

B. F. ADAMS.
Lamp-Chimney Holder.

No. 106,303.

Patented Aug. 16, 1870.

Fig. 1.

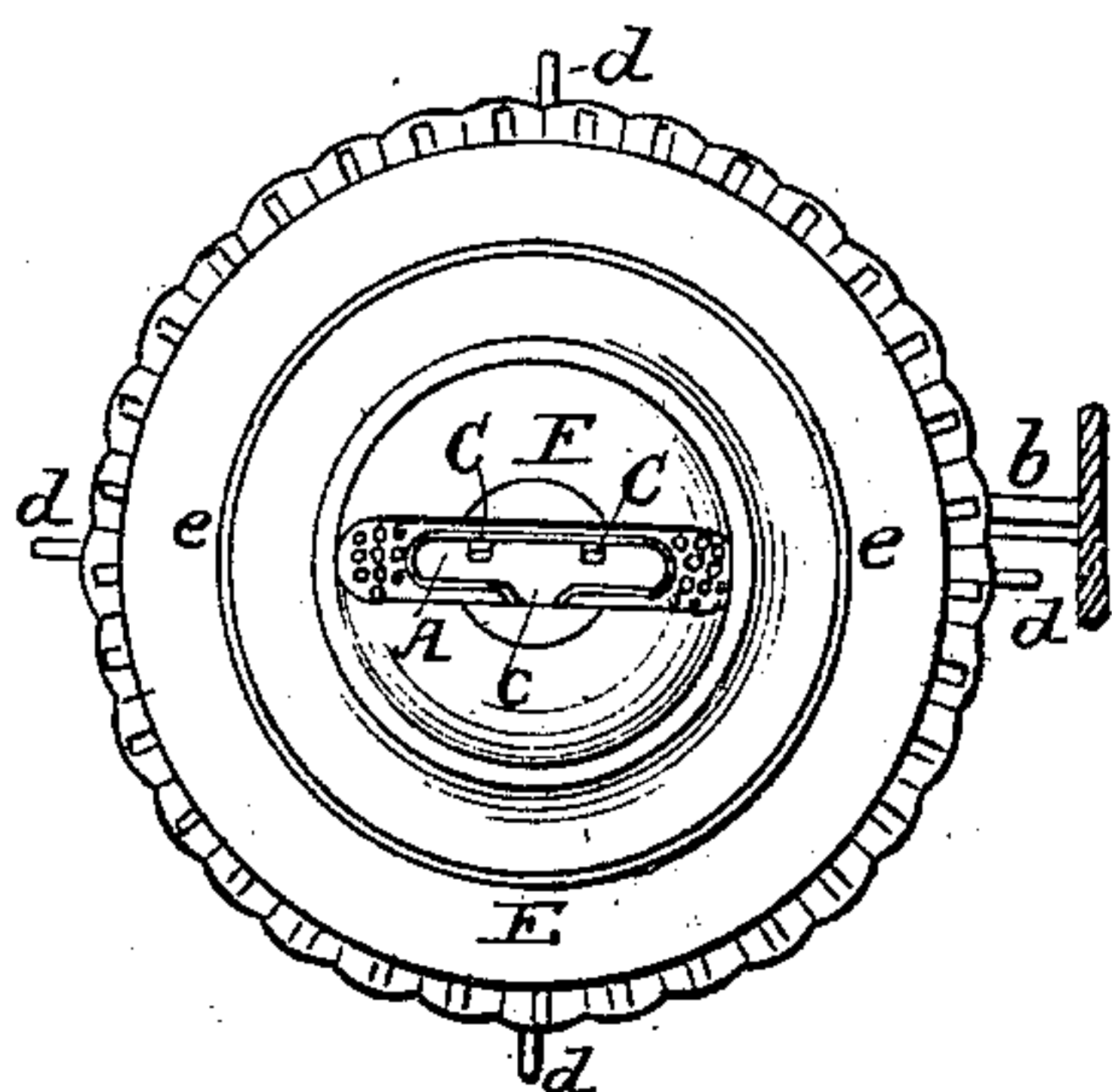


Fig. 2.

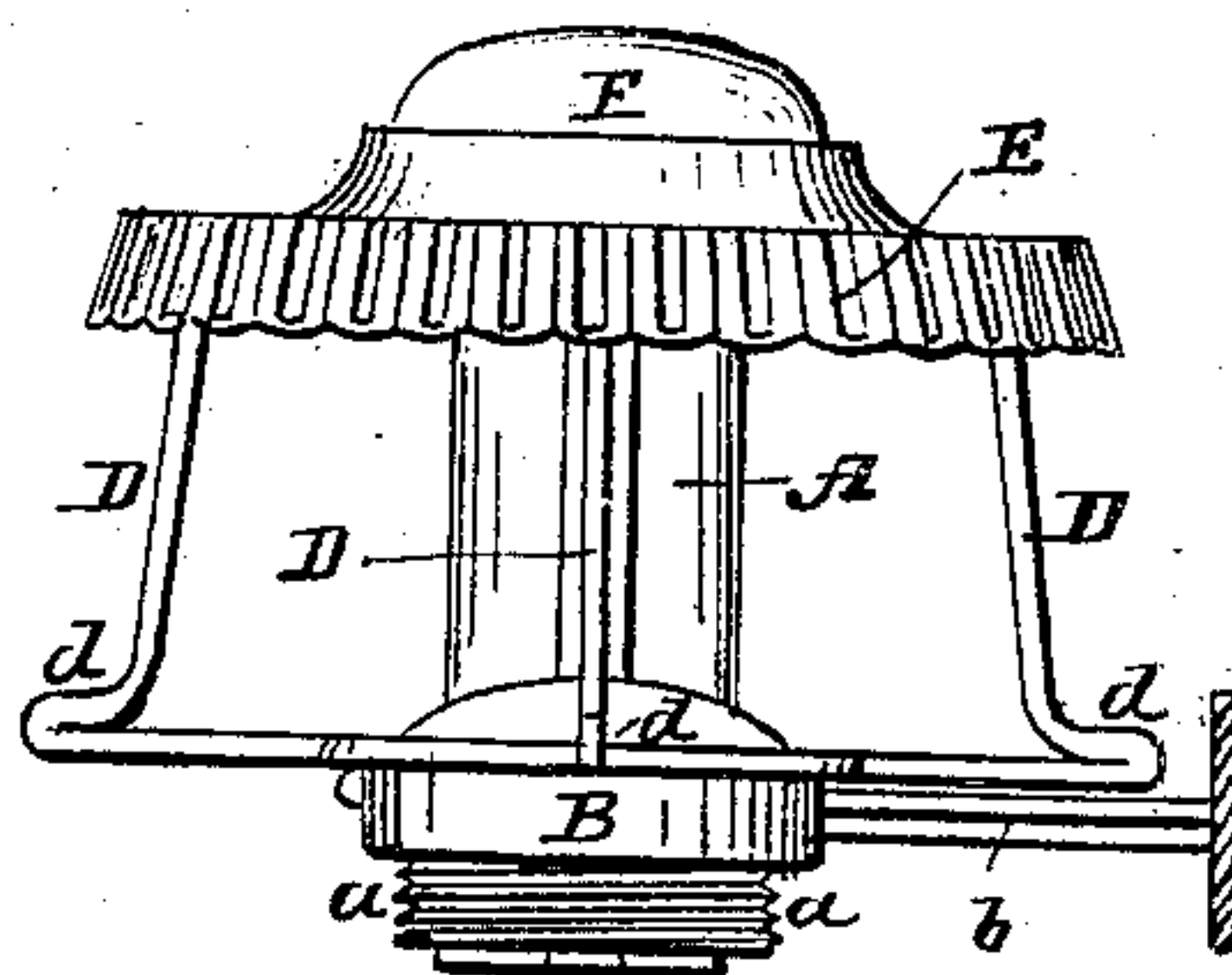


Fig. 3.

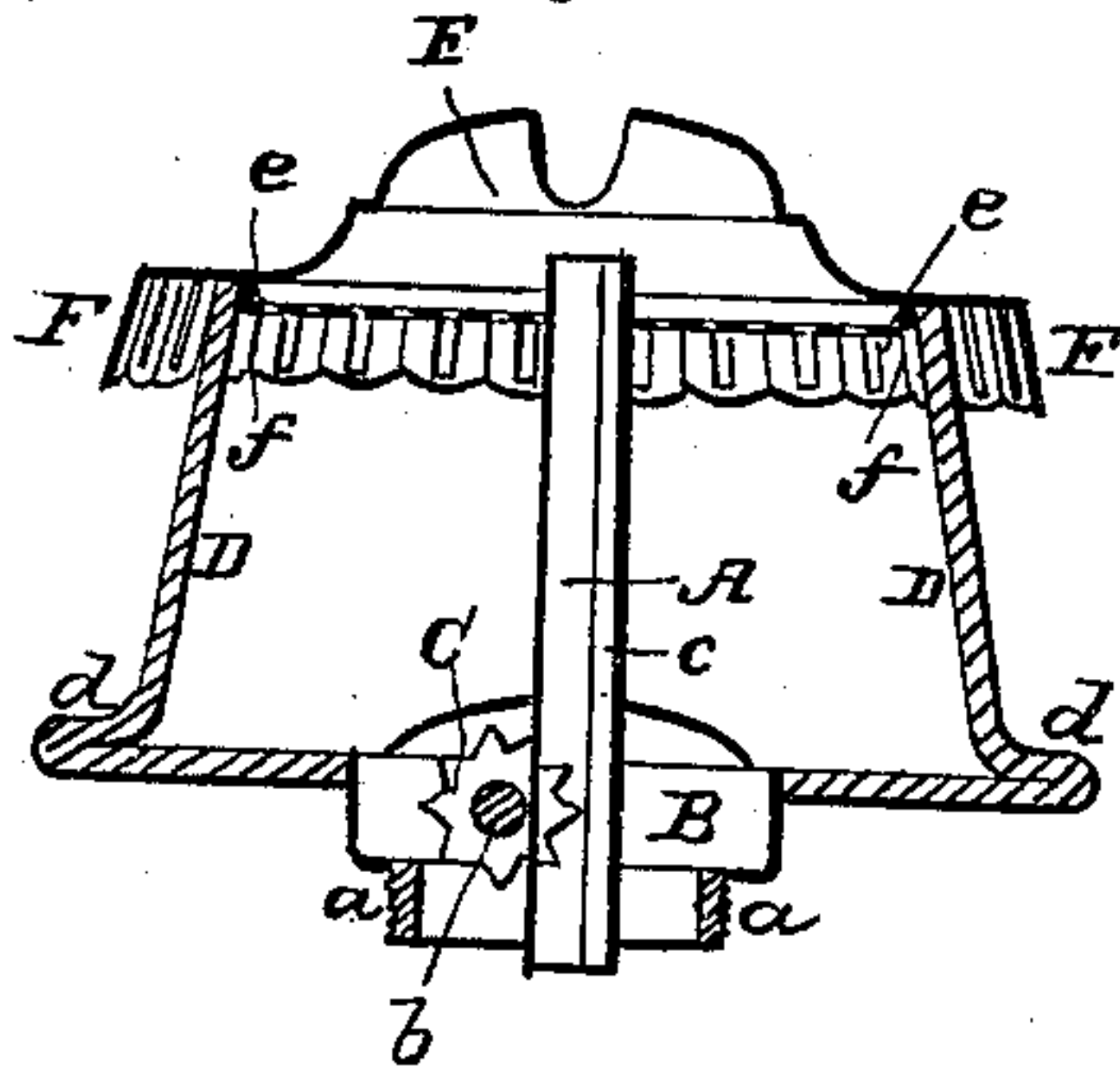
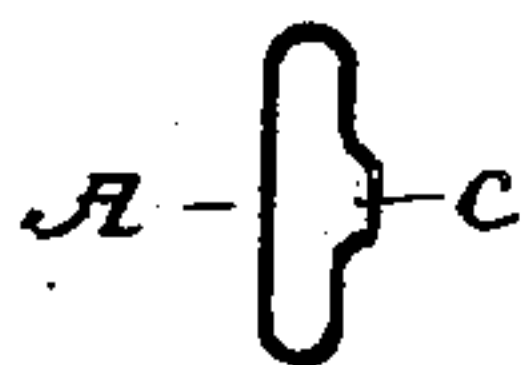


Fig. 4.



Witnesses:

S. N. Piper
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Inventor:

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by his attorney

R. W. Eddy

UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN ADAMS, OF BOSTON, MASSACHUSETTS.

LAMP-BURNER.

Specification forming part of Letters Patent No. **106,303**, dated August 16, 1870.

To all persons to whom these presents may come:

Be it known that I, BENJAMIN FRANKLIN ADAMS, of Boston, of the county of Suffolk and State of Massachusetts, have made a new and useful invention having reference to the Burners of Lamps for the combustion of hydrocarbon fluids; and do hereby declare the same to be described as follows and represented in the accompanying drawing, which makes part of my specification—

Figure 1 of such drawing being a top view, Fig. 2 a side elevation, and Fig. 3 a transverse section, of a burner as constructed in accordance with my invention. Fig. 4 is a horizontal section of the wick-tube.

In such drawing, A denotes the wick-tube as extended through and up from a cylindrical box or case, B, and supported thereby, such box being furnished with a screw, *a*, by which it may be screwed into the mouth of a lamp-reservoir. The wick-elevator C is arranged within, and has its shaft *b* supported, in the usual manner, by the box B.

The wick-tube is constructed with a channel or groove, *c*, extended lengthwise through it from end to end, and arranged within the interior of the tube, and to open therein in manner as represented in Figs. 3 and 4, the purpose of such channel being to allow of the escape of any explosive or combustible vapor that may form within the lamp-reservoir, and to direct such vapor against the wick and to the flame thereof. By being directed against the wick while passing through the escape-channel, more or less of the vapor will become, or is liable to become, condensed upon the wick, the remainder being directed into the flame.

From the box B four or any other suitable number of brackets or wires, D, bent in manner as represented, are extended and arranged as shown, the several projecting parts *d d* of such wires serving as a rest to receive and support the lower end of a glass chimney when such chimney is applied to the burner.

These wires or brackets serve also to support a recessed foraminous air-distributor and chimney-holder, E, which, formed in manner as exhibited in the drawing, has a series of inclined and perforated springs projecting down from and extending about it circumferentially.

The cone or air-deflector F fits into a circular chamber or recess, *e*, made in the air-distributor, whose bottom, beneath such recess, is made foraminous. The deflector F is provided with two small tenons, *f f*, to extend through corresponding holes made in the bottom of the air-distributor, the said tenons and holes serving to determine the correct position of the deflector relatively to the wick-tube.

A glass chimney, when on the burner, should encompass and fit closely to the peripheral springs of the air-distributor, and rests on the parts *d d* of the brackets.

From the above it will be seen that with the burner constructed as described the air will very readily pass into the lower end of the chimney, and be at liberty to freely flow up through the perforations of the air-distributor and into the deflector, as well as to the space over such.

A burner so made is not only very simple in construction, but safe and highly efficient in operation.

By means of the brackets D, constructed and arranged as represented, I am enabled to dispense with a plate or disk for supporting the brackets and the chimney, and consequently allow the air easier access to the chimney-supporter E than it would have were such a disk used, whether it be whole or provided with perforations.

By making the air-passages in the peripheral springs of the part E instead of between them, I am enabled to preserve the said passages from being diminished in size by a chimney, as they are likely to be when made between the several springs. A tight-fitting chimney, by contracting the springs, is liable to close the air-passages more or less when they are disposed between the springs, and thereby impede the proper flow of air; but by having the air-passages as oblong slots, arranged in the springs, the air-passages are not materially affected by chimneys, which may either tightly or loosely fit to the peripheral springs.

Having described such burner, what I claim as of my invention therein is as follows:

1. The air-distributor and chimney-holder E, as constructed with the foraminous cham-

ber or recess *e*, to receive and hold the deflector *F*, and also with its series of separate inclined peripheral springs, provided with the oblong air-passages arranged in them, in manner as represented.

2. Also, the chimney-holder *E*, as made or provided with the recess or chamber *e*, and the tenon holes or mortises in the bottom thereof, in combination with the air-deflector *F*, as made with its bottom to enter and fit to such chamber, and with tenons to enter such holes or mortises, as set forth, the whole being as described and represented.

3. Also, each of the brackets *D*, as formed of wire, bent in the manner as described and

represented, so as to form the projection or foot *d*, for supporting the bottom of a glass chimney while such chimney may be encompassing the holder *E*, as set forth.

4. Also, in the burner, as described, the supporting-wires *D*, the chambered chimney-holder *E*, the series of slotted peripheral springs, the deflector *F*, and its tenons *f f*, constructed, arranged together, and combined with the wick-tube *A* and the box *B*, as set forth.

BENJ. F. ADAMS.

Witnesses:

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J. R. SNOW.