

F. J. SCHISLER.
NON-EXPLOSIVE OIL CAN.
APPLICATION FILED JULY 28, 1913.

1,103,319.

Patented July 14, 1914.

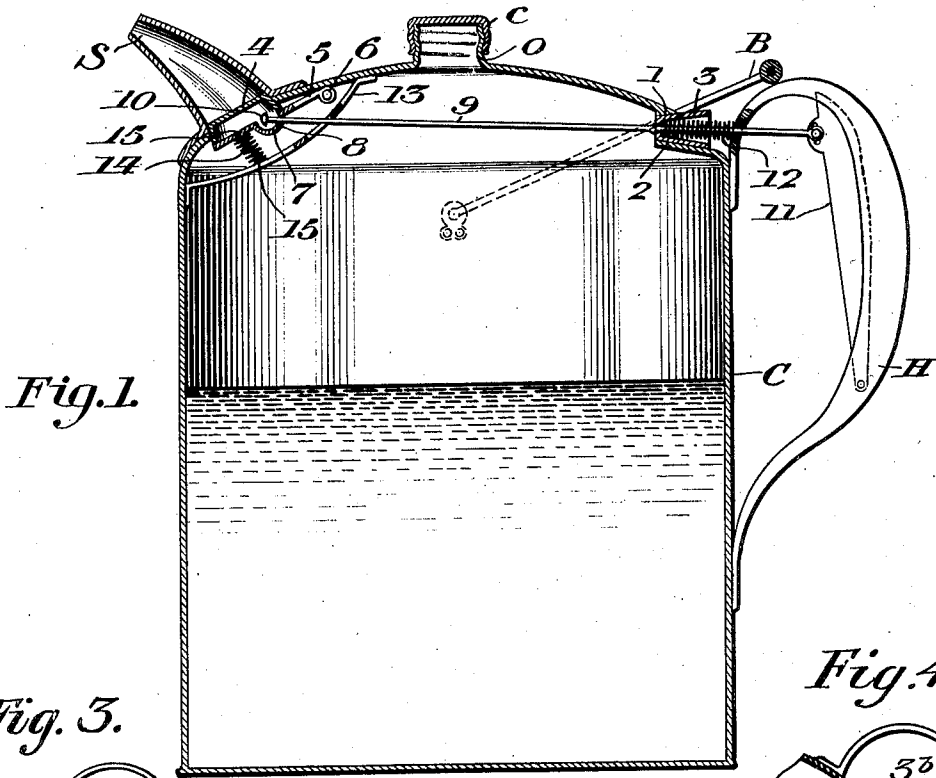


Fig. 3.

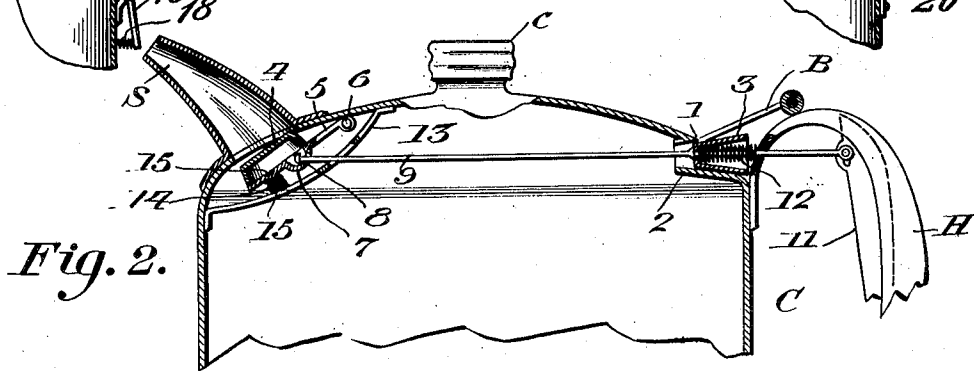
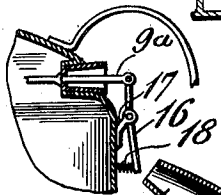
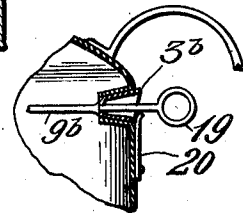


Fig. 2.

Fig. 4.



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NON-EXPLOSIVE OIL-CAN.

1,103,319.

Specification of Letters Patent.

Patented July 14, 1914.

Application filed July 28, 1913. Serial No. 781,617.

To all whom it may concern:

Be it known that I, FRANK J. SCHISLER, a citizen of the United States, residing at Winthrop, in the county of Sibley and State of Minnesota, have invented certain new and useful Improvements in Non-Explosive Oil-Cans; 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.

This invention relates to improvements in oil cans and particularly to non-explosive oil cans.

One object of the invention is to provide an oil can of this character having an improved construction and arrangement of automatically closing valves or stoppers one of which will also open automatically under pressure from the inside of the can, thus obviating any danger of the explosion of the contents of the can.

Another object is to provide a safety oil can which will be simple, strong and durable in construction, reliable in operation and in which the use of separate removable stoppers, caps and the like for the discharge spout of the can is obviated.

In the accompanying drawings: Figure 1 is a central vertical sectional view of an oil can illustrating the application of the invention and showing the stoppers or valves in closed position; Fig. 2 is a similar view of the upper portion of the can showing the valves in open position; Fig. 3 is a detail sectional view of a portion of a can showing a modified construction and arrangement of the valve operating mechanism; Fig. 4 is a similar view illustrating another modified form of the invention.

In the present embodiment of the invention the same is shown as being applied to an ordinary oil can C having a handle H on one side and a discharge spout S on its opposite side. The can C is also shown as being provided with the usual bail B and as having in its upper end the usual filling opening *o* which is normally closed by a cap *c*.

At a suitable position in the can and preferably in the upper portion of the side there-

of directly opposite to the discharge spout S is a safety vent 1 which has arranged therein a tapered or substantially conical shaped transversely disposed valve seat 2. Adapted to be engaged with the valve seat 2 is a safety valve 3 which is in the form of a tapered hollow plug constructed to closely fit the seat 2 and to close the vent opening 1 of the can.

Adapted to be engaged with the inner end of the spout S and to normally close the same is a main valve or stopper 4 which is also preferably in the form of a hollow, slightly tapered plug to the inner wall of which is secured a hinge plate or bar 5 extending in the same plane as said wall and the free end of said bar is hingedly attached to the inner surface of the top of the can as shown at 6, whereby the valve is adapted to swing into and out of the inner end of the spout for the purpose of opening and closing the same. The inner wall of the plug has formed therein an offset or outwardly projecting semi-circular socket 7 in which is formed an aperture 8.

Extending loosely through the aperture 8 in the socket 7 is a valve operating rod 9 and the end which extends into the valve 4 is provided with a head 10 of larger diameter than the opening 8 whereby the rod 9 is movably connected with the valve. The opposite end of the rod 9 extends through the safety valve 3 and is soldered or otherwise rigidly secured thereto preferably to the small end thereof as shown. The end of the rod after passing through the valve 3 is shown extending through an opening in the upper inner portion of the handle H and is pivotally connected to the free end of a valve operating lever 11 which is pivoted at its other end to the handle H and is adapted to work in the latter as shown.

Arranged on the rod 9 is a safety valve closing spring 12 one end of which bears against the inner end of the valve 3 and the opposite end against the adjacent portion of the handle H whereby the pressure of the spring is applied to close and yieldingly hold the safety valve in a closed position. Secured to the inner surface of the upper portion and top of the can is a bracing and

spring supporting strip 13 which spans the mouth of spout S and is spaced therefrom having therein an aperture through which the valve operating rod 9 passes. Between the strip 13 and the inner or rear wall of the valve 4 is a spring 14 the pressure of which is applied to close and normally hold the valve 4 in closed position in the inner end of the spout S. The rear wall of the valve and the spring supporting strip 13 are preferably indented at opposite points where the spring 14 engages the same to form studs 15 which are designed to hold the spring in operative position.

By arranging the valves of the can as herein shown and described, it will be seen that when it is desired to discharge or pour any of the contents of the can therefrom it is simply necessary to grasp the handle H and retract or depress the lever 11 therein, which operation will pull back on the valve operating rod 9. The rod 9 when thus actuated by the lever 11 will first instantly open the safety valve 3 owing to the fixed or rigid connection of said valve with the rod. After the safety valve has been opened and on the further retraction of the lever 11 and rod 9, the head 10 of the latter will be brought into engagement with the rear wall of socket 7 in the main valve 4 so that a further movement of the lever 11 and rod 9 will swing the valve 4 inwardly thus disengaging the same from the inner end of the spout S through which the contents of the can may now be discharged when the latter is tilted in the usual manner. When the desired quantity of oil has been poured from the can and the lever 11 released, the spring 14 will instantly close the main valve 4 while the spring 12 will close the valve 3 as will be readily understood. By providing the loose connection between the valve operating rod 9 and the main valve 4 which closes the discharge spout of the can and projecting said rod a short distance into said valve, it will be seen that any pressure of gas or air which might accumulate in the can will force the safety valve 3 open against the tension of spring 12, thus permitting the discharge of this gas without opening the main valve thereby preventing any danger of the contents of the can exploding therein. The instantaneous closing of the valve 4 by the spring 14 engaging the same will also smother any flames which might enter the can should the contents thereof take fire while being poured from the can.

In Fig. 3 of the drawings is shown a slightly modified construction of the valve operating mechanism said mechanism being shown in this instance as a thumb lever 16 which is pivoted on a bracket 17 secured to the side of the can below the vent opening

therein. The upper end of the lever 16 is pivotally connected to the outer end of the valve operating rod 9^a of this form of the device, while between the lower or free end of the lever and the can is arranged a coiled spring 18 the pressure of which is applied to the lever to cause the same to project the rod 9^a and to close and yieldingly hold the safety valve 3^a in a closed position. In order to open the valves when provided with the operating mechanism shown in Fig. 3 it is simply necessary to engage the free end of the lever 16 with the thumb or finger and to depress said end of the lever, thereby swinging the opposite end thereof outwardly, which will retract the valve operating rod 9^a and open the valves as will be readily understood.

In Fig. 4 of the drawings is shown another modified form of valve operating mechanism, said mechanism being shown in this instance as simply an eye or ring 19 formed or secured to the outer end of the valve operating rod 9^b and by means of which said rod is retracted to open the valve. The rod 9^b and the safety valve 3^b in this form of the invention are projected and the safety valve closed by a flat leaf spring 20 which is secured to one side of the can and has its free end engaged with the outer edge of the safety valve as shown. In both modified forms of the valve operating mechanism shown in Figs. 3 and 4 of the drawings the arrangement and operation of the main valve or stopper for closing the discharge spout of the can is the same as that shown and described in the preferred form of the invention and a further description of this part of the invention is not thought to be necessary.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various 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 the invention as shown.

Having thus described my invention, what I claim is:

A non-explosive oil can having a spout and a vent arranged in the opposite side walls thereof, a safety valve to close said vent, a main valve adapted to fit into and close the inner end of the spout and having a hinged connection to the inner side of the can to permit the valve to swing into engagement with the inner end of the spout, said main valve having an apertured offset therein, a spring arranged to close said main valve and hold it yieldingly in closed position, a valve operating rod fixed to said

safety valve and having one end projecting
through and beyond the apertured offset in
the main valve, means for preventing the
withdrawal of said rod from said valve, a
5 spring to close said safety valve, and an
operating mechanism connected with said
rod whereby the latter is retracted to suc-
cessively open the valves.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 10
nesses.

FRANK JOSEPH SCHISLER.

Witnesses:

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CHAS. W. QUANDT.