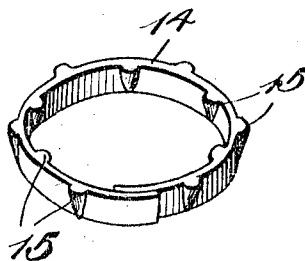
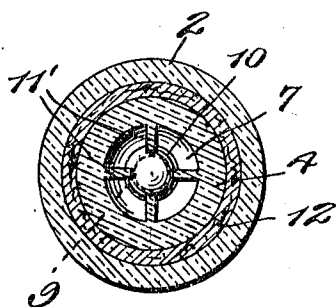
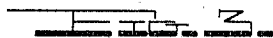


1,048,759.



C.S. Swain,

Chas. L. Grisbauer. 33y
A. B. Norton.

Watson E. Coleman.
Attorney

UNITED STATES PATENT OFFICE.

CHARLES S. SWAIM, OF TAFT, CALIFORNIA.

NON-REFILLABLE BOTTLE.

1,048,759.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed June 8, 1912. Serial No. 702,519.

To all whom it may concern:

Be it known that I, CHARLES S. SWAIM, a citizen of the United States, residing at Taft, in the county of Kern and State of California, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in bottles known as non-refillable bottles and has for its object to provide a bottle of this character which is simple and durable in construction, inexpensive to manufacture and one which will be very efficient and useful in operation.

Another object of the invention resides in providing a closure or stopper formed of glass which is so designed and provided with a valve as to form a non-refillable portion of the device, and still another object of the invention resides in providing improved means for locking this particular closure permanently in the neck of the bottle after once being effectively positioned.

A still further object resides in providing a glass closure or stopper with an annular groove within which is adapted to be disposed a metallic band or ring having lugs formed on the inner and outer faces thereof, said lugs being adapted to engage with an annular notch or the like formed in the neck of the bottle proper.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a vertical section through the bottle having my improved closure applied thereto. Fig. 2 is a transverse section therethrough as seen on line 2-2, Fig. 1; and Fig. 3 is a perspective view of the locking band removed.

In describing my invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which—

1 indicates a bottle of any ordinary construction having the neck 2 formed thereon, said neck being provided adjacent the upper peripheral edge thereof with an annular notch 3. In order to form a closure for the bottle, I provide my improved stopper 4

which is formed preferably of glass and is provided with a substantially cylindrical space or passage-way 5 extending from the top thereof to a point about mid-way of its ends, said passage-way or space being adapted to receive therein a removable cork closure 6. This space or passage-way 5 communicates at its lower end with an enlarged opening or chamber 7, the walls of which are arcuately designed so as to form contracted openings 8 and 9 respectively at the upper and lower portions of said chamber, the lower opening terminating in the bottom of the closure 4 and disposed in this chamber is a glass ball valve 10. The provision of a contracted opening at the upper portion of the chamber 7, which communicates with the channel-way or space 5, provides a substantial annular flange or projection 11, which acts as a rest or support for the cork closure 6 disposed in said passage-way and formed on the walls of said chamber 7, about mid-way of its ends or nearer the upper end thereof, as desired, are the spaced lugs or projections 11' which are adapted to limit the movement of the ball valve 10 in one direction. The ball valve will, of course, in its normal position, be seated in the lower end of the chamber 7 to entirely close the lower opening 9 therein, but in view of the curvature of the walls of said chamber, said valve is adapted to leave its resting place at the slightest tilt of the bottle, but the provision of the lugs 11' will limit the movement of said ball valve and allow the liquid from the bottle to pass between said lugs.

In order to allow the glass closure 4 to fit snugly within the neck 2 of the bottle, and at the same time prevent any possible leakage of the contents therebetween, the outer periphery of the closure adjacent the lower end has mounted therein, a cork ring or band 12. The closure 4 is also provided, adjacent the upper end with an annular groove 13 in which is disposed a split spring band 14, the band being provided on its inner and outer faces with lugs or projections 15 arranged in staggered relation with respect to one another. This band 14 will readily fit within the groove 13 to permit the closure 4 being inserted in the neck 2, and when said closure has been disposed to the point wherein the groove 13 registers with the notch 3, in said neck, the band 14 will spring outwardly to permit the lugs on the outer face thereof to engage said notch, while the

lugs on the inner face of the same will project inwardly to the extent of being disposed within the groove 13 of the closure 4. Under these conditions, it will be seen that said closure after being once positioned to the locking point, may not be removed.

In practice, the bottle is first filled with the desired contents, whereupon the closure 4 having the ball 10 therein and having the spring washer or band 14 properly disposed in the groove 13, is introduced into the neck of said bottle and forced downwardly until the lugs of said band or washer 14 interlock with the notch 3 of the neck and the groove 13 of the closure. A cork closure 6 is then introduced in the passage-way or space 5 and the bottle with its contents is then in condition to be shipped to the consumer with a possible application of a seal or the like over the top of the neck. When it is desired to extract a portion of the contents of the bottle, it is first necessary to remove the cork closure 6; whereupon by turning the bottle over in the usual manner, the ball valve 10 will be caused to roll toward the lugs in the chamber 7 so as to allow the contents of the bottle to pass through said chamber, through the passage-way 5 and into any desired receptacle provided. The contents may be completely removed from the bottle, if desired, and as soon as the bottle is set in an upright position, it will be seen that the ball valve 10 will again return to its closed position, over the opening 9 and thus any attempt to refill the bottle through the passage-way 5 and the chamber 7, will be prevented. Furthermore, it will be seen that in view of the locking of the closure 4 to the neck of the bottle, said closure may not be removed so that all possible attempts to refill the bottle will be in vain.

From the foregoing it will be seen that I have provided a simple, inexpensive and efficient means for carrying out the objects of the invention and while I have particularly described the elements best adapted to

perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described this invention, what I claim is:—

1. In a non-refillable bottle, the combination with a body having a neck formed thereon, said neck being provided with an annular notch on the inner walls thereof; of a rigid closure having an annular groove in the outer periphery adjacent the upper end thereof, and a split spring locking band having lugs on the inner and outer faces thereof adapted to engage in the groove of said closure and the notch of said neck to prevent the removal of the closure from the latter when once effectively disposed.

2. In a non-refillable bottle, the combination with a body having a neck formed thereon, said neck being provided with an annular notch on the inner wall adjacent the upper edge thereof, said notch having the rear wall thereof beveled outwardly from its lower to its upper edge; of a rigid closure having an annular groove therein, adjacent the upper end thereof, a split spring locking band adapted to be disposed in the groove of said closure, and a plurality of lugs formed on the inner and outer faces of said locking band and arranged in staggered relation with respect to one another, the outer faces of said lugs being beveled coincident to the inclination of the rear wall of the notch in said neck, whereby the lugs on the outer faces of said band may be readily engaged with said notch to securely lock said rigid closure therein.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CHARLES S. SWAIM.

Witnesses:

L. A. HAHN,
A. M. NOBLE.