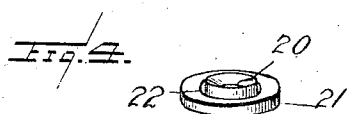
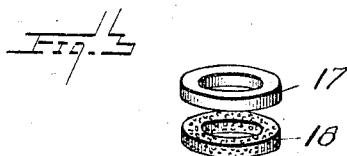
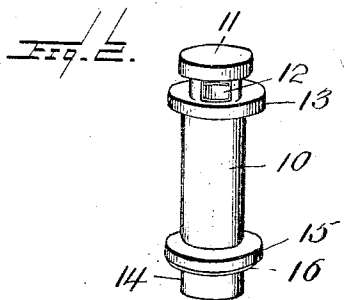
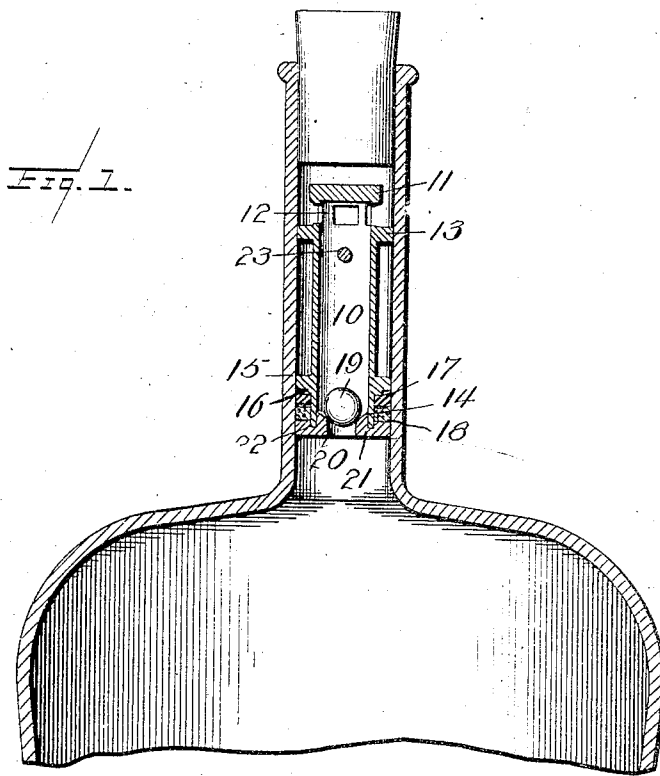


J. G. B. BLOOMER.
NON-REFILLABLE BOTTLE.
APPLICATION FILED SEPT. 3, 1908.

935,887.

Patented Oct. 5, 1909.



WITNESSES:

H. F. Roy & Co.
Alfred T. Sage.

INVENTOR

James G. B. Bloomer.

BY

E. B. Stocking Attorney

UNITED STATES PATENT OFFICE.

JAMES G. B. BLOOMER, OF ATLANTIC CITY, NEW JERSEY.

NON-REFILLABLE BOTTLE.

935,887.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed September 3, 1908. Serial No. 451,593.

To all whom it may concern:

Be it known that I, JAMES G. B. BLOOMER, citizen of the United States, residing at Atlantic City, county of Atlantic, and State of New Jersey, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a nonrefillable bottle, and particularly to a guarded valve construction.

The invention has for an object to provide a construction of valve guard embodying a tube adapted for insertion in the neck of an ordinary bottle and to be retained therein by a washer carried upon the outer periphery of said tube, while the discharge therefrom is guarded by an integral cap plate, and the ball valve retained within the tube by means of a separate disk having a ball seat and contacting with the washer upon the periphery of the tube.

Other and further objects and advantages of the invention will be hereinafter fully set forth and the novel features thereof defined by the appended claims.

In the accompanying drawing:—Figure 1 is a vertical section showing the application of the invention; Fig. 2 is a detail perspective of the tube; Fig. 3 is a similar view of the washers; Fig. 4 is a perspective of the valve seat.

Like numerals refer to like parts in the several views of the drawing.

The numeral 10 designates the valve tube which is provided at one end with a cap plate or closure 11 beneath which the discharge openings 12 are disposed so as to discharge laterally of the length of the tube. At this end of the tube a flange 13 is formed of substantially the interior diameter of the bottle neck and which prevents access to the lower portion of the neck. Intermediate of this flange and the opposite open end 14 of the tube, a corresponding peripheral flange 15 is formed and has upon its face a shoulder 16 against which the rubber washer 17 is adapted to abut. The space between this shoulder and the flange 15 permits the washer to be slightly bent upward in forcing the tube into the bottle neck and by its frictional contact with said neck prevents removal of the tube. Beneath the washer 17 a cork washer 18 is disposed which prevents the fluid within the bottle from coming in contact with

the rubber and also assists in holding the tube in position. While these washers have been described respectively of rubber and cork any other suitable material may be used. Within the tube a valve is disposed, for instance, a ball 19, as shown in Fig. 1, which is adapted to normally rest upon a seat 20 formed in the seat disk 21. This disk is separate from the tube, as shown in Fig. 4, and provided with an annular channel 22 adapted to receive the open end of the tube which may be secured therein in any desired manner, for instance, by the application of a proper cement thereto. The use of this separate valve seat permits the annular washers, as shown in Fig. 3, to be readily applied in contact with the seat and also the ball disposed within tube. In order to prevent this ball from clogging the discharge openings, any desired projection may be provided within the tube, for instance, the cross bar 23, as shown in Fig. 1.

In the operation of the valve, for pouring from the bottle, the ball contacts with the projection within the tube and clogging of the outlet openings or violent contact with the cap plate is thus prevented, while, when the bottle is in a vertical position the ball rests upon its seat and the entrance of liquid into the bottle in an attempt to refill the same is absolutely prevented. It will be seen that this construction permits the formation of the tube from a single piece of vitreous material, such as glass or porcelain and the ready application of the ball valve and washers thereto, all of the parts being secured in position by the valve seat cemented to the tube before its insertion in the bottle neck. Prior to the insertion of the valve cement or liquid glass is placed between the cork and rubber washers and the latter held slightly upward in sliding the stopper down the bottle neck as the rubber washer is of slightly greater diameter than said neck. When in substantially the desired position an upward draft on the tube brings the cork and rubber washers into contact and forces outward the cement between the same so that it contacts with the bottle neck and adheres thereto so as to permanently secure the valve tube in position. It is thus held by the cement as well as the friction of the washer. It will be seen that this construction is adapted for application to a bottle neck of ordinary formation and does not require a special formation of bottle

nor securing means in the neck thereof. The invention therefore presents a simple, efficient and economically constructed form of nonrefillable bottle.

5 Having described my invention and set forth its merits, what I claim and desire to secure by Letters Patent is:—

1. In a bottle valve, a tube having a guard
10 plate at its upper end and discharge openings laterally therefrom, peripheral flanges at the opposite end portions of said tube, a ball within said tube, a flexible washer mounted in contact with one of said flanges,
15 a ball seat for retaining said ball and washer in position, and a cork washer disposed intermediate said flexible washer and seat.

2. In a bottle valve, a tube having a guard

plate at its upper end and discharge openings laterally therefrom, a peripheral flange upon the tube adjacent said openings, a peripheral flange adjacent the opposite end of said tube and provided with a shoulder thereon, an annular rubber washer disposed in contact with said shoulder, an annular cork washer in contact with said rubber washer, a ball within said tube, and a ball seat secured to the end of said tube to retain said ball and washers in position.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES G. B. BLOOMER.

Witnesses:

LOUIS A. REPETTO,
HARRY I. RAUF.