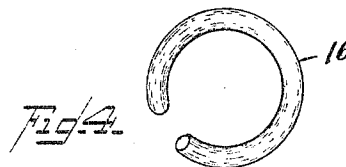
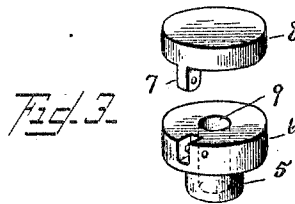
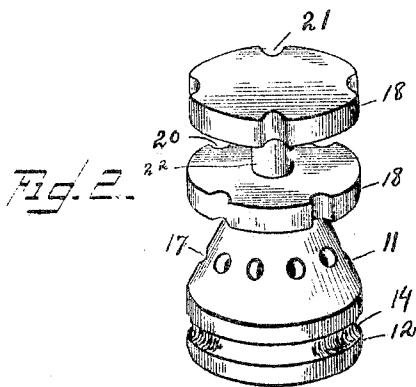
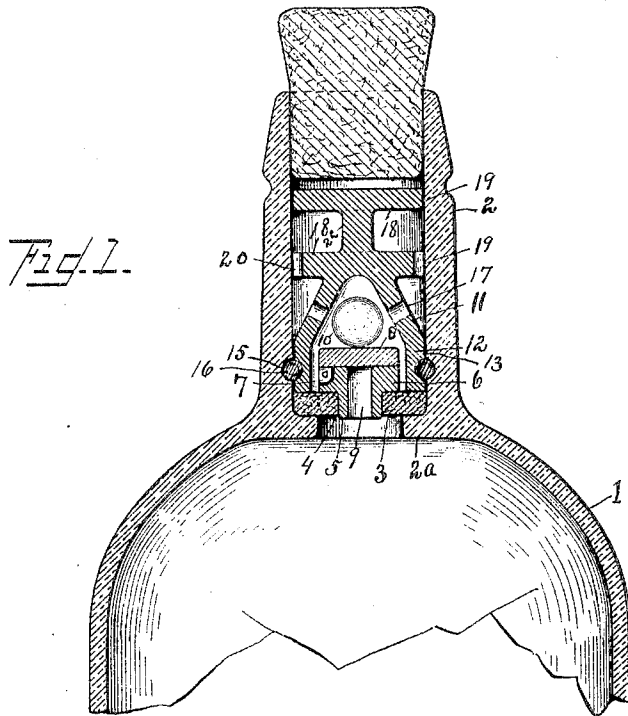


L. HOFMANN.
NON-REFILLABLE BOTTLE.
APPLICATION FILED FEB. 27, 1904.



Attest
W. A. Guiter
E. A. Welch.

Inventor
Louis Hofmann.
by
F. H. Peterson, Atty.

UNITED STATES PATENT OFFICE.

LOUIS HOFMANN, OF NEW YORK, N. Y., ASSIGNOR OF A FORTY-FIFTH
PART TO GEORGE E. FOERSTER, OF NEW YORK, N. Y.

NON-REFILLABLE BOTTLE.

No. 802,510.

Specification of Letters Patent.

Patented Oct. 24, 1905.

Application filed February 27, 1904. Serial No. 195,604.

To all whom it may concern:

Be it known that I, LOUIS HOFMANN, a citizen of the United States, residing in Brooklyn borough, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to means for preventing the refilling of bottles; and its object is to provide an article acceptable to the trade which can be made at such low cost as not to be prohibitive, which is not liable to get out of order, and is effective to prevent refilling of the bottle.

In the accompanying drawings, Figure 1 is a sectional view of a glass bottle provided with my improvements. Fig. 2 is a view of a glass fitting which is cemented within the neck of the bottle. Fig. 3 is a view of a flanged plug and a lid therefor. Fig. 4 is a metal locking-ring.

In the several views like signs denote like parts.

The bottle (designated as 1 and usually made of glass) is provided with a neck 2, the upper portion whereof is adapted to receive the usual stopper. At the base of the neck the bottle is formed with an annular interior flange 2^a, upon which rests a cork plug 3, having a central perforation or opening 4, within which fits a hard-rubber plug 5, having a flange 6, which rests upon the plug 3. To the flange 6 is pivoted, by means of ears 7, a lid or valve 8, of hard rubber or other buoyant material, which normally closes a central opening or perforation 9 in the central plug 5.

Upon the lid 8 rests a ball 10, preferably of glass, which is confined by a cone 11, having a cylindrical base 12 fitting within the bottle-neck 2 and cemented thereto at 13 and resting upon the plug 3. In said base is formed a peripheral groove 14 to register with an interior annular groove 15, formed in the bottle-neck, and in these grooves fits a steel ring 16, thereby inseparably locking the cone and bottle-neck together. Said ring is split, as at Fig. 4, and in assembling the parts is sprung into the groove 14 before the cone is inserted in the neck, and when the ring reaches the groove 15 it expands into said groove, so that it becomes impossible thereafter to separate the parts, even after taking out the cement.

Surmounting the cone, which is provided

with perforations or other openings 17, is a pair of baffling-disks 18, one above the other and both fitting in the neck and cemented thereto at 19. The lower disk is provided with openings 20, which are out of line with openings 21, formed in the upper disk. The cone and disks are integral and formed of glass or other ceramic material, the lower disk being preferably joined directly to the cone, and a vertical central stem 22 connecting the disks.

Normally the lid is held down by the ball, so that it is impossible to introduce liquid into the bottle past the lid. When the bottle is inverted, if it is attempted to introduce liquid the upward movement of the liquid closes the lid. Moreover, if the lid is of hard rubber or cork it will float or rise under such conditions, and it is not essential in all cases that the lid be hinged. When the bottle is lying on its side, the ball, which may nearly fill the cone, rolls down the side of the latter and rests against the valve, thus holding the same closed.

Variations may be resorted to within the scope of my invention, and portions of my improvements may be used without others. It will be observed that great economy is effected in forming the cone and two disks of a single piece of glass and that ample protection is afforded by cementing the same within the bottle, although the same may be locked without cementing or both cemented and locked.

Having thus described my invention, I claim—

1. The combination with a glass bottle having a neck, an interior flange at the base of the neck, and an interior annular groove above said flange, of a plug having a central perforation and fitting within said neck between said flange and said recess, a plug fitting in said perforation and provided with a flange at its upper end, and formed with a perforation, a lid hinged upon said plug-flange, a ball resting upon said lid, a glass cone confining said ball and having at its base a cylindrical portion fitting in said bottle-neck and cemented thereto and also having a peripheral groove opposite said interior groove, a locking member within said grooves, a glass baffler upon said cone and integral therewith, a glass stem integral with said baffler and ris-

ing therefrom, and a glass baffler upon said stem and integral therewith; said bafflers being cemented within said neck.

2. The combination with a glass bottle having a neck and an interior flange at the base of the neck, of a plug having a central perforation and fitting within said neck upon said flange, a flanged plug fitting in said perforation, a buoyant lid hinged upon the flanged

plug, a ball resting upon said lid, a cone confining said ball, and baffling-disks above said cone; said cone and baffling-disks being integral and cemented to said neck. 10

LOUIS HOFMANN.

Witnesses:

EDWARD A. McCUE,
LEWIS H. SAPER.