

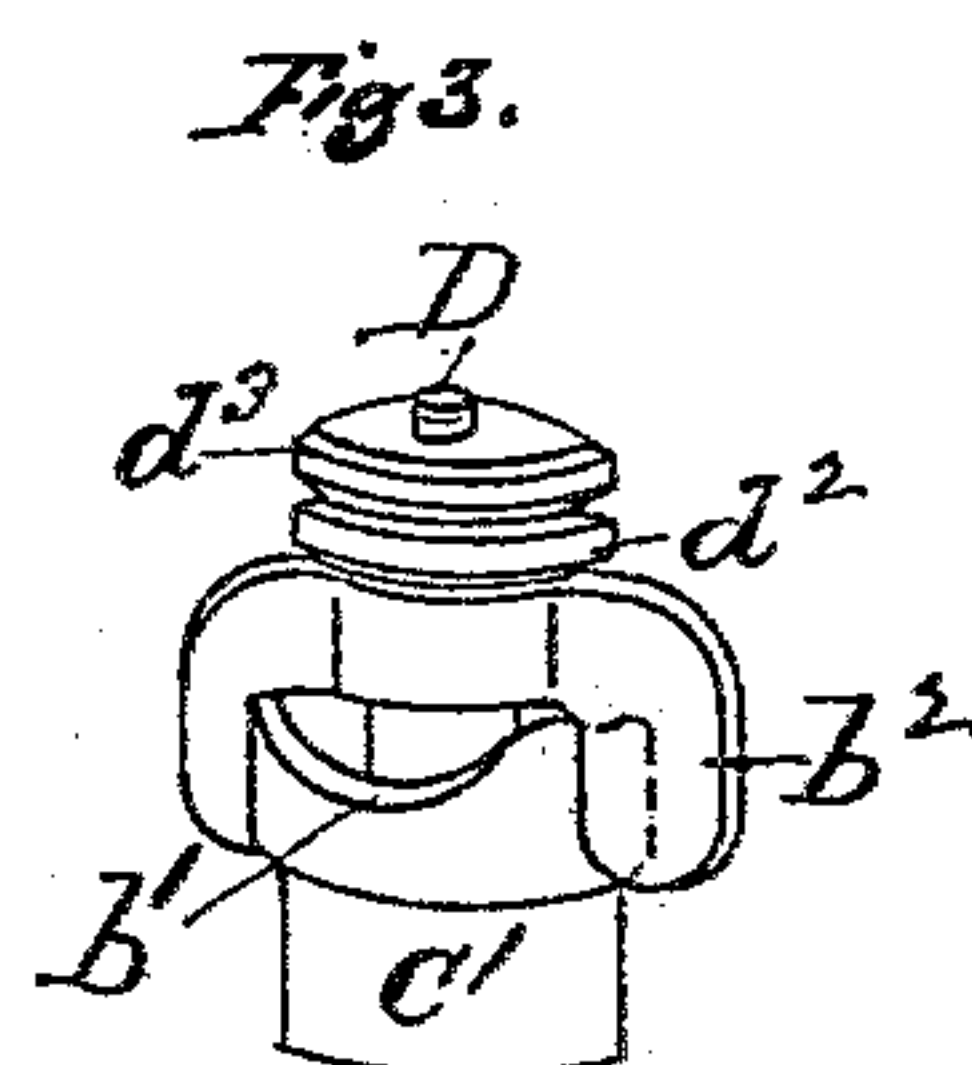
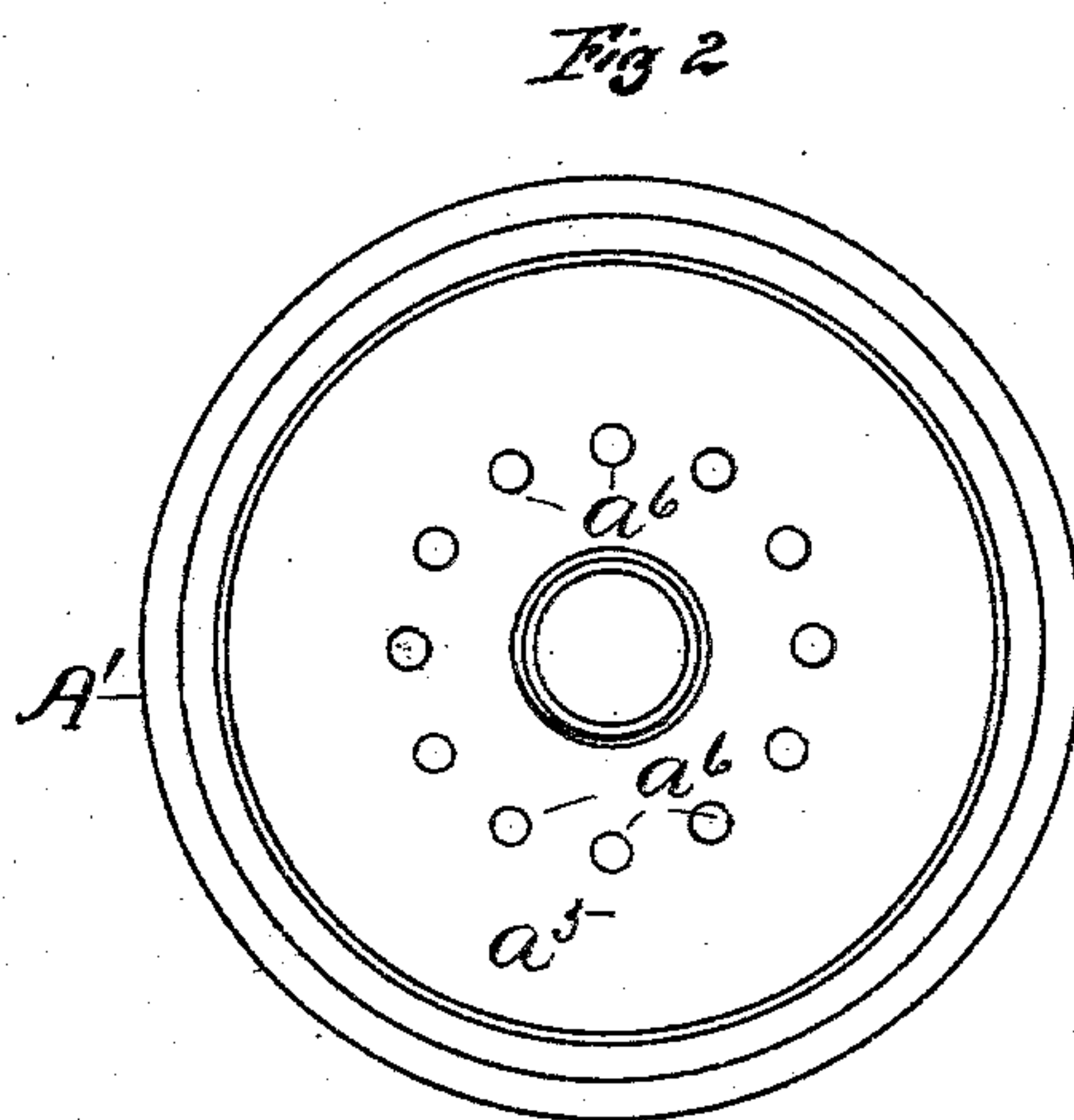
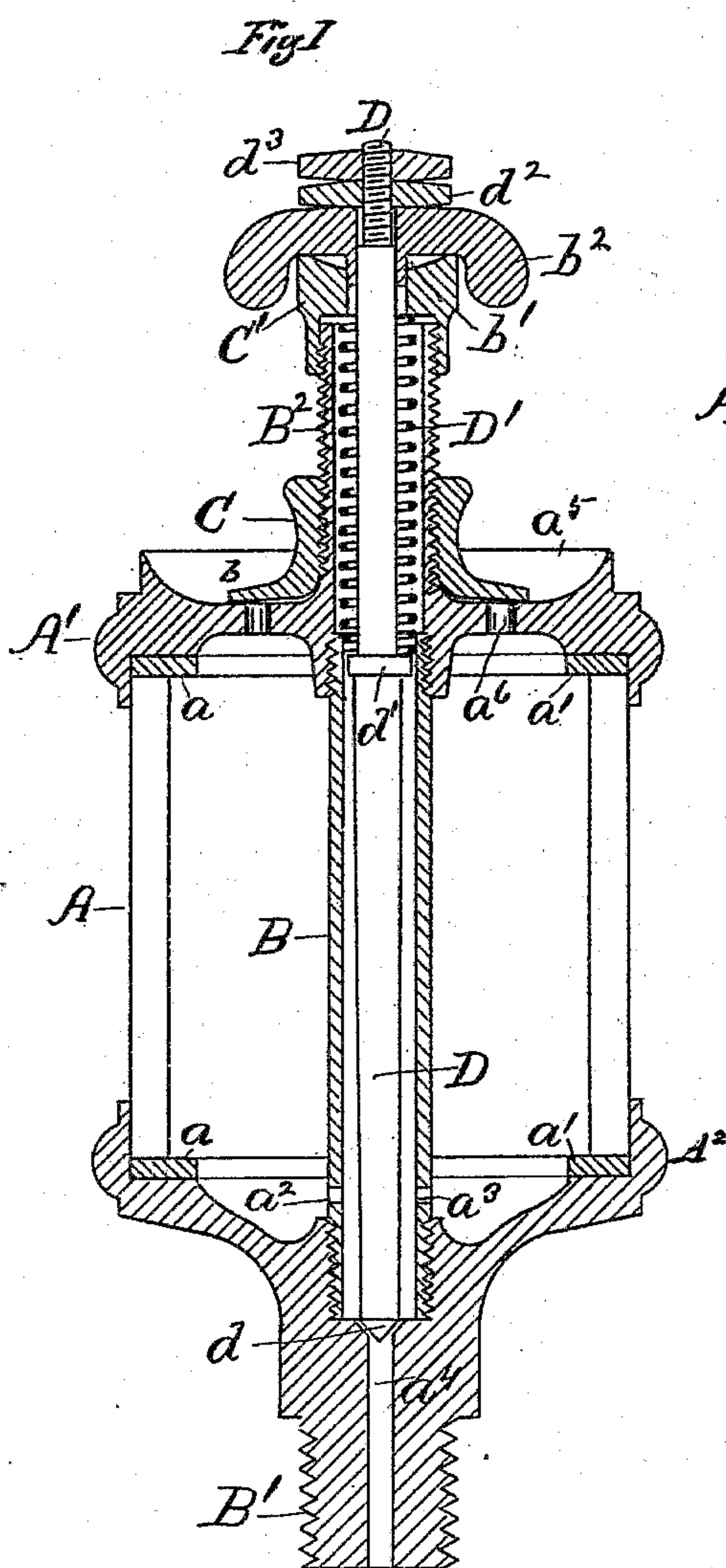
(No Model.)

R. J. THOMAS.

OIL CUP.

No. 287,979.

Patented Nov. 6, 1883.



WITNESSES

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RICHARD J. THOMAS, OF MILWAUKEE, WISCONSIN.

OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 287,979, dated November 6, 1883.

Application filed August 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, RICHARD J. THOMAS, of Milwaukee, county of Milwaukee, State of Wisconsin, have invented certain new and useful Improvements in a Lubricator, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in that class of lubricators or oil-cups that are more especially intended for use on journals and bearings; and it consists of providing a filler-cap, whereby the oil-cup may be replenished with oil without the necessity of entirely removing said cap from the apparatus; and it further consists of means for adjusting the feed device, so as to regulate and control the quantity of oil flowing to the parts to be lubricated.

Figure 1 is a vertical longitudinal section of an oil-cup embodying my improved features; Fig. 2, a top view of the cup with the filler-cap and feed-regulating mechanism removed, and Fig. 3 a view in perspective of the detached upper part of the feed mechanism.

Referring to the drawings, A represents the oil-reservoir, of a cylindrical form, and ordinarily composed of glass. This cylindrical body is clamped between the upper head or end, A', and the lower head, A'', the gaskets a a' being interposed to provide an elastic bearing and form a tight joint.

The central vertical tube, B, is provided at each end with an exterior screw-thread, that is adapted to engage with correspondingly-threaded apertures in the inner surfaces of the upper and lower heads, closing the ends of the oil-reservoir, thereby clamping and removably securing these parts with proper relation to each other.

The tube B is provided, near the lower end, with the feed-ports a^2 a^3 , through which the oil flows into the passage a^4 in the downward-projecting threaded stem B', communicating with the parts to be lubricated.

The top of the head A' is dished out to form the depression a^5 , and provided with the series of apertures a^6 , through which oil is sup-

plied to the reservoir. The neck B² forms part of the head A', and extends upward therefrom, and is provided with an exterior-threaded surface for the reception of the filler-cap C, having an interior-threaded surface and adapted to be conveniently run up and down on said neck, as required. This filler-cap is provided with the annular flange b , which projects over and tightly closes the series of apertures a^6 . When replenishing the oil-reservoir, just give the cap C several turns upward, uncovering the holes a^6 , the concave upper surface of the head A' preventing the oil from flowing over the sides. The filler-cap C cannot ordinarily be entirely removed from the neck B², by reason of the head C' having a threaded connection with the upper end of said neck. This arrangement makes it unnecessary to detach the filler-cap each time that it may be necessary to replenish the supply of oil, and positively prevents the cap from being lost or misplaced.

There have always been very serious objections to the ordinary arrangement in this class of oil-cups, where the cap simply screws onto the projecting end of a neck or nipple, as the cap must be entirely removed at each operation of filling the cup, and is very often dropped down among the machinery, or not replaced at all by a careless attendant, in which case the oil is thrown out of the cup by the motion of the machinery, and dirt is allowed to enter. It is also sometimes a difficult matter to replace the ordinary cap, for the reason that from repeated working the threads have become worn and the cap must often be turned around a number of times before the threads will catch. These caps are also very liable to work off from the jar and vibration of the machinery, and particularly so on a locomotive-engine. My improved filler-cap removes all these objections and makes it a very simple and convenient matter to fill the oil-cup. Even supposing the filler-cap to work loose in my case, it cannot, under any circumstance, work off and become lost. The cap in this case, however, is not likely to work loose. Having a good broad bearing-surface, it will remain in place when screwed down on the concave head.

The head C' is screwed down tightly on the

upper end of the neck B², and two sides of the same are cut away on a curve, as shown at b', while the two sides at right angles present a higher or raised bearing-surface for the adjusting-stop b². When this stop is in the position shown in Fig. 1, the cup is in the act of feeding, as this position raises up the spindle D and opens the oil-passage in the lower end of the cup. Now, by turning the adjusting-stop around at right angles to the position shown the same drops down into the cut-out sides of the head C', and the lower conical end, d, of the spindle D engages with a correspondingly-shaped seat in the stem B', and the cup ceases to feed.

The upper part of the spindle D, passing through the head A' and the neck B², is enveloped by the spiral spring D', the upper end of which bears against the under recessed side of the head C', the lower end resting on the collar d', formed on the spindle D, thus confining the spring, so as to impart the required tension to automatically throw and retain the spindle D in a closed position when it is not intended to feed oil, or when the machinery is at rest.

The upper end of the spindle D is threaded for the reception of the adjusting-nut d², by means of which the spindle may be set to increase or diminish the size of the opening at the lower conical end, and thus regulate the apparatus to feed a greater or less quantity of oil, as may be desired. The screw-nut d³ serves to lock the companion nut when the same is set to feed a certain quantity.

Having thus described my invention, what I claim as new, and desire to obtain by Letters Patent, is—

1. In a lubricating apparatus, the combination, with the perforated head A', concave on

the upper side and provided with the neck B², of the head A² and the central vertical tube, B, having a threaded connection with said heads, whereby the cylindrical body A, interposed, is removably clamped in relation thereto, substantially as described.

2. In a lubricating apparatus, the combination, with the concave head or end A', having a number of apertures communicating with the oil-reservoir, and provided with the threaded neck B², projecting upward from the center of said head, of the filler-cap C, provided with the annular flange b and an interior screw-thread, so as to adapt the same to engage with and traverse said neck for the purpose of covering or uncovering the filling-apertures without removing said filling-cap from its threaded connection, substantially as described.

3. In a lubricating apparatus, the combination, with a concave head or end provided with a projection or neck extending upward from the center of said head and surrounded at the base by filling-apertures, of a filler-cap adapted to have a threaded engagement with said neck, and the screw-head C', placed on the upper end of said neck, whereby said cap may be adjusted to permit of the oil-reservoir being replenished without danger of disengaging said cap from said neck, substantially as described.

4. In a lubricating apparatus, the combination, with the two inclosing ends, of the tube B, having oil-escape ports in the lower end thereof, the neck B², the spindle D, provided with the collar d', the spring D', and the head C', substantially as and for the purpose set forth.

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Witnesses:

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