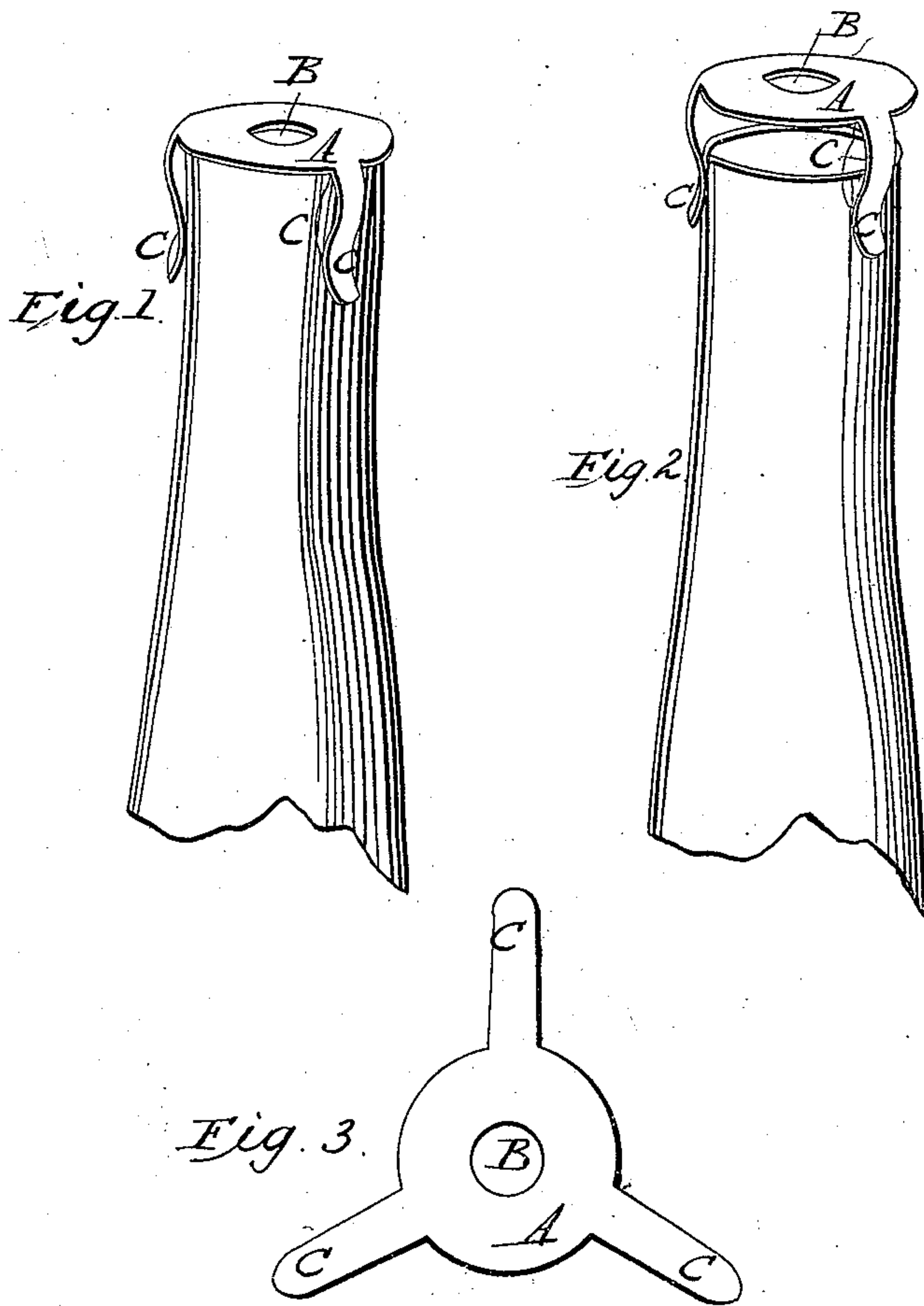


J. LEWIS.  
Lamp Chimney.

No. 43,592.

Patented July 19, 1864.



Attest  
J. P. Fox  
R. P. Bell

Inventor.  
James Lewis

# UNITED STATES PATENT OFFICE.

JAMES LEWIS, OF MOHAWK, NEW YORK.

## IMPROVEMENT IN LAMP-CHIMNEYS.

Specification forming part of Letters Patent No. 43,592, dated July 19, 1864.

*To all whom it may concern:*

Be it known that I, JAMES LEWIS, of Mohawk, in the county of Herkimer and State of New York, have made a new and useful improvement in illuminating-lamps having glass chimneys, which improvement is intended to increase the illuminating-power of said lamps without increasing the combustion or consumption of oil, or to diminish the consumption of oil without diminishing the illuminating-power of the lamp in the same degree; and I do hereby declare that the following is a clear and exact description of the construction and operation of said improvement, reference being had to the annexed drawings, forming a part of the specification, in which—

Figure 1 represents a metallic cap or damper applied to the top of the chimney of a lamp. Fig. 2 represents the same in a more elevated position. Fig. 3 represents a flat piece of metal, which, when formed up, produces the metallic cap shown in Figs. 1 and 2.

Similar letters of reference refer to similar parts.

From a sheet of brass or any other suitable metal pieces may be cut in any convenient manner, having the form represented in Fig. 3. The circular parts A of such pieces may have a diameter a little greater than the top of a lamp-chimney. In the center there may be a hole, B, about half an inch in diameter. The radial parts C C C may be bent, as in Figs. 1 and 2, so as to embrace the top of a lamp chimney with sufficient firmness to retain the metallic cap thereon in either of the positions shown in Figs. 1 and 2, or in any intermediate position to which said cap may be adjusted. The caps thus formed may be adapted to lamp-chimneys of various diame-

ters by bending the radial parts C C C until they embrace the chimney with the requisite force.

Operation: Without the metallic cap applied to the lamp-chimney, the combustion of oil in the flame is perfect, so much so that a large portion of the carbon of the oil undergoes gaseous combustion with the evolution of less light than might be obtained by a less perfect combustion. The metallic cap applied to the chimney of the lamp diminishes the flow of air through the chimney, and thereby the amount necessary for perfect combustion, and by retarding the combustion the carbon is less rapidly consumed, exhibiting more of the phenomena of the combustion of a solid, with the evolution of more light. The metallic cap is intended to operate within the extreme limits of a perfect gaseous combustion, and a combustion so imperfect as to be attended with a deposit of carbon or lamp black, modifying the blaze between those points. The metallic cap may be adjusted by moving it up or down over the chimney, within the limits in which its desirable effects are visible, to admit it to the condition of the blaze, so as to produce the maximum illuminating effect.

This invention is designed for and may be applied to "kerosene-lamps" such as are at this time in common use.

I claim—

An adjustable cap or damper for lamp chimneys, when constructed and applied substantially in the manner and for the purpose hereinbefore set forth.

JAMES LEWIS.

Witnesses:

L. P. COE,  
R. P. BELL.