

J. F. LEWIS.
 AUTOMATIC GREASE CUP.
 APPLICATION FILED OCT. 1, 1909.

1,015,626.

Patented Jan. 23, 1912.

2 SHEETS—SHEET 1.

Fig. 1

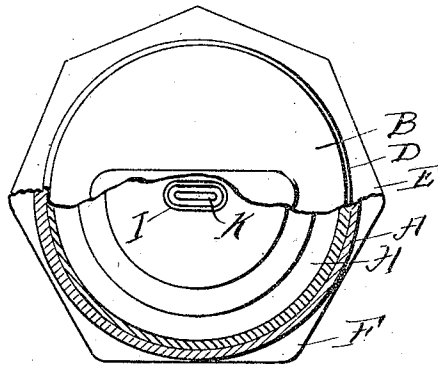
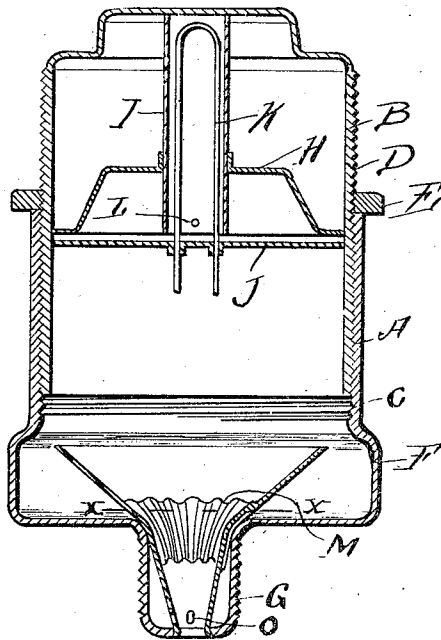


Fig. 2.



WITNESSES

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2 SHEETS—SHEET 2.

Fig 3

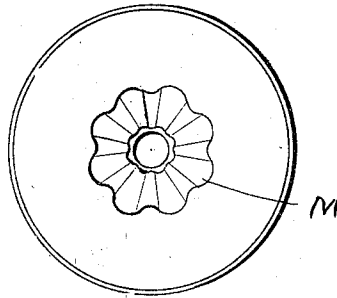


Fig 4

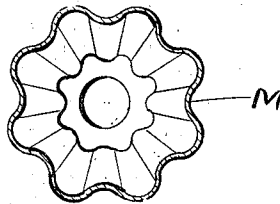
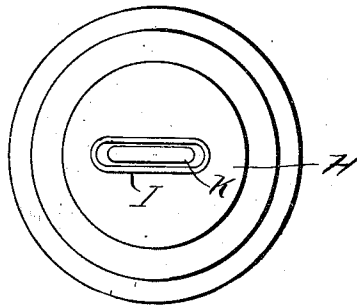


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN F. LEWIS, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC GREASE-CUP.

1,015,626.

Specification of Letters Patent.

Patented Jan. 23, 1912.

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To all whom it may concern:

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

My invention relates to a new and useful improvement in automatic grease cups, and has for its object to provide such a cup in which the grease will be fed by means of compressed air contained in the upper portion of the cup, and yet when desired positively forced therefrom without cutting off the air pressure, and in which the cup will always empty itself.

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 plan view of my improved cup, a portion thereof being broken away to show the cap and cap tube therein. Fig. 2 a vertical section. Fig. 3 a plan view of the funnel. Fig. 4 a section of the funnel, at the line $x-x$ of Fig. 2 and Fig. 5 a plan view of the removable cap and the tube carried thereby.

My improved grease cup consists of the body portion A and the top portion B. The body portion being provided with internal threads C, while the top portion is provided with corresponding external threads D, in order that they may be screwed together as plainly shown in Fig. 2. A jam nut-E is also run upon the threads D and is adapted to be forced into contact with the upper edge of the body so as to hold the portion B in any adjustment as may be readily understood.

The lower portion of the body A is enlarged or swelled out as indicated at F to form a multiple sided wrench hold and also to produce an enlarged chamber. A threaded nipple G is formed with the bottom of the body for screwing into the bearing to be lubricated.

H represents a cap preferably made of sheet metal, stamped into saucer shape having a flange which snugly fits within the top portion B and the tube I is secured in this cap and projects above the same to form a stop to determine the position of the cap in the portion B by coming in contact with the top thereof. Through this tube the air passes to the space above the cap when being compressed and flows back when being expanded.

J is a disk adapted to scrape the walls of the upper portion B in moving up and down therein and to this disk is secured the staple shaped wire K the latter adapted to slide into the tube and being prevented from accidental withdrawal therefrom by the pin L, thus permitting the disk to rest upon the grease contained in the cup and maintain an even surface.

M represents a funnel the spout of which extends through the nipple its end being spun over, and the sides of this funnel and spout are corrugated or fluted as clearly shown in Fig. 4 so as to leave passages from the lower portion of the cup to the nipple, and holes O are formed in the spout of the funnel for the purpose hereinafter set forth.

In practice after the body has been filled with grease the top portion is screwed therein, the disk coming in contact with the grease will be forced upward into the top portion compressing the air until the disk is stopped by the cap H, the space above the cap acting as a reservoir for the compressed air. Any further downward movement of the top B will force the grease through the funnel to the bearing with screw pressure, but when the top B is stopped in any position the air compressed in the upper portion thereof will exert sufficient pressure on the disk and grease to continue to feed the latter. It is to be noted that when the edges of the disk come in contact with the flange of the cap H the center portion of the disk also comes in contact with the tube I thus supporting the disk against undue pressure. When a sufficient amount of the grease has been fed from the cup to bring the disk J into contact with the funnel the air pressure will force the grease, which is on the outside of the funnel by way of the corrugations through the holes O to the bearing to be lubricated. By this arrangement an emergency supply of grease is provided which will not readily be fed to the

bearing until after the disk has come in contact with the funnel but which will flow down should the bearing become over heated.

5 By the relative arrangement of the cap H and the disk J the grease will not be forced into the cap nor above it, thus leaving sufficient space to act as an air reservoir. The ends of the wire K project below the disk and may be utilized to draw the disk downward should it become stuck in the top.

Of course I do not wish to be limited to the exact details of construction here shown as these may be varied within the limit of the claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is—
20 1. A grease cup consisting of a body and an upper portion the latter threaded into the former, a removable cap set in the upper portion, a tube carried by said cap adapted to serve as a stop, a disk, a guide wire secured to said disk and projecting into said tube, means for preventing accidental withdrawal of the guide wire, and a funnel, the spout of which projects into the outlet from the body portion of the cup
30 as specified.

2. In combination with a grease cup of the character described, a saucer shaped cap adapted to be forced into the upper portion of the cup, a tube carried by the cap for determining the position of the latter, 35 a disk, a staple-shaped wire carried by the disk adapted to extend into the tube, a funnel, the sides and spout of which are corrugated said spout projecting into the outlet from the body portion of the cup, as and 40 for the purpose set forth.

3. In combination with a grease cup of the character described, a funnel, the spout of which projects into the outlet of the cup and is secured therein so as to form a space 45 outside of the funnel and its spout, the lower end of said space being closed, said spout having a hole in its side near its lower end, the funnel and spout being corrugated to permit the passage of grease 50 around the outside thereof, as and for the purpose set forth.

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

JOHN F. LEWIS.

Witnesses:

EDW. W. ANSTICE,
S. M. GALLAGHER.