

D. W. BARR.
LUBRICATING DEVICE.
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1,259,474.

Patented Mar. 19, 1918.

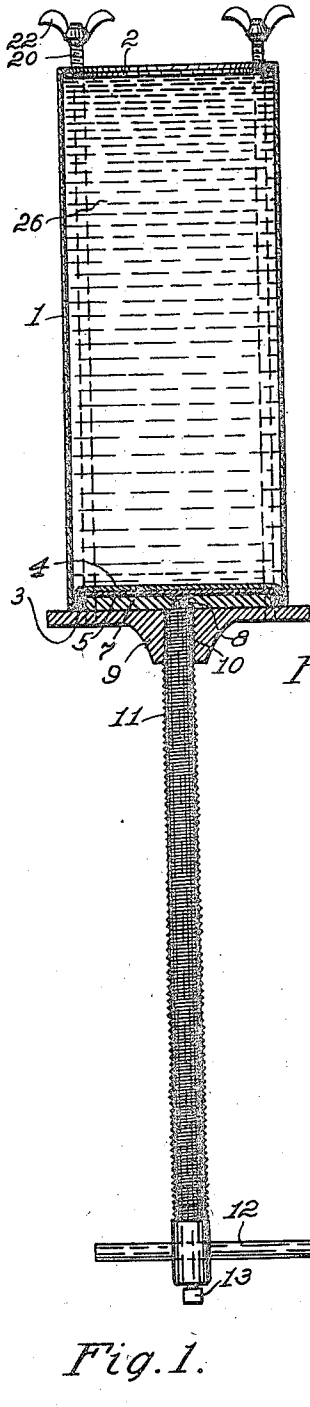


Fig. 1.

Fig. 3.

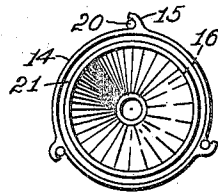
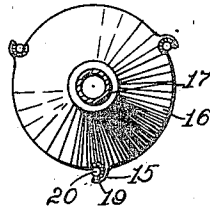


Fig. 4.

Fig. 5.

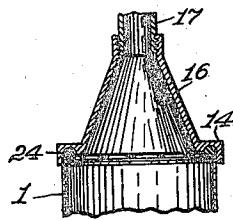


Fig. 6.



Fig. 7.

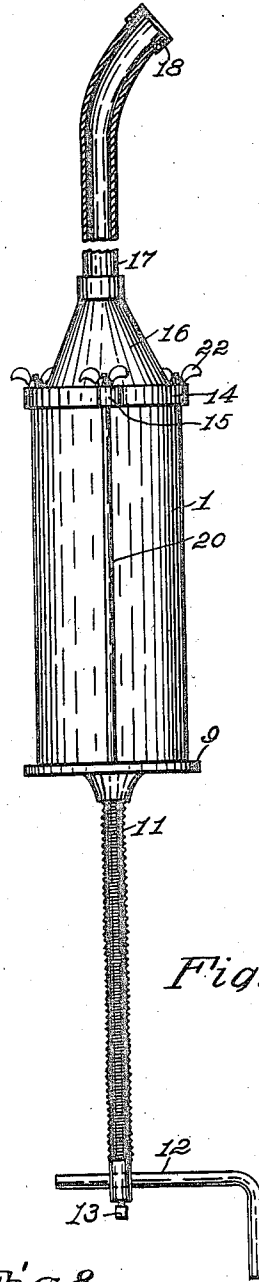
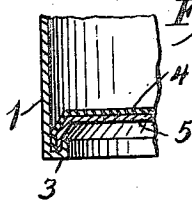


Fig. 2.

Fig. 8.



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UNITED STATES PATENT OFFICE.

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LUBRICATING DEVICE.

1,259,474.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DAVID W. BARR, a citizen of the United States of America, and a resident of Waterloo, Blackhawk county, Iowa, have invented certain new and useful Improvements in Lubricating Devices, of which the following is a specification.

My invention relates to improvements in lubricating devices, particularly to that type such as is used manually and called grease-guns for forcing grease into bearings, and the object of my improvement is to supply for this purpose a device adapted to operate upon the hardened grease or lubricant in a container, by gradually expelling the contents, employing a movable part of the container as a propelling element.

This object I have accomplished by means which are hereinafter described and claimed, and which are illustrated in the accompanying drawings, in which:

Figure 1 is a longitudinal central sectional view of one of my improved movable bottom containers, as associated with the clamping and propelling parts coöperatively used therewith for expelling the contents thereof.

Fig. 2 is an elevation, on a diminished scale, of a container with a conical ejector-top mounted thereon, and propelling mechanism clamped thereon for pushing inwardly the movable bottom of the container.

Figs. 3 and 4 are respectively plan views of the upper and lower parts of the conical ejector top of the device.

Fig. 5 is a detail perspective view of related parts of said ejector-top and the fastening-means therefor.

Fig. 6 is a longitudinal section of said ejector-top and of a portion of the container upon which it is fitted, and Fig. 7 is a longitudinal section of the top of the container, including its removable cap, before the removal thereof.

Fig. 8 is an enlarged fragmentary view of abutting portions of the container and of its bottom closure.

Similar numerals of reference denote corresponding parts throughout the several views.

An important feature of my improved grease-gun is the grease-container 1, which is a metal can having the inwardly-flanged top ring 2, in which the usual removable cap 6 is fitted for a closure. The bottom of the

can is composed of a metal cup 5 over which is fitted a like cup 4 made of fiber, or pressed paste-board. This bottom is pressed into place by means of suitable machinery, and the lower edge of the can afterward inverted or turned over at 3 to lock the bottom from downward displacement and form a tight joint therewith. The can is filled with hardened or viscous grease 26.

The means employed to discharge the contents of the can is a circular push-head 7 resting in contact with the under face of the can bottom 4—5 and centrally orificed to receive the rotatable diminished upper end 8 of a threaded shaft 11, the latter provided at or near its other end with a cross-piece or crank-handle 12, secured by a set-screw 13. Upon the shaft 11 is mounted a circular plate 9 to work thereon and being of larger diameter than the push-head 7, and standards 20 are mounted about this plate 9 having threaded upper ends carrying the wing-nuts 22. The can 1, after its closure 6 has been removed, is placed upon the push-head 7 and within the surrounding standards 20.

The numeral 16 denotes a conical hollow discharge-head having a widened base-ring 14 containing a downwardly-directed annular channel 21, in which is seated a rubber or elastic sealing ring or gasket 24, which seals the joint between the discharge-head and the ring 2 on the can when brought together as shown in Fig. 6. In the upper end of the discharge-head 16 is mounted a communicating nozzle 17, provided with a removable end-cap 18.

The expanded part 14 of the discharge-head 16 has ears 15 with inner vertical circular seats 23 open at one side tangentially to receive the upper ends of the standards 20. The wing-nuts 22 are used to clamp upon the ears, with their lower coned parts 25, as shown in Fig. 5 releasably locked in the inwardly coned hollows or sockets 19 of said ears 15, thus preventing escape of the standards from said ears.

The cap 18 of the nozzle 17 having been removed, the crank-handle 12 may be employed to rotate the shaft 11, causing the plate 9 to push the head 7 against the can bottom 4—5, carrying the latter upward whose upwardly cupped edge forms a piston to push the grease 26 out of the can and through the discharge-head 16 and spout or

nozzle 17, the elastic outer layer or edge of the outer cup 5 serving as a packing to prevent exudation of grease from the bottom of the can, during the action of the device.

5 It will be seen that containers, such as that described, may be supplied in said form already filled, for consumers, and may be discarded when emptied. The bottom 4—5 of the can, when the can is emptied, cannot be
10 pushed back to close the bottom of the can properly by any ordinary means, such as a stick, without turning or buckling, if one wished to re-fill the can. The bottom could be only replaced by the same machinery
15 originally used for that purpose, and thus the can becomes a non-refillable container for all practical purposes, which makes it a desirable device for the use of manufacturers of lubricants. The bottom of the con-
20 tainer becomes an integral part of the device, forming a packed piston, and it will be noticed that the cupped edges or flanges of said bottom are flared outwardly. This outwardly flared part helps to prevent the
25 pushing back of the bottom by ordinary means, since the obliquity of the edge makes it tilt when pushed down.

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

30 1. A device of the character described, comprising a container having an open top and a movable bottom, a discharge-nozzle seated removably upon the open end of the
35 container and having hook-shaped ears the

cavity of each being reamed out conically at the upper end, a pusher-head smaller in diameter than the interior of the container placed against the container-bottom centrally, a clamping-plate placed against the
40 lower edge of the container and having threaded standards fixed thereon and passed along the exterior of the container and through the cavities of said ears, by way of the side-openings of their cavities, said side-
45 openings all facing in one direction, thumb-nuts on said standards with coned lower parts adapted to fit the coned upper parts of the cavities in said ears to lock the standards therein, said clamping-plate having a
50 centrally threaded orifice and a threaded shaft mounted in said orifice rotatably and having its upper end rotatably connected to the center of said pusher-head.

2. In a device of the character described,
55 a container having an open top, and bottom closure mounted therein for longitudinal displacement therein toward said open end only, said closure having its circumferential
60 edge crimped outwardly and downwardly conically toward the inner wall of the container, and the lower end of the container crimped inwardly to overlap the crimped part of the closure.

Signed at Waterloo, Iowa, this 19th day
65 of February, 1916.

DAVID W. BARR.

Witnesses:

G. C. KENNEDY,
PEARL STANTON.