No. 671,124. Patented Apr. 2, 1901.

E. D. BANGS.

LUBRICATOR.

(Application filed Jan. 9, 1899.)

(No Model.)

Fig. 2.

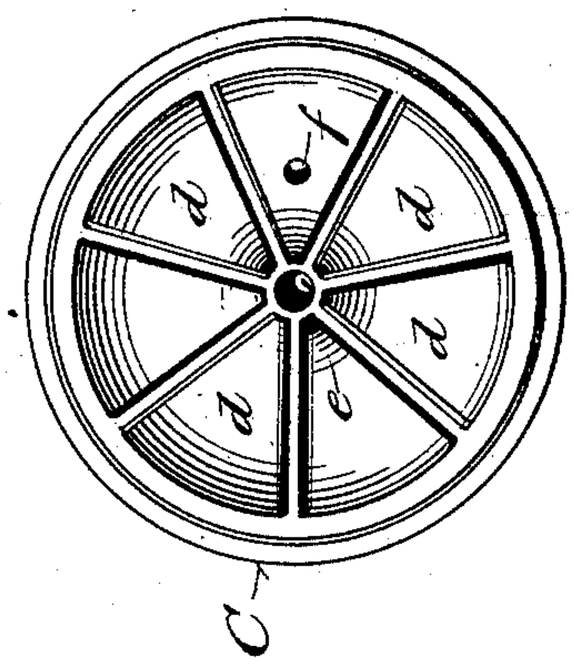
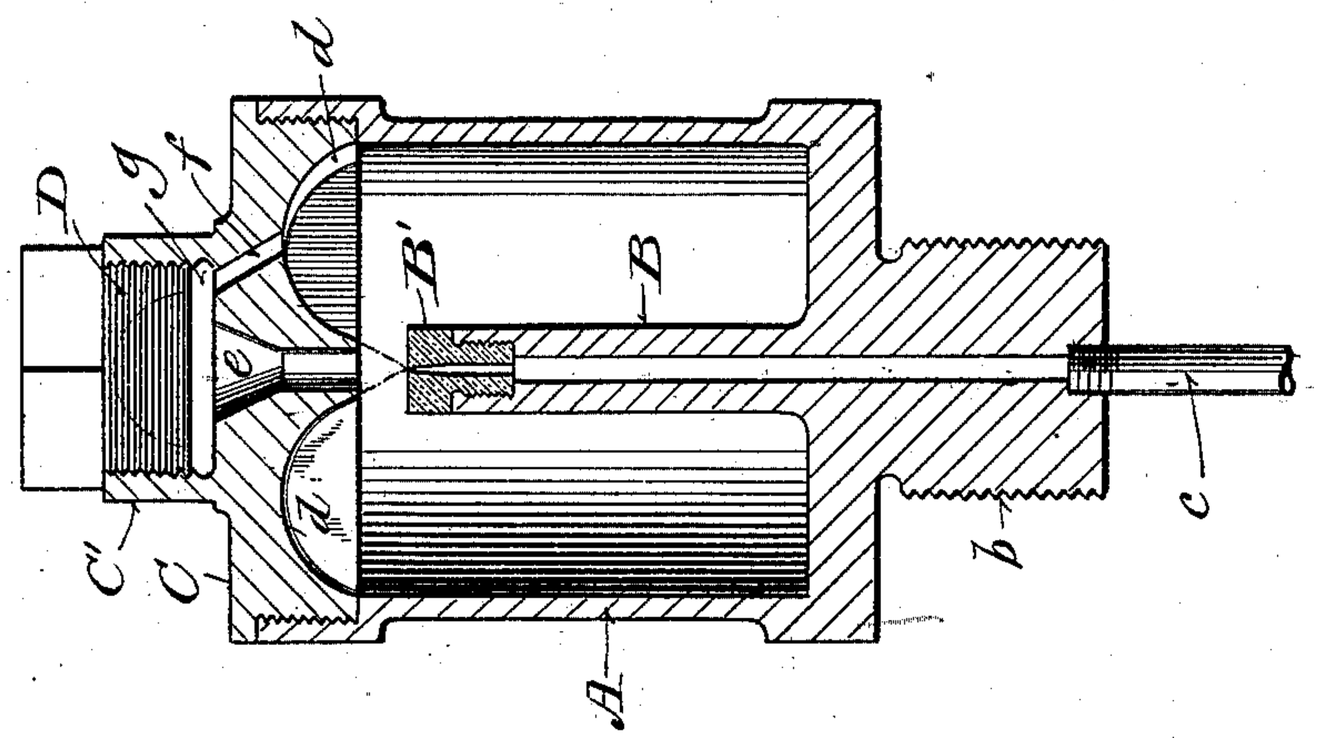


Fig. 1.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWIN D. BANGS, OF MILWAUKEE, WISCONSIN.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 671,124, dated April 2, 1901.

Application filed January 9, 1899. Serial No. 701,584. (No model.)

To all whom it may concern:

Be it known that I, EDWIN D. BANGS, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Lubricators; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to improve that class of lubricators in which an oil-cup provided with a vertical feed-column is organized to provide for automatic direction of the course of the oil to the inlet of said feed-column incidental to reciprocative movement of the cup.

Therefore said invention consists in certain peculiarities of construction and combination of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a vertical sectional view of my improved lubricator, and Fig. 2 a plan view of the head of the same inverted.

Referring by letter to the drawings, A indicates a cylindrical oil-cup having a depending nozzle *b*, that is screw-threaded to engage a correspondingly-tapped supporting-bracket or a bearing-box. When fitted to a bracket on a crank or other movable element of machinery, an oil-conveyer pipe *c* is fitted in the lower end of the nozzle to lead to a bearing.

Centrally of the cup, inside the same, is a vertical column B, having a bore that constitutes an upward continuation of the nozzle-bore, the upper or inlet end of the column-bore being reduced to a minute opening, and it is preferable, as herein shown, to make said upper end of the column a detachable section of the whole in the form of a tip B′, interchangeable with others, in which the inlet-opening is of greater or less area in proportion to the quality of oil utilized and the temperature to which the cup and its contents are exposed, the quantity of feed being proportionate to the area of said inlet-opening. The tip is shown in screw-thread connection with the remainder of the feed-column, and this is the preferred construction, the union being such that said column is exteriorly uninterrupted from end to end.

In screw-thread union with the upper end of the cup is a head C, having its under side provided with a series of radial concaved recesses *d*, all of which have angular convergence in a direction toward the inlet of the column and serve as guides for directing the course of the oil to said inlet. As a matter of preference there is an odd number of the radial recesses, and thereby one of the same is always in position to catch and guide the oil irrespective of the adjustment of the cup-head.

Centrally of the cup-head C are a funnel-shaped aperture *e* and an interiorly-screw-threaded neck C′, of greater diameter than said aperture, above the latter. Oil is introduced into the cup through the aperture *e* in head C, and the air displaced by said oil escapes through a vent-hole *f* in said head, the upper terminus of the vent-hole being within the neck aforesaid.

A screw-threaded preferably concaved plug D is employed to close the neck C′ of head C, and the length of the plug is such that air-space *g* is had between its lower end and said head, the concavity of said plug being shown by dotted line in Fig. 1.

By removing head C ready access may be had to the interior of the cup whenever necessary or desirable; but under all ordinary circumstances said head remains in place.

In practice downward movement of the cup causes the oil therein to be thrown upward suddenly against the radially-recessed under side of the head C, compressing the air above said oil in the filling-aperture and space under the plug D, the pressure of this compressed air operating to force some of the aforesaid oil down the vertical column B in said cup.

Owing to the peculiar construction of the under side of the cup-head C, no adjustment to insure proper guiding of the oil to the inlet of the feed-column is necessary. Therefore the lubricator as it leaves the factory may be attached to either a vertically or rotary reciprocative machine element.

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

A lubricator comprising a cup having a depending attaching-nozzle, an inner central feed-column, the bore of which continues

through the nozzle, the upper or inlet end of said bore being reduced to a minute opening, and a cup-closing screw-head provided with a series of horizontal radial concave under side recesses all of which have angular convergence toward the minute inlet of said feed-column, a filling-aperture, a vent-hole and a plug-closed neck encompassing said filling-aperture and vent-hole.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

EDWIN D. BANGS.

Witnesses:
N. E. OLIPHANT,
B. C. ROLOFF.