Sept. 2, 1924. 1,507,498

W. G. MATTHEWS

OIL CAN

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Fig. 1.

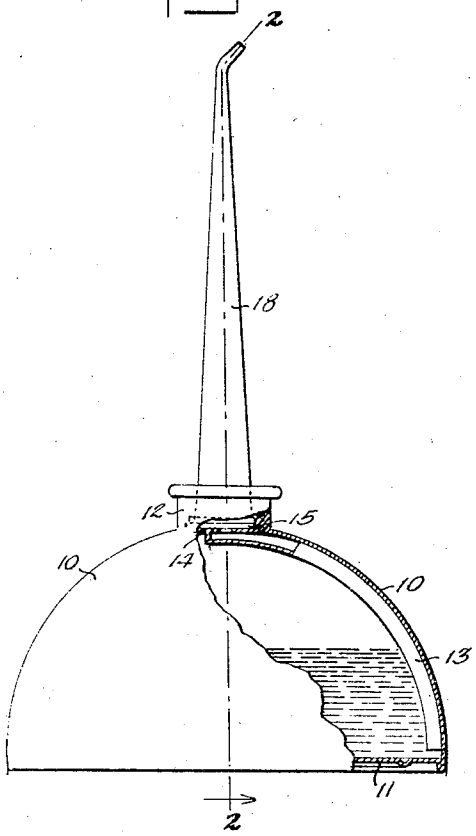


Fig. 2.

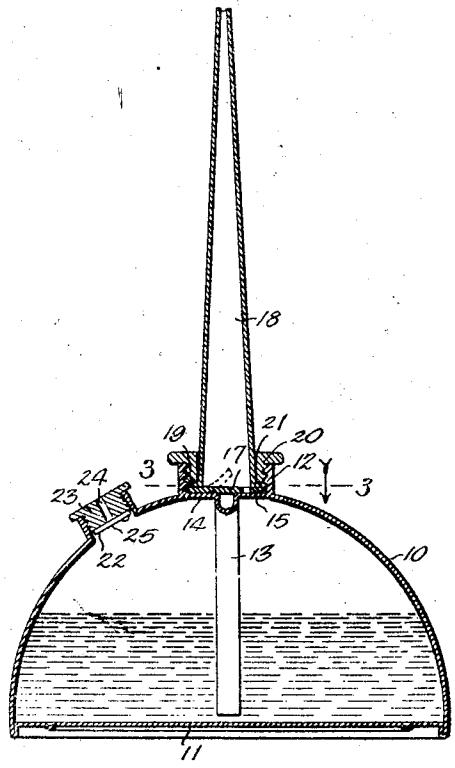
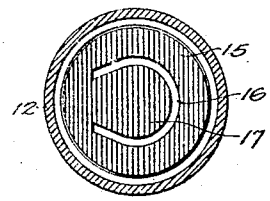


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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OIL CAN.

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To all whom it may concern:

Be it known that I, WILLIAM G. MATTHEWS, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Oil Can, of which the following is a full, clear, and exact description.

This invention has relation to dispensing containers and has particular reference to an improvement in oil cans.

The outstanding object of the present invention is to provide an oil can by means of which the contents may be forced therefrom irrespective of the position of the can and which will effectually operate to insure the dispensation therefrom of the entire contents.

As a further object the invention contemplates an oil can of the pump type which is extremely simple in its construction, inexpensive to manufacture, and which is highly efficient in its purpose.

With the above recited and other objects in view, the invention resides in the novel construction set forth in the following specification, particularly pointed out in the appended claims and illustrated in the accompanying drawings, it being understood that the right is reserved to embodiments other than those actually illustrated herein to the full extent indicated by the general meaning of the terms in which the claims are expressed.

In the drawings—

Figure 1 is a side view of an oil can constructed in accordance with the invention, with parts broken away and shown in section to disclose the underlying structure.

Fig. 2 is a sectional view therethrough taken approximately on the line indicated at 2—2 in Fig. 1.

Fig. 3 is a horizontal sectional view taken approximately on the line indicated at 3—3 in Fig. 2.

Referring to the drawings by characters of reference, the can includes a body 10 which constitutes a reservoir for the oil or other contents, the said body being of substantially semi-spherical formation and provided with a flexible resilient bottom wall 11 of the common type which operates upon inward flexing to exert an internal pressure for discharging the contents. The can body 10 is provided with a cylindrical neck or boss 12 which is interiorly threaded and which communicates with the interior of the can body or reservoir through the side of a discharge tube 13, the upper end of which is closed and the lower open end of which is disposed adjacent the bottom of the can at one side thereof, said tube following the contour of the interior of the can. The neck 12 is provided with a bottom wall 14 and affords a cup shaped receptacle within which is fitted a disk 15 having a concentric semi-circular slot 16 which provides a hinged flap valve centrally thereof. The disk 15 is preferably constructed of a resilient flexible material such as rubber, leather, or the like. A spout 18 having an outturned flange 19 is next arranged within the neck 12 to overlie the disk 15, the marginal portion of which constitutes in effect a gasket. The internal diameter of the lower end of the spout is of sufficient size to permit of free upward flexing of the flap valve 17 which is designed upon downward movement to close the upper communicating end of the tube 13. A retaining nut 20 having an interiorly threaded portion for interengagement with the internally threaded neck is provided with a central opening 21 which receives the spout 18. The retaining nut engages the flange 19 of the spout and serves to clamp the same together with the marginal portion of the disk 15 against the bottom wall 14 of the neck. Under this arrangement it will be noted that an internal pressure on the body of the can will serve to flex and open the outwardly opening check valve 17, while pressure in the opposite direction will serve to close the same. In order to provide means to permit of the intake of air to the interior of the body and also to allow for refilling thereof, a filling opening 22 is provided on the body at one side of the neck 12, and a closure plug 23 is threaded into the filling opening and said closure plug is provided with a vent 24 which is normally closed by an inwardly opening check valve 25.

In use and operation inward flexing of the bottom 11 will increase the internal pressure in the body 10 above atmospheric pressure, thereby forcing a quantity of the contents through the tube 13 thus opening the outwardly opening check valve 17. When the bottom wall 11 flexes back to normal position the internal pressure is lowered below atmospheric pressure thereby closing the

check valve 17 and opening the check valve 25. Repeated flexures of the bottom 11 will effect a compression of the air within the can body above the oil or other contents to force the same through the tube 13 and check valve 17 whereby the contents may be dispensed with the spout in an upright position or in approximately a horizontal position, providing the lower open end of the tube 13 is submerged in the oil or contents. When the disk 15 becomes worn or otherwise unfit for further use, it may be readily removed and replaced by a new one by simply removing the nut 20 and the spout. It will be further observed that due to the proximity of the inlet end of the tube 13 to the bottom and side of the can body, practically the entire contents may be dispensed therefrom.

I claim:

1. An oil can including a body having an outlet and a flexible resilient portion constituting a diaphragm for alternately raising and lowering the internal pressure of the body, an inwardly closing and outwardly opening check valve controlling said outlet, a discharge spout adapted to communicate with the outlet, and a common means for connecting the discharge spout with the body and for retaining the said check valve in relative position between the outlet and spout, and an inlet provided with an inwardly opening and outwardly closing check valve.

2. An oil can comprising a body having a flexible resilient portion constituting a diaphragm for alternately effecting the raising and lowering of the internal pressure thereof, said body having an outlet opening, an annular interiorly threaded boss on the body surrounding the outlet opening, a conduit in said body extending from the inlet opening to a point adjacent its bottom and one side thereof, a disk-like member seated in the bottom of the boss having a hinged resilient central portion constituting a flap valve overlying the outlet opening, a spout having an annular outturned flange seated in the boss and upon the marginal portion of the disk-like member, a nut threaded into said boss, surrounding the spout and engaging its flange for clamping the same together with the disk-like member in said boss, a filling nozzle, a removable closure plug in the filling nozzle, said plug having a passage therethrough constituting an inlet, and an inwardly opening outwardly closing check valve for controlling said inlet opening.

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