S. S. WILLIAMSON & H. D. BOYER.

CLOSURE FOR CONTAINERS.

APPLICATION FILED AUG. 24, 1917.

1,275,816.

Patented Aug. 13, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

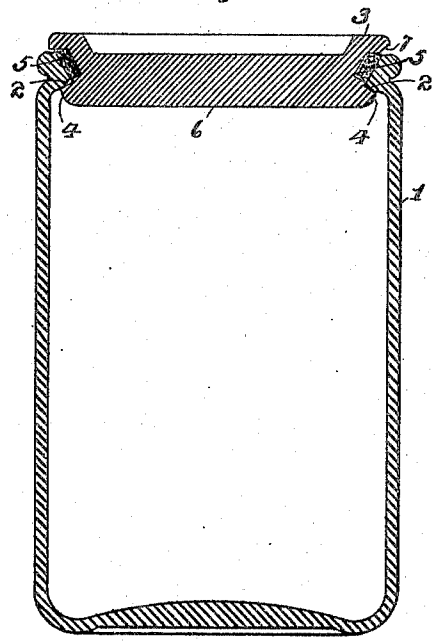


Fig. 2.

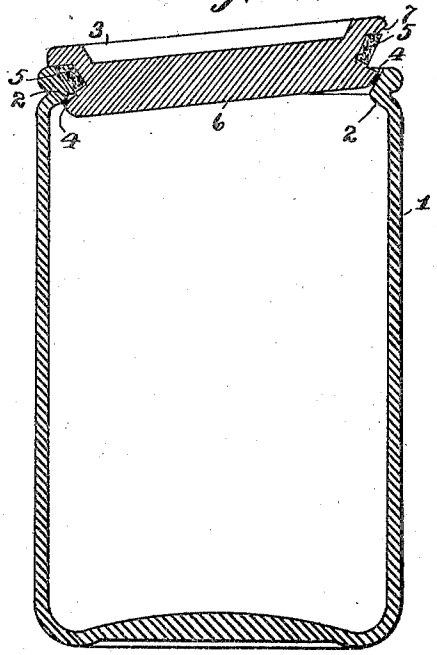


Fig. 3.

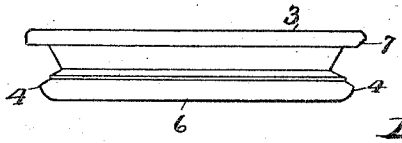


Fig. 4.

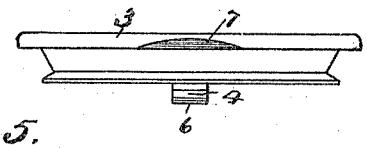
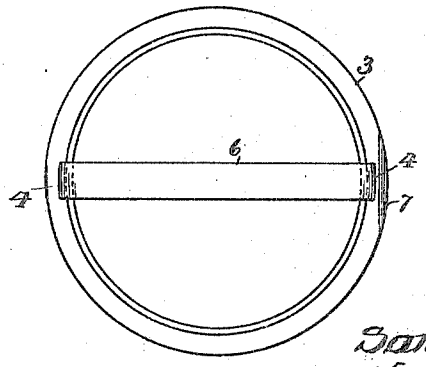


Fig. 5.



Witnesses

Inventors

Samuel S. Williamson

Harrison D. Boyer

By W. W. Williamson

Attorney.

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

S. S. WILLIAMSON & H. D. BOYER.

CLOSURE FOR CONTAINERS.

APPLICATION FILED AUG. 24, 1917.

1,275,816.

Patented Aug. 13, 1918.

2 SHEETS—SHEET 2.

Fig. 6.

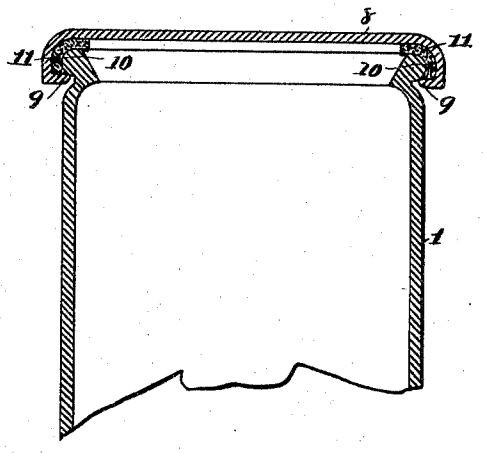
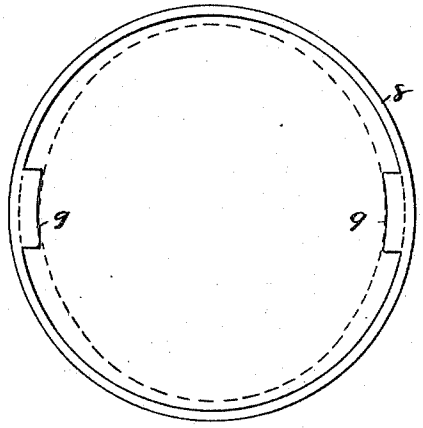


Fig. 7.



Witnesses.

Inventors.

Samuel S. Williamson

Harrison D. Boyer

By W. W. Williamson

Attorney.

UNITED STATES PATENT OFFICE.

SAMUEL S. WILLIAMSON AND HARRISON D. BOYER, OF PHILADELPHIA, PENNSYLVANIA.

CLOSURE FOR CONTAINERS.

1,275,816. Specification of Letters Patent. Patented Aug. 13, 1918.

Application filed August 24, 1917. Serial No. 187,924.

To all whom it may concern:

Be it known that we, SAMUEL S. WILLIAMSON and HARRISON D. BOYER, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Closures for Containers, of which the following is a specification.

Our invention relates to a new and useful improvement in closures for containers and has for its object to provide a simple and effective device of this character which can be securely locked in place without any other means of fastening except the shape of the closure and the action of the sealing ring.

A further object of our invention is to so construct the device that it can be readily unlocked and removed from the container, it being especially adapted for use on glass jars.

With these ends in view our invention consists of certain details of construction hereinafter set forth and then specifically designated in the claims, reference being had to the accompanying drawings in which:—

Figure 1, is a vertical section of a jar showing the closure locked in the mouth thereof.

Fig. 2, is a similar view showing the closure as placed in the mouth of the jar prior to pressing the tilted edge downward, whereby the locking will be effected.

Fig. 3, is a side elevation of the closure.

Fig. 4, is a similar view taken at right angles to Fig. 3.

Fig. 5, is a bottom plan of the closure.

Fig. 6, is a view similar to Fig. 1 showing our improvement adapted to lock over the mouth of the jars, and

Fig. 7, is a bottom plan of the closure shown in Fig. 6.

In carrying out our invention as embodied in Figs. 1 to 5 inclusive, 1 represents a jar having an under cut shoulder 2 which we utilize to lock the closure or top 3 in place as hereafter explained.

While the closure may be made of any suitable material it is well adapted to be of glass and consists of a disk having opposing lugs or projections 4 adapted to pass beneath the under cut shoulder 2 of the jar. The distance between the extreme ends of these opposing lugs is greater than the diameter of the opening through which they pass, and to be inserted beneath the shoulder 2 must be tipped at an angle as shown in Fig. 2.

A sealing ring 5 surrounds the closure or top 3 and must be of sufficient thickness and compressibility to permit the top to be forced edgewise to the extent of permitting the elevated lug to pass through the opening and in turn be forced beneath the shoulder by the reaction of said sealing ring. Cork or rubber are well adapted for this purpose.

While we have shown the opposing lugs formed upon the ends of a bar 6 it is obvious that the lower portion of the top might be elliptical in shape, the edge of the major diameter serving as the opposing lugs, or there may be three or more points of opposing contact.

A portion of the top is slabbed away as at 7 to indicate the point at which an implement such as a knife or spoon handle is to be applied to tilt one edge of the top upward in unlocking the same.

From the above description the operation of our improvement will obviously be as follows:

The top being placed in the mouth of the jar in the position shown in Fig. 2 one of the lugs 4 will be inserted beneath the shoulder 2, while the other lug 4 will rest upon the surface of the flared portion of the mouth of the jar. Now by exerting sufficient pressure upon the elevated edge of the top the elevated lug will be forced downward, and this movement will cam the top edgewise against one side of the sealing ring, until the last named lug springs under the shoulder 2.

In this position the opposing lugs will securely lock the top in place against any internal pressure which the jar may be capable of sustaining, but when it is desired to remove the top from the jar, it is only necessary to insert an implement at the slabbed portion 7 and pry this edge of the top upward, when the corresponding lug 4 by camming upon the shoulder 2 will force the top edgewise, compressing one side of the sealing ring sufficiently to let this lug pass upward through the opening to the position shown in Fig. 2. The top will then be free for removal.

Among the advantages of this device is the fact that no fastening devices are used and that both the jar and top may be made of glass.

In the modification shown in Figs. 6 and 7 the closure 8 is constructed to pass over the mouth of the jar the lugs 9 being adapted to pass under the shoulder 10 formed upon the jar.

In this construction the compressible washer 11 is seated inside of the closure.

Instead of the lugs 9 the lower rim of the top 8 may have a flange formed therewith of elliptical shape as shown in dotted lines in Fig. 7, the opposing points of contact being the inner edges thereof on the minor axis of the ellipse.

Of course it is not our intention to limit ourselves to the exact size or shape of the jar or its closure as these may be varied within the scope of the claims.

Having thus fully described our invention, what we claim as new and patentable is:—

1. A closure for a container of the class having a shoulder adjacent its mouth, said closure having opposing points of contact adapted to alternately pass under said shoulder and be held against withdrawal except by first forcing the closure sidewise, and a sealing ring interposed between the closure and the mouth of the container, said ring being of material sufficiently resilient to permit the opposing contact points to be alternately forced beneath the shoulder and normally hold said opposing points equidistant beneath said shoulder.

2. A closure for containers consisting of a disk having opposing contact points adapted to alternately pass beneath a shoulder on the container and be held in a normal position by a resilient sealing ring.

3. A closure for containers consisting of a disk having rigid opposed contact points adapted to alternately pass beneath a shoulder upon the container, a resilient sealing ring for holding said contact points in normal position beneath said shoulder and a slabbed portion for facilitating the insertion of an implement for forcing the closure edgewise and lifting one side thereof upward.

4. In combination, a container undercut below its mouth, a top having lugs adapted to be alternately and diametrically inserted in the undercut and resilient means to permit said insertion and then center the top to maintain the lugs in said undercut.

5. In a device of the character described, a top having lugs in combination with a receptacle provided with means adjacent its mouth to alternately receive said lugs and resilient means disposed between the top and receptacle to permit the insertion of one lug after the other has been positioned and then center the top to hold both lugs in registration with said means.

6. A closure comprising in combination, a receptacle having a shoulder adjacent its mouth, a closure provided with opposing lugs adapted to underlie said shoulder and be alternately projected beneath said shoulder and resilient means to permit the projection of one lug beneath the shoulder after the other has been positioned and then center the closure to maintain both lugs beneath the shoulder.

7. A closure comprising in combination, a receptacle having a shoulder adjacent its mouth, a closure provided with opposing lugs adapted to underlie said shoulder and be alternately and diametrically projected beneath said shoulder and resilient means located between the receptacle and closure to permit the projection of one lug beneath the shoulder after the other lug has been positioned and then center the closure to maintain both lugs beneath the shoulder.

8. A closure comprising in combination, a receptacle having a shoulder below its mouth, a closure provided with opposing lugs, the distance between the ends of said lugs being greater than the diameter of the shoulder and adapted to be alternately inserted beneath said shoulder and a resilient ring adapted to be compressed during the insertion of one of the lugs after the other has been positioned and then center the closure to maintain both lugs beneath the shoulder.

9. A closure for containers comprising a top provided with diametrically opposite lugs, a resilient ring on said top and a container undercut below its mouth into which the lugs are alternately projected by a diametric movement of the top, the first movement being accomplished manually and the second movement by the action of the resilient ring.

10. A closure for containers comprising a top provided with lugs, a container undercut below its mouth and a resilient ring, said ring being compressed to permit the projection of one lug into the undercut after the other lug has been positioned and then center the top to maintain both lugs in the undercut.

In testimony whereof, we have hereunto affixed our signatures.

SAMUEL S. WILLIAMSON.
HARRISON D. BOYER.

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