(No Model.)

O. H. WARREN.

OIL CAN.

No. 333,575. Patented Jan. 5, 1886.

FIG 1

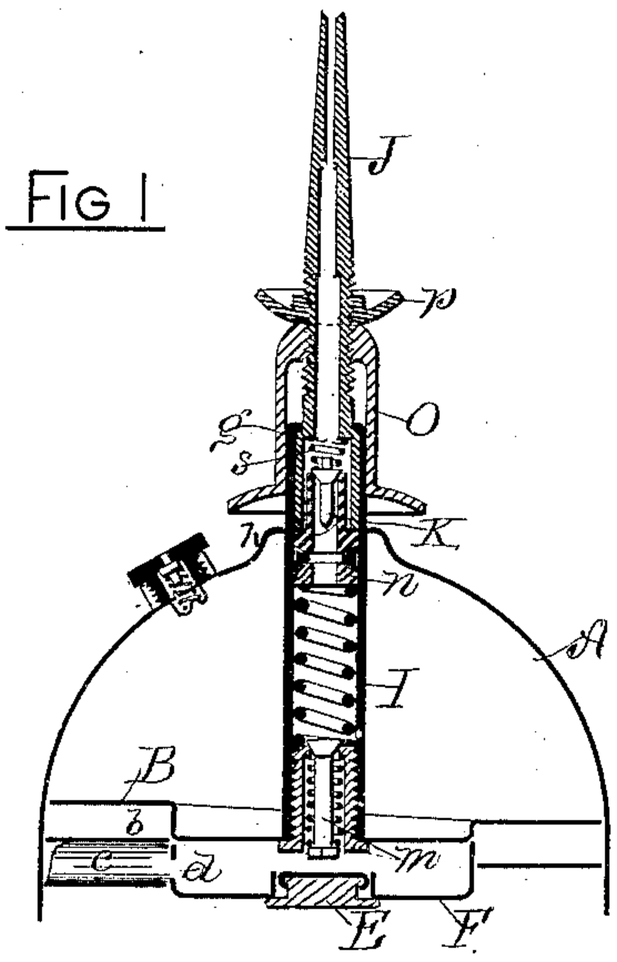


FIG 2

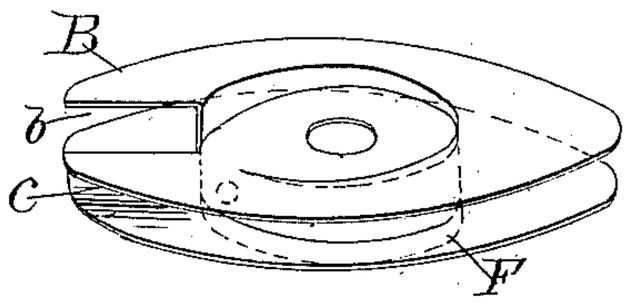


FIG 3

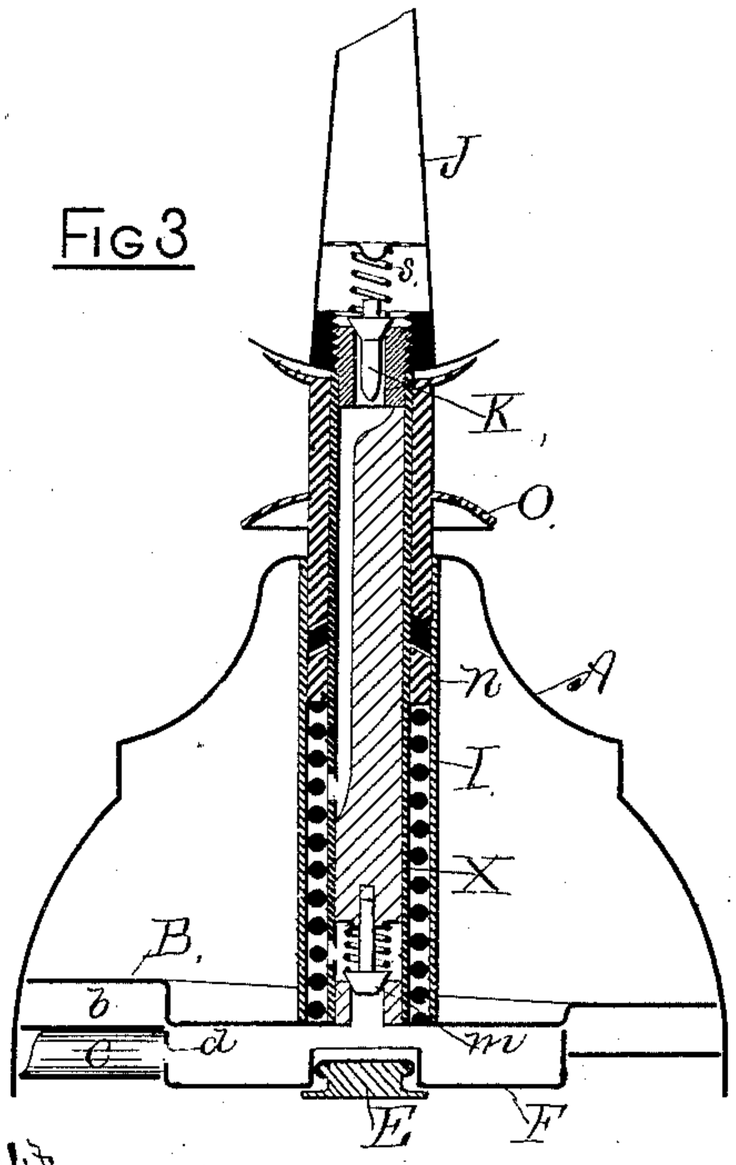
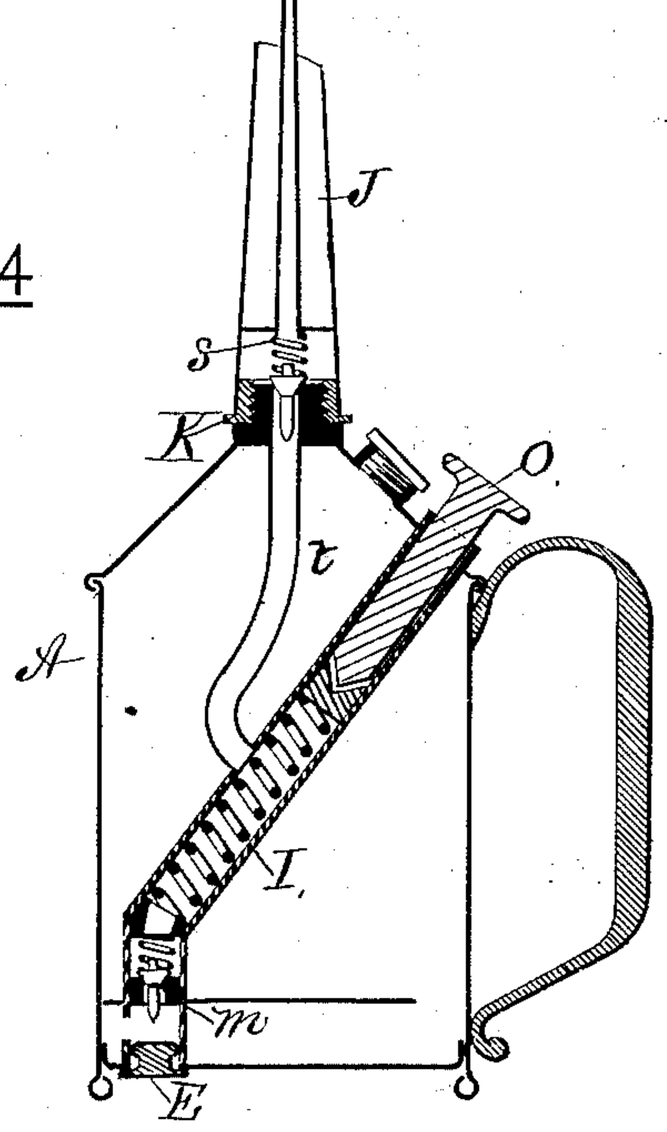


FIG 4



Witnesses

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ORRIS H. WARREN, OF SYRACUSE, NEW YORK.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 333,575, dated January 5, 1886.

Application filed May 8, 1885. Serial No. 164,772. (No model.)

To all whom it may concern:

Be it known that I, ORRIS H. WARREN, of Syracuse, county of Onondaga, State of New York, have invented certain new and useful Improvements in Constructing Oil-Cans, of which the following is a specification.

My present improvements are based on my former patented invention dated February 10, 1874, by which I adapt my invention to certain styles of hand-oilers by the introduction of new devices for perfecting the action of the same, by which I am enabled to gage with accuracy and certainty the quantity of oil delivered, and prevent all drip in stopping off the flow. I attain these objects by the mechanism shown in the accompanying drawings, in which—

Figure 1 is a vertical section through the center of the can. Fig. 2 is a detached view of the "retainer." Figs. 3 and 4 show modifications in construction.

The reference letters are the same in all the figures.

A represents the exterior of the shell or oil-fountain, of any ordinary and convenient figure. At the base of this oil-holder I form a spiral or helical tube, B, surrounding a central chamber, F, the top and bottom plates of which can be affixed at their circumference to the outer shell, A, forming at the bottom of the oil-fountain what I denominate the "retainer." This spiral tube B opens into the oil-reservoir above at *b*, and terminates below in a closed end at *c*. A small aperture, *d*, through the side of chamber F, opens a communication between them. The top and bottom of chamber F are horizontal or perpendicular to the plane of the section, Fig. 1. By this arrangement when the oil-reservoir is filled and set on its base the chamber F of oil-retainer is filled through the spiral tube B, the inclination of which facilitates the discharge of air from those parts, and insures their filling with oil, by which means the retainer is always ready to furnish a supply of oil to the pump when held in any position. The top of the chamber F is perforated, over which perforation the lower end of the pump-barrel I is affixed, and extends upward through the top of the can. The top of the barrel I is contracted by a flange, *g*, projecting inward. I insert from the under side up through pump-barrel I a discharge tube or stem, J, of any desired length, having an enlargement near its lower end that strikes the flange *g* at the top of the pump-barrel, which holds it. Into the lower enlarged end of the tube J a short tube, K, is inserted, the lower end of which is enlarged, and comes in contact with the lower end of the stem J. At the top of tube K there is a valve-seat and valve. This valve is held down by a light spiral spring, *s*. Below the bottom of tube K there is a ring-follower, N, between which and the bottom of tube K a ring-packing is placed. Into the bottom of the pump-tube I a valve-seat, *m*, is placed, on which the foot-valve is seated and held down by a light spring. Between the top of valve-seat *m* and the follower *n* there is a strong spring bearing up against follower *n*, and holding it and the parts above it up against their bearings. An opening, L, in the bottom of the chamber F, directly under the base of the pump-tube, gives access to the above-described parts, through which they can readily be removed. This opening is closed by a cap at E. A finger-piece, *o*, is screwed onto the stem J about the top of the pump-tube, from which a cap projects downward over said pump-tube, as seen in Fig. 1, and above it a jam-nut, *p*, is screwed down to hold it in position. By raising or lowering the finger-piece *o*, the length of stroke of the pump is regulated. The finger-piece *o* and the stem J are elevated by the spring *s* between the parts *n* and *m*, and depressed by bearing on the finger-piece *o*, by the adjustment of which on stem J the quantity of oil discharged is regulated for each impulse, and which can be regulated down to a single drop. By means of the sudden stoppage at the end of the stroke, when the finger-piece strikes the shoulder at *h*, the oil is thrown entirely free from the end of the tube J, preventing all dripping of oil therefrom. The can A is provided with a valved vent that allows the air to enter the reservoir as the oil is pumped out. It is obvious that this arrangement and construction of parts determines with accuracy the amount of oil delivered, and prevents all waste.

It is obvious that the structural arrangement of parts may be changed without changing the principal features of my positive-ac-

tion-pump oil-can, with an oil-retainer, that constitutes my new devices. One of these modifications is shown in illustration at Fig. 3. Where there is a central tube, *x*, joined to the top of the chamber F, constructed as in Fig. 1, this tube extends up and has the stem J affixed thereto, at which point there is a valve and valve-seat, *k*, above the top of the oil-reservoir. The pump-barrel I surrounds the tube X, and is affixed to the top of the retainer F below and to the top of the can above, forming an annular pump-chamber between tube X and barrel I, in which an annular piston works, having a proper packing at its lower end, with a spiral spring below to force the piston upward, the piston being pressed down by the finger-piece *o*. In the center tube the space is partially filled by a core, of cork or other light material, so shaped as to occupy most of the space, but allowing a sufficient passage from the oil-retainer F to the stem J. There is a foot-valve in the bottom of the tube X, as in the pump-barrel, Fig. 1. The elevating of the annular piston fills the space below it from the retainer through openings in the tube X above the foot-valve, and its depression forces the oil into the inner tube and up through stem J.

Fig. 4 represents a modified oil-can having a handle on one side, so that when used it will always be inclined one way. The retainer in this case may be formed by a simple diaphragm, *f*, affixed to the sides of the can above the bottom, forming the retainer below it with a small opening on the side next the handle, communicating with the reservoir above. A pump is located in the reservoir in an inclined position, communicating with the retainer on the side opposite to the handle. Its upper end projects through the shell A over the handle and has a thumb-piece at *o* for forcing the piston of the pump down to discharge the oil that flows up through the tube *t*, inserted in the side of the pump and extending up to the stem J, as clearly seen in the Fig. 4.

Having thus described my improvement in the construction of oil-cans, I claim—

1. In a machine-oiler, the combination of a force-pump with an oil-retainer, substantially as herein described, the foot-valve of the pump controlling the passage connecting the pump barrel or chamber and the oil-retainer, there being an opening between the oil-retainer and the oil-reservoir for the admission of oil to the retainer, as and for the purposes specified.

2. The adjustable finger-piece, in combination with the piston of the force-pump in an oiler and attached onto or about the stem of the can, as described.

3. The chamber F and helical tube composing an oil-retainer, constructed substantially as and for the purposes specified.

4. In combination with the oil-retainer and force-pump, the opening E, through the bottom of the chamber F, opposite the base of the force-pump, for giving access to the working parts of the pump, as specified.

ORRIS H. WARREN.

Witnesses:
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