

W. D. LUDLOW,
Lamp.

No. 103,213.

Patented May 17, 1870.

Fig. 1

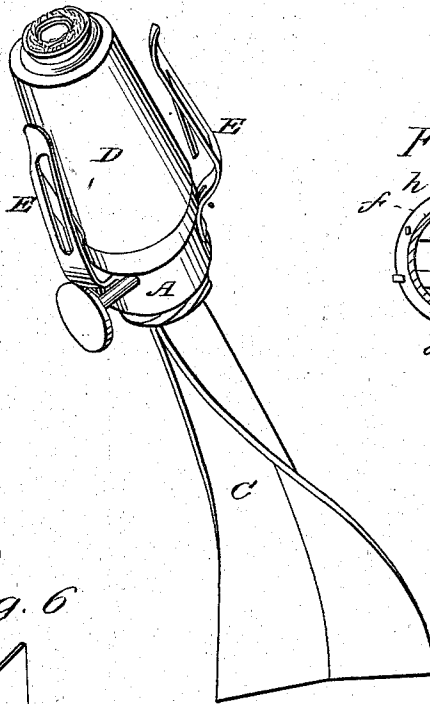


Fig. 2

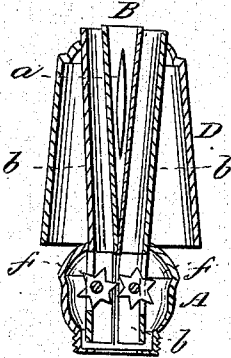


Fig. 3

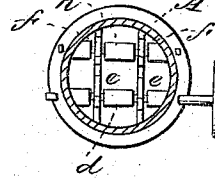


Fig. 4

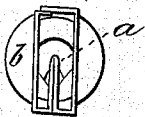


Fig. 6

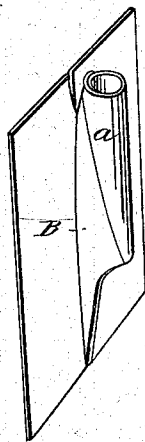


Fig. 5



Witnesses:

Harry King
L. L. Cress

Inventor:

Wm D. Ludlow
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Atty

United States Patent Office.

WILLIAM D. LUDLOW, OF NEW YORK, N. Y.

Letters Patent No. 103,213, dated May 17, 1870.

IMPROVEMENT IN LAMP-BURNERS.

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

To all whom it may concern:

Be it known that I, WILLIAM D. LUDLOW, of New York, in the county of New York and in the State of New York, have invented certain new and useful Improvements in Lamp-Burners; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

My invention relates to that class of burners by which a round or Argand flame is formed, and consists in so constructing the wick-tube that a flat wick may pass into the tube folded, and come out at the top in a round or Argand shape.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective of the lamp-burner complete;

Figure 2 is a vertical section of the same.

Figure 3 is a bottom view, showing the double ratchets;

Figure 4 is a bottom view of the wick-tube;

Figure 5 is a top view of the same; and

Figure 6 is a perspective of the plate from which the wick-tube is made, showing the inner tube already formed.

A represents the base of the burner, which is to connect with the reservoir by a screw or otherwise, and through which base the wick-tube passes, said tube being secured to the base in any suitable manner.

The wick-tube B consists of a central tube, *a*, and an outer tube or casing, *b*, made of one piece of sheet metal.

This wick-tube is made of one piece of metal in the following manner:

A piece of sheet metal is first bent into a comparatively small tubular form, so split or slotted at the top that the edges come together, forming the top of the inside tube, and the ends of the folded metal are reversed and carried around forming an outer sheath or case to the inside tube, the space between these forming the passage for the wick C.

At the point where the ends of the sheet metal are reversed to form the outer tube *b*, is left an opening, *i*, for the purpose of admitting air into the central tube *a*, and the lower end of the wick-tube thus formed is flattened, so as to admit a flat wick folded.

In the base A, either within or on the outside of the tube *b*, is placed a shaft, *d*, operated from the outside by a button, in the usual way.

This shaft is provided with two ratchets or cog-wheels, *e e*, which gear into two similar ratchets, *f f*, mounted on a shaft, *h*, and between these two sets of ratchets the wick is moved upward.

The wick C is passed into the lower end of the

wick-tube, between the wick-raisers *e e* and *f f*, in a flat, folded condition. Its edges are then separated or diverged around the air-passage *i*, at the side of the central tube *a*, and then they are brought together again at the top in a circular form. By this means one flat wick is folded and forms an Argand or hollow flame.

Around the wick-tube B is a conical case or inverted funnel, D, to confine and supply air to the air-passage for the inner tube.

The air-passage to this cone is unobstructed at the bottom, as the cone is fastened to the wick-tube only at the top.

The cone D is of that exact diameter at the bottom to allow just a proper proportion of air to pass under it to supply the inner draught, and to allow only just enough air to pass up around it to supply the flame with air from between the cone and the chimney, and direct from the outer atmosphere without first passing it under a cone.

If too much air passes within through the central tube the flame will be unsteady, and too much scattered or spread; or, if a disproportion of air should be allowed to pass up around the flame between the cone and the chimney, the flame will be narrowed or too much contracted.

A chimney with a contracted throat or neck is used to confine the passing air upon the flame at the point of ignition and produce a perfect combustion.

On the outside of the base A are placed a sufficient number of double spring catches B E, or chimney-holders, to support and hold the chimney in proper position around the cone D.

I do not claim a flat wick in a lamp-burner that bends said wick in an Argand form; nor do I claim the employment of two wicks to form an Argand flame.

My invention differs from the above materially. The wick is of one piece, and folded in the center, and from thence passes folded into the lamp-throat, is spread around a tube, and forms an annular flame at its top.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. A lamp-burner, constructed as described, so that a flat wick passes in a folded condition into the wick-tube and through the wick-raisers and is then spread into a circular form at the top to make an Argand flame, substantially as specified.

2. The wick-tube B made of one piece of metal, substantially as herein set forth.

3. The combination of the cone D, double springs B E, wick-tube B, as constructed, and wick-raisers *e e*, all substantially as set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 28th day of July, 1869.

Witnesses:

WM. D. LUDLOW.

C. M. ALEXANDER,
J. M. MASON.