

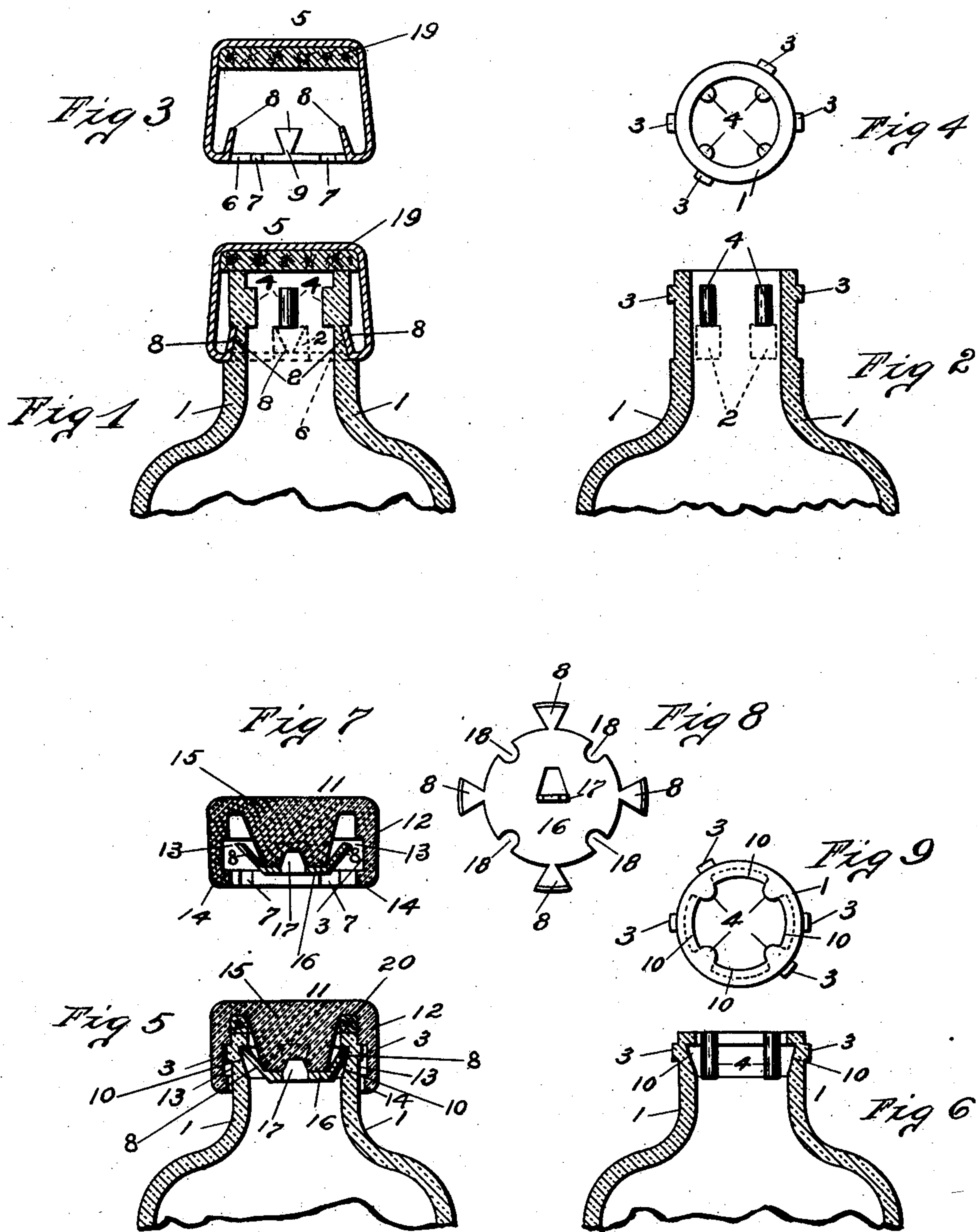
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E. E. CHAPMAN.
CLOSURE.

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NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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CLOSURE.

SPECIFICATION forming part of Letters Patent No. 747,373, dated December 22, 1903.

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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 a new and useful Closure, of which the following is a specification.

This invention relates to means for preventing the fraudulent refilling of vessels, and particularly to closures for bottles, jugs, jars, and like vessels; and some of the objects of the invention are to provide a closure of this general character which is simple and cheap in construction and at the same time positive and effective in operation.

Another object of the invention is to provide a closure which can be easily and quickly forced down upon the neck of a vessel, where it will be automatically secured in position, and from which it can only be removed by being rotated thereon until the engaging portion shall have been disconnected.

A further object of the invention is to provide a closure which after having been once secured in position and then removed can only be used as a temporary cover while the vessel is in a vertical position—that is, the closure will have been so effected by the first removal as to be thereafter forever useless for its original purpose.

Furthermore, an object of this invention is to prevent the use of an ordinary cork after the vessel shall have been once closed and then opened and to require a new closure of a peculiar construction whenever the vessel is to be refilled by the party originally filling the same.

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 longitudinal central sectional view of a portion of a vessel embodying one form of the invention, showing the closure in position thereon. Fig. 2 is a similar view of a portion of a vessel with the closure removed.

Fig. 3 is a sectional view of the closure, illustrating the engaging portions or fingers. Fig. 4 is a top plan view of a neck of the vessel. Fig. 5 is a view similar to Fig. 1, illustrating a modified form of construction. Fig. 6 illustrates a modified construction from that shown in Fig. 2 of the drawings. Fig. 7 shows a modification of the closure illustrated in Fig. 3. Fig. 8 is a detail view of the blank carrying the engaging portions or fingers, and Fig. 9 is a top plan view of the neck of the vessel illustrated in Fig. 6.

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 4 thereof, the reference character 1 designates a portion of a neck of a vessel, which may be of any form and construction, as this invention is not limited to use with any particular character of vessels or receptacles. The exterior of the neck of the vessel is preferably cut away at predetermined points to form recesses or notches 2, desirably having inclined bottoms, substantially as illustrated in Fig. 2 of the drawings, and formed on or connected with the neck of the vessel are preferably a plurality of guiding or directing lugs or projections 3. The interior of the neck of the vessel is preferably provided with a plurality of extensions 4 to prevent the introduction and retention of a cork within the neck of a vessel after the closure shall have been removed therefrom. Thus the vessel will be rendered useless for ordinary purposes until a new closure shall have been provided.

The closure illustrated in Figs. 1 and 3 preferably embodies a metallic cap or cover 5, although the closure will be constructed of any suitable material that may be found desirable in practice, and the cap or cover 5 is desirably provided with an annular internal rim or flange 6, preferably cut away, as at 7, to permit the closure passing into position over the guiding-lugs 3 on the neck of the vessel, and formed on or connected with the flange 6 are breakable projections or fingers 8, constructed to enter the recesses 2 in the

vessel-neck and to be retained therein by their own inherent resiliency and when therein to prevent the removal of the cap or cover 5 by any force or pull exerted in the line 5 with the longitudinal axis of the vessel-neck.

The guiding-lugs 3 on the vessel-neck enter the cut-away portions in the rim of the closure when the latter is forced down into position upon the vessel-neck, and thus direct the expansible and breakable projections or fingers 8 into the recesses 2 in the neck of the vessel, where they are retained until the closure is removed by being twisted upon the neck of the vessel until the projections or fingers 8 are broken from the flange 6 at the point of connection therewith, which is the weakest point of the projections, as shown at 9 in Fig. 3 of the drawings.

Referring now to Figs. 5 to 9 of the drawings, there is illustrated a vessel having a neck 1, provided with guiding-lugs 3, and with an annular internal groove 10, divided by a plurality of internal extensions 4 to prevent the introduction of a cork or other device into the neck of the vessel; but in this construction it will be seen that the lugs or projections 3 and the extensions 4 are arranged in irregular order, so that a closure of a particular construction will be required to fit upon the neck of the vessel.

The closure illustrated in Figs. 5 and 7 may be formed of glass or other like material, and preferably embodies a cap or cover 11, having a depending annular flange 12, desirably cut away internally to form an annular internal recess or chamber 13, and the flange 12 is preferably constructed with an inwardly-directing annular rim or edge 14, having cut-away portions 7 to receive the guiding or directing lugs 3 on the vessel-neck, substantially as before explained. The cap or cover 11 is preferably provided with a depending central projection 15, to which is secured a disk or plate 16, having a central extension 17, secured in said projection in any suitable manner, and the plate or disk 16 is preferably provided with peripheral recesses 18 to receive the internal extensions 4 upon the vessel-neck when the closure is being forced into position thereupon, while expansible and breakable projections or fingers 8 are formed on or connected with the disk or plate 16, substantially as illustrated in Figs. 5, 7, and 8 of the drawings, and are constructed to enter the groove 10 and be broken off by the internal extensions 4 on the vessel-neck, substantially as before stated.

The operation of this invention will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following explanation thereof.

After the vessel has been filled with the desired liquid the closure is placed thereon and moved around thereon until the cut-away portions of the closure register with the guiding-lugs on the vessel-neck, whereupon the

closure is then forced down upon the neck of the vessel until the expansible and breakable projections or fingers enter the recesses in the vessel-neck, when the closure will be securely retained in position and cannot be removed without breaking the projections or fingers, which clearly indicates that the vessel has been opened and renders the closure thereafter forever useless for practical purposes, as it can only then merely rest upon and loosely inclose the neck of the vessel while the latter is in a vertical position.

If found desirable in practice, a disk or section of cork or packing 19 may be placed within the cap or cover 5 and a ring 20 of such material may be located within the cap or cover 11 to insure a tight joint or connection between the closure and the orifices of the vessel-neck.

When it is desired to remove the closure from the neck of the vessel, it is only necessary to twist or rotate the former upon the latter, thereby breaking off and disengaging the projections or fingers from the closure, whereupon the latter can be removed, when the cut-away portions of the closure are brought into registering position with the lugs or projections 3, as in the first instance.

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 this invention.

I claim—

1. The combination with a vessel having a recessed neck and having external guiding-lugs and internal extensions to prevent the introduction of the stopper and a cap or cover cut away to receive said lugs and having breakable projections to engage the recesses in the vessel to retain the cap or cover in position thereon and to be broken off in said recesses by the rotation of the cap or cover upon the vessel-neck.

2. The combination with a vessel having a recessed neck and a device having fan-shape breakable projections constructed to engage said neck and to be broken off in said recesses by the rotation of said device.

3. The combination with a vessel having a recessed neck, a cap or cover having a central projection carrying breakable projections constructed to enter said recesses and to be broken off therein by the rotation of the cap or cover.

4. The combination with a vessel having a recessed neck, and a cap or cover having a central projection and an annular flange and a plate or disk carrying breakable projections and secured to said projection, said projections engaging and being broken off in said recesses by the rotation of the cap or cover.

5. The combination with a vessel having a recessed neck, a cap or cover having an annular flange and a central projection and a

disk having a central extension to engage said projection and having peripheral engaging projections to be broken off in said recesses by the rotation of said cap or cover.

5 6. The combination with a vessel having a neck constructed with internal recesses and external guiding-lugs, a cap or cover having an annular recessed flange cut away at the edges thereof to receive said lugs and having
10 a central projection and a disk having a central extension to engage said projection and having breakable projections to engage and be broken off in said recesses by the rotation of said cap.

15 7. The combination with a vessel having a neck constructed with internal recesses and external guiding-lugs and having means to prevent the insertion of the stopper, a cap or cover having an annular recessed flange cut
20 away at the edge thereof to receive said lugs and having a central projection and a disk

having connection with said projection and cut away to receive said means, said disk having breakable projections to engage said recesses and to be broken off therein by the
25 rotation of the cap.

8. The combination with a vessel having a recessed neck and having extensions to prevent the introduction of the stopper and a cap or cover having breakable portions constructed to engage said recesses when said
30 device is forced into position and to be broken off in said recesses when the cap or cover is removed by being twisted or rotated upon the vessel.

35 In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EARLE E. CHAPMAN.

Witnesses:

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