

(No Model.)

W. C. WINFIELD.
OIL CAN.

No. 520,871.

Patented June 5, 1894.

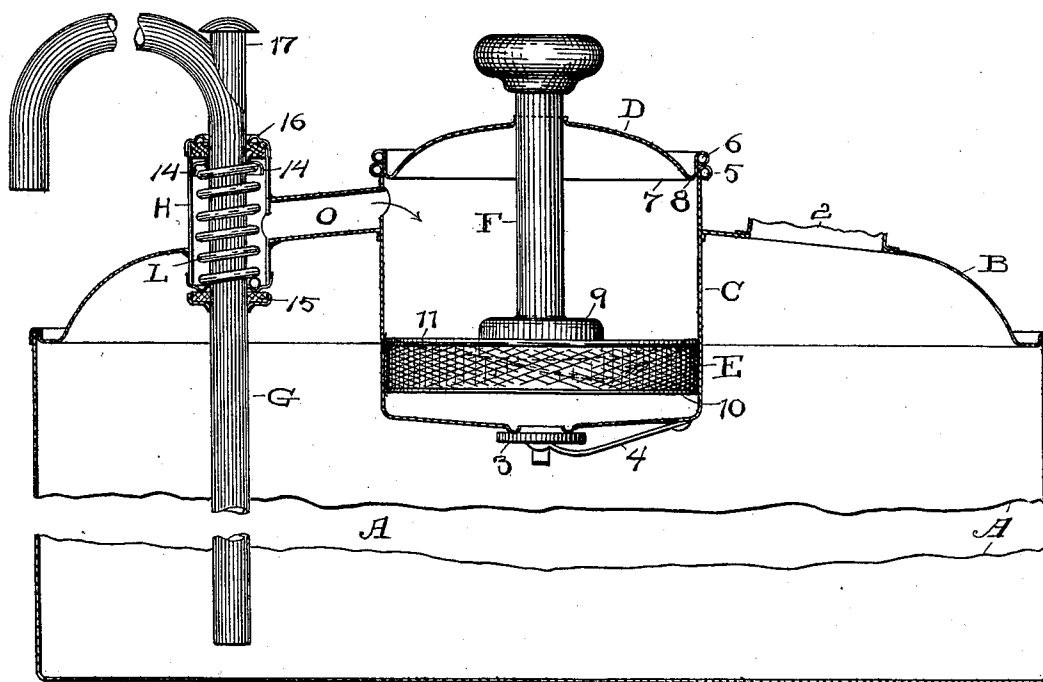


Fig. 1

Fig. 3.

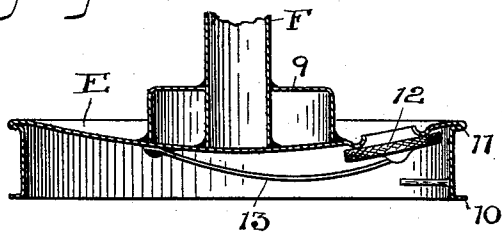
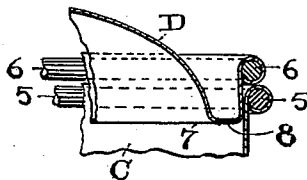


Fig. 2.



ATTEST.
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UNITED STATES PATENT OFFICE.

WILLIAM C. WINFIELD, OF WARREN, OHIO, ASSIGNOR TO THE WINFIELD MANUFACTURING COMPANY, OF SAME PLACE.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 520,871, dated June 5, 1894.

Application filed February 9, 1894. Serial No. 499,590. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WINFIELD, a citizen of the United States, residing at Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Oil-Cans; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to oil cans, and the invention consists in an oil can provided with an air compressor in its top or cover and a discharge tube with an air vent chamber through which the air pressure in the can is relieved, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical central sectional elevation of my improved oil can and its attachments and having the center of the can transversely broken out so as to shorten the figure. Fig. 2 is an enlarged view in section of a part of the top or cover and a part of the top of the can, and showing the construction and relation of the cover and can, all as hereinafter more fully described. Fig. 3 is a central sectional elevation of the piston in the compressor and enlarged so as to more clearly bring out its construction.

A represents the can, and B the can cover or top. This cover is permanently fixed upon the can and has the usual opening —2— through which the can is filled.

C represents the compressor cylinder and D the cap or cover thereof. The cylinder C is seamless and drawn to the desired shape in a suitable die, and has a central outlet opening in its bottom closed by the valve —3— which has a spring shank —4— to hold it normally in closed position. The edge of the cylinder about its top is curled and provided with a wire —5— which forms a perfectly true and smooth finish. The edge of the cover has a like curl and wire —6— therein, which rests upon the curled edge of the cylinder C when the cover is in closed position, and within this curled edge of the cover and fitting around the inside of the cylinder C is a depression —7— in which are one

or more inlet openings —8—. It will be noticed that the cylinder C is relatively small as compared with the size of the can, and that it extends only a short distance below what is properly the upper edge of the can itself, and stands wholly above the normal oil line when the can is full.

The piston E is provided with a stem or handle F by which the piston is operated, and a suitable strengthening and supporting boss —9— is employed to make a firm fastening for the handle or stem upon the piston. The piston itself, though serving a common function, is of a novel construction and is made from a single sheet of metal drawn into the desired shape. The lower edge of this piston is formed with an outwardly extending flange —10—, and its upper flange —11— is formed by a double fold at right angles to the axis of the piston. The immediate center of the piston to which the stem F is attached is somewhat depressed relatively to the side thereof, and at one side of its center is an inlet valve —12— having a spring metal support or shank —13— holding it normally in place. The flanges —10— and —11— upon the periphery of the piston afford space for the packing so as to make the piston duly tight about its side, and when the piston is used the valve 12 serves as an inlet for the air to the space beneath the piston, and the valve —3— has a discharge valve from the compressor into the can. If necessary, a suitable catch or holder of some kind may be employed to lock the cap D upon the cylinder C, so that in operating the piston the cap will not become displaced.

G is a discharge tube which is set into the can so as to bring its lower end approximately near to the bottom of the can, as usual, and the upper end of the said tube passes through the air vent chamber or barrel H and is bent into a curved elbow outside the can. This barrel H itself is permanently fixed in the cover B by soldering or otherwise, and within this barrel around the tube G is a spiral wire spring L. This spring rests upon the bottom of the said barrel, and a suitable collar —14— is fixed to the tube G and serves as an upper bearing surface for the spring. When the tube is depressed the said collar

bears on the said spring and the spring serves to restore the tube to its normal and working position when the pressure is withdrawn. Outside of the barrel or chamber H and at the bottom thereof on the tube G is a valve —15— of suitable material and adapted to close the air inlet to the barrel, and the spring L keeps this valve in closed position. The top of the barrel is closed by a fixed cap —16— packed so that air will not escape in that direction. Then between the barrel or chamber H and the top of the compressor is a vent tube O through which air is discharged from said chamber H into the compressor cylinder C. Among the advantages which follow this connection of barrel and compressor is the catching of any overflow of oil that may, by one cause or another, be carried into the barrel or chamber H, and which would find its way to the outside of the can if the air were discharged from said barrel immediately to the outside, but by having the connecting tube O through which any creeping or escaping oil which gets into the barrel H may be forced into the compressor cylinder C, I avoid all possible leakage or creeping of oil to the outside of the can. When once the oil is deposited in the compressor it naturally works down and will either enter the can or be evaporated.

When the lamp or other receiving vessel is filled the flow is relieved by repressing tube G, opening valve —15—, and thereby relieving the air pressure which caused the flow. To make this depression convenient I provide a thumb or finger projection —17— at the elbow of tube G, the head of which projection is like a push button and brings the pressure at the right place. Then by removing the hand from the tube G the valve —15— will immediately close under the pressure of spring L and remain in that way until again opened. This construction also leaves tube G free to be rotated axially to carry the discharge elbow back over the can when it has been used.

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

1. An oil can and an air vent chamber located at the top of the can and having an air inlet from the can, a discharge tube extending through the can and vent chamber and a valve on said discharge tube to close the air inlet to said vent chamber, substantially as set forth.

2. In an oil can, an air compressor, a discharge tube extending through the can, an air vent chamber surrounding the discharge tube at the top of the can and a vent connection between said chamber and said compressor, substantially as set forth.

3. The can and the air compressor set into the top of the can, in combination with the vent chamber, the discharge tube through said chamber having a spring support therein and a valve to close said chamber, substantially as set forth.

4. The can, the vent chamber fixed in the top of the can, a slidable discharge tube extending through both the top and bottom of said chamber, a valve on said tube to close the bottom of said chamber and a spring within said chamber to press said tube upward and close the said valve, substantially as set forth.

5. The can and the air compressor fixed and supported in the top of the can, in combination with the vent chamber fixed in the top of the can, a vent passage connecting said chamber with the air compressor, a discharge tube through said vent chamber and a valve on said tube to close the bottom of the said chamber, substantially as set forth.

6. In an oil can, a discharge tube provided with a valve and extending through the top of the can, a spring holder located in the top of the can, a spring surrounding said discharge tube supported by said holder and arranged to press said valve against the bottom of said holder, substantially as set forth.

Witness my hand to the foregoing specification this 1st day of February, 1894.

WILLIAM C. WINFIELD.

Witnesses:

ROBT. T. IZAUT,
G. W. BYARD.