

F. H. FURNISS.
LAMP-EXTINGUISHERS.

No. 177,631

Patented May 23, 1876.

Fig. 1.

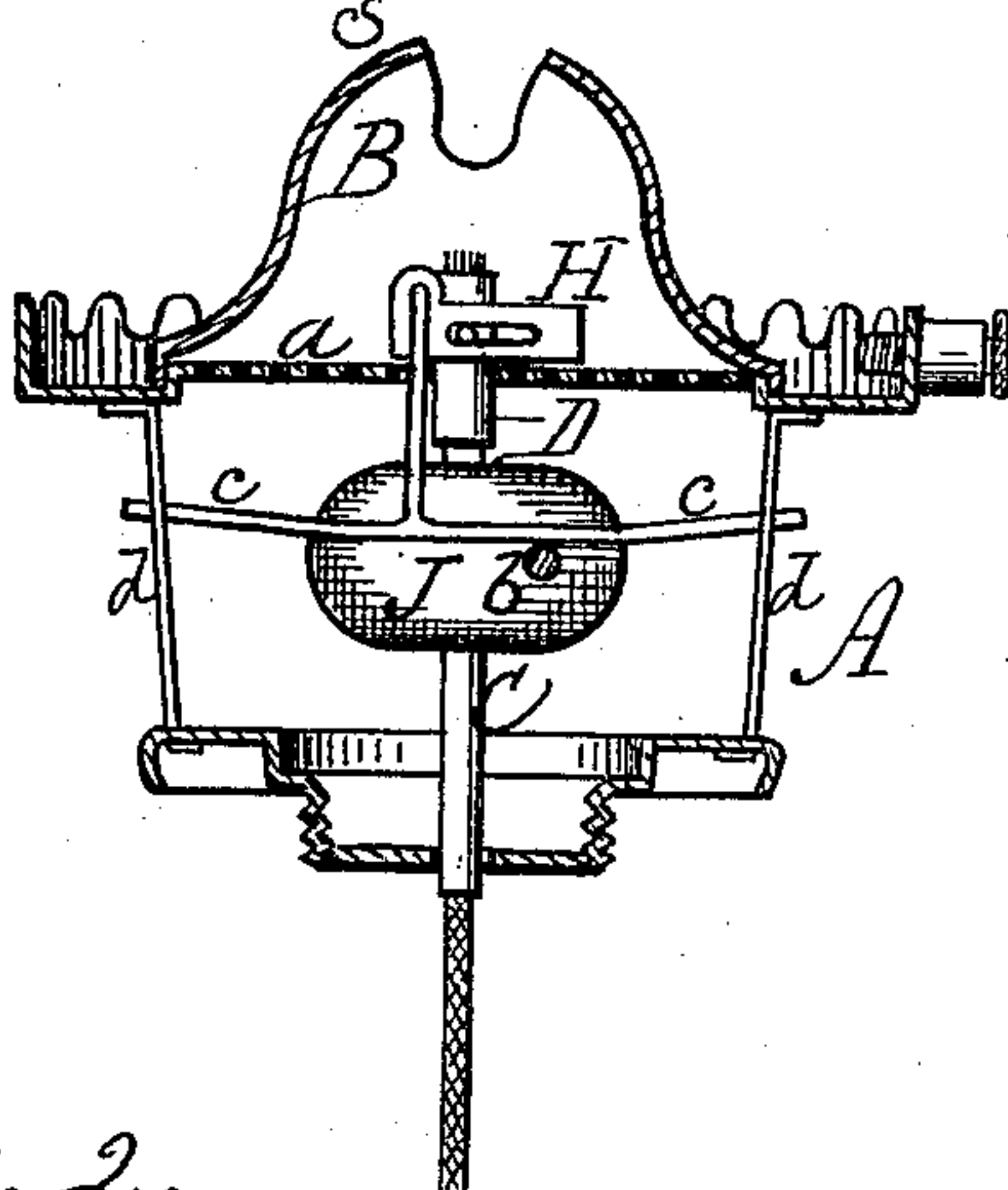


Fig. 2.

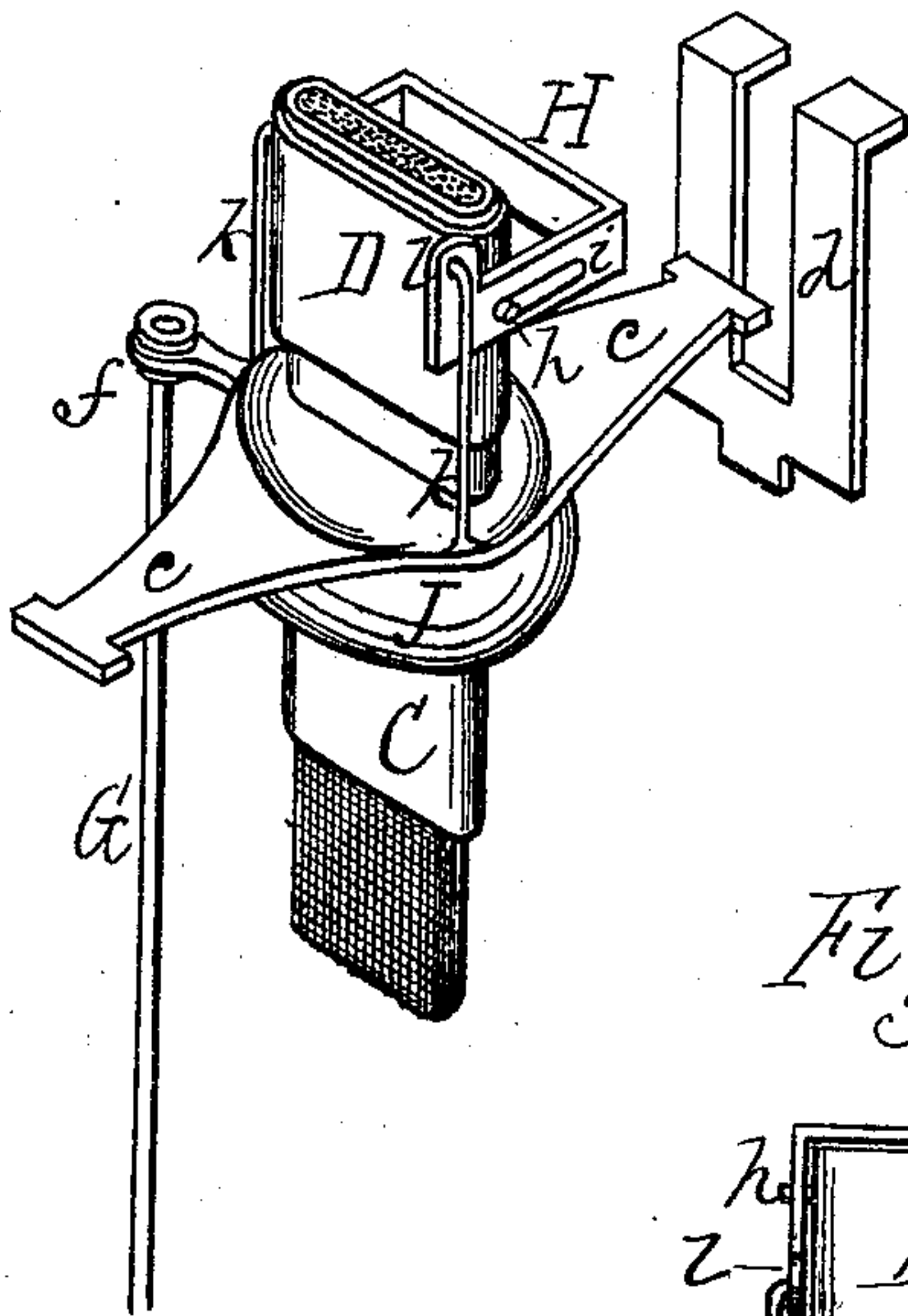


Fig. 3.

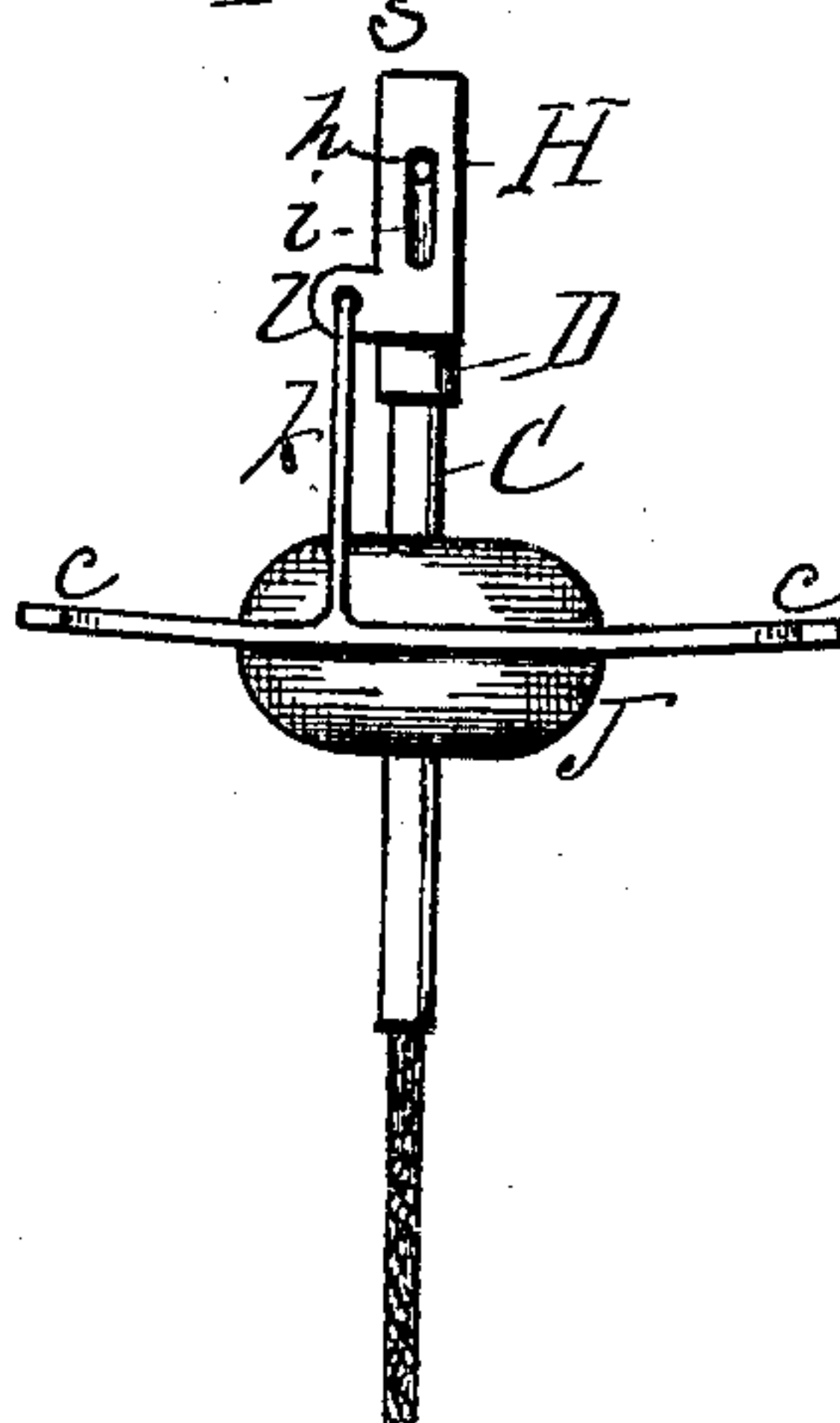
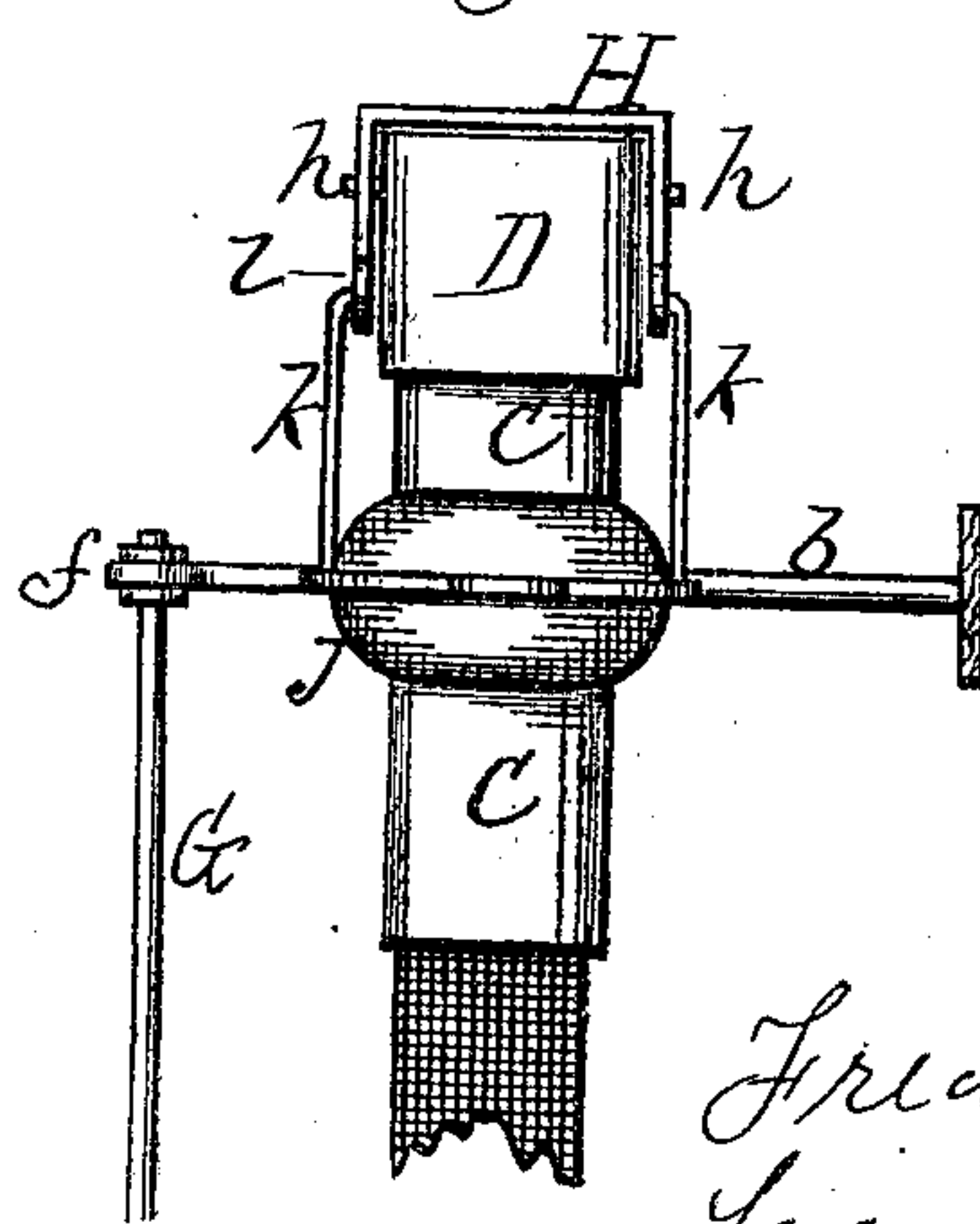


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LAMP-EXTINGUISHERS.

Specification forming part of Letters Patent No. **177,631**, dated May 23, 1876; application filed April 8, 1876.

To all whom it may concern:

Be it known that I, FRED. H. FURNISS, of Waterloo, in the county of Seneca and State of New York, have invented a certain new and useful Improvement in Lamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical section of a lamp-burner provided with my improvement. Fig. 2 is a perspective view. Fig. 3 is a view similar to Fig. 1, but showing the extinguisher closed upon the wick-tube. Fig. 4 is a view at right angles to Fig. 3.

My improvement relates to devices for extinguishing the flame of a lamp, and is of that kind known as automatic or self-acting. It is an improvement upon my patent of March 21, 1876.

The invention consists in the combination of the extinguishing-cap with a movable wick-tube, which slides up and down in an exterior fixed tube, whereby the wick is first depressed, and the cap then brought down over the end of the fixed tube; also of other parts, as hereinafter more fully described.

A is an ordinary lamp-burner. B is the cone or deflector. C is the wick-tube. D is a short fixed tube, secured fast in the web *a* of the burner, and projecting a little distance above and below the said web. The wick-tube slides up and down loosely in this fixed tube, and, when raised, the wick rests just far enough above the end of the fixed tube to produce necessary combustion. If desired, the action may be reversed, the outer tube being made movable and the inner one stationary. The wick is operated in the wick-tube by the ordinary spur-wheel shaft *b*. J is a bulb or head, to which the wick-tube is made fast. This bulb carries the spur-wheel, and has arms *c c*, which move up and down in the guideways *d d* of the burner. G is a rod, attached at the upper end to the bulb, as shown at *f*, by means of a screw-joint, so that it can be readily engaged or disengaged. The lower end of the rod passes down through a closed tube of the lamp-body, and through the base of the lamp, where a spring is con-

nected therewith to force it downward, as shown in my aforesaid patent. When the lamp rests upon a table or other supporting-surface the rod is thrown up and the spring is depressed, and the wick-tube C is then moved up in the fixed tube D, so that combustion can take place; but when the lamp is raised from its support, then the wick-tube is forced down within the fixed tube D by reason of the reaction of the spring upon the rod G. H is the extinguisher. It is a band of metal bent in square or rectangular form. It is secured to the opposite edges of the fixed tube D by pivots *h h* of the latter, which pass through slots *i i* of the former. These slots are of sufficient length to allow the extinguisher to first turn up and then to drop vertically in contact with the top of the fixed tube. *k k* are rods, which connect the elbows *l l* of the extinguisher with the bulb J.

When the wick-tube is raised in the fixed tube to allow combustion, as before described, then the extinguisher will be thrown down or back, as shown in Fig. 1, so as not to interfere with the blaze; but when the wick-tube is depressed or thrown down by the action of the spring-rod, then the extinguisher will be brought down over the top of the fixed tube, as shown in Fig. 3, thereby extinguishing the flame and making a close cover to the said fixed tube.

Two special advantages are gained by this arrangement: first, the extinguishing of the blaze is made more certain by the drawing of the wick down into a close space and covering it by a close-fitting cap; and, second, the difficulty of making the cap fit over an undue projection of the wick is avoided. The unequal projection of the wick upward has caused some difficulty in this respect.

I do not claim, broadly, a self-acting lamp-extinguisher; but

I claim—

1. The combination, with the wick-tube C, sliding loosely in the fixed tube D, of the extinguisher H, attached to the edges of the fixed tube by the pivots *h h*, resting in the slots *i i*, the whole arranged to operate as and for the purpose specified.

2. The two tubes C D, sliding one within the

other, and the extinguishing-cap H, pivoted to the outer tube, in combination with a spring-rod, G, connected with the extinguisher, in the manner and for the purpose specified.

3. The combination, with the extinguisher H and sliding wick-tube C, of the rods *k k*, connecting the extinguisher with the said tube, as and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

FRED. H. FURNISS.

Witnesses:

HIRAM VAN AMBURGH,
L. MORGAN.