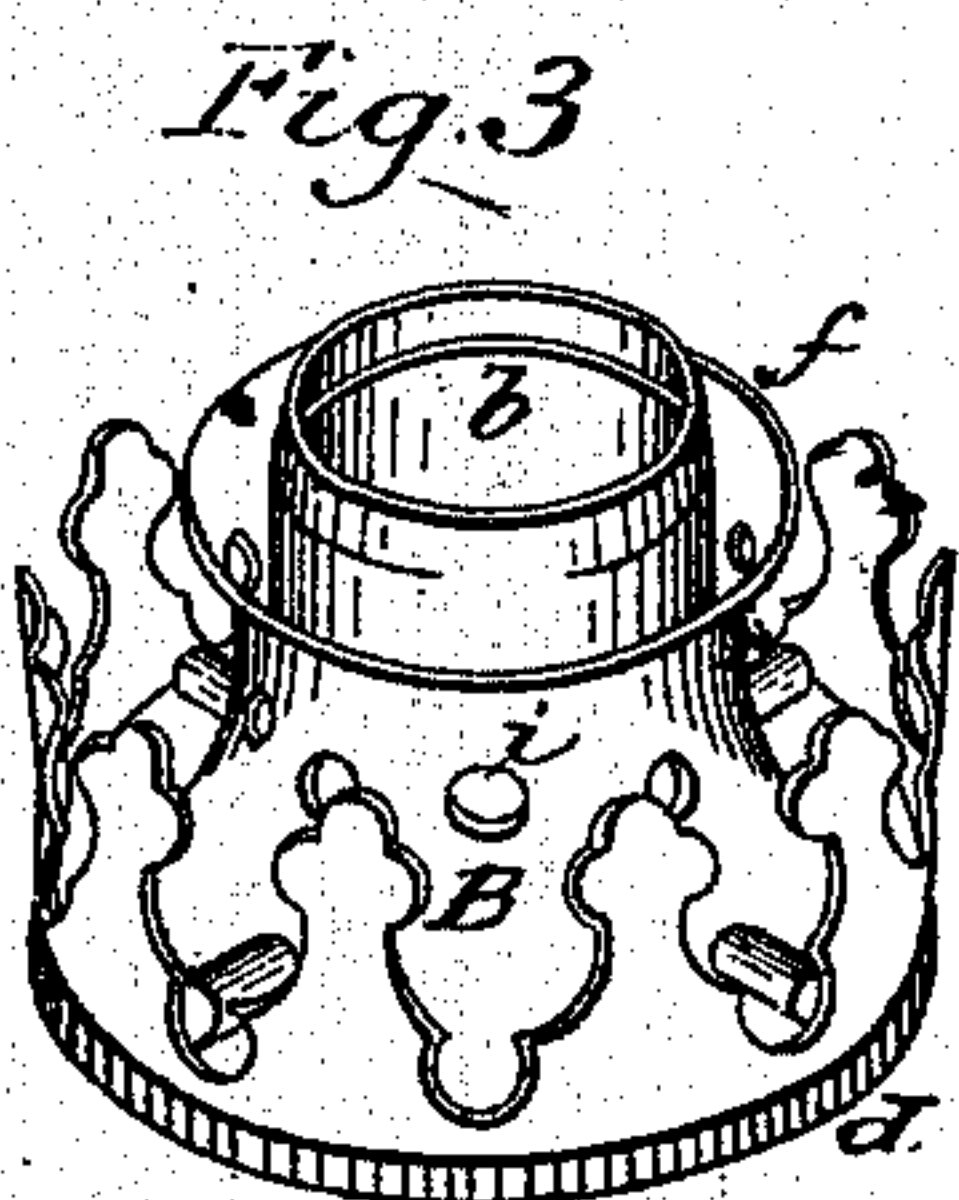
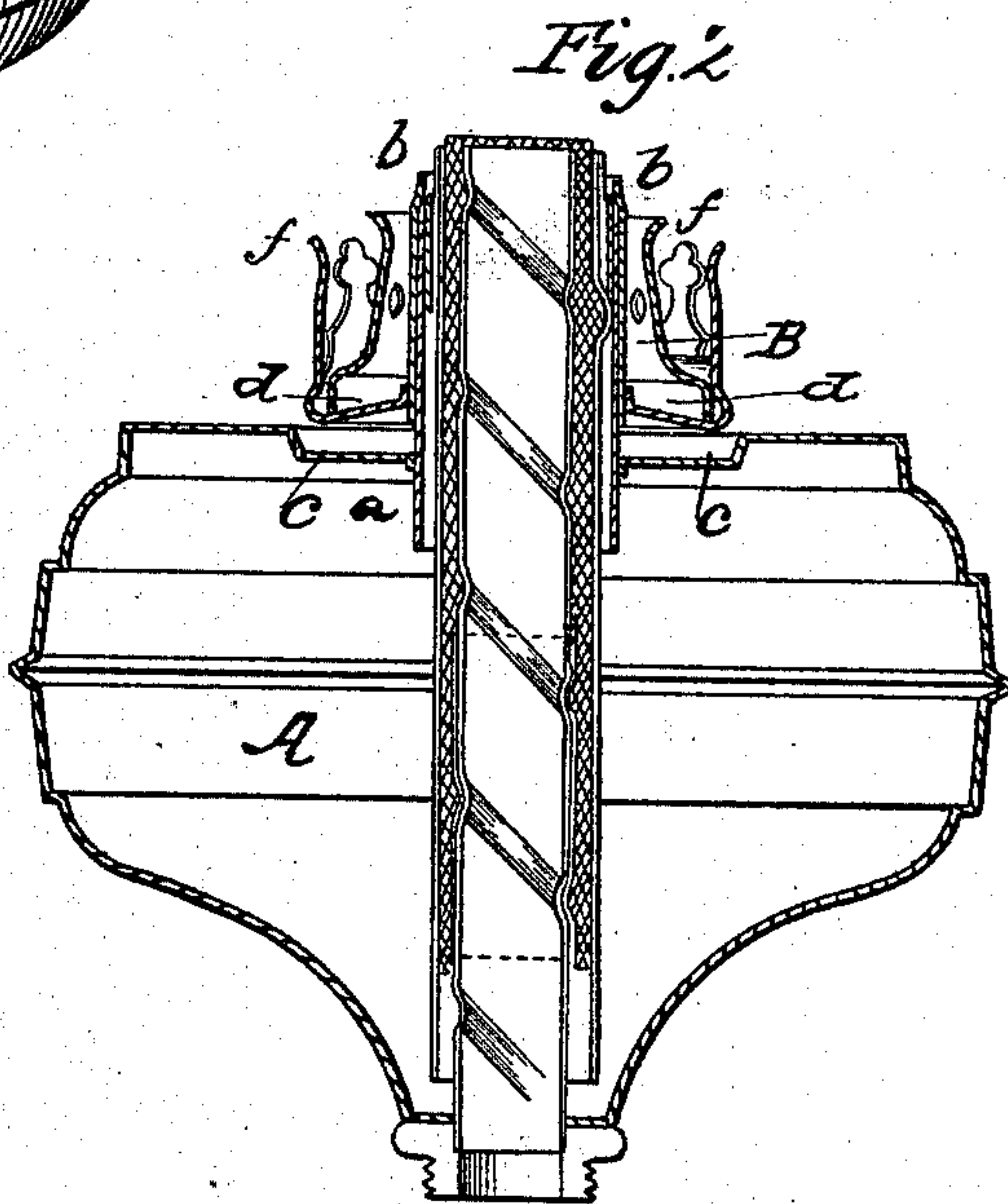
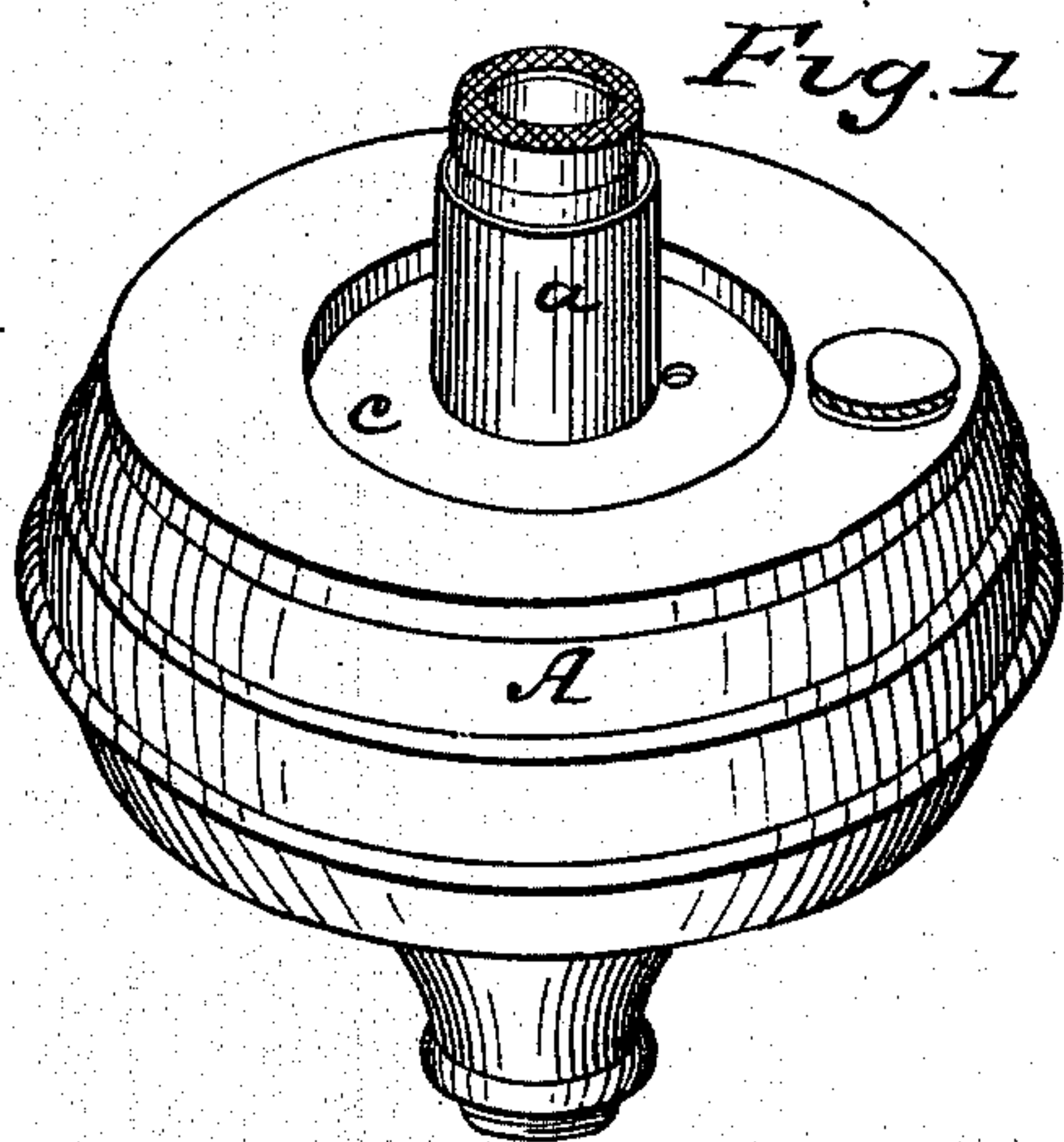


R. S. MERRILL.

Lamp.

No. 104,623.

Patented June 21, 1870.



Witnesses
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Inventor
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by A. Pollok
his atty

United States Patent Office.

RUFUS SPAULDING MERRILL, OF HYDE PARK, ASSIGNOR TO HIMSELF,
W. B. MERRILL, AND JOSHUA MERRILL, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 104,623, dated June 21, 1870.

LAMP.

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

To whom it may concern:

Be it known that I, RUFUS SPAULDING MERRILL, of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

My invention relates to lamps in which Argand burners are used, and it has special reference, first, to the means for supporting the burner in position upon the lamp, and, secondly, to the formation of the cone employed within the burner, for the purpose of directing the air upon the flame.

My invention consists—

First, in the combination, with the oil-fountain of an Argand burner, of a sheet-metal tube, so inserted in the top of the fountain as to project both below and above said top, the part projecting above the fountain being so arranged as to surround the wick-tube, and support the removable part of the burner, as herein-after shown and set forth, while the part projecting below the top shall not extend much below the ordinary level of the oil, that is, only so far as to admit of its being soldered, or otherwise secured to the top.

Second, in the combination, with the burner-supporting tube claimed in the preceding clause, of a recess or depression formed on the top of the fountain, substantially as and for the purposes hereinafter set forth.

The nature of my invention will be readily understood by reference to the accompanying drawing, in which—

Figure 1 is a perspective view of a lamp-reservoir, or fountain, provided with a burner-supporting tube, in accordance with my invention.

Figure 2 is a vertical central section of the same, with a burner applied to the tube.

Figure 3 is a perspective view of the burner, detached.

The burner-supporting tube *a* is a short tube of sheet metal, which is fitted and soldered, or otherwise suitably secured in the top of the fountain *A*. It encircles that portion of the wick-tube which projects above the top, and is of such height as may be found necessary, in order to support the burner in its proper position relative to the top of the wick-tube.

Upon the upper end of this tube is fitted the burner-sleeve *b*, as shown in the drawing, and the burner is thus, by means of this tube, supported in position and centered around the wick-tube. The use of this short auxiliary tube, fixed to the lamp-top, is advantageous in many respects, and admits of the lamp being made simply, cheaply, and without the use of screw-collars, or other devices usually employed in lamps of this class.

The tube *a* extends below the top and down into the lamp only far enough to admit of a secure con-

nection being made between it and the lamp-top, as above described; and, as it does not surround, to any appreciable extent, the wick-tube within the lamp, the oil is free to pass, without impediment, to the wick, and there is no danger of clogging the flow of oil, or of causing sediment to gather around the wick, as would be the case were the burner-supporting tube a continuous cylinder extending from the top to the bottom of the lamp, and perforated to admit the oil to its interior, and to the wick-tube and wick contained within it.

I prefer to secure the tube in a recess or depression, *c*, made in the top of the reservoir, of such depth and diameter as necessary, in order to allow the base *d* of the burner to be brought down to a level with the top of the lamp, or even within the recess, without preventing the air from passing in under the base and up through the burner. The lamp can thus be made very compact and neat in appearance.

As hereinbefore stated, I combine, with the wick-tube, an air-cone or cylinder, *B*, with a flaring top, *f*, for the purpose of diffusing the air, or permitting it to spread before it reaches the flame, and, also, for the purpose of deflecting or changing the direction of the current of air which passes up around the exterior of the cone. This cone is placed within the chimney-springs, and rests upon the base *d*, and extends up to within a short distance of the wick.

It may be perforated, as shown at *i*, in order to allow a portion of the air passing up through the perforated base *d* to pass through the holes, and form an exterior current of air; or, the exterior current of air may be produced by admitting air between the base of the chimney and the seat upon which it rests, as has been done heretofore in some cases.

Air-cones, when employed heretofore, have always been narrowest or most contracted at the top, thus compressing the air, and discharging it in a thin annular sheet, which passes up tangentially, or nearly parallel with the flame, which, consequently, is not fed with air to such an extent as it should be, and, when air-cylinders have been used, they have been of the same size all the way up, and, like the cones, discharge the air in a thin annular sheet.

To obviate this, I make the top of the cone or cylinder flaring, as shown in the drawing, so as to present the air to the flame in a diffused state, in which condition it is best adapted to feed and mingle with the flame; and the bent-out flange, or flaring top, serves, also, to deflect or change the direction of the current of air which passes up around the exterior of the cone, thus thoroughly diffusing the air, and causing it to feed the flame to the best advantage.

Having now described my invention and the manner in which the same is or may be carried into effect,

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

1. The combination, with the oil-fountain of an Argand burner, of a sheet-metal tube, so inserted in the top of the fountain as to project both below and above said top, the part projecting above the fountain being so arranged as to surround the wick-tube and support the removable part of the burner, substantially as herein shown and set forth, while the part projecting below the top shall not extend much below the ordinary level of the oil, that is, only so far as to admit of its being soldered, or otherwise secured to the top.

2. In combination with the burner-supporting tube,

claimed in the preceding clause, the recess or depression formed on the top of the fountain, substantially as and for the purposes herein set forth.

3. The combination, with the wick-tube and burner, of an air-cone or cylinder, having a flaring top, or upper end, substantially as and for the purposes shown and set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

RUFUS S. MERRILL.

Witnesses:

W. BAILEY,

EDM. F. BROWN.