H. BROWN.

Lamp Burner.

No. 37,606. Patented Feb. 10, 1863.

Fig. 1.

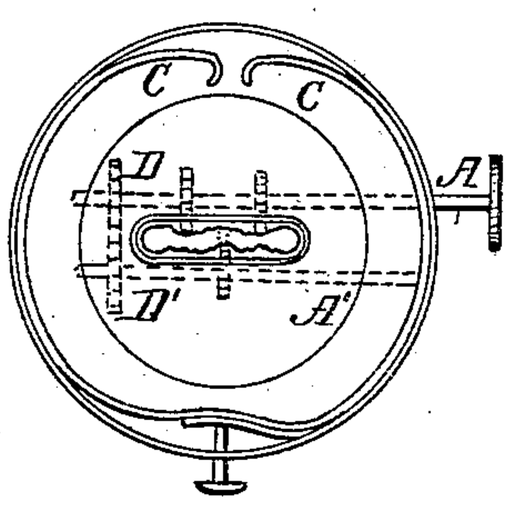


Fig. 4.

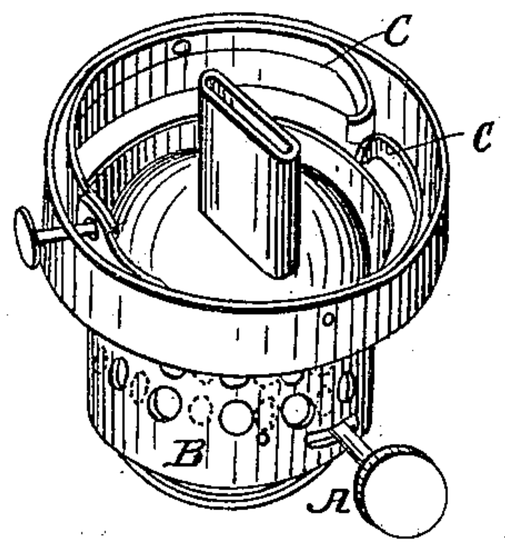


Fig. 2.

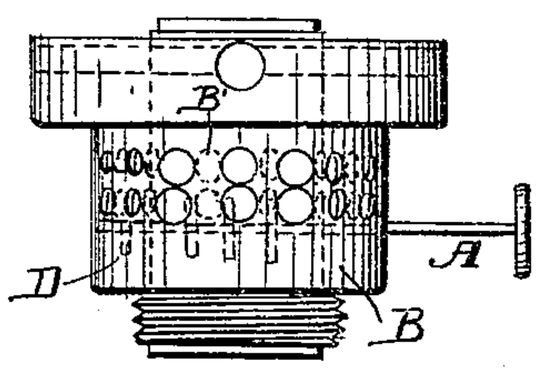
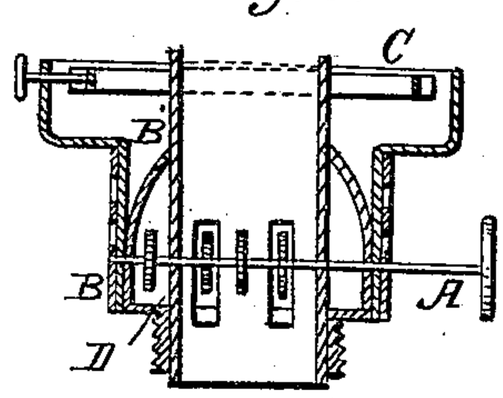


Fig. 3.



Witnesses:

B. Brent.

L. Johnson.

Inventor:

Harvey Brown

UNITED STATES PATENT OFFICE.

HARVEY BROWN, OF NEW YORK, N. Y.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. **37,606,** dated February 10, 1863.

To all whom it may concern:

Be it known that I, HARVEY BROWN, of the city, county, and State of New York, have invented new and useful Improvements in the form and construction of Burners for Kerosene and other Oil Lamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a top view; Fig. 2, a side elevation; Fig. 3, a vertical section; Fig. 4, a perspective view.

A A′ are the spur-wheels upon their shafts, upon which shafts there are also the cog-wheels D D′; B, the cap or band having orifices inclosing that part of the burner marked B′, having similar orifices; C C, the springs.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I make my burner in the usual form at the lower end, with screws to attach it to the cap of the lamp in the usual way. Above the screw I enlarge the diameter of the burner suitably to give sufficient space within for the wick-tube and the cog-wheels D D′, or their equivalents, on the shafts of the spur-wheels, one of which (marked A) I make in the usual form, with one end extending out with a burr or rim upon the outer end for the purpose of moving the wick up or down, with the addition of the cog-wheel D on this shaft just outside of the wick-tube, this cog-wheel to mesh into a similar cog-wheel (marked D′) on the shaft A′, which has one or more spurs on it, as desired, which pass through orifices in the wick-tube on the opposite side from the spurs on the shaft A, by which means the wick is moved up or down, having spurs to move it operating together on both sides by means of moving the shaft A in the usual way, as the shaft A′ is short, only passing through the burner for the support of its ends. I next carry up the side of my burner a sufficient distance to make suitable orifices for the admision of air to the flame of my burner, which orifices may be made in size, form, and number as shall best accomplish the end of admitting air to the frame of my burner, which I regulate by means of the band B, which I make and place over this part of the burner (marked B′) with orifices suitable to open fully the orifices in the burner, and by moving around suitably I partly or fully close the orifices in the burner and thus regulate the quantity of air admitted to the flame of the lamp, as desired. I next carry out my burner in its manufacture about at right angles with the perforated part below a sufficient distance, so that by turning it up there will be room within its circumference for the deflector or chimney, or both, to be applied. I next make the semicircular spring C C of brass, steel, or other suitable material and attach them opposite to each other on the inside of the least upright part of the burner by screws, rivets, or otherwise, as desired. I bend in the ends of these springs on one side in such form of curve as desired. On the other side I have the ends lap over. In the outside piece as they lap I make a slit or opening through which I put a pin and fasten it to the end of the other spring on the inside. The outer end of this spring I pass through an orifice prepared for it in the upright side of the burner and pin a head or other appliance by which these ends of the springs may be pulled out, so as to allow the chimney and deflector, one or both, as arranged, to drop down to their places in the lamp, the other side having been placed under the other curved ends of the springs, so that, as the chimney is crowded in under them, they press on the flange or rim of the chimney, and, as the pin is let go of on the front side, the springs recoil back and impinge on that side, and thus the chimney is firmly and steadily held—no space or place for moving or shaking, to which they are subject in most other forms of springs and screws.

I make this burner in size, form, and finish as desired, with such modifications in the construction and use of the several parts above represented as may be found desirable, not departing from the principles involved therein.

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

1. The arrangement and construction of the spur-wheel A′, in combination and connection, by means of the cog-wheels D D, or their equiv-

alents, with the spur-wheel A, for the purpose of moving the wick, substantially as described. I do not claim the spur-wheel A separately, as that is a known and used device.

2. The band B, in combination with the perforated burner B′, substantially in the manner and for the purposes set forth.

3. The springs C C, constructed, arranged, and operated substantially in the manner and for the purposes set forth.

HARVEY BROWN.

Witnesses:
B. MIX.
L. JOHNSON.