

No. 711,430.

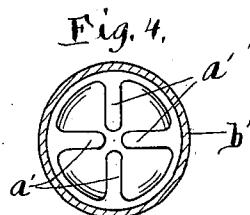
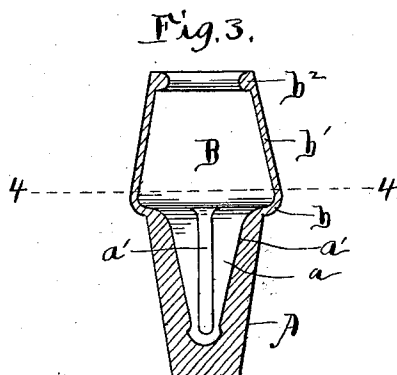
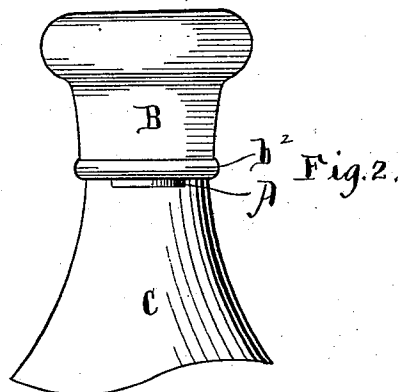
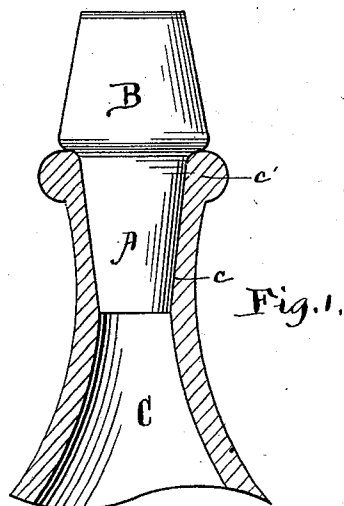
Patented Oct. 14, 1902.

F. W. LEUTHESSER.

BOTTLE CLOSURE.

(Application filed Oct. 15, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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BOTTLE-CLOSURE.

SPECIFICATION forming part of Letters Patent No. 711,430, dated October 14, 1902.

Application filed October 15, 1901. Serial No. 78,669. (No model.)

To all whom it may concern:

Be it known that I, FRED W. LEUTHESSER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Bottle-Closures, of which the following is a specification.

The object of this invention is to provide a simple and inexpensive closure combining in itself the greatest amount of lightness and strength and capable of sealing the bottle to which it is applied tightly against the admission of air or leakage of the liquid within the bottle.

In the drawings illustrating the invention, Figure 1 is an elevation, partly in section, of a bottle-neck having therein one of the closures of this invention before the cap or hood has been turned down around the lips of the bottle-mouth. Fig. 2 is an elevation of a bottle-neck, showing the closure in place with the hood or cap turned over the lips of the bottle-mouth; Fig. 3, a sectional elevation of the closure of this invention, showing the ribs reinforcing the interior of the plug or stopper; and Fig. 4, a cross-sectional view taken on line 4 4, showing the ribs in perspective.

The closure of this invention is made of rubber or other elastic material and is constructed with a hollow plug or stopper A, preferably downwardly tapered, having on its inner walls a series of longitudinally-extending ribs or projections *a'*, formed, as shown, to downwardly converge toward the bottom of the interior cavity of the plug or stopper. Extending from the upper edge of the plug or stopper is a cap or hood B, having inwardly-converging side walls, likewise made of elastic material, of a diameter at its base greater than the upper edge of the plug or stopper, thereby providing a flange or shoulder *b* at the point of connection between the cap and plug. Around the upper edge of the cap or cover is an inwardly-extending annular ring *b'*, formed, as shown, integral with the body-wall of the cap or cover.

In use the plug or stopper is inserted into the mouth of the bottle, and the cap or cover and the inwardly-extending annular ring integral therewith is reversed and stretched down and around the lips of the bottle, distending the

cap or cover and reversing the relation of the annular ring, so that it lies without the cap or cover when the bottle has been closed, as shown in Fig. 2, thereby allowing the plain smooth side of the cap or cover to lie firmly and tightly and under tension against the outer wall of the bottle-neck. The annular ring being of less diameter when in normal position, as shown in Fig. 1, will be stretched to a greater extent than will any other portion of the cap or cover, thereby most firmly sealing the closure at its lower edge. The longitudinally-extending ribs on the interior of the plug or stopper enable the plug or stopper to be made light without impairing its strength and rigidity in any way and at the same time securing a much greater amount of elasticity than would be found in a solid plug or stopper, while using in its construction a lesser amount of rubber, thereby decreasing the expense of manufacture. By reason of the fact that the plug is made hollow it will have sufficient elasticity to allow of its insertion into bottle-mouths having varying internal diameters, while the ribs on its interior afford a rigidity sufficient to prevent the walls of the plug from warping or buckling when it is forced into the bottle and insure a tight firm elastic contact with the bottle-mouth under all circumstances. The flange or shoulder *b* prevents the plug from being driven too deeply within the mouth of the bottle and at the same time allows the cap or hood to be more easily drawn around the lips of the bottle.

What I regard as new, and desire to secure by Letters Patent, is—

1. A closure for bottles consisting of a hollow plug or stopper usable with bottles having mouths of varying internal diameter and provided on its interior with a series of strengthening-ribs inwardly extending insuring the close contact between the stopper and the bottle-mouths, and an elastic cap normally extending upwardly from the plug or stopper and adapted to be reversed and turned down around the bottle-mouth, substantially as described.

2. A closure for bottles consisting of an elastic hollow plug or stopper usable with bottles having mouths of varying internal di-

ameter and provided on its inner face with longitudinally-extending strengthening-ribs insuring the close contact between the stopper and the bottle-mouths, an elastic cap attached to the plug or stopper of a diameter at its base sufficient to leave an outwardly-turned shoulder or flange at the point of attachment with the plug or stopper and provided at its upper edge with an annular rim normally inwardly extending, substantially as described.

3. A closure for bottles, consisting of an elastic, downwardly-tapered hollow plug or stopper usable with bottles having mouths of varying internal diameter and provided on

its inner face with longitudinally-extending, converging strengthening-ribs insuring the close contact between the stopper and the bottle-mouths, an elastic cap having normally converging side walls attached to the plug or stopper and of a diameter at its base sufficient to leave an outwardly-turned shoulder or flange at the point of attachment with the plug or stopper and provided at its upper edge with an annular rim normally inwardly extending, substantially as described.

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