





# UNITED STATES PATENT OFFICE.

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## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 706,914, dated August 12, 1902.

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*To all whom it may concern:*

Be it known that I, JULIUS EWALD, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Non-Refillable Bottles, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a non-refillable bottle having on the neck thereof a rim, vertically-extending recesses or grooves in said rim, the same inclining downwardly and outwardly, so as to form a shoulder which is continuous of a shoulder around the neck, and a finger or catch which is connected with the bottle-cap and adapted to spring under said shoulder, said cap being also adapted to interlock with means on said neck.

Figure 1 represents a perspective view of the portion of a non-refillable bottle embodying my invention. Figs. 2 and 3 represent vertical sections thereof at a right angle to each other. Figs. 4 and 5 represent side elevations of the neck of the bottle. Fig. 6 represents a top view thereof.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the neck of a bottle, the same having thereon the laterally-projecting rim B, in which are the vertical grooves C, the base of said rim B forming the horizontal shoulder D. In said rim there are also the vertical grooves E, which are diametrically opposite to said grooves C, the shoulder at the base of said grooves E being continuous of the grooves D at the base of the grooves C. On the neck below said shoulder D is the circumferential bead F, and between said bead and the bottom or shoulder of the rim B is the annular groove G, which extends around the neck of the bottle.

J designates knobs or heads whose shanks or pins project outwardly from the wall of the passage G.

K designates a cylindrical cap which is formed with a closed top L and being open at bottom. In the under edge of the cap are recesses M, which are adapted to receive the shanks of the knobs J, as will be hereinafter more fully described. On the under side of the top L of the cap is the packing N, which

is adapted to bear against the mouth of the bottle and tightly close the same. Depending from within the cap are the elastic or spring catches P, whose noses Q are intumed and adapted to engage the shoulders D for holding the cap in the closed condition of the bottle.

The operation is as follows: The cap is presented to the neck of the bottle, at the mouth thereof, so that the noses Q of the catches P fit in the grooves E. The cap is then lowered to its full extent, and the noses Q ride down the inclined backs of said grooves and are thus spread apart until they fully clear the bottoms of said grooves or of the edges of the rims B, when they contract and spring under said edges, which constitute the shoulders D, and engage with the same, while the packing N closes the mouth of the bottle, it being seen that the cap is locked with the bottle and cannot be withdrawn therefrom. At the same time the shanks of the knobs J enter the recesses M, thus controlling the cap against rotation. Owing to the bead F, the catches P are guarded, so that access to the same or the insertion of an implement thereto through the bottom of the cap is prevented. When the bottle is to be opened, the knobs J are broken off by any suitable means—say by blows imparted to the heads or shanks of said knobs. This permits the cap to be rotated, whereby the noses of the catches ride under the shoulders D until they reach the grooves C, when as they register with the latter the cap may be raised, the noses of the catches then riding freely through said grooves without interference, the bottle, as is evident, being open. As the bottle is now devoid of the pins, the rotation of the cap cannot be controlled, and as the neck is fractured the bottle cannot be further used as an original package, and so its utility to that extent is ended.

In practice the bottle, or at least the neck thereof, is formed, preferably, of glass or other vitreous material, and the knobs H are integral therewith, so that as they are of a nature that they may be cracked, chipped, disintegrated, or otherwise detached from the neck they at the desired time are easily destroyed, and thus no longer occupy the recesses M, so that the cap may be rotated, as above stated, the noses of the catches then being free to move



in the passage G on their way to the grooves C, so as to enter the latter and permit the displacement of the cap.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a non-refillable bottle, a neck provided with a rim, vertically-extending recesses in said rim, one of said recesses inclining downwardly and outwardly so as to form a shoulder which is continuous of a shoulder around the bottle-neck, and a finger which is connected with the bottle-cap and adapted to spring under said first-named shoulder.

2. A non-refillable bottle consisting of a

neck provided with a rim, a bead below the same, vertically-extending recesses in said rim, a headed pin at the side of the neck a cap having its lower edge adapted to interlock with said pin, and a finger connected with the cap on the interior thereof, one of said recesses being inclined downwardly and outwardly so as to form a shoulder which is continuous of a shoulder around the bottle-neck and said finger being adapted to spring under the first-named shoulder.

JULIUS EWALD.

Witnesses:

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