

M. HENRY.
GREASE CUP.
APPLICATION FILED MAR. 7, 1911.

1,012,546.

Patented Dec. 19, 1911.

2 SHEETS—SHEET 1.

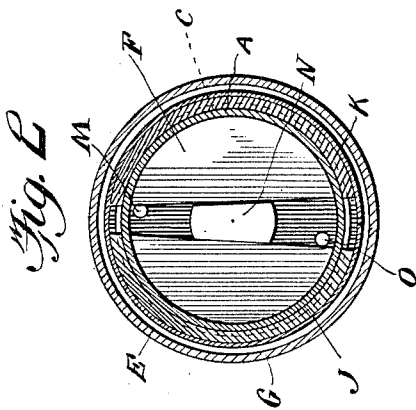


Fig. 4

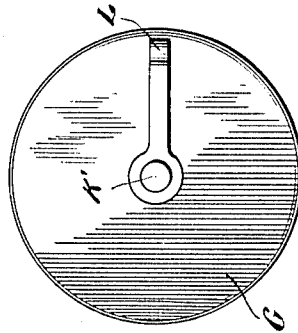
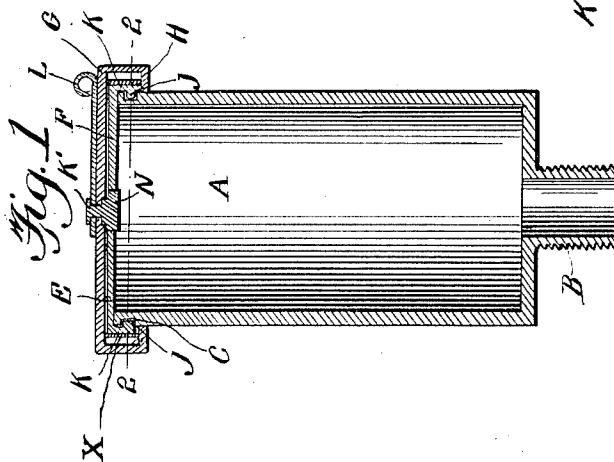
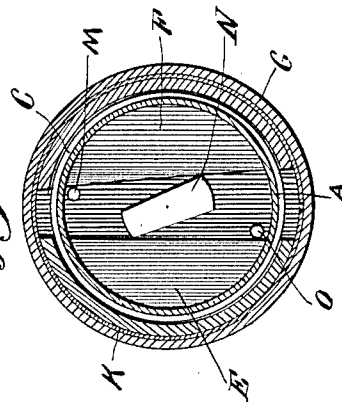


Fig. 3



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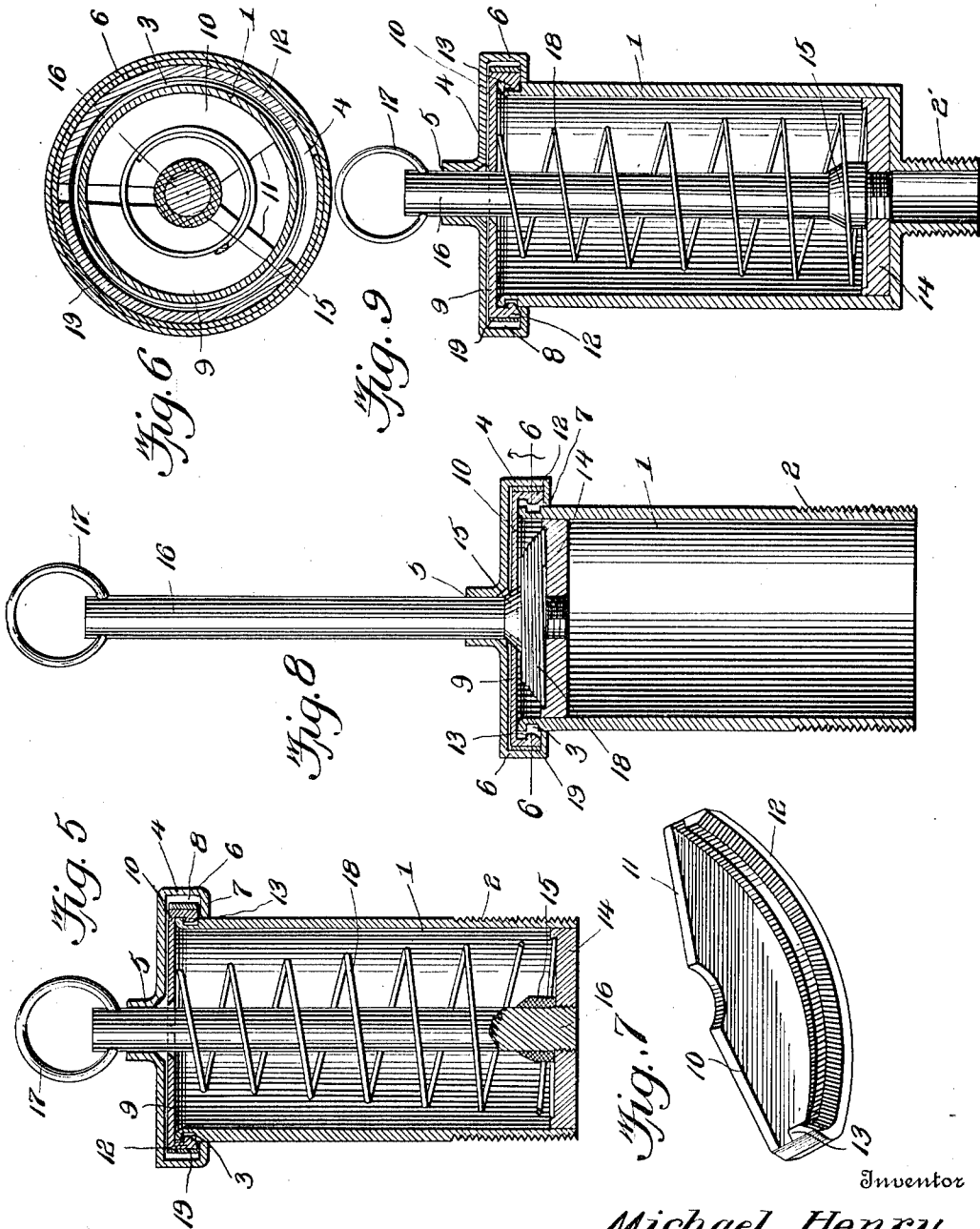
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UNITED STATES PATENT OFFICE.

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GREASE-CUP.

1,012,546.

Specification of Letters Patent.

Patented Dec. 19, 1911.

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To all whom it may concern:

Be it known that I, MICHAEL HENRY, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented new and useful Improvements in Grease-Cups, of which the following is a specification.

This invention relates to improvements in lubricating devices, and the primary object of the invention is to provide a device of this character wherein the closure may be easily and quickly removed to supply the device with a lubricant, the closure being so arranged upon the cup to also withstand the hard usage to which devices of corresponding characters are ordinarily subjected.

The principal object of the invention is the provision of a lubricant cup having means for automatically securing the closure to the cup, or said means comprising a pair of spaced movable segmental members arranged within the closure of the cup, the said segmental members adapted to engage an annular depression formed upon the cup, and simple and effective means being provided for sliding the segmental members to bring the same out of engagement with the annular depression of the cup.

With the above, and other objects in view, which will appear as the nature of the description progresses, the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings—Figure 1 is a vertical longitudinal sectional view taken through a lubricant cup constructed in accordance with the present invention. Fig. 2 is a horizontal sectional view upon the line 2—2 of Fig. 1. Fig. 3 is a sectional view also taken upon the line 2—2 of Fig. 1, but showing the locking mechanism in releasing position. Fig. 4 is a top plan view of the closure. Fig. 5 is a vertical longitudinal sectional view taken through a slightly modified form of the device. Fig. 6 is a horizontal sectional view upon the line 6—6 of Fig. 8. Fig. 7 is a detail perspective view of one of the segmental members. Fig. 8 is a detail sectional view illustrating the manner of unlocking the closure from the cup. Fig. 9 is a vertical longitudinal sectional view of a cup employed upon the stationary engine.

In the accompanying drawings A designates a grease cup. This cup preferably has

its lower end reduced and formed with a threaded extension B, while its upper portion is left entirely open.

The letter C indicates an annular groove arranged directly below the open end of the cup. This groove is adapted to serve as a pocket for the reception of a pair of segmental members E and F, carried by a closure G. The closure is formed adjacent its lower end with an inturned annular bead H, so as to provide a pocket for the rims K provided upon each of the arcuate edges of the segmental members E and F. The said off-set edges of each of the segmental members has its lower portion provided with an inturned flange J, and each of the said flanges is adapted to be received within the annular groove or depression of the cup so as to sustain the closure upon the cup. The segmental members E and F are normally forced toward each other through the medium of a slitted annular spring X which is arranged within the pocket of the closure and contacts the off-set annular rings of each of the said segmental members. The closure is centrally provided with an opening, the same adapted to receive a pintle K carried upon a handle L. The pintle K has connected therewith an elongated spreader N, the said spreader having its opposite longitudinal edges arranged in a substantially parallel relation with each other and the said edges are adapted to contact the inner or straightened edges of the segmental members. The inner face of the closure is further provided with a pair of oppositely disposed stops M and O, the said stops being arranged approximately in a line with the longitudinal edges of the spreader N.

From the above description, taken in connection with the drawings, it is thought that the method of operation will be clearly apparent to those skilled in the art to which such devices appertain, it being merely necessary to operate the handle in order to cause the spreader N to separate the segmental members and it will be noted that when the said closure is placed upon the cup, the off-set edges of the segmental members will be brought securely into engagement with the annular depression of the cup.

In Figs. 5 to 8 inclusive, I have illustrated a modified form of the device. In these figures the numeral 1 designates the lubricant cup. This cup comprises, what may be termed, a pipe section having its lower ex-

tremity threaded as at 2 for connection with the device upon which it is employed. The upper extremity of the cup is provided with an annular groove designated by the numeral 3. The numeral 4 designates a closure for the cup. This closure is provided with a central opening 5 and is formed with a side flange 6. The lower portion of the flange is extended inwardly as at 7 to provide an annular recess or pocket 8. The numerals 9 and 10 designate a pair of oppositely disposed segmental members which are arranged upon the underface of the closure. These segmental members have flattened faces and each is centrally provided with an arcuate depression 11. The edges of the segmental members adjacent their meeting faces are formed with substantially semi-cylindrical rims 12, and each of the said rims has its lower portion formed with an inwardly extending bead 13. The numeral 14 designates the plunger or follower and 16 the stem for the follower. The lower extremity of the stem is provided with a boss 15, and the said stem is adapted to extend through the central opening 5 of the closure 4 and to have its extremity provided with a handle, such as a ring 17. Positioned between the segmental members and the inner face of the follower is a spiral helical spring 18, the latter exerting pressure between the closure and the follower to force the follower into contact with the lubricant and the lubricant from the cap. The numeral 19 designates a flat circular spring which is positioned within the pocket of the closure and which exerts pressure against the flanges of the segmental members to force the beads of the said segmental members out of the pocket and to bring the said beads into engagement with the annular depression of the cup. The operation of the device, will, it is thought, be perfectly apparent from the above description and accompanying drawings. It will be noted that as the stem 16 is forced upwardly its boss 15 will contact with the opposite arcuate edges of the segmental members to force the said segmental members within the pocket of the closure, thus bringing the beads of the segmental members out of engagement with the annular depression, and thus allowing the closure to be removed from the cup.

The device illustrated in Fig. 9 is substantially similar to that just described, excepting that the cup is provided with a reduced threaded extension, whereby the cup may be positioned within a threaded opening.

Having thus described the invention, what I claim is:—

1. In combination with a cup having an annular depression, of a closure for the cup, said closure being provided with a pair of

movable segmental members, resilient means contacting the segmental members to force the same toward each other and into engagement with the annular depression, and means for sliding the segmental members to bring the latter out of engagement with the annular depression.

2. The combination with a lubricant cup having a depression arranged adjacent its upper mouth, a closure for the cup, a pair of slidable segmental members having semi-cylindrical beads, said members carried by the closure and adapted to have their beads engage the depression of the cup, resilient means for forcing the beads into engagement with the depression, and means for sliding the segmental members to bring their beads out of engagement with the depression.

3. The combination with a cup having an open mouth, and being provided with a depression directly below the said open mouth, of a closure for the cup, said closure being provided with an off-set side wall having its lower extremity inturned, a pair of segmental members mounted for slidable movement within the cup, each of said segmental members having one of their edges formed with an approximately semi-circular flange, the lower wall of each of the said flanges being provided with a bead, a spring member surrounding the flanges and adapted to exert pressure to bring the segmental members toward each other and into engagement with the depression upon the cup, and means for sliding the segmental members away from each other and to bring their beads out of engagement with the depression.

4. The combination with a cup having an open mouth, and being provided with a depression directly below the said open mouth, of a closure for the cup, said closure being provided with an off-set side wall having its lower extremity inturned, a pair of segmental members mounted for slidable movement within the cup, each of said segmental members having one of their edges formed with an approximately semi-circular flange, the lower wall of the said flange being provided with a bead, a spring member surrounding the flange and adapted to exert pressure to bring the segmental members toward each other and into engagement with the depression upon the cup, means for sliding the segmental members away from each other and to bring their beads out of engagement with the depression, and stop members for sustaining the segmental members when slid.

5. The combination with a cup having an open mouth, and being provided with a depression directly below the said open mouth, of a closure for the cup, said closure being provided with an off-set side wall having its

lower extremity intumed, a pair of segmental members mounted for slidable movement within the cup, each of said segmental members having one of their edges formed
5 with an approximately semi-circular flange, the lower wall of each of the said flanges being provided with a bead, a spring member surrounding the flanges and adapted to exert pressure to bring the segmental members toward each other and into engagement
10 with the depression upon the cup, means for sliding the segmental members away from each other and to bring their beads out of

engagement with the depression, said means comprising a substantially rectangular
15 spreader having its longitudinal edges contacting the straightened edges of the segmental members, and contacting with the segmental members to limit their movement in one direction. 20

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

MICHAEL HENRY.

Witnesses:

MARY M. PADDOCK,
FRANCIS T. PETERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."