

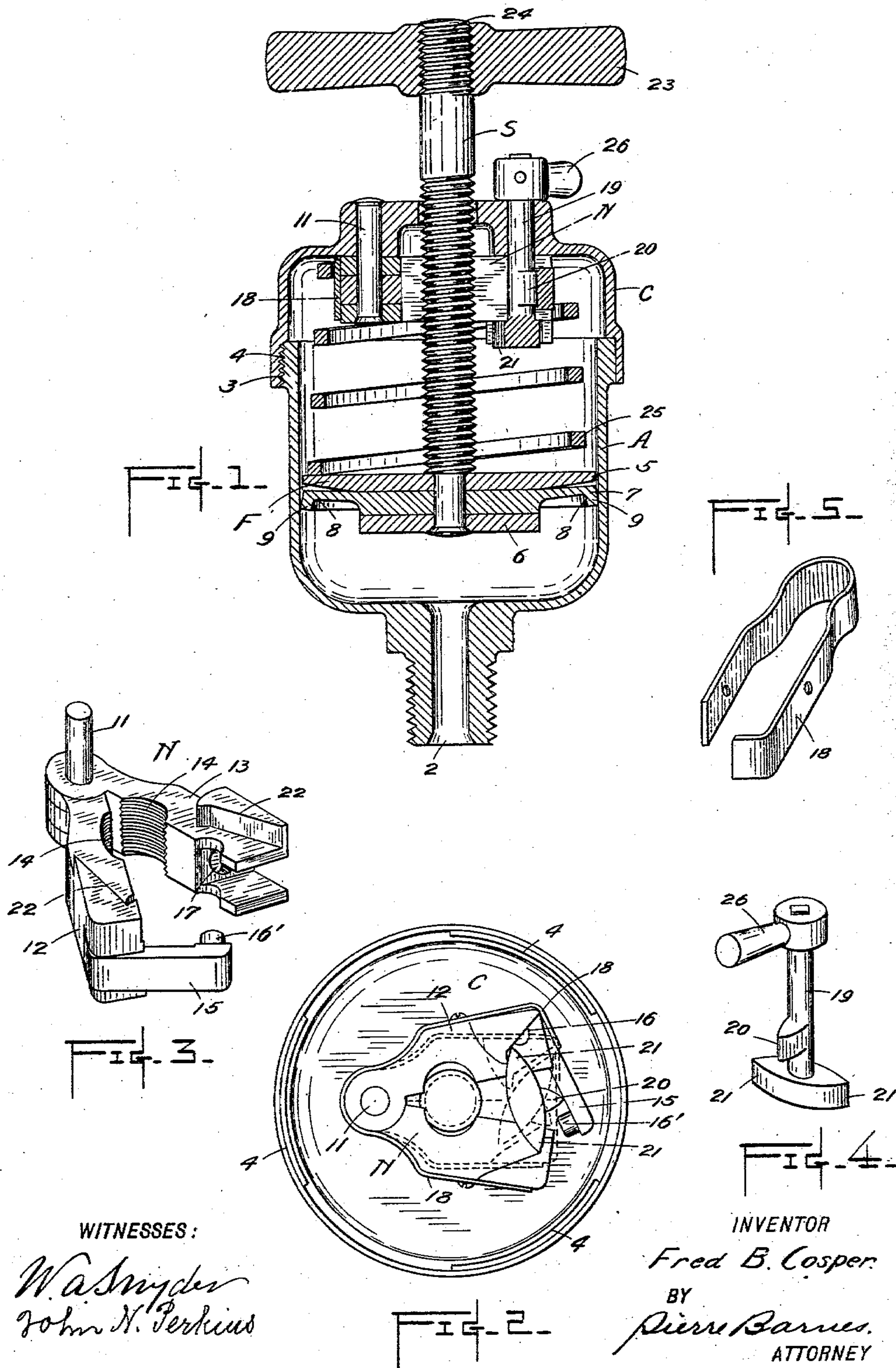
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PATENTED FEB. 17, 1903.

F. B. COSPER.  
GREASE CUP.

APPLICATION FILED APR. 17, 1902.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRED B. COSPER, OF SEATTLE, WASHINGTON.

## GREASE-CUP.

SPECIFICATION forming part of Letters Patent No. 721,023, dated February 17, 1903.

Application filed April 17, 1902. Serial No. 103,367. (No model.)

*To all whom it may concern:*

Be it known that I, FRED B. COSPER, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Grease-Cups, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in grease-cups used in lubricating machinery. These improvements relate to the entire cup and all its parts and include principally the construction of the cup proper or grease-receptacle, the cover and means for removing and securing it to the cup, the follower and means for operating it, such means including both automatic and screw feeds, and other details, all of which I shall hereinafter fully describe.

The object of my invention is to provide an effective automatic and positive-feed grease-cup, and each of the several improvements which I have made has in view this general result.

In the accompanying drawings, Figure 1 is a central vertical section of a grease-cup embodying my improvements. Fig. 2 is an under side view of the cover of the cup with the divided nut N shown open and also by broken lines in its closed position, the follower being removed in order to show the construction. Figs. 3, 4, and 5 are perspective detail views of the divided nut and its controlling means.

The cup comprises a cylindrical grease-receptacle A, provided with an outlet 2 at the bottom and a screw-threaded portion 3 upon the outside adjacent to its upper edge. This threaded portion is mutilated, being adapted to register with a correspondingly-formed threaded portion 4 (see Fig. 2) on the inner surface of the rim or cover, whereby the latter may be quickly put on or removed from the cup-body A. Extending loosely through the cover is screw-threaded stem S, having a follower F fixed to its lower extremity, so that it will turn therewith. The follower consists of a disk 5 of less diameter than the internal bore of the cup and beveled on its under face, a washer 6, and a pliable packing-piece 7, preferably of leather, therebetween. The said packing-piece is formed with a concentric groove or channel 8 and an

outer downwardly-projecting flange 9 perpendicular to the body thereof, so that when the latter is forced by the grease charge under pressure against the beveled face of the aforesaid disk 5 the flange 9 will flare outwardly and press upon the circular wall in proportion to the said pressure.

A divided nut N is connected by a pivot-pin 11 to the under side of the cover C and consists in a pair of jaws 12 13, movable upon the said pin. Intermediate the length of the nut is an aperture 14, provided with a screw-thread adapted to register with the thread of the stem. The jaw ends opposite to their pivotal connection aforesaid are provided with a latch 15 for locking them in their closed position, which latch is hinged by a pivot 16 to the jaw 12 and engages by a pin 16', provided integral of the latch, with a socket 17 in the other jaw 13. A spring 18 (see Fig. 5) embraces the jaw parts and the latch to retain them in their normal or closed position. Extending downwardly through the cover is a spindle 19, (see Fig. 4,) having at its upper end handle 26 and having near its lower end wiping-toes 20 and 21, respectively, adapted to disengage the latch from its socket and coincidentally spread the jaw ends apart by bearing against angular-faced lugs 22 thereon to release said stem from its nut when the spindle is turned on its axis in opposition to the action of the spring 18. A handle 23 is secured to the upper end of the follower-stem by screwing the same upon a thread 24 of the same hand as that beneath.

25 is a helical compression-spring removably interposed between the cup-cover and the follower, and where it is intended to use the cup solely with a positive—i. e., screw feed—it may be left out of the cup. 26 is a lever-handle for actuating the spindle 19.

The operation of the device is as follows: When the cup is to be refilled, the nut N is released from the follower-stem by a side pressure of the thumb upon the handle 26. Then the follower is drawn up to where it is to be retained in its uppermost position, and by pressing the last-named handle in the opposite direction the nut-jaws are released, and thereby permitted to close about the stem. A partial turn of the cover brings the threads thereof opposite to the slots of the



cup, when it may be lifted off for the charge of grease. The cover is then replaced upon the cup and quickly secured by a slight turn, thus not only avoiding the loss of time required by the old method of screwing the cover on or off, but guarding against all danger of stripping the thread, as the cover must be down to its proper level before the threads engage so that it may be turned.

10 The cup is changed from a positive to an automatic feed by separating the stem from its handle, opening the nut and removing the stem therefrom to introduce the spiral spring 25 between the cover and the follower, close the nut and compress the spring by screwing the follower thereagainst. The cover is then replaced upon the cup and the nut released, so that the spring will assert itself and make the feed automatic. The

20 automatic feed may be stopped or changed at any time to a positive one by simply closing the nut upon the follower-stem. When using the cup automatically, if it is desired to feed the grease in larger quantities than

25 the spring is able to force out—for instance, when starting machinery and also when the discharge-opening becomes clogged by a hard lump of grease, so that the force of the spring is incapable of dislodging it—then by closing

30 the nut and screwing down the follower the desired result is attained and the frequent trouble of a hot journal possibly avoided. The cup is again made automatic by releasing the stem from the nut. This changing

35 of a grease-cup from an automatic to a positive feed, or vice versa, is an operation unattainable with any other grease-cup which has come to my notice.

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

1. A device of the type set forth, consisting of a cup having a cover thereon, and a follower operating within the cup and carrying a threaded stem, a pair of spring-pressed jaws pivoted to the cover and engaging said stem therebetween, with a projection on each of the jaws, and a spindle projecting through the cover and carrying wiping-toes on its

50 lower end for engagement with said projec-

tions, whereby the said jaws may be spread so as to be disengaged from the stem.

2. In a grease-cup, the cup proper provided with a mutilated screw-thread upon its outer surface adjacent to the upper edge thereof and a cover having a corresponding mutilated thread upon the inner rim, in combination with a follower having a screw-threaded stem projecting through said cover, a divided nut, a pivot-pin secured to the cover on which the parts of the nut turn, a latch hinged to one of the jaws of said nut and adapted to engage with the other jaw, a spring adapted to close the said nut and retain the latch in locked engagement therewith, and means to open said nut from without the cup, substantially as described.

3. In a device of the type set forth, the combination with a cup having a removable cover, of a follower carrying a threaded stem operating through the cover, spring-pressed means pivoted to the under side of the cover inclosing and engaging said stem, means for locking the said spring-pressed means, and means operated from the exterior of the cover for disengaging said locking means from the spring-pressed means, and spreading the last-named means so as to disengage the same from said stem.

4. In a device of the type set forth, the combination of a cup having a cover, of a follower carrying a threaded stem with the stem operating through the cover, a divided nut pivoted to the cover and inclosing said stem, a latch pivotally supported by one of the jaws and adapted to engage the other jaw, a spring for normally retaining said nut in its closed position and for pressing said latch into its locked position, a spindle extending through the cover and provided with toes operating on the lower face of the nut, said nut being provided with projections for engagement with said toes, and a toe carried by the spindle for opening said latch, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRED B. COSPER.

Witnesses:

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