

(No Model.)

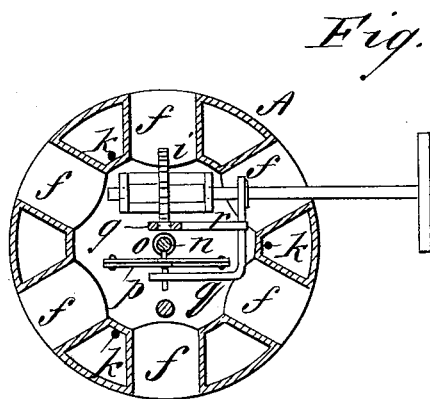
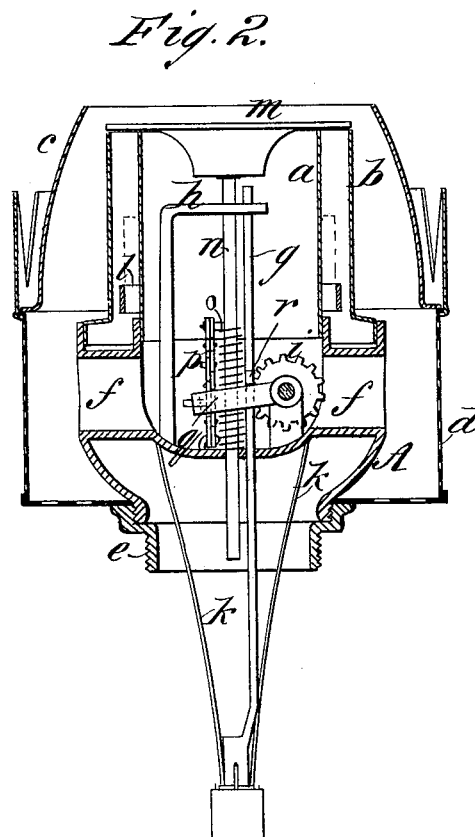
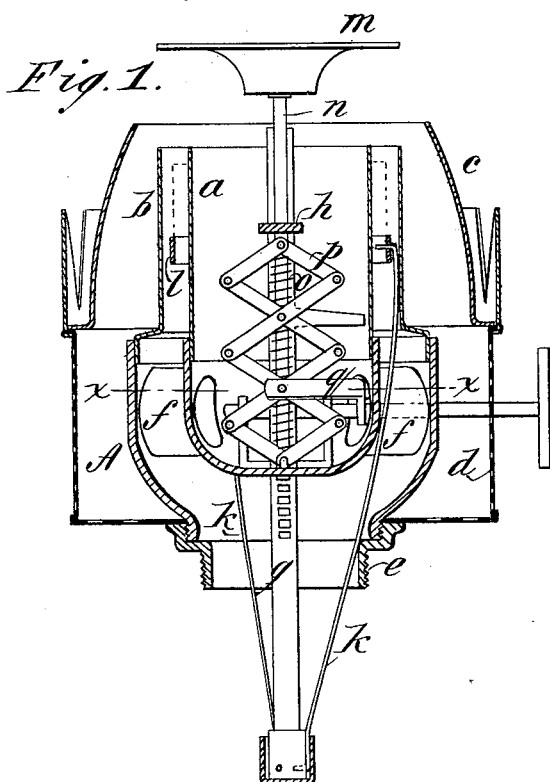
E. H. HICKOK, Dec'd.

M. H. HICKOK, Administratrix.

LAMP BURNER.

No. 386,822.

Patented July 31, 1888.



WITNESSES:

*Donn Twitthell.*  
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INVENTOR:

*E. H. Hickok*

BY *Munn & Co*

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# UNITED STATES PATENT OFFICE.

EDWIN H. HICKOK, OF NEW YORK, N. Y.; MARY H. HICKOK ADMINISTRATRIX OF SAID EDWIN H. HICKOK, DECEASED.

## LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 386,822, dated July 31, 1888.

Application filed July 18, 1884. Renewed November 17, 1886. Serial No. 219,180. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN H. HICKOK, of the city, county, and State of New York, have invented a new and Improved Lamp-Burner, of which the following is a full, clear, and exact description.

My improvements relate to burners of the Argand type; and the invention consists in certain novel features of construction, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section of the improved burner. Fig. 2 is a similar section in a plane at right angles to Fig. 1, and Fig. 3 is a horizontal section on line *x x* of Fig. 1.

A is the base of the burner; *a*, the central air-tube thereon; *b*, the outer or wick tube, forming an annular space around tube *a* for the wick. *c* is the outer cone or deflector, and *d* the perforated air-distributor.

The lower portion of the base A is drawn inward to a circle of about the diameter of the tube *b*, or smaller, and is still further reduced by a collar, *e*, which is shown as screwed on the base, but may be in one piece therewith, if desired. I prefer the separate collar *e*, and make it of non-conducting material, such as hard rubber, so as to prevent heat from being conveyed to the fountain and to the air-distributor *d*, supported by the collar. The base A and the closed bottom portion of the tube *a* are connected by horizontal air-tubes *f*, six in number, more or less, which supply air to the center of the flame.

I make use of a wick that is to be the subject of a separate application for patent, composed in its principal portion of longitudinal filaments only, which wick readily passes through the reduced neck and gives an ample supply of oil, and the wick divides in order to pass the air-tubes *f*.

The wick-raiser is adapted by its construction and arrangement to the reduced collar or neck. The rack *g* is placed at the center of the tube *a*, and is guided at its upper end by an arm, *h*, attached to the base.

*i* is the ratchet-wheel engaging the rack.

*k k* are flexible arms, preferably made of

spring-wire, connected to the lower end of rack *g*, and extending up between the air-tubes *f* to the space around tube *a*, where they connect to the ring *l*. The ring *l* is formed to receive and hold the wick, and may have penetrating points or devices suitable to the wick employed. In the movement of the rack up and down, the arms *k*, being flexible, adapt themselves to the tube *a* and the collar *e*. These arms may be flat strips of metal, and in some cases need not be flexible.

The deflector *m* is carried by a central rod, *n*, fitted to slide in arm *h*, and is raised by a spring, *o*, around the rod.

*p p* are toggle-bars connected to the rod *n* and to the bottom of tube *a*.

*q* is a lever hung on the shaft of the ratchet-wheel and connected to the toggle-bars, and *r* is a lug or projection on rack placed to bear on lever *q* when the wick-raiser is down at about its lowest point. When the wick is lowered and lug *r* reaches the lever, the toggles are thereby compressed and the deflector *m* brought down with a quick movement over the wick-tube and the flame extinguished.

The construction of the wick-raiser may be varied; but the rack should be within the air-tube, as when placed outside it is necessary to enlarge the collar or neck to give room for the rack to enter the fountain.

I am aware that reducing-collars have been used with lamp-burners for attaching large-sized burners to fountains with small-sized collars. That I do not claim.

The burner-body made all in one piece, as herein shown, forms no part of the present invention; but I reserve to myself the right to make a separate application therefor at some future time.

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

1. In an Argand burner, the combination, with a vertically-movable deflector, a wick-adjusting rack, and a wheel for operating the said rack, of a spring for raising the deflector, and means connected with the shaft of said wheel and operated by the wick-adjusting mechanism for causing the descent of the deflector upon the wick, substantially as specified.

2. In an Argand burner, the combination,

with a vertically-movable deflector, a wick-adjusting rack, and a wheel for operating the said rack, of a spring for raising the deflector, and a rocking or swinging arm connected with the shaft of said wheel and operated by the wick-adjusting mechanism, causing the descent of the deflector upon the wick, substantially as specified.

3. The combination, with an Argand burner having a central air passage or tube, and the wick-operating mechanism arranged in said tube, of an extinguisher, a vertically-sliding rod supporting the same, extending down into the central air passage or tube, and intermediate connections between the extinguisher-support and the wick-operating mechanism, whereby provision is made for controlling the sliding movement of the extinguisher-rod by the wick-raising mechanism, substantially as herein shown and described.

4. The combination, with an Argand burner having a central air-tube, of the rack *g*, ar-

ranged within the air tube, the ratchet-wheel *i*, and the arms *k*, extending outside of the air-tube and provided with wick-engaging device on their ends, substantially as herein shown and described.

5. The combination, with a lamp-burner, of the rack *g*, placed within the air-tube, ratchet-wheel *i*, arms *k*, extending outside the air-tube, and the ring or holder *l*, substantially as described.

6. The combination, with an Argand burner having a central air-tube, of the toggles *p*, the spring for extending the same, the rod *n*, connected to the toggles, the deflector *m* on the rod, the rack *g*, and means for operating the rack and depressing the toggles by the downward movement of the rack, substantially as herein shown and described.

E. H. HICKOK.

Witnesses:

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C. SEDGWICK.