

S. E. WOOLMINGTON.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JULY 5, 1912.

1,059,419.

Patented Apr. 22, 1913.

Fig. 1.

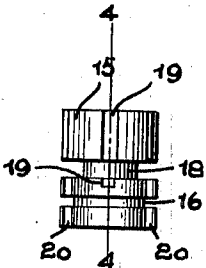
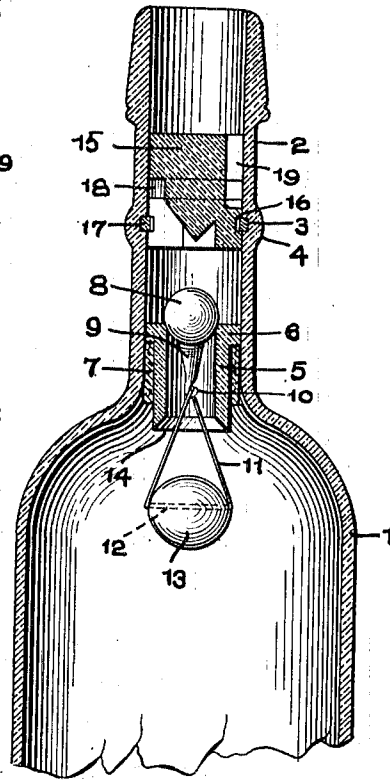


Fig. 3.

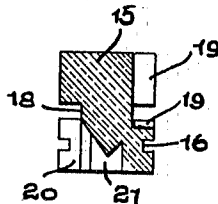


Fig. 4.

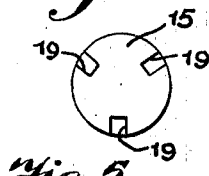


Fig. 5.

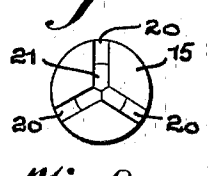


Fig. 6.

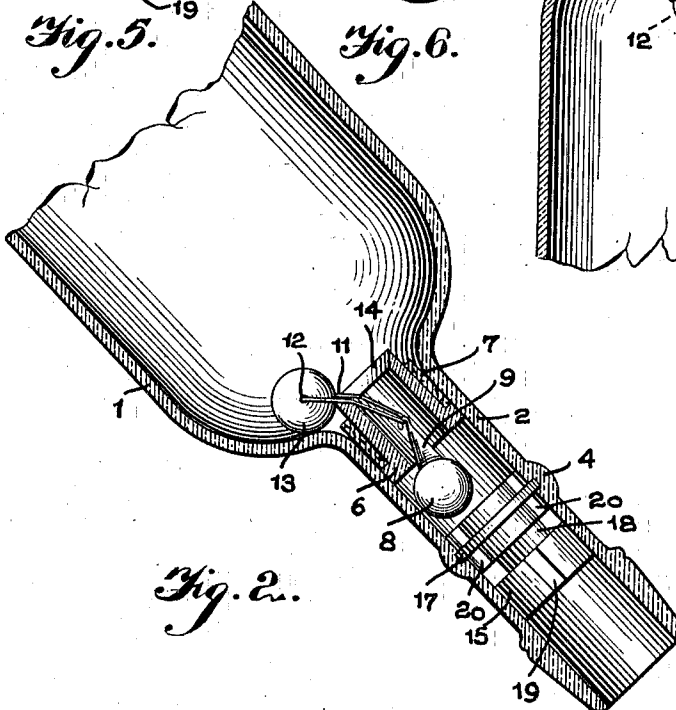


Fig. 2.

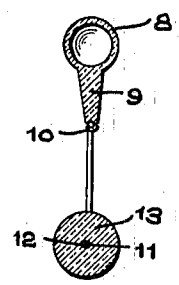


Fig. 7.

Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL E. WOOLMINGTON, OF PHILADELPHIA, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

1,059,419.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed July 5, 1912. Serial No. 707,663.

To all whom it may concern:

Be it known that I, SAMUEL E. WOOLMINGTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to improvements in non-refillable bottles, the object of the invention being to provide an improved closure which permits the free egress of liquid from the bottle, yet prevents any re-filling of the bottle, overcoming the possibility of using the receptacle for a substitute.

A further object is to provide an improved construction of float valve and weight connected by a flexible device which extends through a liquid passage, and which compels the valve to seat if any attempt is made to fill the bottle, yet allows it to freely open when the bottle is canted.

A further object is to provide improvements of this character which may be manufactured and sold at a reasonably low price, which will be extremely simple in construction, and which may be used with various liquids without injuriously affecting the same.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings: Figure 1 is a view in longitudinal section showing the valve in closed position. Fig. 2 is a view in longitudinal section showing the bottle canted and the valve in open position. Fig. 3 is a view in elevation of the baffle removed. Fig. 4 is a view in longitudinal section on the line 4-4 of Fig. 3. Fig. 5 is a top plan view of the baffle. Fig. 6 is a bottom plan view of the baffle, and Fig. 7 is a view in longitudinal section through the valve and its weight.

1 represents a bottle and 2 an integral neck thereon. This neck 2 is of the same internal diameter from its outer end to an internal groove 3 at a point between the ends of the bottle neck. This grooved portion 3 is reinforced by an annular enlargement 4, and the internal diameter of the bottle neck diminishes slightly from the groove 3 to the

inner end of the neck, so that the inward movement of the valve cylinder 5 is limited. Furthermore the valve cylinder when forced into position is rigidly held. This valve cylinder has an annular flange 6 on its outer end which engages the inner face of the bottle neck and a ring of cork 7 is provided around the cylinder to render the same perfectly tight.

The outer end of cylinder 5 constitutes a seat for a ball valve 8. This ball valve 8 is provided with an integral extension 9 having a hooked end 10 which is adapted to receive a cord 11. This cord 11 is projected through a central longitudinal opening in an ellipsoidal weight 13.

It will be noted that the inner end of the cylinder 5 which is internally beveled as shown at 14 extends into the bottle a sufficient distance to allow the weight to fall outside of the same and be held thereby as clearly shown in Fig. 2, so that the weight will not interfere with the passage of the liquid when the bottle is canted. Furthermore the weight 13 is free to revolve on the cord so that as it is shifted from position to position, it will not entangle in the cord to shorten the length of the connection between the same and the valve.

The valve is hollow as seen most clearly in Fig. 7, so that it constitutes a float, and the said valve, the weight and the cylinder are composed of some non-metallic material which will in no wise injuriously affect the contents of the bottle. To prevent any tampering with the valve, I provide a baffle which is also composed of some non-metallic material. This baffle is of general cylindrical form, and is provided near its inner end with an annular groove 16 which is adapted to register with the groove 3 in the bottle neck. A spring band 17 is located in these grooves 16, and 3, and serves to effectually lock the baffle against removal. Baffle 15 is provided between its ends with an annular groove 18 which is connected with a plurality of longitudinal grooves 19 extending to the outer end of the baffle, and with a plurality of longitudinal grooves 20 extending to the inner end of the baffle. These grooves 19 and 20 are out of alinement so that any implement inserted through the grooves 19 cannot be forced around through the grooves 20. Furthermore the grooves 19 extend into the inner wall of groove 18, so

that any implement inserted will be caught in the inner end of the groove and prevent any possibility of the device being removed.

The inner end of the baffle is recessed as shown at 21, so that a relatively large outlet passage is provided in the inner end of the baffle communicating with the several grooves 20, so that but comparatively small obstruction is provided for the escape of the liquid.

Fig. 1 shows the valve in its normal closed position, and Fig. 2 illustrates the same in its open position. When the bottle is canted, the valve falls away from the outer end of the cylinder 5 and the weight 13 falls against the side of the bottle and is prevented from closing the end of the passage 5 by reason of the fact that it is caught and held between the end of the cylinder 5 and the wall of the bottle. The liquid is then free to flow out of the neck of the bottle. When the bottle is returned to normal position, the weight 13 will quickly draw the valve to closed position. It will thus be seen that it will be impossible to fill the bottle when in an upright position because the weight 13 holds the valve closed. Any attempt to fill the bottle in an inclined or inverted position will be prevented, because the valve is hollow and operates as a float, so that the liquid will move the valve to closed position.

Various slight changes might be made in the general form and arrangement of parts

described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

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

The combination with a bottle and a neck thereon, of a valve cylinder secured within the neck of the bottle, a hollow float ball valve normally against the outer end of the cylinder, a solid ellipsoidal ball weight having an opening extending longitudinally through the center thereof, an integral extension on the ball valve projecting into the outer end of the valve cylinder, a single cord connecting the end of the extension and the weight, said cord positioned through the longitudinal opening in the weight, whereby the weight is free to revolve, and said extension and cord of a combined length to permit the weight to swing to one side and lie against the edge of the cylinder to one side of the center thereof, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL E. WOOLMINGTON.

Witnesses:

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S. W. FOSTER.