No. 819,892. PATENTED MAY 8, 1906.

S. C. KINDIG.

NON-REFILLABLE BOTTLE

APPLICATION FILED JUNE 15, 1905.

Fig. 1.

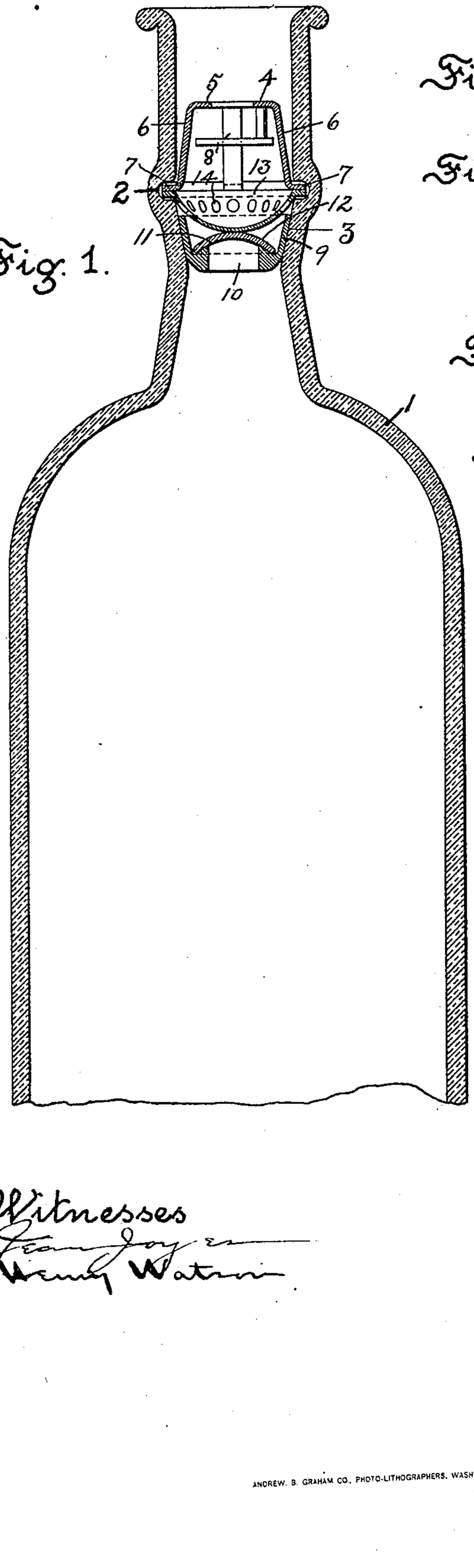


Fig. 2.

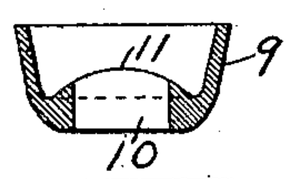


Fig. 3.

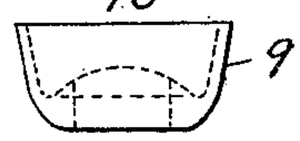


Fig. 4.

Fig. 5.

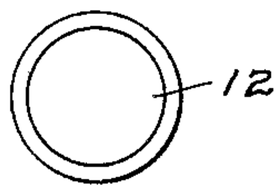


Fig. 6.

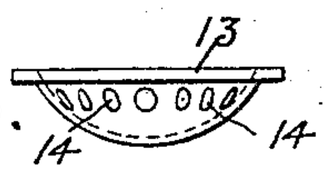


Fig. 7.

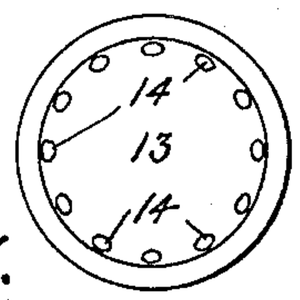
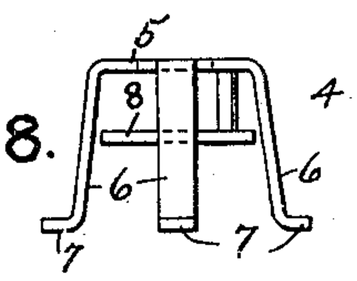


Fig. 8.



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UNITED STATES PATENT OFFICE.

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NON-REFILLABLE BOTTLE.

No. 819,892. Specification of Letters Patent. Patented May 8, 1906.

Application filed June 15, 1905. Serial No. 265,319.

To all whom it may concern:

Be it known that I, SAMUEL C. KINDIG, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Improvement in Non-Refillable Bottles, 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, effective, and simple construction which will permit of the contents being readily poured out of the bottle and which will effectively prevent the bottle being refilled, also to so construct the bottle neck that any lateral strain thereon caused by 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 secured in the neck thereof. Fig. 2 is a vertical sectional view of the lower member of the valve. Fig. 3 is a side elevation of same. Fig. 4 is a side elevation of the intermediate member of the valve. Fig. 5 is a plan view of same. Fig. 6 is a side elevation of the upper pliable member of the valve. Fig. 7 is a plan view of same. Fig. 8 is a side elevation of the valve-guard detached.

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 for the valve.

The valve-guard 4 may be of any suitable material and construction. In the present instance it is shown struck up from a single piece of metal and comprising an apertured disk 5, having depending portions 6, the lower ends of which are bent outward at 7 to engage the recess 2 in the neck of the bottle. Attached to the disk 5 in such a manner as to extend below the same is a solid disk 8, the same being between the depending members 6 and is sufficiently near the apertured disk 5 to serve as a baffle-plate and prevent the insertion of a wire or other device, such as might be used in an attempt to hold the valve off its seat for the purpose of refilling the bottle.

The valve, which is located in the neck of the bottle below the valve-guard, comprises a cup-shaped member 9, constructed of cork, wood, glass, or other suitable material, provided with a central aperture 10, the bottom inner surface 11 of the member 9 being convex. The second or intermediate member is constructed of glass, wood, or other rigid material and consists of a concavo-convex disk 12, the concave face of which will overlie the convex face 11 of the member 9 of the valve when in its normal position. The upper convex face of the disk 12 provides a support for the upper pliable member 13 of the valve. The said upper member 13 of the valve is made of rubber or other pliable material and consists of a concavo-convex disk having a plurality of apertures 14 near the periphery thereof. The outer edge of the disk 13 rests in the annular recess 2 in the bottle-neck and is held in position by the depending members 6 of the valve-guard. The lower outwardly-bent ends of said members impinge against the upper surface of the said edge of the disk 13.

In pouring liquid from a bottle or other vessel to which my improvement is applied pressure from within will force the disk 12 toward the valve-guard against the pressure of the pliable disk 13 to uncover the aperture 10. The liquid will then pass through the said aperture 10, around the disk 12, through 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 disk 13 down on the disk 12 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 all be readily inserted into the neck and secured in position through the mouth of the bottle.

The glass around the recess 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 my invention, what I claim is—

1. A non-refillable bottle having a neck provided with an internal annular recess therein, 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 aperture in said member when pressure is applied to the upper surface of the said disk, and an upper pliable perforated member having its edge extending in the recess in the bottle-neck and its lower surface normally resting upon the intermediate disk to hold it to its seat.

2. A non-refillable bottle having a neck provided with an internal annular recess therein, 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 aperture in said member when pressure is applied to the upper surface of the said disk, an upper pliable perforated member having its edge extending in the recess in the bottle-neck and its lower surface normally resting upon the intermediate disk to hold it to its seat, and means to hold the pliable member in position.

3. A non-refillable bottle having a neck provided with an internal annular recess therein, and a seat below said recess, in combination with a valve comprising a lower member having an aperture therethrough, a concavo-convex disk adapted to close the aperture in the said member when pressure is applied to the upper surface of the said disk, an upper pliable member provided with a plurality of apertures therein and having its edge extending in the recess in the bottle-neck and its lower surface normally resting upon the intermediate disk to hold it to its seat, and means to hold the edge of the disk in the said recess.

4. A non-refillable bottle having a neck provided with an internal annular recess therein, and a seat below said recess, in combination with a valve comprising a lower member having an aperture therethrough, a concavo-convex disk adapted to close the aperture in said lower member when pressure is applied to the upper surface of said disk, an upper pliable member provided with a plurality of apertures therein and having its edge extending in the recess in the bottle-neck and its lower surface normally resting upon the intermediate disk to hold it to its seat, and a valve-guard having the lower outwardly-bent ends of its depending portions project into the said recess in the bottle-neck and impinge against the edge of the pliable member of the valve.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL C. KINDIG.

Witnesses:
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SAMUEL J. FISHER.