

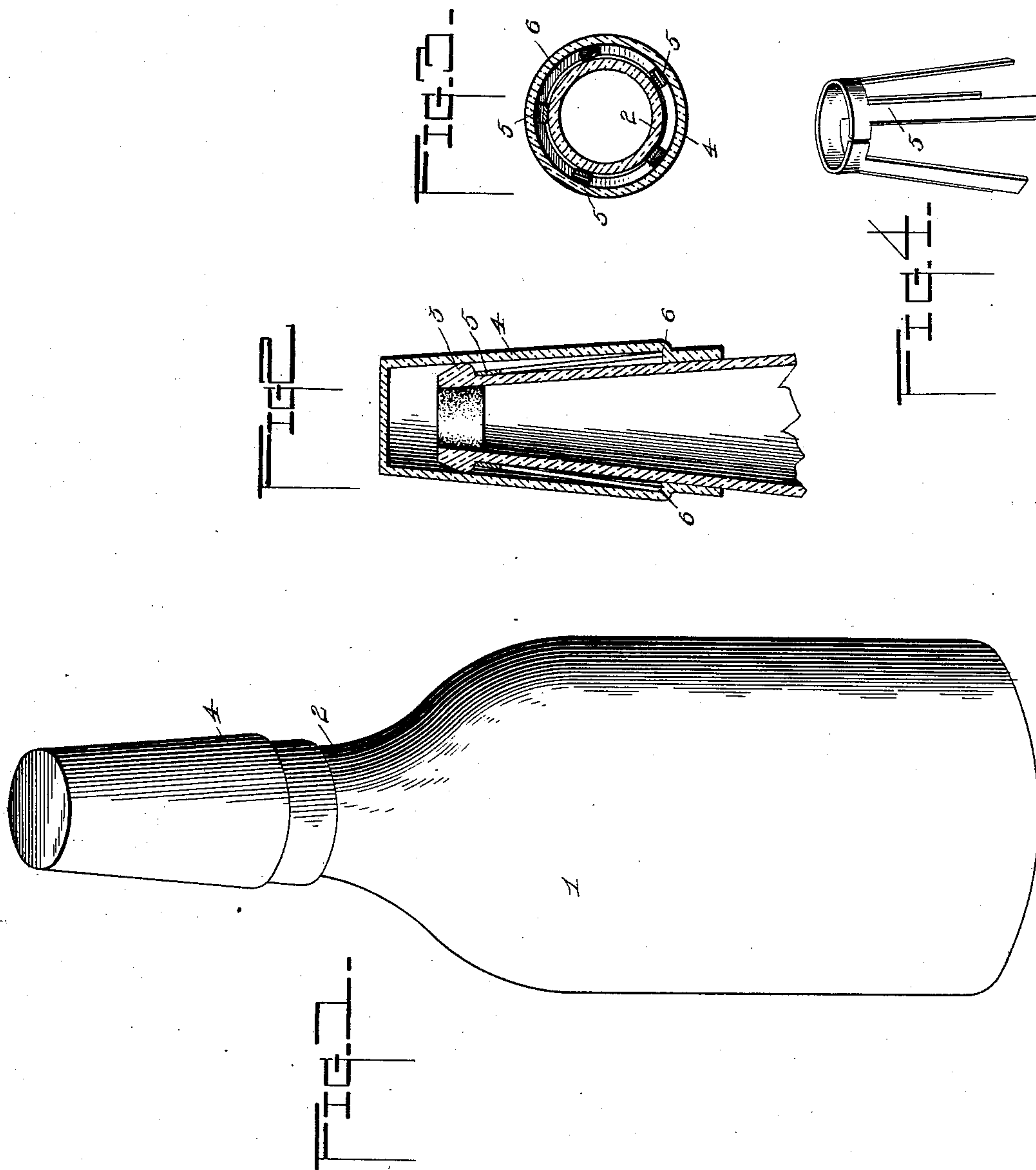
No. 606,665.

Patented July 5, 1898.

J. T. HOLLAND.
BOTTLE.

(Application filed Dec. 15, 1896.)

(No Model.)



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

JAMES T. HOLLAND, OF NEAR MEMPHIS, TENNESSEE.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 606,665, dated July 5, 1898.

Application filed December 15, 1896. Serial No. 615,773. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. HOLLAND, a citizen of the United States, residing near Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Bottle, of which the following is a specification.

My invention relates to bottles of the non-refillable type, and has for its object to provide for use in connection with bottles and adapted to be applied to a bottle of the ordinary shape (namely, with an upwardly and gradually tapered neck and a rounded and enlarged lip) a cap designed to bear a name, trade-mark, or other design or matter for identifying the contents of the bottle with the proprietor and capable of preventing access to the cork or stopper of the bottle until such cap has been destroyed, thus also destroying the means of identifying the bottle and preventing the contents of the bottle from being adulterated or the bottle from being refilled and sold as an original package.

Furthermore, it is my object to provide such a construction of cap and means for securing the same originally to the bottle that the operation of removing the same will result in the expansion of the cap at a plurality of spaced points, whereby the cap will be completely shattered to prevent repair and subsequent application.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a sealing-cap embodying my invention applied in the operative position to a bottle of the ordinary construction and shape. Fig. 2 is a vertical sectional view of the cap and fastening devices and the contiguous portion of the bottle-neck. Fig. 3 is a transverse section of the same. Fig. 4 is a detail view in perspective of the fastener or catch.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

The bottle 1, to which the sealing-cap embodying my invention is adapted to be applied, is of the ordinary and well-known construction, having a slightly-tapered neck 2, termi-

nating in an enlarged or thickened lip 3, which projects laterally beyond the exterior surface of the contiguous portion of the neck, but is of less diameter than the neck at a short distance below the lip. Fitted in the mouth of the bottle-neck is an ordinary cork or stopper, as in the usual practice, and fitted exteriorly upon the neck for covering the cork is a frangible cap 4 of glass or any equivalent material, which is adapted to be broken to give access to the cork. This cap is constructed with special reference to the manner in which it is to be struck or pressed in order to remove it to give access to the cork or stopper, and hence is slightly tapered toward its upper end, with its bore at a point removed from its upper end equal in diameter with the exterior surface of the lip 3, the lower end of the cap being slightly contracted to form a neck-seat of but little larger diameter than the exterior circumference of the lip 3, whereby in applying the cap said neck-seat passes over the lip and comes in contact with and snugly embraces the neck at a point below the plane of the lip or at a point where the neck is of slightly-larger diameter than the lip. This contact of the neck-seat with the neck of the bottle occurs simultaneously with the contact of the interior surface or bore of the cap with the periphery of the lip, as may be clearly seen by reference to Fig. 3. Thus when the cap is seated upon the bottle-neck it is in contact therewith at a plurality of points, spaced apart to form an annular interval between the surface of the neck and the wall of the cap and between the plane of the under side of the lip 3 and a shoulder 6, which is formed by said contraction of the lower edge of the cap. Inasmuch as the cap is tapered toward its upper end, while the bottle-neck is enlarged downwardly, it is obvious that any axial pressure applied to the upper end of the cap will tend to expand the cap at two spaced points—namely, in the plane of the lip 3 and in the plane of the neck-seat below the shoulder 6—and if this pressure (whether applied gradually or as a blow upon the upper end of the cap) is sufficient to materially strain the cap it will cause the expansion and fracture of the cap at the two points of bearing above mentioned, and hence will shatter the cap in such a way as to prevent

the possibility of subsequent repair and second use after the bottle has been refilled or the contents thereof have been adulterated.

In order to prevent the displacement of the cap after its application to the bottle-neck by axial upward movement, I employ a locking device 5, which is located in the above-mentioned annular space between the planes of the bottle-lip and the shoulder 6, and consisting in the construction illustrated of a split ring embracing the bottle-neck beneath and contiguous to the under surface of the lip 3 and having a plurality of downwardly-extending divergent spring-tongues which terminally engage the shoulder 6 when the cap has been depressed in the operation of applying it to the bottle-neck a sufficient distance to dispose the shoulder below the plane of the extremities of the tongues. The particular advantage of this form of locking device or catch resides in the fact that while wholly concealed within the cap when the latter is in place, and hence protected from tampering by means of instruments introduced between the neck-seat at the lower end of the cap and the neck, it is adapted to be applied to a bottle of the ordinary construction and to remain in place after the destruction of the cap for subsequent use by the proper manufacturer or the proprietor of the mark with which the cap embodying my invention is provided. The split ring provides for applying the catch with facility or subsequently removing it, if not required, without the use of tools, and also adapts it to snugly fit necks which may differ slightly in diameter at the point below the enlarged lip.

It will be seen, furthermore, that even should a slight looseness of the cap upon the neck of the bottle allow a thin instrument to be inserted between the neck-seat and the neck it would pass upwardly between the inner sides of the catch-arms and the bottle-neck, and hence would serve to expand rather than contract said arms, and hence could not result in disengaging the lower extremities of the arms from the shoulder 6. In other words, the catch-arms spread toward the open end of the cap. No special construction of bottle-neck is required in connection with the catch or the manner of mounting the same upon the neck, the enlarged lip being depended upon solely to prevent the displacement of the catch after it has been fitted upon the bottle, and the bearing of the bore of the cap upon the periphery of said lip prevents any looseness or enlargement of the split ring of the catch from allowing it to expand and become displaced upwardly from the lip.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. The combination with a bottle having a laterally-enlarged lip, and a neck which is reduced below the lower surface of the lip and is downwardly expanded to form a gradual taper of which a portion below, and spaced from, the lip is of slightly-larger diameter than the lip, of a frangible cap inclosing the upper end of the bottle-neck and having upper and lower annular seats respectively fitting the lip and the bottle-neck at said point of slightly-larger diameter than the lip, the cap, from its upper seat upon the bottle-lip, being upwardly tapered, and means, inclosed by the cap, and between the under side of the bottle-lip and the lower edge of the cap, for preventing the axial upward displacement of the cap, substantially as specified.

2. The combination with a bottle having a laterally-enlarged lip, and a neck which is of less diameter than the lip at the under side of the latter, and is enlarged downwardly therefrom in a gradual taper to a point of slightly-larger diameter than the lip, of an upwardly and continuously tapered frangible cap inclosing the upper end of the neck and having a bore which, at a point spaced from its upper closed end, is of equal diameter with the bottle-lip, and having its lower end contracted to form a neck-seat of slightly-larger diameter than the lip, and fitting snugly upon the bottle-seat at the point where said neck is of slightly-larger diameter than the lip, said contraction of the lower end of the cap forming an interior shoulder, and a locking device or catch arranged within the cap, in the annular space between the under side of the lip and said shoulder of the cap, and comprising a split ring, snugly fitting the reduced portion of the neck contiguous to the under surface of the lip, and downwardly-divergent spring-arms for terminally engaging the shoulder of the cap, whereby the extremities of said arms occupy positions in a circle of larger diameter than the neck-seat of the cap, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES T. HOLLAND.

Witnesses:

S. LUNDEL,
C. T. MCCENO.