(No Model.)

E. ROBARDS.

OIL CAN.

No. 588,011. Patented Aug. 10, 1897.

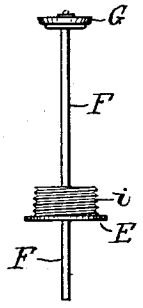


Fig. 2.

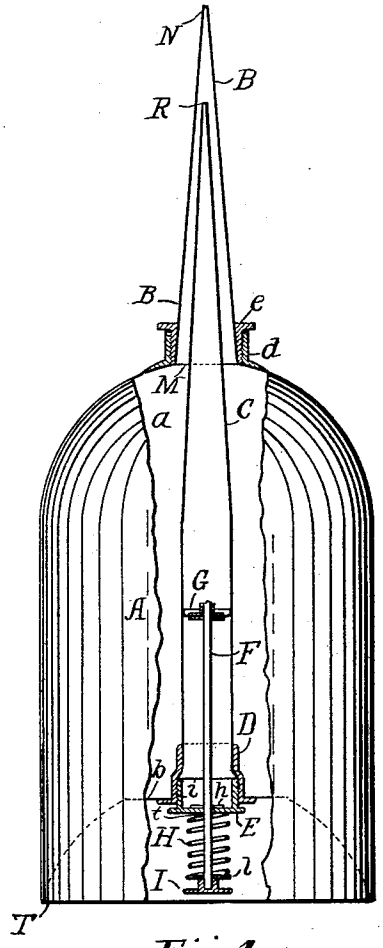


Fig. 1.

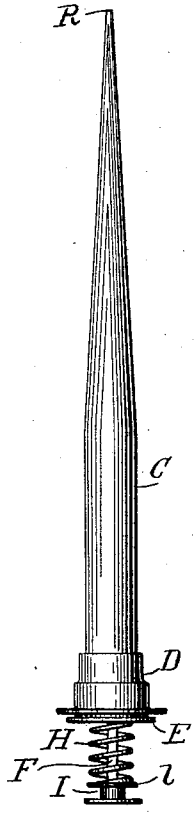


Fig. 3.

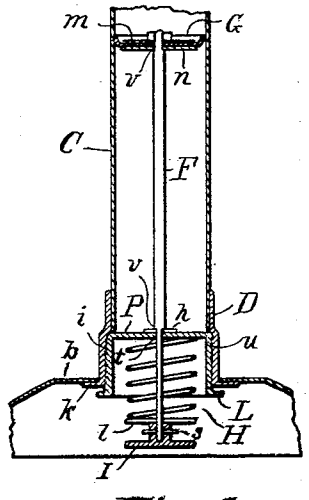


Fig. 4.

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UNITED STATES PATENT OFFICE.

EDWARD ROBARDS, OF STILESVILLE, INDIANA.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 588,011, dated August 10, 1897.

Application filed March 13, 1897. Serial No. 627,422. (No model.)

To all whom it may concern:

Be it known that I, EDWARD ROBARDS, a citizen of the United States, residing at Stilesville, in the county of Hendricks and State of Indiana, have invented certain new and useful Improvements in Oil-Cans or Oilers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of oil-cans which are used for the purpose of dropping lubricating-oil onto the wearing parts of machinery, being commonly known as "machine-oilers;" and it consists in certain devices and the combination thereof by which the discharge or flow of oil from the can is effected and controlled, as will be more fully described hereinafter and pointed out in the claims.

The objects of my invention are to provide a hand-oiler of the class indicated which shall be the means of preventing the waste of oil, which shall be positive in operation, so as to control the amount of oil to be discharged or dropped, which shall be free from complicated or delicate parts that would be liable to disarrangement, and the devices of which shall be applicable to all styles and sizes of cans. I fully attain these objects in my invention, which is, furthermore, simple in design, cheaply constructed, has no exposed parts liable to be broken or damaged, and is durable and economical in use.

Referring to the drawings, Figure 1 represents an elevation of an oiler in which a portion is broken away, showing my devices applied thereto in a vertical central sectional view; Fig. 2, a view of plunger and cap detached; Fig. 3, an elevation of air-tube and connections detached from oiler, and Fig. 4 an enlarged view of details of portions embracing a modified form of cap at bottom of air-tube.

In the drawings, A designates the body of an oiler; B, the spout thereof; C, the air-tube; E, the cap; F, the plunger, and G the plunger-head or piston; H, the reversing-spring, and I the push-button.

In constructing my invention I make the body A of any desired metal and of suitable size and design as may be best suited for the various uses for which it may be demanded. The bottom *b* is tightly attached to the bottom edges T of the sides of the body and is sunken or dished upward a suitable amount to provide clear space for the operating devices which protrude below the bottom. The center of the bottom has a suitable opening to receive the air-tube C, which has at its lower end secured thereto a collar D, having a flange *k*, which is soldered or otherwise secured to the bottom.

In lieu of the collar the lower end of the air-tube may have an integral flange, by which it may be secured to the bottom. The spout B is made in the usual manner, having either a straight or bent point, and is preferably provided with a collar *e* at the bottom adapted to screw into a suitable collar *d*, secured to the top of the oiler. The air-tube C is cylindrical and has parallel sides from the bottom upward a short distance, while the upper portion is tapering to a point, having a small orifice R. It is inserted through the bottom of the can and extends up through the interior *a* and in to the spout B to near its upper end, but does not fill the interior thereof, leaving a passage M entirely around it.

The parallel portion of the air-tube is smooth inside, in which the plunger F and head G travel. The head G is composed of a flexible cupped packing having a plate *n* below and a plate *m* above and all suitably secured, as by a threaded nut, to the plunger F. The latter may have a shoulder *v*, against which the head may be forced and secured. The collar D or lower end of air-tube is provided with internal screw-threads *u*, into which is inserted the cap E or L, having external screw-threads *i* and a central opening *t*, into which the plunger F is loosely inserted. The two caps shown are practically the same except that the cap E has its inclosing plate at the front and in the cap L it is (P) at the bottom, requiring less dish in the bottom of the can-body. The cap may have its front flange milled or made hexagonally, as desired.

The plunger F is provided with a collar *h*, which may be pressed tightly thereto or rest against a shoulder *v*; or when the body of the plunger is enlarged to form the shoulders *v v* the collar may be dispensed with. The lower end of the plunger F is inserted through the opening *t* of the cap. The head G is then inserted in the tube F. The spring H is placed over the end of the plunger and seated against the plate or head of the cap, the latter being then screwed into its place in the end of the air-tube. The spring-seat plate *l* is then placed over the end of the plunger and against the spring. The plate *l* may be made integrally with the push-button I, which has a socket fitting over the end of the plunger, the latter being secured therein by any suitable means, preferably by a removable pin *s*, inserted into suitable holes.

In operation, the can being supplied with a quantity of oil, the unfilled portion and the upper end of the air-tube above the plunger-head G becomes filled with air. The can then being turned with the spout downward, in the usual position for oiling, the thumb of the hand holding the oiler is placed against the push-putton I. As the oil fills the spout around the air-tube the air in the latter is imprisoned, and as no air can get into the bottom of the body as a vent the oil will not flow from the spout, to be wasted before reaching the place to be oiled. The end of the spout being placed at the oil-hole in the machine-bearing to be oiled, a slight pressure of the thumb on the push-button compresses the air in the tube slightly, forcing a small quantity of air from the orifice R against the surrounding oil in the spout, forcing a few drops out through the orifice N of the spout to the desired place. Upon removing the pressure upon the push-putton the spring H causes the plunger to reverse its motion, in doing which air passes around the cupped packing of the head G, to fill the vacuum at the top of the head, when it is ready to again deliver oil. As the plunger is forced back by the spring-pressure the dropping of the oil ceases instantly, thereby avoiding waste of oil.

It will be obvious that my device has no parts that are delicate and liable to get out of order or be damaged, and the essential parts, as shown in Fig. 3, may be made and assembled complete for use and quickly applied to any of the usual styles of oiler by simply cutting a hole in the bottom and inserting and securing the air-tube by soldering.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an oil-can, the combination of a body provided with a tapering spout, an air-tube having a parallel cylindrical lower portion and a tapering upper portion and secured at its lower end to the bottom of said body, extending therethrough centrally and into said spout, a plunger having a packed head working in said air-tube, means for guiding said plunger centrally in said air-tube, and means by which said plunger is held normally at its downward limit of travel, substantially as shown and described.

2. In an oiler, the combination of a body having an upwardly-dished bottom and a tapering spout at the top thereof, a cylindrical air-tube extending through an aperture in said bottom and into said spout but not filling its interior, said tube being tightly secured at its lower end to said bottom, internal screw-threads in said tube at the bottom thereof, a cap having a central aperture and provided with exterior screw-threads fitting into said tube, a plunger working through the aperture in said cap, a push-button on the lower end of said plunger, a spiral spring interposed between said button and said cap to press the button downward, and a packed head secured to the upper end of said plunger and working in said tube, substantially as shown and described.

3. In an oiler, the combination with a body having an upwardly-dished bottom and a tapering spout centrally at the top, of the air-tube extending from the bottom through the body and into the spout thereof and secured at the lower end to said bottom, a centrally-perforated cap removably attached to the lower end of said air-tube, a plunger in said air-tube and working in the perforation in said cap, a push-button on the lower end of said plunger, a spring arranged to press said button away from the bottom of said tube, and a packed head on the upper end of said plunger and working in said tube as an air-piston, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD ROBARDS.

Witnesses:
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