

J. W. HUGHES & D. T. BORDEN.
BOTTLE CLOSURE.

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968,947.

Patented Aug. 30, 1910.

Fig 1

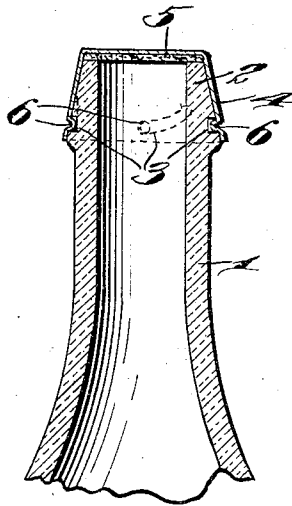


Fig 3

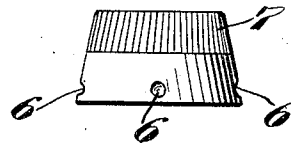


Fig 2

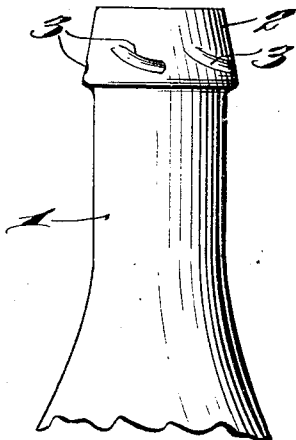
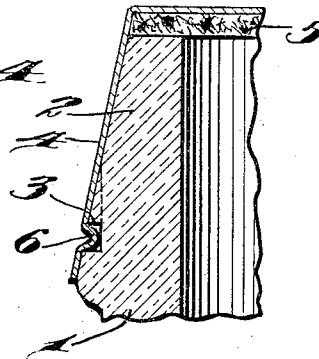


Fig 4



Witnesses

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BOTTLE-CLOSURE.

968,947.

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To all whom it may concern:

Be it known that we, JAMES WESLEY HUGHES and DANIEL T. BORDEN, citizens of the United States, residing at Millville, in the county of Cumberland and State of New Jersey, have invented certain new and useful Improvements in Bottle-Closures, of which the following is a specification.

Our invention relates to improvements in bottle closures, the object of the invention being to provide a simple, inexpensive construction which can be quickly operated to thoroughly seal the bottle, yet which may be removed and replaced as desired.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings: Figure 1, is a view in longitudinal section, illustrating our improvements. Fig. 2, is a view in elevation of the bottle neck. Fig. 3, is a view in elevation of the cap, and Fig. 4, is an enlarged broken view in section of the neck and the closure thereon.

1, represents the neck of a bottle having a beveled or truncated conical enlarged end 2. That is, this enlarged end 2 is of least external diameter at the open end of the bottle, and increases in diameter from this point. The end 2 is provided on its outer face with an annular series of curved grooves 3, constituting cam grooves which start in the lower portion of the end 2, where the grooves are deepest, and extend upward to a point removed from the end of the neck where the grooves merge into the surface of end 2. This is shown clearly in Fig. 4, where the inner or base wall of the groove is illustrated as lying substantially parallel with the interior wall of the bottle neck, so that it merges into the surface of the beveled or conical end 2.

4, represents the cap which is of a conical shape to fit the end 2, and 5 is a disk of cork or other similar material to tightly seal against the end of the bottle neck.

In operation, after the bottle is filled, the cap 4 with the disk 5 therein, is positioned

over the end 2. When in this position a suitable machine is employed to tightly press down the cap or cover, and indent the cap or cover as shown at 6, forming a plurality of lugs projecting into the grooves 3, to securely hold the cap on the bottle neck.

When it is desired to remove the cap, it is merely necessary to turn the same in the right direction when the lugs or indentations 6, will ride through the grooves 3, until they reach the smaller diameter of the end 2, when they are out of the grooves and the cap may be removed.

If desired, the cap may be replaced by entering the lugs in the ends of the grooves 3, and turning the cap when the walls of the grooves will draw the cap tightly down into closing position.

To facilitate the turning of the cap, it is preferably roughened as shown at 7, but our invention is in nowise limited to the design of the cap, as it may be ornamented and roughened in various ways, and we do not therefore limit ourselves to the precise detail set forth, but consider ourselves at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

The combination with a bottle neck, having a tapering or conical end, and a plurality of curved cam grooves in said end deepest in the lower widest portion of the tapering end and coming flush with the surface of the tapering end at a point removed from the upper end of the bottle neck, of a conical cap fitting said end of the neck, a disk in the cap against the end of the neck, and indentations in the cap constituting lugs positioned in the grooves, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES WESLEY HUGHES.

DANIEL T. BORDEN.

Witnesses:

MIMIE HUGHES,

SUSANNA BORDEN.