No. 752,614. PATENTED FEB. 16, 1904.

E. E. CHAPMAN.

CLOSURE.

APPLICATION FILED MAR. 27, 1903. RENEWED NOV. 18, 1903.

NO MODEL.

Fig. 9

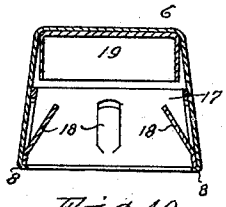


Fig. 10

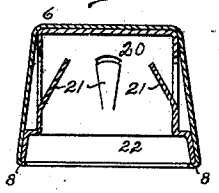


Fig. 11

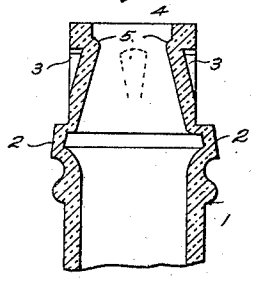


Fig. 12

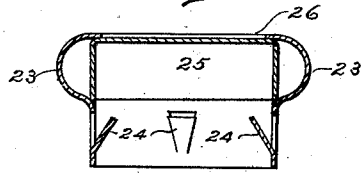


Fig. 4

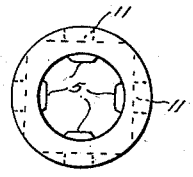


Fig. 5

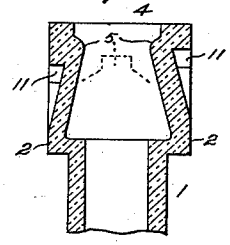


Fig. 6

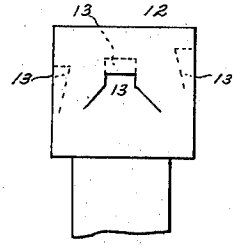


Fig. 7

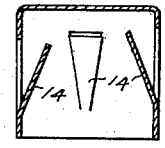


Fig. 8

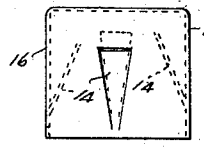


Fig. 1

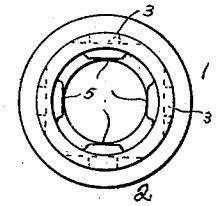


Fig. 2

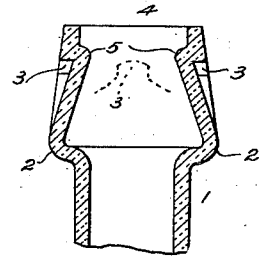
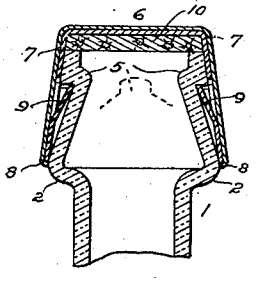


Fig. 3



Witnesses
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Inventor
Earle E. Chapman
by
Charles S. Rogers
his Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 752,614. Patented February 16, 1904.

UNITED STATES PATENT OFFICE.

EARLE E. CHAPMAN, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO STANDARD BOTTLE CLOSURE COMPANY, OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA.

CLOSURE.

SPECIFICATION forming part of Letters Patent No. 752,614, dated February 16, 1904.

Application filed March 27, 1903. Renewed November 18, 1903. Serial No. 181,738. (No model.)

To all whom it may concern:

Be it known that I, EARLE E. CHAPMAN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Closures; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in closures for receptacles, and particularly to closures for bottles, jugs, jars, and other vessels; and some of the objects of this invention are to provide a closure which will be simple and cheap in construction and at the same time efficient for the purpose intended.

Another object of the invention is to provide a closure constructed to prevent the fraudulent refilling of bottles or the adulteration of their original contents or the sale of the bottles a second time as the original package except by the original bottler.

It is also an object of this invention to provide a closure constructed to be removed from the bottle or vessel by rotation thereon whereby the engaging portions of the closure are disconnected partially or entirely therefrom.

With these and other objects in view the invention consists, essentially, in the construction, combination, and arrangement of parts, substantially as more fully described in the following specification, and as illustrated in the accompanying drawings, forming part of this application, in which—

Figure 1 is a top plan view of the neck of a bottle or vessel constructed to receive one form of the improved closure. Fig. 2 is a longitudinal central section of the same. Fig. 3 is a longitudinal central section of a portion of a neck of a bottle embodying the construction illustrated in Figs. 1 and 2, showing a closure in position thereon, the closure being also in section. Fig. 4 is a top plan view of the neck of a bottle or vessel, illustrating a modified form of the construction illustrated in Figs. 1 to 3. Fig. 5 is a longitudinal central sectional view of the construction shown in Fig. 4. Fig. 6 is a side elevational view of a cap or cover in position upon the neck illustrated in Figs. 4 and 5. Fig. 7 illustrates a sectional view of the closure shown in Fig. 6. Fig. 8 is an elevational view of a modified form of a closure. Fig. 9 is a sectional view of still another form of closure embodying an interior or auxiliary cap and an interior ring carrying engaging projections or fingers. Fig. 10 is a sectional view of still another form of closure wherein the engaging projections or fingers are carried by the interior or auxiliary cap. Fig. 11 is a longitudinal sectional view of a portion of the neck of a bottle constructed to receive the closure illustrated in Fig. 10, and Fig. 12 is a sectional view of still another form of cap or cover.

Similar characters of reference designate corresponding parts throughout the several views.

Referring to the drawings, and particularly to the construction illustrated in Figs. 1 to 3 thereof, the reference character 1 designates the neck of a bottle, jug, jar, or other vessel desirably having an annular swell or shoulder 2, above which are formed a plurality of recesses 3, preferably increasing in depth toward said orifice, substantially as illustrated in Figs. 1 to 3 of the drawings. Upon the interior of the neck of the bottle or vessel is preferably formed an annular inwardly-directed shoulder or offset 5 to prevent the introduction of a cork or stopper, and the neck of the bottle preferably flares outwardly from the shoulder 5, essentially as shown. A closure 6 may be provided with suitable sides constructed to inclose the upper portion of the neck 1, and within the closure 6 is preferably secured an interior or auxiliary closure 7, retained in position within the cap 6 by the deflection of the rim 8 of the latter, Fig. 3, and the interior or auxiliary cap has portions thereof cut away to form resilient engaging projections or fingers 9, preferably of the same form or contour as the recesses 3 and of the same relative arrangement, so that when the closure is forced down upon

the neck of the vessel or bottle the projections or fingers will enter the recesses 3 in the bottle-neck and prevent the removal of the closure, except as hereinafter more fully explained. In order to make a tight connection or closure for the bottle, a disk 10, of cork or other substance, may be placed within the interior or auxiliary closure 7, whereupon the closure is forced down upon the neck of the vessel or bottle and the disk 10 is compressed between the edge of the bottle-neck and the closure until the engaging fingers or projections 9 enter the recesses 3 in the bottle-neck, whereupon the vessel is securely closed. To remove the closure from the vessel, it is only necessary to rotate or twist the cap thereupon, thereby partially or entirely breaking off or severing the engaging projections 9 from the interior or auxiliary closure 7, whereupon the closure can be removed, but will thereafter be useless for the purpose of closing and sealing the bottle or vessel and will require a production of a new closure having engaging projections or fingers of the same form, relation, and position as the recess in the neck of the vessel.

In Figs. 4 and 5 of the drawings there is illustrated a different construction of the bottle-neck wherein the recesses 11 are rectangular in form and are arranged in different positions in relation to the mouth or orifice 4 of the bottle-neck, and a closure 12 is provided with substantially rectangular fingers 13, arranged in different positions or planes to correspond with the recesses 11 in the bottle-neck, so as to engage the said recesses when the closure 12 is forced down upon the neck of the bottle or vessel, as before explained.

Referring to Fig. 7, there is illustrated a closure 12, having engaging projections or fingers 14 of slightly-different construction from that illustrated in Fig. 6, and Fig. 8 illustrates still another construction of closure 15, being cut away at 16 to form engaging projections or fingers 14.

Referring now to the construction illustrated in Fig. 9 of the drawings, reference character 6 designates a closure having a deflected rim 8 to retain therein a ring or band 17, carrying engaging projections or fingers 18, and above the band or ring 17 is an internal or auxiliary cap 19, and by means of this construction the closure can be made lighter and of different metals, or the auxiliary internal cap 19 can be entirely dispensed with, if found desirable in practice.

In Fig. 10 of the drawings is illustrated the closure 6, having an internal or auxiliary cap 20, provided with integral engaging projections or fingers 21 and with an annular offset or shoulder 22, the auxiliary cap being retained in position by the deflected rim 8 of the closure 6, as before explained. The closure illustrated in Fig. 10 is designed to be secured upon the neck of a bottle or vessel, such as is illustrated in Fig. 11 of the drawings, and the engaging projections or fingers 21 enter the recesses 3 in the bottle-neck, substantially as described in connection with Figs. 1 to 3 of the drawings.

In Fig. 12 there is illustrated still another form of cap or cover 23, having integral engaging projections or fingers 24 and provided with an interior section 25 to cover a slot or opening 26 therein, substantially as illustrated in Fig. 12 of the drawings.

The operation of securing the closure in position upon the neck of a bottle or vessel and removing the same after they shall have been so secured is the same in all the constructions, and as this operation has been explained in connection with the structure illustrated in Figs. 1 to 3 of the drawings further explanation will not be required.

It is not desired to confine this invention to the specific construction, combination, and arrangement of parts herein shown and described, and the right is reserved to make all such changes in and modifications of the same as come within the spirit and scope of the invention.

I claim—

1. In a closure the combination with a vessel having external recesses, a closure having an internal portion provided with engaging projections, or fingers constructed to enter said recesses when the closure is in position and to be injured or disengaged from the cap by the rotation thereof upon the vessel.

2. In a closure the combination with a vessel having recesses, of a closure having an interior or auxiliary portion retained therein by the deflections of the rim of the closure, said portion being constructed with resilient engaging projections constructed to enter said recesses and to be injured or disengaged from said closure by the rotation thereof on the vessel.

3. In a closure the combination with a vessel having recesses of a closure having an internal or auxiliary portion retained therein by the deflection of the rim of the closure, said portion having integral engaging projections or fingers constructed to enter said recesses and to be twisted or broken off therein by the rotation of the cap.

4. In a closure the combination with a vessel having external recesses of a closure having an auxiliary portion carrying engaging fingers or projections to enter said recesses and to be twisted or broken off therein by the rotation of the closure.

5. In a closure the combination with a vessel having recesses of a closure having an internal ring or band carrying engaging projections or fingers constructed to enter said recesses and to be twisted or broken off therein by the rotation of the closure.

6. In a closure the combination with a ves-

sel having external recesses, of a cap or cover having a band or ring carrying integral engaging projections or fingers constructed to enter said recesses and to be twisted or broken off therein by the rotation of the cap or cover.

7. In a closure the combination with a vessel having recesses in the neck thereof arranged in different planes, of a cap or cover having an internal portion carrying engaging fingers or projections arranged in different planes and in the same relation and position as said recesses and constructed to engage the latter and to be broken off therein by the rotation of the cap on the vessel.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at Los Angeles, in the county of Los Angeles, State of California, this 26th day of February, 1903.

EARLE E. CHAPMAN.

Witnesses:
JOHN SATTERWHITE,
MIGNON FORD.