

E. K. HAYNES.

Improvement in Lamp Burners.

No. 115,608.

Patented June 6, 1871.

Fig. 1.

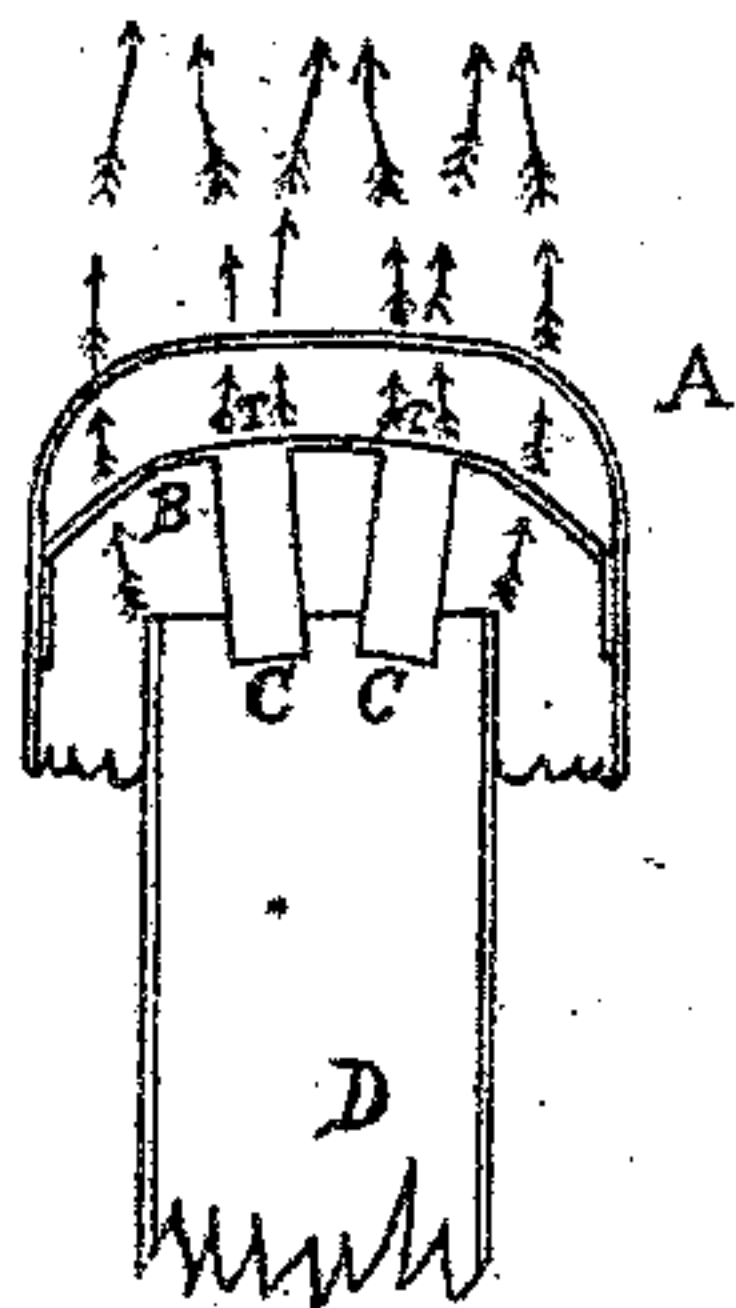


Fig. 2.

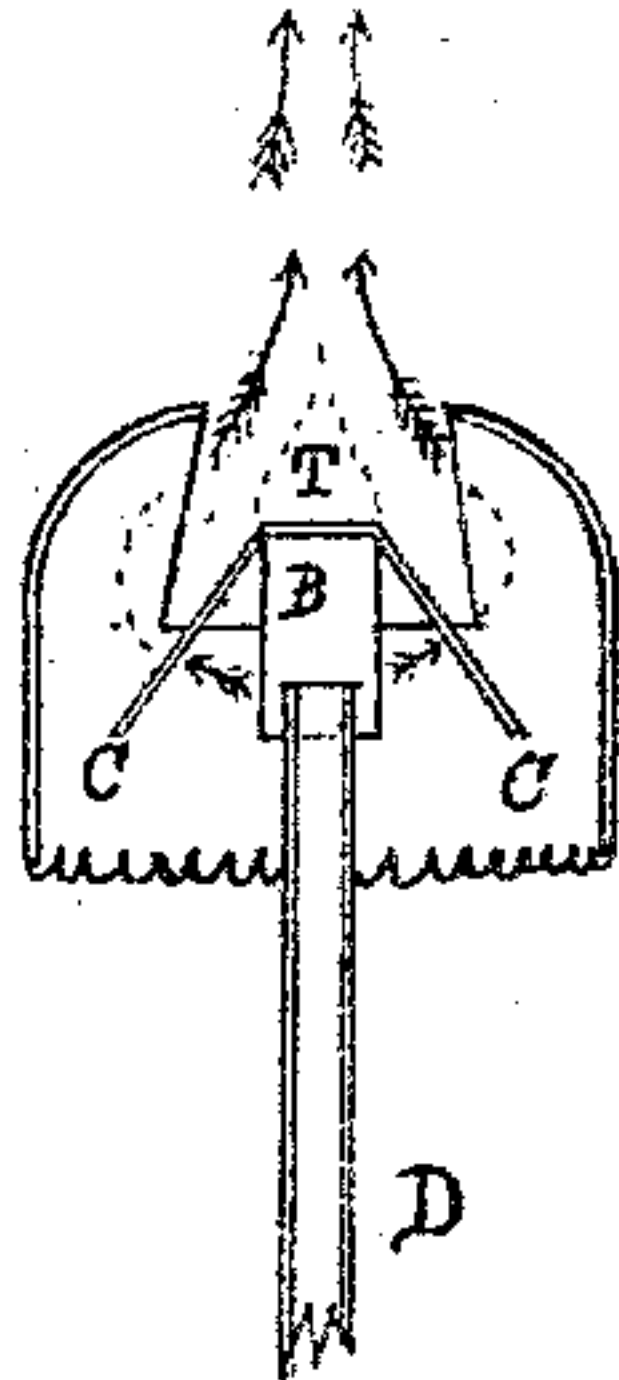


Fig. 3.

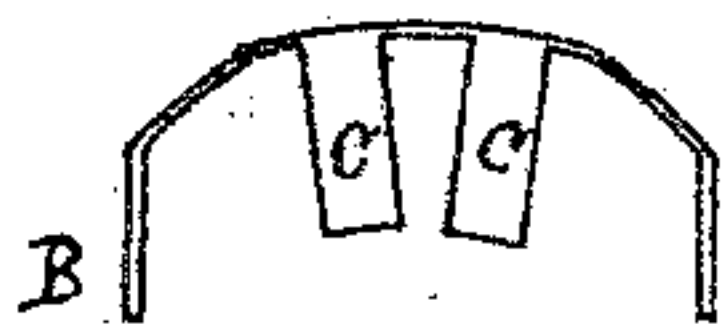


Fig. 4.

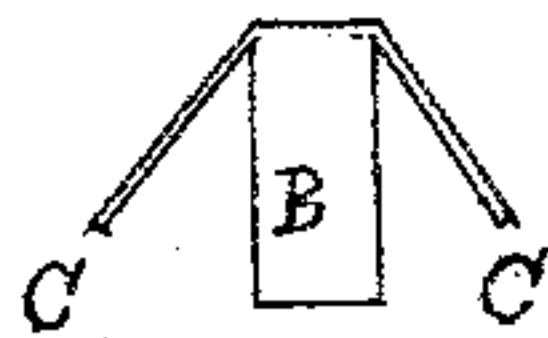
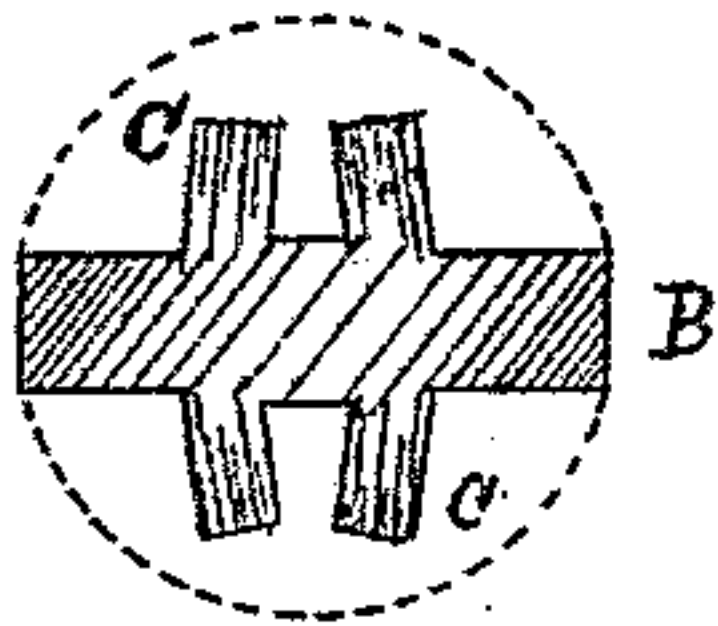


Fig. 5.



Witnesses,
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UNITED STATES PATENT OFFICE.

EDGAR K. HAYNES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. 115,608, dated June 6, 1871.

To all whom it may concern:

Be it known that I, EDGAR K. HAYNES, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Lamp-Burner; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, in which—

Figure 1 is a vertical longitudinal view, the front half being removed, embodying my invention. Fig. 2 is a transverse view of the same. Fig. 3 is a side view of my invention detached. Fig. 4 is an end view of the same. Fig. 5 is a top view of the same.

The nature and object of my invention relate to the production of more perfect combustion in a lamp-burner for burning coal-oils without the use of the chimney, although a slack-draught chimney may be used with a good effect.

My invention relates to the method of dividing the flame from a single wick. This I accomplish by placing a piece of flat or V-shaped metal, in the form of one or more crosses, directly over the longitudinal center of the wick-tube, with the arms of the cross at the sides, and of sufficient width to divide the flame and not obstruct its passage around each side. The object of the cross-pieces is to prevent the flame from crowding too much into the center. If a cone or deflector is used I make the burning-aperture nearly one-half wider than is usual, to admit of the passage of the flame with the air that I have admitted by dividing the flame.

Its operation, which I have found by experiment to be that when combustion commences on the wick the flame rises, and would, if not

obstructed, continue to rise in a solid body to a point, or nearly so. By inserting my divider B C the flame is divided by passing up each side of it, the air passing into the flame over the top of it. This passing of the air from the edges tends to crowd the flame together too much in the center, which is avoided by the cross-pieces C C at proper intervals. The arrows in Figs. 1 and 2 show the form of the flame from a divider with two cross-pieces, which rises in three prongs at the top. The air passes in at T, between the arrows. With the use of the deflector which I prefer to use, the air also passes from under it and crowds the flame onto the air in the center, which produces a very pure and white light, nearly as much so as is produced with the use of a chimney.

A is the cone or deflector, of any suitable form, supported in position in any manner that will admit of its being removed for lighting and cleaning. B is the main dividing-bar; C, C, its arms or cross-pieces, to prevent the flame from crowding together. This bar is fastened to the deflector, if one is used; if not, to the wick-tube or the base of the burner. It may be of flat metal or V-shaped. Its ends, also the cross-pieces, must incline down, where they pass through the edges of the flame, sufficient to prevent cinders from forming on them. D represents a portion of a wick-tube.

I claim—

The dividing-bar B, with its arms or crosses C C, substantially as and for the purpose hereinbefore set forth.

EDGAR K. HAYNES.

Witnesses:

B. C. MOULTON,
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