

(No Model.)

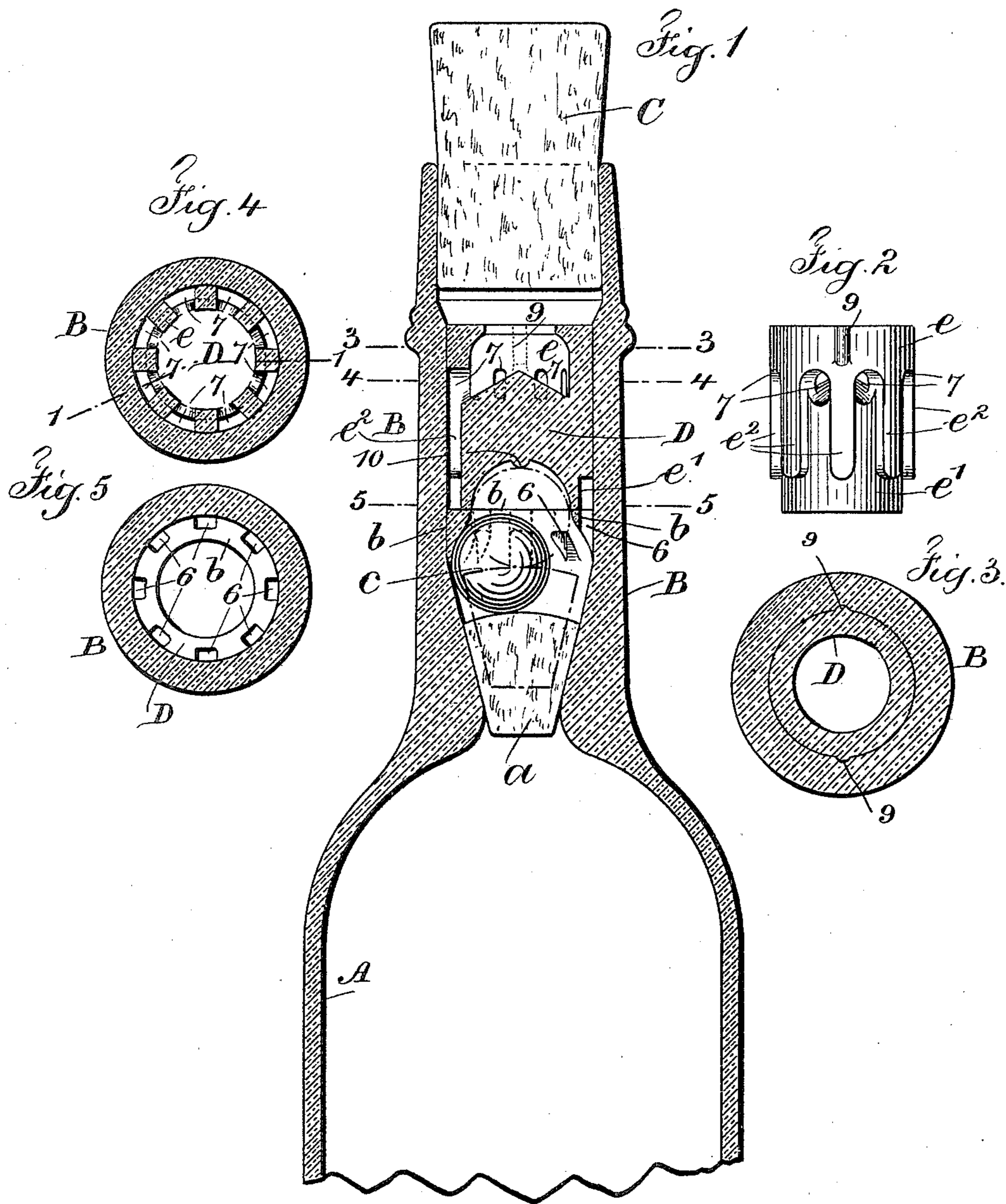
2 Sheets—Sheet 1.

L. H. BROOME.

DEVICE FOR PREVENTING FRAUDULENT REFILLING OF BOTTLES.

No. 581,845.

Patented May 4, 1897.



Witnesses

Chas. H. Smith
J. Staib

Inventor

Lewis H. Broome
per L. W. Serrell & Son
Atys.

(No Model.)

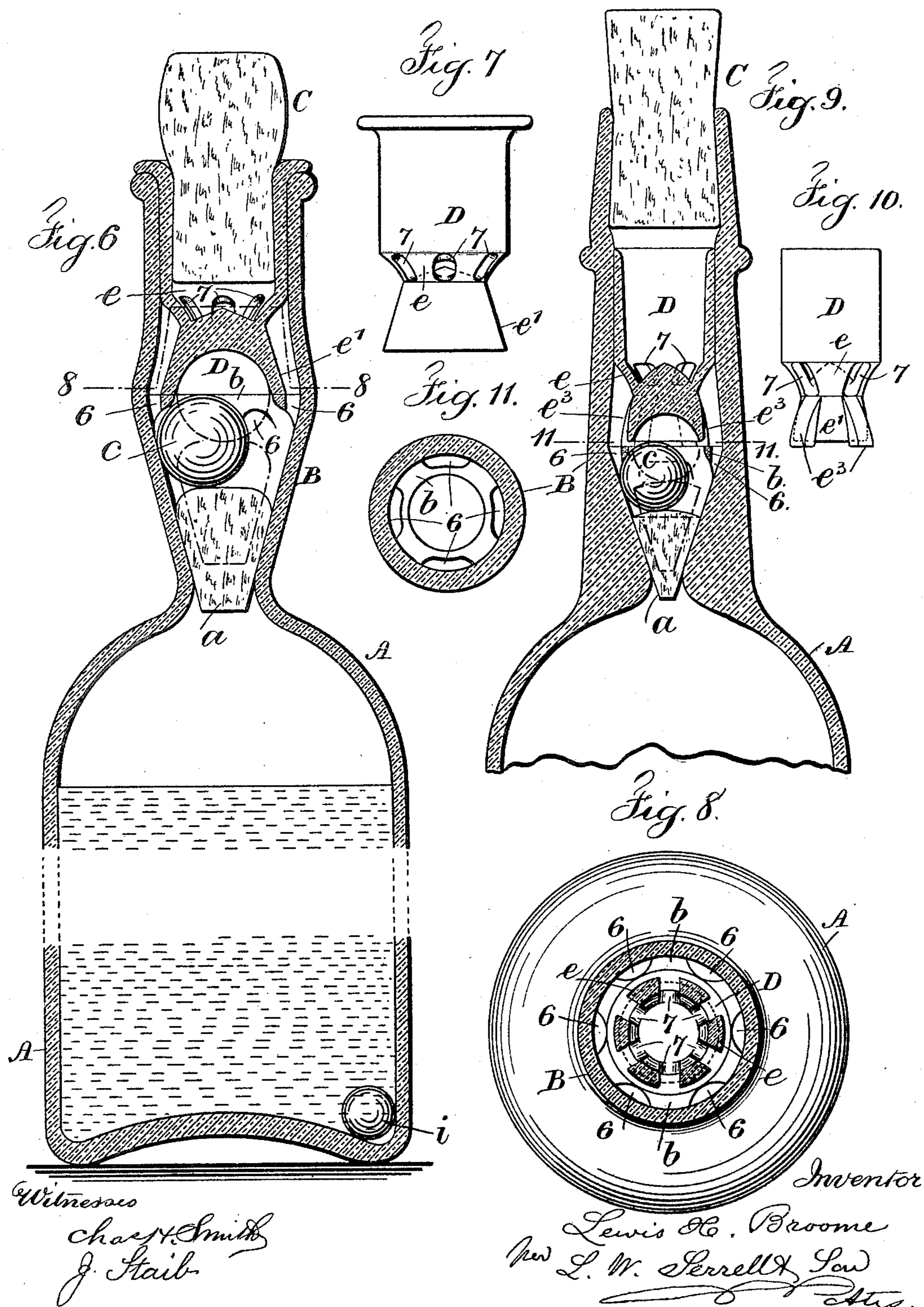
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UNITED STATES PATENT OFFICE.

LEWIS H. BROOME, OF JERSEY CITY, NEW JERSEY.

DEVICE FOR PREVENTING FRAUDULENT REFILLING OF BOTTLES.

SPECIFICATION forming part of Letters Patent No. 581,845, dated May 4, 1897.

Application filed February 25, 1896. Serial No. 580,708. (No model.)

To all whom it may concern:

Be it known that I, LEWIS H. BROOME, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented a new and useful Improvement in Devices for Preventing the Fraudulent Refilling of Bottles, of which the following is a specification.

My invention relates to an interceptor adapted to be placed within and cemented to the neck of the bottle, the same to be seated upon an internal perforated flange and to occupy a position above an inner cork and ball in the contracted lower part of the neck of the bottle, and this interceptor preferably comprises a tubular portion having lateral openings and a hollow base that is slightly smaller than the tubular portion, and around which base there is an annular communicating passage for the discharge of the liquid contents of the bottle.

The perforations in the internal flange and the lateral openings in the interceptor are staggered, so as to prevent the insertion of a wire or other instrument for engaging the inner cork, so as to assist in refilling the bottle.

The construction is hereinafter more particularly specified.

In the drawings, Figure 1 is a vertical section at the line 1 1 of Fig. 4 of the upper end of the bottle, illustrating my invention. Fig. 2 is an elevation of the interceptor. Fig. 3 is a cross-section at 3 3 of Fig. 1. Fig. 4 is a cross-section at 4 4 of Fig. 1. Fig. 5 is a cross-section at 5 5 of Fig. 1. Fig. 6 represents a vertical section, showing a slight modification of my improvement. Fig. 7 is an elevation of the interceptor shown in Fig. 6. Fig. 8 is a sectional plan at 8 8 of Fig. 6. Fig. 9 is a vertical section representing another slight modification of my invention. Fig. 10 represents an elevation of the interceptor as shown in Fig. 9, and Fig. 11 is a cross-section at 11 11 of Fig. 9.

The bottle A may be of any desired form or dimensions, and B represents the neck, and C the stopper therefor. The bottle-neck is provided with an internal flange b, having perforations at 6, arranged equidistant from each other. The inner cork is shown at a, and the same seats in the lower contracted end of the neck of the bottle adjacent to the

interior of the bottle, and above said inner cork is a ball c, preferably of glass. The interceptor D is also preferably made of glass and comprises an upper tubular portion e and hollow base e', and through the lower part of the tubular portion e above the hollow base are equidistant lateral openings 7, and upon the exterior of the interceptor, as shown in Fig. 2, there are depending ribs e², between which are grooves connecting with the lateral openings 7, and as these ribs stop short of the lower edge of the hollow base there is therefore an annular passage around said hollow base below the ribs, and at opposite sides of the upper end of the interceptor are splines 9, and grooves are provided in the inner opposite faces of the bottle-neck to receive said splines.

The upper open end of the bottle-neck is sufficiently large to freely receive the interceptor, and the splines 9 and their grooves determine the position of the interceptor in the bottle-neck and prevent the same turning, and also determine the position of the lateral openings 7 with reference to the perforations 6 in the internal flange, so that the one comes intermediate or staggered to the position of the other to prevent the introduction of a wire or other instrument down into the neck of the bottle that could engage the cork a to hold the same back to enable the bottle to be fraudulently refilled.

The inner cork a and ball c are first introduced into the bottle-neck. The interceptor is then introduced and is preferably cemented in place, between its circumference and the bottle-neck and at the lower edge of the hollow base where the same rests on the internal flange, by any well-known material for cementing together surfaces of glass or similar refractory material, so that when the interceptor is cemented in place it cannot be removed without breaking the neck of the bottle.

The bottle is of course to be originally filled with the neck unobstructed, after which the inner cork a and the ball c are inserted and then the interceptor, which is secured in place, and last of all the stopper C is inserted and usually sealed. The ball c preferably possesses sufficient weight to keep the inner cork a to its seat in the neck of the bottle.

To remove the contents of the bottle, the stopper C is withdrawn and the bottle turned wholly or partially upside down, so as to bring the inner cork *a* and ball *c* into the position shown by dotted lines, with the ball in the hollow base, the liquid contents discharging around the cork and ball and through the perforations 6 in the internal flange *b* into the annular passage around the lower edge of the hollow base *e'*, from thence into the grooves between the ribs *e²* and through the lateral openings 7 into the tubular portion *e*, and through the open end of the bottle into the vessel to receive the same. I prefer to employ a small teat 10 integral with the interceptor and against which the ball *c* rests when within the hollow base, the object of the same being to prevent the ball being so seated as to be held by suction.

Should one try to refill the bottle by placing the same sidewise in a vessel of liquid, the ball *c* has sufficient weight to press and keep the cork to its seat, the ball occupying the position shown in Fig. 1 in full lines, where it rests against the under curved surface of the internal flange *b* to prevent the ingress of liquid to the bottle.

In the modification shown in Fig. 6 the upper end of the tubular portion of the interceptor is flanged and rests upon the upper end of the bottle-neck and receives the stopper C, and the annular connecting-passage surrounds the hollow base of the interceptor and the ribs *e²* are dispensed with. The lateral openings 7 at the base of the tubular portion *e* of the interceptor and the perforations 6 in the internal flange *b* are staggered or alternating, as before described. This interceptor is shown in elevation, Fig. 7, and is to be cemented in place within the neck of the bottle, and the lower edge of the hollow base *e'* rests upon the upper surface of the internal flange *b*.

Fig. 8 of the drawings shows the perforations 6 of the internal flange *b* and the lateral openings 7 of the tubular portion *e* as staggered or alternating, so as to prevent the introduction of a wire or other instrument by which the action of the cork and ball can be prevented.

Another modification is shown in Fig. 9, which consists in forming the hollow base with foot-pieces *e³*, that rest upon the internal perforated flange *b*, the hollow base in this case not directly touching said internal flange, but being slightly above the same to provide an annular opening below the said hollow base. The construction of this interceptor is shown in elevation in Fig. 10 and the internal perforated flange in Fig. 11, and in this modification the interceptor is cemented to the bottle-neck around its tubular portion, and the bottom of the foot-pieces *e³* rest upon the perforated flange *b*.

In all the modifications the lower end of the bottle-neck is contracted to receive the inner

cork *a*, and above the cork is the ball *c*, and the internal perforated flange *b* is formed with the bottle-neck, and the interceptor has a tubular portion with lateral openings and a hollow base resting upon said perforated flange *b* to receive the ball *c*, and the interceptor is cemented within the bottle-neck.

I have shown in Fig. 6 and may prefer to employ a small ball *i* of glass or metal surfaced with glass in the bottle with the liquid contents, the object of which is to impart a blow to the base of the cork *a* when the bottle is overturned to dislodge the cork in case it adheres to its seat.

I claim as my invention—

1. The combination with a bottle having a neck with a tapering contraction at the lower end, and a perforated flange integral with the bottle-neck, of an inner tapering cork and a ball above the same, and an interceptor within the bottle-neck to be seated upon said integral perforated flange and having openings therethrough alternating or staggered with the openings in the perforated flange, substantially as set forth.

2. The combination with a bottle having a neck with a tapering contraction at the lower end, and an internal perforated flange, of an inner tapering cork seated in the base of the bottle-neck and a ball above the same, an interceptor within the bottle-neck and seated at its lower end upon said perforated flange and having a tubular portion with lateral openings, and a hollow base to receive the ball when the bottle is in an inverted position, the lateral openings in the interceptor and the perforations in the flange being alternated or staggered, substantially as set forth.

3. The combination with a bottle having a neck with a tapering contraction at the lower end and an internal perforated flange *b* integral with said neck, of the inner cork *a* seated at the lower end of the neck, the ball *c* above said cork, the interceptor comprising an upper tubular portion *e* and hollow base *e'* with lateral openings 7, and the external ribs *e²* having intermediate grooves connecting with the lateral openings 7 and with the annular passage around the hollow base, the lateral openings in the interceptor and the perforations in the internal flange being staggered or alternating, substantially as set forth.

4. The combination with a bottle having a neck with a tapering contraction at the lower end and an integral internal perforated flange *b*, of the inner tapering cork *a* seated at the lower end of the neck, the ball *c* above said cork, the interceptor comprising the upper tubular portion *e* and hollow base *e'* with lateral openings 7, the external ribs *e²* and intermediate grooves connecting with the lateral openings 7 and with the annular passage around the hollow base, the lateral openings in the interceptor and the perforations in the internal flange being staggered or alternating, the splines 9 upon opposite sides of the

interceptor fitting grooves within the bottle-neck to insure the proper position of the interceptor, substantially as set forth.

5. The combination with a bottle having a neck with a tapering contraction at the lower end, and an integral internal perforated flange, of a tapering inner cork seated in the base of the bottle-neck and a ball above the same, an interceptor within the upper end of the bottle-neck and seated at its lower end upon said perforated flange and comprising the upper tubular portion with lateral openings, and a hollow base to receive the ball

when the bottle is in an inverted position, the lateral openings in the interceptor and the perforations in the flange being alternated or staggered, and a small ball to dislodge the inner cork in case it adheres to its seat, substantially as set forth.

Signed by me this 18th day of February, 20 A. D. 1896.

L. H. BROOME.

Witnesses:

HAROLD SERRELL,
S. T. HAVILAND.