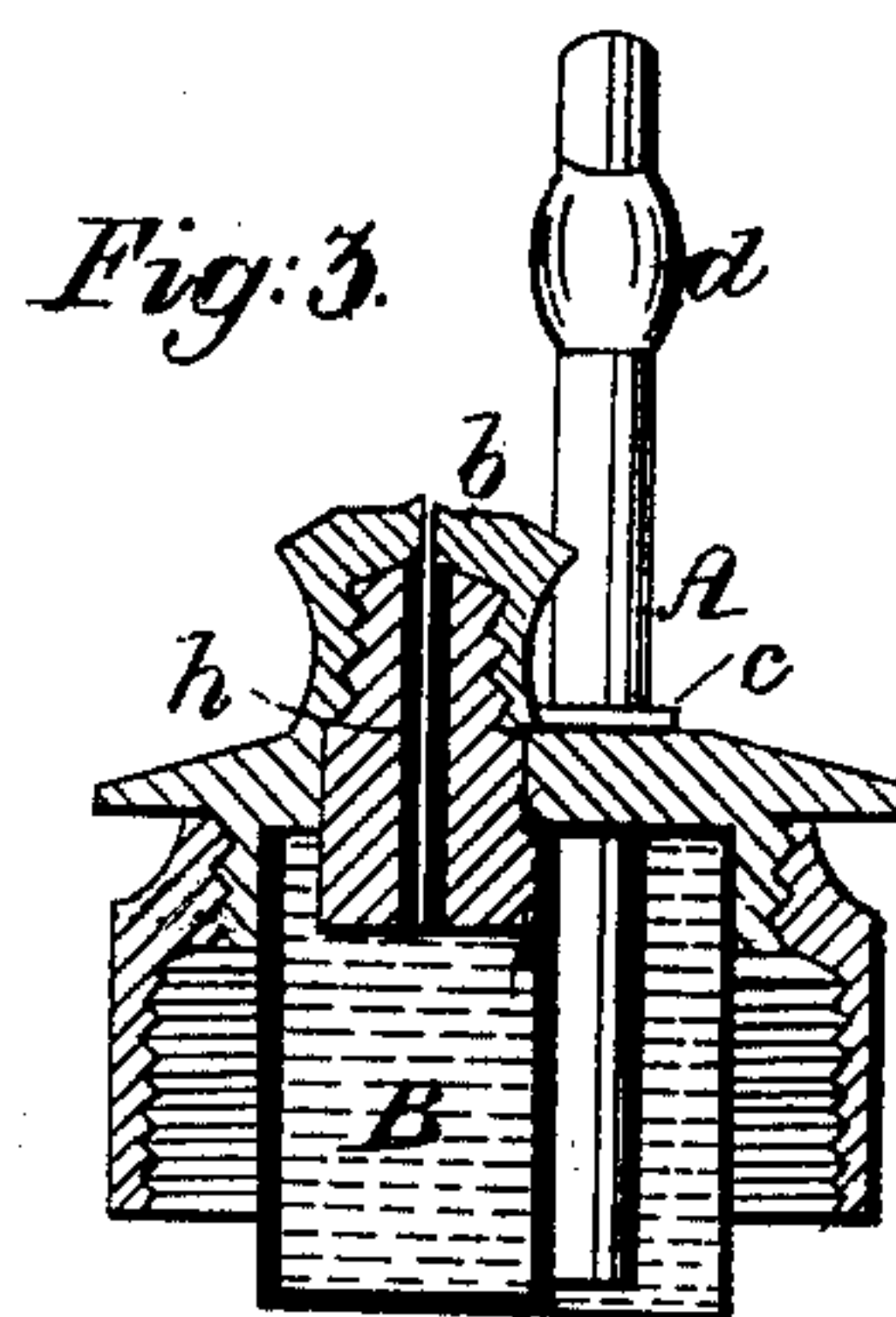
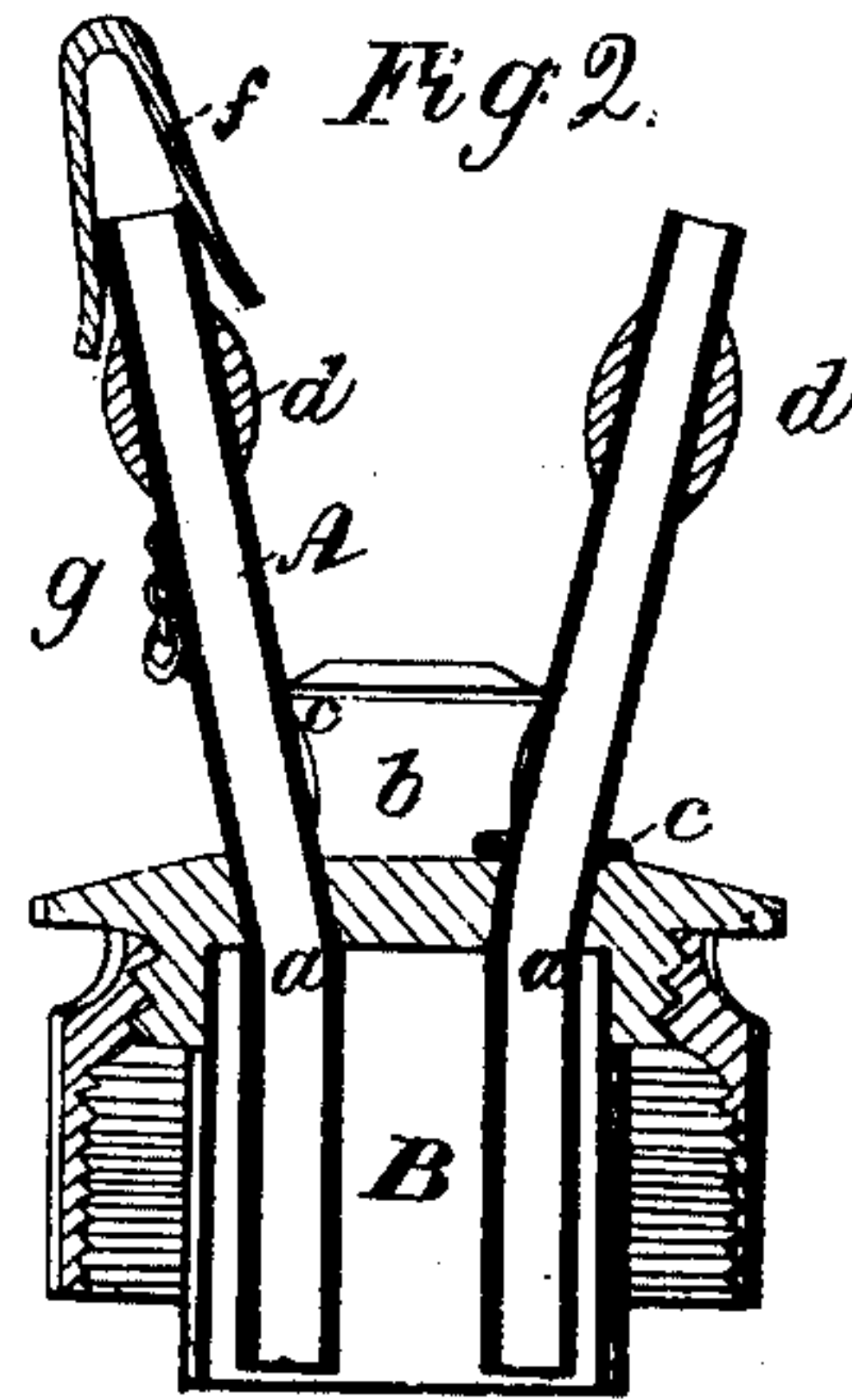
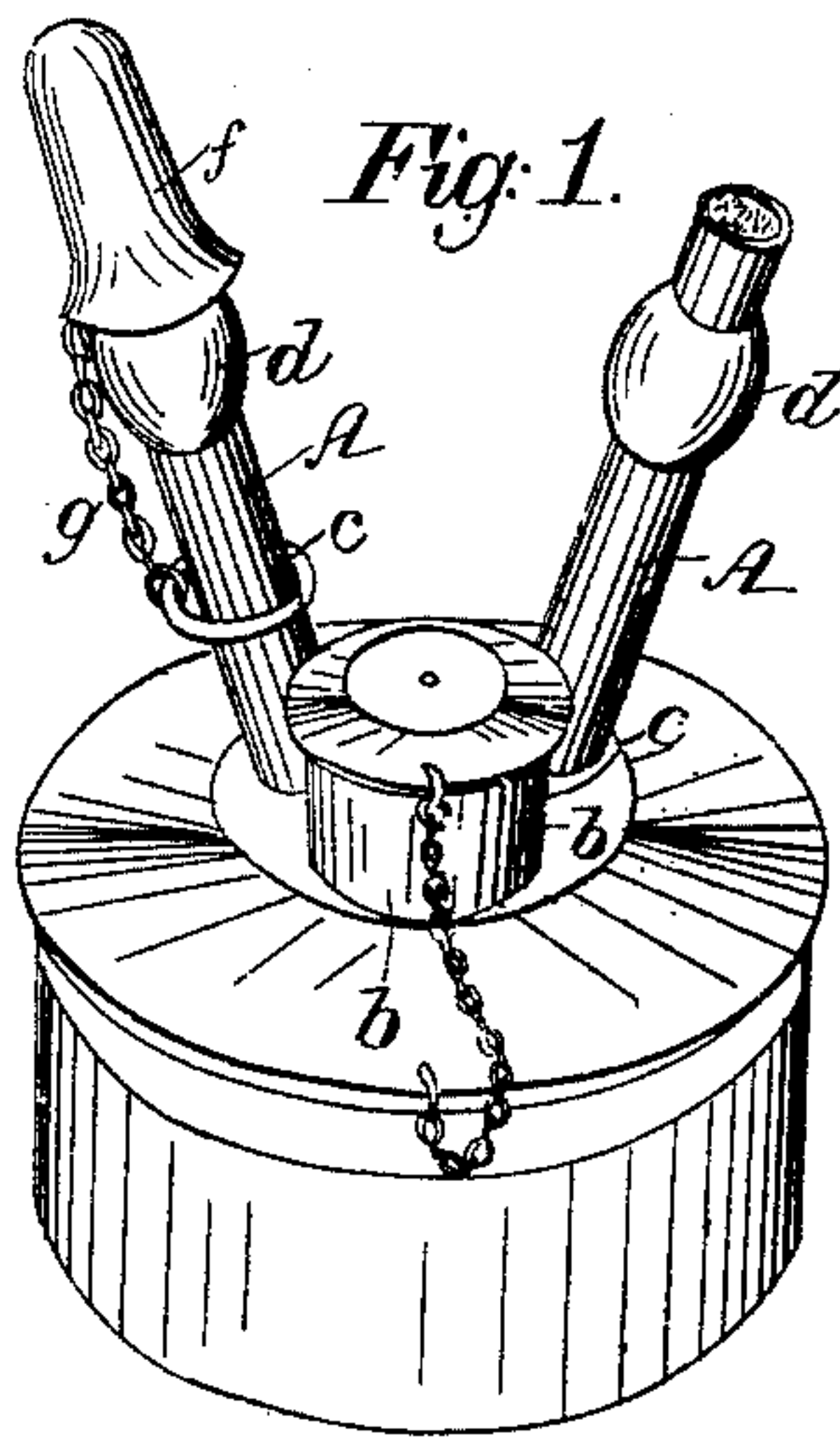


W. BELL.
Lamp Extinguisher.

No. 11,928.

Patented Nov. 14, 1854.



UNITED STATES PATENT OFFICE.

WILLIAM BELL, OF BOSTON, MASSACHUSETTS.

LAMP-CAP.

Specification of Letters Patent No. 11,928, dated November 14, 1854.

To all whom it may concern:

Be it known that I, WM. BELL, of Boston, in the county of Suffolk and State of Massachusetts, have made a new and useful Improvement in Lamp-Caps; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification.

10 In lamps for burning spirit gas, as constructed previous to my present invention, it has been necessary to unscrew the lamp cap each time the lamp was filled, and where this has been carelessly done, explosions and
15 fatal accidents have resulted. To obviate this a cylinder of perforated metal or of wire gauze has been attached to the cap, within which the wick was inclosed, and which was surrounded by another cylinder
20 of gauze, that when the cap was removed for the purpose of filling the lamp the flame, should it be accidentally lighted, might not ignite the fluid within. The expense of making these two cylinders was considerable, and
25 their use was furthermore objectionable, on account of the unusual appearance which they presented within the lamp, and also because the inner tube had to be entirely removed from the lamp before the latter
30 could be filled, and the fluid was thus liable to drop upon any object near.

To remedy these objections and at the same time to afford an equal degree of safety I have made the following invention
35 which consists in perforating the lamp cap itself with a hole of sufficient size to enable the lamp to be filled therein, and adapting to it a small chamber or sack of perforated metal or wire gauze, by which means the
40 lamp may be filled without unscrewing the lamp cap, and all danger of explosion avoided.

Considerable inconvenience has been found to result from the long chains, which it was
45 found necessary to use for the purpose of attaching the extinguishers to the lamp caps. To remedy this I have adapted rings to the lamp tubes, which are furnished with suitable stops to prevent the rings from being
50 slipped off, the extinguishers being secured to the rings by short chains, and thus all

inconvenience resulting from the interference of the chains with each other is avoided.

Some method of preventing the fall of the wick through the tubes, is very necessary in
55 lamps for burning mixtures, of which alcohol is a principal ingredient, as the wick in such lamps is made much smaller than in others. Springs and points have been made use of for the purpose of holding the wick,
60 but have been found to be objectionable on account of their original cost and liability to get out of repair.

In order that others skilled in the art may make and use my invention, I will proceed
65 to describe the manner in which I have carried it out.

Figure 1 is a view of my lamp cap with the improvements applied. Fig. 2 is a section through the tubes. Fig. 3 is a section
70 at right angles to the former, and through the aperture by which the lamp is fed.

A are the tubes bent at *a*, for the purpose of retaining the wick from falling.

B is a small chamber of perforated tin,
75 or wire gauze, placed at the side of the tubes, and beneath the cap; into this chamber an opening is made through the cap, which is fitted with a suitable stopper *b*. Through the center of this stopper is a small tube *h*,
80 for the purpose of permitting the vapor from within the lamp to escape, and thus avoid the danger of explosions. *c* are rings sliding freely upon the tubes, upon which they are retained by suitable stops *d*. These
85 rings are connected with the extinguishers *f*, by short chains *g*. When the extinguishers are in use, the rings *c* slide upon the tubes until they reach the stops *d*, and when the lamp is burning they drop into the position
90 seen in Figs. 2 and 3. By this arrangement I am enabled to make use of chains so short that they cannot interfere with each other, and thus all inconvenience and annoyance from this source is avoided.
95

I do not claim the use of wire gauze, or perforated tin, for the purpose of preventing the explosion of spirit lamps; but

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

The perforation in the lamp cap in combination with the short chamber of per-
100

forated tin, wire gauze or other analogous contrivance, by which means the lamp may be filled without removing the cap, and the spirit within the lamp may be protected
5 from igniting when the lamp is filled, without the use of the double cylinder of wire gauze or perforated sheet metal, as heretofore employed.

In testimony whereof I have hereunto set my signature this nineteenth day of May 10 A. D. one thousand eight hundred and fifty three.

WM. BELL.

Witnesses:

SETH J. THOMAS,
E. C. BANTFIELD.