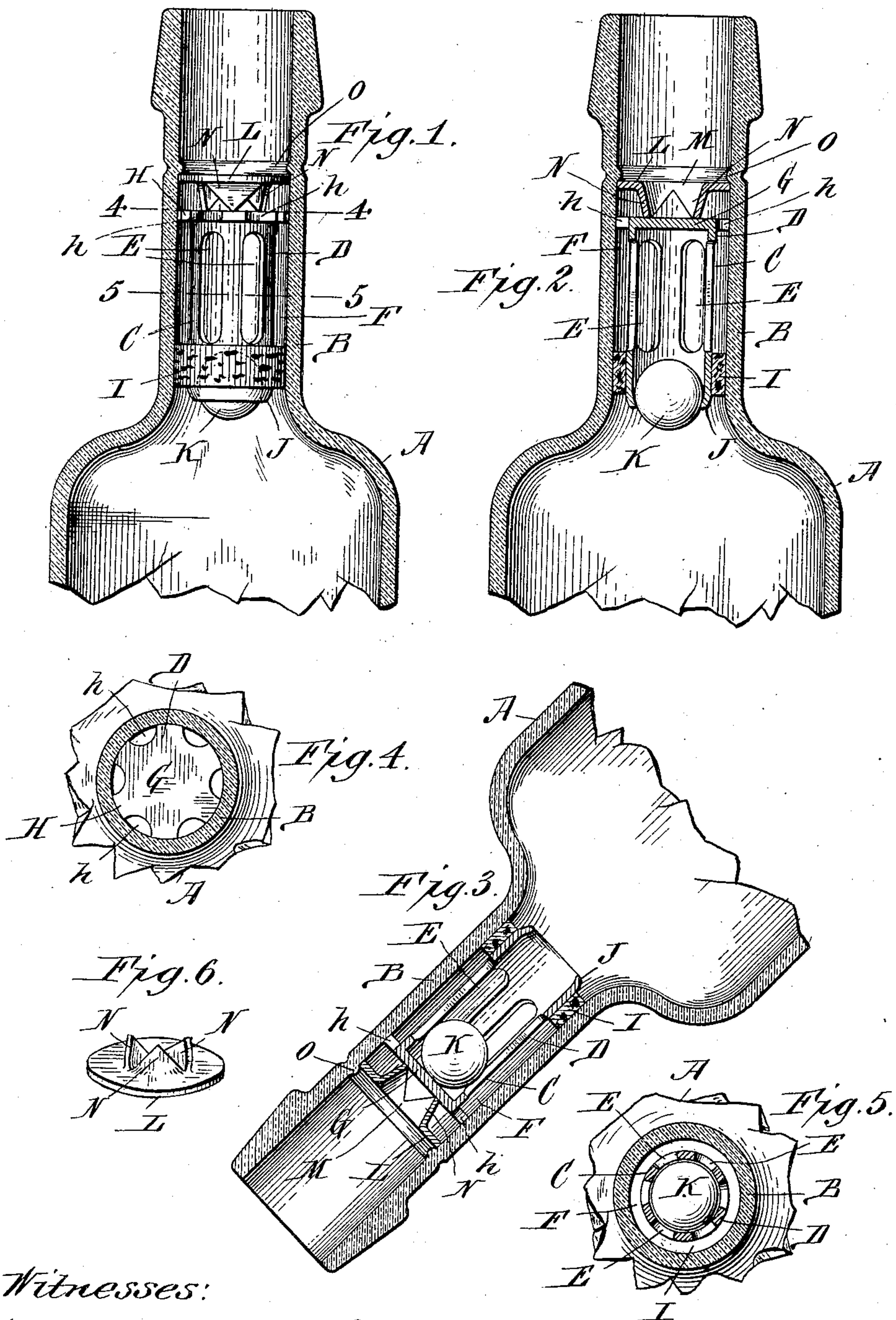


No. 898,090.

PATENTED SEPT. 8, 1908.

J. W. BUTLER.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED AUG. 15, 1907.



Witnesses:  
Harry D. Rapp.  
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# UNITED STATES PATENT OFFICE.

JAY W. BUTLER, OF HERMITAGE, NEW YORK.

## NON-REFILLABLE BOTTLE.

No. 898,090.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed August 15, 1907. Serial No. 388,702.

*To all whom it may concern:*

Be it known that I, JAY W. BUTLER, a citizen of the United States, residing at Hermitage, in the county of Wyoming and State of New York, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to non-refillable bottles, and more particularly to means inserted into the neck of a bottle for preventing the refilling of the same when emptied or partially emptied, while constructed to permit the outward flow of liquid therefrom.

The objects of my invention are, the production of a simple, inexpensive and effective stopper arranged within the neck of the bottle to prevent fraudulent refilling of the same; to provide a guard having a liquid passage arranged out of line with liquid passages of the stopper so that the insertion of a tool to manipulate the valve is prevented; to provide a cork or other compressible collar around the lower end of the stopper casing or tube whereby the latter is centered and leakage between the casing and the wall of the bottle neck is prevented; and to otherwise improve on bottle-stoppers of this type.

Briefly stated, my invention comprises a tube or casing within the bottle-neck having a notched peripheral flange at its upper end which fits snugly within the bottle-neck, and a number of elongated openings through which the liquid passes; said casing being closed at its upper end and having its wall at the lower end curved inward to form a valve-seat against which a spherical inwardly closing valve is seated; a cork or similar collar surrounding the lower end of the casing and occupying the space between the latter and the wall of the bottle-neck, and a guard having a central opening and supported on the closed upper end of the casing, said guard preventing the insertion of a wire or tool for unseating the spherical valve with a view of forcing liquid into the bottle.

In the drawings,—Figure 1 is a central vertical section through the upper portion of a bottle showing my improved bottle-stopper in elevation. Fig. 2 is a central vertical section through the upper portion of a bottle and through my improved bottle-stopper. Fig. 3 is a similar section showing the bottle inverted to unseat the spherical valve of the stopper and permit the discharge of liquid from the bottle. Fig. 4 is a cross-section on line 4—4, Fig. 1. Fig. 5 is a cross-section on

line 5—5, Fig. 1. Fig. 6 is an inverted perspective view of the guard supported on the bottle-stopper.

Referring now to the drawings in detail, like letters of reference refer to like parts in the several figures.

The reference letter A designates a bottle provided with the usual cylindrical neck B, into which my improved bottle-stopper C is inserted. The stopper comprises a cylindrical tube D constructed of suitable non-corrosive material, and provided with a plurality of elongated openings E, by preference spaced equidistantly around the tube. Said tube is somewhat smaller in diameter than the internal diameter of the bottle-neck so as to provide an annular space F between the two; the upper end of said tube being closed, as at G, and provided with an outstanding flange H which fits snugly within the bottle-neck. Said flange is provided with a plurality of notches *h* which establish communication between the bore of the bottle-neck above said stopper and the space F between the latter and the wall of said neck.

I designates a compressible collar of cork or other like material which surrounds the lower end of the tube and occupies a portion of the space between the latter and the wall of the bottle-neck; said collar serves to center the tube within the neck and also acts to retain said tube in proper position therein. The lower end of said tube is open, and the wall thereof at this point is curved inward, as at J, to form a valve-seat for a spherical valve K which closes inwardly to prevent the inflow of liquid into the bottle. When inverting the bottle to discharge the contents in whole or part, the spherical valve unseats itself in the manner shown in Fig. 3, thereby opening the bottom of the tube to allow the liquid to pass thereinto, which then issues through the elongated openings E in the wall of the tube, passing thence through the space F between said wall and the wall of the bottle-neck, thence out through the notches *h* in the flange H at the upper end of the tube, and finally out the upper end of the neck.

In order to prevent tampering with the valve with a view of unseating the same, I employ a guard L which is supported on the closed upper end of the tube; said guard comprising a disk having a center opening M formed by stamping a plurality of lips N from the disk and bending the same down-



ward to act as legs which support the disk upon said tube. Owing to the opening M thus formed being out of line with the notches *h* in the flange of the stopper tube, it is impossible to insert a wire or other object into said tube, and consequently the spherical valve can only be unseated by inverting the bottle in the manner shown in Fig. 3.

10 With a view of preventing the withdrawal of the guard or both the guard and stopper tube from the neck of the bottle, said neck is heated at a point directly above the guard after the latter and the stopper  
15 are inserted into the neck. The latter is then subjected to external pressure at a point where it is heated to form an internal bead O, directly underneath which the guard is located. If desired, the neck of the bottle  
20 may be tapered slightly to prevent the stopper being forcibly pushed into the bottle, and a cork may be applied to the upper open end of the neck.

Having thus described my invention, what  
25 I claim is,—

1. The combination with a bottle, of a

valve - stopper in the neck thereof having liquid passages between it and the wall of the bottle-neck, an inwardly-closing valve in said stopper and a disk having a plurality of legs stamped therefrom to form a central opening and to support the disk on said stopper.

2. The combination with a bottle having a neck provided with an internal bead, of a valve - stopper in said neck and having liquid passages between it and the wall of said neck, an inwardly-closing valve in said stopper and a guard supported on said bottle-stopper and located directly beneath the internal bead in said neck, said guard comprising a disk having a plurality of legs stamped centrally therefrom and bent downward to bear against said valve-stopper.

In testimony whereof, I have affixed my signature in the presence of two subscribing witnesses.

JAY W. BUTLER.

Witnesses:

JOSEPH W. FORNCROOK,  
ALBERT E. BARRATT.