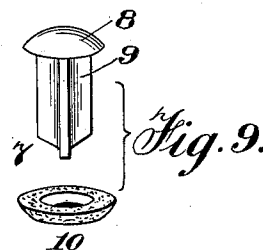
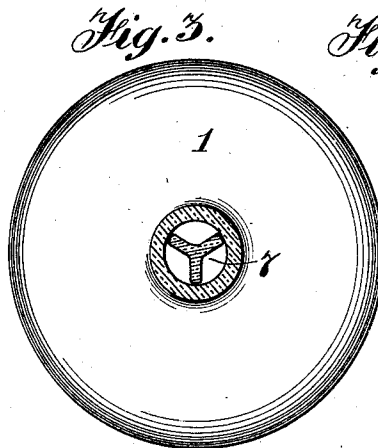
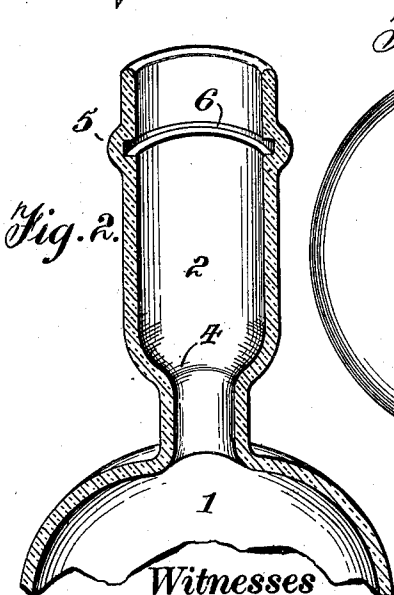
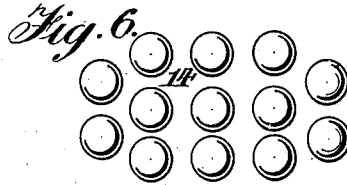
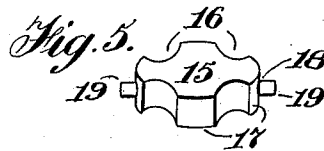
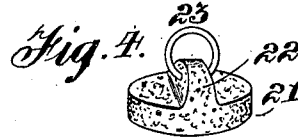
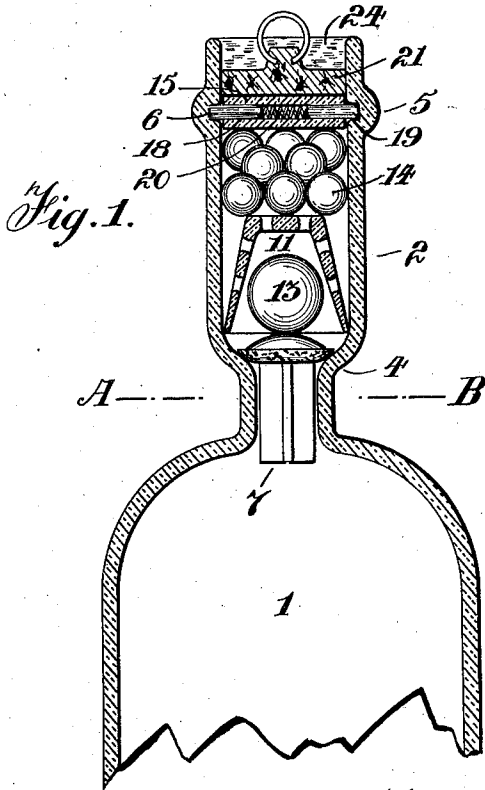


J. B. CHARTRAND.
NON-REFILLABLE BOTTLE.
APPLICATION FILED OCT. 3, 1910.

985,111.

Patented Feb. 21, 1911.



Witnesses
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Att'y

UNITED STATES PATENT OFFICE.

JEAN BAPTISTE CHARTRAND, OF MONTREAL, QUEBEC, CANADA, ASSIGNOR OF ONE-FOURTH TO JOHN JACOB DAY, ONE-FOURTH TO HENRI BRUNO LEDOUX, AND ONE-FOURTH TO ALEXIS PILON, ALL OF MONTREAL, CANADA.

NON-REFILLABLE BOTTLE.

985,111.

Specification of Letters Patent. Patented Feb. 21, 1911.

Application filed October 3, 1910. Serial No. 585,123.

To all whom it may concern:

Be it known that I, JEAN BAPTISTE CHARTRAND, resident of 1704 Notre Dame street west, in the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, a subject of the King of Great Britain, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

10 The invention relates to improvements in non-refillable bottles, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

15 The invention consists essentially in the novel construction and arrangement of parts within the neck of the bottle, whereby the liquid will flow from the bottle by raising a valve, seated on a shoulder at the lower portion of the neck and pass through devious passages and through openings in the locking plate, said valve being adapted to return to its closed position, in every position of the bottle but that of the inverted position for pouring.

25 The objects of the invention are to devise a bottle for containing the more expensive liquors and mixtures so that it will be quite impossible to refill that bottle with spurious goods, and generally to provide in that type of bottle, a construction of parts that is comparatively cheap to make and convenient for bottling purposes.

30 In the drawings, Figure 1 is a vertical sectional view of a portion of a bottle showing the various parts of the invention in position in the neck thereof. Fig. 2 is a sectional perspective detail of the neck portion of the bottle having the parts removed. Fig. 3 is an enlarged cross sectional view on the line A—B in Fig. 1. Fig. 4 is a perspective detail of the stopper. Fig. 5 is a perspective detail of the locking plate. Fig. 6 is a detail of the group of balls. Fig. 7 is a perspective detail of the inverted cup-shaped cover. Fig. 8 is a perspective detail of the valve ball. Fig. 9 is a perspective detail of the valve, showing the parts thereof separated.

50 Like numerals of reference indicate corresponding parts in each figure.

1 is the body of the bottle.

2 is the neck of the bottle flaring outwardly a short distance above the body 1

forming the shoulder or valve seat 4 and 55 extending upwardly therefrom having the bead 5 adjacent to the upper end thereof on the outer side, and the annular recess 6 behind said bead 5 in the inner wall of the upper portion of said neck.

60 7 is a valve formed of the body 8, the stem 9 extending downwardly from said body 8 and of radial wing formation and the cork ring 10 fitting under the body 8 and having a beveled under side meeting the seat 4.

11 is an inverted cup-shaped cover having a plurality of holes 12 in the side walls and top thereof and resting against the flare of the neck above the shoulder 4 and closing in 70 from above the valve 7, the side wall of said cover 11 converging slightly to its top to form on the inside thereof inclined ways.

13 is a ball forming a weight on the valve 7 and permitting the fall of said valve from 75 engagement with the seat 4 on the inversion of the bottle and yet keeping said valve to its seat at all times except when said bottle is tipped well beyond the horizontal in the inversion of said bottle, the said inclined 80 ways of the cover 11 forming the path way for the rolling of said ball to said valve 7.

14 are balls loosely placed on top of the cover 11 and preferably of smaller size than the ball 13, though of sufficient diameter to 85 prevent them falling between the inner wall at the upper portion of the neck and the cover 11. The upper ones of the balls 14 are slightly below the annular recess 6.

15 is a locking plate having the curved 90 slot openings 16 in the sides thereof and the curved ends and sides 17 corresponding to the curve of the inner wall of the bottle neck and the diametrically arranged hole 18 therethrough.

95 19 are pins projecting outwardly from each end of the hole 18.

20 is a spiral spring arranged between the inner ends of the pins 19 so that the said pins will always be kept in their outer position unless compressed, consequently on 100 placing the locking plate 15 in the upper portion of the neck of the bottle, the said pins 19 will be held to their inner position by the inner wall of said neck engaging the 105 outer ends of said pins until the locking plate is pushed down far enough for the pins to reach the annular recess 6, then the said

pins shoot out into said recess and effectually lock said plate in position, thereby also retaining the balls 14 and completely inclosing the parts underneath beyond the possibility of any tampering therewith.

21 is a stopper of cork, rubber or any suitable material having the boss 22 extending upwardly from its top side and the ring 23 engaging said boss. The stopper 21 is inserted in the upper portion of the neck of the bottle, over the locking plate 15.

24 is a body of wax filling in the upper portion of the neck of the bottle above the stopper 21 and from which the ring 23 preferably projects so that the said ring may be caught by a suitable tool and the wax pulled out, the wax, of course, acting only as a means of sealing the bottle for transportation purposes.

In the use of the bottle, the bottle is first filled with the neck in the state that it is shown in Fig. 2, that is without the valve and the necessary parts to protect that valve, then the valve 7 is inserted with the stem thereof projecting downwardly into the body portion, the ball 13 is then placed on top of the valve and over that the cover 11, while the balls 14 are placed on top of the cover 11 and the locking plate 15 over said balls 14. The stopper 21 is then inserted and suitably sealed with the wax 24.

In opening the bottle, the stopper is pulled out, as explained, then the bottle is inverted considerably beyond the horizontal so that the liquid flows past the valve and through the holes 12 around and between the balls 14, through the openings 16 and out through the top of the neck, the flow of liquid is therefore comparatively free from the bottle, but it is impossible to introduce any liquor into the bottle after the said parts in the neck are in position, because the valve will always rest on its seat, held there by the

ball 13 no matter what position the bottle may be in, so long as the said bottle is not inverted.

What I claim as my invention is:

1. In a non-refillable bottle, a valve seat formed at the opening of the direct passage into the body of the bottle from the main portion of the neck, a valve having a downwardly projecting stem extending through said direct passage, a ball mounted on said valve, a cup-shaped cover having a plurality of holes through the walls thereof and inclosing said ball and valve, a plurality of balls arranged on top of said cover, and a locking plate secured over said plurality of balls.

2. A non-refillable bottle comprising a body and a neck, the latter having an annular recess toward the upper end thereof and converging toward the lower end and forming a valve seat, a valve mounted on said seat, a ball on said valve, a perforated cover on said ball, a plate fitting in said neck over said annular recess and having scalloped edges forming outlet passages and a hole extending diametrically therethrough, a spring arranged centrally in said plate within said hole, a pair of pins one at each end of said hole and extending loosely thereinto against said spring, said pins being spring-held in said annular recess and means loosely arranged between said plate and said cover for holding said cover in position over the valve.

Signed at the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, this thirtieth day of September 1910.

JEAN BAPTISTE CHARTRAND.

Witnesses:

G. H. TRESIDDER,
H. DAVIS.