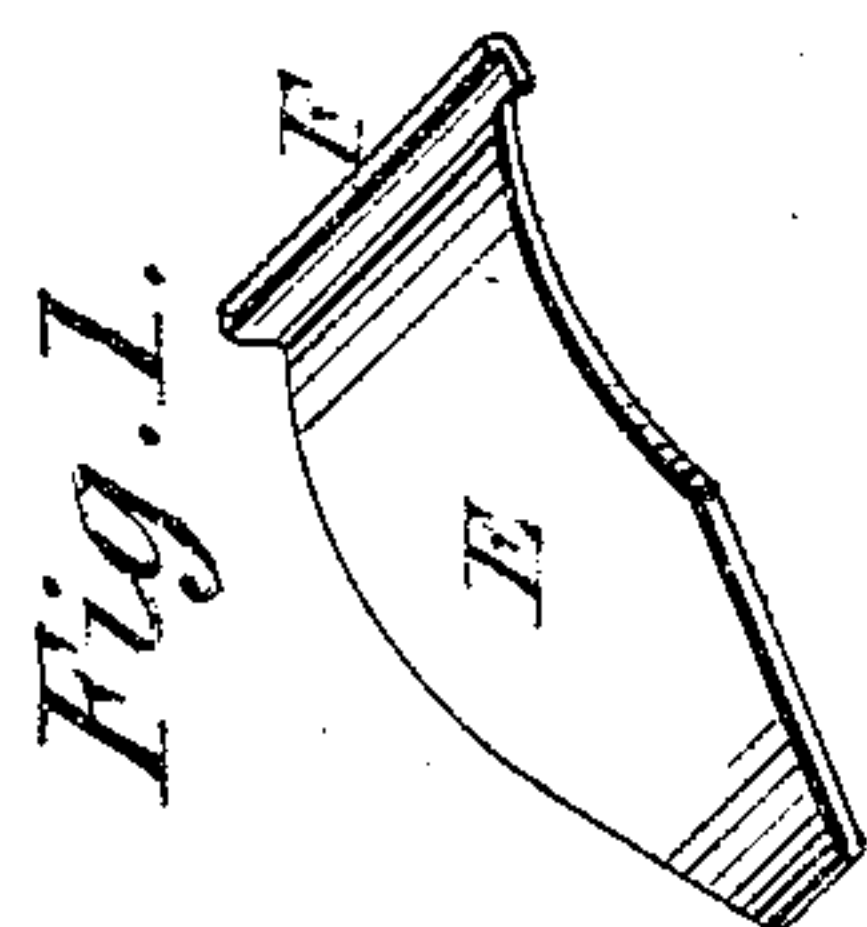
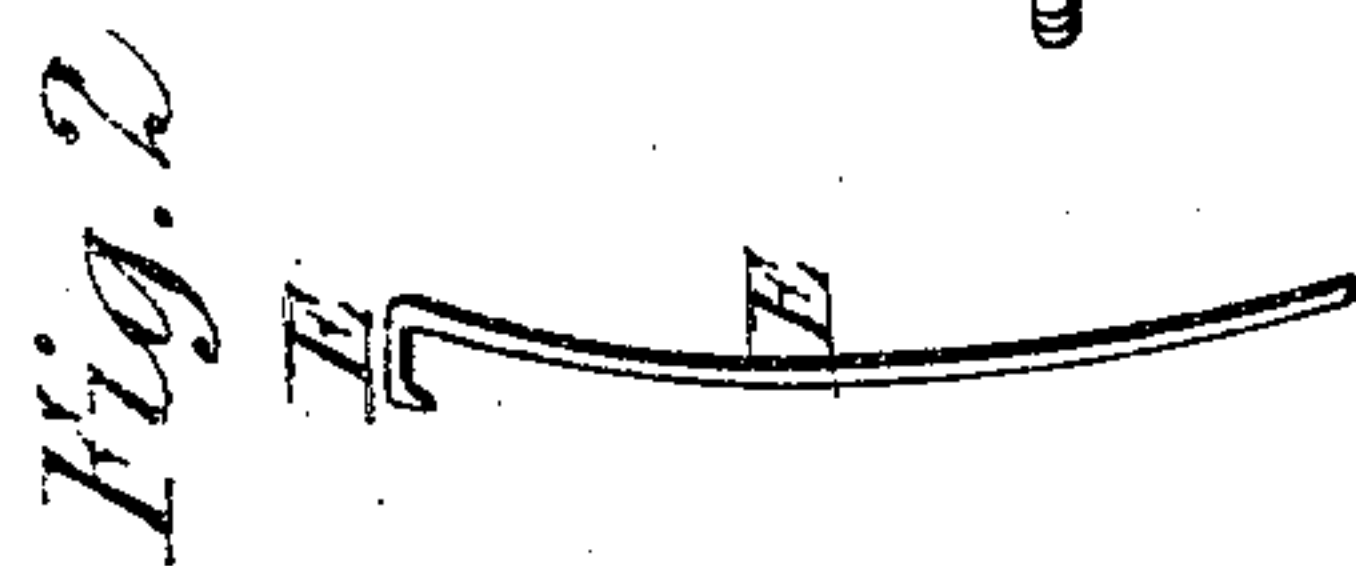
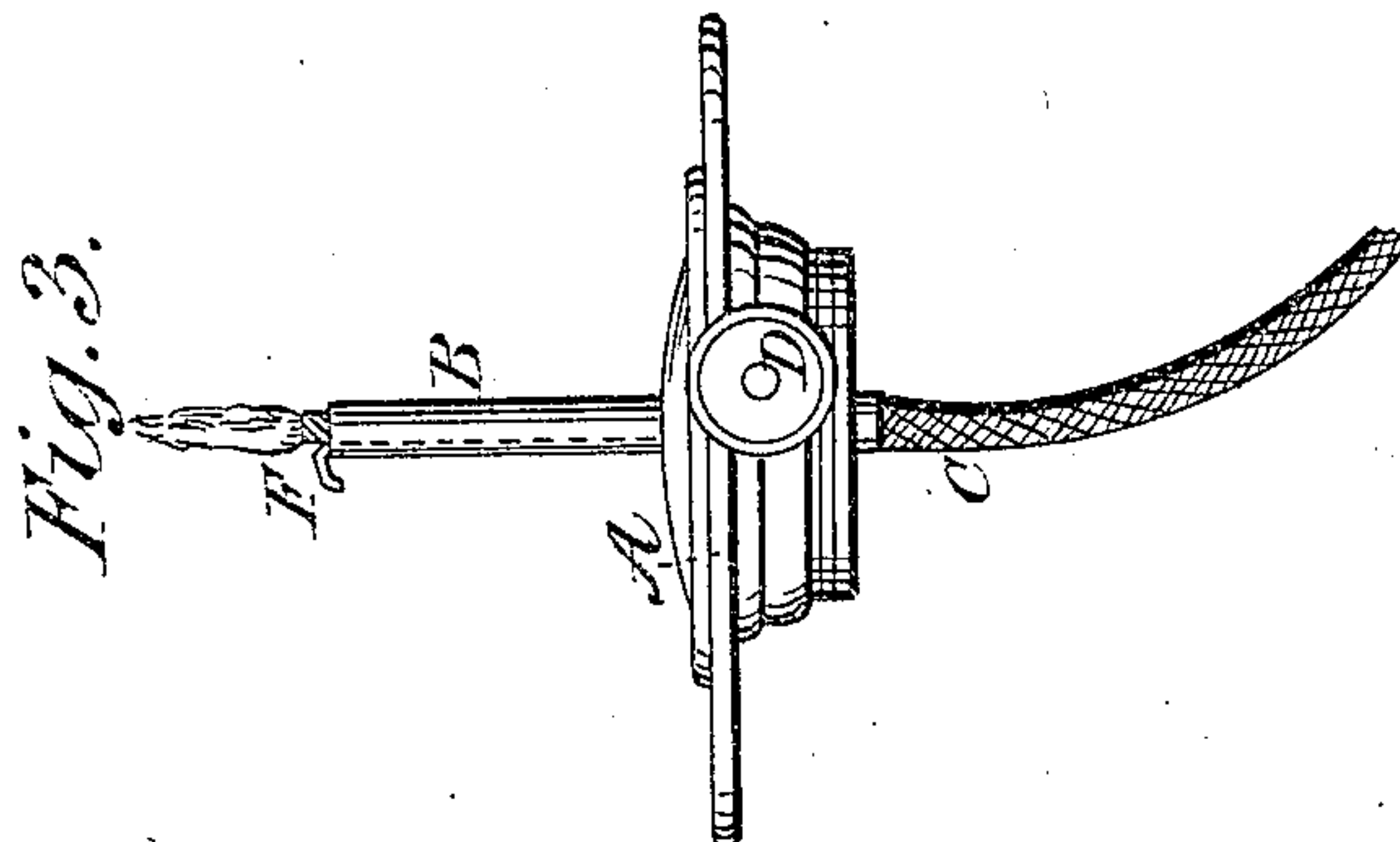
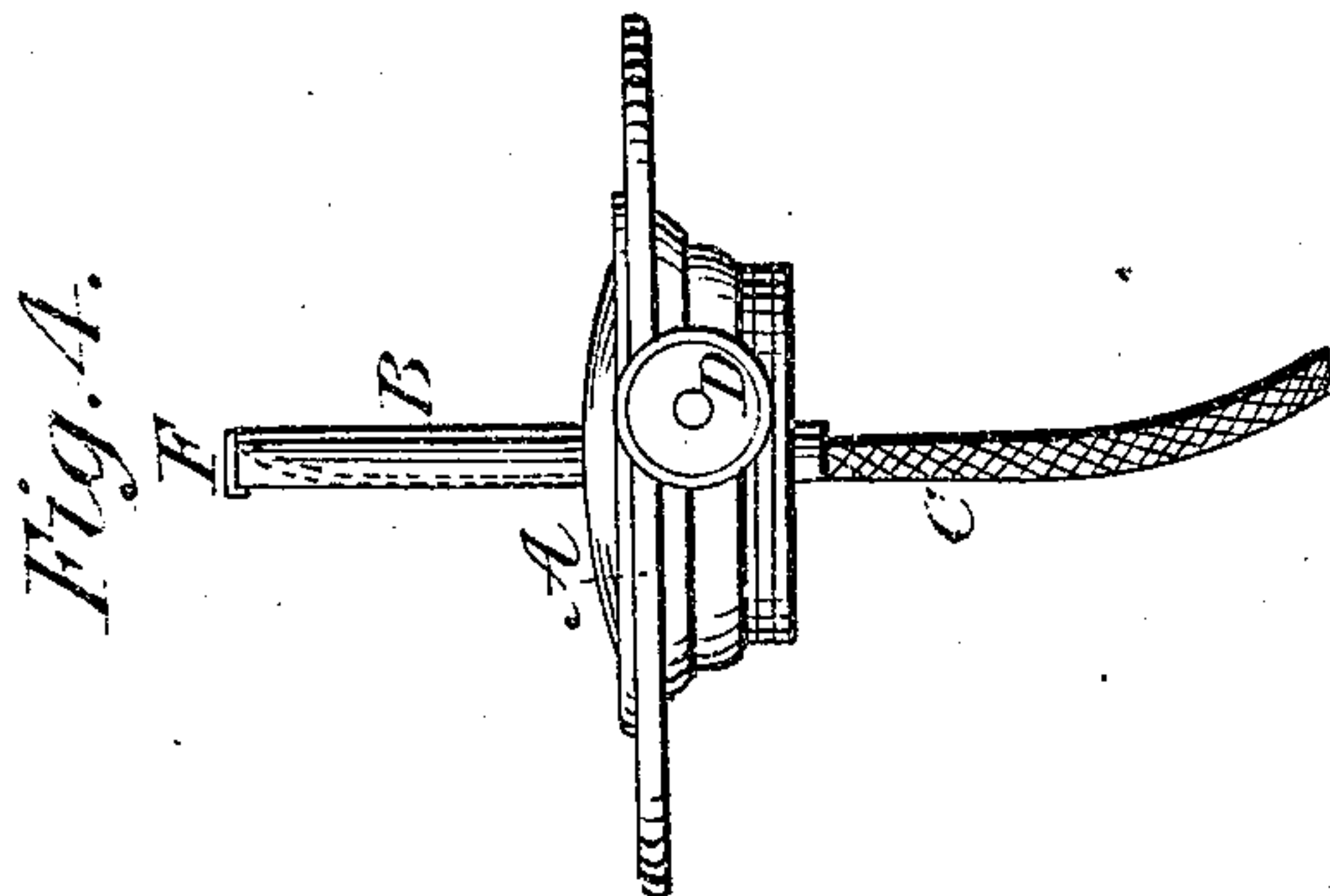


D. J. POWERS.  
Lamp Extinguisher.

No. 103,652.

Patented May 31, 1870.



Witnesses.

*B. H. Frost*  
*S. C. Field*

Inventor:

*Daniel J. Powers*

# United States Patent Office.

DAVID J. POWERS, OF CHICAGO, ILLINOIS.

Letters Patent No. 103,652, dated May 31, 1870.

## IMPROVEMENT IN LAMP-EXTINGUISHERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DAVID J. POWERS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Lamp-Extinguisher; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view of my improved lamp-extinguisher.

Figure 2 is an end view of the same.

Figure 3 is an elevation of a lamp-cap, showing the position of the extinguisher when the wick is lighted.

Figure 4 is a similar view of a lamp-cap with the extinguishers closed upon the tube to extinguish the flame.

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

A fruitful source of accidents in lamps for burning hydrocarbon oils consists in the contact of oxygen with the volatile gases generated by heat within the lamp-reservoir, the oxygen being supplied by the admission of atmospheric air through the wick-tube.

The quantity of gas is increased as the oil is consumed, and, when the lamp is extinguished by the ordinary means, the flame communicates with the volume of gas and an explosion is the result.

My invention has for its object to provide an extinguisher for oil-lamps which, when the wick is turned down to extinguish the flame, shall close the top of the wick-tube in contact therewith upon the outside, and prevent the introduction of oxygen through the tube to the reservoir of the lamp.

The invention consists in an elastic metal plate and cap, applied to the wick-tube of a lamp, to shut with close contact over and upon the upper end of the wick-tube, when the wick is lowered, being thrown into position by the elasticity of the metal plate.

In the accompanying drawing—

A is the screw-cap, and

B the wick-tube of an oil-lamp, as ordinarily constructed;

C is the wick, and

D the device for raising and lowering the same.

The extinguisher is constructed of an elastic metal plate, E, curved longitudinally, as shown in fig. 2, and having its upper end bent over at right angles to form a cap, F, of sufficient size to close completely the top of the wick-tube over the wick.

The extinguisher is placed within the tube, and secured in place by bending its lower end over the lower end of the wick-tube, at one side, as shown at G, fig. 3, or in any other suitable manner, so that the concave side of the plate shall bear against the wick C.

When the wick is moved up by the device D it forces the upper end of the plate to one side of the tube, in the position shown in fig. 3, to admit of lighting, and, when it is desired to extinguish the flame, the wick is withdrawn into the tube, and the elasticity of the plate throws the cap F over the end of the wick-tube, as shown in fig. 4, completely closing the same against the admission of air.

The force of the spring in closing the cap over the wick-tube causes the edge of the cap to free the coal from the end of the wick, thereby cleaning the latter without cutting.

A modification of my invention consists in a straight plate of elastic metal, arranged upon the outside of the wick-tube, attached at its lower end to the latter, and having its upper free end bent over, forming a cap to cover the top of the tube.

Upon the inner face of the plate an inclined lug or wire should be placed, extending through a slot in the side of the tube, so that, when the wick is elevated, its upper end, coming against the inclined wire or lug, shall force the upper end of the extinguisher off the end of the wick-tube.

The cap is thrown by the tension of the spring plate over the end of the tube, when the wick is moved down sufficiently to clear the inclined wire or lug.

The extinguishers are made to suit the different sizes of lamps, and can, therefore, be supplied to the trade for attachment to lamps already in the market.

To attach them it is only necessary to bend their lower ends over the lower ends of the wick-tubes, as previously described.

I am aware that a metal spring for closing the wick-tubes of lamps is not new, and I do not, therefore, claim it broadly, but

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

The lamp-extinguisher, consisting of the metal spring E and the flat cap or cover F, constructed and applied to a wick-tube substantially as described.

DAVID J. POWERS.

Witnesses:

G. H. FROST,

E. A. ELLSWORTH.