No. 883,693.

PATENTED APR. 7, 1908.

W. M. BROWNLEE.

HERMETICALLY CLOSED RECEPTACLE.

APPLICATION FILED APR. 4, 1907.

Fig. 3.

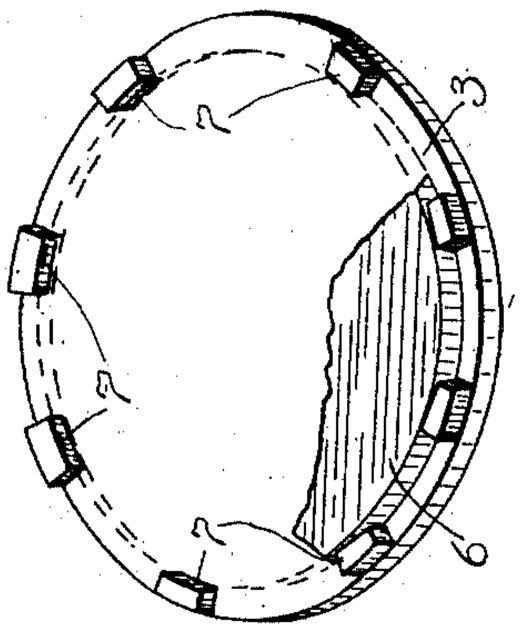


Fig. 4.

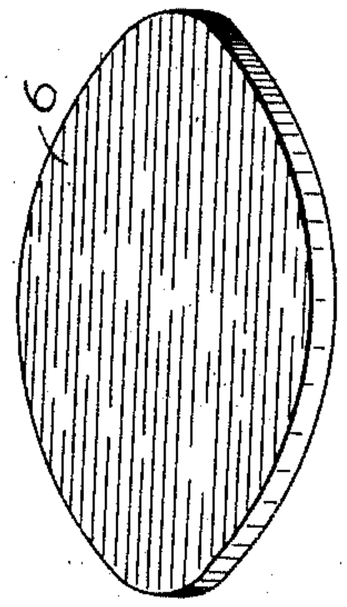


Fig. 7.

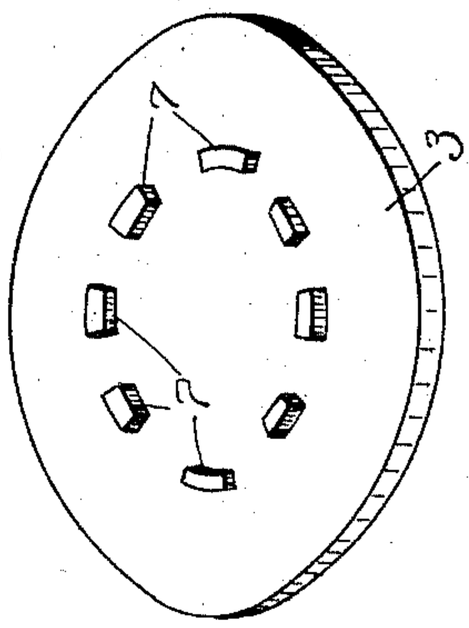


Fig. 2.

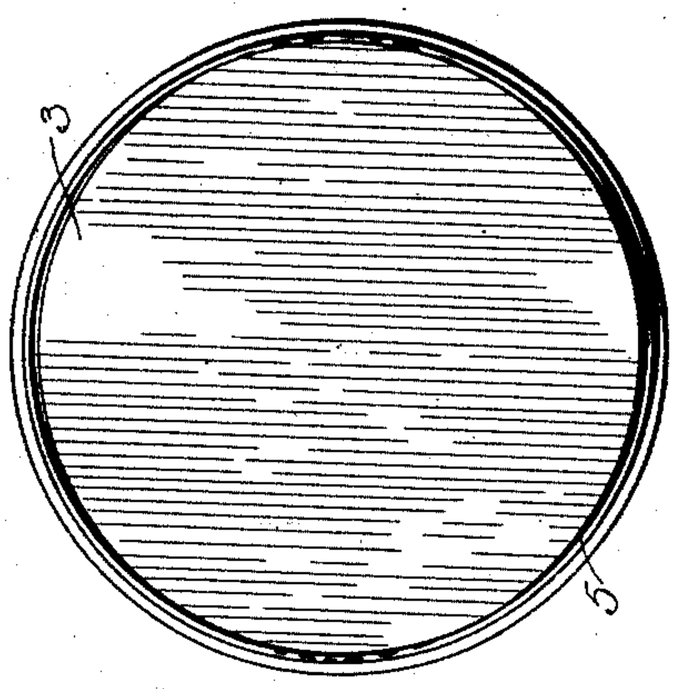


Fig. 5.

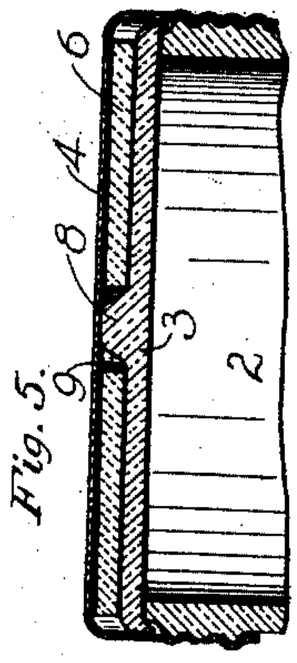


Fig. 6.

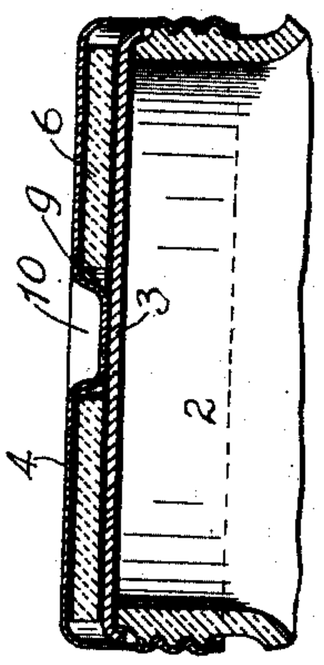
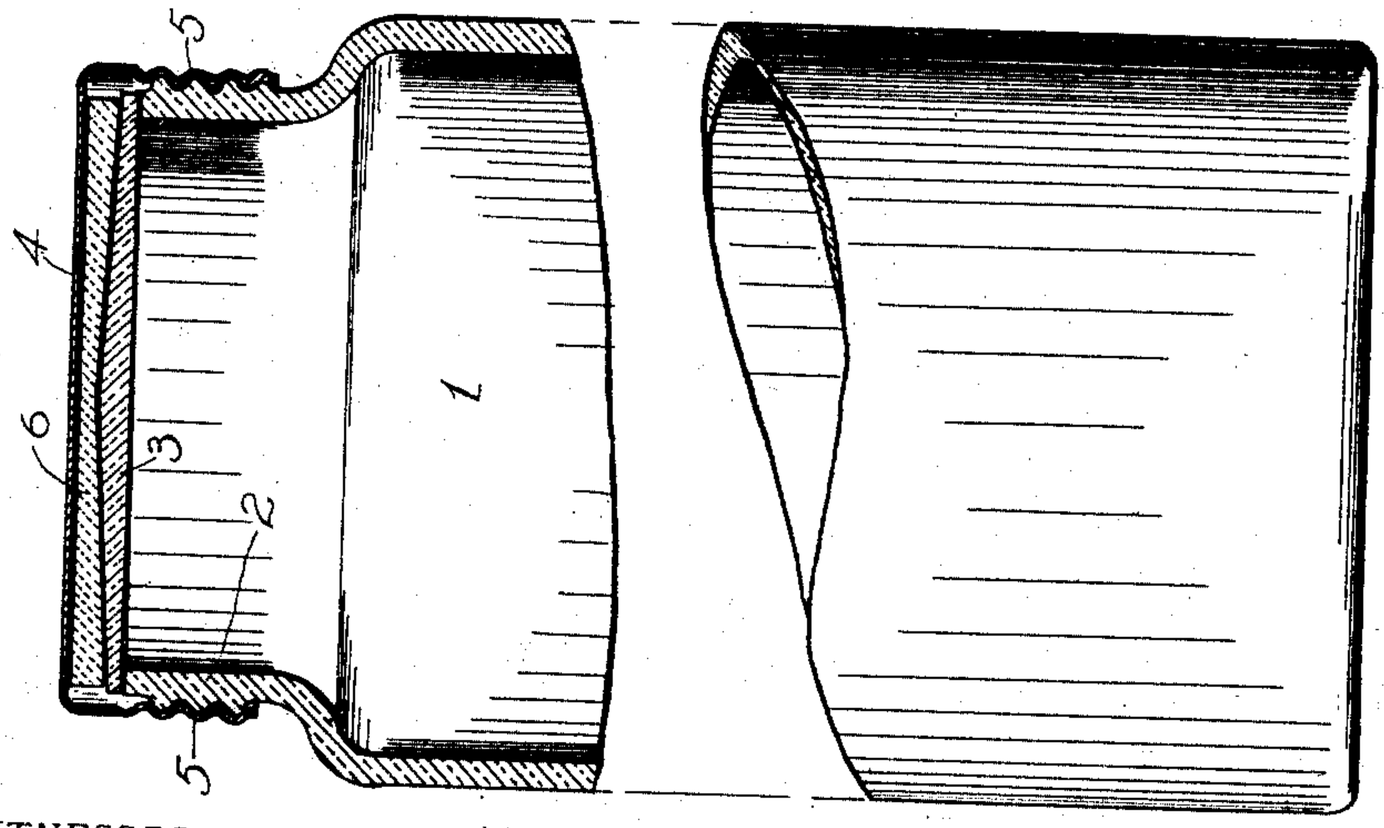


Fig. 1.



WITNESSES

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HERMETICALLY-CLOSED RECEPTACLE.

No. 883,693. Specification of Letters Patent. Patented April 7, 1908.

Application filed April 4, 1907. Serial No. 366,380.

To all whom it may concern:

Be it known that I, WILLIAM M. BROWNLEE, a citizen of the United States, residing at Jefferson City, in the county of Jefferson and State of Tennessee, have invented a new and useful Improvement in Hermetically-Closed Receptacles, of which the following is a specification, reference being had to the accompanying drawing.

My improvement relates more particularly to hermetically sealed receptacles for containing fruit, vegetables, and similar commodities, such vessels comprising a main body having at its upper portion a mouth or opening, and a cap or cover resting over said mouth or opening in such manner as to prevent the passage of liquids and gases.

The object of the invention is to provide a simple and economical structure involving the use of a material fusible at a comparatively low temperature which, after fusing, enters a space between the cover and the body of the receptacle and forms a seal between said two members.

In the accompanying drawings, Figure 1 is an upright sectional view of a glass fruit jar embodying my improvement; Fig. 2 is a bottom view of the cap; Fig. 3 is a detail view of a plate which is placed directly over the mouth of the jar; Fig. 4 is a detail view of a fusible disk which is placed between said plate and the cap; Figs. 5 and 6 are sections showing other forms of the plate and fusible disk; Fig. 7 illustrates another form of the plate.

Referring to said drawings, 1 is a glass jar having a neck, 2, which is exteriorly screw-threaded in the well-known manner. Upon said neck rests a plate or member, 3, which is firm, non-fusible, and preferably impervious to the said fusible material when the latter is fused, and the periphery of said plate is preferably extended outward as far as the outer face of said neck. And said periphery may extend even further than the outer face of said neck and be turned slightly downward, as shown in Figs. 5 and 6, in order that liquid flowing outward from the upper face of said plate will be the more certain to flow downward between the outer face of said neck and the flange of the cap or cover to be next described.

A cap or cover, 4, having a screw-threaded, downward-directed flange, 5, is located above the plate, 3, and has said flange extended around the neck, 2, in engagement with the screw-threads on the exterior of said neck.

Between the plate, 3, and the horizontal portion of the cap, 4, is located a mass, 6, of paraffin or other wax or similar material which is fusible at a relatively low temperature—a temperature approximately the same as or somewhat less than the temperature of boiling water.

The operation of the above-described form of my apparatus is as follows: The jar, 1, is filled with the fruit or other material which is to be preserved. Then the plate, 3, the mass of wax, 6, and the cap, 4, are put into position on the neck, 2, the cap being screwed down as far as it will go. If the contents of the jar are at approximately boiling heat, the paraffin or other fusible material, 6, will soon become heated by conduction and melt and in the liquid form flow outward over the edge of the plate, 3, and downward between the outer face of the neck, 2, and the inner face of the flange, 5, and completely fill the space between said neck and said flange. If said neck and said flange are so hot as to make it probable that said fused material will escape at the lower edge of said flange, a cloth or other suitable device or material may be placed around the lower edge of said flange and the base of said neck to constitute a barrier or dam to hold said fused material until it cools sufficiently to partially solidify. If the contents of the jar are not hot or not sufficiently hot to fuse the mass, 6, of paraffin, said mass may be melted by applying heat to the exterior of the cap, 4, as by placing a hot iron upon said cap.

The mass, 6, of wax may be in the form of a disk and such disk may be large enough to permit its edges to bear against the flange, 5; and the plate, 3, may be large enough to permit its periphery to bear against said flanges; so that said plate and said mass of wax can be firmly secured within the cap, 4, and said three members handled together and applied to the neck of the jar at the same time. The upper face of the plate, 3, is preferably slightly sloping from the middle toward the periphery, as shown in Fig. 1, in order that the melted wax may readily flow to and over said periphery. Said plate and said cap are preferably so formed that the cap will bear downward upon the plate when said two members are in position upon the neck of the jar, said engagement continuing after the melting of the mass, 6, of fusible material.

In Fig. 3, said plate has lugs, 7, or similar devices rising from adjacent the periphery and adapted to bear against the cap, 4. In this construction, the mass, 6, of fusible material rests upon the plate within the circular space inclosed by said lugs, and when said material melts, it flows outward through the spaces between said lugs. In Fig. 5, said plate has a central upward-projecting lug, 8, upon which the cap, 4, bears, the disk-form mass, 6, of fusible material having a central opening, 9, through which said lug, 8, rises. As is obvious, the cap, 4, may be made to bear downward upon said lug, 8, (or upon the lugs, 7) sufficiently to press said plate, 3, closely against the neck, 2, of the jar. In Fig. 6, the central portion of the cap, 4, has a downward extension, 10, which extends through the opening, 9, in the mass, 6, of fusible material and bears against the upper face of the plate, 3. In these several forms and in similar forms, there is some yielding of the cap and the plate, due to flexibility of the parts, when the cap is screwed down, such yielding being, of course, greatest when the engagement between said plate and said cap is central.

In Fig. 7, the lugs, 7, shown at the periphery of the cover in Fig. 3, are located approximately midway between the periphery and the center of said plate, and the mass, 6, of fusible material may be placed within said circle of lugs.

The plate, 3, may be flexible and slightly elliptical in form, the minor axis being a little less than the smallest diameter across the flange, 5, of the cap, 4, and the major axis being a little more than said diameter. When in this form, said plate may "spring" into the cap by slightly flexing it so as to cause the ends of said longer axis to approach each other. When said plate is made of substantially non-flexible material, as glass or porcelain, the cap may be sprung to make a long axis in one direction sufficient to permit the plate to move into place. And when said plate is thus within the cap, said plate and said cap separably engage each other. By springing the cap, or the plate if it is flexible, said members may be separated from each other for the purpose of cleansing and sterilizing preparatory to filling or refilling the jar to which said cap and plate belong. This is an important feature. If said plate were not removable, there would be no way of removing foul material located between said plate and said cap; and there should be such cleansing whenever jars are to be refilled.

I claim as my invention:

1. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

2. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a flange extending downward over said body, said body and said flange having means for effecting engagement between said members, and a mass of fusible material located between said plate and said cap, substantially as described.

3. In a structure of the nature described, a receptacle body having an opening and being screw-threaded around said opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a screw-threaded flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

4. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening, a cap located above and bearing downward upon said plate and having a flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

5. In a structure of the nature described, a receptacle body having an opening and being screw-threaded around said opening, a plate extending across the wall of said body and across said opening, a cap located above said plate and having a screw-threaded flange extending downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

6. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening, and having a downward-directed periphery, a cap located above said plate and having a flange extended downward over said body, and a mass of fusible material located between said plate and said cap, substantially as described.

7. In a structure of the nature described, a receptacle body having an opening, a plate extending across the wall of said body and across said opening and having a downward-directed periphery, a cap located above said plate and having a flange extending downward over said body, said body and said flange having means for effecting engagement between said members, and a mass of fusible material located between said plate and said cap, substantially as described.

8. In a structure of the nature described, a receptacle body having a circular opening, a cap located above said opening and having a

flange extending downward over said body, a plate bearing upon said body around said opening, said plate and said cap separably engaging each other, and a mass of fusible material located between said plate and said cap, substantially as described.

9. In a structure of the nature described, a receptacle body having an opening, a cap located above said opening and having a flange extending downward over said body, a plate bearing upon said body around said opening, said plate and said cap separably engaging each other, and a mass of fusible material located between said plate and said cap, substantially as described.

10. In a structure of the nature described, a receptacle having a circular opening, a circular cap located above said opening and having a flange extending over said body, an elliptical plate bearing upon said body around said opening and against the flange of said cap, and a mass of fusible material located between said plate and said cap, substantially as described.

In testimony whereof I have signed my name, in presence of two witnesses, this thirtieth day of March, in the year one thousand nine hundred and seven.

WILLIAM M. BROWNLEE.

Witnesses:

A. P. LOCKETT,

J. HUGH PARRETTE.