

E. J. HALE.

Improvement in Lamp-Burners.

No. 114,805.

Patented May 16, 1871.

Fig. 1.

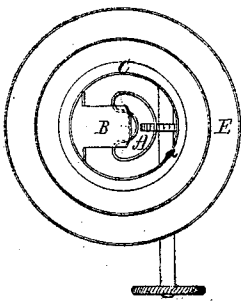


Fig. 4.



Fig. 5.

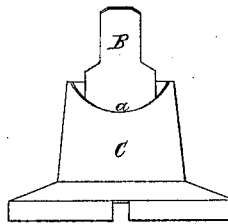


Fig. 2.

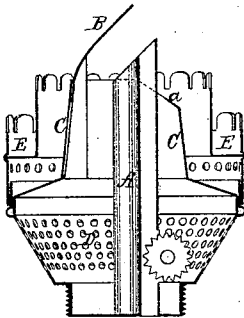
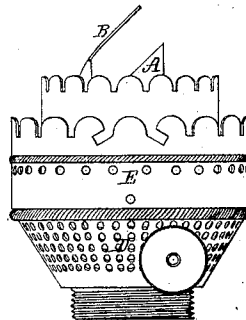


Fig. 3.



Witnesses.

S. N. Piper

L. N. Holden

Elias J. Hale.

by his attorney.

W. H. May

# United States Patent Office.

ELIAS J. HALE, OF FOXCROFT, MAINE.

Letters Patent No. 114,805, dated May 16, 1871.

## IMPROVEMENT IN LAMP-BURNERS.

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

*To all persons to whom these presents may come:*

Be it known that I, ELIAS J. HALE, of Foxcroft, of the county of Piscataquis, of the State of Maine, have invented a new and useful Improvement in Burners for Lamps; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, and

Figure 2 a vertical section of one of my improved burners.

Figure 3 is a side elevation of it.

In this burner the wick-tube A is crescent-shaped or bowed in transverse section, as shown in Figure 4 and also in fig. 1, and it has extended over it, in manner as represented, a deflecting tongue, B, which projects upward from the air-cone or deflector C, by which such wick-tube is surrounded; such deflector and wick-tube being sustained by the body D of the burner.

The glass chimney-supporter is represented at E as encircling the deflector.

The upper end of the wick-tube is beveled or inclined upward, nearly in parallelism with the deflecting tongue, and the deflector or cone C may be level on its top or be notched down, as shown at *a*, opposite the tongue.

Figure 5 is a side elevation of the deflector C, the notch *a* and the tongue B being exhibited therein in their arrangement with each other.

It has been found that with the wick-tube formed in transverse section, in manner as represented, and having the deflecting tongue arranged with it, as set

forth, or with it and the cone or deflector C, in manner as described, an excellent form of flame is secured to the wick when in operation, and economic results follow—that is to say, there is little or no danger of breakage or smoking of the chimney.

Combustion of the oil is very perfect, little or no smoke being produced, and as a necessary consequence the illuminating power of the flame is proportionally increased.

I would remark that the wick-tube may have a level top, but with the beveled top, as explained, an improved action results, the flame being better deflected by the tongue; or the current of air in ascending impinges against the under side of the tongue, and by such is deflected into the flame so as to spread the same.

I make no claim to a wick-tube formed in transverse section, in manner as shown in fig. 4.

I claim—

1. The combination and arrangement of the deflecting tongue B with the wick-tube A, as described.

2. The combination and arrangement of the deflecting tongue B with the wick-tube A and the air-cone or deflector C, as set forth.

3. The wick-tube, having in transverse section the bow-shape, substantially as described, and its top beveled, as and for use with a deflecting tongue, as set forth.

ELIAS J. HALE.

Witnesses:

R. H. EDDY,  
J. R. SNOW.