No. 774,050.

PATENTED NOV. 1, 1904.

M. F. DOLPHIN.

LUBRICATOR.

APPLICATION FILED MAY 13, 1904.

NO MODEL.

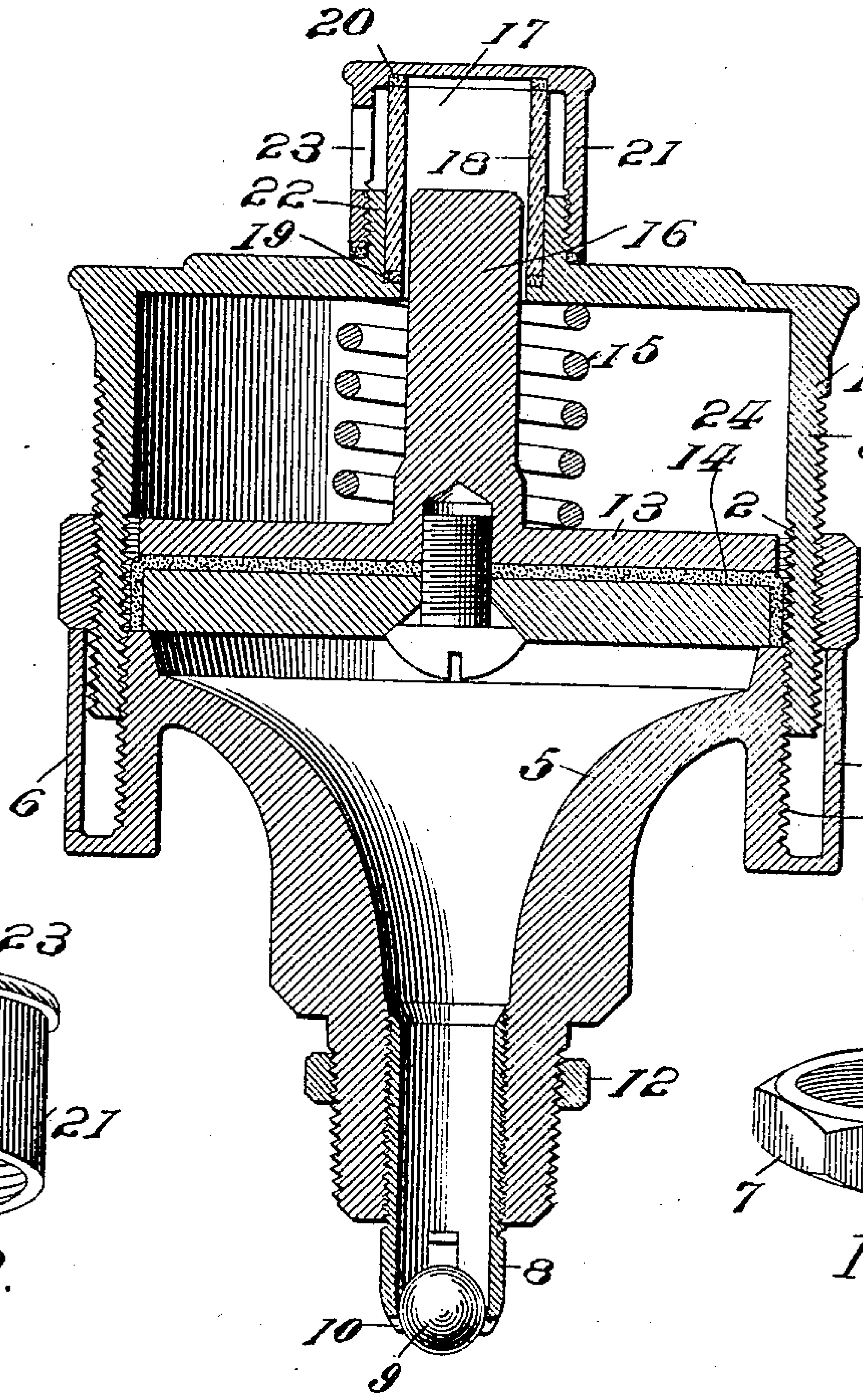

Fig.1.

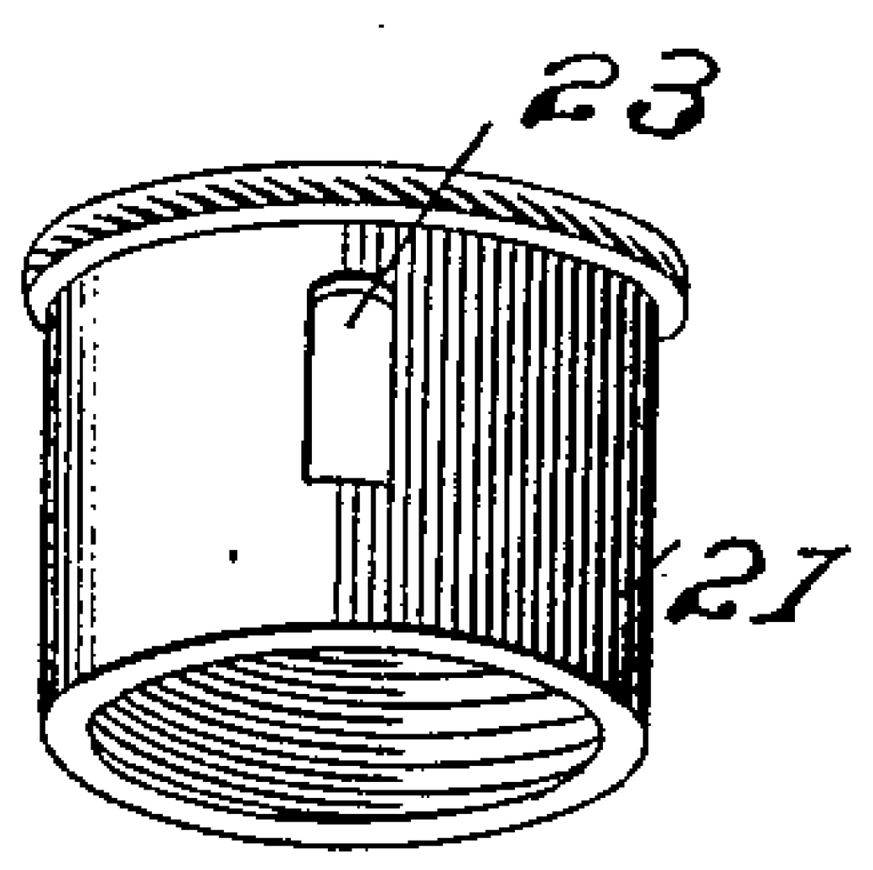

Fig.2.

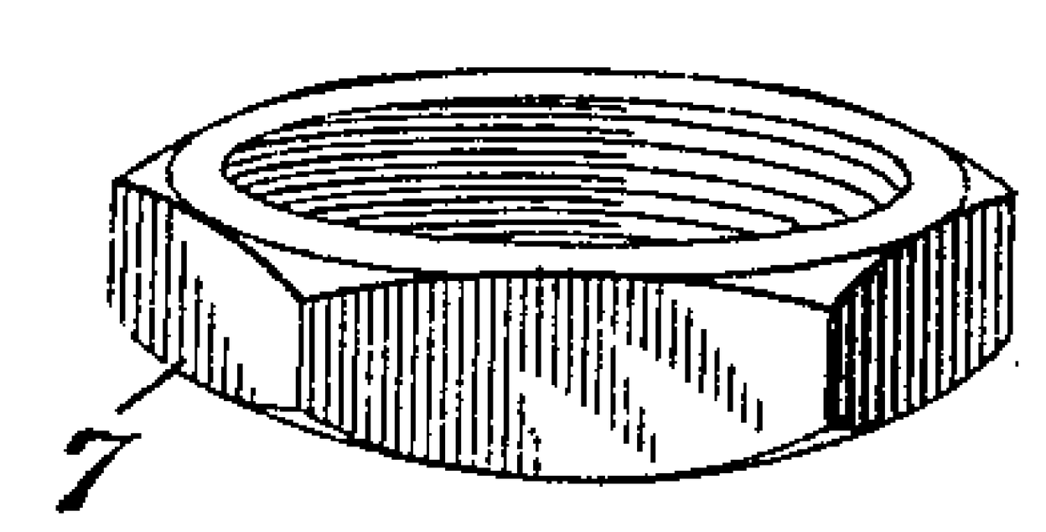

Fig. 3.

WITNESSES:

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No. 774,050. Patented November 1, 1904.

UNITED STATES PATENT OFFICE.

MICHAEL F. DOLPHIN, OF SCRANTON, PENNSYLVANIA.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 774,050, dated November 1, 1904.

Application filed May 13, 1904. Serial No. 207,839. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL F. DOLPHIN, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Lubricators; and I 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.

The objects of this invention are, first, to so construct a lubricator as to prevent the lubricant from escaping beyond the piston which bears thereon to force it outwardly; secondly, to enable the pressure on the lubricant to be readily increased or lessened according to the feed it is desired to maintain, and, thirdly, to provide means for indicating the amount of the lubricant within a cup whose walls are not transparent.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional view of a lubricator embodying my improvements. Fig. 2 is a view in perspective of the sight-feed-tube cap. Fig. 3 is a view of the cup-binding nut, shown on a smaller scale than in Fig. 1.

Referring to the drawings, 1 designates a cylindrical cup formed with an interior thread 2 and an exterior thread 3, the former working in a thread 4 of the bottom 5. This bottom is formed with an outer concentric wall 6, which is designed to overlap the lower end of the cup, with a space between itself and the threaded portion of the bottom to accommodate the cup, which latter may be readily adjusted by being turned axially. It is held as against slipping by a binding-nut 7, working in the outer thread 3 and designed to bear against the edge of the cylindrical wall 6. The bottom 5 is preferably convexedly curved (like a funnel) on its inner surface, and into its lower reduced end may be screwed a sleeve 8, having a ball 9 for insuring the outflow of the lubricant through openings 10, such ball being designed to engage with a rotary shaft or the like; but this attachment may be dispensed with, if desired, and the bottom equipped with a narrow tapered outlet-opening. The said reduced end of the bottom is preferably exteriorly threaded to accommodate a binding-nut 12 for preventing slipping or loosening of the lubricator when in use.

13 is a piston within the cup, which piston carries a washer 14, of leather or other suitable material, to aid in preventing the lubricant from working above the piston. The latter is normally under the tension of a coil-spring 15, which encircles a stem 16, extended upwardly from the center of the piston. This stem at its upper end projects into an air-tight chamber 17, formed on the top of the cup. This chamber is formed by a glass tube 18, resting at its lower end on a packing-ring 19, surrounding the opening into the chamber, and at its outer end it is engaged by a packing-ring 20. The tube is held air-tight by an inclosing cap 21, threaded at its lower end to engage an exteriorly-threaded flange 22, extending outwardly from the top of the cup. This cap is equipped with one or more sight-openings 23, whereby the conditions within the cup—that is to say, the quantity of lubricant beneath the piston—will be indicated by the position of the stem 16. Thus not only is provision made for readily ascertaining the position of the piston, but the chamber 24 above the latter is made air-tight, and all danger of loss of the lubricant is thus avoided.

In practice to fill the cup with lubricant the nut 7 is loosened and the cup 1 is removed. The lubricant is placed on the bottom 5, whereupon the cup is repositioned and secured by tightening the nut 7. The cup is turned axially, according to the pressure it is desired the piston should exert against the lubricant, and thus time the outflow thereof. Once the cup is adjusted it cannot work loose, being held by its binding-nut bearing against that portion of the bottom overlapping the exterior thread of the cup. As the quantity of the lubricant lessens the piston will gradually move toward the bottom under the tension of its spring, and its position is readily ascer-

tainable at a glance through the sight-openings of the cap by which the sight-tube is held air-tight.

The advantages of my invention are apparent to those skilled in the art.

I claim as my invention—

1. A lubricator comprising a cup having interior and exterior threads, a bottom having an exterior thread with which the interior thread of the cup is designed to engage, and also having an outer portion overlapping the exterior thread of the cup, a binding-nut on such thread engaging said overlapping portion, and a spring-pressed piston within the cup.

2. A lubricator comprising a cup having interior and exterior threads, a bottom having an exterior thread with which the interior thread of the cup is designed to engage, and also having an outer concentric wall overlapping the exterior thread of the cup, a binding-nut on such thread for engaging said wall, and a spring-pressed piston within the cup.

3. A lubricator comprising a cup having an air-tight chamber therein, a piston movable in said chamber, a sight-tube in the top of the cup, and an indicator carried by the piston extending from said chamber into said sight-tube.

4. A lubricator comprising a cup having an air-tight chamber therein, a piston movable in said chamber, a sight-tube in the top of the cup, and a stem extended from said piston through said chamber into said sight-tube.

5. A lubricator comprising a cup having an air-tight chamber therein, a piston movable in said chamber, a sight-tube in the top of the cup, a cap for holding said tube having a sight-opening, and an indicator carried by the piston extending into said sight-tube.

6. The combination with the cup having an air-tight chamber, a piston therein having an upwardly-extended stem, a sight-tube in the top of the cup having packing at its upper and lower ends, and a cap for binding said tube and packing together, said cap having a sight-opening therein.

7. The herein-described lubricator comprising a cup having interior and exterior threads, a bottom having an exterior thread with which the interior thread of the cup engages, said bottom also having an outer concentric wall, a binding-nut on the exterior of the cup for engaging said wall, a spring-pressed piston within said cup having an upwardly-extended stem, an air-tight chamber on the top of the cup into which said stem projects, and an inclosing cap having a sight-opening, as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MICHAEL F. DOLPHIN.

Witnesses:

JAMES F. BELL,

F. V. HUMBERT.