G. W. BIRD & H. AKINS.

FORCE FEED LUBRICATOR.

APPLICATION FILED APR. 11, 1907.

899,378.

Patented Sept. 22, 1908.

Fig. 1.

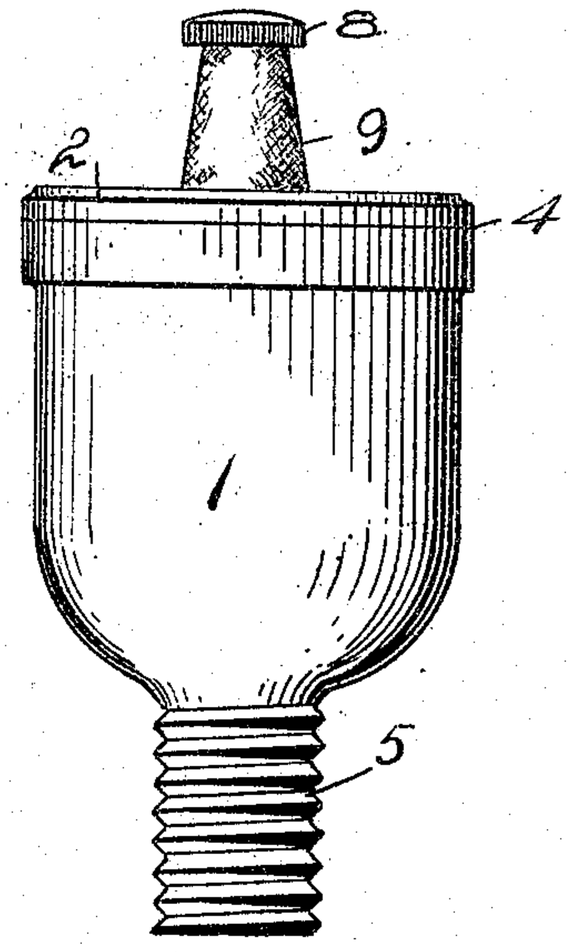
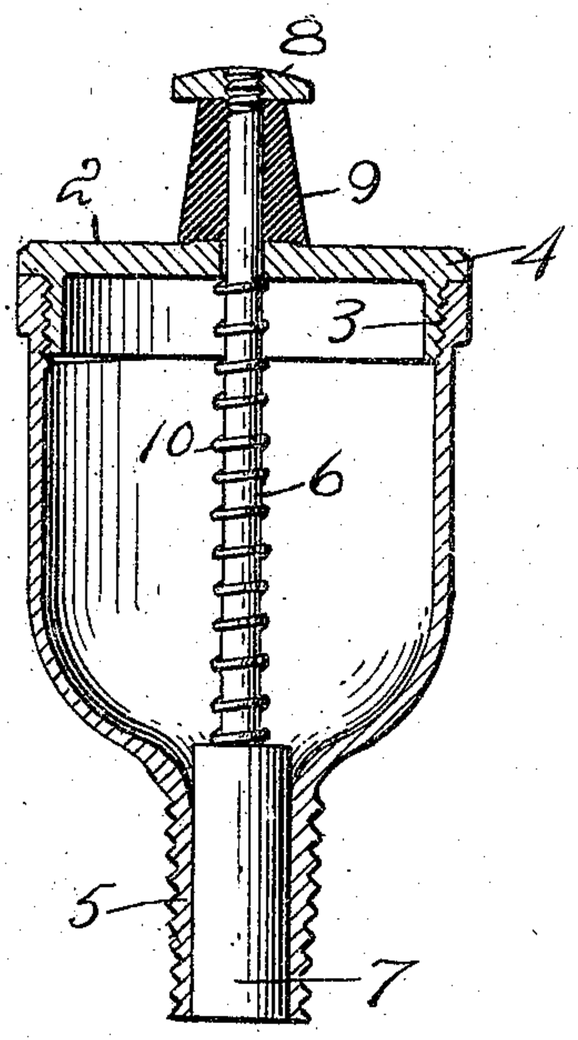


Fig. 2



WITNESSES:

J. C. Simpson

M. T. Miller

INVENTORS

George W. Bird

Hoyt Akins

BY Chandlee & Chandlee

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE W. BIRD AND HOYT AKINS, OF STATESBORO, GEORGIA.

FORCE-FEED LUBRICATOR.

No. 899,378. Specification of Letters Patent. Patented Sept. 22, 1908.

Application filed April 11, 1907. Serial No. 367,521.

To all whom it may concern:

Be it known that we, GEORGE W. BIRD and HOYT AKINS, citizens of the United States, residing at Statesboro, in the county of Bulloch, State of Georgia, have invented certain new and useful Improvements in Force-Feed Lubricators; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to that kind of lubricators or oilers that comprise a cup that is adapted to be attached to the cap or covering of the journal-bearing through the medium of a stem screwed therein, through which stem the lubricant is fed by force to the journal or spindle and its bearing as required.

It is the object of the invention to provide improvements in the class of devices mentioned that will simplify their construction, reduce the cost of their manufacture, and enhance their efficiency in certain connections and render them ready of use and certain in their operation.

The nature of the invention is fully and clearly ascertained from the device portrayed in the annexed drawing, forming a part of this specification, in view of which it will first be described with respect to its construction and mode of operation, and then be pointed out in the subjoined claims.

Of the said drawings—Figure 1 is a side elevation. Fig. 2 is a central vertical section.

Similar numerals of reference designate similar parts or features, as the case may be, wherever they occur.

In the drawings 1 designates the cup which may be of the form shown or any other suited to its purpose.

2 designates the top or cover of the cup which is provided with a pendent annular screw-threaded flange 3 that is adapted to be screwed in the top of the cup until the projecting rim 4 of the cover rests upon the upper edge of the former.

5 designates the hollow stem extending down from the center of the base of the cup, and which is externally screw-threaded, to adapt it to be turned into corresponding screw-threaded holes formed in the caps or boxes of spindle and journal bearings, so as to form communication between the interior of the cup and the spindle.

6 designates an operating stem which runs through a hole in the center of the cover, and through the cup into the hollow stem 5 where it is secured to a rubber stopper, 7, that, when down, extends through the hollow stem as a plunger and closes the opening through the stem. A thumb-nut, 8, is screwed upon the upper end of the stem, and a rubber sleeve, 9, surrounding the rod and interposed between the thumb-nut 8 and the top 2, packs the opening in the cover around the cylindrical plunger and prevents leakage of the lubricant from the cup and dust or dirt from entering the cup when the latter is closed.

10 designates a helical compression spring, surrounding the rod 6 inside of the cup, interposed between the lower side of the cover 2 and the top of the plunger 7, and operating with a tendency to press the plunger down and consequently push down on the rod 6, drawing the thumb nut 8 down on the washer 9.

In use, with the improvement in fixed position, the cup may be supplied with a thick lubricant or heavy oil, and when it is desired to lubricate a bearing the rod 6 carrying the plunger 7 will be raised by taking hold of the nut 8 and pulling it up against the stress of the spring 10. Upon the raising of the washer 9 with the rod 6 and stopper or plunger 7, sufficient vent will be given to the cup by the space around the rod where it extends through the cover 2 of the cup to allow the lubricant to speedily run down and fill the hollow stem 5 below the plunger 7. If this vent were not provided, the lubricant being thick and naturally sluggish would be slow to gravitate to the bottom of the cup so that it could be forced on the bearing to lubricate it by the plunger. When the operator lets go of the said nut, the lubricant that has run into the hollow of the stem will be forced out on the journal or bearing by the plunger or plug 7 acting as a piston or plunger influenced by the action of said spring 10. Air will rush into the cup around the rod 6 where it passes through the cover until the stopper 7 is lowered, when the rubber washer 9 will close the said opening around the rod.

When it is desired to fill the cup the thumb nut 8 will be turned off, the sleeve 9 removed

and the cap 2 unscrewed and taken off without disturbing the plunger 7, or letting any oil out of the cup. After filling the latter the parts mentioned as removed will be replaced.

By our improvements it will be seen that a very simple, efficient and handily operated force feed lubricating cup is provided.

What is claimed is—

The combination with an oil cup, of a perforated cap secured thereto, said cup having a hollow exteriorly threaded stem, an operating stem extending through said cap perforation and provided below with a cylindrical plunger held within said hollow stem and extending to the bottom thereof, a nut secured to the upper end of said operating stem, a rubber sleeve surrounding said operating stem above said cap and forming a stop to said stem, and a coil spring surrounding said stem within said cap, all arranged substantially as and for the purpose set forth.

In testimony whereof, we affix our signatures, in presence of two witnesses.

GEORGE W. BIRD.
HOYT AKINS.

Witnesses:
J. J. E. ANDERSON.
H. P. COBB.