Sept. 1, 1931. D. L. ROBBINS 1,821,480

OIL CAN

Filed May 7, 1929 2 Sheets-Sheet 1

Fig. 2.

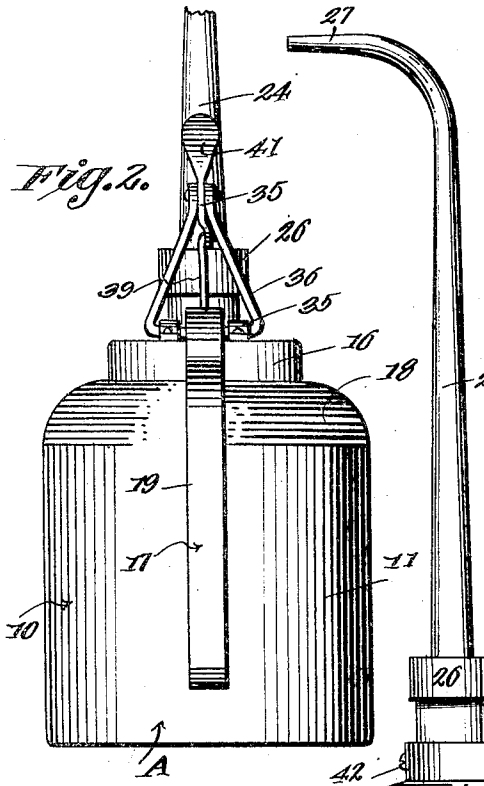


Fig. 3.

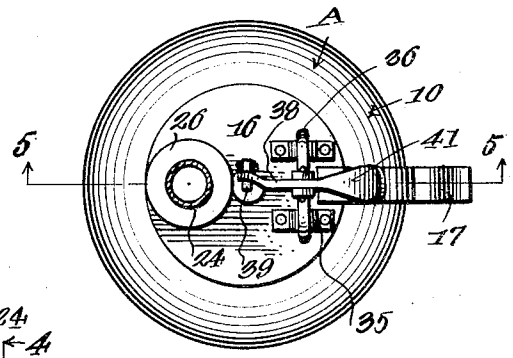
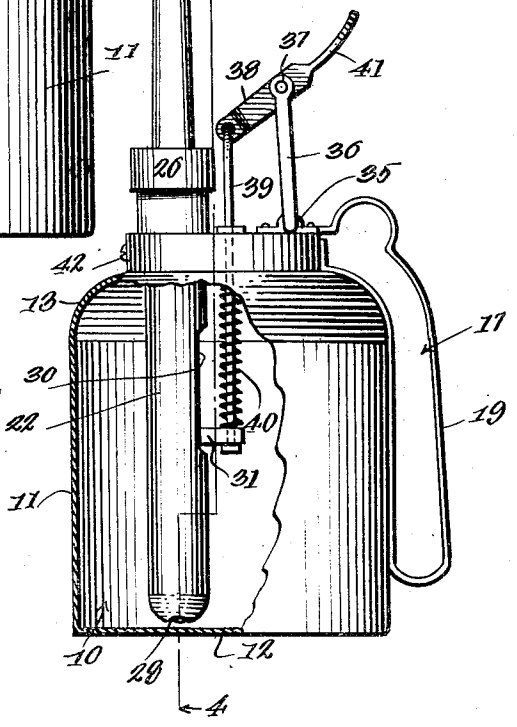


Fig. 1.



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Filed May 7, 1929 2 Sheets-Sheet 2

Fig. 4.

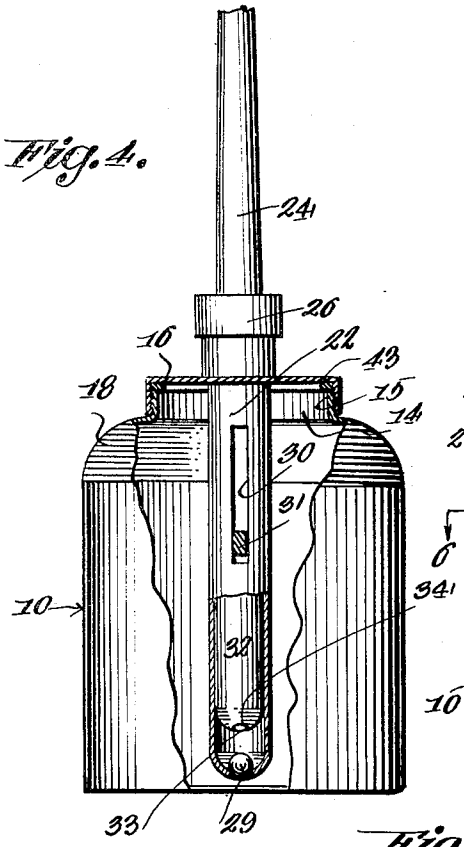


Fig. 5.

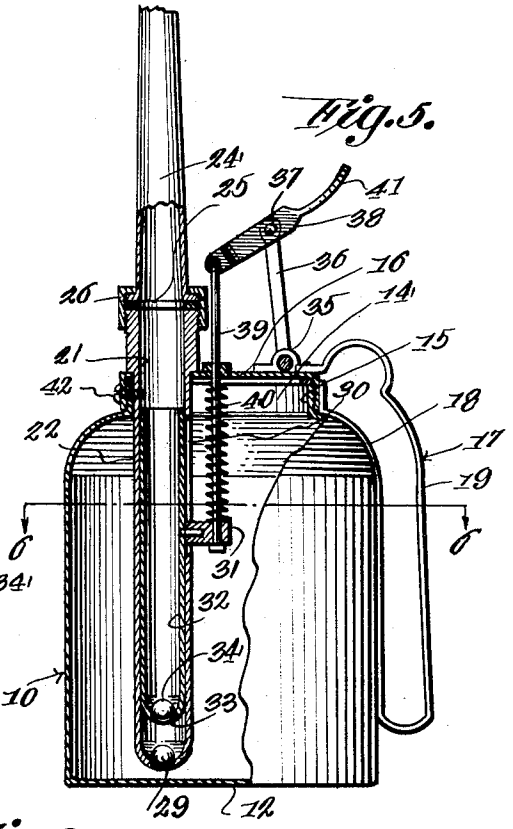
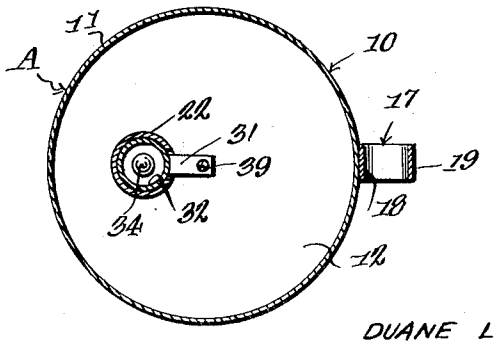


Fig. 6.



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UNITED STATES PATENT OFFICE

DUANE LYNN ROBBINS, OF SACRED HEART, MINNESOTA

OIL CAN

Application filed May 7, 1929. Serial No. 361,140.

This invention appertains to lubricating devices and more particularly to a hand lubricator of the pump type.

One of the primary objects of my invention is to provide a novel oil can having novel means for forcing the oil from the bottom of the can out of the dispensing nozzle.

Another important object of my invention is the provision of novel means for supporting all of the operating parts of the oil can from the closure cap for the body of the can, whereby upon removal of the closure cap the parts can be quickly taken apart for cleaning or repair.

A further important object of my invention is the provision of an oil can having a sliding valve plunger arranged in the outlet tube supporting the nozzle, the lower end of the tube being likewise provided with an inwardly opening valve, with novel means for operating the plunger from the exterior of the can including a spring pressed thumb operated lever, whereby upon movement of the lever the valve plunger will be raised and lowered for forcing the lubricant out of the nozzle.

A still further object of my invention is to provide an improved oil can of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture, and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which drawings:

Figure 1 is a side elevation of my improved oil can showing the same partly broken away and in section;

Figure 2 is a rear elevation of my oil can, the upper end of the nozzle being broken away;

Figure 3 is a top plan view of the oil can, the nozzle being shown in section;

Figure 4 is a section taken on the line 4—4 of Figure 1 looking in the direction of the arrows;

Figure 5 is a section taken at right angles to Figure 4 on the line 5—5 of Figure 3 looking in the direction of the arrows;

Figure 6 is a horizontal section taken on the line 6—6 of Figure 5 looking in the direction of the arrows.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates my improved oil can, which comprises a body 10 formed of any desired material such as copper or tin and of the desired size for holding the preferred amount of oil. The body 10 in the present instance is shown to include a cylindrical side wall 11, a flat bottom wall 12, and a bowed top wall 13 having an enlarged filling opening 14 surrounded by an externally threaded flange 15, on which is removably fitted the closure cap 16. The closure cap 16 carries the various operating parts of the device and has secured thereto the depending handle 17 which overlies the body of the can and which forms means for manipulating the oil can during the oiling process and for facilitating the removal of the closure cap 16 from the body. The handle 17 is preferably formed from stiff sheet metal suitably bent to form an open frame and the same includes inner and outer legs 18 and 19 arranged in spaced relation, the inner leg 18 conforming to the curvature of the body of the can. The upper end of the leg 18 is riveted or otherwise secured to the depending flange of the closure cap 16, while the outer leg 19 is provided with an inwardly extending lug 20 which is riveted or otherwise secured to the top wall of said closure cap 16.

The closure cap 16 adjacent to one side thereof and at a point diametrically opposite the handle 17 is provided with an opening 21 in which is removably fitted the outer pump tube or barrel 22. This outer tube or barrel 22 adjacent to its upper end is provided with an external flange 23 for fitting against the closure cap for limiting the inserting movement of said barrel into the body of the oil can and for preventing the escape of oil around the barrel or tube and said closure cap. The extreme upper end of the

barrel or tube 22 is externally threaded and has seated on its upper edge the oil outlet nozzle 24. If preferred, a washer 25 can be interposed between the nozzle and the upper end of the tube or barrel 22 to prevent the leakage of oil therebetween, and the nozzle is held on the barrel or tube by the use of a suitable flanged threaded ring 26. The nozzle 24 can be of any preferred type and if desired the upper end thereof can be bent at an angle as at 27 in order to facilitate the oiling of the various machinery parts.

The extreme lower end of the barrel or outer tube 22 terminates adjacent to the bottom 12 of the oil can body 11 and is provided with an inlet port 28 forming a valve seat, against which normally rests the inwardly opening ball valve 29. At a point intermediate its ends the barrel is provided with a guide slot 30 in which is slidably mounted a block 31 detachably connected to an inner tube or plunger 32 slidably mounted in the barrel 22. As shown, the plunger or inner tube 32 is of hollow form and has the lower end thereof provided with a port 33 against which normally seats a closure inwardly opening ball valve 34.

Riveted or otherwise secured to the closure cap 16 adjacent to the handle 17 is a pair of bearing brackets 35 which bearing brackets rockably support a substantially V-shaped link 36, to the upper end of which is pivotally secured, as at 37, the actuating thumb lever 38. The inner end of the lever extends toward the nozzle 24 and has operatively connected thereto the pump rod 39. This rod slidably extends through the closure cap 16 and is connected with the slide and guide block 31. An expansion spring 40 is coiled about the pump rod and bears respectively against the lower surface of the closure cap 16 and the slide and guide block 31, and functions to normally hold the inner tube or pump plunger 32 in its lowermost position. The outer end of the lever 38 is provided with a thumb grip or piece 41 which is arranged directly above the handle 17, so that when the handle is grasped by the fingers, the thumb will be in a convenient position for resting upon the thumbpiece 41 and consequently actuating the lever 38.

In operation of my improved oil can, pressure is applied to the thumbpiece 41 which will raise the pump plunger 32 against the tension of the coil spring 40 and the lifting movement of the plunger will unseat the valve 29 and suck in the oil from the body of the can. Upon release of pressure on the thumbpiece 41, the spring 40 will return the pump plunger 32 to its lowermost position, seating the valve 29 and unseating the valve 34, allowing the lubricant to flow above the valve 34 and into the plunger. This process is repeated until the lubricant is forced or lifted out of the nozzle.

This forms an efficient means for operating the oil can and for insuring the delivery of the oil from the nozzle.

As heretobefore stated, it is merely necessary to unthread the closure cap 16 from the body of the can after which the various parts can be disassembled for repairs or cleaning purposes.

If preferred, I can utilize a holding screw 42 for preventing accidental rotation of the closure cap and this screw can extend into or impinge against the barrel 22 and thus hold the same against sliding movement incident to the operation of the plunger or inner tube 32.

I also prefer to place a suitable gasket 43 in between the closure cap 16 and the upper edge of the flange 15 surrounding the opening 14 in the body.

Changes in details may be made without departing from the spirit or the scope of this invention, but

What I claim as new is:

An oil can comprising a body, a removable closure cap for the upper end of said body, a handle for the can carried by the cap and extending along the side of said body, a pump barrel carried by the cap and extending into the body and terminating adjacent to the lower end thereof and having a port, an inwardly opening ball valve for controlling said port, a nozzle carried by the upper end of said barrel, a hollow pump plunger slidably mounted in said barrel having a port in its lower end, an inwardly opening ball valve for controlling said port, the barrel having a longitudinally extending guide slot therein, a block removably associated with said plunger extending through the slot, bearing brackets secured to the closure cap, an inverted V-shaped link rockably mounted in said bearing brackets, a manipulating lever rockably mounted on the link at a point intermediate its ends, a manipulating thumbpiece on the outer end of said lever arranged directly above said handle, an inwardly extending pump rod operatively connected to the inner end of said lever and slidable through said cap, means connecting the lower end of the pump rod to the block, and an expansion spring coiled about said rod and interposed between the closure cap and said block.

In testimony whereof I affix my signature.

DUANE LYNN ROBBINS.