E. B. REQUA.

Lamp Burner.

No. 35,893. Patented July 15, 1862.

Fig. 1

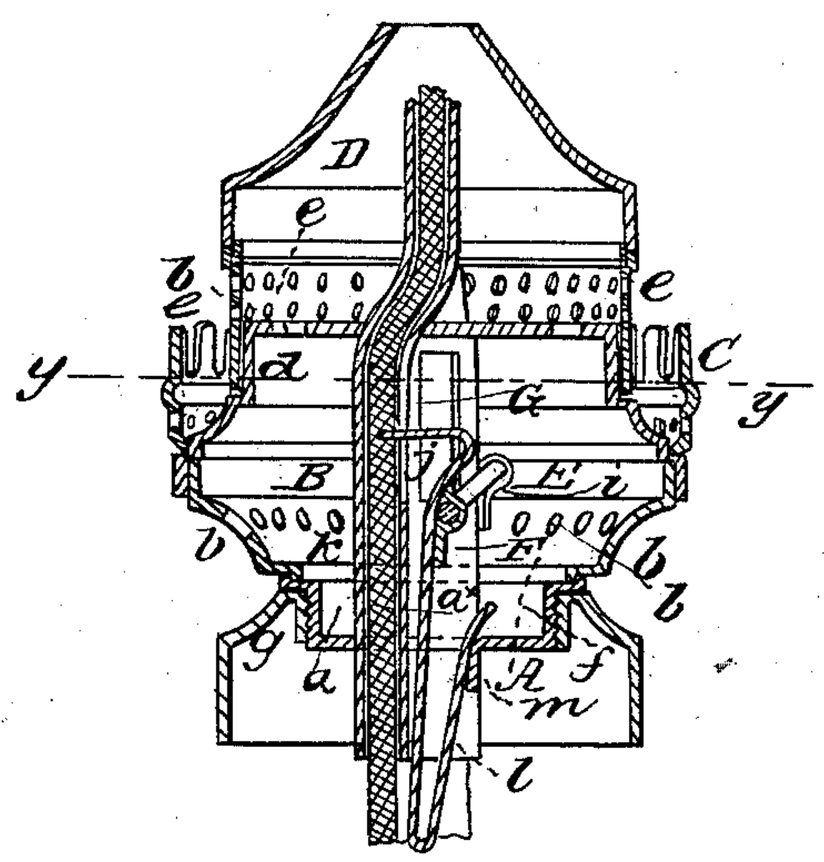
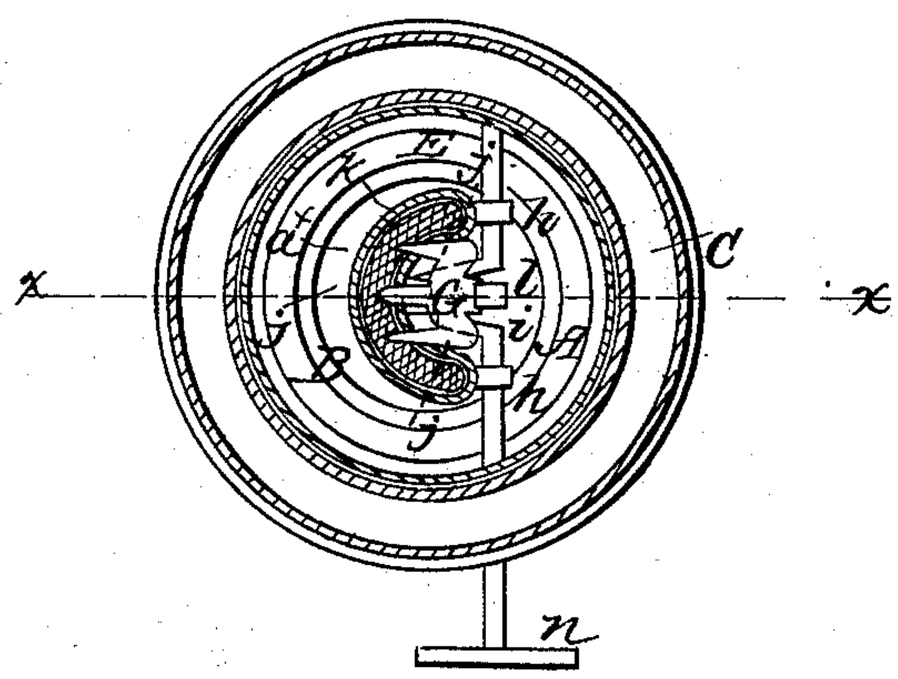


Fig. 2



Witnesses

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IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. **35,893**, dated July 15, 1862.

To all whom it may concern:

Be it known that I, E. B. REQUA, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Lamp-Burner; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved lamp-burner for burning coal-oil; and it consists, first, in a novel and useful improvement in the wick-tube, whereby much broader wicks than usual may be employed in burners of a given size and a correspondingly broader flame obtained.

The invention consists, second, in a novel and improved means for elevating and lowering the wick, whereby the same will not be compressed in the tube as hitherto and the free ascent of the oil retarded, and at the same time the moving of the wick rendered certain, whether it be thick or thin for the tube, and capable of being moved or adjusted within the tube with the greatest facility.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the cap of the burner, which is screwed into the top of the lamp, as usual, and B is a wick-tube, which is secured vertically in the cap A and passes up through a horizontal partition, *a*, in the upper part, C, of the burner. The lower part or cap, A, of the burner is perforated, as shown at *b*, for the admission of air, and the partition *a* is also perforated, as shown at *b'*, the latter perforations being in a circular raised ledge, *d*, at the center of the partition and over which the cone or deflector D is fitted, the latter being perforated at its lower part, as shown at *e*.

The cone or deflector covers the upper part of the wick-tube B, and the latter is of peculiar shape, being flat and straight at its upper part and bent at its lower part below the partition *a*, so as to be of semicircular form in its horizontal section, as shown clearly in Fig. 2 at $a^{\times}$. This form of the wick-tube constitutes an important feature of the invention. It admits of the upper part of the tube being comparatively wide, as the lower part by being bent or curved, as shown and described, is materially contracted in width, so much so that it may pass through the screw portion *f* of a small-sized cap, while its upper straight end will be much wider than the diameter of *f*. Hence I am enabled to use a much wider wick than usual in a burner of a given size and a proportionably wider flame obtained. Another advantage is obtained by this bending of the wick-tube, and that is that burners of various sizes may be screwed into the same socket, *g*, on the lamp, which is an important feature, as it obviates the necessity of manufacturing different-sized sockets to suit different-sized burners.

E represents a shaft, which passes horizontally into the burner and has its bearings *h h* attached to the wick-tube B. This shaft is allowed to turn freely in its bearings, and it is provided with a crank, *i*, which is opposite the center and concave side of the wick-tube.

On the crank *i* there is fitted a rod, F, the upper end of which has a fork, G, composed of two or more tines permanently secured to it. These tines project from the upper end of the rod F at right angles, and they pass through vertical slots *j* in the wick-tube and have their points pressed into the wick *k* in the tube D by means of a spring, *l*, which is attached to the lower end of the rod F and bears against a projection, *m*, at the bottom of the cap A, as shown clearly in Fig. 1.

The shaft E projects at one end through the burner and has a small thumb-wheel, *n*, attached for the convenience of turning it. When the shaft E is turned from left to right, the rod F is operated by the crank *i*, so that the fork G will be shoved toward the wick-tube D, and then upward, raising the wick, and then receding and moving downward and forward again toward the wick-tube and upward. To lower the wick, the shaft E is turned in a reverse direction. By this arrangement the wick is operated (raised or lowered) with the greatest facility and with certainty, and without being subjected to any undue pressure to retard the free ascent of the oil.

I do not claim raising and lowering the wick by means of a fork irrespective of the manner of operating the same; but

I do claim as new and desire to secure by Letters Patent—

1. Bending or curving the lower part of the wick-tube B in semicircular form in its horizontal section, as and for the purpose set forth.

2. Operating or raising and lowering the wick *k* through the medium of the crank-shaft E, fork G, and rod F, provided with the spring *l*, substantially as described.

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Witnesses:
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