

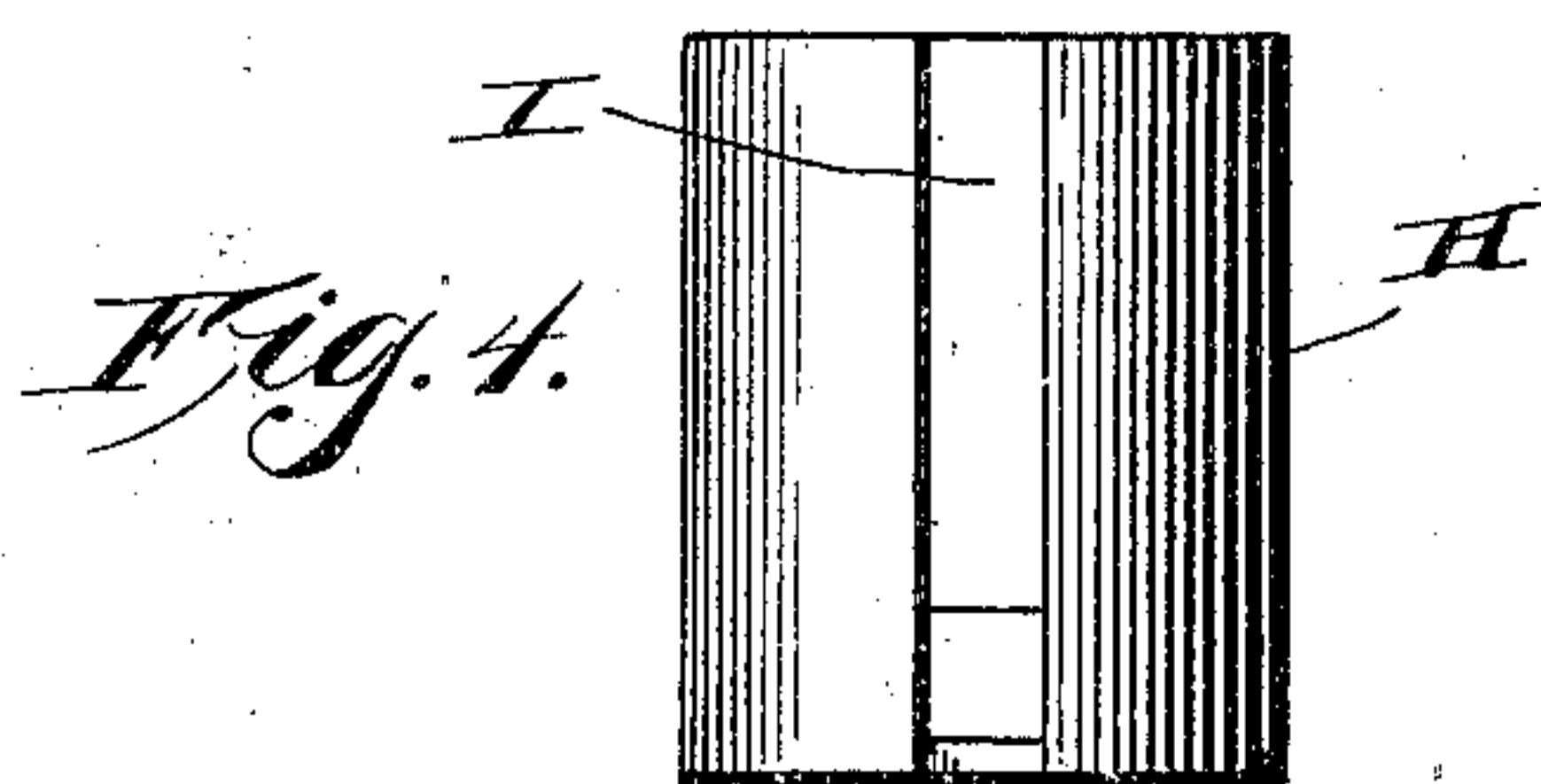
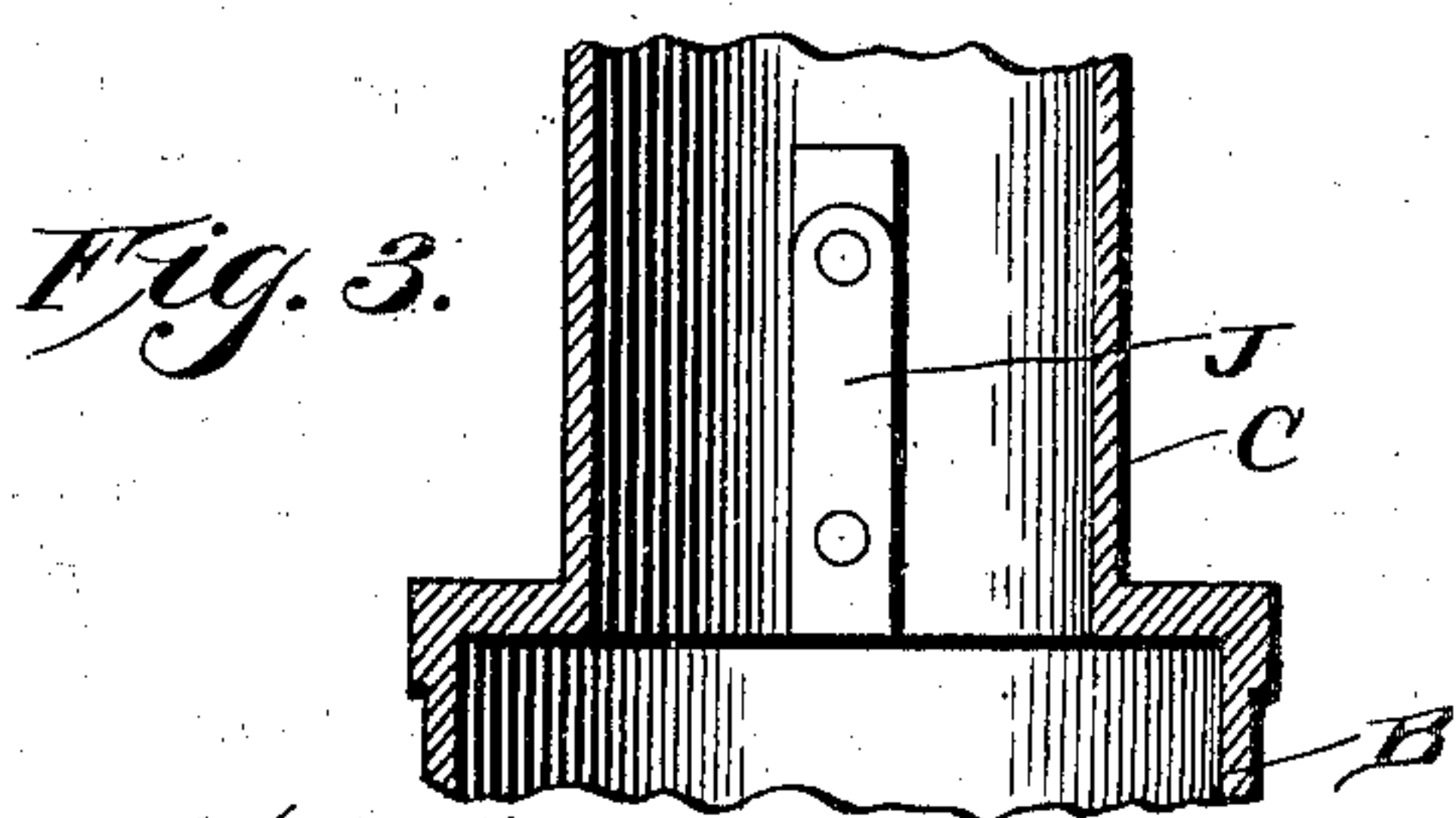
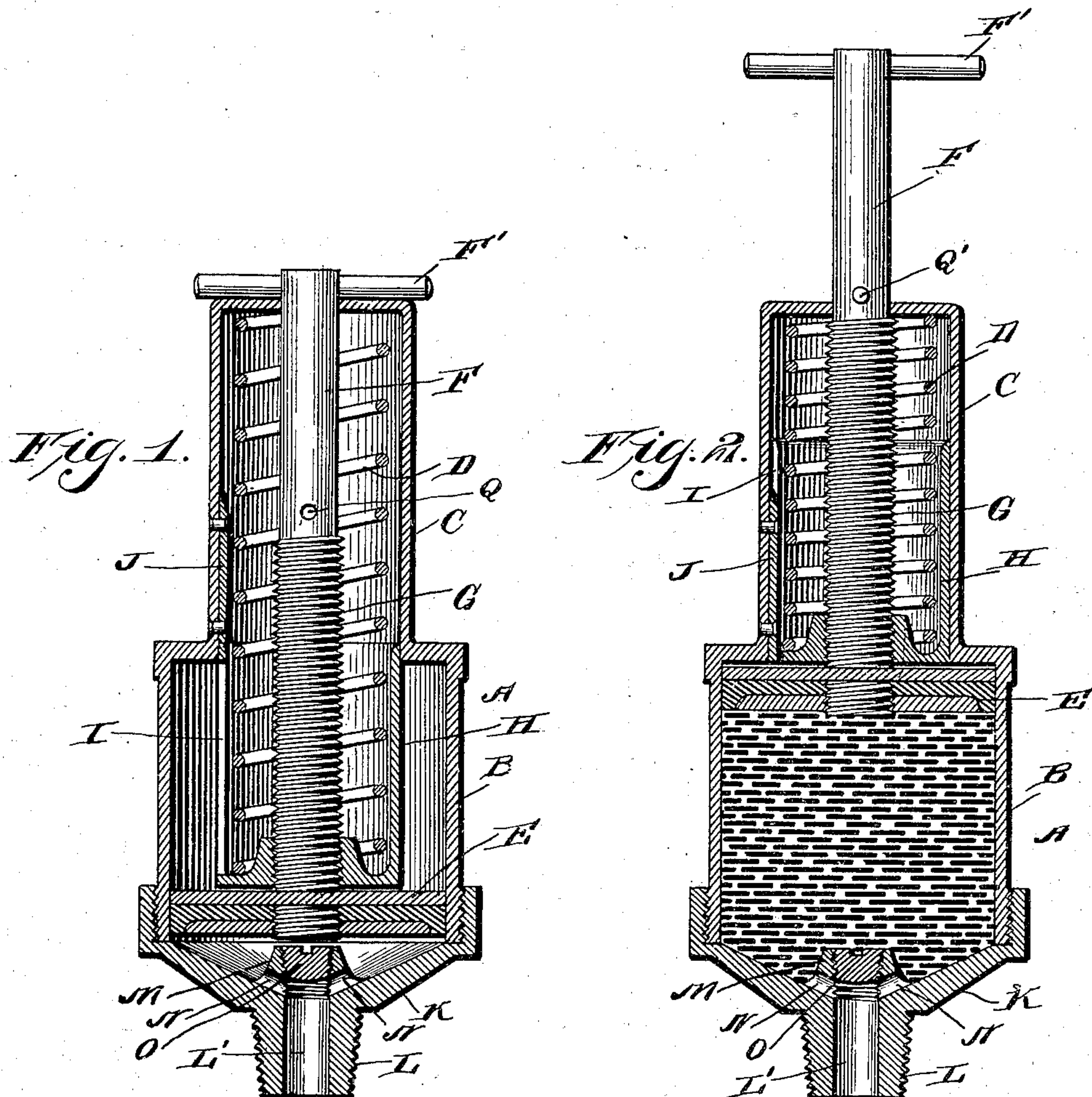
No. 726,314.

PATENTED APR. 28, 1903.

J. F. LEWIS.
GREASE CUP.

APPLICATION FILED JULY 19, 1902.

NO MODEL.



Witnesses:

Louis D. Heinrichs
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Att'y

UNITED STATES PATENT OFFICE.

JOHN F. LEWIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE PHILADELPHIA LUBRICATOR MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF DELAWARE.

GREASE-CUP.

SPECIFICATION forming part of Letters Patent No. 726,314, dated April 28, 1903.

Application filed July 19, 1902. Serial No. 116,234. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. LEWIS, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Grease-Cups, of which the following is a specification.

My invention relates to a new and useful improvement in grease-cups, and relates to that class of grease-cups which are designed to feed automatically semisoft or buttery grease regularly into journals of machinery; and the object of the present invention is to furnish a grease-cup which will be extremely simple and composed of few parts and in which the tension of the spring can be increased at any time by the simple turning of a handle and to provide a dust-proof case, the whole being designed as an improvement on my inventions for which Letters Patent of the United States were obtained October 30, 1888, No. 392,161; July 16, 1889, No. 407,226, and September 29, 1896, No. 568,407.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a longitudinal section of my improved grease-cup, showing the same entirely empty; Fig. 2, a similar view to Fig. 1, showing the grease-cup filled to its greatest capacity; Fig. 3, a longitudinal section through a portion of the grease-cup, showing the interior of the casing and the spline riveted thereto; Fig. 4, a side elevation of the thimble adapted to slide vertically within the cylinder.

A represents the body of the apparatus, of which B is the barrel or cylindrical cup which constitutes the receptacle for the lubricant. The upper portion C of the body is reduced in diameter for the reception of the spring D.

E is a plunger fitted upon the inside of the

cup B, and F is the plunger-rod extending upward from the plunger through the top of the part C. The plunger-rod F is exteriorly threaded for a little more than half its length from the lower end, as indicated at G, and H is a thimble opening upward and threaded upon the plunger-rod F. This thimble is of such a diameter as to slide within the part C of the body and is slotted upon one side, as represented at I, and in this slot fits a spline J, riveted to one side of the part C of the body. This spline J, operating in conjunction with the slot I, prevents the thimble from turning relative to the body. The spring D is interposed between the bottom of the thimble H and the top of the portion C of the body and surrounds the plunger-rod F. Upon the lower end of the cup B is threaded the base-piece K, which is provided with the threaded shank L, by which it is attached to the journal to be lubricated. An opening L' extends through this shank and upward through a boss M, extending upward from the interior of the base-piece K. Lateral openings N extend from the central open portion through the boss M and communicate with the interior of the cup, and a screw-plug O is threaded from above into the boss M and serves to regulate the flow of lubricant from the cup to the journal. The upper end of the plunger-rod F is provided with the cross-handle F', by which the plunger-rod may be turned or raised.

In filling the cup the base-piece K is removed and the plunger-rod is raised to its greatest extent until the hole Q, formed through the plunger-rod, is above the upper end of the portion C of the body. A pin Q' is then passed through the hole, holding the plunger-rod in its raised position against the tension of the spring. The lubricant is then placed within the cup B, and the base-piece K is then replaced. Then by removing the pin Q' the spring will be allowed to act to force the plunger downward upon the lubricant, and the same will be automatically delivered to the bearing, the amount of the flow being regulated by the screw-plug O. If at any time it is desired to increase the pressure

upon the lubricant, by an occasional turning of the plunger-rod the thimble H will be caused to travel upward upon the screw-threaded portion of the plunger-rod, and thus increase the tension of the spring. By this means I am enabled to construct a grease-cup of comparatively few parts, and the same is comparatively dust-proof, as the only movable part extending outside of the cup is the plunger-rod.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. In a grease-cup, a cylindrical body, a plunger fitted to slide within said body, a plunger-rod extending upward from said plunger through the upper end of the body, a handle provided upon the upper end of the plunger-rod, a threaded portion provided upon the plunger-rod, a thimble threaded upon said plunger-rod, said thimble opening upward, means for preventing the rotation of the thimble relative to the body, but allowing the same to slide therein, a spring interposed between the bottom of the thimble and the top of the body, a base-piece threaded upon the lower end of the body, a threaded shank formed with the base-piece, said shank provided with an opening formed therethrough communicating with the interior of the cup, and means for opening or closing said opening to regulate the flow of the lubricant, as and for the purpose specified.

2. In a grease-cup, a cylindrical body, a plunger fitted to slide within said body, a plunger-rod secured to said plunger and extending upward through the upper end of said body, a handle provided upon the upper end of the plunger-rod, a screw-threaded portion provided upon the plunger-rod extending from the plunger upward to a point little more than half the length of the plunger-rod, a thimble opening upward threaded upon said plunger-rod, said thimble provided with the vertical slot, a spline riveted to the inside

of the casing adapted to fit in said slot, a spring interposed between the bottom of the thimble and the top of the body, and surrounding the plunger-rod, a base-piece threaded upon the lower end of the body and provided with a threaded shank, and an opening provided therethrough, and a screw-plug adapted to regulate the amount of opening through said base-piece, as and for the purpose specified.

3. In a grease-cup, a body consisting of a barrel or cup B, and a reduced portion C extending upward therefrom, a plunger fitted to slide within the portion B, a partially-screw-threaded plunger-rod extending upward through the top of the portion C, a handle provided upon the upper end of the plunger-rod, a thimble opening upward threaded upon the plunger-rod and fitted to slide within the portion C, said thimble provided with a slot, a spline secured to the inside of the portion C and fitting within said slot in the thimble, a spring interposed between the thimble and the top of the portion C, the plunger-rod being provided with an opening Q adapted to be above the upper end of the portion C when the plunger is raised to its greatest height, a pin O adapted to be passed through said opening to hold the plunger raised, a base-piece secured to the lower end of the cup B, a threaded central shank formed with the base-piece provided with a vertical opening therethrough, a boss arranged upon the interior of the base-piece and extending inward, said boss provided with openings extending from the central opening to the interior of the cup, a screw-threaded plug screwed from above, downward through said boss and adapted to regulate the flow of lubricant, as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

JOHN F. LEWIS.

Witnesses:

L. D. HEINRICHS,
L. W. MORRISON.