

A. BRUCE & A. A. POOL.

LUBRICATOR.

No. 174,470.

Patented March 7, 1876.

Fig. 1.

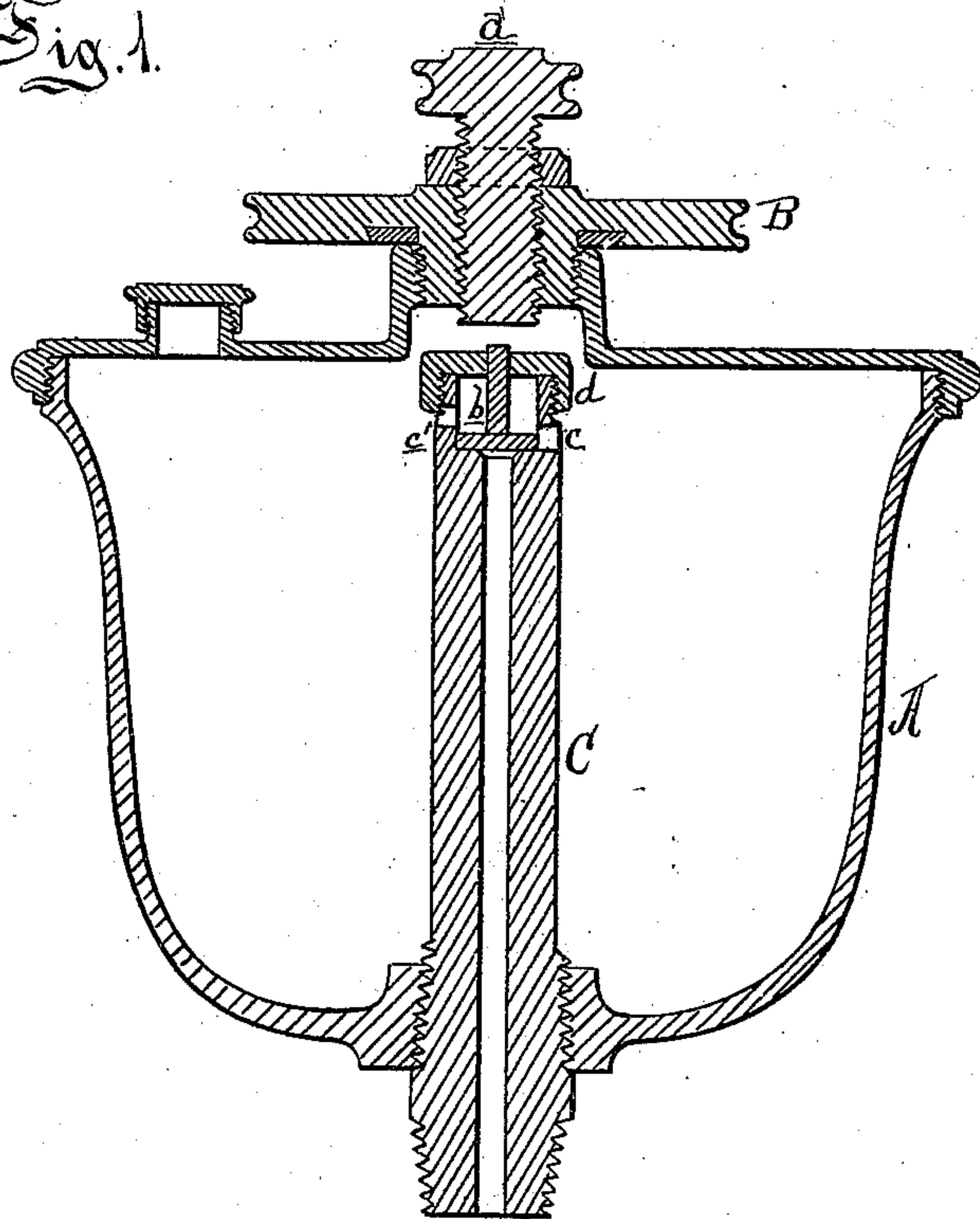
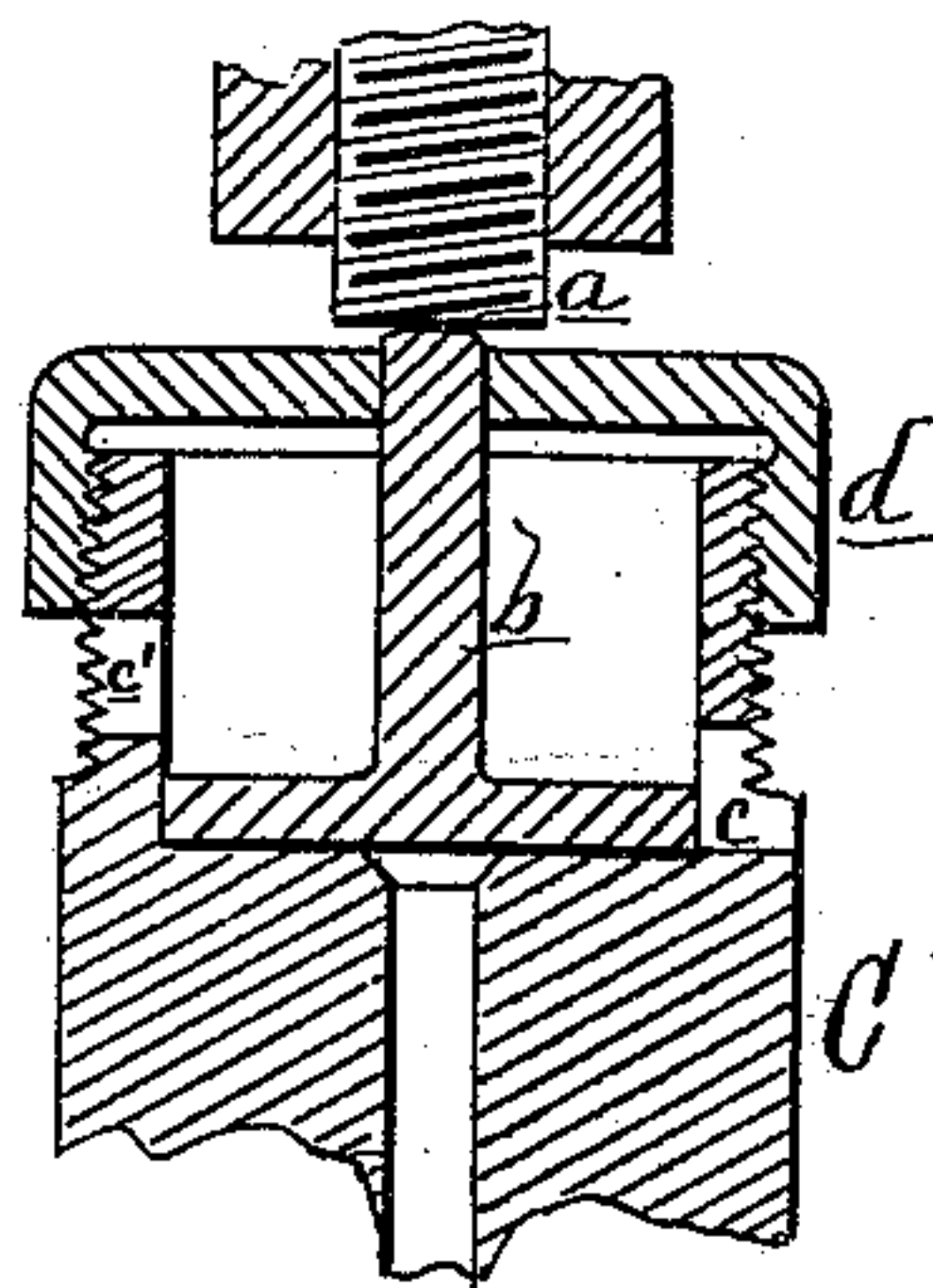


Fig. 2.



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ALEXANDER BRUCE AND ALPHEUS A. POOL, OF DETROIT, MICHIGAN.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **174,470**, dated March 7, 1876; application filed January 28, 1876.

To all whom it may concern :

Be it known that we, ALEXANDER BRUCE and ALPHEUS A. POOL, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Lubricators, of which the following is a specification:

The nature of our invention relates to an improvement in steam-engine lubricators of that class which are mounted on the steam-chest to deliver a given volume of oil at each stroke of the piston, by the overflow resulting from the condensation of steam entering the oil-cup at each stroke; and it consists in the peculiar construction and arrangement of the valve at the top of the hollow stem with reference to the regulating-screw in the top of the cup, as more fully hereinafter set forth.

Figure 1 is a vertical section of the device. Fig. 2 is an enlarged sectional detail of the valve at the top of the stem.

In the drawing, A represents an oil-cup, having a plug, B, at the top, through which is tapped a regulating-screw, *a*. C is a hollow stem, tapped into the bottom of the cup, extending up into and nearly to the top, the lower and projecting end being screw-threaded to tap or screw into the steam-chest. The upper end of the stem is counterbored to form a seat for a valve, *b*, whose stem projects up through and is guided by a cap, *d*, screwed on the top of said stem. The lift of this valve is regulated by the screw *a*. *c c'* are two oppo-

site slots cut in the sides of the stem below the cap, extending downward, the bottom of the former being nearly on the plane of the valve-seat, while that of the latter is above such plane, and above the valve when seated.

When the valve of the engine covers both steam-ports, there is a sudden and momentary increase of pressure in the steam-chest, which causes the valve *b* to lift, allowing a limited volume of steam to flow through one or both ports into the oil-cup, where it is condensed to water, on which the lubricant floats, and of which a limited quantity passes through the opened slot and down the stem of its own gravity.

By having the slots on different planes we are enabled to feed as fast or as slow as we may desire. By giving the valve a chance to lift considerably the oil will flow out through both slots if a rapid feed be required.

What we claim as our invention is—

The combination, with the cup A, of the hollow stem C, guide-cap *d*, valve *b*, regulating-screw *a*, and slots *c c'*, on different planes, constructed and arranged substantially as described and shown.

ALEXANDER BRUCE.
ALPHEUS A. POOL.

Witnesses:

H. S. SPRAGUE,
EDWARD BARTHEL.