

S. E. BELL.
BOTTLE CLOSURE.
APPLICATION FILED AUG. 9, 1910.

1,007,056.

Patented Oct. 31, 1911.

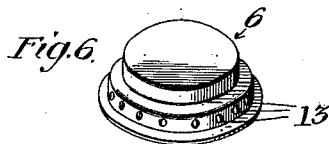
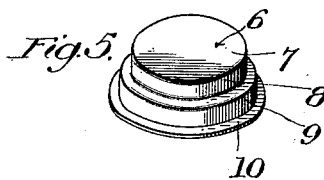
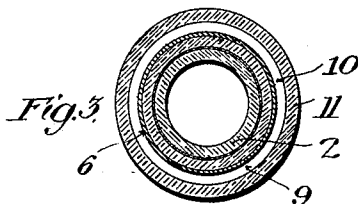
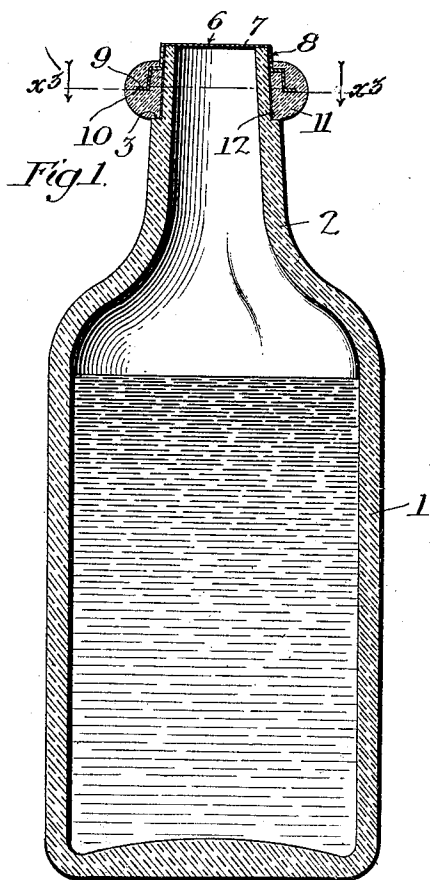


Fig. 2.

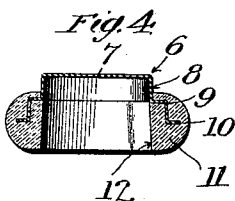
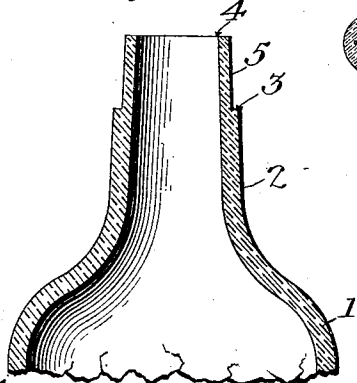
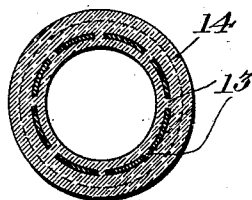


Fig. 7.



Witnesses:
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UNITED STATES PATENT OFFICE.

STUART EDWARD BELL, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO
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BOTTLE-CLOSURE.

1,007,056.

Specification of Letters Patent.

Patented Oct. 31, 1911.

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To all whom it may concern:

Be it known that I, STUART EDWARD BELL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Bottle-Closure, of which the following is a specification.

This invention relates to bottle closures and particularly to that class of bottle closures which are secured to the bottle in such a manner as to prevent fraudulent use of the bottle after the removal of the contents, and one of the main objects of the present invention is to construct a closure of the class described, which is of simple and economical construction, and which may be readily applied to the bottle without the use of special machinery.

Other objects and advantages will herein-after appear in the following specification.

Referring to the drawings which are for illustrative purposes only: Figure 1 is a vertical sectional view of a bottle, and closure embodying one form of my invention. Fig. 2 is a vertical sectional view of the upper portion of the bottle shown in Fig. 1, with the closure removed. Fig. 3 is a horizontal sectional view on line x^3-x^3 Fig. 1. Fig. 4 is a vertical sectional view of the closure removed from the bottle. Fig. 5 is a perspective view of the metal cap forming a part of the closure. Fig. 6 is a perspective view of a preferred form of the metal cap. Fig. 7 is an enlarged horizontal sectional view of a closure having the form of metal cap shown in Fig. 6.

1 designates a bottle having a neck 2 formed with a shoulder 3. The portion of the neck above the shoulder 3 is tapered upwardly to the mouth 4 of the bottle, as shown at 5, the neck including the tapered portion 5 being turned during the molding operation for the purpose of producing a true round outer surface on the neck of the bottle.

The closure consists of a cap 6, formed of thin metal, having a flat top 7 and tapered sides 8 formed with a stepped rim 9 terminating in an outwardly extending flange 10. The stepped portion 9 and flange 10 are embedded in a ring 11 of glass, molded thereon and having the inner surface or face 12 of the ring molded in tapered form to fit the tapered portion 5 of the neck of the bottle. The inner face 12 of the glass ring

11 forms a continuation of the tapered sides 8 of the cap 6 and together form a tapered surface which fits the tapered portion 5 of the neck of the bottle. The stepped portion 9 and flange 10 insure the cap being securely anchored in the glass of the ring 11, and prevent relative movement therebetween, at the same time forming a reinforcement of the glass ring.

In the preferred form of cap shown in Fig. 6 and Fig. 7, the stepped portion 9 of the cap is perforated as shown at 13, so that the glass of the ring 14 may flow through the perforations, thereby more intimately locking the cap 6 and the ring 14 together.

After the bottle has been filled the tapered portion 5 and the shoulder 3 of the neck of the bottle are coated with liquid glass or other suitable cement, and the closure placed over the mouth of the bottle, the under side of the glass ring 11 being seated on the shoulder 3, and the cap 6 resting on the upper end of the neck of the bottle, the tapered walls 8 of the cap and the inner face 12 of the glass ring fitting snugly the tapered portion 5 of the bottle neck 2. The cement on setting firmly, seals the glass ring 11 of the closure to the neck of the bottle, and becomes permanently attached thereto. The liquid glass or other cementing material is applied to the neck of the bottle as a very thin film or coating, and the glass ring 11 is seated thereon and is pressed into close contact therewith. This prevents any great portion of cement used from being exposed to the action of any dissolving agent such as hot water which is ordinarily used for dissolving liquid glass, and owing to the thinness of the cementing agent and its inaccessibility to any sharp pointed instrument, it is impossible to dig or scrape such cementing material from between the glass ring and the neck of the bottle.

To remove the contents of the bottle, the metal cap 6 is punctured or cut, the glass ring 7 and sides 8 of the metal cap remaining cemented to the bottle in such a manner that to remove them would necessitate breaking the neck of the bottle.

It is understood that I do not limit the scope of the invention to the particular construction of the closure shown, but desire it understood that every form of closure be

included having a metal cap secured in a glass ring, which is seated upon the bottle neck to form a closure therefor.

What I claim is:

5 1. A glass bottle and closure therefor, comprising a metal cap extending over the mouth of the bottle and an insoluble glass ring molded on said cap; said glass ring being arranged to encircle the neck of the bottle and contact therewith and to be independently cemented thereto.

2. A glass bottle and closure therefor, comprising a metal cap extending over the mouth of the bottle and an insoluble glass ring molded thereon; said glass ring being adapted to encircle the neck of the bottle and contact therewith and to be independently cemented thereon, said bottle having a tapered neck portion to receive said closure and contact with said glass ring, and a shoulder on the bottle adapted to have the glass ring seated thereon.

3. A bottle closure comprising a bottle having a tapered neck, a shoulder on such neck, an insoluble glass ring adapted to encircle such tapered neck and contact therewith and to be independently cemented thereto, said ring being arranged to seat

upon the shoulder, and a metal cap having a flange cast in such glass ring.

4. A glass bottle and closure therefor, comprising a metal cap extending over the mouth of the bottle, and having a stepped rim, a glass ring molded on the stepped rim and independently cemented to the bottle, said bottle having a tapered neck portion to receive said closure, and a shoulder on the bottle adapted to have the glass ring seated thereon.

5. A glass bottle and closure therefor comprising a metal cap extending over the mouth of the bottle and having a perforated rim portion and a glass ring molded on the rim portion and cemented to the bottle; said bottle having a tapered neck portion to receive the closure, and a shoulder on the bottle adapted to have the glass ring seated thereon.

In testimony whereof, I have hereunto set my hand at Los Angeles California this 4th day of August, 1910.

STUART EDWARD BELL.

In presence of—

FRANK L. A. GRAHAM,
F. M. TOWNSEND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."