

A. ANGELL.  
LAMP-BURNER.

No. 188,490.

Patented March 20, 1877.

Fig. 1.

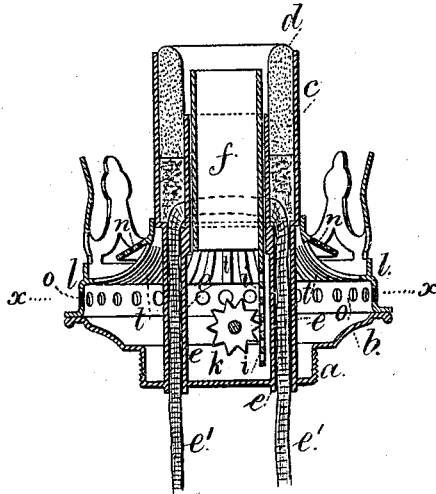


Fig. 2.

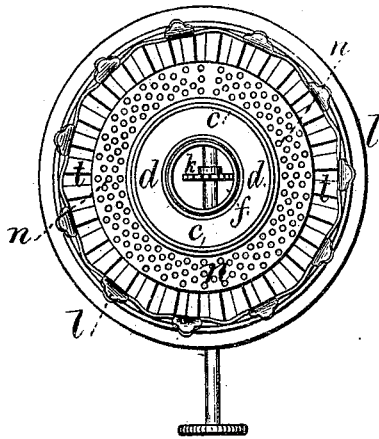
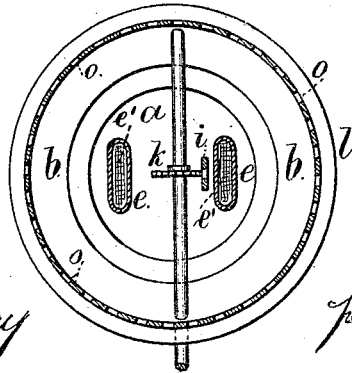


Fig. 3.



Witnesses

Chas. H. Smith  
Geo. D. Pinckney

Inventor

Albert Angell.

per Lemuel W. Serrell

att'y

# UNITED STATES PATENT OFFICE.

ALBERT ANGELL, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO CHARLES  
F. A. HINRICHS, OF BROOKLYN, NEW YORK.

## IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. 188,490, dated March 20, 1877; application filed  
February 5, 1877.

*To all whom it may concern:*

Be it known that I, ALBERT ANGELL, of East Orange, in the county of Essex and State of New Jersey, have invented an Improvement in Lamp-Burners, of which the following is a specification:

I make use of a cylinder containing a non-combustible wick, and from the bottom of this cylinder there are two or more wick-tubes passing through the body of the lamp to the reservoir.

Within the wick-cylinder there is a movable air-tube, that can be raised or lowered to increase or lessen the flame, and there is a movable chimney-holder and air-distributer around the wick-cylinder.

The object of this construction is to prevent the heat extending down to the reservoir, and to properly regulate the action of the air as it passes up to the flame.

A non-combustible mineral wick has been made in a cylindrical form, and a composition adapted to use as a wick has been employed, and reference is hereby made to Letters Patent Nos. 179,049 and 183,036 for a more full description of such non-combustible mineral wick, and to Letters Patent No. 178,774 for an air-tube that is raised or lowered to regulate the flame.

In the drawing, Figure 1 is a vertical section of the burner. Fig. 2 is a plan of the same, and Fig. 3 is a sectional plan at the line *x x*.

The screw *a* is adapted to the reservoir, upon which the burner is to be screwed. This is provided with a disk or burner body, *b*, upon which rests the removable chimney-holder.

The cylinder *c* is of a size to receive the composition non-combustible mineral ring *d*, that forms the Argand wick, and from the bottom of the cylinder *c* there are two wick-tubes, *e e*, extending down through the sheet metal of the body within the burner-screw. These tubes contain wicks *e'*, that are led up into the cylinder *c*, and brought around in opposite directions and secured, so that they cannot pull out accidentally; or a long wick may have a longitudinal slit therein, so that the split portion passes at each side of the

central air-tube of the cylinder *c*, and the ends go down through the wick-tubes.

It is preferable to introduce asbestos, "mineral wool," or similar material between the wick *e'* and the ring *d*, of non-combustible material, to prevent the cotton wick becoming charred.

The central movable air-tube *f* is provided with a rack, *i*, that is moved by the pinion *k* upon a horizontal shaft, at the outer end of which there is a button-head. This takes the place of the ordinary wick-raiser, because by lowering the tube *f* the exposed surface of the mineral wick is increased and the flame enlarged, and by raising the said tube *f* the flame is lessened.

The removable chimney-holder *l* is made as a ring, with a conical perforated portion, *n*, surrounding the wick-cylinder *c*, and supported by the bars *t*, and this perforated cone serves to regulate the proportion of air that passes up around the burner and inside the chimney. The perforations at *o* around the bottom of the chimney-holder serve to regulate the total volume of air admitted to the flame.

It will generally be preferable to employ spring chimney-holders, and to use locking-studs or a bayonet-lock to secure the chimney-holder upon the body of the burner.

I claim as my invention—

1. The cylinder *c*, receiving the non-combustible Argand wick *d*, in combination with the wick-tubes *e e*, passing from such cylinder *c* down through the metal of the burner, substantially as set forth.

2. The combination, with the non-combustible Argand wick *d* and movable air-tube *f*, of the rack *i* and pinion *k*, for the purposes and as set forth.

3. In combination with the cylinder *c*, wick-tubes *e*, and burner-body *b*, the removable chimney-holder *l*, perforated air-distributer *n*, and perforations *o*, substantially as set forth.

Signed by me this 25th day of January, A. D. 1877.

ALBERT ANGELL.

Witnesses:

GEO. T. PINCKNEY,  
HAROLD SERRELL.