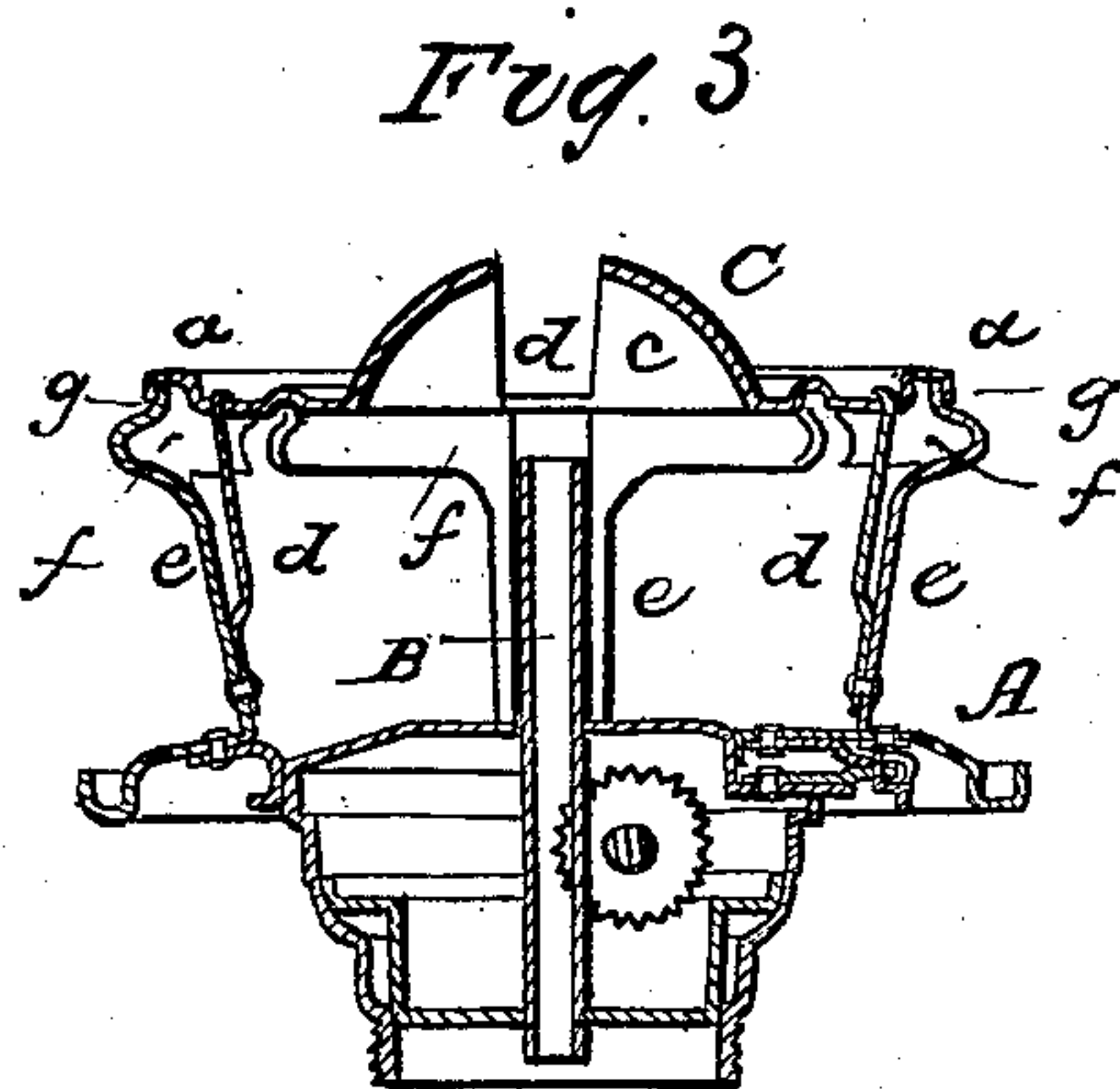
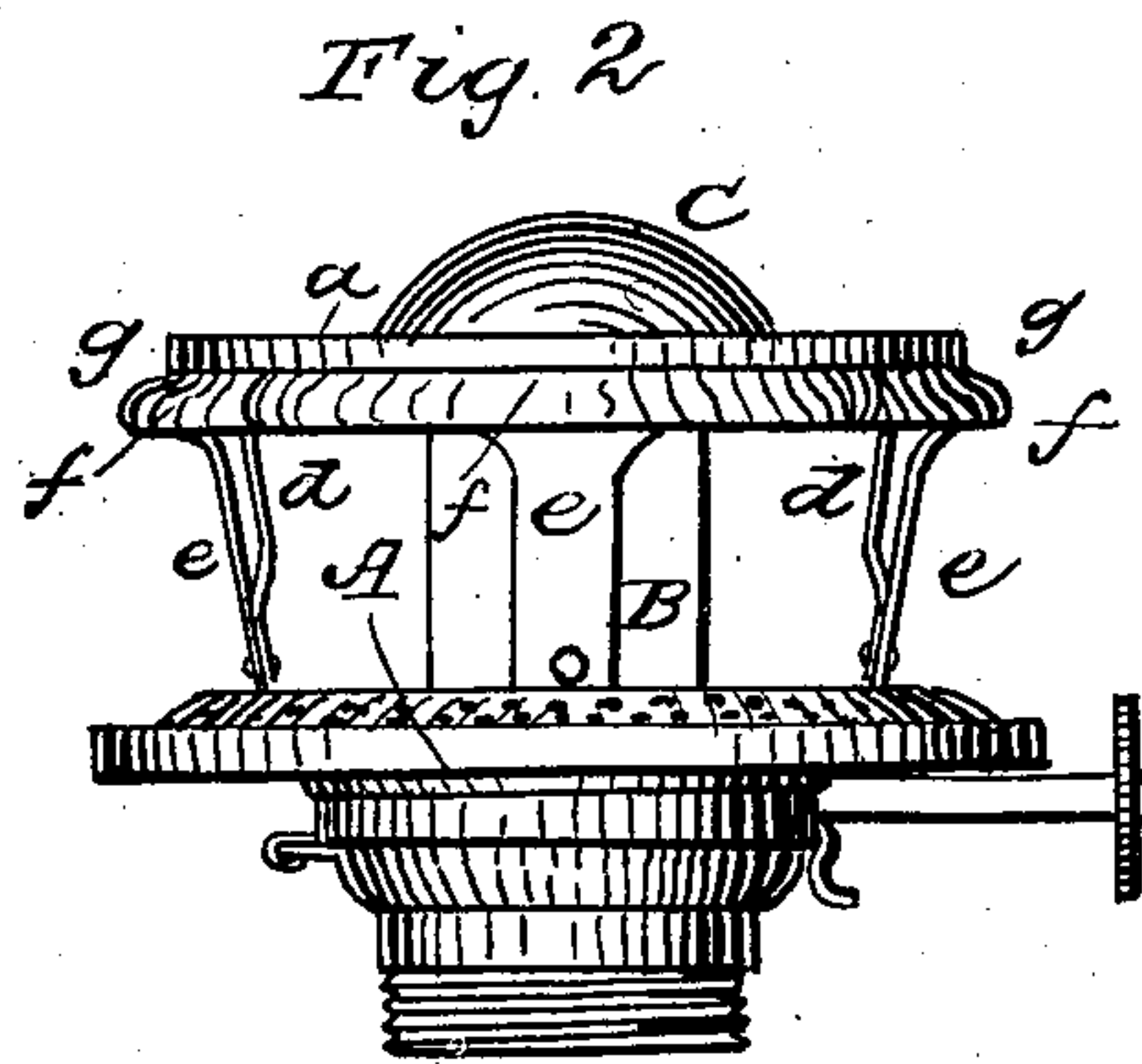
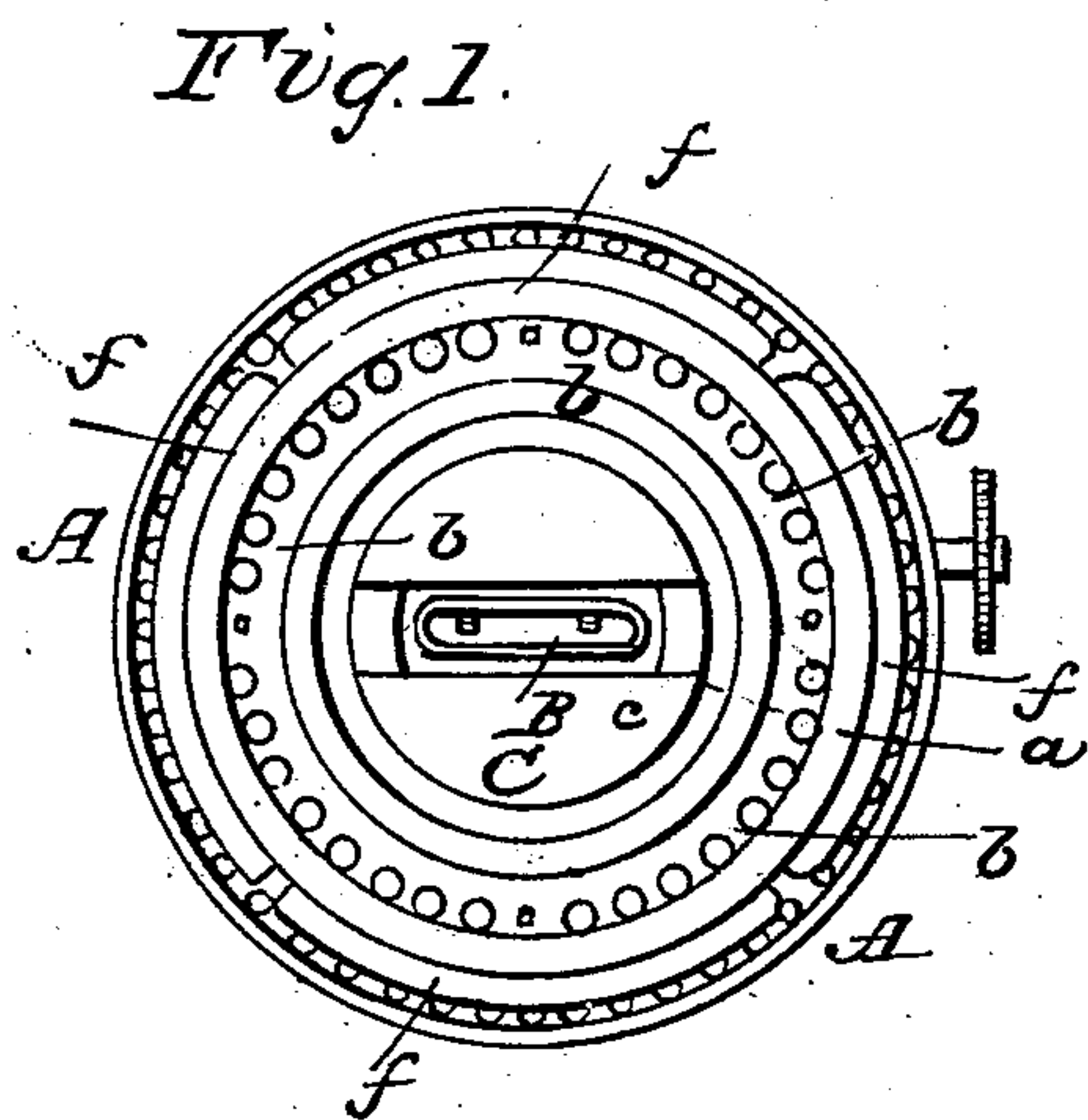


A. TAPLIN.
Lamp-Chimney Holder.

No. 87,988.

Patented March 16, 1869.



Witnesses
S. N. Piper
J. P. Hale Jr

Inventor
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United States Patent Office.

ALVIN TAPLIN, OF SOMERVILLE, MASSACHUSETTS.

Letters Patent No. 87,988, dated March 16, 1869.

IMPROVEMENT IN LAMP-BURNERS.

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

To all persons to whom these presents may come :

Be it known that I, ALVIN TAPLIN, of Somerville, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Lamps for Burning Liquid Hydrocarbons; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 denotes a top view,

Figure 2, a side elevation, and

Figure 3, a transverse section of a lamp-burner provided with my invention.

The said improvement has reference to the means of supporting the glass chimney, and supplying air to that part of the flame of the wick which usually extends above the air-deflector, or cone.

In the drawings—

A is the foraminous base, on which the lower edge of the chimney usually rests;

B is the wick-tube; and

C, the cone, or air-deflector.

This latter I construct with a flange, or lip, *a*, and a series of air-holes, *b b*, &c., arranged concentrically about the slotted dome *c*.

The flange, or lip is to project down from the periphery of the deflector.

The said deflector is supported above the base A by a series of arms, or posts, *d d d d*, extended upward from the said base, and fastened to the deflector, or extended from springs *e e e*, in manner as represented.

To each of the said arms the lower part of a leaf-spring, *e*, riveted.

The upper end of this spring is surmounted by one of a series of arcal bearers, *f f f f*, which are arranged relatively to the outer edge of the deflector, in manner as represented.

Each of the bearers is provided with a lip, or flange, *g*, which projects upward from it, and bears against the flange of the deflector.

The next adjacent ends of the bearers are very near together, their distance apart being, generally speaking, just about sufficient to allow of the necessary play or movements of the bearers.

When the chimney is pressed down upon, and so as to force its lower edge against the bearers, they will move inward, and allow it to pass down by them, and to the base A; and while the chimney may be on such base, the bearers, by the pressure of their springs, will be forced against the inner surface of the chimney, and will thus aid in keeping the chimney steady on the base.

While the burner may be in operation air will pass through the series of holes, *b*.

For steadying the chimney, and supplying it with air from the space beneath the deflector, it has been customary to form the deflector of thin metal and of a concavo-convex shape, and with radial slits extending from its periphery.

It has been customary to surround the deflector with a helical spring, coiled into a series of holes made in the deflector, near its outer edge, such being as represented in the United States patent, No. 73,488.

The contraction of the helical spring, or the peripheral springs, (formed by the radial slits,) by a close-fitting chimney, tends to diminish the passages for the supply of air to the space over the deflector, and it has been found, that as glass chimneys vary more or less in size, contractions of the air-ducts by a closely-fitting chimney, frequently, very materially, by the resulting diminution of the supply of air, effect the combustion of the fluid of the wick.

Consequently I have preferred to maintain the air-ducts, or passages through the deflector at a constant size, and to apply to the deflector such bearers as will act independently of the air-inlets, that is, such, as when contracted, will not effect any diminution of the air-passages of the deflector.

I would also remark, that for supporting a chimney, when reposing on a circular foraminous plate, or rest, and encompassing an air-deflector, it has been customary to employ a series of curved springs, either extended upward from the said rest, or downward from the deflector, such being as represented in the United States patents, Nos. 75,565, 75,566, and 80,909.

In carrying out my invention, I employ with each of such springs, when projecting upward from the chimney-rest, or a post, or standard, elevated thereon, and serving to support the air-deflector, an arcal bearer, as set forth, having its upper surface cam-shaped, or so inclined, that when the chimney is pressed down upon it, such inclined surface will cause the arcal bearer to move inward, in order to enable the chimney to pass the outer edge of the bearer.

Each bearer extends horizontally in opposite directions from its supporting spring, and at their ends the bearers of the series are very close together, as hereinbefore stated.

The circumscribing flange, or lip *a* of the air-deflector serves, with the flanges, or lips *g* of the bearers, to arrest the bearers under the outward pressure of their springs, and thus to keep them in their proper positions to receive a chimney.

Were it not for the flanges, or their equivalents, the bearers would be liable to be forced outward by the base of the chimney, when forced down upon them, the result of which would be breakage or injury of the springs of the bearers.

I make no claim to either of the lamp-burners described in the aforesaid patents; nor do I claim any parts, combination, or arrangement of parts, contained in either of such burners, as neither of them contains a series of arcal bearers, constructed and arranged with an elevated foraminous air-deflector, and with springs, and a chimney-rest, and provided with stops, as in the burner represented in the accompanying drawings, and hereinbefore explained.

In this bearer the circumferential air-passages of the deflector maintain a uniform size, however the chimney may vary in diameter, the arcal bearers serving not only to support the chimney, but to arrest the passage of most, if not all, of the air up by the circumference of the deflector.

I claim the arrangement of the series of inclined top arcal bearers *f* and the stop-projections *a g* with

the elevated foraminous deflector *C*, and the series of springs *c*, arranged and combined with the chimney-rest, as described.

ALVIN TAPLIN.

Witnesses:

R. H. EDDY,
F. P. HALE, Jr.