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BOTTLE CLOSURE

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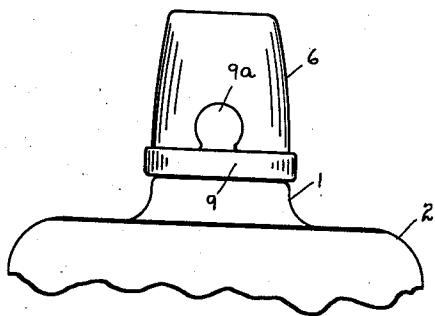


Fig. 1.

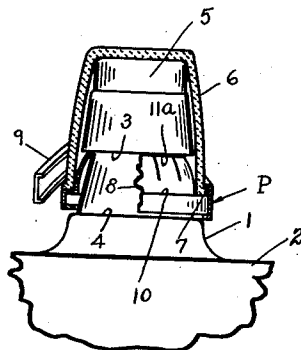


Fig. 2.

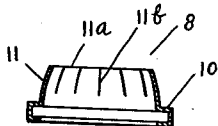


Fig. 3.

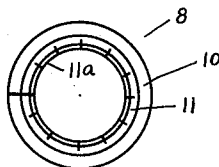


Fig. 4.

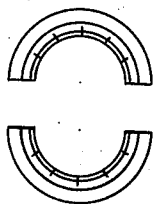


Fig. 5.

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BOTTLE CLOSURE

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10 Claims. (Cl. 215—46)

The invention relates to bottle closures, and this application comprises a continuation in part of application Serial No. 731,637, filed June 21, 1934. The object is to provide a bottle closure including a glass dose cap or jigger which is self locking when assembled with a bottle. Another object is to provide a dose cap that affords a tamper-proof closure for the bottle upon which it is secured. Still other objects will appear in the following specification.

In the accompanying drawing Fig. I is a fragmentary view of a bottle in side elevation, showing the closure embodying this invention installed thereon; Fig. II is a similar view of the bottle, but showing the closure partly in vertical section and partly in side elevation; Fig. III is a sectional view of one of the elements of the closure; Fig. IV is a plan view of the same; and Fig. V is a view, comparable with Fig. IV, illustrating a modification.

Referring to the drawing, the neck 1 of bottle 2 is provided with two annular shoulders 3 and 4 spaced apart a substantial interval vertically of the bottle neck. The mouth of the bottle may be sealed with a headed cork stopper 5, or other suitable sealing member, such as the well-known screw cap. And over the mouth and neck of the bottle thus sealed the tamper-proof closure of this invention is assembled.

Such tamper-proof closure includes essentially three elements: a glass dose cap or jigger 6 provided at its periphery with a shoulder 7; a locking sleeve or latch-member 8; and a tear-apart or removable keeper band 9. The locking sleeve 8 is formed with an annular shoulder 10, upon which the rim or lip of the dose cap seats, and the keeper band 9—a strip of thin aluminum or other soft metal well-known in other associations in the art—is pressed into engagement with the top of shoulder 7 of the cap and the bottom of shoulder 10 of the locking sleeve, as indicated at P in Fig. II. These three elements 6, 8 and 9 of the closure are initially assembled and integrated in the described manner before assembly upon a sealed or stoppered bottle.

Above its shoulder 10, the locking sleeve or latch member 8 of the device includes a tubular portion 11 of substantial height, and at its upper edge 11a such portion is of less radius than the neck portion of the bottle above the shoulder 3, while the lower portion of the sleeve—the portion embodying the shoulder 10—is normally formed with an internal diameter equal to or slightly in excess of the maximum diameter of the bottle neck above said shoulder 3. The tubular portion 11 of the locking sleeve is formed of

elastic or resilient material and is radially expandible; a clearance is provided between the inner wall of cap 6 and the upper edge of the tubular portion to admit of such expansion, whereby the closure 6, 8, 9 may be thrust as a unit downward and over the sealed bottle neck, the portion 11 of the locking sleeve yielding laterally within the cap 6 and permitting passage over the upper neck portion of the bottle. As the cap 6 engages and is pressed downward against the stopper 5, the upper edge 11a of the locking sleeve passes below the shoulder 3 and contracts, thereby securing the closure structure in assembly with the bottle. Manifestly, when the closure has thus been installed, it is necessary to tear-apart and remove the keeper band 9 before the bottle may be uncovered, and, conveniently, the keeper band is provided with a thumb tang 9a, to facilitate such removal in known way.

Of course, once the keeper band has been removed, it affords signification that the bottle has been tampered with. Thus, there is provided a tamper-proof closure which advantageously may be assembled and automatically locked upon a bottle without the need of a capping machine, and the usual and objectionable use of screw threads on the bottle neck and within the dose cap is avoided.

The tubular portion 11 of the locking sleeve yieldingly engages the interior surface of the dose cap 6 adjacent its lip, and, since the locking sleeve remains fixed upon the bottle, it serves frictionally to secure the cap in place after the keeper band has been removed and discarded. Accordingly, when the bottle has once been opened, the dose cap may be removed from the bottle and replaced in secure position thereon at will.

I have shown the locking sleeve or member 8 in this case to be formed of thin, but strong, sheet metal, say sheet steel, having a medium degree of resiliency. The upper tubular portion 11 of the sleeve is vertically slotted on circumferentially spaced-apart lines 11b, providing between the successive slots a succession of tangs which are adapted to be flexed about their bases when the assembled closure 6, 8, 9 is thrust downward over the bottle neck in the manner described. Indeed, I contemplate that the locking sleeve or latch member 8 may be fashioned of a strip of metal, bent into cylindrical form and pressed by means of dies or rolls into its illustrated form, cf. Figs. III and IV.

While the above-described structure is particularly designed for securing glass jiggers or dose

caps upon bottles, without the use of threads, it may be possible in certain cases to embody a well-known pressed metal cap, instead of the glass cap, in the assembly. And in such cases, the retention of the locking sleeve upon the bottle neck may not be essential after the bottle has been initially opened. Under these circumstances, I fashion the locking sleeve in two halves, as shown in Fig. V. While they are assembled with the cap (by means of keeper band 9) the two halves form in effect the single-piece locking sleeve already described; but, when the keeper band is torn away and the cap removed, the two locking sleeve halves may be readily removed from the bottle neck and discarded. A jigger is known in the art to be a drinking or measuring cup, and it will be understood that variations from the structure described may be made without departing from the invention as defined in the following claims.

The structure of my invention provides means for readily securing a drinking or measuring cup in assembly with a bottle, to comprise a unitary article of commerce, and, manifestly, the particular size or shape of the drinking cup or glass is a matter of choice.

I claim as my invention:

1. A glass drinking or measuring cup provided with a shoulder adjacent its lip, a locking member including a shoulder to receive the lip of said cup in seated engagement, and a removable keeper interengaging the shoulders of said cup and locking member and thereby securing them together for assembly as a unit in automatically locked engagement with the neck of a bottle.

2. A glass drinking or measuring cup in combination with a locking sleeve, and a removable keeper securing said cup and sleeve together for assembly as a unit with the neck of a bottle.

3. A glass drinking or measuring cup in combination with a locking sleeve including a sleeve portion extending upward into said cup and being laterally expansible at its upper end, said cup and locking sleeve including shoulders, and a removable keeper interengaging said shoulders, whereby the assembly may be installed as a unit upon the neck of a bottle.

4. The structure of claim 3 in which the upwardly extending portion of said sleeve engages the cup internally and serves as means for removably securing the cup upon the bottle after the bottle has been opened and said keeper discarded.

5. A glass drinking or measuring cup in com-

bination with metal locking means for engagement with the neck of a bottle, keeper means, said glass cup and said metal locking means including complementary elements, and said keeper means removably engaging said complementary elements, to effect integration of said cup and locking means for assembly with and service on a bottle.

6. A drinking or measuring cup in combination with a locking member for engagement with the neck of a bottle, and destructible keeper means integrating said cup and said locking member for assembly as a unit upon a bottle, said locking member being separable, whereby, when said keeper and cup are removed from initial service position, the locking member may be removed from the bottle and discarded.

7. The structure of claim 6, in which said locking member comprises a plurality of segmental sections readily freed from one another upon removal of the cup from assembly.

8. A drinking or measuring cup in combination with locking means, and a destructible keeper, said locking means including members for locking engagement with a neck of a bottle, said cup and said locking means including complementary portions engaged by said keeper for the separable integration of said cup and locking means to provide a tamper-proof bottle closure, as described.

9. In combination with a bottle, a glass drinking or measuring cup, a locking member adapted to engage said bottle, and keeper means for normally securing cup and locking member in assembly, whereby said cup is (by engagement of the locking member with the bottle) secured upon the bottle, said keeper being movable from said normal securing position, whereby said cup may be removed from said assembly.

10. In combination, a locking member for securing a cap on a bottle, said member comprising a body adapted to extend circumferentially of the neck of said bottle, a shoulder extending laterally of said locking member and adapted to receive the rim of said cap in readily removable engagement, said locking member including a body portion extending downward from said rim-engaging shoulder, and a portion extending upward from said shoulder and within said rim, together with a keeper for normally securing said locking member and cap in assembly, said keeper in service engaging the body portion of said locking member below said shoulder and the rim of said cap above the region of its engagement with said shoulder.

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