

J. S. ALSTON.
CLOSURE FOR BOTTLES.
APPLICATION FILED OCT. 28, 1912.

1,059,101.

Patented Apr. 15, 1913.

Fig. 1.

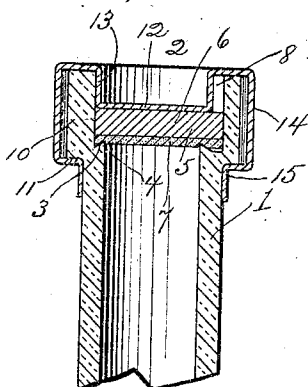


Fig. 4.

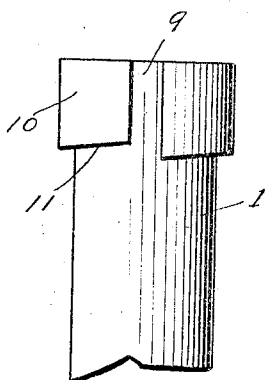


Fig. 2.

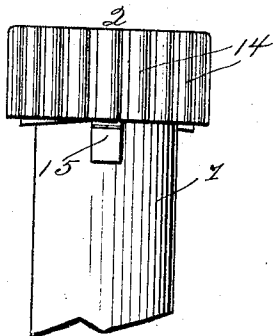


Fig. 5.

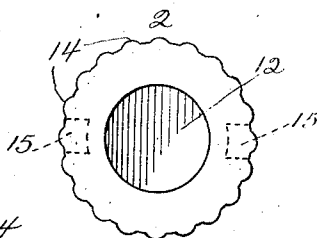


Fig. 6.

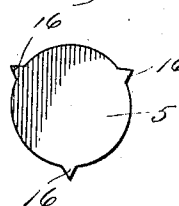
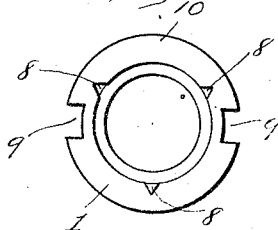


Fig. 3.



Witnesses

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CLOSURE FOR BOTTLES.

1,059,101.

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To all whom it may concern:

Be it known that I, JOHN S. ALSTON, a citizen of the United States, residing at Atlantic City, in the county of Atlantic and State of New Jersey, have invented certain new and useful Improvements in Closures for Bottles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same; reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to closures for bottles, jars or the like and has for its object to provide a simple and effective closure which can be easily and quickly applied to a bottle, jar or the like and which will absolutely seal the same and which can be readily removed without injury to the closure and with ease and despatch.

With this object in view the invention consists in the novel construction of the closure and in the novel construction of the bottle neck or mouth to receive the same.

The invention also consists in certain combinations of parts, all of which will be first fully described and afterward specifically pointed out in the appended claims:

Referring to the accompanying drawing: Figure 1 is a vertical sectional view taken through a bottle neck illustrating the closure in operative position. Fig. 2 is an elevation of the same. Fig. 3 is a top plan view of the bottle neck. Fig. 4 is an elevation of the bottle neck with the cap or closure removed. Fig. 5 is a top plan view of the cap or closure, and Fig. 6 is a plan view of the sealing disk.

Like numerals of reference indicate the same parts throughout the several figures in which;

1 indicates the neck of a bottle, jar or the like, and 2 indicates a cap or closure. The neck 1 of the bottle, jar or the like is provided at its mouth with an interior annular shoulder 3, said annular shoulder 3 being formed on an angle as shown in Fig. 1 in order to present a sharp edge 4 for engagement with the sealing disk 5, said sealing disk 5 being of any suitable material but preferably of a wood pulp board 6 having a layer of waterproof paper 7 under the same in the manner as shown in Fig. 1.

Longitudinally of the bottle neck and extending between the end of the bottle neck and the annular shoulder 3 are a plurality of grooves 8 as shown in Fig. 3, said grooves 8 terminating at the annular shoulder 3 in the manner as illustrated in Figs. 1 and 3. Exteriorly of the bottle neck I provide a plurality of vertical grooves 9 which extend to a point below the said annular shoulder 3, the said bottle neck at the mouth thereof being slightly enlarged at 10 in the manner as shown in the accompanying drawing, the bottom portions of the said enlargement being inclined at 11 to form inclined planes in the manner as shown in Fig. 4.

Referring now to the cap or closure it will be seen that the same is provided with a relatively deep central depression 12, the wall 13 of which is annular and snugly fits the internal surface of the bottle neck in the manner as shown in Fig. 1, while the exterior portion of the cap or closure 2 is provided with a plurality of corrugations 14 so as to better enable manipulation of the cap, while a plurality of locking elements 15 are provided at the extreme bottom edge of the cap in the manner as shown in Figs. 1 and 2.

As will appear from Fig. 6 the sealing disk 5 is provided at its periphery with a plurality of extensions 16, which extensions enter the vertical grooves 8 in the bottle neck in order to hold the said disk 5 against rotation while applying or removing the cap or closure.

Having thus fully described the several parts of this invention its operation is as follows: The bottle neck being constructed in the manner as shown and described the cap or closure is applied by depressing the same so that the locking elements 15 pass downwardly through the exterior vertical grooves 9 in the bottle neck and take under the inclined bottom surfaces or edges of the external enlargement of the bottle-neck. The sealing disk 5 being in proper position and in engagement with the annular shoulder 3 within the bottle neck the cap or closure is given a turn which causes the locking elements 15 to engage the inclined surfaces 11 on the bottom of the enlargement 10 which causes the depressed central portion of the cap or closure to engage and force the sealing disk into intimate engagement with the annular shoulder 3 within the bottle neck, the sharp edge of said annular shoulder en-

tering the sealing disk in the manner as shown in Fig. 1. When the cap is applied the extensions 16 on the sealing disk 5 enter the internal vertical grooves 8 in the bottle neck and as the cap or closure is turned to lock the cap or closure the sealing disk 5 is held stationary relative to the annular shoulder 3 so that the same is not mutilated.

By means of this construction the cap or closure can be applied and removed an indefinite number of times without injuring the sealing disk and without effecting the sealing qualities of the same.

Having thus fully described the invention what I claim as new and desire to secure by Letters Patent of the United States is:—

1. A bottle and cap comprising a bottle neck having an enlarged portion at the mouth thereof, a plurality of vertical grooves in said enlarged portion, the bottom surface of said enlarged surface being inclined, the interior of said neck being provided with an annular shoulder, said annular shoulder being inclined to present a sharp edge, the said bottle neck being also provided on its interior with a plurality of vertical grooves arranged between the mouth of the bottle and the said annular shoulder; a cap having a central depression to fit the interior of the bottle neck, a sealing disk arranged between said central depression in the cap and the annular shoulder in the bottle, the said cap being also provided with a plurality of locking elements adapted to enter the said external grooves in the said enlarged portion of the bottle neck and to engage the inclined surface of the said enlarged portion to lock the cap in position and to force the said sealing disk

into intimate engagement with the said annular shoulder within the bottle neck, the said sealing disk being provided with a plurality of extensions on its periphery to enter the said vertical grooves on the interior of the bottle neck to hold the said disk against rotation within the bottle neck when the said cap is rotated on the bottle neck, substantially as described.

2. A bottle and closure therefor, the neck of said bottle having an external enlargement thereon, the bottom surface of said enlargement being inclined, the interior of said bottle-neck having an annular shoulder therein provided with a sharp edge, said bottle-neck interior having a plurality of vertical grooves therein extending from the mouth of the bottle to said shoulder, a sealing disk adapted to fit within the bottle-neck and having perimetric extensions thereon received by said vertical grooves, said sealing disk resting upon said annular shoulder, said closure having a centrally depressed portion entering the bottle-neck and engaging said sealing disk, said closure also having at its bottom-edge locking elements adapted by turning said closure to take under and engage the inclined surfaces of said external neck-enlargement to cause said centrally depressed portion of the closure to engage and force said sealing disk upon the sharp edge of said annular shoulder.

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

JOHN S. ALSTON.

Witnesses:

JAMES C. SASSER,
MARY E. HUGHES.