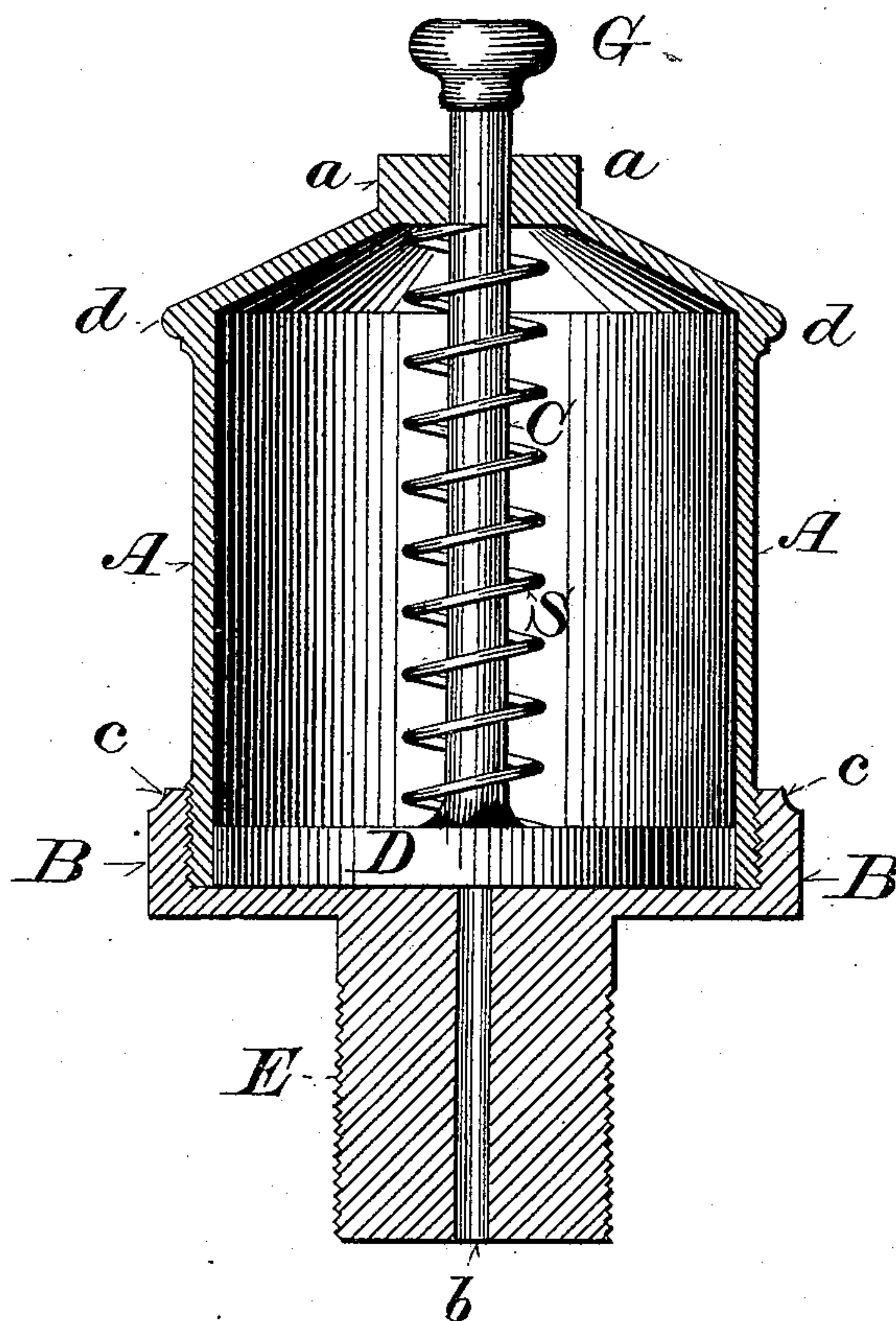


(No Model.)

E. A. WADHAMS.  
LUBRICATING CUP.

No. 316,202.

Patented Apr. 21, 1885.



Witnesses:

Chas. L. Goss.  
George Goll.

Inventor:

Edward A. Wadhams,

By O. H. Botton  
Attorney.

# UNITED STATES PATENT OFFICE.

EDWARD A. WADHAMS, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO E. ELDRED MAGIE, OF SAME PLACE.

## LUBRICATING-CUP.

SPECIFICATION forming part of Letters Patent No. 316,202, dated April 21, 1885.

Application filed January 22, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD A. WADHAMS, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Lubricating-Cups; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which forms a part of this specification.

The object of my invention is in that class of cups employing a close-fitting piston for feeding the lubricant to relieve the piston of atmospheric pressure upon its upper face when the cup has been emptied, and thereby to facilitate the refilling of the cup.

The accompanying drawing represents a vertical medial section of my improved cup.

A A is the cup proper inverted, or, more properly, closed at the top and open at the bottom, about the edge of which it is externally threaded to engage with the internally-threaded upturned rim or flange *c c* upon the removable base or bottom B. The base B is provided in the usual manner with a threaded neck, E, for attaching the cup to the bearing to be lubricated. It has a passage, *b*, through which the lubricant is fed to the bearing.

D is a close-fitting plunger or piston provided with the stem C, which passes through and has a bearing in the top of cup A.

A spiral spring, S, surrounds the stem C, and bears at the top against the top of the cup, and at the bottom against the upper face of the piston D.

The top of the cup may be squared at *a a* and milled at *d d* to assist in unscrewing the cup A from its bottom B.

To assist in compressing the spring S and withdrawing the piston D into the cup A for the purpose of filling, the protruding end of the stem C may be provided with a knob or handle, G.

As heretofore constructed, this class of cups which employ a piston for feeding the lubri-

cant to the bearing have been made integral with the bottom, with a lid or cover detachable therefrom in the region marked *d d* in the drawing. With these cups the following serious difficulty is encountered: When the lubricant has been expelled and the piston forced to the bottom of the cup, as shown in the drawing, it is impossible or extremely difficult to lift or withdraw the piston for the purpose of refilling the cup, owing to the atmospheric pressure upon the upper face of said piston and the exclusion of air from the under side thereof.

In case the piston could be removed without introducing air under the piston, so much force is required that the piston-stem is extremely liable to be bent or broken. In practice, however, the cup is unscrewed or removed from the bearing to which it is attached every time it needs refilling. In this way a vent is given through the passage *b* to the under side of the piston; but the operation is inconvenient, and all of the lubricant in said passage is removed, necessitating its replacement before the lubricant can act upon the bearing.

My improved cup can be easily and quickly refilled by unscrewing the cup at *c c* from its bottom B without molesting the lubricant left in and filling the passage *b*, and without the slightest danger of bending, breaking, or injuring the piston or its stem C.

A few turns of the screw-threaded cup A admits air about the base of the piston, thereby relieving the same of the unequal atmospheric pressure upon its two faces, and permitting of its easy withdrawal into the cup for purposes of refilling.

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

1. The combination, in a lubricator, of the base B, the inverted cup A, detachable at the bottom from said base B, and piston D, substantially as and for the purposes set forth.

2. The combination, in a lubricator, of the inverted cup A, detachable base B, piston D, provided with stems C, and actuating-spring



S, substantially as and for the purposes set forth.

3. The combination, in a lubricator, of the inverted cup A, externally threaded at the bottom, the base B, provided with the internally-threaded upturned flange *c c* and neck E, the feeding-passage *b*, and the automatic feeding-piston D, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWARD A. WADHAMS.

Witnesses:

CHAS. L. GOSS,  
GEORGE GOLL.