

G. Waters,

Lubricator.

No. 92131.

Patented June 29, 1869.

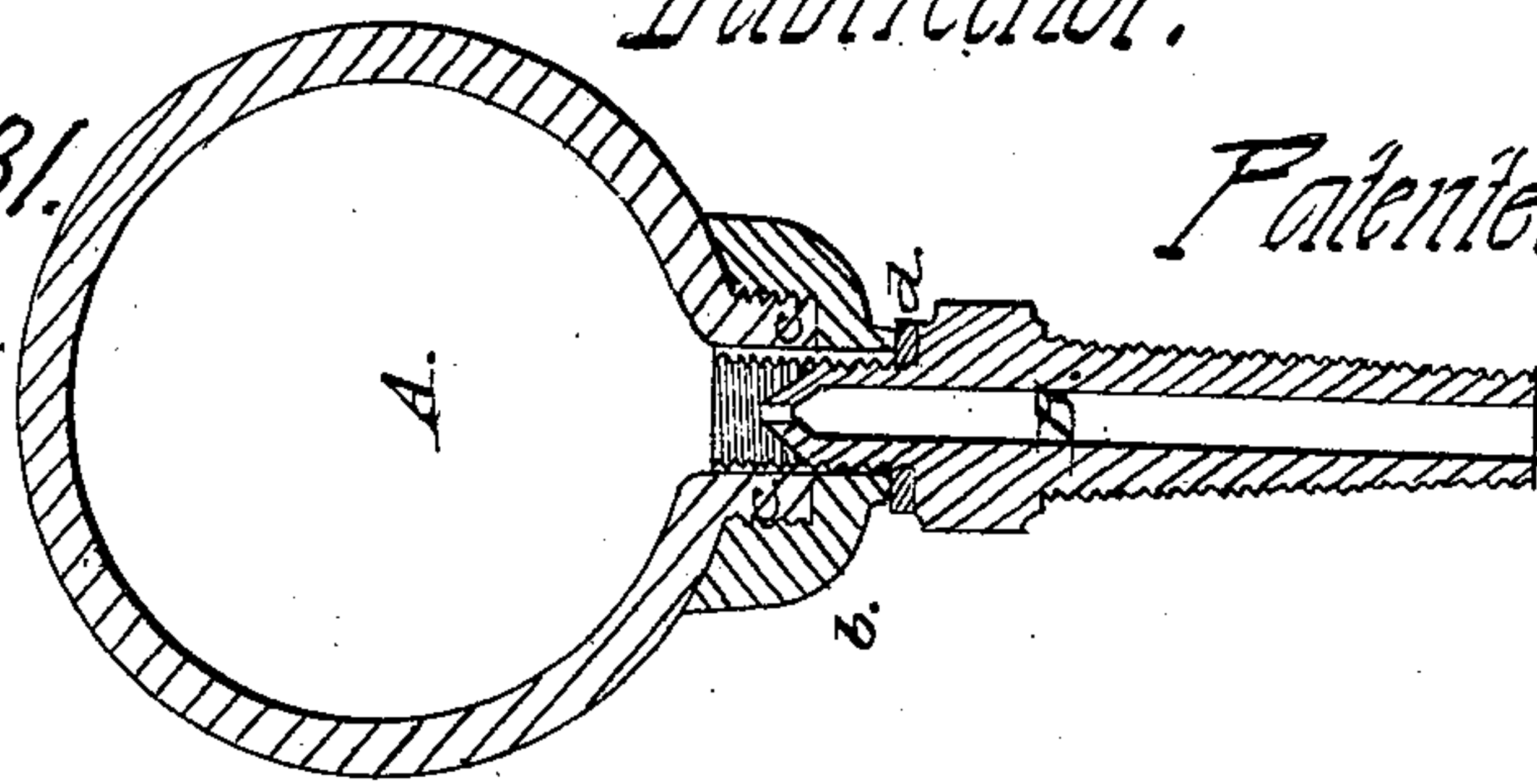


Fig. 3.

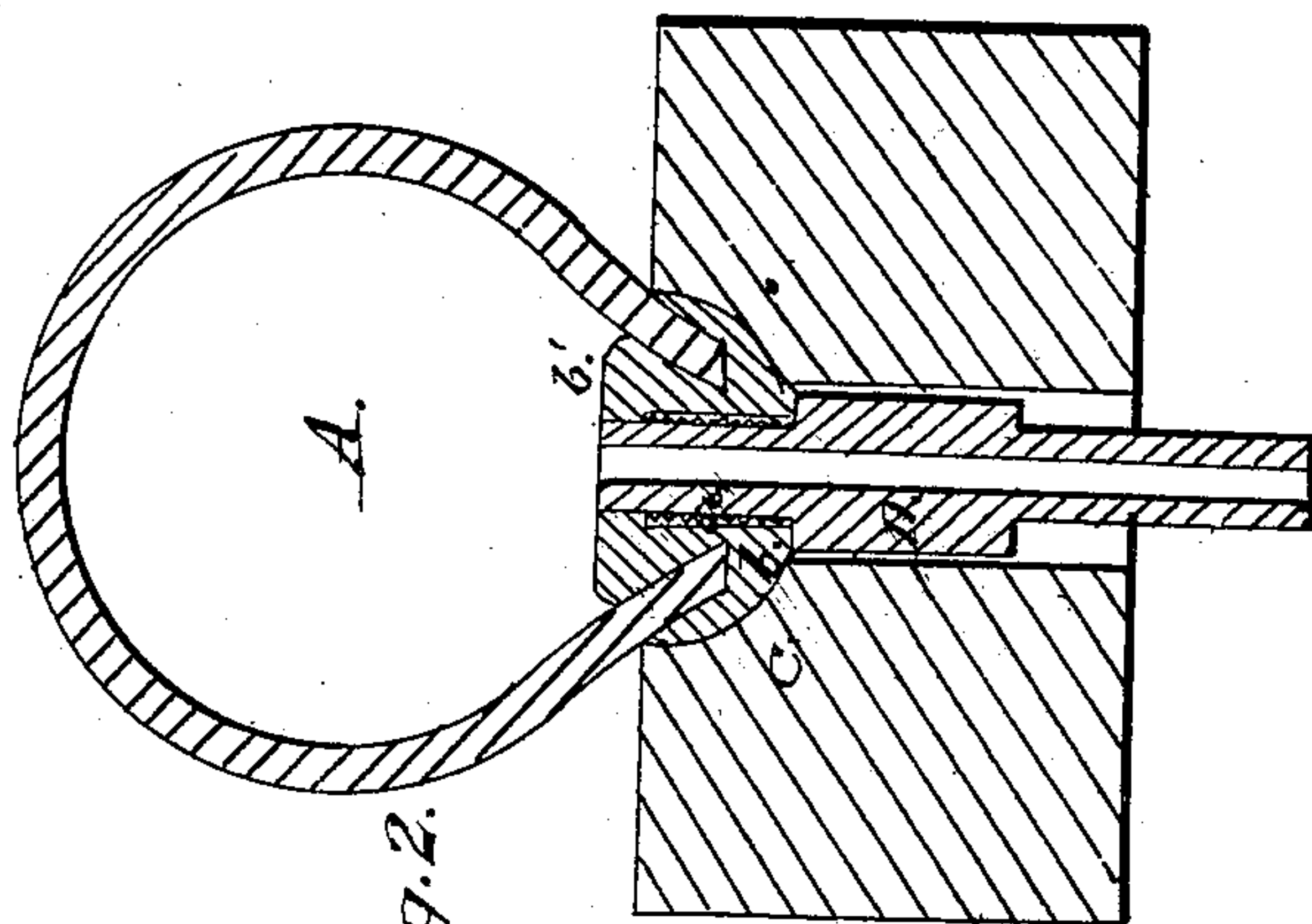


Fig. 2.

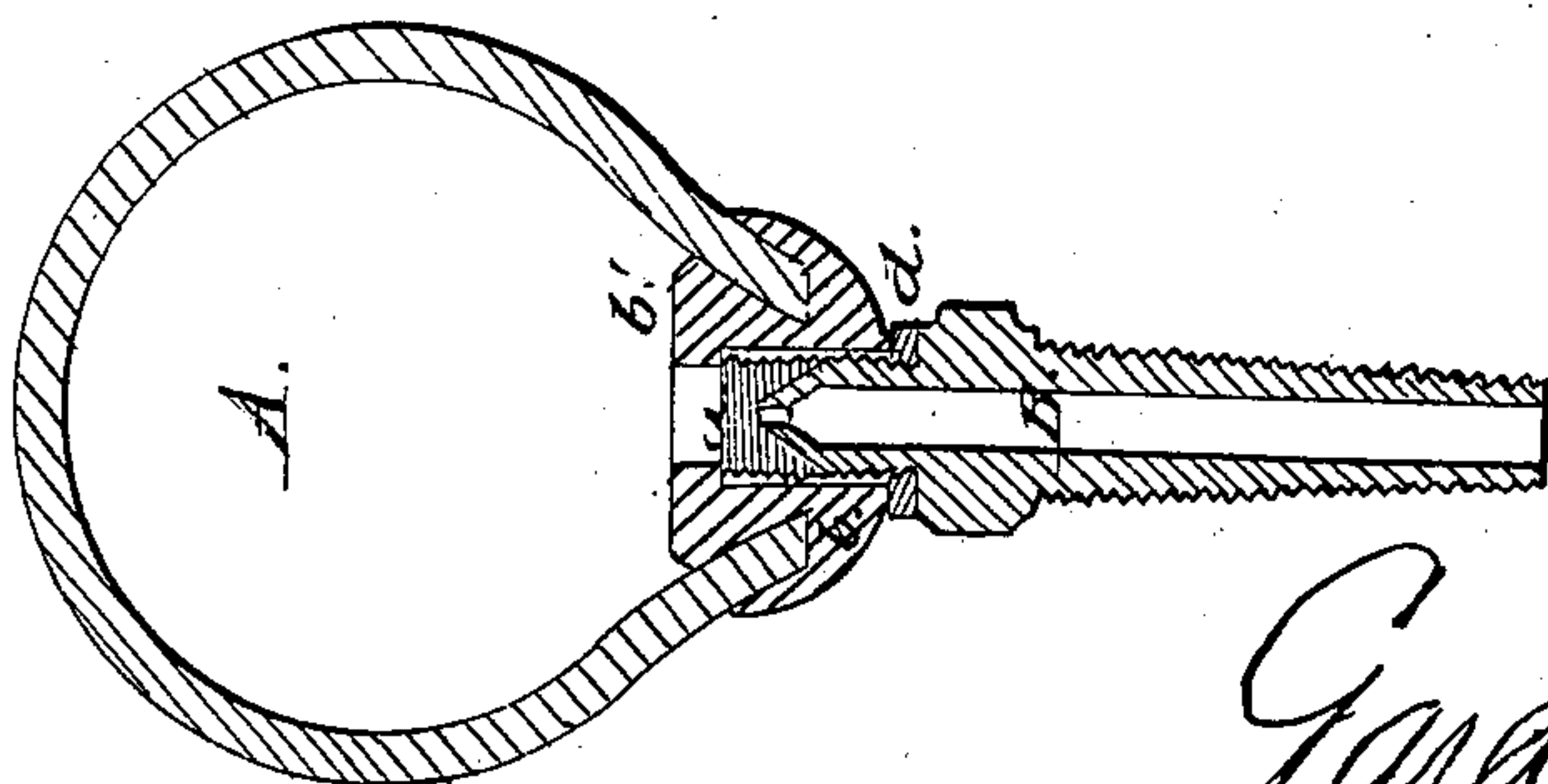


Fig. 1.

WITNESSES:

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United States Patent Office.

GARDNER WATERS, OF CINCINNATI, OHIO.

Letters Patent No. 92,131, dated June 29, 1869.

IMPROVEMENT IN LUBRICATORS.

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

To whom it may concern:

Be it known that I, GARDNER WATERS, of Cincinnati, in the county of Hamilton, and State of Ohio, have invented certain new and useful Improvements in Automatic Lubricators; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figures 1 and 2 represent vertical central sections of two forms of my improved lubricator; and

Figure 3 is a like section of the lubricator, and a mould for casting the guard of soft metal which unites the different parts of which the lubricator is composed.

My invention relates to that class of lubricators consisting of a bulb, in which the lubricant is held, and a stem, through which the lubricant is fed automatically to the shafting or other mechanism; and

It consists of a lubricator, in which the bulb and the tube for holding the tubular feed-stem are united by means of a fusible or soft metal, or alloy, cast around the bulb-neck, which has formed upon it corrugations or projections, constituting a holding-surface for the metal, or both around the neck and within the bulb, so that they shall be upon the inside as well as the outside of the bulb.

In the drawings—

A represents the glass bulb of the lubricator;

B is the tubular feed-stem;

a is the tube in which the stem is held; and

b is the guard of soft metal for holding the tube to the bulb.

The method of casting or running the soft-metal guard around the neck of the bulb and within the bulb, is illustrated in fig. 2, where C is the matrix, and D the core for holding the tube in place during the operation.

The core, in this instance, is hollow, in order to allow the escape of the air displaced by the entrance of the metal which forms the button *b'*, within the bulb.

I need not, however, further describe the manner of forming the button, as it has been fully set forth and claimed in my application for a lubricator, which has recently been allowed.

It will be seen that the present guard surrounds, both on the outside and inside, the neck or lower end of the bulb, to which the tube *a* is thus firmly held.

Instead, however, of running the metal both around the bulb-neck and inside the bulb, the tube *a* can be

held in place by simply casting the guard around or upon the exterior of the neck, as shown in fig. 3. In such case the orifice in the bulb need be only large enough to receive the end of the tube *a*, while the neck should have formed, upon its exterior, corrugations or flanges, or any equivalent means, constituting a holding-surface for the metal guard upon the exterior of the neck.

The mould for casting the metal around the neck is similar to that shown in fig. 2; and the thimble or tube *a* is held upon a core, as illustrated in the same figure. But in this case, as the metal does not enter the interior of the bulb, the core may be solid instead of tubular.

The metal, when cast around the neck of the bulb, enters the corrugations *c*, or surrounds the flanges, teeth, or equivalent holding-devices formed upon the exterior of the neck, and thus holds the tube *a* firmly in position.

The tube *a*, as shown in the drawings, has an internal screw-thread, with which the screw-threaded upper end of the stem B engages. Instead, however, of employing this means for uniting the two, the stem may be forced into the tube, and held by friction.

Between the shoulder of the stem and the tube, there may be interposed a washer or packing, *d*, of suitable material, so as to insure that perfect tightness of the joint which is so essential to the perfect operation of the lubricator.

In conclusion, I would observe that I do not claim forming the metal holding-button *b'* within the bulb, as shown in figs. 1 and 2, as that feature has been described and claimed by me in the application above referred to; but

What I claim, and desire to secure by Letters Patent of the United States, is—

An automatic lubricator, in which the bulb and the tube for holding the feed-stem are united, by means of a guard of fusible or soft metal, or alloy, cast around the neck of the bulb, provided, upon its exterior, with corrugations or equivalent means, forming a holding-surface for the metal, or both around and within the bulb, substantially as and for the purposes set forth.

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

G. WATERS.

Witnesses:

EDM. F. BROWN,

M. BAILEY.