

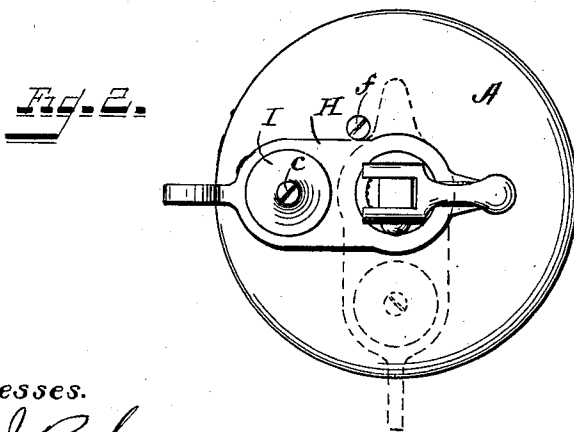
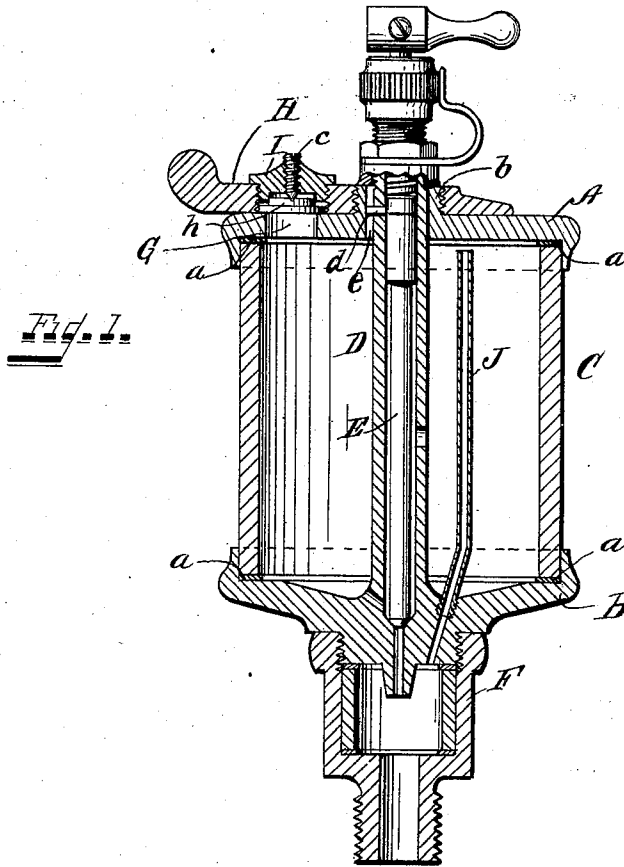
No. 691,570.

Patented Jan. 21, 1902.

H. RITTER.
LUBRICATOR.

(Application filed Mar. 30, 1901.)

(No Model.)



Witnesses.

Wm. J. Beck.

Gus. G. Hampton

Inventor.

Henry Ritter
by *Chas. M. Beck*
his Attorney.

UNITED STATES PATENT OFFICE.

HENRY RITTER, OF CINCINNATI, OHIO, ASSIGNOR TO THE LUNKENHEIMER COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 691,570, dated January 21, 1902.

Application filed March 30, 1901. Serial No. 53,702. (No model.)

To all whom it may concern:

Be it known that I, HENRY RITTER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Lubricators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of lubricators which are generally known as "oil-cups" and which usually consist of a cylindrical reservoir, generally of glass, held between top and bottom metal plates, the latter of which is provided with an attaching-stem containing the oil-exit passage and by which the cup is screwed upon the bearing to be lubricated. A central stem-valve extending up through the top of the cup serves to regulate the feed, which is effected by gravity. It is desirable and has been customary in this class of cups to provide a filling-opening in the top cap, through which the cup is refilled from time to time, as required, and to provide a swinging scutcheon pivoted concentric with the valve-stem for covering and uncovering this filling-opening in an expeditious manner to save the time that would be necessary if a screw-plug had to be removed and reinserted every time the cup was refilled. An example of such a cup is shown in my prior patent, No. 639,293, of December 19, 1899. Heretofore with such cups an air-vent was found desirable in or around the scutcheon over the filling-hole to prevent a vacuum within the cup and permit the oil to feed out by gravity. With the advent of explosive-engines and the application of this class of cups thereto it was found that the back pressure in the cup would throw the oil out through the vent and means had to be provided to make the cup absolutely air-tight exteriorly; and the object of my present invention is to provide a cup of this character having a swinging scutcheon for rapidly opening and closing the filling-opening with a valve carried by the scutcheon, which by the act of swinging the scutcheon over the filling-hole shall automatically close and press down said valve air-tight upon the filling-hole.

The novelty of my invention will be hereinafter more fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a central sectional elevation of a lubricator embodying my invention. Fig. 2 is a plan view of the same.

The same letters of reference indicate identical parts in both the figures.

As my invention has nothing to do with the particular construction of the oil-cup proper and its feeding devices, it is only necessary in describing the same, referring to Fig. 1, to say that A is the top metal cap; B, the lower metal cap; C, the glass cylinder clamped between the two, with cork or other gaskets *a* at its ends, by the central tube D, extending up from the base B through an aperture in the cap A and serving as a sheath for the valve-stem E. The lower end of the cap B has a pendent screw-threaded extension, by which it is screwed to the part to be lubricated. In this instance it has an additional pendent sight-feed tube F, common in this class of cups, the lower end of which serves as the means of connection of the part to be lubricated.

The top cap A has the usual filling-hole G, which is covered and uncovered by a swinging scutcheon-plate or scutcheon H, in this instance arranged upon a threaded boss *b*, projecting from the top of the cap A, so that when swung open to uncover the filling-hole, as represented by the dotted lines in Fig. 2, it ceases to bind upon the top of the cap; but when swung back to cover the filling-hole it is gradually forced down toward the cap to effect a tight joint. If the scutcheon alone were depended upon to tightly close the filling-hole, too much friction would be created between the scutcheon and the top of the cap to enable it to be readily operated, and under this friction the contacting parts would wear and soon a leakage-vent would be created; but by placing the scutcheon on a screw-pivot which forms a cam therefor this tight locking and loose unlocking is readily and efficiently accomplished. To remedy the aforesaid difficulty and at the same time provide a filling-hole which will be air-tight when closed, I provide on the under side of the scutcheon a

valve *h*, Fig. 1, of slightly-greater area than the area of the filling-hole, which valve forms the only frictional bearing between the top of the cap and the under side of the scutcheon 5 and which when the latter is closed over the filling-hole is forced down by the cam action of the screw to form an air-tight joint therewith to hermetically seal the reservoir exteriorly.

10 As a further improvement in this valve construction I prefer to make the valve *h* adjustable by seating it within a bore upon the under side of the scutcheon and having a set-screw *c* bearing upon its upper side, so that 15 the valve can be adjusted with nicety and any frictional wear can be compensated for or taken up.

As a still further improvement I prefer that the bore in which the valve is seated should 20 be entirely through the scutcheon and should be threaded to receive a cap-nut *I*, through which the set-screw *c* has its bearing, as seen in Fig. 1, for by this construction should the valve *h* become worn it is very easy to remove 25 the cap-nut *I* and replace the worn valve *h* with a new one, thereby rendering the valve *h* renewable at will.

In Fig. 1, *J* is what is known as the "equalizing-tube," having communication at its 30 lower end with the aperture in the bearing to be lubricated and at its upper end with the top of the oil-cup to prevent a vacuum therein and to insure the regular feeding of the oil.

35 It is also desirable that the top cap *A* should be positively held from turning under the swinging action of the scutcheon, and any suitable means may be employed for that purpose. In this instance I have shown the cap *A*, 40 through which the upper end of the tube or sheath *D* extends, key-seated, as at *e*, Fig. 1, with a pin *d* projecting from the tube *D*, confined in said key-seat, thereby locking the cap *A* to the tube against turning, though not pre- 45 venting its coupling and uncoupling in putting the parts together or taking them apart. Any suitable stop, as a screw or pin *f*, Fig. 2, secured in the top of the cap *A* and project-

ing therefrom, is employed to limit the swinging motion of the scutcheon when the valve 50 closes the filling-hole.

Having thus fully described my invention, I claim—

1. In a lubricator and in combination; a cup; a top cap therefor having a filling-hole; 55 a scutcheon-plate; a cam-pivot on which said plate is mounted and on which it swings freely with a rising-and-falling movement; and a valve carried by said scutcheon-plate and adapted to be brought over and forced 60 down upon the filling-hole by the movements of the scutcheon-plate to close and seal said filling-hole.

2. In a lubricator and in combination; a cup; a top cap therefor having a filling-hole; 65 a scutcheon-plate; a cam-pivot on which said plate is mounted and on which it swings freely with a rising-and-falling movement; a valve carried by said scutcheon-plate and adapted to be brought over and forced down 70 upon the filling-hole by the movements of the scutcheon-plate to close and seal said filling-hole, and means for adjusting said valve vertically relative to said scutcheon-plate.

3. In a lubricator of the character described, 75 the combination of the top cap provided with a filling-hole, a swinging scutcheon with a cam-pivot thereon, and an adjustable and removable valve carried by said scutcheon to tightly seal said filling-hole, and a removable 80 screw-cap for holding said valve in place.

4. In a lubricator of the character described the combination of the cap *A* provided with filling-hole *G*, the swinging scutcheon *H* thereon, the valve *h* carried in a threaded bore 85 through said scutcheon and adapted to cover and uncover said filling-hole, the screw-cap *I* secured in the threaded bore of the scutcheon, and the set-screw *c* passed through said screw-cap and bearing upon the top of the 90 valve, substantially as described.

HENRY RITTER.

Witnesses:

OWEN N. KINNEY,
EDWARD PECK.