J. & R. MORELLI.
CLOSURE FOR BOTTLES.
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WITNESSES: J. VG Egois, 172.

ATTORNEY

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.
To all whom it may concern:

Be it known that we, Joseph Morelli, a citizen of the United States, residing at West Hoboken, Hudson county, New Jersey, and Raphael Morelli, a subject of the King of Italy, residing at the borough of Manhattan, county and State of New York, have invented a new and useful Improvement in Closures for Bottles, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof.

Our invention relates to closures for bottles particularly to bottles for liquids intended to be projected or dashed from the container rather than to flow freely therefrom. Such bottles are to be seen at soda fountains and the like where costly extracts and juices are sprinkled into the glass or in the shop of the hairdresser where expensive tonics are sprinkled upon the heads of the customers.

Our invention has for its object to provide an efficient, durable and comparatively inexpensive closure or stopper that cannot be removed when once it is set in place within the bottle and which will effectively prevent the refilling of the container and yet permit the discharge of its contents.

Our invention has for its object simplicity and economy of manufacture, durability and strength of construction. Our invention has other objects which will appear more fully hereinafter.

We shall now describe our invention and shall thereafter point out our invention in claims.

Figure 1 is a central sectional view of a bottle with a stopper embodying our invention. Fig. 2 is an elevational view of a modified form of bottle closure. In the embodiment of our invention shown in Fig. 1, a cork or body 1 of suitable material is provided which is adapted to fit snuggly into the neck 15 of the bottle 6. A hole or central passage 16 extending the length of the cork is provided for the passage of the liquid out of the bottle. This passage way is lined with a sleeve 3 of porcelain or metal having a shouldered portion 3a at its lower end whereby it is secured to the cork. At its upper end the sleeve tapers outwardly to form a seat 4 for the ball valve 10 hereinafter described and thence extends over the top of the cork to form a cap or guard 5 therefor, the seat and cap thereby forming the valve chamber therefor. The valve 10 operating within the sleeve lined passage way 16 is shown as comprising a stem 7 at the upper end of which is the valve proper 10 substantially spherical in construction and adapted to rest upon the seat 4 provided by the sleeve and thus effectively close up the passage way 16. A ball like weight 11 is shown as mounted upon the valve proper 10 and made integral therewith, being provided to steady the movement of the valve and assist in closing it against the inflow of liquids. The lower end of the valve stem 7 is shown as provided with a collar 8 or weight and a coiled spring 9 is shown coiled around the stem and bearing at its upper end against the base of the stopper 1 and at its lower end against the collar 8 to which it is secured. The spring 9 serves to keep the valve against its seat and close normally against the passage of liquids either in or out of the bottle. The valve can be opened only by operating it against the resistance of the spring and to effect this operation, it is obviously necessary to shake the bottle, causing the valve or-plunger to move forwardly, lifting the valve from its seat and permitting the liquid to flow out of the bottle. Although the movement of the valve is limited by the engagement of the collar with the cork an additional stop is provided by the conical cap or guard 5 for the valve which is shown as mounted upon the cap 2 and made integral therewith. To prevent any tampering with the valve or the removal of the cork or stopper proper for the purpose of refilling the bottle, a cover 13 is provided having holes 13a for the passage of the liquid therethrough and side walls 14 adapted to encircle the flange of the neck of the bottle and be clamped beneath it and around the neck of the bottle in such a way that any effort to remove it would result in its mutilation and destruction so that its use thereafter would indicate that the bottle had been tampered with and refilled with a liquid of inferior quality. This cover 13 would preferably be marked or otherwise stamped with the signature or trade-mark of the original manufacturer so as to make the use of an imitation cover unlawful. In Fig. 2 another embodiment of our invention is shown in which the stopper
is permanently secured in the bottle by strips 18 of unyielding material provided with hook portions 18a adapted to engage beneath shoulders provided in the neck of the bottle. These are secured to the stopper 17 and preferably made integral with the cup 19 as shown and inserted into the neck of the bottle and made to set in place as the cork 17 is forced inwardly and in place. In this embodiment the guard 20 is shown as provided with a threaded portion on which the cup 21 is adapted to be secured. The cup 21 is provided with holes 21a to permit the passage of liquid therethrough. To prevent any tampering with the valve 10 to effect the refilling of the bottle means are provided for making the removal of the cup impossible without mutilating or otherwise destroying it. An opening 24 is provided in the walls of the cup 21 exposing thereby the threaded portion of the conical guard 20. When the bottle is filled, the stopper 17 in place and the cup 21 screwed on the guard, the thread is cut at the point with a sharp tool and the unscrewing of the cap thereby prevented.

It is obvious that various modifications may be made in the construction shown and described within the spirit and scope of our invention.

We claim:

1. A bottle closure comprising a stopper, a sleeve fitted therein, a valve operating in said sleeve, the sleeve being provided at its outer end with an enlarged portion to form a chamber for the valve, the sides of said enlarged portion converging at their lower ends to form a valve seat for the valve and at their upper ends converging to form a retaining cap for the valve, and retractive means secured to the valve and adapted to normally hold said valve in the closed position and against the valve seat, said means being adapted to yield only when the valve is subjected to a shaking in the direction of the axis of the valve whereby said valve is moved from its valve seat to allow for the passage of the liquid therethrough.

2. A bottle closure comprising a stopper, a sleeve fitted therein, a valve operating in said sleeve, a combined valve seat and valve retaining cap provided at the outer end of said sleeve, the movement of the valve being limited by the space between said valve and retaining cap, and retractive means secured to the valve and adapted to normally hold said valve in the closed position and against the valve seat, said means being adapted to yield only when the valve is subjected to a shaking in the direction of its axis whereby the valve is raised from its seat to allow for the passage of the liquid therethrough.

3. A bottle closure comprising a stopper, a sleeve fitted therein, a valve operating in said sleeve, a combined valve seat and valve retaining cap provided at the end of said sleeve and integral therewith and forming a valve chamber for the valve, passages provided in the valve retaining cap for the passage at all times of liquid in the valve chamber, and retractive means secured to the valve and adapted to normally hold said valve in the closed position and against its valve seat, said means being adapted to yield only when the valve is subjected to a shaking in the direction of its axis whereby the valve is raised from its seat to permit the passage of the liquid therethrough.

In witness whereof we have caused our names to be affixed hereto in the presence of two witnesses.

JOSEPH MORELLI.
RAPHAEL MORELLI.

Witnesses:
BERNARD COWEN,
RAY C. SAWYER.

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