

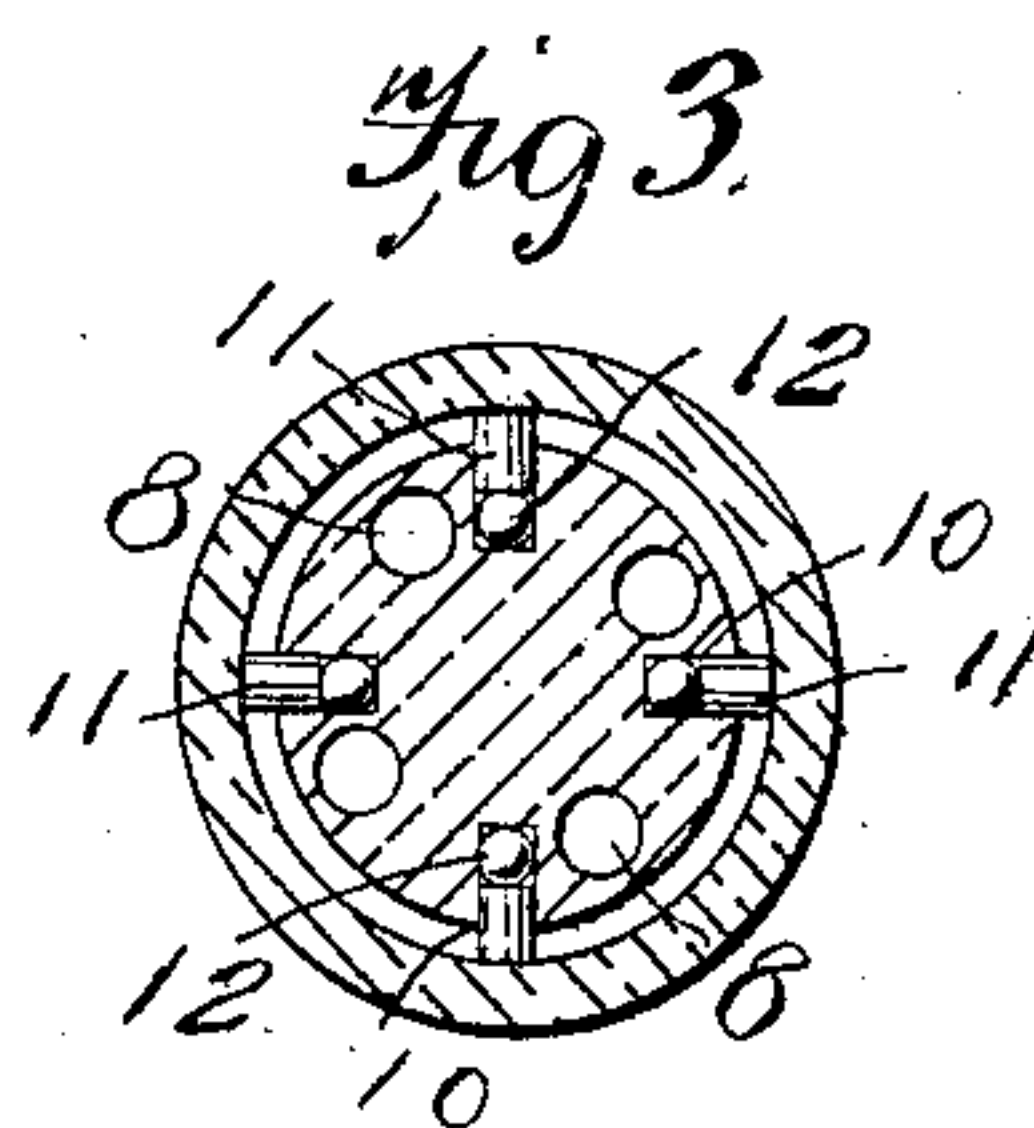
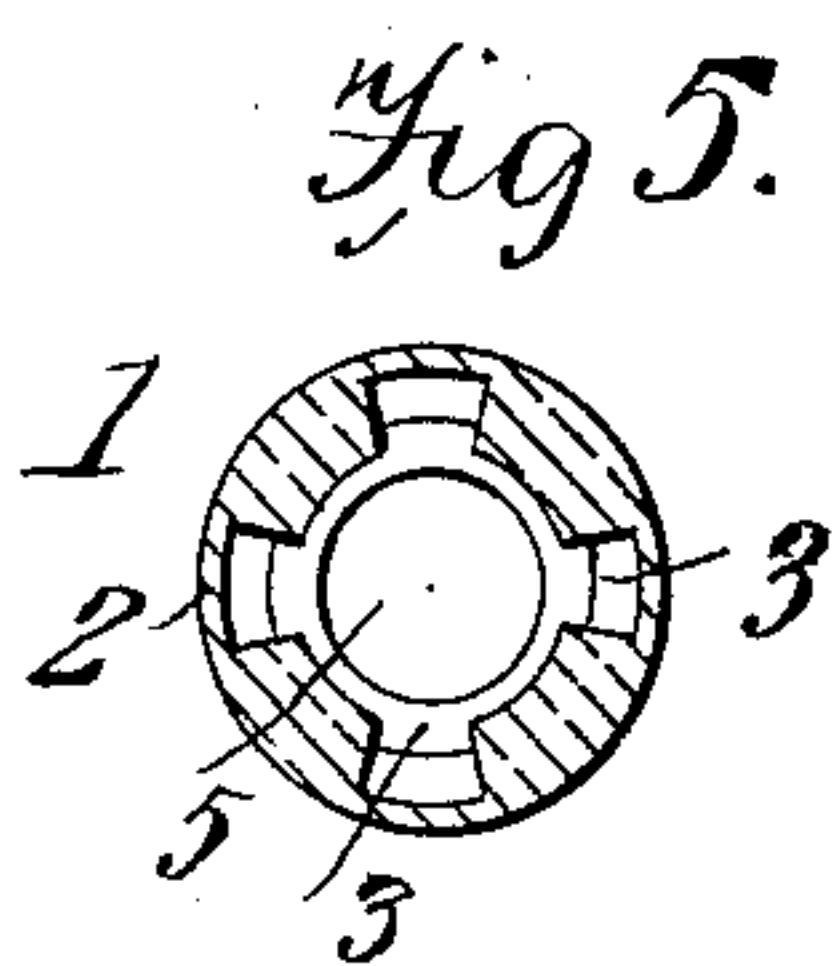
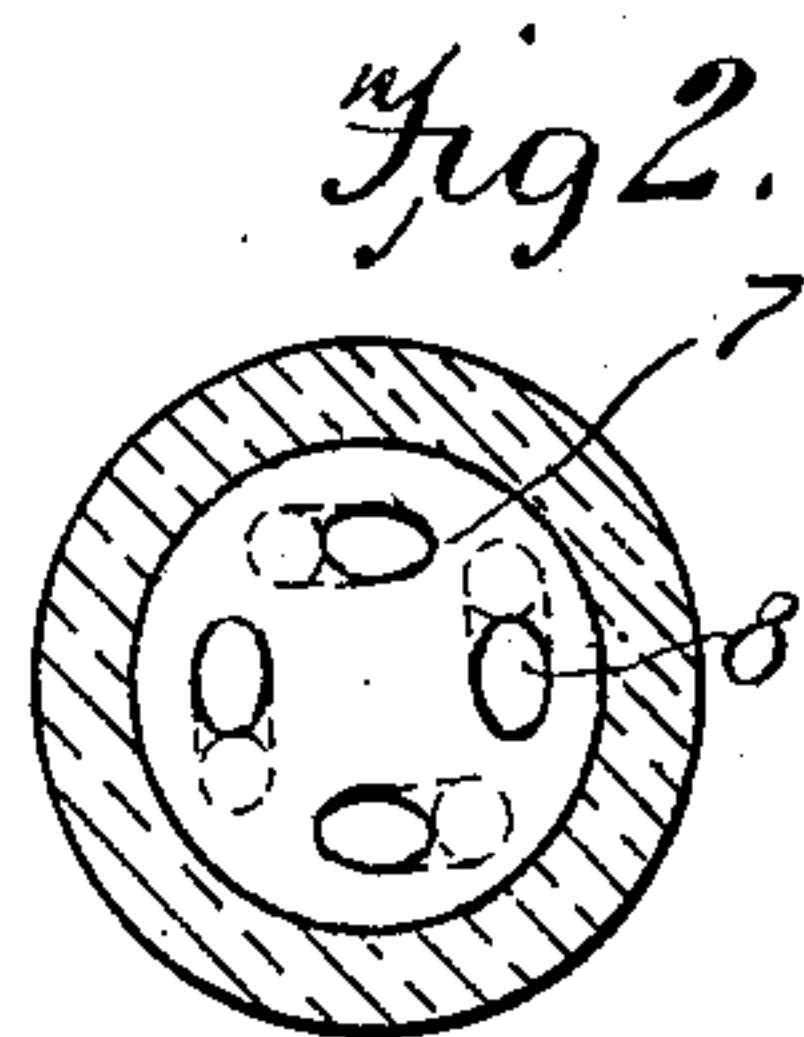
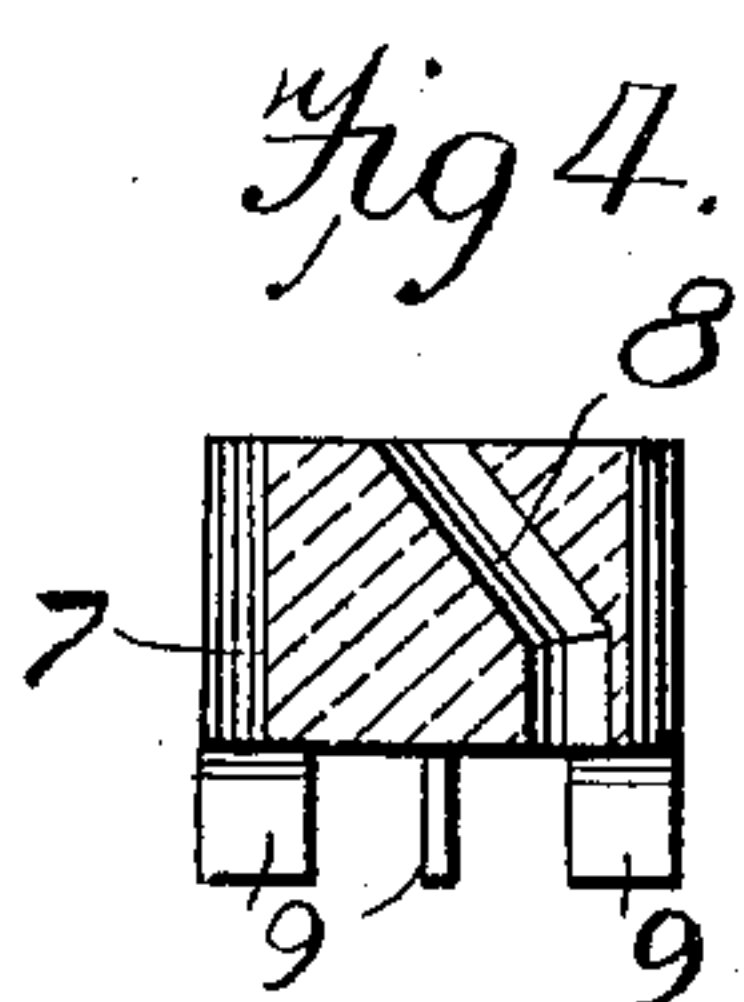
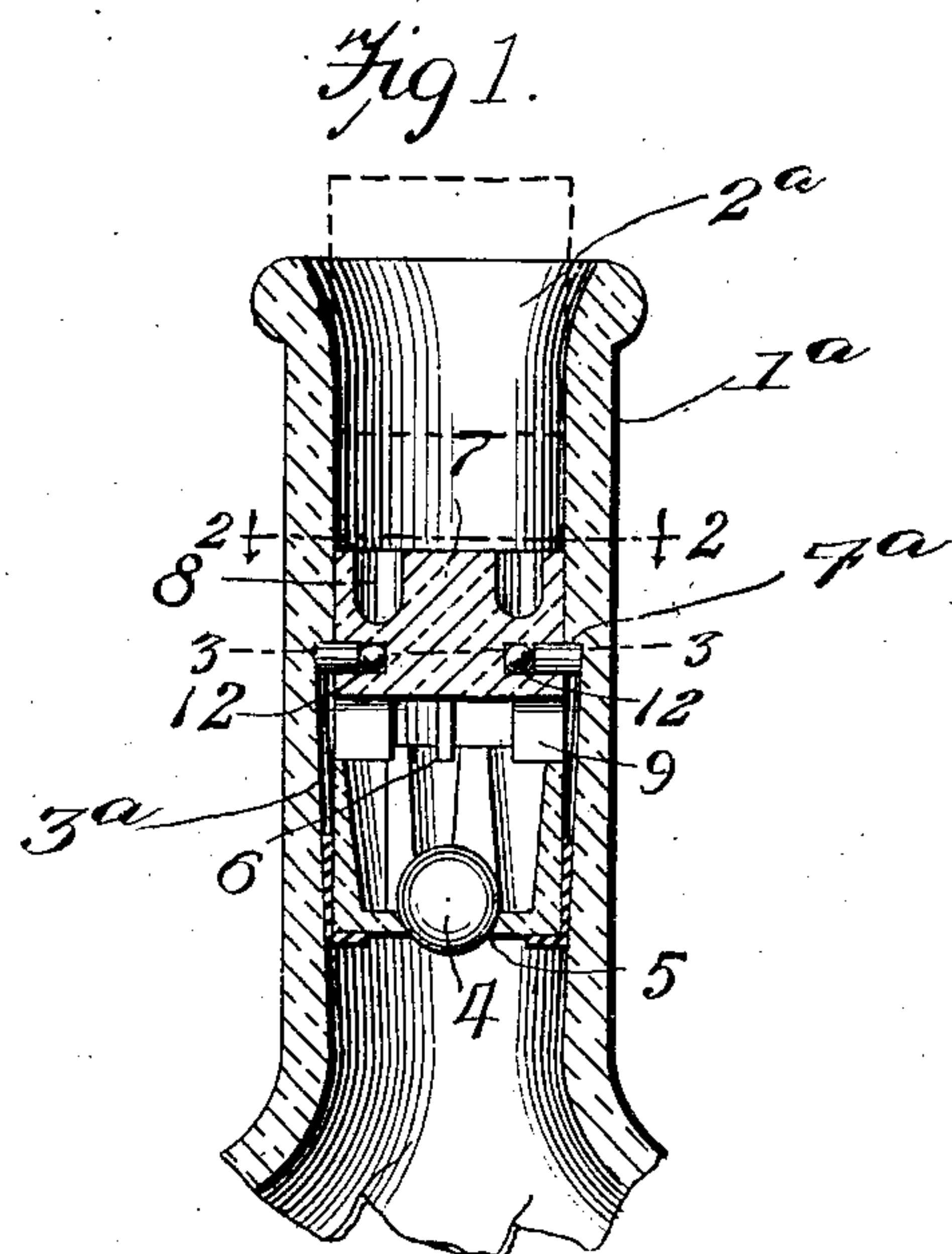
C. K. BRINER & H. T. FOX.

BOTTLE.

APPLICATION FILED NOV. 1, 1907.

898,628.

Patented Sept. 15, 1908.



Witnesses

Hugh H. Ott
Wm. North

Inventors

Czark Briner
Howard T. Fox

By

Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

CZAR K. BRINER AND HOWARD T. FOX, OF VEEDERSBURG, INDIANA.

BOTTLE.

No. 898,628.

Specification of Letters Patent.

Patented Sept. 15, 1908.

Application filed November 1, 1907. Serial No. 400,235.

To all whom it may concern:

Be it known that we, CZAR K. BRINER and HOWARD T. FOX, citizens of the United States, residing at Veedersburg, in the county of Fountain and State of Indiana, have invented new and useful Improvements in Bottles, of which the following is a specification.

This invention relates to non-refillable bottles, and the object of the invention is to improve the construction of non-refillable bottles and to provide a simple, inexpensive, and efficient device adapted to be readily applied to the neck of the bottle or analogous receptacle and capable, after the same has received its original contents, of preventing the liquid from being introduced in such receptacle, thereby preventing fraudulent refilling with an imitation liquid.

To these ends the invention consists in the novel combination and arrangement of elements as will hereinafter be fully described and claimed.

In the drawing, Figure 1 is a vertical sectional view of the neck of a bottle embodying my improvements. Fig. 2 is a horizontal section on the line 2—2 of Fig. 1. Fig. 3 is a similar view taken on the line 3—3 of Fig. 1. Fig. 4 is a vertical sectional view of the cap employed with this invention and taken through one of the ports of the cap, and Fig. 5 is a horizontal sectional view of the valve cup, the ball valve being removed.

In the drawings the numeral 1^a designates the neck of the bottle as any desired or preferred construction and being provided with a flaring mouth 2^a and an internal flaring recess 3^a terminating in the shoulders 4^a adapted as a securing means for a valve cap about to be described.

The improved stopper comprises two parts or sections—a valve cup and a cap—each preferably constructed of glass or other suitable material.

The valve cup 1 is cylindrical in form and hollow for a portion of its depth, the inner wall 2 of this hollow portion being downwardly inclined for a portion of its length and thence provided with the inturned portion 3 adapted to act as a seat for the spherical valve 4. The opening 5 communicating with the valve seat of the cup serves to permit a passage for the contents of the bottle. The wall 2 of the valve cup is provided with a series of vertically arranged ribs extending from the valve seat upward to the upper

edge of the cup. These ribs are so positioned and of such size as to permit the ball valve to pass between them, thus insuring the proper seating of the valve. The upper edge of the cup is formed with diametrically opposite recesses 6, the purpose of which will hereinafter be described. The cap 7 comprises a cylindrical body portion of an equal circumference to that of the valve cup 1 and is provided with a series of angular openings or ports 8 arranged upon its upper face and communicating with the valve cup 1. At its lower face the cap 7 is provided with a series of lugs or fingers 9, adapted for engagement with the recesses 6 of the valve cup 1, thus providing means by which the cap and the valve cup may be properly positioned in relation to each other when in operative position within the neck of the bottle. The cap 7 is provided upon its periphery with a series of openings or channels 10 adapted for the reception of locking pins or bolts 11. Interposed between the locking pins 11 and the inner walls of the channels 10 are resilient elements 12 adapted to normally force the pins out of the channels. These elements 11 may be composed of rubber balls such as are shown in the drawing, or suitable helical springs, but for the sake of economy I prefer using the rubber as illustrated.

As noted in Fig. 1 of the drawing the valve cup 1 is provided at its lower extremity with a thin band of cork or rubber, the object of which being to hold the valve cup in rigid engagement with the interior of the mouth of the bottle when it is inserted in operative position.

In assembling the elements within the bottle mouth the valve cup 1 is first inserted until it occupies position upon the internal flare of the bottle neck, substantial to that illustrated in Fig. 1 of the drawing. The cap 7 is now pressed within the mouth of the bottle, the flaring portion of which serves to force the locking pins 11 backward within their seats, thus allowing the cap to be pushed still further down until the locking pins pass the shoulders 4^a of the bottle 1^a, when the locking pins acting under the influence of resilient balls 12 will force themselves into engagement under the shoulders of the bottle neck.

Should it be desired the cap and valve cup might be connected with each other before their insertion within the bottle neck, but for cheapness of construction it is desirable to

have these elements composed of separate members.

It will of course be obvious that a cork or other suitable stopper may be inserted within the neck of the bottle, as is illustrated in the dotted lines of Fig. 1 of the drawing, after the improvement is positioned.

While we have thus far described the preferred embodiment of our invention it is to be understood that changes in the precise construction may be resorted to without departing from or sacrificing any of the advantages of our invention.

Having thus fully described the invention, what is claimed as new is:

1. A non-refillable bottle having the internal circumference of its neck provided with a flaring recess and a shoulder above the recess, a cap having locking pins engaging the shoulder of the recess, the body of the cap being provided with angular ports and downwardly extending fingers, and a valve cup

having a valve seat, a valve for the seat loosely placed in the cup, ribs projecting vertically above the valve seat for guiding the valve in operation, and the fingers of the cap adapted to limit the movement of the valve.

2. In a bottle stopper, a valve cup formed with a valve seat, a valve for the seat loosely placed in the cup, and ribs projecting vertically above the valve seat for guiding the valve in operation, the upper end of the cup being formed with slots, a cap for the valve cup, having fingers adapted to engage within the slots in the cup and to limit the movement of the valve when the valve is unseated.

In testimony whereof we affix our signatures in presence of two witnesses.

CZAR K. BRINER.
HOWARD T. FOX.

Witnesses:

WILLIE BOOE,
ZEB E. BOOE.