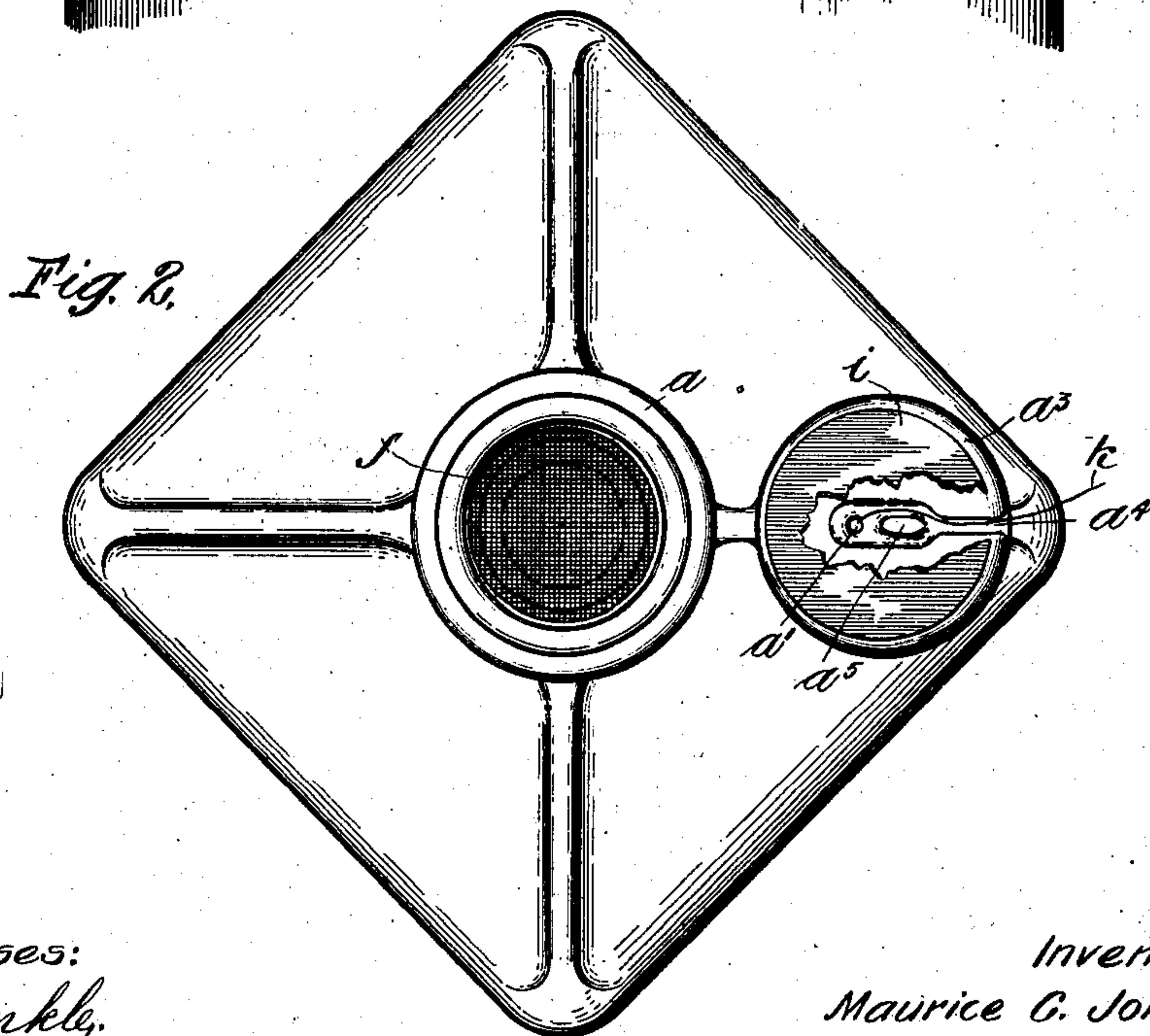
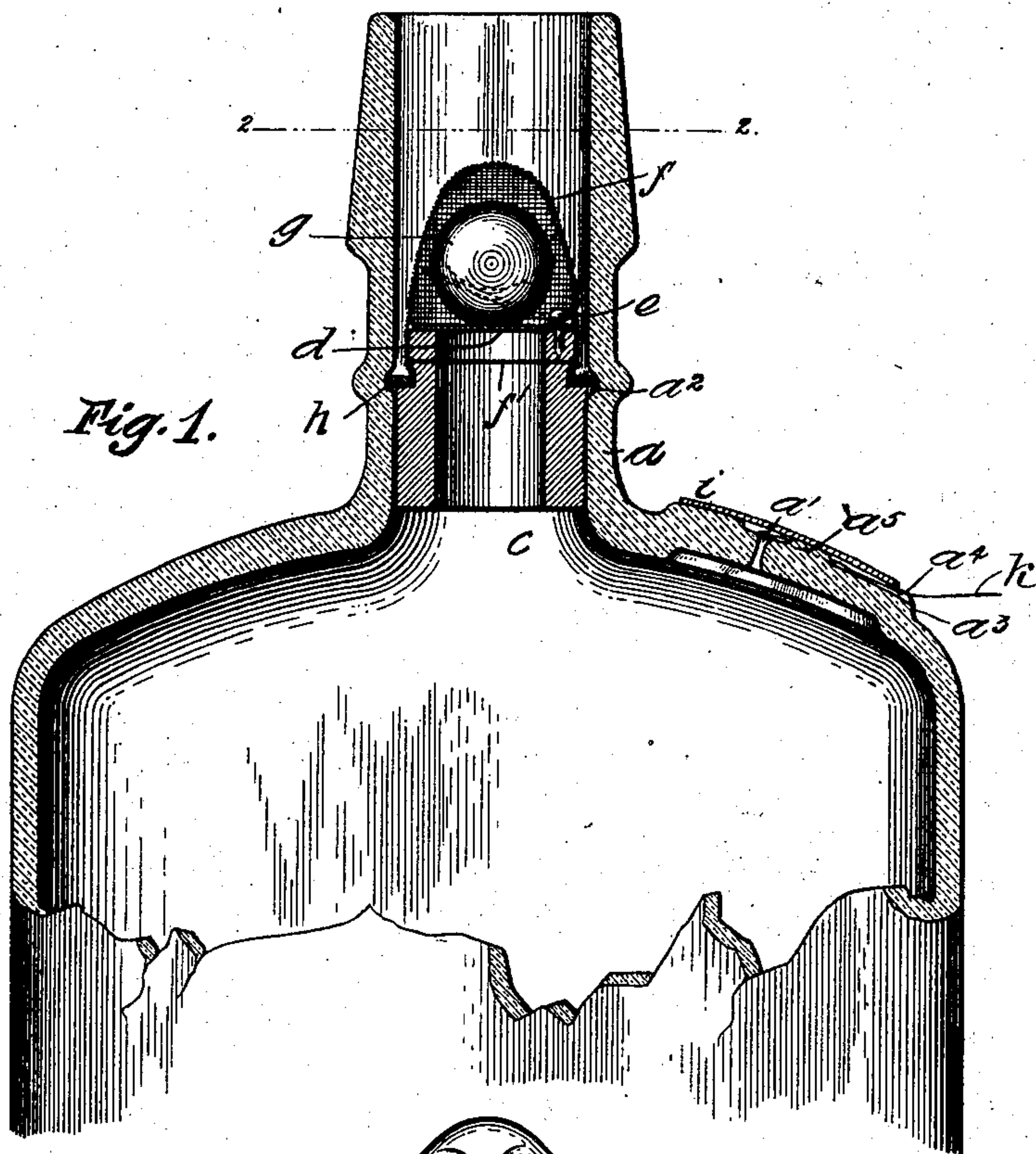


No. 742,328.

PATENTED OCT. 27, 1903.

M. C. JOHNSON.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED JUNE 28, 1902.

NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

MAURICE C. JOHNSON, OF CHICAGO, ILLINOIS.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 742,328, dated October 27, 1903.

Application filed June 28, 1902. Serial No. 113,573. (No model.)

*To all whom it may concern:*

Be it known that I, MAURICE C. JOHNSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Non-Refillable Bottles, (Case No. 1,) of which the following is a full, clear, concise, and exact description.

My invention relates to a non-refillable bottle, and has for its object to provide an improved and simplified structure which will effectually prevent the introduction of liquid into the bottle at any time without detection, while allowing the original contents to be freely poured out whenever desired.

I will describe my invention particularly by reference to the accompanying drawings, and the features or combinations which I regard as novel will be pointed out in the appended claims.

Figure 1 is a vertical sectional view of a bottle constructed in accordance with my invention to prevent fraudulent substitution of other liquids for the original contents. Fig. 2 is a sectional plan view thereof on line 2-2 of Fig. 1.

The same letters of reference designate the same parts in both figures.

The neck *a* of the bottle, which is preferably of clear glass, is provided with a valve which is adapted to permit the free passage of liquids out of the bottle, while preventing its passage in the opposite direction, and a hole *a'* is provided in the top of the bottle near the neck to permit the ingress of air as the liquid is poured out, this air-hole being protected against the introduction of liquid through the same by a seal printed in colors, which will change or "run," if wet.

My improved valve device consists of a tubular body or stopper *c*, preferably of porcelain or similar composition, with a flat surface at the top forming a seat for a thin disk-valve *d*, which is preferably of soft rubber, but may be made of mica or other material. The disk *d* may be loosely anchored in place by a pin *e*, which allows the said disk to raise sufficiently to permit the free passage of liquid out of the bottle. If it be attempted to force liquid into the bottle, however, the disk closes tightly against the flat surface at the mouth of the tubular stopper *c* and effectually

seals the opening. A protecting-hood *f* of fine-meshed wire-netting or the like is placed over the valve *d* and securely fastened to the outer edge of the tubular stopper, being large enough to fit snugly in the neck of the bottle. The lower edge of the wire hood is crimped into an annular recess in the tubular stopper and may be further secured in place by a wire *f'*, passed transversely through the walls of the hood and stopper and tied at the ends to the hood. Within the hood and normally resting upon the disk-valve *d* is an obstructing-body *g*, designed to prevent the insertion of a needle through the screen to puncture the valve. This obstructing-body *g* is preferably a ball of material having a hard smooth surface and may be an ordinary marble.

The tubular stopper *c*, carrying the valve mechanism and its protective devices, may be permanently fastened in the neck of the bottle after the contents have been poured in. The inside of the bottle-neck may be smeared with cement before the stopper is inserted, so that when the cement hardens the stopper will be securely held. The surface of the stopper may be roughened, as shown, to furnish a better binding-surface for the cement. I also prefer to provide the stopper with an annular washer *h*, which is held in an annular recess thereof and adapted to engage an annular recess *a''* in the inside of the bottle-neck. The neck of the stopper *c* above the washer is small enough so that the soft-rubber washer has space to be crowded into by the walls of the bottle-neck as the stopper is inserted. When the stopper is down far enough, the washer expands into the recess *a''* in the bottle-neck and prevents the withdrawal of the stopper, said washer being jammed against the shoulder of the lower portion of the stopper in an obvious manner.

The air-hole *a'* is provided in a raised portion *a'''* at the top of the bottle near the neck and communicates with an open channel *a''''*, extending along the surface of said raised portion of the edge thereof. The top of the raised portion has pasted over it a disk-seal *i*, which covers while not obstructing the air-channel *a''''*. This seal may be of paper printed in anilin or similar colors which will run



or change when wet and may bear a legend to the effect that if the seal is broken or discolored it is evidence that the bottle has been tampered with. Until the bottle is opened  
 5 the first time the air-hole  $a'$  may be stopped by a piece of wax or the like attached to a thread or wire  $k$ , which projects through the channel  $a^4$ . When the liquid is to be poured, the wire  $k$  is pulled slightly to disengage the  
 10 wax stopper from the mouth of the air-hole  $a'$ . The channel  $a^4$  is preferably divided into two paths around an obstructing-tongue  $a^5$  near the air-hole  $a'$  to prevent the insertion of a tube or syringe through the channel  $a^4$   
 15 into the air-hole.

It will be seen that while the original contents of the bottle may be poured out from time to time, as desired, it will be practically impossible to introduce liquid into the bottle  
 20 without mutilating the structure to such an extent that a mere glance will show that it has been tampered with.

The improved valve which I have invented, one form of which is shown and described  
 25 herein, is made the subject-matter of a divisional application, Serial No. —, filed —.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

30 1. A bottle having a protected valve in the neck thereof adapted to prevent refilling, an air-hole  $a'$  being provided through the bottle,

and an open air-channel  $a^4$  being provided in the outer surface of the bottle communicating with said air-hole  $a'$ , in combination with  
 35 a seal  $i$  adapted to be discolored when wet, fastened over the outer surface of the bottle covering the said air hole and channel.

2. The combination with a bottle having a protected valve in the neck thereof adapted  
 40 to prevent refilling, an air-hole  $a'$  being provided through the body of the bottle, and a seal  $i$  pasted on the outside of the bottle over said air-hole, said seal being adapted to be discolored when wet, as described. 45

3. The combination with a bottle having a valve in the neck thereof, of a raised portion  
 50  $a^3$  at the top of the bottle having an air-hole  $a'$  therein and an open channel  $a^4$  extending along the surface of said raised portion and communicating with said air-hole, an obstructing-tongue  $a^5$  in the channel, a stopper for the air-hole having a thread attached thereto and extending through said channel, whereby the stopper may be removed, and a  
 55 protecting-seal fastened over said raised portion and covering the air hole and channel.

In witness whereof I hereunto subscribe my name this 26th day of June, A. D. 1902.

MAURICE C. JOHNSON.

Witnesses:

DE WITT C. TANNER,  
 W. W. LEACH.