

No. 754,685.

PATENTED MAR. 15, 1904.

G. B. OKEY.

STOPPER FOR PREVENTING REFILLING BOTTLES.

APPLICATION FILED JUNE 20, 1903.

NO MODEL.

Fig. 1.

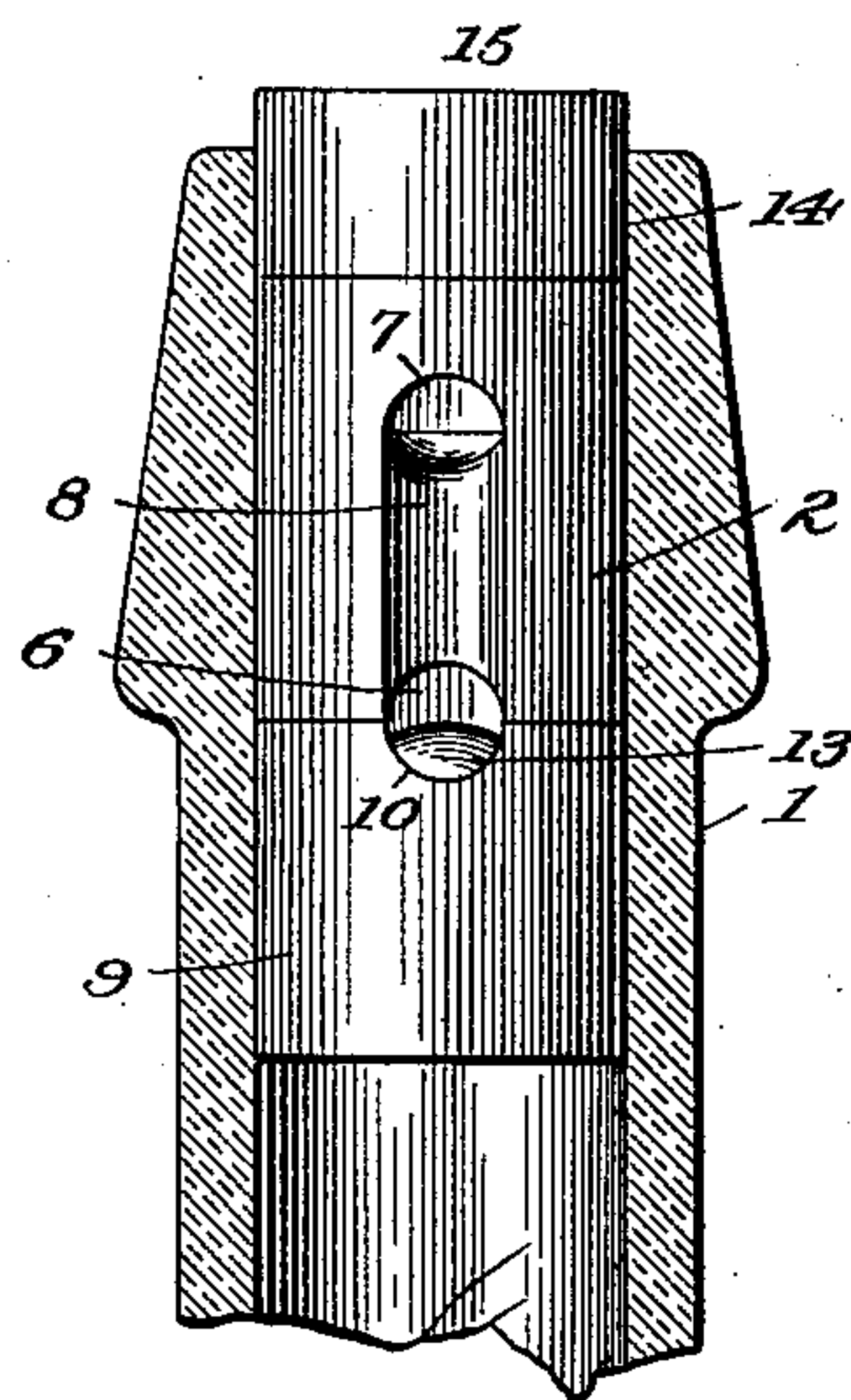


Fig. 2.

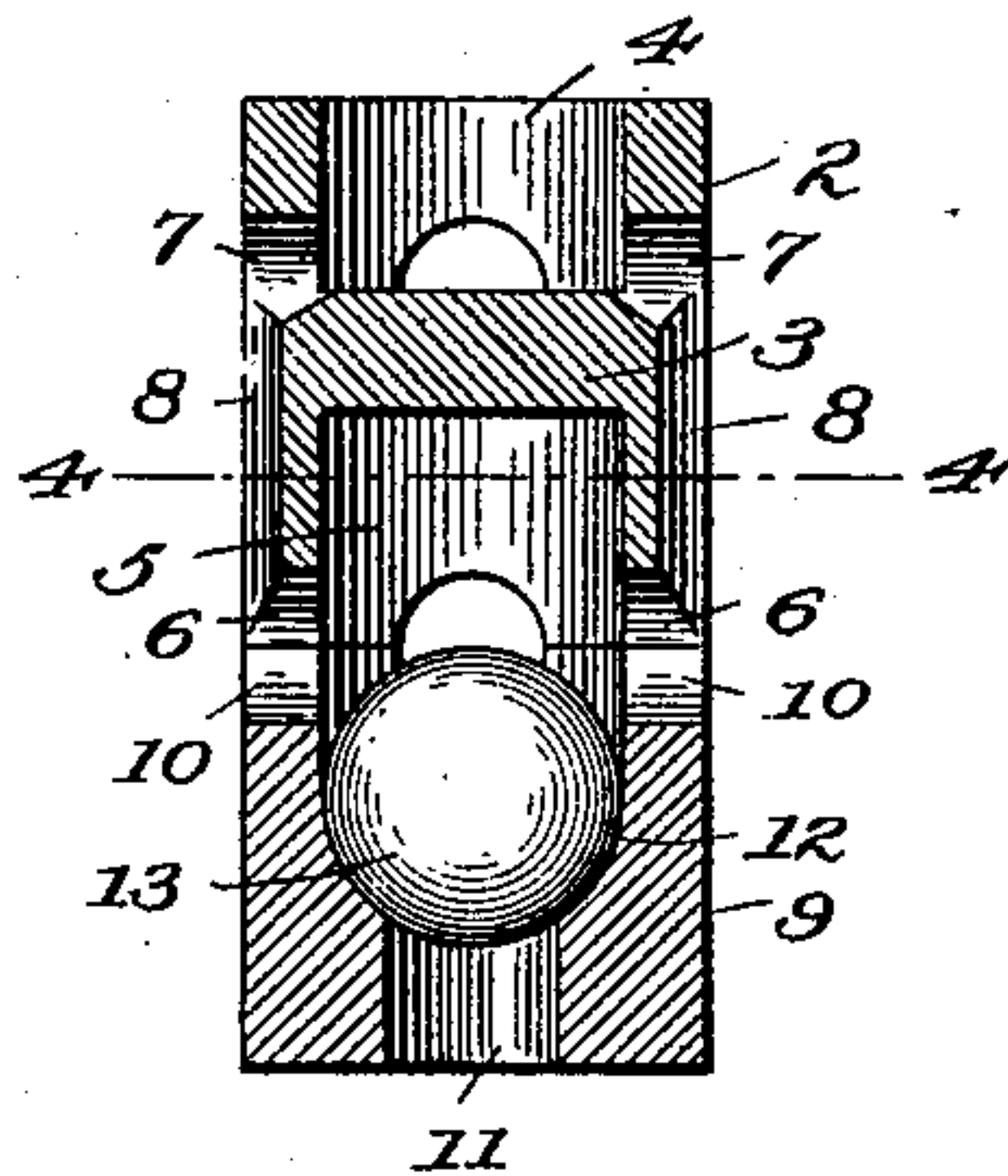


Fig. 3.

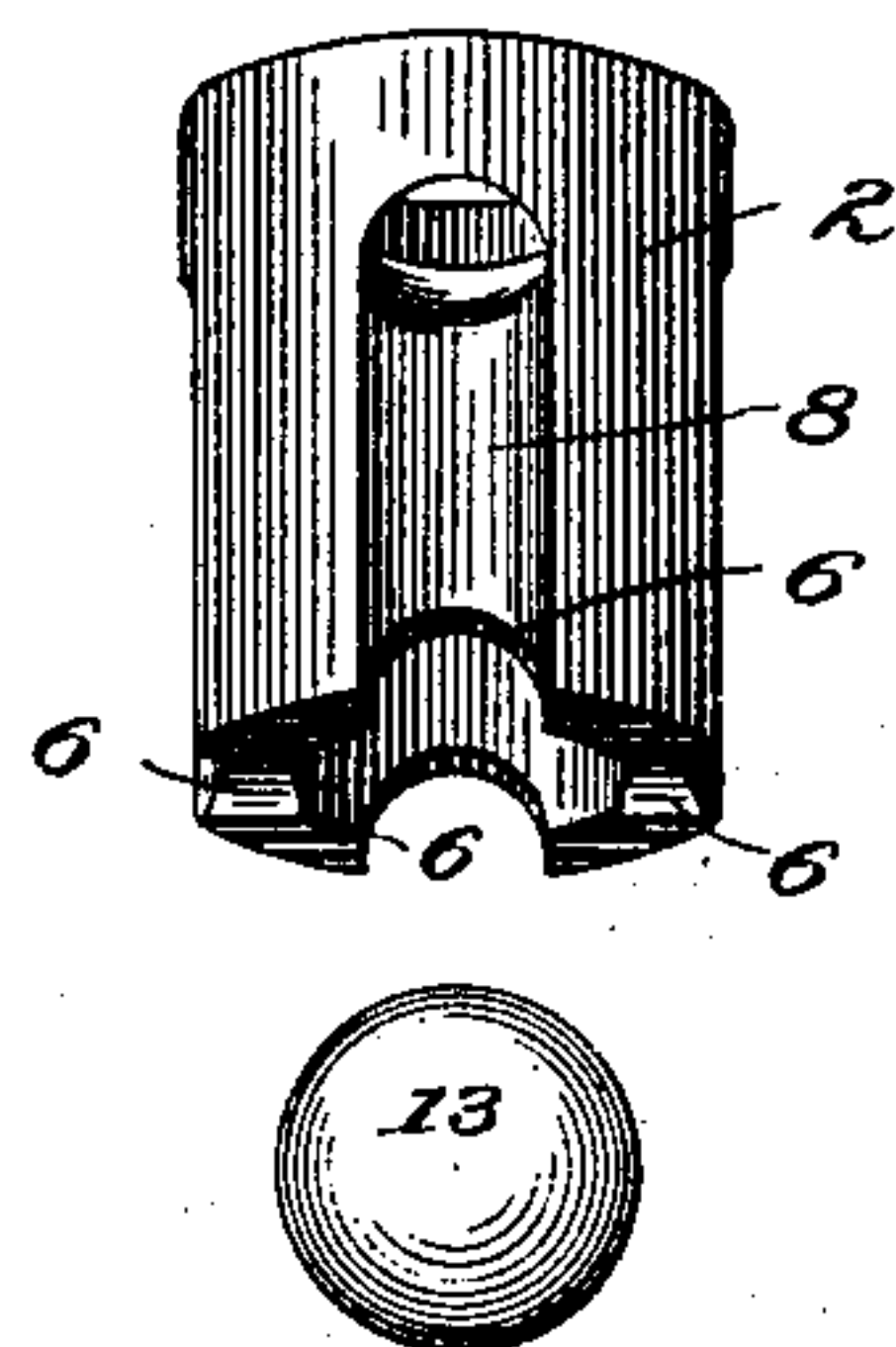
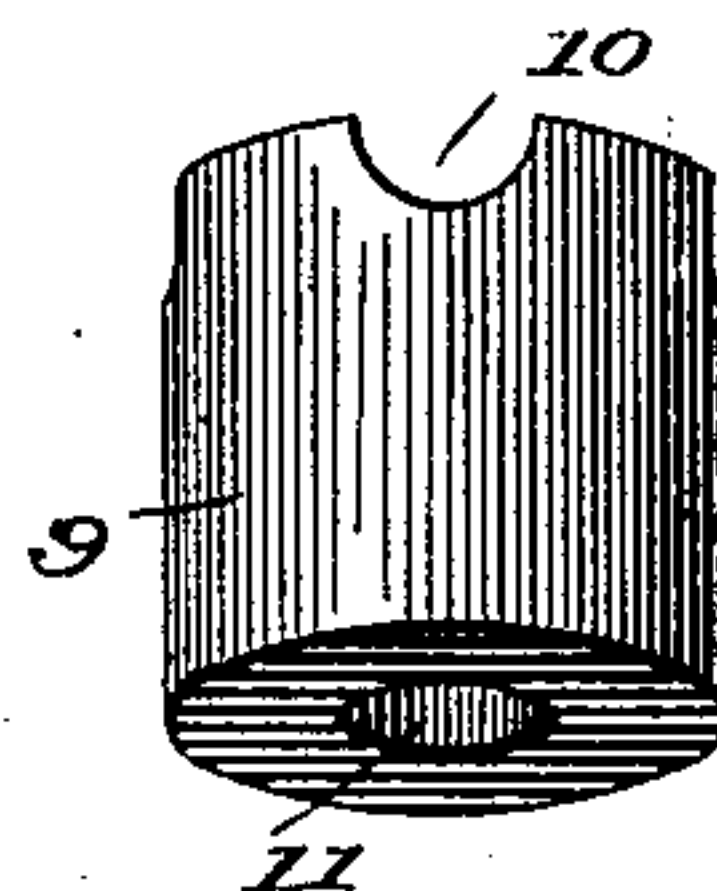
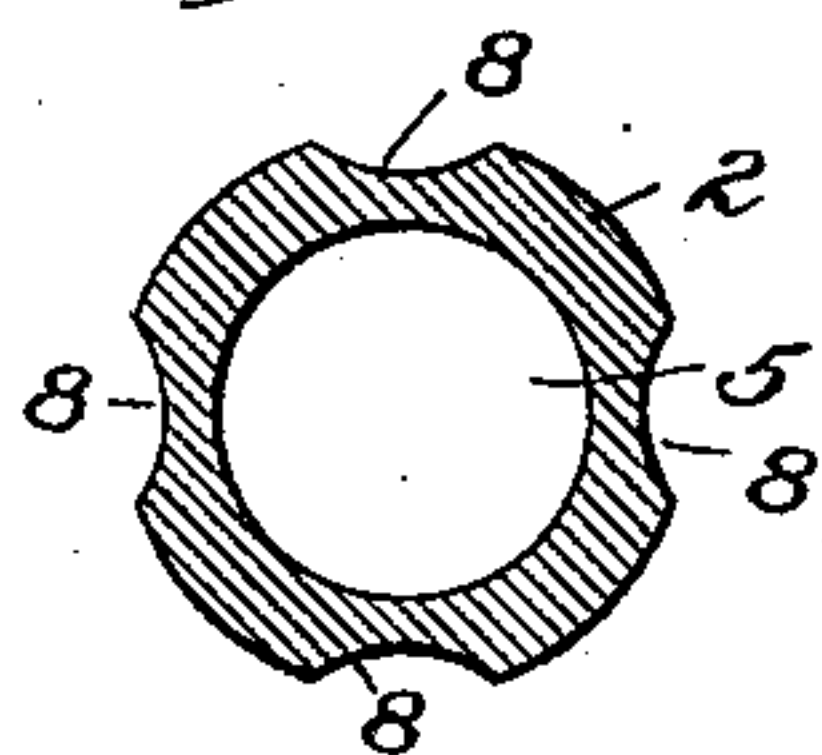


Fig. 4.



Witnesses

Edwin L. Bradford
Anne B. Johnson.

Inventor
George B. Okey
By Johnson & Johnson
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE B. OKEY, OF INDIANAPOLIS, INDIANA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE NATIONAL NON-REFILLABLE BOTTLE COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF ARIZONA TERRITORY.

STOPPER FOR PREVENTING REFILLING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 754,685, dated March 15, 1904.

Application filed June 20, 1903. Serial No. 162,314. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. OKEY, a citizen of the United States of America, residing at the city of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Stoppers for Preventing Refilling Bottles, of which the following is a specification.

This invention, which relates to bottles and the like, contemplates the production of an improved stopper adapted for use in connection with bottles and the like of the usual construction for rendering the latter proof against refilling, whereby the employment of the bottle for dispensing liquor other than that contemplated to be sold therefrom is effectually discouraged.

In addition to the object recited the invention has for its purpose the provision of a stopper of the stated type constructed on simple lines whereby it may be produced inexpensively and possessing the further advantage of being readily applied to the bottle to seal the same against fraudulent refilling.

The invention in detail is set forth in the following description and is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a stopper embodying my invention, the stopper being illustrated in connection with a bottle-neck shown in section. Fig. 2 is a vertical sectional view of the stopper. Fig. 3 is a perspective view of the three parts of the stopper in separated relation. Fig. 4 is a sectional view on line 4 4 of Fig. 2.

Referring to the drawings by numerals, 1 designates the neck of a bottle in the aperture of which my improved stopper is inserted. The stopper is in three parts, which are assembled in the manner shown in Figs. 1 and 2, and the external diameter of the cylindrical members conforms closely to the diameter of the neck-aperture, whereby to effect a fit sufficiently close to exclude air and render the bottle liquid-tight at this point and also to prevent the unauthorized withdrawal of the

stopper. If desired, cement or the like may be added as a further safeguard.

The upper member 2 of the stopper is of tubular form and is provided with a partition 3, providing an upper recess 4 and a lower chamber 5. At the lower end of the wall of the member are a plurality of semicircular lateral notches 6 6, preferably four in number, and in said wall above the partition are a like number of lateral openings 7 7. A vertical channel 8, formed in the outer surface of the wall, connects each pair of notches and openings 6 7 in vertical alinement, as shown. The lower member 9, which is also tubular, has in the upper end of its wall lateral semicircular notches 10 10, which match with the notches 6 6 to provide in the stopper circular outlets for the contents, the openings 10 10 being located to register with the notches 6 6. The lower member has an aperture 11, and above said aperture is a conical or like seat 12 for a ball-valve 13.

In practice the assembled stopper is inserted in the neck-aperture to extend, preferably, below the top of said neck, whereby a recess 14 is provided for the reception of a sealing-cork 15. It will be understood that the stopper is applied to a filled bottle and that the cork 15 performs the usual functions of excluding dust and other foreign substance and of preventing the loss of the contents should the bottle assume a position other than upright. To dispense the contents, the cork is withdrawn and the bottle is partly inverted, whereupon the valve is moved by gravity from its seat and the contents passes by the aperture 11, openings 6 10, channels 8, and openings 7 to the mouth of the bottle, from which it is finally discharged. Refilling of the bottle is prevented by the valve 13, which returns to its seat 12 to close the aperture as the bottle assumes its upright position or when liquid-pressure is brought to bear against the top of said valve.

The chamber 5 is of sufficient height only to allow movement of the valve to unseat it, and

preferably the diameter of said valve is sufficient to allow only a slight clearance between it and the wall of the chamber.

The improvement set out in the claim is designed to lessen the difficulty of seating the two sections, so that the wall-channels will register with openings formed by the notches in the seating ends of the sections to allow a free way for the discharge of the contents. It is important that the ends of the sections should seat without interlocking or telescoping, so that when the lower section is driven in the neck-opening and the upper section driven upon it should the wall-channels not register with the end notches in the lower section the transparent neck will show this and the upper section can be turned to register its notches with the channels. Moreover, the provision of the channels in the outer walls of the upper section allows the greater portion of the cylindrical walls to form a close joining with the walls of the neck and gives the advantage of connecting the channels with outlet-openings in the wall below the upper end of the section. It is also important that both sections of the stopper should form a close joining with the walls of the neck, so they can

be used in bottles without special construction and give a better seating for the neck-opening.

I do not claim a stopper of two sections adapted to form a chamber and to seat within said chamber a ball-valve, each section having openings adapted to communicate with each other to effect the discharge of the liquid and to prevent refilling of the bottle.

I claim as my invention—

A bottle-stopper consisting of two sections the upper section provided with a partition and a plurality of semicircular notches at the edge of its lower seating end, openings in the wall above the partition and grooves in the outer wall terminating in the wall-openings above the partition and connecting the notches at its lower end, the lower section having semicircular notches in the edge of its upper end into which the wall-grooves terminate as shown and described.

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

GEORGE B. OKEY.

Witnesses:

A. E. H. JOHNSON,
GUY H. JOHNSON.