Aug. 29, 1933. F. BLANK 1,924,394

AIR VENT VALVE

Filed Dec. 8, 1931

Fig. 1.

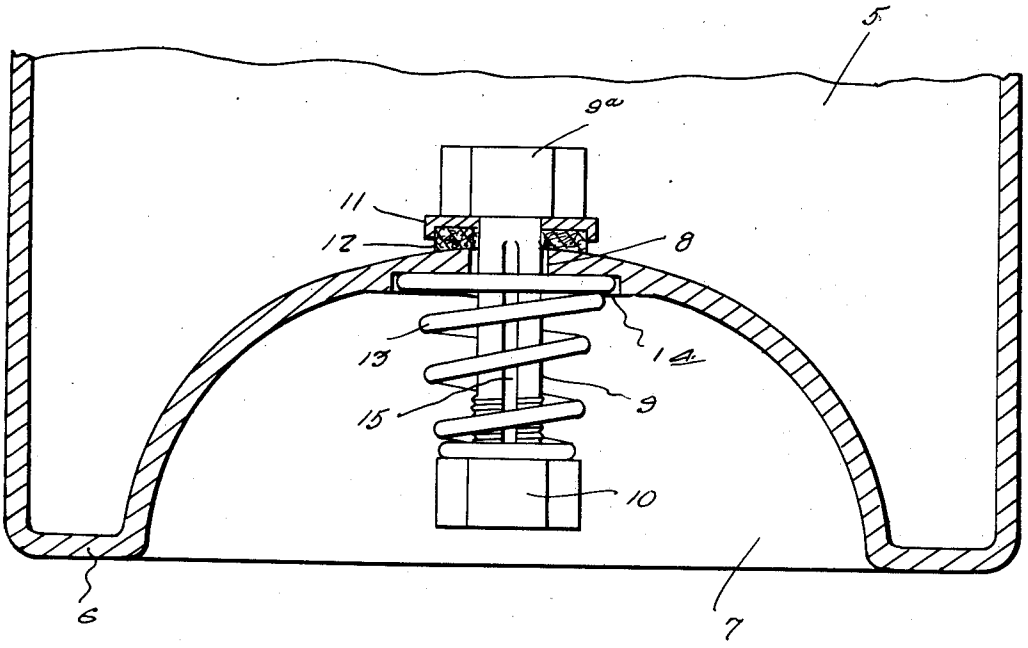



Fig. 2.

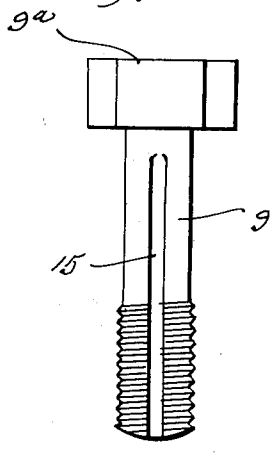
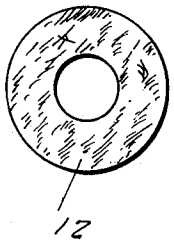



Fig. 3.




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Patented Aug. 29, 1933 1,924,394

# UNITED STATES PATENT OFFICE

1,924,394

## AIR VENT VALVE

Ferdinand Blank, Mount Clemens, Mich.

Application December 8, 1931. Serial No. 579,784

1 Claim. (Cl. 220—44)

This invention relates to valves, and more particularly to air vent valves for containers, such as oil bottles, emergency gas and oil cans and the like, and in accordance with the present invention a container equipped with a valve embodying the features of this invention may be easily and quickly emptied, the vent valve providing means for the emission of air to assist the flow of the liquid.

The invention together with its numerous objects and advantages will be clearly understood from a study of the following description, taken in connection with the accompanying drawing wherein:

Figure 1 is a vertical transverse sectional view through the lower portion of a container and showing my improved valve associated therewith.

Figure 2 is an elevational view of a stem forming part of the invention.

Figure 3 is a plan view of a washer forming part of the invention.

As before intimated, in accordance with the present invention, the container, be it an oil bottle, oil can or the like is provided with a vent opening controlled by a valve adapted to be opened upon discharge of the contents of the container for the emission of air. The invention is susceptible to use with any type of container and in the drawing I have shown a portion of a container designated by the reference character 5, and in this instance the bottom wall 6 of the container has a central portion thereof extended inwardly of the container and forming an exterior chamber 7.

The bottom wall 6 concentric of the chamber 7 is provided with a vent opening 8 normally closed through the medium of my improved valve.

The referred to valve comprises a stem 9 of a diameter slightly less than the diameter of the orifice 8 to provide sufficient clearance to permit venting of the container. On its inner end the stem 9 is provided with a head 9*a*, and the outer end of the stem is threaded and has a nut 10 which also serves as a push button for the stem. A rimmed washer 11 is arranged on the stem inwardly of the container 5 as is also a washer 12, the latter being formed of felt or other suitable absorbent material. An end of the washer 12 is received in the recess of the washer 11, and is conformably fitted within the confines of the rim of said washer 11 as shown in Figure 1.

The washer 12 serves as a closure for the orifice 8 and is normally urged into yielding contact with the bottom wall 6 through the medium of a coil spring 13 that is disposed about the stem 9 within the recess 7. An end convolute of the spring 13 is received in a circular recess 14 provided in the bottom wall 6 concentric to the orifice 8. At its relatively opposite end the spring 13 bearing against the nut 10 and thus the stem 9 is normally urged downwardly.

The stem 9 on diametrically opposite sides thereof is provided with air passages or grooves 15 elongated longitudinally of the stem.

In actual practice, the container 5 is inverted for the purpose of discharging from the contents thereof, the stem 9 is manually pushed inwardly of the container against the action of spring 13 thus moving the washer 12 away from the orifice 8 so that air in the container may vent or pass outwardly through the orifice thus facilitating the flow of the contents through the neck of the container. Immediately upon release of pressure on the stem 9, the spring 13 will act thereon to move the washer 12 into engagement with the bottom wall 6 thus closing the orifice 8. The valve as is apparent provides a fluid tight closure for the orifice and when the bottle or container is in its upright position there will be no leakage through the orifice.

Even though I have herein shown and described the preferred embodiment of the invention, it is to be understood that I do not wish to limit myself to the specific embodiment shown or to restrict the invention beyond the requirements of the prior art and the scope of the appended claim.

Having thus described my invention, what I claim as new is:

A vent valve for a receptacle having a bottom wall provided with a vent orifice, and comprising a stem extending through said orifice and provided with vent grooves elongated longitudinally of the stem, a fixed head on the inner end of said stem, a rimmed washer on said stem adjacent said head, a yieldable disk member carried by said washer and fitted within the confines of the rim thereof and adapted to be compressed between said washer and the bottom wall of the receptacle, and a spring exteriorly of the receptacle and having an end engaged with said stem and a second end engaged with said wall and normally urging the stem outwardly.

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