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AUTOMATIC AIR VENT

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Fig. 1

Fig. 2

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The numeral 9 denotes a substantially U-shaped clamping member secured to the member 3. The outer more or less resilient prong 18—10 of the clamping member are adapted to partly encircle and grip the neck of the bottle preferably on the outside thereby leaving the outlet of the bottle as free from obstruction as possible.

As noted in Fig. 2 the body portion 1 of the vent tube is at an angle with respect to the vertical axis of the bottle, which serves to throw the lower open end of the vent tube toward the outer edge of the bottom to insure a quick inlet of air into the bottle as it is tipped downwardly in the act of discharging the bottle.

To increase the area of the outlet of the bottle the upper portion of vent tube 1 where it leaves the neck of the bottle is flattened as at 11.

In the use of this device which is particularly useful in discharging lubricating oil from bottles or like containers, the vent tube 1 is held in a vertical position whereupon the ball 7 will rest upon the valve seat 6 closing the outlet end of the vent tube as it is passed downwardly into the bottle, the gripping member passing over the extreme upper flanged end of the bottle and seating itself beneath the flanged end to firmly secure the vent tube against displacement when the bottle is tipped in the act of discharging its contents. As heretofore pointed out as the bottle is tipped the ball 7 is unseated and falls into the pocket 8 opening the air intake end of the vent tube 1 permitting air to enter the bottle, causing the contents of the bottle to freely discharge therefrom.

The preferred embodiment of the invention is disclosed in the drawings and set forth in the specification, but it will be understood that any modification within the scope of the claimed invention may be made in the construction without departing from the principle of the invention.

1 claim:

1. An air pressure release for bottles comprising a vent tube adapted to be inserted into the open upper end of a bottle of liquid, and means for closing the outer end of said tube approximately air tight during insertion thereof to prevent partial filling of the tube with liquid during the insertion thereof.

2. An air pressure release for bottles comprising a vent tube adapted to be inserted into the open upper end of a bottle of liquid, said tube having a downturned upper end portion forming an air inlet for the tube and bottle, and means for closing the open end of said downturned end...
portion approximately against egress of air during insertion of the tube into the bottle of liquid to prevent partial filling of the tube with liquid during the insertion thereof.

3. An air pressure release for bottles comprising a vent tube adapted to be inserted into the open upper end of a bottle of liquid, said tube having a downturned upper end portion forming an air inlet for the tube and bottle, and means for closing the open end of said downturned end portion approximately against the egress of air during insertion of the tube into the bottle of liquid to prevent partial filling of the tube with liquid during the insertion thereof, said closing means being constructed and arranged for automatic opening thereof upon tilting the bottle to discharge the liquid.

4. An air pressure release for bottles comprising a vent tube adapted to be inserted into the open upper end of a bottle of liquid, said tube having a downturned upper end portion forming an air inlet for the tube and bottle, and means for closing the open end of said downturned end portion approximately against the egress of air during insertion of the tube into the bottle of liquid to prevent partial filling of the tube with liquid during the insertion thereof, said closing means being constructed and arranged for automatic opening thereof upon tilting the bottle to discharge the liquid and means carried by the vent tube, externally of the bottle, for detachably securing the vent tube thereto.

5. An air pressure release for bottles comprising a vent tube adapted to be inserted into the open upper end of a bottle of liquid, said tube having a downturned upper end portion forming an air inlet for the tube and bottle, a valve casing secured to the downturned end of the vent tube, a gravity valve housed within said casing adapted to remain closed during the insertion of the vent tube into the bottle to prevent filling of the tube with liquid during the insertion thereof.

6. An air pressure release for bottles comprising a vent tube adapted to be inserted into the open upper end of a bottle of liquid, said tube having a downturned upper end portion forming an air inlet for the tube and bottle, a valve casing secured to the downturned end of the vent tube, a gravity valve housed within said casing adapted to remain closed during the insertion of the vent tube into the bottle to prevent filling of the tube with liquid during the insertion thereof, a pocket within said valve casing so constructed and arranged as to receive said ball valve which is adapted to be unseated upon tilting the bottle to discharge the bottle.

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