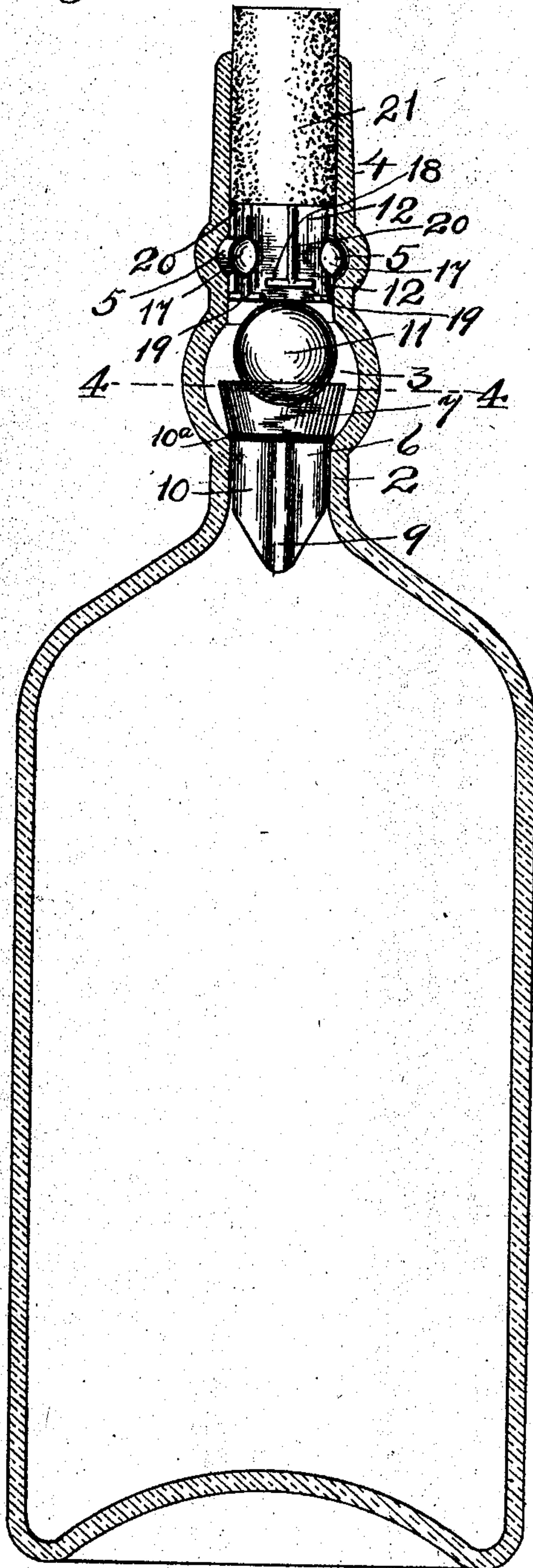
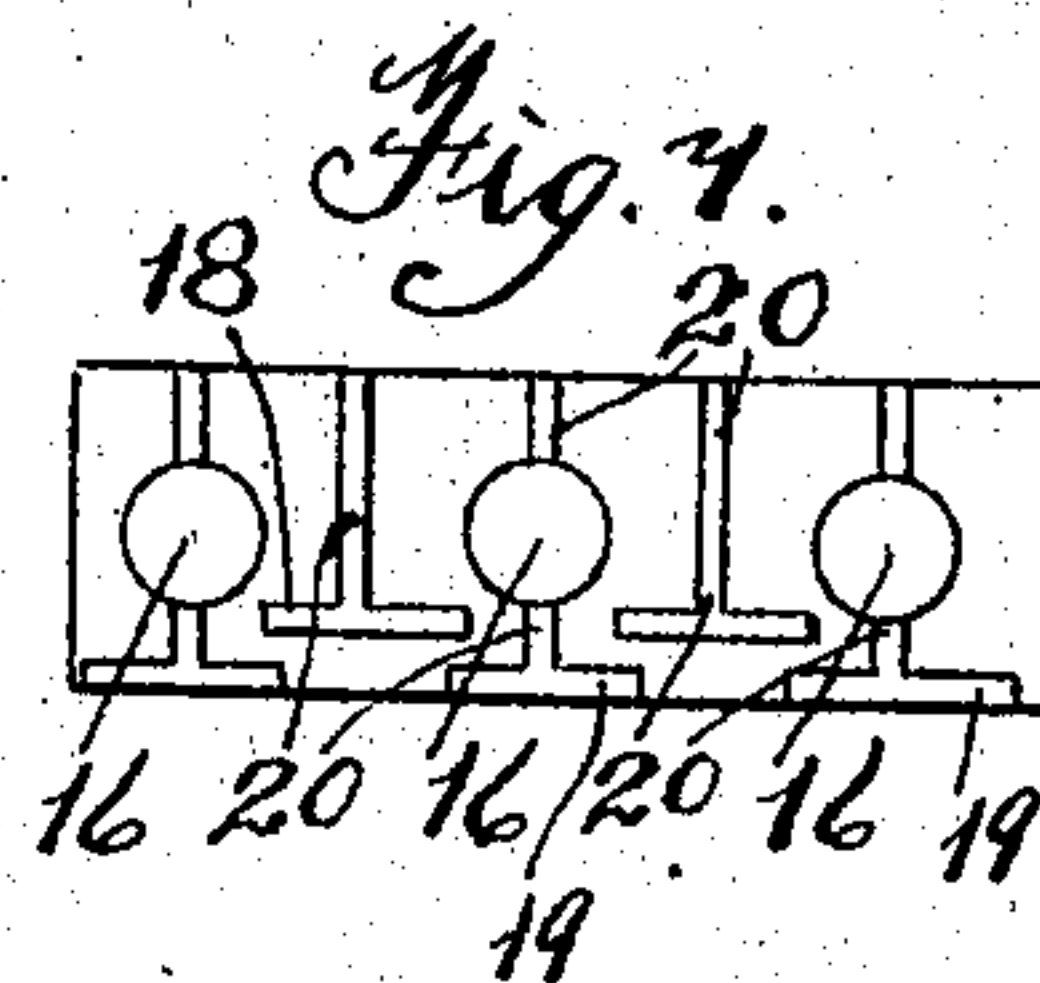
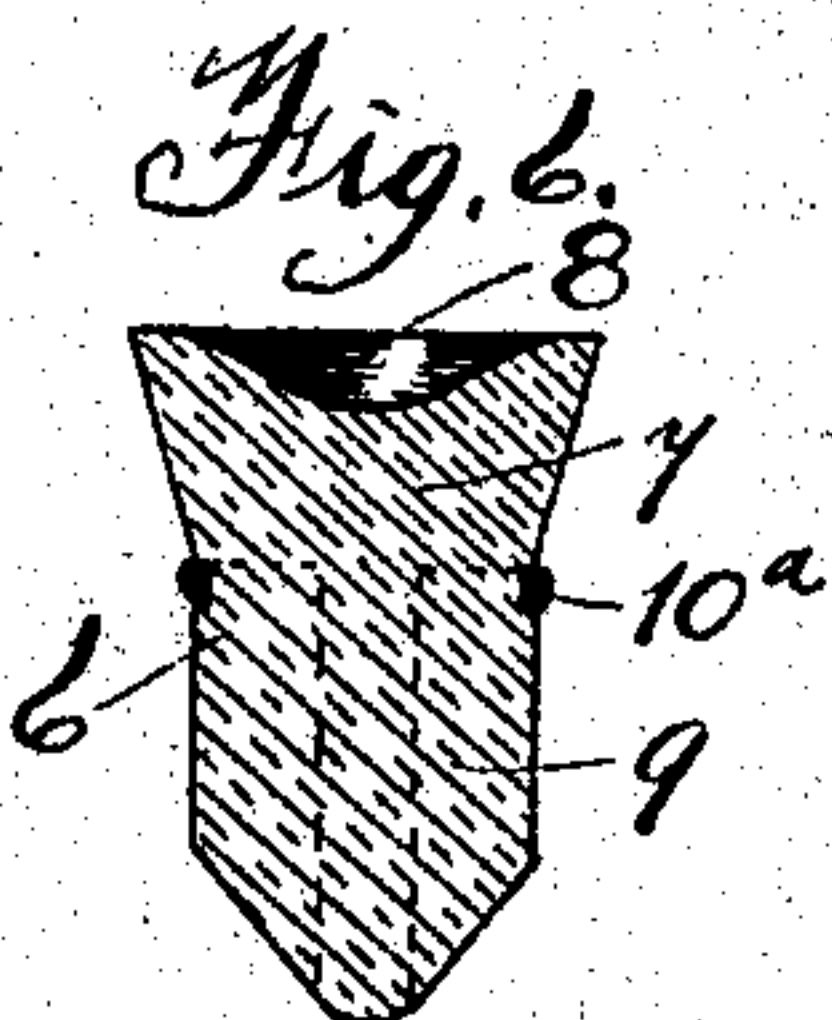
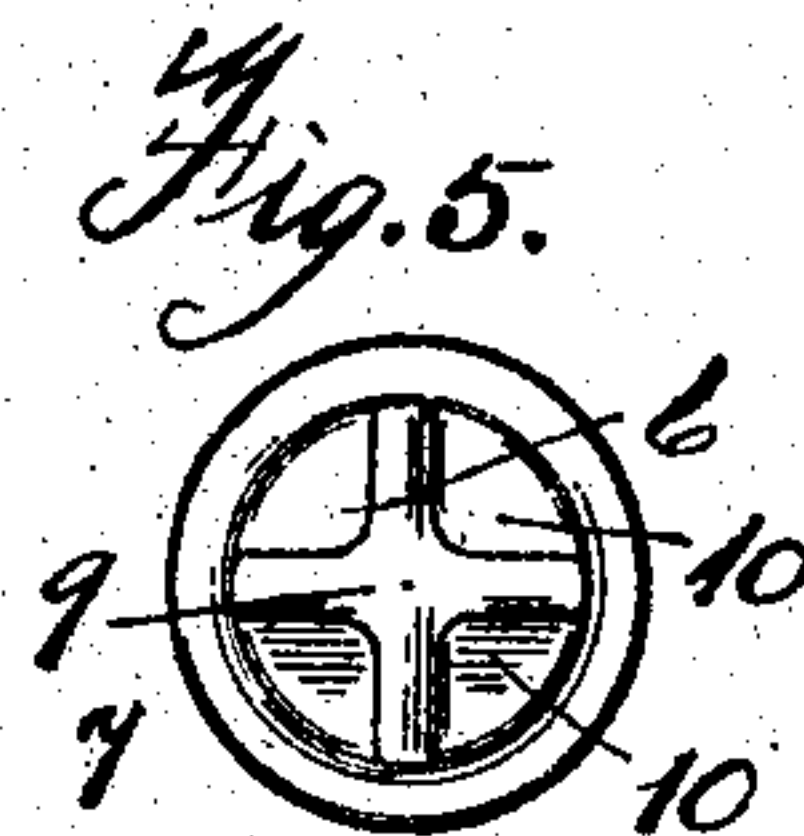
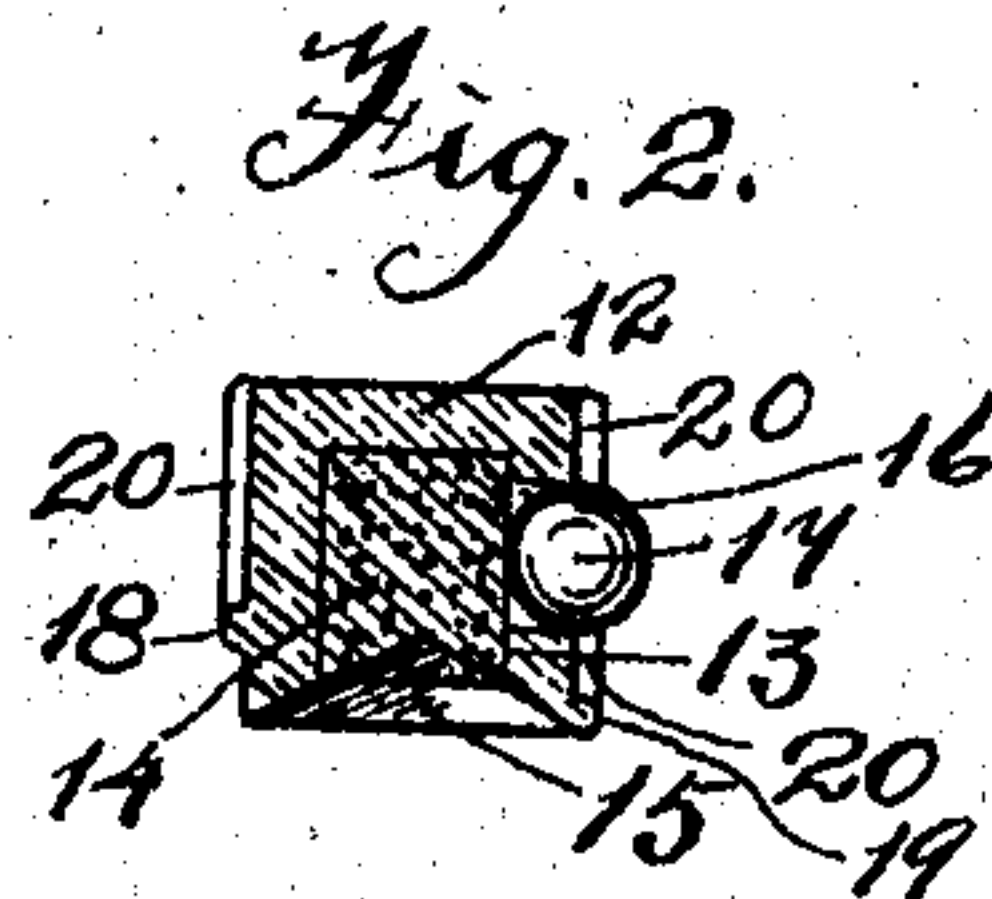
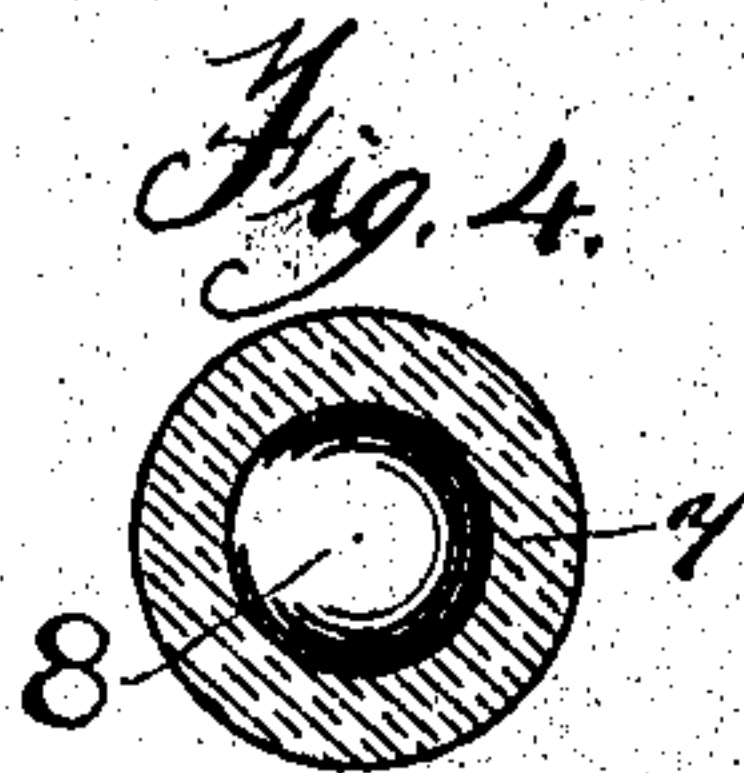
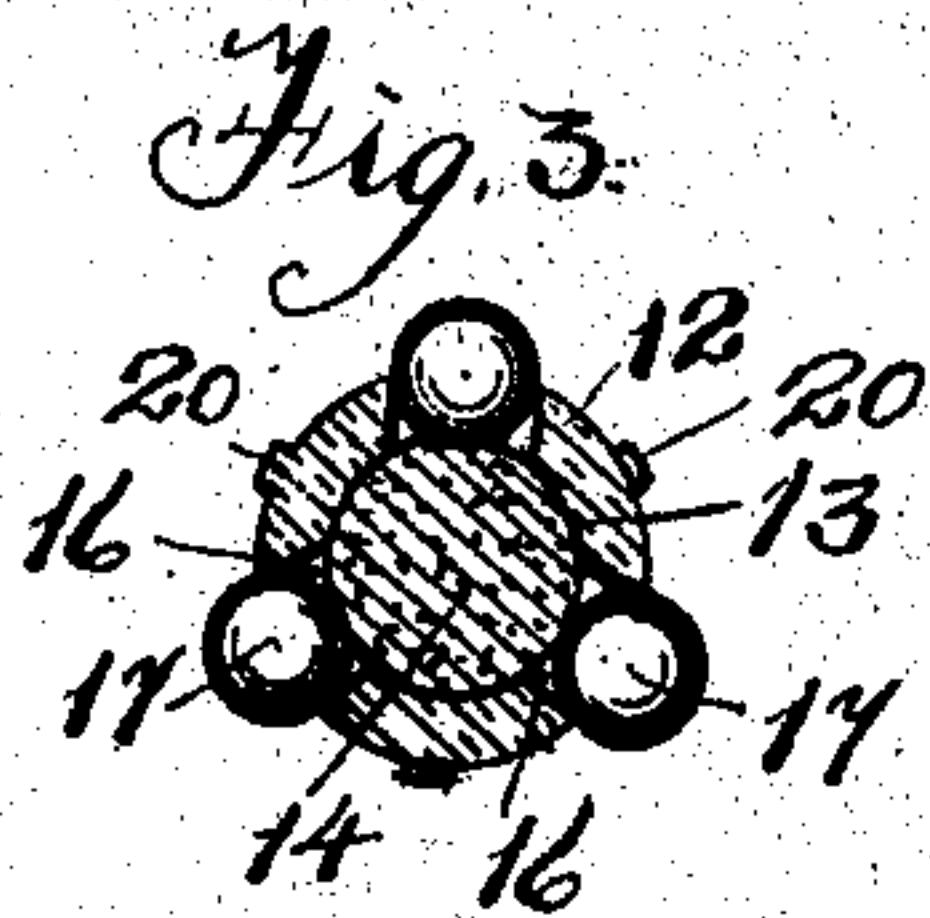


No. 815,639.

PATENTED MAR. 20, 1906.

A. SCHENCK.
NON-REFILLABLE BOTTLE.
APPLICATION FILED APR. 27, 1905.

Fig. 1.



Witnesses:
W. P. Bond,
Walker Banning.

Inventor
August Schenck
By Banning Banning
Attys.

UNITED STATES PATENT OFFICE.

AUGUST SCHENCK, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-THIRD TO MARGARET FALLON, JOHANNA SIEGLER, AND CHARLES CORNACKER, OF CHICAGO, ILLINOIS.

NON-REFILLABLE BOTTLE.

No. 815,639.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed April 27, 1905. Serial No. 257,630.

To all whom it may concern:

Be it known that I, AUGUST SCHENCK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, the same being an improvement on the devices shown and described in application Serial No. 227,718, filed October 8, 1904.

The object of this invention is to produce a bottle which it will be impossible to fill after it has been once sealed, but which at the same time will allow the liquor therein contained to be poured out, thereby allowing the bottle to be filled but once and preventing the substitution of inferior liquor in place of the genuine liquor originally filled into the bottle.

Another object of the invention is to so arrange the parts that the entire bottle and valve members may be formed from glass, which is a substance which will not corrode or deteriorate and which will not in any way impair the quality of the liquor contained.

Another object of the invention is to so arrange the parts that it will be impossible to tamper with or remove the valve without destroying the bottle.

Another object of the invention is to so arrange the valve members that they may be easily slipped into the bottle and permanently positioned therein after the bottle has been filled; and a final object of the invention is to so construct and arrange the bottle as a whole that its operation will be perfect and at the same time enable the parts to be easily constructed and assembled.

The invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings illustrating the invention, Figure 1 is a sectional view of the bottle, showing the valve members in elevation; Fig. 2, a longitudinal section of the inner stopper; Fig. 3, a cross-section of the inner stopper; Fig. 4, a cross-sectional view of the movable valve member, taken on line 4 4 of Fig. 1; Fig. 5, an end view of the movable valve member; Fig. 6, a longitudinal sectional view of the same, and Fig. 7 a diagrammatic view of the periphery of the inner stopper.

The bottle is blown to have a contracted

throat 2 and an enlarged neck 3, which neck terminates in a mouth 4, and between the neck and the mouth is an annular groove 5 on the inside of the glass. Within the contracted throat is a movable valve member 6, having a rounded cup-shaped head 7, provided on its upper face with a rounded recess 8, and the valve member terminates in a depending stem 9, provided with a series of grooves or channels 10, which stem serves as a weight or balance to hold the movable valve member in place and hold the rounded cup-shaped head seated against the contracted walls of the throat when the bottle is standing right side up, as shown in Fig. 1, and the valve member is provided with a rubber gasket 10^a around its head.

Within the conical recess 8 is a ball 11, preferably of glass, and above the ball is an inner plug 12, which is provided with a chamber 13 on its interior, within which chamber is located a filling-plug 14, preferably of cork, although rubber or other elastic material may be used. The plug 12 is open at its lower or inner end for the insertion of the filling, and the end of the plug and filling are provided with a conical recess 15 in alignment and cooperating with the recess 8 in the movable valve member. Within the rounded exterior wall of the plug are a series of three holes 16, within which are located balls 17, preferably formed of glass, which balls abut against the elastic filling for the plug and normally outwardly project from the plug and are adapted to be driven in or compressed against the elastic filling when pressure is brought to bear on the balls, and said balls when the plug is inserted in place extend into the annular groove or channel 5 in the inner wall of the bottle-neck, locking the plug in place and preventing its removal when once inserted. The plug is provided around its exterior with a series of upper horizontally-extending curved ribs 18 and lower curved ribs 19, the two series of ribs being arranged in staggered relation to one another a short distance apart and having their terminal ends overlapping one another by a small distance. The horizontally-extending curved ribs have connecting therewith upwardly-extending straight ribs 20, which terminate at the upper end of the plug. The horizontally-extending ribs by reason of their relation prevent the insertion of a wire or similar device

into the bottle for the purpose of retracting or tampering with the ball 11, and the curved and straight ribs together serve to position the plug within the bottle and prevent its
 5 movement and at the same time provide interstices or spaces between the ribs for the discharge of the liquid within the bottle. The closure of the bottle is completed by an exterior cork 21, which fits into the mouth of
 10 the bottle-neck.

In use the liquor, patent medicine, or other fluid is filled into the bottle before the insertion of any of the valve members, and after the filling operation the movable valve member is first inserted into the bottle and falls
 15 down to its seat against the contracted throat, in which position it is maintained by the weight of the stem, after which the ball is inserted into the bottle to rest within the recess 8 in the movable valve member, so that the weight of the ball will serve and hold the valve fully seated when in upright position, as shown in Fig. 1. After the ball has been
 20 inserted the closing-plug is entered into the mouth of the bottle and presses down through the mouth, which pressure causes the balls 17 to be compressed into the elastic filling for the plug by the contact with the wall of the mouth until the plug has been forced into the
 25 position shown in Fig. 1, in which the balls come into line with the groove or channel 5 and spring outwardly by the pressure from within, locking the plug in place within the neck of the bottle and at a sufficient distance
 30 from the movable valve member to allow the ball to have a considerable play between the two members. The inner plug is of a size to leave a slight annular space around its exterior for the passage of liquor from the bottle, and when constructed, as herein shown, to
 35 have the filling entered into the plug from the inner or lower end it will be impossible to remove the elastic filling to obtain access to the balls which lock the plug in place. When
 40 it is desirable to pour out the liquor, the bottle is unsealed by the removal of the exterior cork 21 and then tilted up sufficiently to cause the ball to roll from the movable valve member to the plug, which allows the movable
 45 member to be unseated and the liquor to flow around the movable valve, around the walls of the plug, and out of the mouth of the bottle. As soon, however, as the bottle is brought back to upright position or even
 50 when the bottle approaches an upright position the movable member will seat itself by the action of the depending stem, and the ball will roll back into place to exert pressure against the movable member, holding it in
 55 position and preventing the inflow of liquor into the bottle.

The provision of the ribs, which overlap one another around the entire periphery of the plug and above the ball 11, prevents any
 65 tampering with the bottle or the unseating of

the ball by the insertion of a wire or similar device intended to force back the ball and allow it to become unseated.

It will be seen from the foregoing description that the bottle of the present invention
 70 is of a construction which enables the parts to be readily assembled after the filling of the bottle, and when assembled it will be impossible to refill the bottle with spurious or inferior liquor. The parts are so arranged that
 75 the bottle will be entirely open for the admission of liquor prior to the sealing operation, since none of the members herein described are permanent features of the bottle itself, but are all of them introduced into the bottle
 80 after the filling operation, and that the bottle itself does not differ materially from the bottles heretofore constructed, so that it will not be necessary to depart to any appreciable extent from the methods heretofore employed
 85 for the manufacturing of bottles. This is a feature of importance, since it enables the same bottle to be used with or without the features of the present invention, so that it will be possible to use a uniform grade of bot-
 90 tles and to apply the sealing means of the present invention to only such bottles as it is desirable to prevent from being refilled.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a non-refillable bottle, the combination of a bottle having a contracted throat forming a seating-face and terminating in a neck, the latter opening into a throat, a valve member adapted to seat against the seating-
 100 face, a closing-plug adapted to be locked into the bottle-throat, a ball between the closing-plug and the valve member, two rows of separated ribs around the lower end of the plug having their ends overlapping to guard
 105 against tampering with the valve member and ball, and rows of straight ribs extending at right angles thereto and adapted to abut against the inner wall of the bottle-throat to position the plug in place and provide spaces
 110 for the outflow of the liquid, substantially as described.

2. In a non-refillable bottle, the combination of a bottle, a valve member adapted to close the outlet for the bottle, and a closing-
 115 plug adapted to be locked into the throat of the bottle above the valve member and provided with two rows of separated ribs around the lower end of the plug, having their ends overlapping to guard against tampering with
 120 the valve member, and rows of straight ribs extending at right angles thereto and adapted to abut against the inner wall of the bottle-neck to position the plug in place and provide spaces for the outflow of liquid, substan-
 125 tially as described.

AUGUST SCHENCK.

Witnesses:

WALKER BANNING

OSCAR W. BOND.