

C. J. HENRY.
BOTTLE CLOSURE.
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969,621.

Patented Sept. 6, 1910.

Fig. 1.

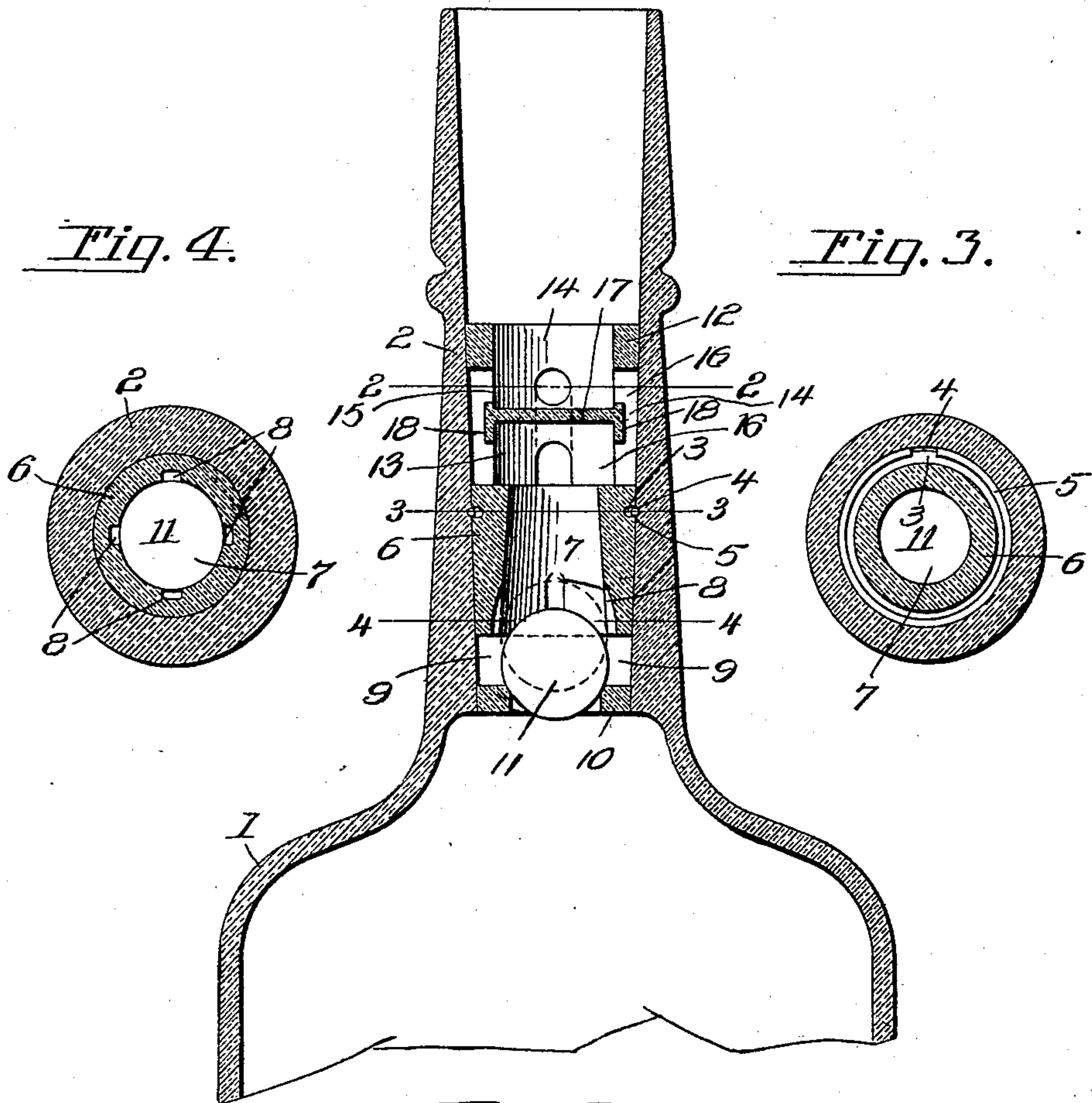
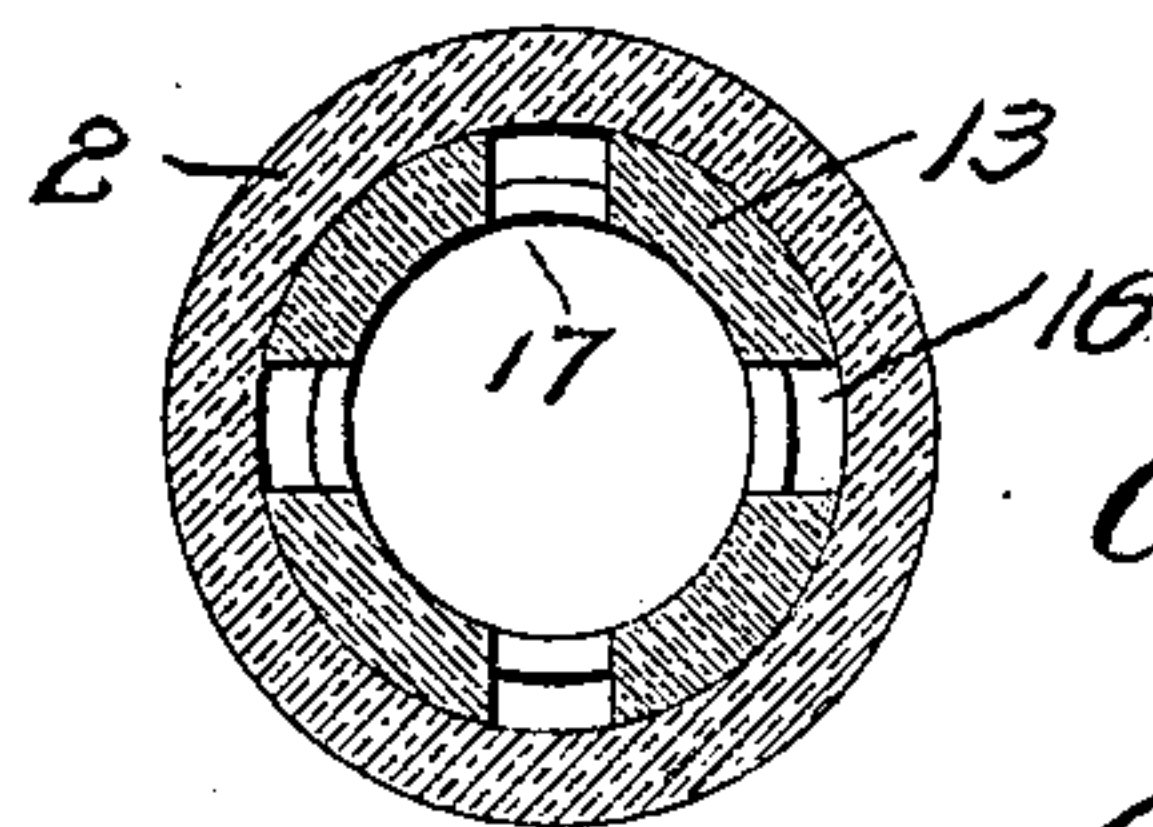


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES JOHN HENRY, OF PERTH AMBOY, NEW JERSEY, ASSIGNOR OF ONE-THIRD TO JACOB GREENSPAN AND ONE-THIRD TO MARTIN JOHN OLSEN, BOTH OF PERTH AMBOY, NEW JERSEY.

BOTTLE-CLOSURE.

969,621.

Specification of Letters Patent.

Patented Sept. 6, 1910.

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To all whom it may concern:

Be it known that I, CHARLES JOHN HENRY, a citizen of the United States, residing at Perth Amboy, in the county of Middlesex and State of New Jersey, have invented new and useful Improvements in Bottle-Closures, of which the following is a specification.

This invention relates to bottle closures, and has for its object to provide a closure adapted to be arranged in a bottle neck and to permit of the ready discharge of the liquid from the bottle, or to prevent refilling of the bottle when once emptied.

A further object of the invention is to provide a simple type of closure which may be readily applied for use and is inexpensive of construction.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described, illustrated and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a vertical section through the upper portion of a bottle embodying my invention. Figs. 2, 3 and 4 are horizontal sections taken respectively, on the lines 2—2, 3—3 and 4—4 of Fig. 1.

Referring to the drawing 1 designates the body of a bottle having a neck 2 which is internally tapered or flared. Arranged within the lower portion of the neck is a closure plug or stopper formed of glass or other suitable material and provided with an annular groove 3 to receive a spring locking ring 4 adapted to engage an annular groove 5 in the wall of the neck and to fasten the stopper therein against possibility of removal. The plug or stopper consists of a body portion 6 having a flaring discharge passage 7 and provided at the lower end of said passage with grooves or by-passes 8. These grooves or by-passes 8 communicate at their lower ends with a space or chamber 9 provided in the neck between the lower end of the plug body and an annular seat or ring 10 fitted within the base of the flaring neck and held therein by friction or indissoluble cement, the opening in said ring or seat being concaved at its upper end to form a seating surface for a ball valve 11 arranged to move in said chamber and into the lower portion of the flaring passage 7. The

valve normally closes the opening in the seat 10 to prevent entrance or discharge of liquid, but when the bottle is tilted rolls into the lower end of the passage 7, in which position it closes the lower end of said passage, the liquid discharging around the same and into the upper end of said passage through the by-passes 8.

Above the body portion 6 is an annular crown portion 12 which is connected with said body portion by an annular intermediate portion 13. The upper half of this portion 13 is provided with an annular series of ports 15, while the lower half thereof is provided with a corresponding annular series of ports 16. Said portion 16 is divided by a horizontal guard member or baffle plate 17 separating the ports 15 and 16 and provided with depending strengthening flanges or webs 18. By this construction the liquid flowing through the lower portion 6 is prevented from passing directly to the upper portion 12 and is caused to first pass into the lower half of the intermediate portion 13, thence outwardly through the ports 16 into the chamber 17, outwardly around the flanges 18 of the guard member and thence through the ports 15 into the upper half of the portion 13 and finally out through the passage in the upper portion 12. The guard or baffling plate 17 is designed to prevent the introduction of a wire or other implement into the neck far enough to reach the valve 11 so that the latter can not be tampered with.

From the foregoing description, it will be apparent that the plug, which is externally tapered, will be held in position against downward movement both by the form and construction of the neck and stopper and by the action of the locking ring, and will be held from withdrawal by the latter, and that the liquid flowing through the passage 7 will enter the passage 15, and thence flow through the channel 16 into the passage 14 and finally into the upper portion of the neck from which it will discharge. The stopper terminates preferably below the top of the neck, to enable an ordinary form of cork or stopper to be inserted therein to prevent access of dust and dirt to the interior of the neck.

A stopper constructed as described in ac-

cordance with my invention is not only effective in use, but may be manufactured and sold at a comparatively low cost.

Having thus described the invention what
5 is claimed as new is:

A receptacle having a neck of flaring form and provided with a valve seat in the base thereof, a plug irremovably secured within the neck above said seat, said plug comprising a base portion having a flaring passage provided at its lower end with recesses forming by-passes, an annular crown portion having a passage, an annular intermediate portion integral with and connecting said base and crown portions, said intermediate portion being provided above

and below its horizontal center with lateral ports communicating with said chamber, a horizontal guard disposed upon said intermediate portion between the sets of ports 20 and separating the same from each other, said guard being provided with depending strengthening webs or flanges, and a valve adapted to rest normally upon said valve seat and to enter the base of said flaring passage without closing said by-passes. 25

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

CHARLES JOHN HENRY.

Witnesses:

JACOB GREENSPAN,
MARTIN JOHN OLSEN.