K. G. TUNK.

Lamp Extinguisher.

No. 202,076. Patented April 2, 1878.

Fig. 1.

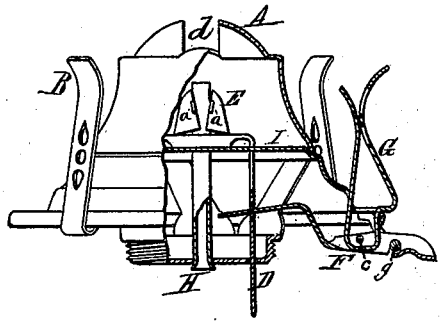


Fig. 2.

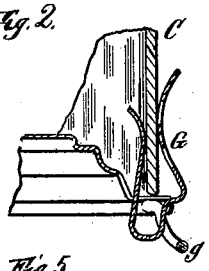


Fig. 3.

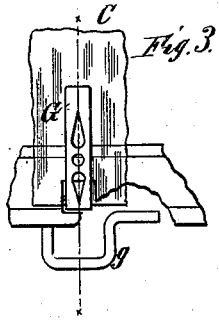


Fig. 4.

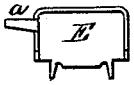


Fig. 5

Fig. 6.

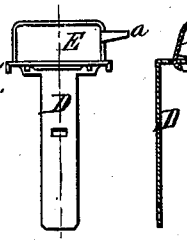


Fig. 7.

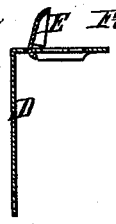


Fig. 8.

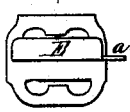


Fig. 9.

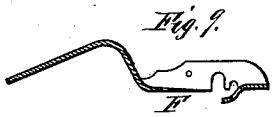


Fig. 11.

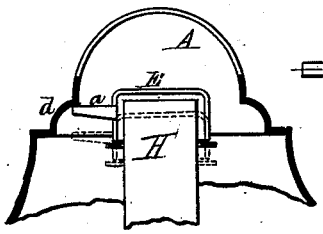
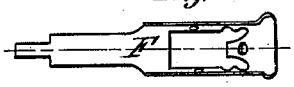


Fig. 10.



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UNITED STATES PATENT OFFICE.

KNUT G. TUNK, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN LAMP-EXTINGUISHERS.

Specification forming part of Letters Patent No. **202,076**, dated April 2, 1878; application filed February 15, 1878.

To all whom it may concern:

Be it known that I, KNUT G. TUNK, a citizen of Sweden, at present residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Extinguishers for Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a partial section and elevation of a lamp-burner, a portion of the cone being broken away to show the location and relative arrangement of the several features constituting my improvements. Fig. 2 is a sectional elevation, and Fig. 3 a front view, of a fragment of the burner-cone and chimney, illustrating the arrangement of the chimney-nippers and the location of the stirrup which supports the operating-lever. Fig. 4 is a front, and Fig. 5 an end, view of one of the lids employed to extinguish the flame. Fig. 6 is a front view, Fig. 7 an axial section, and Fig. 8 a top or plan view, of the guide which elevates the extinguisher-lids, one of the lids only being shown in place. Fig. 9 is a side view, and Fig. 10 a plan, of the lever which operates the guide. Fig. 11 is a sectional elevation, showing one of the tangs connected with an extinguisher-lid, and bearing against the rounded portion of the cone, whereby the lid is brought into its final closed position, the usual location of the lid and tang being shown by the dotted lines.

Like letters in all the figures indicate corresponding parts.

The object of my invention is to produce an effective extinguisher for lamps which shall automatically operate under all circumstances of ordinary accidents and yet not extinguish the flame, by merely moving the lamp about, be simple and cheap to manufacture, and retain the general symmetrical appearance of the lamp.

To accomplish all of this, the invention consists in certain details of construction and arrangements of parts, as will be hereinafter first fully described, and then pointed out in the claims.

A is the cone of a common form of lamp-burner, having the usual chimney-holding springs B and wick-tube H.

The extinguisher is made in the form of two lids, E E, hinged at their lower edges to the carrier or guide D, which projects through suitable guiding-slots in the air-distributing plate I and the bottom plate of the burner. When the guide D is elevated it carries the lids E E with it up along the sides of the wick-tube, and the hinges upon the lids are so made as to permit them to close together by their own weight, and thus envelop the projecting end of the wick-tube, causing the flame to be extinguished.

The operating-lever F projects slightly beyond the burner, being hinged near its outer end upon the stirrup *g*, and passing through a slot in the carrier or guide D near its inner end.

It is obvious that by simply pressing down upon the outer extremity of lever F the carrier may be elevated and the lids closed together. In this manner the flame may be easily and quickly extinguished without the necessity of blowing down the chimney or elsewhere about the lamp. The weight of the carrier and inner end of the lever F tends always to draw the extinguishing-lids E E down to their opened position, as shown in Fig. 1.

At G is shown a bent spring or clamp, (herein denominated the "nipper,") which is preferably made a little shorter than the chimney-holders, so that as the chimney is being located upon the lamp it will be guided between the projecting ends of the nipper without any necessity of particular adjustment. The chimney-nipper passes down through a slot in the rim of the cone, and is connected with lever F by means of a loose joint or hinge, preferably in the form of a wire, connecting the upturned edges of said lever. One of the arms G is bent, as shown in Figs. 1 and 2, so as to prevent its dislodgment, and the hinge *c* being located between carrier D and stirrup *g*, it is apparent that if the nippers be elevated the lids E E must be carried up to a position over the wick.

The chimney, being clamped between the bent arms of nipper G, will, when it is slightly displaced, as under any ordinary accident to

the lamp, draw the nipper upwardly, and this motion will cause the lever F and carrier D to elevate the lids E E, through the medium of which the flame is extinguished; and since the chimney is held by the holders B of ordinary form, there is little or no danger of the lamp being extinguished while moving it about, as frequently occurs with other forms of automatic extinguishers.

Since the lids are made to operate by their own weight when carried sufficiently high, they might not close together very well if the lamp happen to be tipped over toward the side of one of the lids. To insure their closing properly under all circumstances, I provide them with tangs or pikes *a*, which project out a little distance from their ends, and engage with or bear against a slightly-rounded portion of the cone. (Indicated at *d*, Fig. 1.) By this rounded portion the tangs are crowded toward each other, and cannot therefore admit the lids to a position wherein they are separated, provided they be elevated sufficiently to bring them into proper working position.

To facilitate and cheapen the cost of construction, the lids, the lever, and the carrier are stamped from ordinary sheet metal. The several essential elements of the improved device may be readily applied to the usual forms of burners without changing their character or modifying their construction any more than puncling out the necessary slots.

The obvious simplicity of the improved device, its cheapness, efficiency, and non-liability to get out of order, are among the characteristics which will recommend it for use in preference to more complicated forms.

I am aware of previously-existing extinguishers wherein a weight has been made to operate a cap intended to cover the wick. This construction necessitates an unsightly addition to the lamp for the support of the weight, and is further objectionable in that it frequently puts out the light when the lamp is simply being carried about.

I am also aware that the hinged lids are not in themselves new for the purposes herein intended; and, further, that a lamp-chimney has been made to bear against spring-actuated arms, which arms were connected with the extinguishing-blades. I do not, therefore, desire to embrace such features in my claim; but

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

1. In a lamp-burner, the combination of a lid or lids adapted to extinguish the flame with a nipper adapted to clamp the chimney between its projecting arms, said lids and nipper being connected through the medium of a suitable lever, substantially as and for the purposes set forth.

2. In a lamp-extinguisher, the combination, with the extinguishing-lids, which are hinged to a suitable carrier, of the projecting tangs or pikes, adapted to bear against the interior of the burner-cone for the purpose of effecting the closing of said lids, substantially as described.

3. The herein-described burner-cone, the same being provided with a rounded portion, *d*, adapted to direct the extinguishing-lids toward each other when elevated, substantially as shown and described.

4. The combination of extinguishers E E, slotted carrier D, lever F, stirrup *g*, and chimney-nipper G, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

KNUT G. TUNK.

Witnesses:
THOMAS PARKER,
J. D. HANNING.