

H. W. HAYDEN.

Argand Lamp.

No. 132,831.

Patented Nov. 5, 1872.

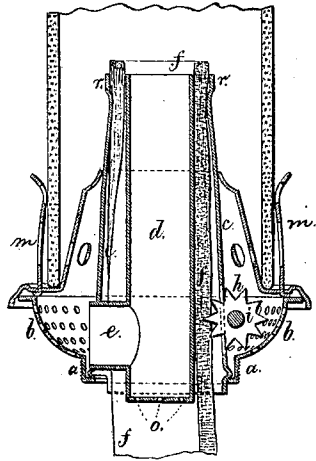


Fig. 1.

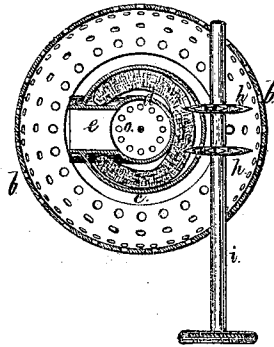


Fig. 2.

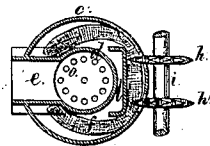


Fig. 3.

Chas. H. Smith
Geo. D. Mason.

Witnesses.

INVENTOR
Hiram W. Hayden,
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ATTY.

UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN ARGAND LAMPS.

Specification forming part of Letters Patent No. 132,831, dated November 5, 1872.

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 the air is supplied to the central tube through a lateral opening, and the wick is flat, but bent into a cylinder by the wick-tube.

I make use of two wick-raising wheels at the opposite side of the air-tube to the lateral opening, so as to raise and lower the wick by acting upon the central portion, leaving the edges free to pass around that lateral opening and come together at their edges in the cylindrical portion of the air-tube. This wick-raising device is very reliable, and also cheap to construct.

In the drawing, Figure 1 is a vertical section of the lamp-burner, complete; Fig. 2 is a sectional plan at the wick-raising mechanism; and Fig. 3 is a similar sectional plan, with a slight modification in the wick-raising mechanism.

The burner-screw *a*, air-distributor *b*, tapering wick-tube *c*, central air-tube *d*, and lateral inlet *e* are substantially the same, except in the particulars hereafter noted, as in patents on lamps heretofore granted to me.

The wick *f* is introduced between the tubes *c* and *d*, and is of a width to fill the cylindrical or nearly cylindrical portion of such tubes above the air-inlet *e*.

In some characters of lamps the wick has been inserted between the wick-raisers in a folded condition; in other cases the wick-raisers have been beneath the central air-tube, and acted upon the concave side of the wick, but said wick could not hang freely because the axis of the wick-raisers was contiguous to its edges. Grooved rollers have also been employed at the convex side of the wick, but these are not adapted to an Argand wick, as they are liable to injure the wick, and are also liable to slip upon the wick and raise or depress the same unequally. To avoid these difficulties I find it necessary to use two wheels

with sharp penetrating points that act upon the wick at each side of its central line so as to move said wick up or down with reliability and uniformity.

The wick-raisers *h h* are made of pointed wheels upon the shaft *i*, and act upon the wick while the latter is confined against the central air-tube, as in Fig. 2; or against the plate *l*, that is attached to that central tube, as in Fig. 3.

In the central air-tube *d* I introduce several small holes, preferably in the lower part of the same, at *o*, so as to serve the purpose of ventilators to the reservoir, by passing the vapors from the oil directly into the center of the flame, and insuring its combustion, and preventing smell.

The tube *c* is made with a regular taper from end to end, so that the wick will move easily in the same; but at the upper end there is a groove rolled in the metal sufficiently to leave the required space for the wick between the inner surface of the tube *c* at this groove and the air-tube *d*; thereby the wick will be properly supported; but there will be a cup at *r* sufficient to allow the wick to descend when extinguishing the same, even though said wick may be incrustated with carbonaceous matter.

The spring chimney-holder *m* is removable with the chimney.

I claim as my invention—

1. The lamp-burner made with a conical wick-tube, a cylindrical air-tube to give a free space to introduce the wick, and a lateral opening from the air-tube through the wick-tube, combined with the wick-raising wheels *h*, upon the shaft *i*, passing through the wick-tube and acting upon the side of the wick opposite to the lateral inlet, the parts being constructed and arranged for operation as set forth.

2. The tapering wick-tube *c*, made with an inward groove near its upper end, and a cup at *r*, as and for the purposes specified.

Signed by me this 22d day of June, 1872.

H. W. HAYDEN.

Witnesses:

JAS. M. ABBOTT,
JAS. A. CARDER.