

M. KOVAC.
NON-REFILLABLE BOTTLE.
APPLICATION FILED APR. 26, 1912.

1,063,698.

Patented June 3, 1913.

Fig. 1.

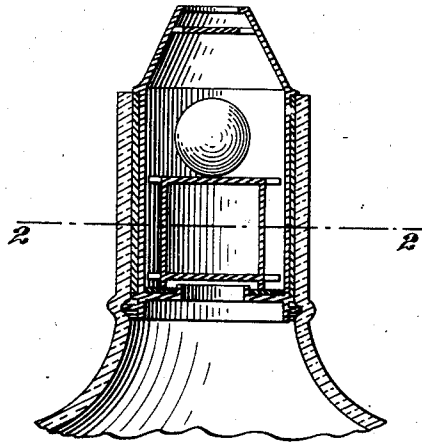
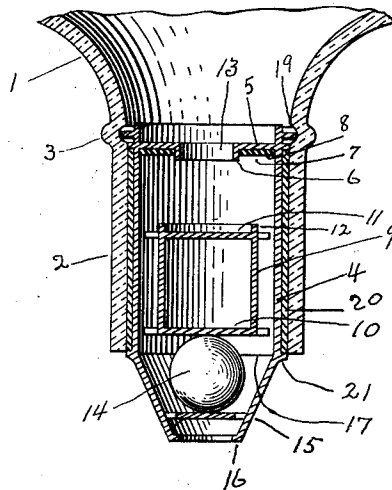
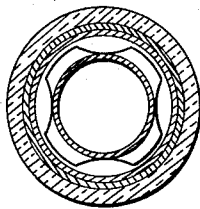


Fig. 3.

Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

MICHAEL KOVAC, OF PASSAIC, NEW JERSEY.

NON-REFILLABLE BOTTLE.

1,063,698.

Specification of Letters Patent.

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Application filed April 26, 1912. Serial No. 693,440.

To all whom it may concern:

Be it known that I, MICHAEL KOVAC, a citizen of the United States, residing at No. 10 Hope avenue, city of Passaic, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to improvements in bottles, and the object of my invention is to provide a bottle which when once emptied of its contents, cannot be refilled. I accomplish this object by the device illustrated in the accompanying drawings in which—

Figure 1 is a section of the upper part or neck of my improved bottle in its upright position. Fig. 2 is a section of the same on the line 2—2 in Fig. 1 and Fig. 3 is a view of the device in an inverted position.

Similar reference characters refer to similar parts throughout the several views.

The neck 2 of the bottle 1 is provided in its bore or inner wall with an annular groove 3. In the neck 2 I set a casing 4, of cylindrical form, provided at its inner end section with an annular valve seat 5, said valve seat is provided with an annular projection 6, or wall forming an annular seat 7 surrounding the valve opening or port 13. In the seat 7 is provided a packing 8. The operating valve 9 is of a tubular cylindrical form smaller in circumference than the casing 4, and is hermetically sealed by disks 10 and 11. The disk 10 being secured upon the upper end of the valve 9 and the disk 11 being secured adjacent the lower end of the valve 9 and forming a cup on the base of the said valve 9. The annular lip 12 of the said cup normally rests on the packing 8 in the seat 7 thereby closing the port 13, when the valve is in its normal position.

The disks 10 and 11 are larger in diameter than the valve 9 and their peripheries are convoluted as will be seen by reference to Fig. 2, as by this construction the disks engaging the inner periphery of the casing 4 will guide the valve 9 in a true longitudinal movement, and will permit the free discharge of the liquid when the bottle has been inverted and the valve open. A ball 14 of sufficient weight to force the valve 9 to its seat when the bottle is held in an upright or horizontal position, is placed in the casing 4. When the ball 14 drops upon the disk 10 on the head of the valve 9 it serves to lock the valve in its normal or closed po-

sition. The upper end of the casing terminates in a frustum 15 the base of which is smaller than the casing 4 and has an outwardly bent section 21 to cooperate with the outer periphery of the casing 4, forming an internal ledge 17 on the upper end of the casing 4, at the point of junction between the casing 4, and the bent outward base of the frustum 15 the base of the frustum 15 is fused or otherwise suitably secured to the upper end of the casing 4.

The apex of the frustum 15 has the wall bent inwardly to form an annular flange 16. Situated at a point between the base of the frustum 15 and the apex thereof is set a cut out disk 18 secured to the inner wall of the said frustum 15 and forming a diaphragm which acts as a stop for the ball 14 when the bottle is inverted, for the purpose of discharging the liquid, which will flow freely around the diaphragm through its cut out side apertures. The annular spring catch 19 is fastened to the body of the casing 4 in any suitable manner and being compressed is forced down into the neck of this bottle and locks the device in place by springing out into the annular groove 3. The casing 4 is preferably covered with a thin sheathing of cork 20 to prevent leakage.

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

My device operates to prevent the refilling of the bottle for the reason that in its upright position the valve 9 with the superimposed weight of the ball 14 securely seals the port 13.

The valve 9 constituting an air chamber extremely light in weight and in its inverted position thereby rises with any liquid and seals the port 13. When placed in a substantially horizontal position the ball will roll down the inclined wall of the frustum 15 and cause the valve 9 to seal the port 13.

The application of force to the liquid will serve only to more securely seal the port 13.

Having thus described my invention what I claim is:

1. In a device of the character described, the combination of a bottle provided with a neck having an internal groove therein, an annular spring catch 19 seated in said groove, a casing 4 secured to the annular spring catch 19, a valve seat 5 in said casing

having a central port 13 formed therein, a wall 6 surrounding the port 13 and forming a seat 7 surrounding the port 13, a packing in said seat 7, a valve of tubular form in the casing 4, plane disks 10 and 11 forming the end section of the said valve, an annular lip 12 on the under side of said valve and normally resting on the packing in the said valve seat, a ball intermediate said valve and the outer end section of the said casing and means for retaining the ball in the said casing, substantially as shown and described.

2. In a device of the character described, the combination of a casing, an annular valve seat therein and provided with a central port, a wall surrounding the said port, a valve of tubular cylindrical form in said

casing, plane disks forming the end sections of said valve, an annular lip projecting downwardly from the under side of the said valve and normally resting in the said valve seat between the wall surrounding the port and the casing, and a ball on the said valve whereby the valve is sealed against the downward passage of liquid, substantially as shown and described.

In testimony whereof, MICHAEL KOVAC, has signed his name to this specification in the presence of two subscribing witnesses, this nineteenth day of March, 1912.

MICHAEL KOVAC.

Witnesses:

GEO. DENZEL,
ANNA BRANNIGAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
