

H. W. HAYDEN.

Improvement in Argand Lamp-Burners.

No. 115,955.

Patented June 13, 1871.

Fig. 1.

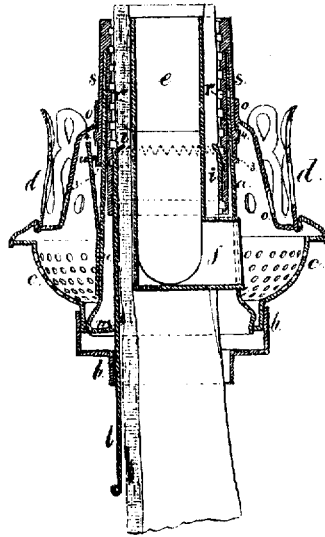


Fig. 3.

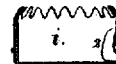


Fig. 4.

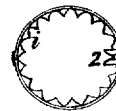
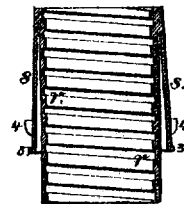


Fig. 5.



Hiram W. Hayden
Lemuel W. Lowell atty

Witnesses,

Chas. H. Smith
Geo. D. Walker

UNITED STATES PATENT OFFICE.

HIRAM W. HAYDEN, OF WATERBURY, CONNECTICUT, ASSIGNOR TO HOLMES,
BOOTH & HAYDENS, OF SAME PLACE.

IMPROVEMENT IN ARGAND-LAMP BURNERS.

Specification forming part of Letters Patent No. 115,955, dated June 13, 1871.

To all whom it may concern:

Be it known that I, HIRAM W. HAYDEN, of Waterbury, in the county of New Haven and State of Connecticut, have invented an Improvement in Argand Lamps; and the following is declared to be a correct description of the same:

This invention relates to that class of Argand lamps in which there is a lateral connection to the central air-tube, and a flat wick bent up into a cylindrical form above this lateral connection.

In Letters Patent granted August 16, 1870, No. 106,363, a tapering wick-tube, a cylindrical air-tube and lateral connection, and a wick-holder are shown, but said wick-holder is operated by a rack and pinion, the latter passing through an opening in the exterior wick-tube; hence there is an opportunity for the escape of vapors at this point, and a risk of explosion when the liquid that is burned contains light hydrocarbon, such as gasoline, benzine, or naphtha.

My invention is made with reference to obtaining safety and freedom from odor in burning any character of liquid hydrocarbon; and said invention consists in a wick-raising screw, interposed between the wick-tube and the wick-holder; and connected at its upper end with a cylinder or sleeve exterior to the wick-tube, in combination with such wick-tube, air-tube, and lateral connection, whereby the wick-raiser is operated without any slot or opening through the wick-tube.

In the drawing, Figure 1 is a section of the lamp complete. Fig. 2 is a separate section of the screw wick-raiser. Fig. 3 is a section, and Fig. 4 a plan view of the wick-holder, showing a modification thereof.

The conical wick-tube *a*, screw-ring *b*, perforated air-distributor *c*, chimney-holder *d*, central air-tube *e*, and lateral inlet *f* are similar to the corresponding parts in the aforesaid Letters Patent, except in the features herein named, and the wick-holder *i* receives within it the wick in a somewhat similar manner, and the wick is held by the teeth on *i*, and preserved in a cylindrical form around the air-tube *e*, and can be raised or lowered by the movement of said holder *i*. This holder *i* may

be guided and kept from turning by the slide *l*, passing through a guide, *m*; or the holder *i* may be a short cylinder or hoop, as shown in Figs. 3 and 4, and guided and kept from turning by a pin, *2*, upon the air-tube *e*, or by any other convenient means. The wick-tube *a* is not as high as the air-tube *e*, in order that there may be a connection at the top of the cylindrical tube *r*, by means of which the said tube *r* may be revolved. This tube *r*, being cylindrical, holds the wick in a better shape for being raised and lowered correctly than the wick-tubes heretofore employed with flat wick bent into a cylindrical form, because said tube *r* is parallel, or nearly so, to the air-tube *e*. This tube *r* is made with a screw-thread in its inner surface, that acts upon projections from the wick-holder *i* to raise or lower the wick as said tube *r* is revolved. The tube *r* may be revolved by any convenient means. I have shown and prefer to employ an exterior sleeve, *s*, surrounding the air-tube *a*, and made with a flange, *3*, at its lower end, above which the spring tooth *u* catches, to hold the parts *r* and *s* down to place, but allow of their being revolved. These parts *r* and *s* are firmly united at their upper ends. The chimney-holder *d* is made with a guide, *o*, extending up to the sleeve *s*, and a projection or projections, *4*, upon such sleeve is received into one of a series of notches in the guide *o*, so that the wick can be raised or lowered by turning the chimney-holder, and with it the sleeve *s* and tube *r*, and the chimney-holder and chimney can be lifted off for lighting or trimming. The flat wick can be easily inserted through the wick-tube *a* and drawn above the end of *e*, when the tube *r* is removed; then the holder *i*, put around the same at a proper distance from the end of the wick, and its points penetrate and hold the wick; then the wick is put into the tube *r* and the parts drawn down to place in the wick-tube *a*. This construction gives great facility for introducing and adjusting the wick.

I claim as my invention—

1. The tube *r*, introduced between the wick and the tube *a*, in combination with the said tube *a*, air-tube *e*, and lateral opening to hold a flat wick in a cylindrical form between said tube *r* and air-tube *e*, as set forth.

2. The tube *r*, made with a screw, in combination with the wick-holder *i*, air-tube *e*, lateral inlet, and tube *a*, substantially as set forth.

3. The sleeve *s*, in combination with the tube *r*, wick-tube *a*, air-tube *e*, and lateral inlet *f*, substantially as set forth.

4. The removable chimney-holder *d*, in combination with the sleeve *s*, tubes *r* and *a*, air-

tube *e*, and lateral inlet, substantially as set forth.

Signed by me this 16th day of May, A. D. 1871.

H. W. HAYDEN.

Witnesses:

A. S. CHASE,

A. F. ABBOTT.