

(No Model.)

C. BOOKER.

DEVICE FOR PREVENTING REFILLING OF BOTTLES.

No. 561,084.

Patented June 2, 1896.

Fig. III.

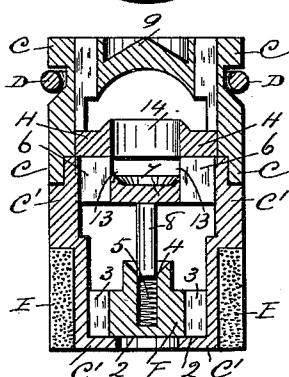
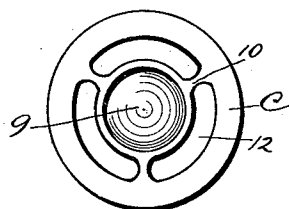


Fig. II.

Fig. IV.

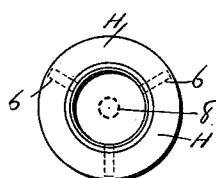
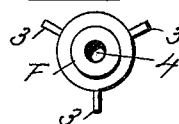


Fig. V.



Inventor.

Charles Booker
By his Atty John D. Hendony

Witnesses.

Alfred Young
William Thompson

UNITED STATES PATENT OFFICE.

CHARLES BOOKER, OF TORONTO, CANADA.

DEVICE FOR PREVENTING REFILLING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 561,084, dated June 2, 1896.

Application filed August 8, 1895. Serial No. 558,612. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BOOKER, a citizen of Canada, and a resident of Toronto, in the county of York, in the Province of Ontario, Canada, have invented new and useful Improvements in Devices to Prevent the Refilling of Bottles, of which the following is a specification.

My invention relates to an improved device to prevent the refilling of bottles, consisting of a stopper of suitable material located and secured in the neck of a bottle. This stopper is supplied with a split spring-ring, which fits in an annular groove in the outer body of the stopper and also fits in a groove in the neck of the bottle, thus retaining the stopper in position. The stopper is also supplied in its interior with a lower valve, which covers the lower opening of the stopper, and a rigid guard to prevent tampering with said valve.

The objects of my invention are, first, to provide a bottle and stopper which will allow of the emptying of the bottle and will prevent the refilling of said bottle; second, to afford facilities for the adjustment of the stopper in the neck of the bottle, and, third, to prevent any possible means of entrance into the bottle from the exposed or upper part of the device. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an enlarged sectional elevation of the neck of a bottle, showing my invention in elevation inserted in position therein in its completeness. Fig. 2 is a sectional elevation of the same device detached from the bottle. Fig. 3 is a plan of the same with outer split ring removed, showing central disk and three apertures around said disk. Fig. 4 is a plan of the inner rigid guard, showing its three wings and its central lower pin in broken lines. Fig. 5 is a plan of the lower valve having central socket for said lower pin and outer three wings.

Similar letters and figures refer to similar parts throughout the several views.

In the drawings, A is the bottle, which has in its neck an interior circular groove B.

C is the upper half of the stopper, and C' the lower half, which is in two parts, upper and lower, to facilitate the insertion of the

interior parts, and is made of suitable material which will not corrode. The upper half of this stopper has an outer annular groove, having upper square shoulder, in which is placed the ring D. This ring is split, so that when pressed against its groove the stopper can enter the bottle-neck, and when entered the spring-ring will widen out in diameter in the said groove in neck of bottle and retain the stopper in position, as shown.

The lower part of the stopper is supplied with a cork ring E, which fits the neck snugly. The upper part of neck of bottle is intended to have the usual cork, which is not shown. The lower part of this stopper has an interior flange or valve-seat 2, having central opening, on which seat the valve F rests, covering said opening. This valve has three wings 3 and central socket 4, in which is a slight spiral spring 5. Immediately above this valve is a rigid guard H, having three wings 6. The upper large flange of said guards rests upon the upper end of the lower half of stopper and fits snugly the lower end of upper half of stopper, and the lower central and concaved part 7 of this guard, and which is connected to the guard by the wings 6, has an under central shank 8, which fits into the said socket 4 of valve and engages with said slight spiral spring 5. The upper half of stopper has a central disk 9, the outer circle of which is recessed or sunk in the upper face of the stopper and is connected to the stopper by means of three wings 10, thus forming three openings 12 between said disk and interior of wall of stopper.

When pouring liquid out of the bottle, the force of the liquid creates an opening between the valve F and its seat, and the liquid passes through the three openings which are formed by the three wings or arms of said valve and the interior of wall of stopper C', and thence through the three openings formed by the three wings or arms of the guard H and through its central aperture 14, and thence through the three openings 12, which are formed in upper half C of stopper.

It will be perceptible in the construction of this device that the same will not permit of any refilling of the bottle, on account of the spiral spring closing the valve when the bot-

tle is in vertical position, and also the said valve will act and close even if the bottle is longitudinally or on an incline angle. This is a very important element in the construction thereof. Also another important feature in the construction and arrangement of parts is that it is impossible to probe through to disarrange the valve or to find a center in the upper central disk for drilling purposes. This invention secures the objects set forth.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a bottle having interior groove, with two halves of stopper provided with split spring-ring in annular groove and cork ring, and disk connected to stopper by wings which form openings, the rigid guard having wings, to form openings, and to connect to its lower central and concaved

piece 7, which has a central pin to engage with valve, substantially as described.

2. The combination of a bottle having interior groove, with a stopper composed of upper half C, having annular groove provided with split spring-ring, and central disk connected by means of wings forming openings, the lower half of stopper joined thereto, and provided with cork ring to fit said bottle and lower central opening, a rigid guard having wings connected to lower central piece having lower projecting and central pin to fit in socket of valve, said valve having wings and spiral spring in said socket, substantially as described.

CHARLES BOOKER.

Witnesses:

HENRY C. FOWLER,
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