

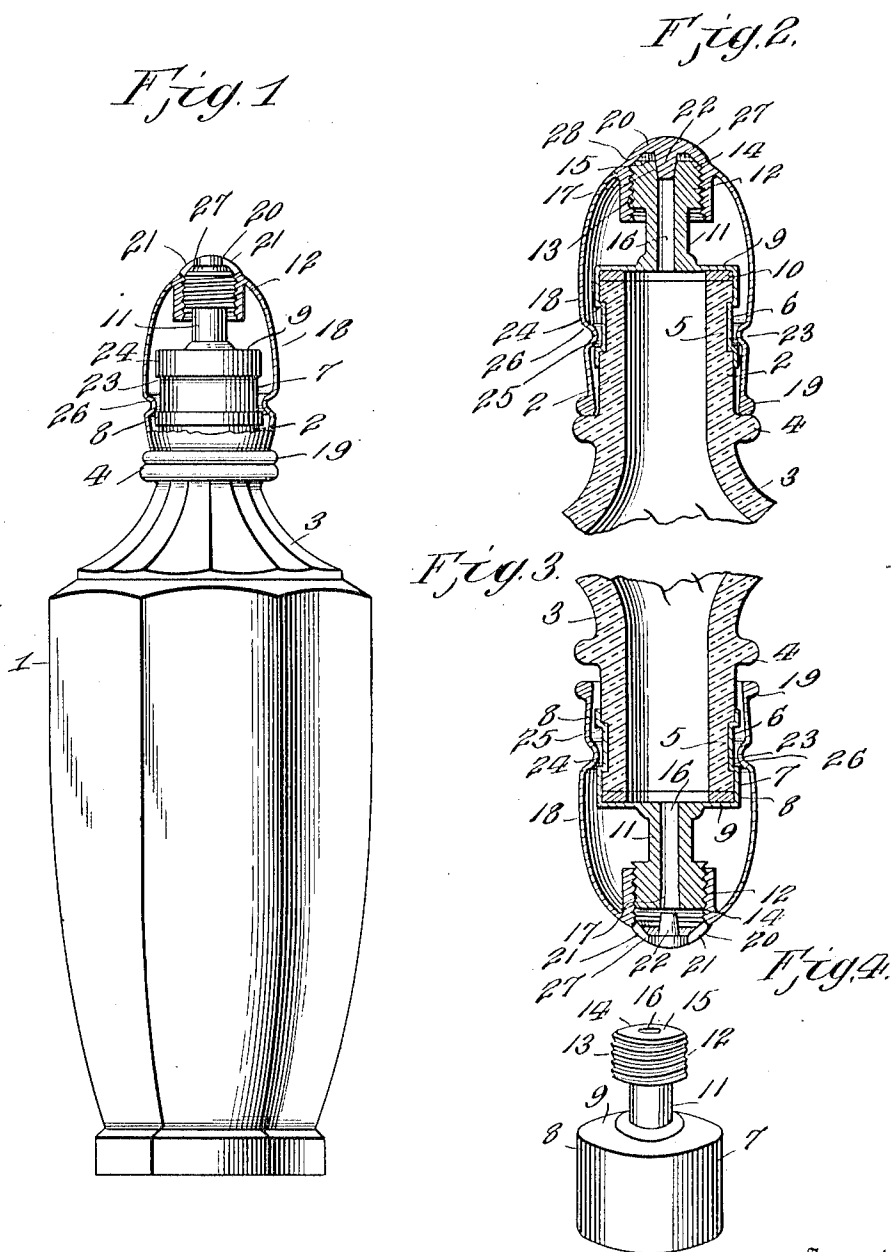
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BOTTLE CLOSURE.

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1,090,091.

Patented Mar. 10, 1914.



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BOTTLE-CLOSURE.

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Specification of Letters Patent.

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Application filed June 25, 1913. Serial No. 775,716.

To all whom it may concern:

Be it known that we, ANST ALEXANDER, a subject of the King of Bulgaria, and ARNOLD M. STEINBERG, a citizen of the United States, residents of Paris, in the county of Henry and State of Tennessee, have invented new and useful Improvements in Bottle-Closures, of which the following is a specification.

This invention relates to bottle closures, and particularly to closures for cologne bottles or the like; and has for its primary object the provision of means for forming a perfect liquid and air-tight connection between the bottle and the closure so as to seal the contents from the outside air and thereby prevent evaporation of the liquid.

A further object of the invention is the provision of a closure wherein will be included means for regulating the discharge of the liquid from the bottle.

Another object of the invention is to provide a closure consisting of a sealing cap and an attaching member and means for connecting the latter to the bottle in such manner which will positively prevent it from being accidentally separated therefrom.

A still further object of the invention is the provision of means for positively preventing the closing cap from being entirely removed from the bottle so as to reduce to a minimum the possibility of refilling the bottle after its original contents is discharged.

A still further object of the invention is the provision of a sealing cap which may be made to wholly embrace the neck of the bottle; one which will be ornamental and attractive in appearance; one which may be operated with facility when it is desired to unseal the bottle for the discharge of its contents therefrom, and one which will be simple, strong and durable.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings: Figure 1 is a side view of a bottle, showing the application of the closure thereto, parts being shown in section; Fig. 2 is a vertical section through the neck of the bottle and through the closure, showing the cap in a closed position; Fig. 3 is a view similar to Fig. 2, showing the bottle canted and illustrating

an open adjustment of the cap; and Fig. 4 is a perspective view of the attaching member and valve seat.

The bottle 1 herein illustrated is provided at the juncture of the neck 2 with the breast 3 with an annular bead 4 and above the bead the neck of the bottle is provided with a relatively deep annular channel 5, into which is extended the inwardly upstruck securing portion 6 of an attaching member 7. The portion 6 is formed between the ends of the depending neck embracing walls 8 of the member 7, and as illustrated said walls are extended into a crown 9 which overlies the upper edge of the neck 2 and which is provided on its inner surface with a sealing gasket 10 of cork or other suitable well known material which will serve to effectually render the connection between the member 7 and the bottle neck air and liquid tight. The crown 9 is provided at its center with a vertically rising neck 11 enlarged at its upper end as at 12 and exteriorly threaded at 13 and provided with an annular beveled seat 14 and a flat horizontal surface 15. The neck 11 has a discharge passage 16 formed therein and arranged axially of the neck 2 and terminally extended into a flared valve seat 17.

The closing cap and liquid regulator is illustrated at 18 and is shown to wholly embrace the neck 2, the said cap being preferably restricted in the direction of its lower end and provided with an annular integral bead 19 which is adapted to engage against the annular flange 4 of the bottle and to form a second seal to assist in the action of the gasket 10 toward rendering the bottle liquid and air tight. The cap 18 has a minimum internal diameter which will permit the cap to be readily placed over the neck of the bottle during the operation of initially assembling the parts.

At the upper end the walls of the cap are extended into a crown 20, having passages 21 at the sides of the axial center of the cap and a valve or plug 22 arranged axially of the bottle and externally flared so as to be projected into the passage 16 at the upper end thereof and securely engaged against the walls of the valve seat 17, as shown in Fig. 2, whereby to form a positive seal at this point to prevent air under ordinary conditions from entering the bottle and for the further purpose of preventing the accidental discharge of the liquid from the bot-

tle, while further serving as a regulator whereby on different adjustments of the cap relatively of the flange 4 of the bottle the discharge orifice formed between the plug
5 or valve 22 and the valve seat 17 can be regulated so as to govern or determine the discharge of the liquid from the bottle when the latter is canted, as shown in Fig. 3.

By connecting the member 7 with the bottle neck as previously described, the portion
10 6 provides an external relatively deep channel 23 having superimposed horizontal annular shoulders 24 and 25. With a view to preventing one from fraudulently refilling
15 the bottle after the original contents is discharged, we provide an inwardly-extending projection 26 formed at one side of the cap 18 and extended into the channel 23 and movable relatively of the shoulders 24 and
20 25 when the cap is adjusted to different positions. This construction is such that on a prescribed movement of the cap the projection 26 thereof will engage the shoulder 24 and thereby mutually cooperate there-
25 with to positively prevent the entire removal of the cap from the bottle, as will be obviously understood. Beneath the crown 20 is a gasket 27 which is adapted to engage
30 against the flat surface 15 of the enlargement 12 on the neck 11 so as to form an additional seal between the closure cap 18 and the attaching member 7. At a point slightly below the gasket 27 the crown is provided with a portion 28 which engages against the

flared wall 14 of the portion 12 to form a
35 further seal when the cap is closed. It is described that the projection 26 is pressed from the cap 18 after the latter is initially connected with the neck of the bottle.

Having thus described our invention,
40 what we claim is:—

A bottle having its neck provided intermediate of its ends with a continuous annular channel, a member embracing the neck
45 and having a portion upstruck in the channel, said member having its crown overlying the neck, a gasket interposed between the neck and the crown, a threaded neck rising
50 from the neck having a discharge passage, a valve carried by the cap and extending into the discharge passage and closing the same when the cap is adjusted in one position, an
inwardly extending annular projection on the cap cooperating with the upstruck portion
55 to prevent complete disengagement of the cap from the attaching member, an annular bead formed on the neck of the bottle adjacent to the lower end of said cap and adapted to be engaged by the latter in the
60 closing thereof to form an air-tight connection between the cap and bottle.

In testimony whereof we affix our signatures in presence of two witnesses.

ANST ALEXANDER.

ARNOLD M. STEINBERG.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."