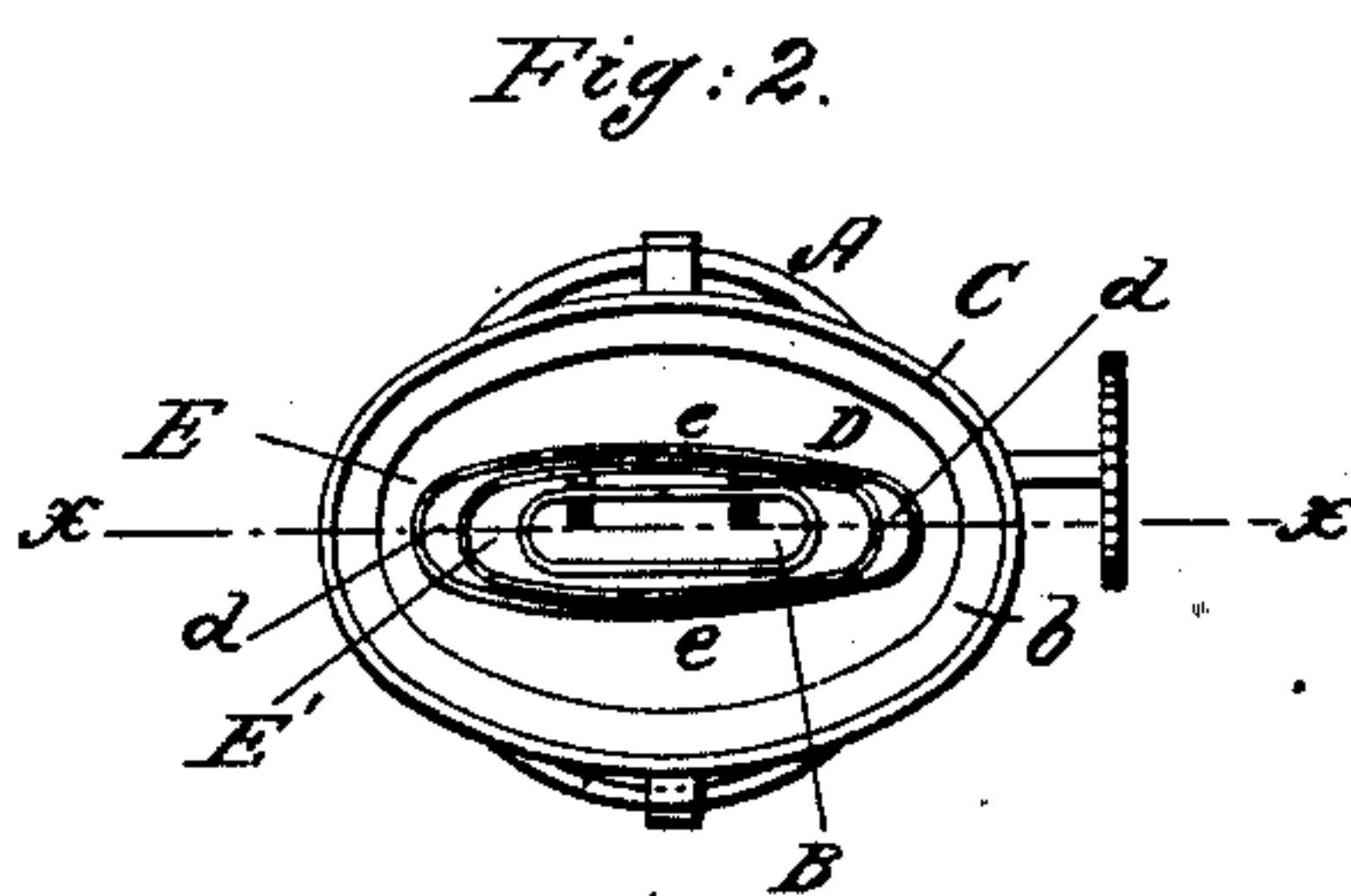
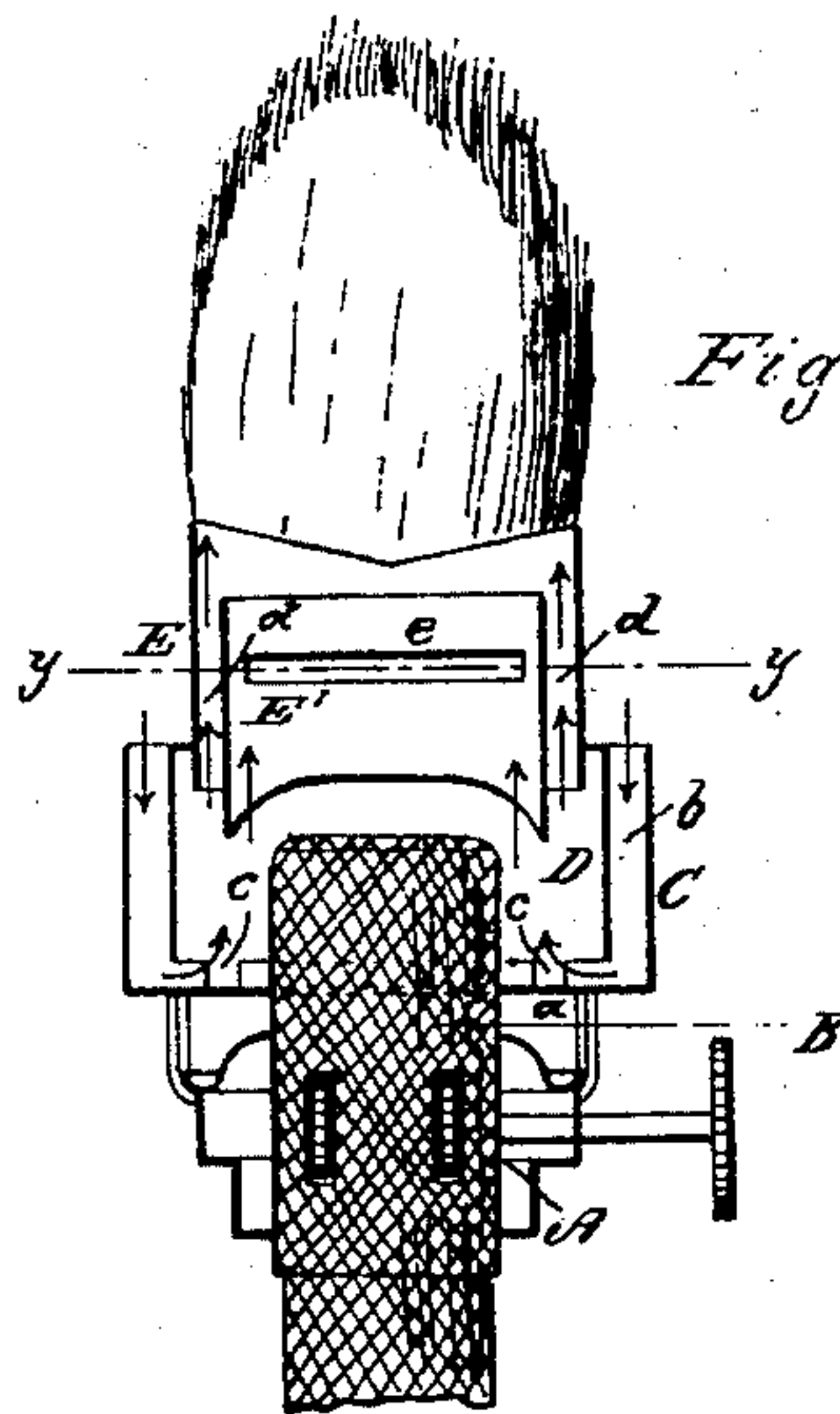


J. O. HARRIS.

Lamp Burner.

No. 45,493.

Patented Dec. 20, 1864.



Witnesses:
J. P. Hall
J. P. M. Samara

Inventor:
Jno. O. Harris.

UNITED STATES PATENT OFFICE.

JOHN O. HARRIS, OF READING, PENNSYLVANIA.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. 45,493, dated December 20, 1864.

To all whom it may concern:

Be it known that I, JOHN O. HARRIS, of Reading, in the county of Berks and State of Pennsylvania, have invented a new and Improved Lamp-Burner; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to an improvement in that class of lamp-burners which are designed for burning coal oil and similar hydrocarbons, which require a large amount of oxygen to support combustion and produce a good illuminating flame.

The invention consists in the employment or use of a double jacket, or two jackets placed one within the other, and provided with one or more horizontal slots made through both jackets, and arranged with or without draft-passages, as hereinafter fully shown and described, whereby the flame is provided with an internal draft and abundantly supplied with oxygen to insure perfect combustion.

A represents the lower part of the burner, which is screwed into the lamp in the ordinary way, and has a flat wick-tube, B, fitted in it, as usual.

C represents a chamber at the upper part of A, of cylindrical or other proper form, through the bottom *a* of which the wick-tube passes, the upper end of said chamber being open; and D is a similar chamber fitted within C and sufficiently smaller in diameter to admit of a draft-passage, *b*, between them, the lower part of D having openings *c* made in it to afford a communication between C and D, as shown clearly in Fig. 1.

The wick-tube B passes up within the chamber D a distance equal to about half the height of the latter, and within the top of the chamber D the two jackets E E' are fitted and firmly secured. These jackets E E' are fitted one within the other. They are of flat form, corresponding to the wick-tube B, but

of larger dimensions, as shown in Fig. 1. The inner jacket, E', is not as broad as the outer one, E, but it is of equal thickness, so that its sides touch the sides of E and are secured to it. The difference in the breadth of the two jackets admits of draft-passages *d d* between them at each end, said passages communicating with the chamber D.

Through the sides of the two jacket E E', there are made one or more slots, *e*, said slots extending through both jackets and being nearly equal in length to the breadth of the inner jacket. In Fig. 1 one slot is only shown at each side of the jackets and above the chamber D, but they may be below the top of said chamber, if desired; and if more than one slot be employed at each side of the jackets the lower ones may be within D and the upper ones above it. The outer jacket, E, extends a trifle above the inner one, E'.

From the above description it will be seen that when the wick is lighted the flame will be an imperfect one at the top of the wick-tube, and the gases eliminated by this imperfect combustion will pass up through the inner jacket, E', and the imperfect flame will have accessions of air from the draft-passages *d d* at the top of E', and will also have air admitted to it through the slots *e e*, and consequently a bright illuminating flame will issue from the top of the jacket E.

The two chambers C D are for the purpose of affording a downward current of air to the base of the flame; but this forms no part of the present invention, it being the subject of a separate application.

I do not claim, broadly, the two jackets, for they have been previously used, but not provided with horizontal slots, as herein described.

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

The employment or use, in connection with a lamp-burner, of two jackets E E', placed one within the other and provided with one or more horizontal slots, *e*, extending through both jackets, and either with or without the end draft-passages, *d d*, substantially as and for the purpose herein set forth.

JNO. O. HARRIS.

Witnesses:

J. P. HALL,

M. M. LIVINGSTON.