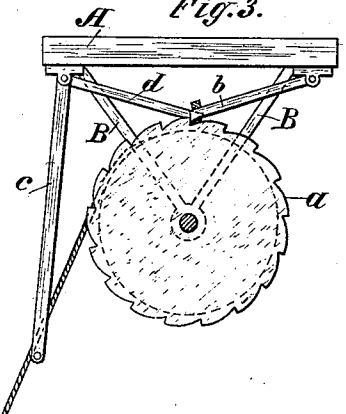


Fig. 4.

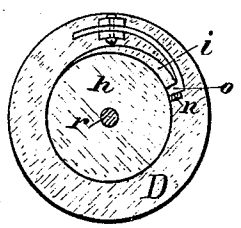


Fig. 5.

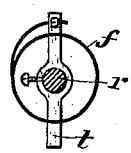
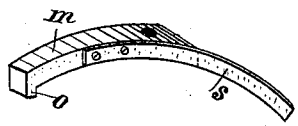


Fig. 6.



Witnesses:
Chas. J. Baur
Frederick W. Packard

Inventor:
Wm. S. Weston

UNITED STATES PATENT OFFICE.

WILLIAM S. WESTON, OF CHICAGO, ILLINOIS.

ELECTRIC-LAMP HANGER.

SPECIFICATION forming part of Letters Patent No. 326,364, dated September 15, 1885.

Application filed May 7, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WESTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Electric-Lamp Hangers, of which the following is a specification.

My invention is an electric-lamp hanger in which the hand-rope, after doing service in raising or lowering the lamp, can itself be rolled up into the hanger by means of a spring placed therein, and used for that purpose only; and my invention consists in the combination of a lamp-supporting cylinder around which the lamp-wires are wound and unwound in raising and lowering the lamp, an independently-revoluble hand-rope cylinder, so that the hand-rope may be pulled down or wound up independently of the lamp, and a suitable clutch for connecting the hand-rope cylinder with the lamp-supporting cylinder, so that the lamp may be raised and lowered by the hand-rope. A spring is provided to wind up the hand-rope after the lamp is raised to the desired position.

My invention is illustrated in the accompanying drawings, in which Figure 1 is a front view of the electric-lamp hanger, showing the interior mechanism of the cylinder D, which carries the hand-rope; Fig. 2, a front view of the hanger, showing a different position of the cylinder D; Fig. 3, an end view from the right; Fig. 4, a cross-section through the line 4 4; Fig. 5, a view showing the manner of connecting the spring *f* with the shaft *r*, and Fig. 6 an enlarged view of the arm *m*.

Similar letters refer to similar parts throughout the several views.

The board A and the standards B B constitute the frame of the hanger. In the standards B B rest and turn the cylinders C C and D. The cylinders C C are of wood and carry the wire cables on which the lamp is hung, and which conduct the electric current. These cylinders are connected together rigidly by means of the shaft *r*, on which are firmly set the wheels or plates *a a*, these wheels being screwed to the inner ends of the cylinders. The shaft *r* enters the wood cylinders only about two-thirds of their length, this being necessary to avoid the danger of a short circuit of the electric current between the pivots *p p*.

On the periphery of the wheels *a a* are cut ratchet-teeth to receive the ratchets *b b*, the ratchets being used in holding the lamp at any desired position.

The bent lever, of which *c c* are the long and *d* the short arms, is used to manipulate the ratchets *b b*, the short arms *d* pressing against the under side of a cross-piece, which connects the free ends of the ratchets. The ends of the long arms *c c* are joined by a wire, *e*, over which passes the hand-rope from cylinder D.

Cylinder D is a hollow casting containing the spring by means of which the hand-rope is rolled up when the lamp has been raised or lowered to the desired position. The spring is a helical wire spring, one end being attached to the cylinder and the other end to the shaft *r* by means of the cross-arm *t*, this cross-arm being held in place by a set-screw. On the shaft is a raised left-hand thread, which moves the cylinder to the right or left as it is rotated. On the ratchet-wheel *a* of the left-hand cylinder C is cast a cylindrical projection, *h*, on the surface of which there is a raised spiral thread, *i*, with an offset at *n*. The arm *m* is attached to cylinder D. On the free end of the arm is a tongue or hook, *o*. As cylinder D is rotated by means of the rope the spring *f* is wound up and the cylinder itself moved to the left. As cylinder D approaches cylinder C the tongue or hook *o* of the arm *m* becomes engaged with the thread *i* and follows it until stopped by the offset *n*. Figs. 2 and 4 show the arm *m* in this position. Cylinder D is now connected with cylinders C C, and the whole mechanism moves as one cylinder or simple pulley. When the arm *m* is disengaged from the thread *i*, it is held close to the end of cylinder D by a small spring, *s*. (Shown in Fig. 6.)

To lower the lamp, first pull down the hand-rope, thus winding up the spring and moving the cylinder to the left until the arm *m* becomes engaged with the thread *i* and the offset *n*. Any further strain on the rope will raise the lamp. Second, raise the lamp a trifle to loosen the ratchets *b b*, and then raise the latter by throwing in with the rope the long arms *c c* of the bent lever. The lamp may

now be lowered to any point and held there by throwing out the rope and letting the ratchets engage again.

To raise the lamp, manipulate the bent lever as before. When the lamp is fixed in position, the wound-up spring will rotate cylinder D and take up the relieved hand-rope.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an electric-lamp hanger, the combination of a lamp-supporting revolving cylinder with an independently-revoluble hand-rope cylinder, a hand-rope, a clutch for connecting said hand-rope cylinder with said lamp supporting cylinder, and a supporting-frame or hanger upon which said cylinders are mounted, substantially as specified.

2. The combination, in an electric-lamp hanger, with a shaft, of a lamp-supporting cylinder fixed upon said shaft, a hand-rope, a hand-rope cylinder mounted loosely on said shaft and having a spring connection therewith, and a clutch for positively connecting said hand-rope cylinder with said shaft to raise and lower the lamp, substantially as specified.

3. In an electric-lamp hanger, the combination, with a shaft, of a cylinder fixed thereon, and a loose cylinder, said loose cylinder and shaft being provided with screw-threads, whereby said loose cylinder may by its revolution on said shaft be brought into positive or fixed engagement with said fixed cylinder, substantially as specified.

4. In an electric-lamp hanger, the combination, with a shaft, of a cylinder fixed thereon carrying the lamp-supporting wires, a hand-rope for raising and lowering the lamp, a loose cylinder on said shaft carrying said hand-rope, said loose cylinder and shaft being provided with screw-threads, whereby said loose cylinder may by its revolution on said shaft be brought into fixed engagement with said fixed cylinder, and a spring for winding up the hand-rope, substantially as specified.

5. In an electric-lamp hanger, the combination, with the supporting-frame, of a shaft having cylinders C C fixed thereon, cylinder D, movably mounted on said shaft, the arm *m*, and its tongue or hook *o*, one of the said cylinders C being provided with a wheel, *a*, and having a cylindrical projection, *h*, provided with the thread *i* and the offset *n*, whereby cylinder D can be brought into positive or fixed connection with the cylinders C C, substantially as set forth.

6. In an electric-lamp hanger, the combination, with a supporting-frame, of the screw-threaded shaft *r*, having cylinders C C fixed thereon, cylinder D, provided with screw-threads, the hand-rope wound on cylinder D, and the spring *f*, having one end attached to cylinder D and the other to said shaft, whereby cylinder D can be shifted in its position on said shaft, substantially as described.

7. In an electric-lamp hanger, the combination, with a supporting-frame, of a screw-threaded shaft having cylinders C C fixed thereon, cylinder D, movably mounted on and fitted to the thread of said shaft, a rope on cylinder D, a spring, *f*, an arm, *m*, and its tongue or hook *o*, a cylindrical projection, *h*, provided with a thread, *i*, and offset *n*, whereby cylinder D can be connected or disconnected with cylinders C C, substantially as set forth.

WM. S. WESTON.

Witnesses:
FREDERICK W. PACKARD,
KYLE A. VANDAGRIFT.