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PATENTED JULY 10, 1906.

S. C. KINDIG & C. A. FERGUSON.

NON-REFILLABLE BOTTLE.

APPLICATION FILED FEB. 3, 1906.

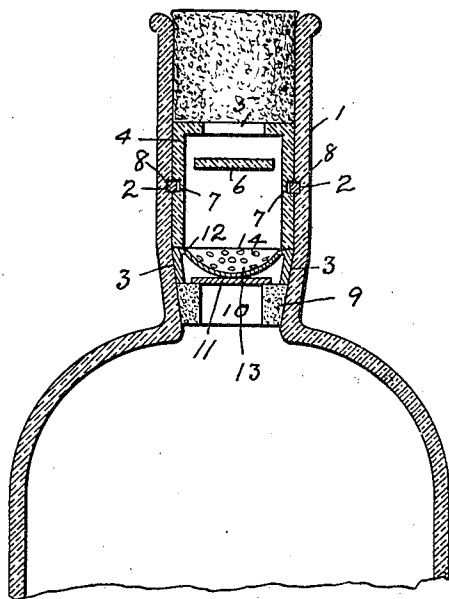


Fig. 1.

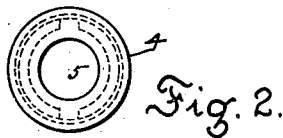


Fig. 2.

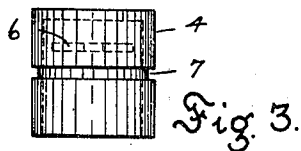


Fig. 3.

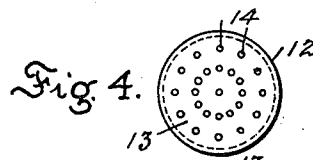


Fig. 4.

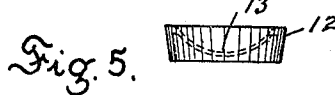


Fig. 5.



Fig. 6.

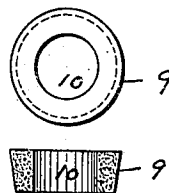


Fig. 7.

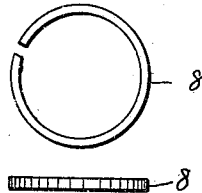


Fig. 8.

Witnesses:

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## UNITED STATES PATENT OFFICE.

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## NON-REFILLABLE BOTTLE.

No. 825,543.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed February 3, 1906. Serial No. 299,283.

*To all whom it may concern:*

Be it known that we, SAMUEL C. KINDIG and CHAPIN A. FERGUSON, citizens of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

This invention relates to improvements in non-refillable bottles, and has for its object to provide a cheap, efficient, and simple device which will permit of the contents being readily poured from the bottle and which will effectively prevent the bottle being refilled; also to so construct the neck of the bottle that any lateral strain thereon caused by the tampering with the parts therein for the purpose of refilling the bottle will cause the neck to break and render the bottle useless.

The invention consists of the new and novel parts and combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional view of a bottle, showing the valve and valve-guard in the neck thereof. Fig. 2 is a top plan view of the valve-guard. Fig. 3 is a side elevation of the valve-guard. Fig. 4 is a top plan view of the upper member of the valve. Fig. 5 is a side elevation of Fig. 4. Fig. 6 is a top plan view and an edge view of the disk or intermediate member of the valve. Fig. 7 is a top plan view and a vertical sectional view of the lower member of the valve. Fig. 8 is a plan view and edge view of the split ring.

Referring to the accompanying drawings, forming part of this specification, and in which like numerals of reference designate like parts, 1 designates the bottle having an internal annular recess 2 in the neck thereof. The said bottle-neck is constructed with a converging portion 3 to form a seat below the recess 2.

The valve-guard 4 is cylindrical and is provided with an opening 5 at the top and a baffle-plate 6 projecting inwardly from the sides of the guard 4 and just below the opening 5. This plate 6 serves to prevent tampering with the valve by means of a wire or other device inserted through the opening 5. The guard 4 is also provided with an external annular recess 7 of about the same size as the recess 2 in the bottle-neck. A split ring 8 is forced

into the recess 7 and the guard 4 forced down into the neck of the bottle until the recess 7 registers with the recess 2, when the ends of the split ring 8 will spring into the said recess 2 and lock the guard in position and prevent it being pulled out. This guard 4 may be made of glass, metal, or other suitable material.

The valve, which is located in the neck of the bottle below the valve-guard, comprises a lower member 9, constructed of cork, wood, glass, or other suitable material, having tapering sides to conform to the seat 3 and a central aperture 10. The second or intermediate member is constructed of glass, wood, or other rigid material and consists of a circular disk 11, which rests on the upper surface of the lower member 9 over the aperture 10. The upper member of the valve is made of rubber and consists of a ring 12 sufficiently thick to make it semirigid and having the sides tapering to conform to the seat 3 of the bottle-neck. The lower edge of the said ring 12 rests upon the upper surface of the lower member 9, and the disk 11 is confined within said ring. Integral with the upper edge of the ring 12 is a concaved flexible diaphragm 13, projecting down into the ring 12 sufficiently to rest upon the upper surface of the disk 11 and hold it to its seat. The said diaphragm is provided with perforations 14, through which the liquid flows when being poured from the bottle.

It will thus be seen that the guard 4 being locked in position and having its lower edges resting upon the upper member 12 and the latter resting upon the lower member 9 the parts are all securely held to their respective positions.

In pouring liquid from a bottle to which our improvement is applied pressure from within will force the disk 11 toward the valve-guard against the pressure of the diaphragm 13 to uncover the aperture 10. The liquid will then pass through the aperture 10, the apertures 14, and out through the neck of the bottle. Should an attempt be made to refill the bottle, it would result in forcing the diaphragm 13 down on the disk 11 and hold the latter tightly over the opening 10.

The bottle-neck and the several parts of the valve are all so constructed that the said

parts can be readily inserted into the neck and secured in position through the mouth of the bottle.

The glass around the recess 2 in the bottle-neck is of about one-half the thickness of that of the rest of the neck. Thus any lateral strain on the said neck caused by an attempt to insert a tool therein to remove the valve-guard or any of the valve members would result in breaking the neck of the bottle at this point and render the bottle useless.

Having thus described our invention, what we claim is—

1. A non-refillable bottle having a neck provided with a seat therein, in combination with a valve comprising a lower member having an aperture therein, a disk adapted to close said aperture, an upper pliable member comprising a ring having its lower edge resting upon the lower member and a central perforated concaved portion normally resting upon the said disk to keep it to its seat, and means to hold the upper pliable member in position.

2. A non-refillable bottle having a neck provided with an internal annular recess, and a seat below said recess, in combination with a valve comprising a lower member having an aperture therethrough, a disk adapted to close the said aperture, an upper perforated pliable member having its lower surface normally resting upon said disk to hold it to its seat, a cylindrical valve-guard having an external annular recess, and a split ring adapted to fit into the recesses in the bottle-neck and valve-guard and lock the latter in position.

3. A non-refillable bottle having a neck provided with an internal annular recess and

a seat below said recess, in combination with a valve comprising a lower member having an aperture therein, a disk adapted to close said aperture, an upper pliable member comprising a ring having its lower edge resting upon the lower member and having a central concaved perforated portion normally resting upon the said disk to keep it to its seat, a valve-guard having an external annular recess, and a split ring adapted to fit into the recesses in the bottle-neck and valve-guard and lock the latter in position.

4. A non-refillable bottle having a neck provided with an internal annular recess and a seat below said recess, in combination with a valve comprising a lower member having a central aperture therein, a disk adapted to close said aperture, an upper pliable member comprising a ring surrounding the said disk and having its lower edge resting upon the upper surface of the lower member and a central perforated concaved portion having its lower surface resting upon the said disk to hold the latter to its seat, a cylindrical valve-guard having its lower end resting upon the ring of the upper member of the valve and provided with a baffle-plate projecting inwardly directly under the opening in the top thereof, and a split ring adapted to fit into the recesses in the bottle-neck and valve-guard to lock the latter in position.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SAMUEL C. KINDIG.  
CHAPIN A. FERGUSON.

Witnesses:

WM. R. LLEWELLYN,  
JEAN JAYER.