(No Model.)

T. HIPWELL.

ARGAND LAMP.

No. 457,587. Patented Aug. 11, 1891.

Fig. 1.

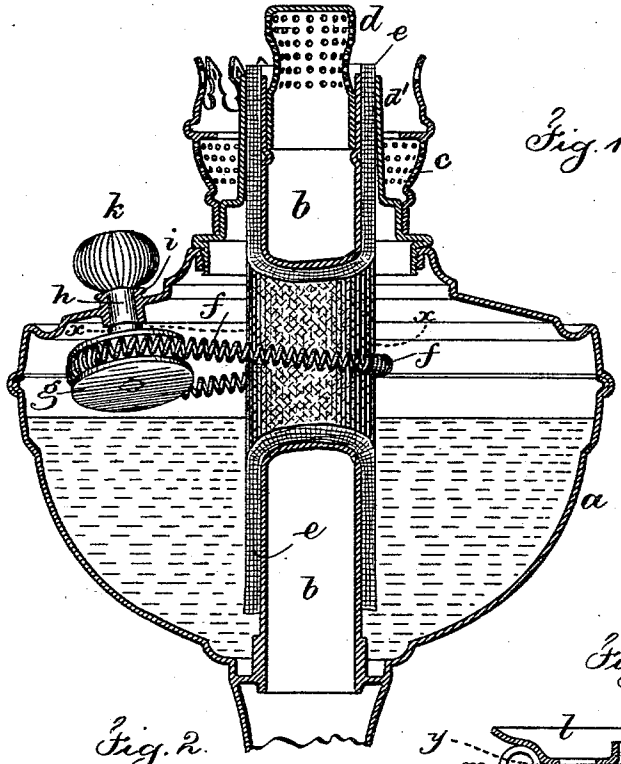


Fig. 2.

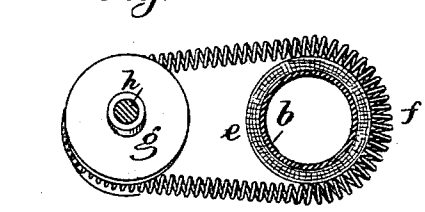


Fig. 3.

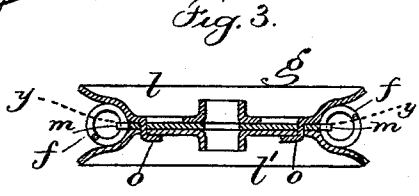


Fig. 5

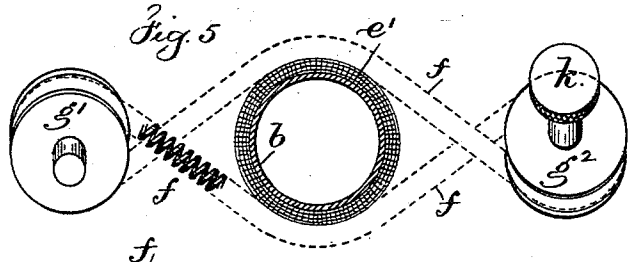
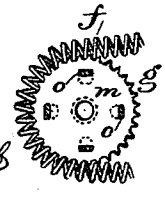


Fig. 4



Witnesses
Chas. H. Smith
J. Stail

Inventor
Thomas Hipwell
by Lemuel W. Serrell
& Co

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS HIPWELL, OF LONG ISLAND CITY, ASSIGNOR TO THE MANHATTAN BRASS COMPANY, OF NEW YORK, N. Y.

ARGAND LAMP.

SPECIFICATION forming part of Letters Patent No. 457,587, dated August 11, 1891.

Application filed February 9, 1891. Serial No. 380,709. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HIPWELL, a citizen of the United States, residing at Long Island City, in the county of Queens and State of New York, have invented a certain new and useful Improvement in Argand Lamps, of which the following is a specification.

Lamps have been made with wick-raising rings of sheet metal, having teeth on the inner surfaces and set at an inclination to rotate the wick and raise or lower the same, and a wire helix has been rotated about its axis, while the outer surface is in contact with the wick to raise or lower the same.

My invention consists in an endless flexible band that passes around the Argand wick and wick-tube at an inclination and around a pulley or wheel, which latter is rotated by a hand button or knob. The longitudinal movement given to this inclined endless flexible band rotates the wick about the central tube and elevates or depresses it, according to the direction of rotation.

In the drawings, Figure 1 is a vertical section of part of a lamp, showing my improvement. Fig. 2 is a sectional plan at *x x*, Fig. 1. Fig. 3 is a cross-section of a preferable form of the grooved pulley or wheel for rotating the wire helix, and Fig. 4 is a sectional plan at *y y*. Fig. 5 is a diagrammatic view showing the endless band passing around two inclined pulleys.

In Fig. 1, *a* represents the fount of the lamp; *b*, the central air-tube; *c*, the air-distributer; *d*, the deflector; *d'*, the wick-tube, and *e* the wick. These parts may be of any well-known description and do not require further explanation.

f represents my endless band passing around the wick *e* at an inclination, and *g* is a grooved wheel or pulley around which the endless band *f* passes and by which the band is operated. This grooved pulley *g* is upon an axis *h*, passing through a collar *i*, secured in and to the shell of the fount. Connected to the outer and upper end of the axis *h* is a hand button or knob *k*, to be grasped by the fingers and rotated in either direction to operate the grooved pulley and endless band in raising or lowering the wick.

The endless band *f*, passing around the wick *e* at an inclination, acts not only to rotate the wick upon the tube *b* but to raise or lower the wick, according to the direction of rotation of the band *f*. The greater the angle of inclination of the band *f* the more rapidly the wick will be raised or lowered, and the less the angle the slower will be the movement. I have shown and prefer to employ only a moderate angle of inclination.

The endless band *f* may be made of any desired material to accomplish the object sought. I, however, prefer and have shown a wire helix, as the same possesses the desired degree of elasticity and is capable of maintaining it, and also because said wire helix is unaffected by the oil or vapors within the fount of the lamp.

The grooved pulley, Fig. 3, is composed of two similar stamped-up saucer-shaped parts *l l'* and an intermediate toothed plate *m*. Slotted openings are made in the plate *m* and part *l'*, and tongues *o* are stamped out of the part *l* and pass through the aforesaid openings, and their ends are turned over to clamp the parts together, as seen in Fig. 3, to form the pulley. The teeth of the plate *m* project into the groove of the wheel *g* and engage the endless band or helix *f* and insure the regular movement of said band and prevent slipping.

I may prefer, especially in lamps having a large central air-tube, to employ two inclined pulleys g' g^2, (see Fig. 5,) and to cross the endless band and pass the same around the said pulleys and around opposite sides of the wick *e'* at an inclination in order to effect the raising and lowering of the wick.

In my improvement the wick is readily and quickly put in place by simply sliding it down over the air-tube to the endless band and then moving the band, there being nothing to interfere with its free movement. If desired, the lower end of the wick can be raveled out, and thus a much longer wick be employed in the lamp.

I claim as my invention—

1. The combination, in an Argand lamp, with the wick and central air-tube, of a pulley capable of being rotated, and an endless flexible band passing around the air-tube and wick at an inclination and around the pulley, substantially as set forth.

2. The combination, in an Argand lamp, with the wick and central air-tube, of an inclined grooved-pulley, an axis passing through the fount, and a button or knob for rotating said pulley, and an endless flexible band passing around the air-tube and wick at an inclination and around the pulley, substantially as set forth.

3. The combination, in an Argand lamp, with the wick and central air-tube, of an inclined pulley and means for rotating the same, and an endless flexible band consisting of a wire helix passing around the wick at an inclination and around the pulley for rotating the Argand wick and raising or lowering the same by the inclination of the helix, substantially as set forth.

4. The combination, in an Argand lamp, with the wick and central air-tube, of an inclined grooved pulley composed of the similar parts *l l'* and central toothed plate *m*, the axis and hand-knob for rotating said pulley, and an endless band consisting of a wire helix passing around the wick at an inclination and around the grooved pulley, engaging its central toothed plate, substantially as set forth.

5. The combination, with a band or cord capable of being operated, of a grooved pulley for such band composed of the similar saucer-shaped parts *l l'*, the intermediate toothed plate *m*, and means for connecting the parts *l l'* and plate *m* together, substantially as set forth.

Signed by me this 5th day of February, A. D. 1891.

THOMAS HIPWELL.

Witnesses:
JOHN J. WRENN,
R. TURNER.