(No Model.)

A. W. KNITTEL.

OIL CAN.

No. 528,946. Patented Nov. 13, 1894.

FIG. 1.

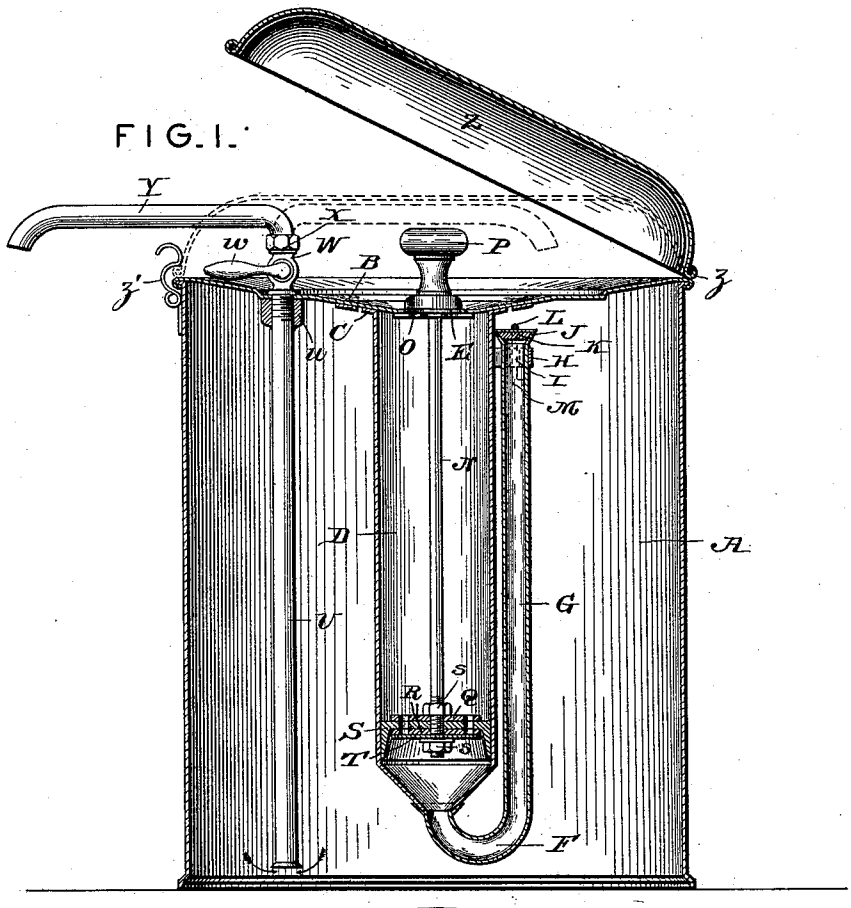
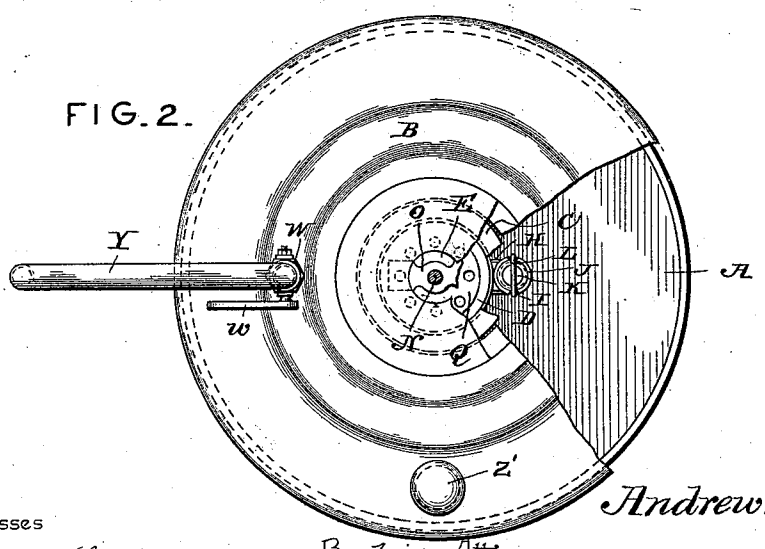


FIG. 2.



Witnesses
Harry L. Amer.
D. P. Wadsworth.

Inventor
Andrew W. Knittel.
By his Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ANDREW W. KNITTEL, OF NEW CASTLE, PENNSYLVANIA.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 528,946, dated November 13, 1894.

Application filed March 10, 1894. Serial No. 503,161. (No model.)

To all whom it may concern:

Be it known that I, ANDREW W. KNITTEL, a citizen of the United States, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented a new and useful Oil-Can, of which the following is a specification.

This invention relates to oil cans; and it has for its object to effect certain improvements in oil cans of that character which are provided with means for ejecting the liquid under air pressure or by pneumatic force to facilitate the filling of lamps and other receptacles with great ease.

To this end the main and primary object of the present invention is to construct an oil can of the character noted which shall be entirely fire proof as having no open passages or spaces communicating with the interior oil chamber, and which shall be epuipped with novel and efficient means for charging, and keeping charged, the can with air, and also for the convenient location of the outer working parts of the can, which, when the can is not in use, are entirely incased out of the way of accident.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a central vertical sectional view of an oil can constructed in accordance with this invention. Fig. 2 is a top view partly in section with the hinged lid or cover removed.

Referring to the accompanying drawings, A represents a liquid and air tight tank or receptacle preferably formed in a cylindrical shape and made in different sizes, and said tank is provided at the top thereof with the centrally depressed or dished top plate B, that incloses the can in at the top and forms a support for the upper flanged end C, of the inwardly depending air or pump cylinder D. The pump cylinder D, is suitably secured at its upper flanged end to the under side of the dished top plate B, and communicates at its upper end with the central top inlet openings E, formed at the center of said top plate for the admission of air into the said cylinder. The cylinder D, depends within the tank A, to a point near the bottom thereof, and has connected to the lower air discharging end thereof, the lower curved end F, of the vertical pump discharge pipe G.

The vertical or upright pump discharge pipe G, is arranged parallel with and in close proximity to the outside of the pump cylinder D, and extends upward within the tank to a point in close proximity to the dished top plate B, and near its upper end the pump discharge pipe G, is securely braced to the cylinder D, by the band or loop H, embracing the same and attached to the cylinder, said band or loop being provided at opposite sides of the pump discharge pipe with the vertical guide eyes or openings I. The extreme upper end of the pipe G, is flared to form a beveled valve seat J, into which snugly fits the beveled check valve disk K, which moves upward to admit air into the tank, but closes down within the seat J, to cut off the return of the air into the pump pipe. The beveled check valve disk K, is encircled at the top by the valve bail L, the opposite side portions of which slide loosely in the guide eyes or openings I, of the band H, and terminate at their lower extremities in the flanged stops M, that are adapted to engage under opposite side portions of the band H, and limit the upward movement of the valve K, to insure the reseating of the same in the seat J, after the pumping operation has been discontinued.

The pump cylinder D, accommodates therein the vertically reciprocating piston rod or stem N, which is mounted to slide in the perforated guide plate O, attached to the top plate B, at the under side of the opening E, and to the upper end of said piston rod or stem is secured a handle knob P, which is grasped by the hand to reciprocate the rod N, so as to work the piston head Q, secured to the lower end of the piston rod. The piston head Q, comprises the perforated head plates R, fitted onto the lower threaded end of the rod N, and clamped onto a correspondingly perforated cup or flanged packing disk S, by the clamping nuts *s*, engaging the threads of the rod N, above and below said plate, and clamped in position by the lower one of said nuts over the lower of the plates R, is a flexible valve disk T, which is adapted

to cover and uncover the aligned air passages or openings in the piston head, as the same is reciprocated.

By working the pump just described, the upper part of the can or tank may be charged with air under pressure, and by discontinuing the pumping operation the air will remain in its compressed state within the tank by being prevented from escaping by the closing of the valve K. The air which has been forced into the can or tank will, until it has completely expanded, tend to force the liquid up through the oil discharge pipe U. The oil discharge pipe U, is fitted at its upper end in the pipe openings *u*, formed in the top plate B, and has its lower end extend very near to the bottom of the tank to provide for relieving the same almost entirely of its contents. A controlling valve W, is connected to the upper end of the pipe U, above the top of the oil tank, and is provided with a short lever handle *w*, for opening and closing the same, and loosely jointed at X, to the valve W, is one end of the swinging nozzle pipe Y, which is adapted to be swung out over the edge of the can when used in filling lamps or other receptacles, but, when not in use, the said nozzle pipe is adapted to be swung inward directly over the top plate of the can and the handle knob of the pump piston, so as to be enclosed by the tank lid or cover Z. The tank lid or cover Z, is hinged to one top edge of the tank A, at *z*, and is adapted to have its free edge engaged by the spring catch *z'*, secured to the correspondingly opposite top edge of the tank, as clearly illustrated in dotted lines in Fig. 1.

By reference to the drawings, it will be seen that the swinging nozzle pipe, for the main length thereof, is disposed in a horizontal plane to provide for the positioning of the same over the top of the tank, and said lid or cover being raised or bowled is designed, together with the dished top plate B, to close in a space which accommodates both said nozzle pipe and the handle knob of the pump piston, so as to protect these parts and prevent fire or any foreign matter gaining access to the interior of the can.

The can is filled through the capped filling opening Z', in the top plate B, and, in operation, after the can has been charged with air as described, it is simply necessary to open the valve W, and the oil will flow out of the pipe Y, automatically, to fill lamps or other receptacles.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In an oil can, the combination of the can body provided with a central air inlet in its top, a pump cylinder secured to the top of the can and depending therein, an upright pump discharge pipe arranged at one side of the cylinder and connected at its lower end to the lower end of the cylinder and provided at its upper end with a flared valve seat, a band encircling the pump discharge pipe near its upper end and provided with guides at its opposite sides, a beveled check valve disk arranged to be seated in said flared valve seat, a valve bail encircling the top of said check valve and provided with opposite side portions sliding in the guides of said band and terminating at their lower extremities in flanged stops adapted to engage under said band, the valved piston arranged to work within the pump cylinder, and the oil discharge pipe projecting through the top of the can body and extending therein to a point near its bottom, substantially as set forth.

2. In an oil can, the combination with the liquid and air tight tank having a central air inlet opening in its top, a pump cylinder arranged within the tank under said central air inlet opening and having a valved discharge pipe opening into the tank near its top, a perforated guide plate attached to the top of the tank across the central air inlet opening, a piston rod working in said perforated guide plate and having a lower threaded end, perforated head plates clamped onto the threaded end of the piston rod, a correspondingly perforated cup or flanged packing disk arranged between said head plates, a flexible valve disk fitted onto the lower one of said head plates, and the oil discharge pipe leading out of the tank from a point near its bottom, substantially as set forth.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ANDREW W. KNITTEL.

Witnesses:
JOHN J. VAN GORDER,
J. E. VAN GORDER.