W. J. TOWLE.

CLOSURE FOR CONTAINERS.

APPLICATION FILED APR. 2, 1917.

1,296,716. Patented Mar. 11, 1919.

Fig. 2

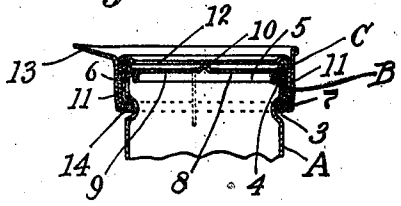


Fig. 1

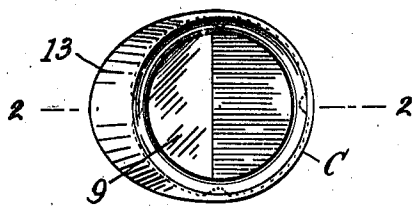


Fig. 5

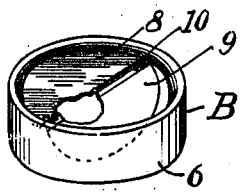


Fig. 3

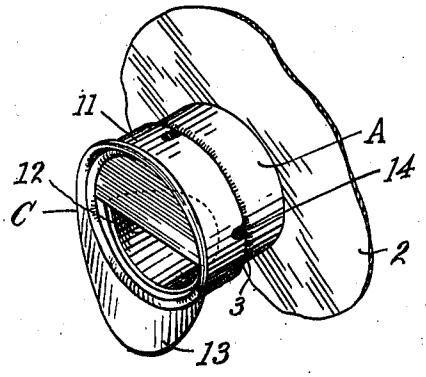


Fig. 6

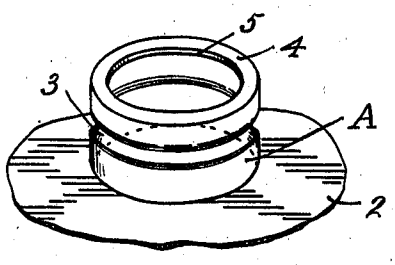
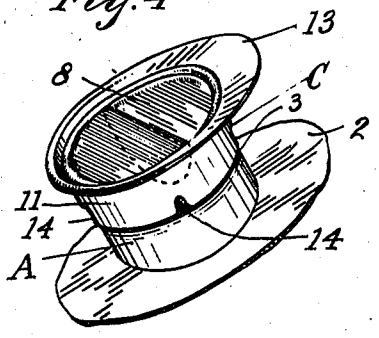


Fig. 4



Inventor,
William J. Towle
A. S. Johnson
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM J. TOWLE, OF ST. PAUL, MINNESOTA.

CLOSURE FOR CONTAINERS.

1,296,716. Specification of Letters Patent. Patented Mar. 11, 1919.

Application filed April 2, 1917. Serial No. 159,140.

To all whom it may concern:

Be it known that I, WILLIAM J. TOWLE, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Closures for Containers, of which the following is a specification.

My invention relates to improvements in closures for vessels, its object being particularly to provide an improved form of closure containing an inner seal and an exterior cap, whereby an air tight seal is ordinarily secured by the inner seal, the inner seal being adapted to be cut away to form a discharge opening, the cap being so constructed and arranged in connection with the inner seal as to permit the discharge opening of the inner seal to be either closed by the cap or exposed, as desired, to permit discharging, removing or exposing the contents of the vessel.

To this end the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings forming part of this specification,

Figure 1 is a plan view of my improved closure;

Fig. 2 is a section on line 2—2 of Fig. 1;

Fig. 3 is a perspective view of the closure shown attached to the wall of a container and in discharging position;

Fig. 4 is a perspective view of my closure shown in connection with a portion of a container wall and showing the cap in closing position in connection with the cut-away inner seal;

Fig. 5 is a perspective view of the inner seal illustrating a portion thereof broken away; and

Fig. 6 is a perspective view of a supporting neck for the closure forming the discharge nozzle for the container.

In the accompanying drawings, I show one form of my invention, A represents a neck suitably supported by the wall 2 of the container, the neck A surrounding the discharge opening of the container. The container forming no part of the invention is not shown. The neck A is formed, adjacent to its free edge, with a surrounding exterior groove 3, forming a rim 4 at the free edge of the neck, the edge 5 of the neck rim being preferably turned inwardly.

In carrying out my invention I provide an inner seal B in the form of a cap, the annular wall 6 of the cap being fitted over the end of the neck A, with the free edge 7 of the wall 6 crimped into the groove 3, to hold the inner seal firmly in place. The top wall 8 of the cap B ordinarily forms a closure or inner seal for the container neck, as illustrated by full lines in Fig. 2. When it is desired to open the inner seal a portion 9 of the sealing wall 8 is cut away from the surrounding rim and bent downwardly, as shown in Fig. 5. I preferably use a material in the inner seal that can be easily cut, and also for the purpose hereinafter pointed out preferably form the sealing wall 8 with a central transverse outwardly projecting rib 10 separating the part of the wall which is to be cut away and bent down, from the portion of the wall which is left uncut.

An exterior cap C, preferably of the construction shown, incloses sealing cap B, and cap C and cap B may be secured to neck A in one operation or cap B may be secured to the neck separately and cap C set over cap B and secured to neck A in another operation. The cap C in the drawings is shown formed of a single piece of metal doubled upon itself to constitute a double wall 11 surrounding the neck with the lower edge of the wall bent into the groove 3. The exterior cap C is loosely supported on the top of sealing cap B so as to be freely rotatable thereon. The inner portion of the double annular wall of the cap C is carried up over the top of the sealing cap B as shown in Fig. 2 and a desired portion and shape is cut out to act as a guide for cutting out the inner seal and to form a discharge opening 12 adapted to be brought into registration with the cut-away opening in the inner seal.

For the purpose of forming a pouring spout I show the cuter portion of the annular wall of the cap bent outwardly and upwardly to form a flange 13. Any suitable way of rotatably securing the exterior cap C upon the neck may be employed, as for example,—prongs upon the lower edge of the annular wall of the cap C may be bent in-

wardly into the groove 3 in the neck A. The cap C may also, as desired be made without a spout, and in this event cap C will be made with a single annular wall, having discharge opening 12 and suitably secured to neck. In use the neck A is first formed in the manner shown in Fig. 6. The sealing cap B is then fitted over the end of the neck to close the same and the free edge of the annular wall 6 of the sealing cap crimped into groove 3, holding the sealing cap B firmly in position. The exterior cap C is then fitted over the inner sealing cap and neck and secured in a suitable manner against removal while, at the same time, allowing free rotation upon the neck. To permit the rotation of the cap C, I preferably utilize the groove 3, as by bending the prongs 14 from the lower edge of the annular wall of the cap C into said groove.

When it is desired to discharge the contents of the container the cap C will be turned so as to bring the opening 12 over the portion of the inner seal that it is desired to cut away. The portion 9 of the inner seal below the opening 12 is then, as shown in Fig. 5 cut away and bent down into the neck or may be cut away and entirely removed. The contents of the container may then be freely poured from the registering openings in the inner seal and the outer cap. When it is desired to close the opening in the inner seal the cap C may be turned to bring the solid top portion of the cap in closing position over the opening of the inner seal. The construction as shown is simple and easy of operation, convenient and cleanly, and as cap C does not come off, it cannot get lost to leave contents unprotected. While I have shown the inner cap B formed of a single piece of metal I may form the cap B with the portion 9 already cut away using separate material, as paper, which will ordinarily be so connected or arranged in connection with the top wall 8 of the inner cap as to form a tight seal but which may be cut away to form an opening in the inner sealing cap which will register with the opening 12 in the outer cap C. The drawings also show rib 10 in inner seal. This may however be made with or without the rib as desired.

I do not restrict myself to any particular or specific use of my invention, as to liquid, semi liquid or dry materials nor as to size, whether it be smaller than size of container or full size of container and further as to construction and shape of inner and outer caps nor neck within the scope of the invention, as defined in the following claims.

I claim:

1. A closure of the class described comprising in combination, a neck and a cap fitted thereto and forming a normally complete closure for said neck, a second cap rotatably supported over said first cap and neck, both caps being permanently secured to the neck, said second cap being provided with an opening exposing a portion of said inner cap, and permitting the same to be cut away to form registering openings for the purpose set forth.

2. A closure of the class described comprising in combination a neck, and a cap permanently secured over the end of said neck and formed with a breakable seal normally closing the same, and a second cap rotatably supported over said inner cap and permanently secured to the neck, said rotatable cap being formed with an opening exposing a portion of the closing seal of said inner cap, the exposed portion of the closing seal of said inner cap being adapted to be cut away to form registering openings in said caps for the purpose set forth.

3. A closure of the class described comprising in combination a neck and a cap fitted thereto and forming normally a full closure for said neck, a second cap rotatably supported over said first cap, said second cap being provided with an opening exposing a portion of said inner cap and permitting the same to be cut away to form registering openings, and said outer cap having its lower edge upturned thereabout and flared outwardly into a pouring spout.

4. A closure of the class described comprising in combination a neck and a cap secured over the free end of said neck and formed with a breakable wall sealing the same, an exterior cap rotatably secured over said inner cap and neck, said rotatable cap being formed with an opening for the purpose set forth, and a transverse rib projecting outwardly from the sealing wall of said inner cap to define the portion of said sealing wall to be broken away.

5. A closure for containers, comprising an inner cap having a top wall divided by an upwardly projecting chordal rib into a removable segment and a fixed segment, and an outer cap having a top wall formed with a segmental shaped opening registerable with the removable segment of the inner cap wall.

6. A closure for containers, comprising an inner cap having a top wall divided by an upwardly projecting chordal rib into a removable segment and a fixed segment, and an outer cap having a top wall formed with a segmental shaped opening registerable with the removable segment of the inner cap wall, and a solid portion seating on the chordal rib whereby the latter will constitute a barrier against the passage of the container contents between the cap walls in either position of the cap.

7. A closure for containers comprising an inner cylindrical member, and a cap member having a cylindrical flange inclosing the member, said flange being bent outwardly

and upwardly upon itself and flared outwardly about the top thereof to form a pouring spout.

8. A closure for containers comprising an inner cylindrical member, and a cap member having a cylindrical flange inclosing the member, said flange being bent outwardly and upwardly upon itself and flared outwardly about the top thereof to form a pouring spout, the lower edge of the flange having portions struck inwardly into interlocking relation with the inner member.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. TOWLE.

Witnesses:
BEATRICE BROWN,
H. S. JOHNSON.