

1,318,112.

Fig. 1.

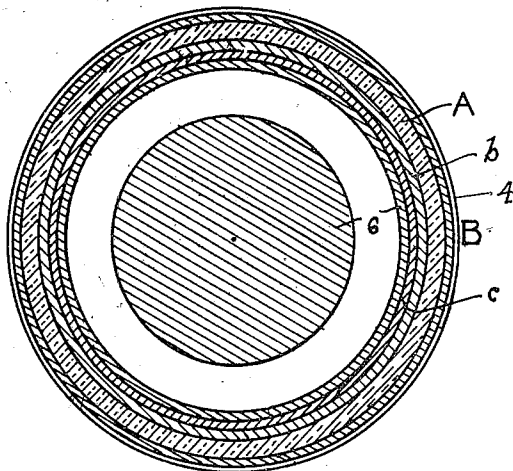


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## RECEPTACLE AND CLOSURE THEREFOR.

1,318,112.

Specification of Letters Patent.

Patented Oct. 7, 1919.

Application filed August 21, 1916. Serial No. 116,007.

*To all whom it may concern:*

Be it known that I, BASIL SAVAGE, a citizen of the United States, residing at San Diego, in the county of San Diego and State of California, have invented new and useful Improvements in Receptacles and Closures Therefor, of which the following is a specification.

This invention relates to receptacles and closures therefor, and more particularly to preserving jars and closures therefor, such invention having for its object the provision of an improved organization or combination or association of parts and features which will be superior in point of relative simplicity and inexpensiveness of formation, construction and organization, taken in connection with positiveness in action, facility in application, manipulation and use, effectiveness in sealing function, which will permit the jar or other receptacle readily and conveniently to be unsealed or opened, and which may be conveniently utilized within its structural organization for indicating the contents of the closure, and which will be generally superior in efficiency and serviceability.

With the above and other objects in view, the invention consists in the novel and useful provision, formation, combination, association, mode of application and inter-relation of parts, members and features, all as hereinafter described, shown in the drawing and finally pointed out in claims.

In the drawing:

Figure 1 is a central vertical sectional view of a fragment of a container, shown as a bottle or preserving jar, the improved closure for which and means of sealing which are shown similarly sectioned and applied to the orifice of such receptacle; and

Fig. 2 is a detail transverse sectional view of the same, taken upon the line  $x^2-x^2$ , Fig. 1, and looking in the direction of the appended arrows.

Corresponding parts in both figures are designated by the same reference characters.

Referring with particularity to the drawing, A designates the upper or mouth portion of a preserving jar or bottle, and B designates inclusively the closure and sealing means shown as applied to such jar or receptacle, which latter is formed or provided adjacent to its orifice and upon the exterior wall with screw threads 3 adapt-

ed to cooperate with similar screw threads 4 formed upon the cap element *a* of the sealing and closure means B. The orifice of the jar A is formed or provided at its terminal portion with an annular seat 5, produced by beveling or chamfering off the wall of the mouth portion of the receptacle, to produce an outward and upward flare, and a sealing element *b* in the nature of an annular gasket cooperates with and is applied to said seat, being held thereto by the cap element *a* and a disk element *c* interposed between such cap element and such sealing element. Preferably such cap element *a* is provided with a central or body portion 6 fitting over the entire orifice of the receptacle, and having an annular depending flange portion 7 in which or upon which the threads 4 are formed, such threads being preferably produced by distorting or striking up the metal of such cap member in any suitable manner. The disk element *c*, which may be referred to specifically as the lid, while the cap member *a* may be referred to generally as a screw cap, is suitably formed or pressed into shape from a blank of cardboard, and the sealing element *b* may be of any suitable material, such as rubber, or a plastic composition, being compressible to produce a liquid-and-air-tight joint as between the lid and the mouth portion of the receptacle when said sealing element and lid are jointly forced into position by application of the screw cap over the same and in threaded co-action with the threads upon the receptacle mouth wall. To produce a particularly efficient closure and sealing relation, and to most effectively take advantage of the flaring seat 5 for the sealing element *b*, such sealing element is likewise dished in formation or caused to flare upwardly and outwardly in its annular construction, so as to complement such formation of the seat 5; and likewise the cardboard lid *c* is bent upwardly and curved outwardly and slightly downwardly, as at 8, to overlie the sealing element or gasket *b* and come substantially into contact with the upper region of the seat 5. To accommodate such inter-relation of the marginal portion of the lid *c* and the sealing element or gasket *b*, the marginal portion of the body 6 of the screw cap *a* is likewise upwardly and outwardly bent, as at 9, thence depending to produce the threaded flange 7. The

body portion 6 of the screw cap may be slightly upwardly arched the more effectively to withstand atmospheric pressure resulting from the sealing off of the contents of the closure partially *in vacuo*, and the central portion of the cardboard lid *c* may likewise and correspondingly be upwardly arched beneath such central or body portion of the screw cap.

10 In the application of the closure and sealing means *B* to the mouth portion *A* of the jar or other receptacle, the sealing element or gasket *b* is first applied or attached to the cardboard lid, and suitable conditions

15 prior to sealing off the contents of the jar having been created within the jar, the said sealing element and lid are jointly applied to the sealing element seat 5, and the screw cap is then screwed down over such elements,

20 so as to force the lid tightly against the sealing element and the sealing element tightly against its seat, the wedge action resultant upon depression of the sealing element in the flaring seat producing a particularly tight and efficient sealing action. Prior

25 to the application of the screw cap *a* there may be inscribed upon the upper surface of the cardboard lid *c* a suitable mark, symbol or wording indicative of the character and

30 nature of the contents of the jar, so that when the screw cap is afterward removed the contents of the jar may be known without removing the lid and sealing element and making examination of such contents.

35 When it is desired to remove the contents of the jar, the screw cap is unscrewed and the lid is punctured, if held in position by atmospheric pressure incident to partial vacuum in the jar. This puncturing may

40 readily be performed due to the cardboard material of the lid, and thus the unsealing of the jar is rendered far more easy and convenient than when a metallic lid is employed. After such puncturing the lid and

45 the sealing element or gasket *b* may be removed, and the contents of the jar taken therefrom. The sealing element *b* effectively isolates the contents of the jar from the metallic screw cap *a*, preventing contamination

50 of the substance of the jar or any poisonous or deleterious effect upon such contents being produced.

It will be seen that the entire closure and sealing means may be very cheaply produced, are convenient in application and removal and in use, effectively seal off and inclose the contents of the jar, and provide for convenient indication upon the lid of the contents of the jar, at the same time being

55 sanitary and safe in use, the only portions of such closure and sealing means being exposed to the contents of the jar consisting of the non-metallic sealing element and lid.

60 While I am aware of the fact that many

devices and combinations and associations of parts and features have been devised aiming at the proper sealing and closing off of the contents of jars and other receptacles, I am not aware, after extended examination of such prior means, that any combination, inter-relation and association of parts and elements as shown in the drawing hereinabove described have previously been devised, nor the particular inter-relation of the same with the orifice of the receptacle, the distinguishing advantages and benefits and attributes of efficiency and convenience attaching thereto readily appearing from the foregoing description taken in connection with the drawing.

I do not desire that the combination be understood as limited to the specific provision, construction, formation, association and inter-relation of the parts, elements and features hereinabove set forth and shown in the drawing, but wish to point out that many detail departures may be made from the same, without circumventing the spirit and substance of the invention.

Having thus disclosed my invention, I claim and desire to secure by Letters Patent:

1. Closure means for receptacles, comprising, in association for joint application, a lid, a sealing element, and a screw cap for holding the lid and the sealing element to the wall of the receptacle orifice with the sealing element in direct contact with the wall of such orifice; said sealing element being upwardly and outwardly flared, and said lid being upwardly and outwardly flared to overlie said sealing element, and said screw cap being centrally upwardly arched and engaging said lid throughout substantially the entire area thereof.

2. The combination, with a jar or the like provided at its orifice portion with exterior screw threads; of a sealing element adapted to be applied to said orifice portion, a cardboard lid adapted to be applied to said sealing element, and a screw cap adapted to be applied to said lid and to be engaged with said threads upon said orifice portion to hold said sealing element and said lid in position to close off and seal off the contents of the jar; said orifice portion being provided with a flaring seat, and said sealing element being complementally formed to co-act with said seat and produce a wedge action in the application of said sealing element to said seat under the thrust of said screw cap, said screw cap being engaged with said lid throughout substantially the entire area thereof and reinforcing said lid.

3. The combination, with a jar or the like provided at its orifice portion with exterior screw threads; of a sealing element adapted to be applied to said orifice portion, a cardboard lid adapted to be applied to said sealing element, and a screw cap adapted to be

applied to said lid and to be engaged with  
said threads upon said orifice portion to hold  
said sealing element and said lid in position  
to close off and seal off the contents of the  
5 jar; said orifice portion being provided with  
a flaring seat, and said sealing element be-  
ing complementally formed to co-act with  
said seat and produce a wedge action in the  
application of said sealing element to said  
10 seat under the thrust of said screw cap; said  
cardboard lid being engaged and interposed  
between said sealing element and the cap  
with its peripheral portion overlying and en-  
gaging the upper edge of said element and  
15 further being adapted to receive an inscrip-  
tion pertinent to the contents of the jar  
whereby such contents may be made known  
when such screw cap is removed.

4. The combination, with a jar or the like  
20 provided at its orifice portion with exterior  
screw threads; of a sealing element adapted  
to be applied to said orifice portion, a non-  
metallic lid adapted to be applied to said  
sealing element, and a screw cap adapted to  
25 be applied to said lid and to be engaged with

said threads upon said orifice portion to hold  
said sealing element and said lid in position  
to close off and seal off the contents of the  
jar; said orifice portion being provided with  
a flaring seat, and said sealing element being 30  
complementally formed to co-act with said  
seat and produce a wedge action in the ap-  
plication of said sealing element to said  
seat under the thrust of said screw cap; the  
marginal portion of said lid being arched 35  
upwardly over said sealing element, and said  
screw cap being similarly arched upwardly  
and outwardly over such marginal portion of  
said lid, the peripheral portion of said lid  
being disposed between the upwardly and 40  
downwardly arched portion of the cap and  
sealing element.

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

BASIL SAVAGE.

Witnesses:

JAS. L. BUCK,  
ED. HODGE.