(No Model.) 2 Sheets—Sheet 1.

H. F. MARANVILLE.

OIL CAN.

No. 589,735. Patented Sept. 7, 1897.

FIG. 1.

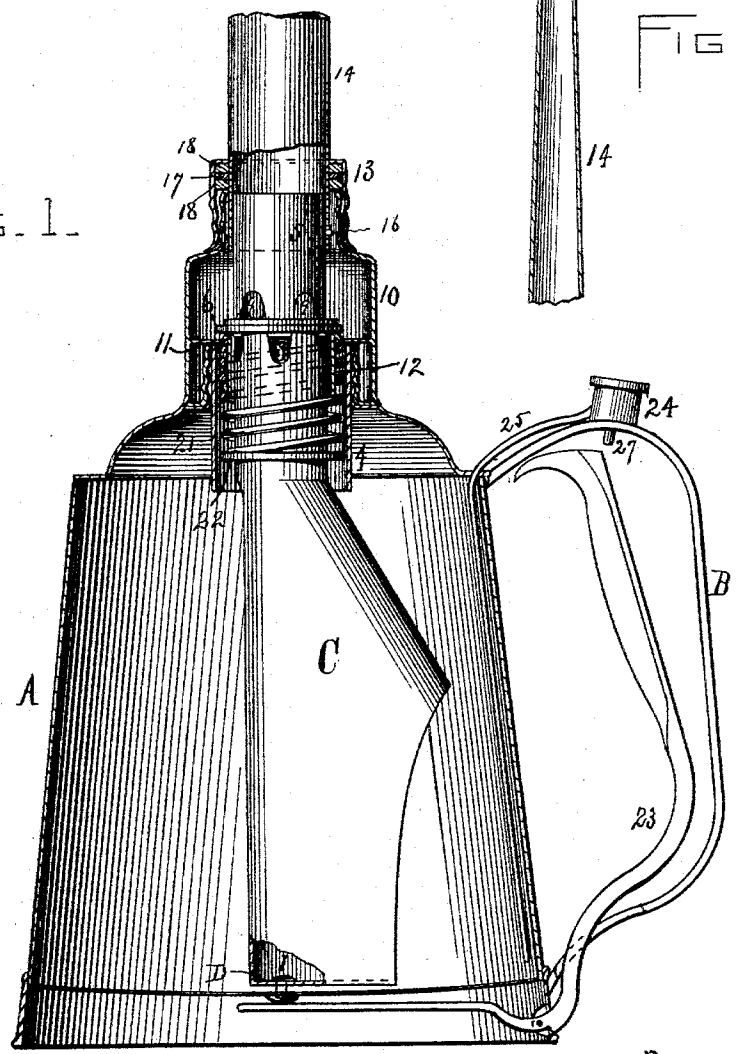


FIG. 2.

Witnesses:
H. S. Wrayne
B. H. Waine.

Inventor.
H. F. Maranville
By Burridge & Butler
Atty's.

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

(No Model.) 2 Sheets—Sheet 2.

H. F. MARANVILLE.

OIL CAN.

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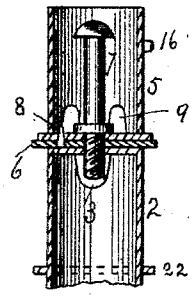


FIG. 3.

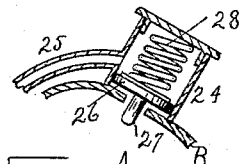


FIG. 4.

Fig. 5.

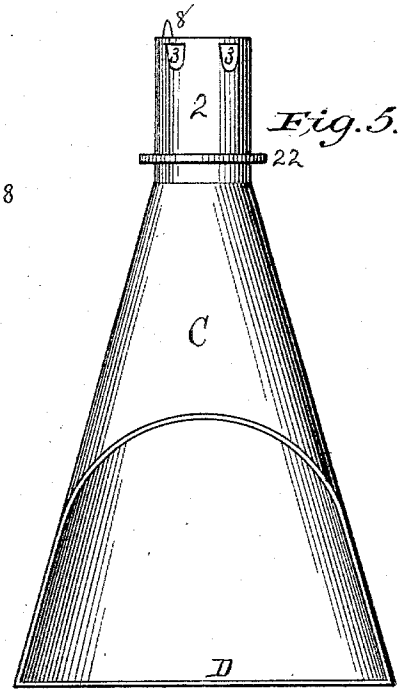
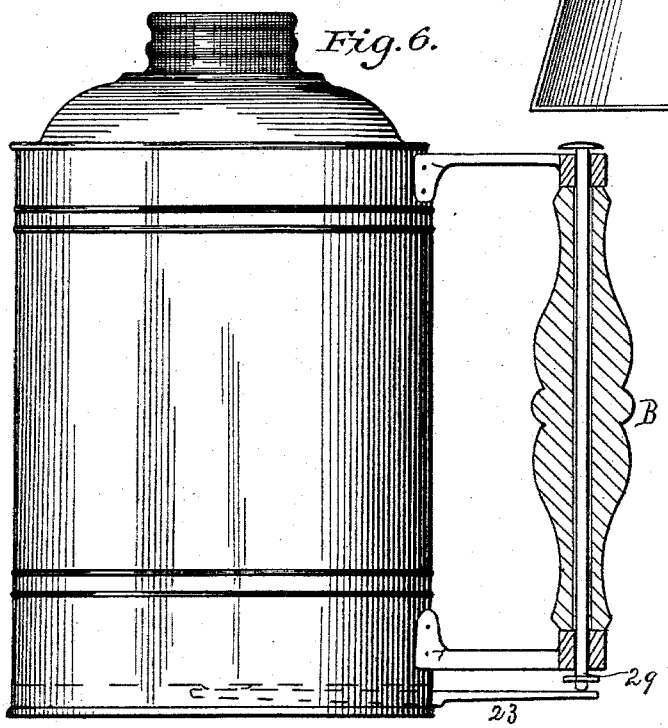


Fig. 6.



Attest:
H. S. Sprague
L. F. Marix.

Inventor.
H. F. Maranville
By Burridge & Cutter
Atty's.

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

UNITED STATES PATENT OFFICE.

HARVEY F. MARANVILLE, OF AKRON, OHIO.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 589,735, dated September 7, 1897.

Application filed August 10, 1896. Serial No. 602,234. (No model.)

To all whom it may concern:

Be it known that I, HARVEY F. MARANVILLE, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Oil-Cans, of which the following is a full, clear, and exact description.

The nature of my invention relates to oil-cans of that class commonly designated "force-feed" cans, the oil being ejected through the spout by the compression of a bulged or spring bottom, the object of this present invention being to provide means whereby the flow of oil may be regulated at the will of the operator.

To this end the invention consists, first, in the means employed for compressing the spring-bottom; second, in providing a rotatable conductor and spout; third, in providing the spout with a valve acting in conjunction with the conductor for controlling the flow of oil; fourth, in the peculiar construction of the vent, and, fifth, in the peculiar construction, arrangement, and combinations of the various parts, all as more fully hereinafter set forth, and pointed out in the claims.

That my invention may be fully understood, reference will be had to the following specification and annexed drawings, of which—

Figure 1 is a central vertical section through my improved can, the rotatable conductor and spout being in sectional elevation, the upper end of the latter being broken off. Fig. 2 is a sectional elevation of the upper end of the spout. Fig. 3 is a central vertical section through the upper end of the rotatable conductor and its extension. Fig. 4 is a central vertical section through the vent-valve case, showing the valve in elevation. Fig. 5 is a side elevation of the conductor detached at right angles to the view given in Fig. 1. Fig. 6 is a side elevation of an oil-can, the handle of which is shown in section and provided with means for actuating the compression-lever, as a modification of that shown in Fig. 1.

Like letters and figures of reference designate like parts in drawings and specification.

A represents the body of an oil-can provided with a handle B, these being of the ordinary style and construction now in general use, excepting as hereinafter specified.

C represents a conductor which has the general appearance of a cone, having a straight side and having a portion of its angular side cut away, as shown. This conductor is provided with a bottom D, by means of which and a pin 1 it is pivotally secured to the bottom of the can A in such manner that the conductor may be easily rotated or turned within the can. The upper end of this conductor terminates in a cylindrical neck 2, closed at the upper end, but provided with a series of openings 3 in the wall of the cylinder. This cylindrical portion of the conductor is received within the neck 4 of the can, the upper end of such neck being exteriorly threaded to engage with a spout or cap. A removable extension to the neck 2 consists of a cylinder 5, closed at the lower end. A valve-disk 6 is interposed between the adjacent ends of the ports 2 and 5, and they are secured together by means of a threaded bolt 7, while a pin 8, extending upward from the head of the neck 2, through the valve-disk and lower end of the part 5, compels them to move simultaneously, as hereinafter explained. Openings 9 are made in the side of the extension 5 near the lower end.

10 represents a supplemental chamber extension to the neck of the can, and it is provided at its lower end with a female thread for the purpose of engaging the threaded neck thereof. This chamber 10 is provided with a diaphragm 11, having a central opening provided with a depending flange 12, which, when the parts are assembled, extends down into the neck 4 and around the neck 2 of the conductor, as shown in Fig. 1, the upper edge of said flange 12 forming a valve-seat upon which the valve 6 seats itself in the operation of the device.

21 is a spring the lower end of which rests upon the flange 22 of the conductor, its upper end finding resistance against the diaphragm 11, and it is for the purpose of retaining the movable parts at their lowest positions, keeping the valve 6 closed, while at the same time it reinforces the spring of the bottom of the cam.

The upper end of the chamber 10 terminates in a threaded neck to receive the threaded sleeve 13 upon the lower end of the spout 14. This spout is provided at its lower extremity

with an open-ended slot which is designed to engage with the pin 16, projecting from the side of the extension 5. Near the lower end of the spout is an annular flange 17, upon either side of which is placed a washer 18, and these are received within the sleeve 13, thereby admitting the spout to be turned within the sleeve, while they prevent the egress of oil around the outside of the spout.

As spouts are generally formed of tin their smaller ends are liable to become jammed and bent out of shape. To prevent this, I solder or otherwise secure in this end of the spout a brass or other suitable tubing 20.

23 represents substantially an exaggerated bell-crank lever which is fulcrumed to the lower edge of the can, its shorter arm extending beneath the bottom thereof and in close proximity with its center, while its longer arm passes upwardly through a slot in the handle in such position that it may be readily grasped by the hand.

24 represents a vent-chamber which is mounted upon the handle, and from this chamber a vent-pipe 25 leads down into the can.

26 is a vent-valve located within the chamber 24, having a valve-pin 27 projecting downwardly therefrom and loosely through an opening in the handle, a spring 28 retaining said valve below the mouth of the vent-pipe.

In some constructions it may be desirable to employ the device shown in Fig. 6, wherein the compression-lever 23 is arranged to be operated by means of a thumb-pin 29, passing down through the handle.

The top of the can may be provided with any suitable filling-hole.

The parts being assembled substantially in the manner shown and described, the operation is as follows, presuming that oil has been put in the can, and it being first observed that the spout points from the rear of straight wall of the conductor, while the open or cut-away portion of the latter is toward the handle, the parts being in such position for ordinary use: The operator takes up the can by the handle, his hand also grasping the lever 23. After the spout has been placed at the point it is desired to lubricate by compressing the lever the short arm of such lever forces in the bottom of the can, and such movement compels the conductor and its attached parts to slide forward and thus raise the valve 6 from its seat, allowing oil to flow out of the conductor through the holes 3, through the valve-opening into the chamber 10, and thence into the spout through the openings 9, and from which it finds exit at the nozzle. Upon releasing the lever the combined action of the spring 21 and the spring of the bottom causes the parts to assume their original and normal positions, closing the valve, and thus completely shutting off the flow of oil. If it is desired to have a continuous flow of oil, the operator compresses the lever until its free end strikes against the pin 27 of the valve 26 and raises the latter above the mouth of the vent-pipe 25, air thus being admitted around the valve-pin into the valve-chamber and thence through the pipe 25 into the bottom of the can, but immediately upon releasing the lever the flow of oil is again stopped, as before. The operator will soon learn that he can largely regulate the flow of oil by the manner in which the lever is actuated.

If it is desired to oil some part of machinery or shafting that cannot conveniently be reached with the parts in position shown in Fig. 1, the spout may be turned to the right or left, and by the connections hereinbefore named the conductor is also turned so that in use the open side of the conductor is always up.

What I claim as my invention is—

1. In an oil-can, an interior conductor rotatably secured to the bottom of said can and having a flanged neck engaging the neck thereof, a removable spout adapted to engage with the neck of said conductor, a spring surrounding the neck of the conductor, and an actuating-lever, the parts being constructed, arranged and operating substantially in the manner and for the purpose set forth.

2. In an oil-can, an interior conductor rotatably secured to the bottom of the can and having a flanged neck engaging the neck thereof, a spring surrounding the neck of the conductor, a vent valve and pipe, and an actuating-lever arranged to compress the bottom of the can and open the valve, substantially as and for the purpose set forth.

3. In an oil-can, an interior conductor rotatably secured to the bottom of said can and having a flanged neck engaging the neck thereof, a spring surrounding the neck of the conductor, a removable cylindrical extension to said conductor a valve-disk, an extension-chamber having a seat for said valve-disk, and a removable and rotatable spout, substantially as and for the purpose set forth.

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

HARVEY F. MARANVILLE.

Witnesses:
H. S. SPRAGUE,
L. H. WAIN.