

C. B. Matthews,
Lamp Burner.

No. 30,417.

Patented Sept. 9. 1866

Fig: 1.

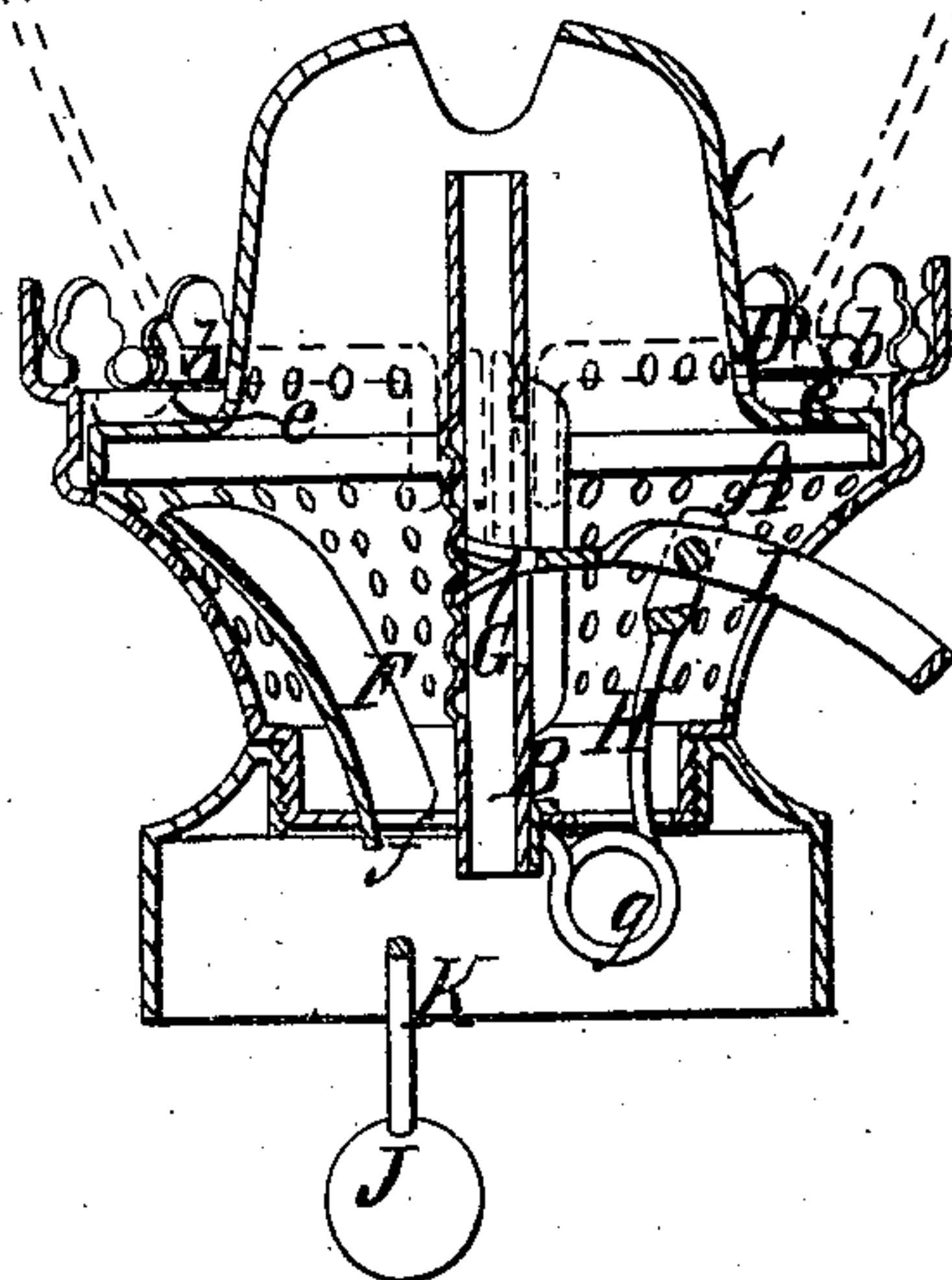


Fig: 2.

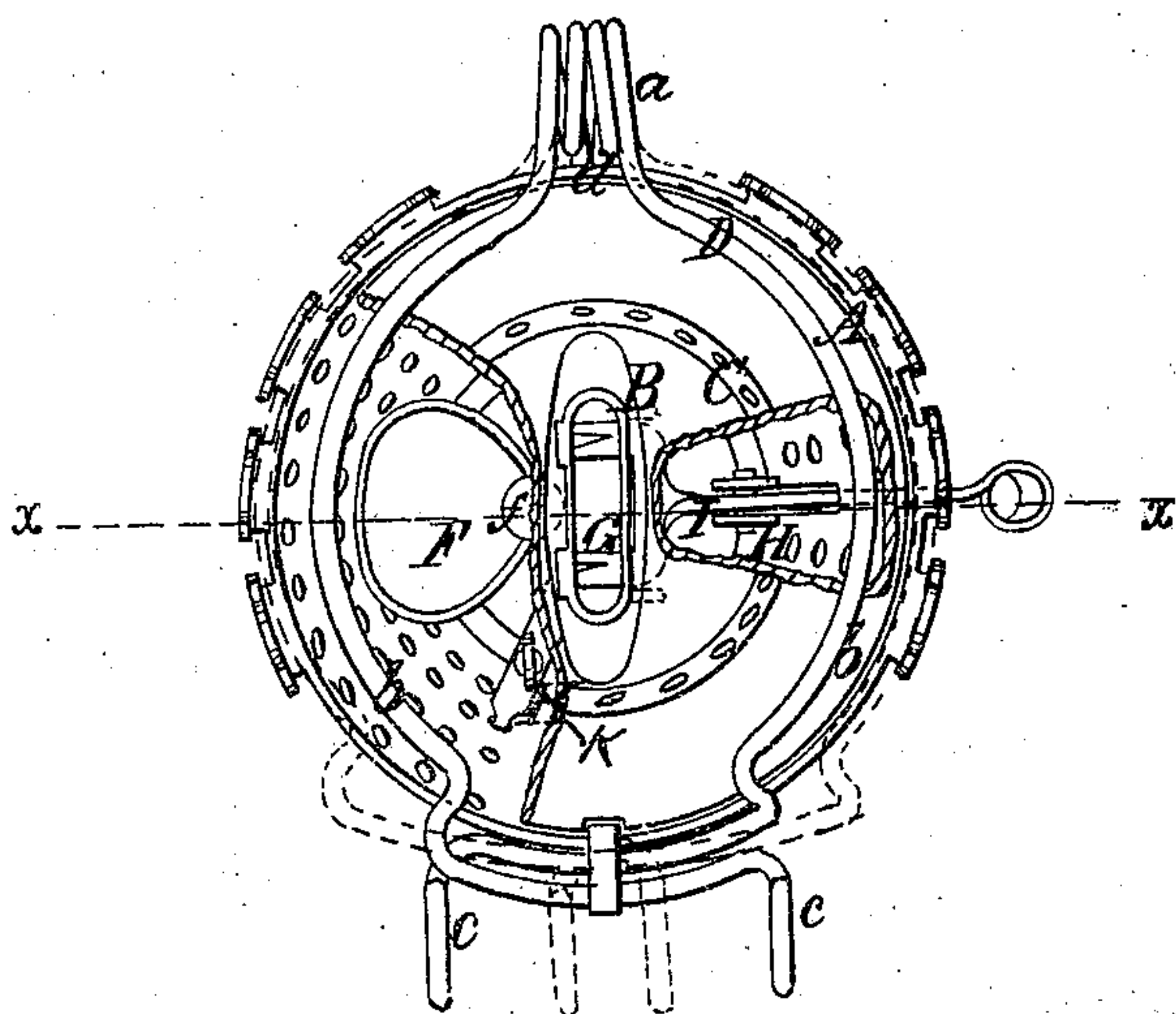
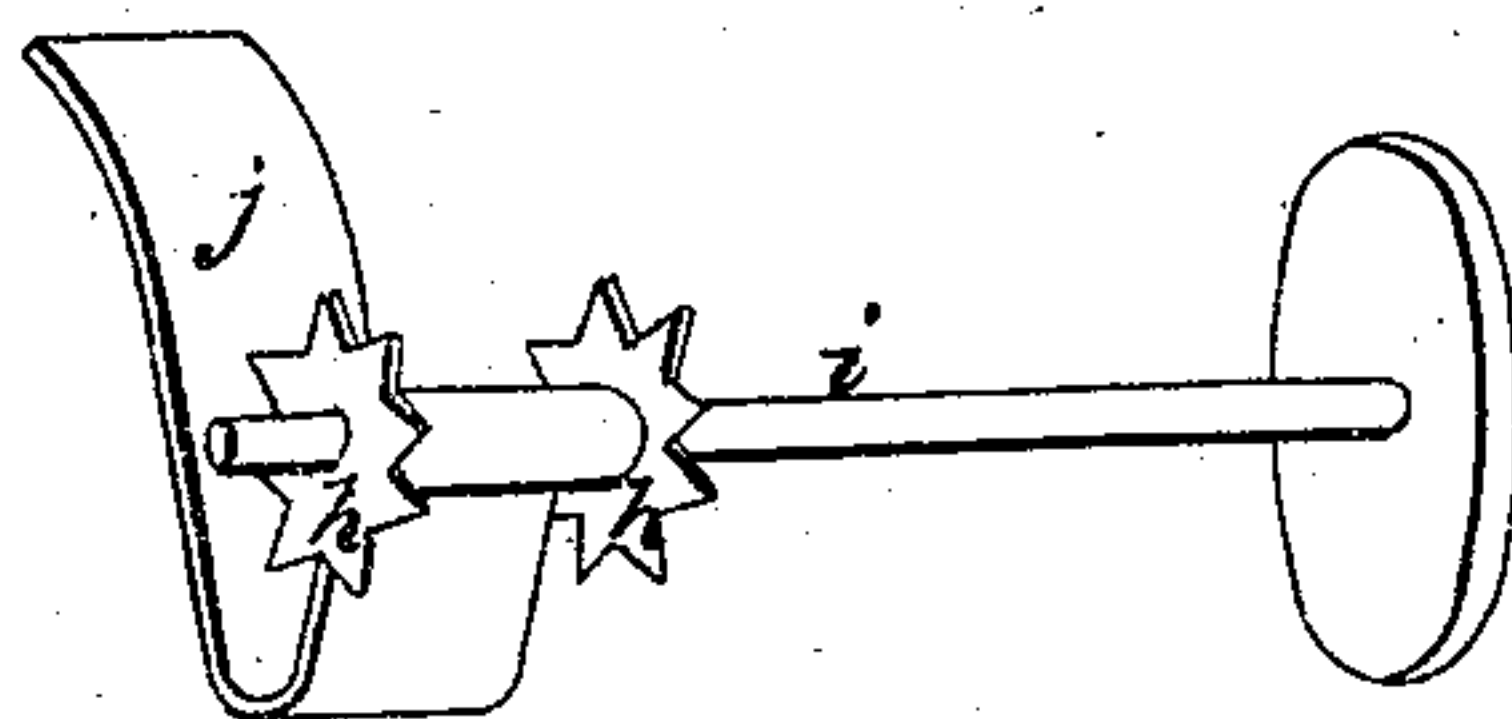


Fig: 3.



Witnesses:
J. W. Combs
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UNITED STATES PATENT OFFICE.

C. B. MATHEWS, OF OQUAWKA, ILL.

IMPROVEMENT IN LAMP BURNERS.

Specification forming part of Letters Patent No. 36,417, dated September 9, 1862.

To all whom it may concern:

Be it known that I, C. B. MATTHEWS, of Oquawka, in the county of Henderson and State of Illinois, have invented certain new and useful Improvements in Lamp-Burners; 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 vertical central section of my invention, taken in the line *x x*, Fig. 2. Fig. 2 is a plan or top view of my invention with the cone partially bisected or broken away; Fig. 3, a detached perspective view of a portion of the same.

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

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

A represents a lamp top or burner, B the wick-tube, and C the cone or deflector. These parts may be constructed in the usual way, and therefore do not require a minute description.

D represents a clamp, which is constructed of a wire or elastic rod bent or curved so as to form a spiral or coil spring, *a*, and two semi-circular jaws, *b b*, as shown clearly in Fig. 2. The free or disengaged ends of the jaws *b b* are bent so as to cross each other and terminate in eyes *c c*, which may be readily grasped by the finger and thumb and pressed toward each other for the purpose of expanding the jaws *b b*, as shown in red in Fig. 2.

The clamp D is secured to the lamp-top A by soldering to it a projection, *d*, underneath the coil-spring *a*, and the clamp, if desired, may be constructed of two pieces of wire, each piece containing a jaw, *b*, and one-half of the spring *a*, both pieces being connected to the lamp-top at the same point. The elasticity of the spring *a* causes the jaws *b b* to fit over the flange *e* at the base of the chimney E, and thereby secure the latter to the lamp top or burner, the chimney being detached from the burner by pressing the disengaged ends of the jaws *b b* toward each other, as previously explained.

This device forms a very simple and economical chimney-fastening—one that may be operated with the greatest facility, and

which will, owing to the elasticity of the spring *a*, together with the elasticity of the jaws themselves, admit of the chimney expanding freely as it becomes heated under the action of the flame, the chimney at the same time being firmly secured to the burner, so that it cannot be casually detached.

Within the burner A there is placed and permanently secured a curved scoop-like projection, F, the lower end of which is at the edge of a hole, *f*, in the bottom of the burner and the upper end nearly or quite in contact with the side of the burner. This projection F serves as a guide or funnel to direct the oil into the fountain of the lamp. In filling the fountain the chimney E and cone C are removed from the burner. This filling attachment is extremely convenient and saves a great deal of trouble, obviating the necessity of detaching the burner from the fountain and preventing the dropping of oil upon the lamp, which always occurs to a greater or less extent even when the wick is drawn but partially out from the fountain.

G represents a fork, which is attached to the upper end of an elastic bar, H, within the burner. The bar H is bent or curved at its lower end to form one or more coils, *g*, and is secured to the wick-tube B at the bottom of the burner, as shown in Fig. 1. The fork G is formed at the inner end of a rod or bar, I, the outer part of which passes through the side of the burner, so that it may be readily grasped by the operator. The spring formed by the coils *g* has a tendency to keep the fork G in contact with the wick in tube B, and in order to raise the wick the outer end of the rod or bar I is depressed, and that movement raises the fork G, and consequently the wick, the spring *g* keeping the fork in contact with the wick, but not causing it to press or bear against it very hard, an excessive pressure not being required. This arrangement, it will be seen, accommodates itself to wicks of different thicknesses—a result not attained by the ordinary toothed wheels placed on a shaft fitted in fixed bearings, and which frequently cause thick wicks to be compressed to such a degree as to prevent the free ascent of the oil and sometimes to rupture the wick-tube. It will be seen, however, from the above description that the same end may be attained by having the shaft of the toothed wheels fitted

in a spring, as illustrated in Fig. 3, *h* representing the wheels, *i* the shaft, and *j* the spring, one end of which may be attached to the burner and the shaft *i* to the opposite end, the spring being bent in V form. The latter modification, however, is an equivalent of the first.

J represents a float, which may be constructed of cork or other material which will float on the surface of the oil in the fountain. This float has a rod, K, attached to it, which passes upward into the burner A and indicates the height of the oil in the fountain. This indicator is an important feature of the invention when metal lamps are employed, as it always shows when the fountain requires to be replenished with oil.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the spring D, with the lamp-top A, cone C, and chimney E, in the manner herein shown and described, so that the said spring will adjust itself both vertically and laterally to the chimney and press the chimney with a yielding pressure in both directions, all as set forth.

2. Having the wick-fork or spur-wheel shaft mounted upon a spring, in the manner and for the purpose herein shown and described.

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Witnesses:

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