(No Model.)

# W. S. WESTON.

## ELECTRIC LAMP HANGER.

No. 326,363. Patented Sept. 15, 1885.

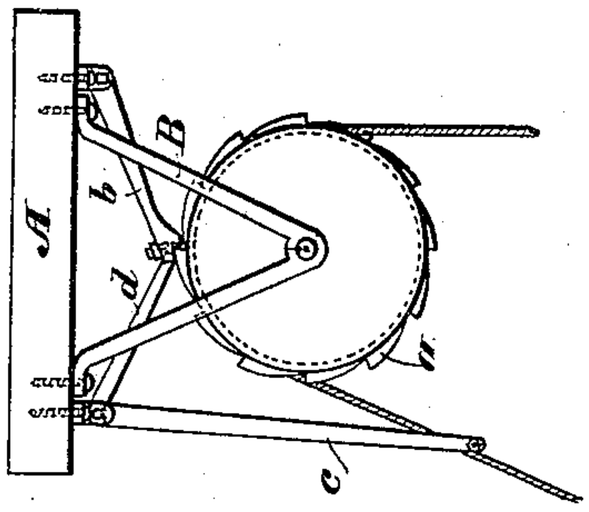


Fig. 2.




Fig. 1.

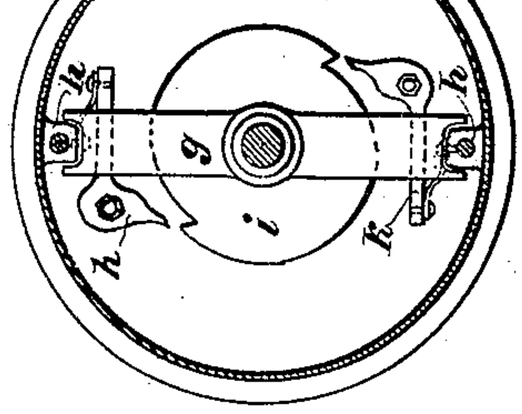


Fig. 6.

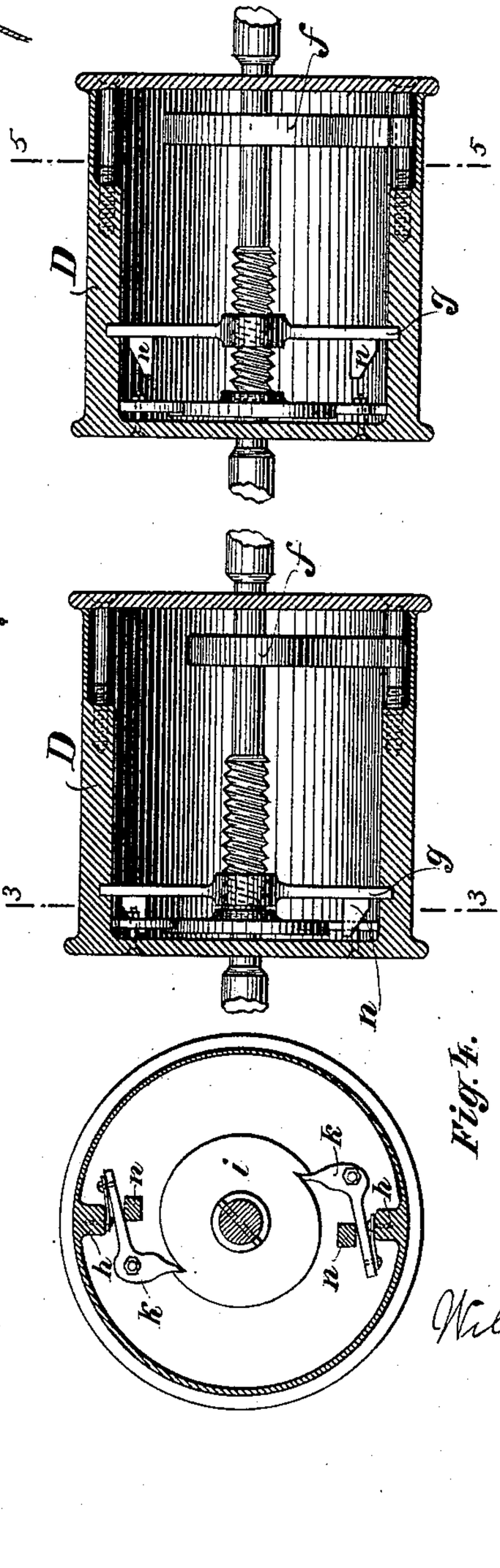


Fig. 5.




Fig. 3.




Fig. 4.

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# UNITED STATES PATENT OFFICE.

WILLIAM S. WESTON, OF CHICAGO, ILLINOIS.

## ELECTRIC-LAMP HANGER.

SPECIFICATION forming part of Letters Patent No. 326,363, dated September 15, 1885.

Application filed February 16, 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 Pulley and a new and useful Electric-Lamp Hanger, of which the following is a specification.

My invention is a pulley and an electric-lamp hanger, in which the hand-rope, after doing service in raising or lowering the weight or lamp, can itself be rolled up into the pulley or hanger by means of a spring placed therein and used for that purpose only. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the electric-lamp hanger; Fig. 2, a side or end view of the hanger from the right; Figs. 3 and 5, enlarged views of the cylinder on which is wound the hand-rope, showing the interior mechanism; Fig. 4, a cross-section of a part of the hanger on the line 3 3, Fig. 3; Fig. 6, a cross-section on the line 5 5, Fig. 5.

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. To the outer ends of these cylinders are screwed the cast pivots *p p*, to which are attached the upper ends of the wire cables, the standards B B and the pivots forming a part of the electric circuit. 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 in 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 arm *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 mechanism by means of which the hand-rope is rolled up when the lamp has been elevated or lowered to desired positions. In the right end of the cylinder is a spiral spring, *f*, of which one end is connected to the shaft and the other to the cylinder. On the shaft is a raised left-hand thread, over which moves the bar *g*, the bar rotating with the cylinder because of the points which project on each side of the ribs *h h*, and at the same time moving to the right or left, according to the direction in which the cylinder is rotating. The ratchet-wheel *i* is fixed on the shaft, while the ratchets *k k* are fixed on the end of the cylinder. As the bar *g* approaches the ratchet-wheel *i*, the two lugs *n n* on the forward side of the bar press in beneath the long arms of the ratchets and cause them to engage with the wheel. Fig. 3 shows the ratchets engaged, and Fig. 5 shows them disengaged. When the ratchets engage with the wheel, cylinder D is connected with cylinders C C, and the whole mechanism moves as one cylinder or simple pulley. When the ratchets are disengaged from the wheel, they are held away by a small spring on the long arm of each.

To lower the lamp, first pull down the hand-rope, thus winding up the spring and moving the bar *g* to the left until the ratchets *k k* engage with the wheel. 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.

My invention is the mechanism whereby the hand-rope, after being used in raising or lowering the weight, may itself be taken up into the pulley. This mechanism is substantially the same as that used in the electric-lamp

hanger for rolling up the hand-rope. The essential difference in construction between the lamp-hanger and the pulley consists in the placing of the cylinder E, which carries the hand-rope, upon a shaft separate from that which carries the loaded cylinder. The two shafts are connected together by the two cog-wheels *w w'*, these wheels being fixed each on its respective shaft. Cylinder E is loose on its shaft, being connected to it only by the spring *f*, and contains the same mechanism and is exactly similar to cylinder D of the lamp-hanger. Cylinder F, which carries the weight, is held in position by the ratchet *t*. The ratchet is manipulated by the lever *v*, there being a loop of wire on the lower end, through which the hand-rope passes. The pulley does not differ in the method of its operation from the lamp-hanger, for which the manner of operating has already been explained.

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

1. The combination, in an electric-lamp hanger, of the cylinders C C with the cylinder D, for the purpose substantially as set forth.

2. In an electric-lamp hanger, the combination of the spring *f* with the cylinder D and the shaft *r*, substantially as described.

3. In an electric-lamp hanger, the combination of the bar *g* with the cylinder D and the shaft *r*, substantially as set forth.

4. In an electric-lamp hanger, the combination of the bar *g* and the lugs *n n* with the spring-backed ratchets *k k* and the ratchet-wheel *i*, all for the purpose substantially as specified.

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