W. L. SCHREIBER.

MEANS FOR CLOSING JARS.

APPLICATION FILED JAN. 9, 1915.

1,222,036.

Patented Apr. 10, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

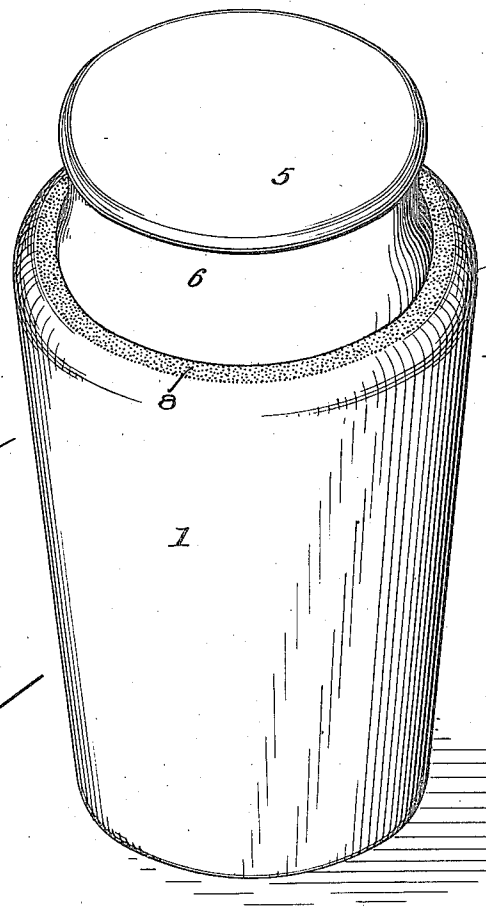


Fig. 4.

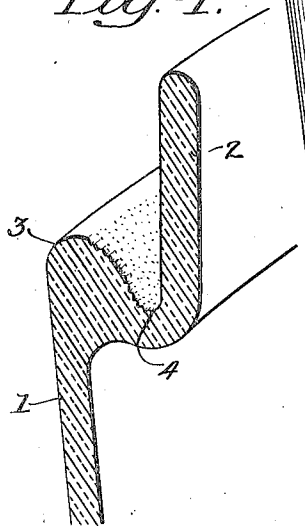


Fig. 5.

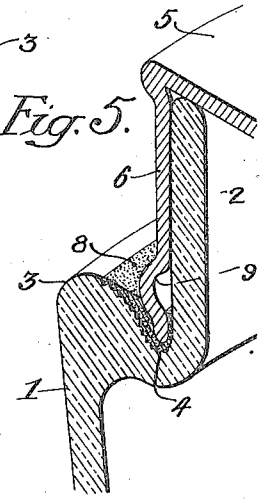
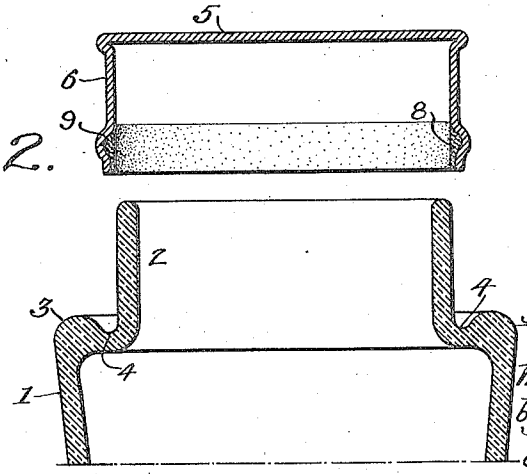


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

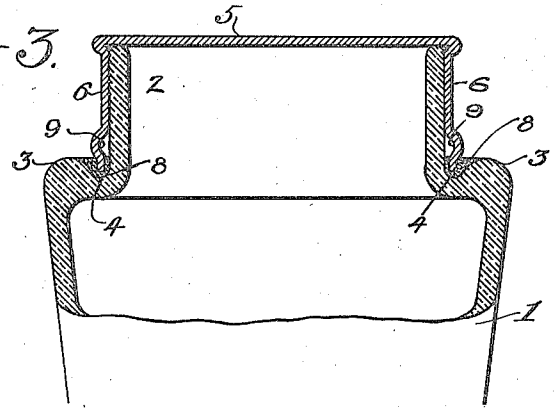


Fig. 6.

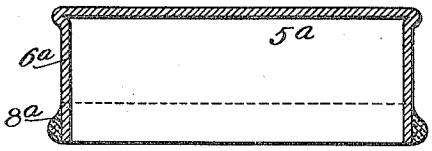


Fig. 7.

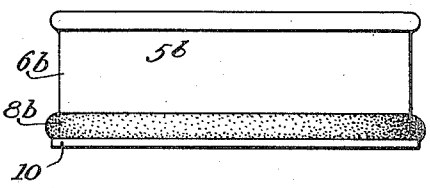


Fig. 8.

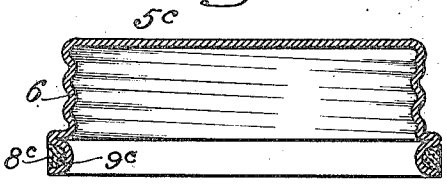


Fig. 9.

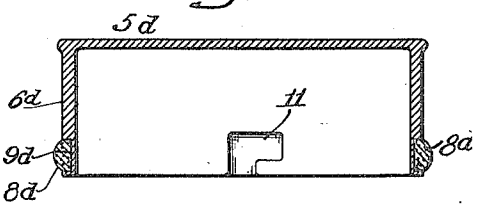


Fig. 10.

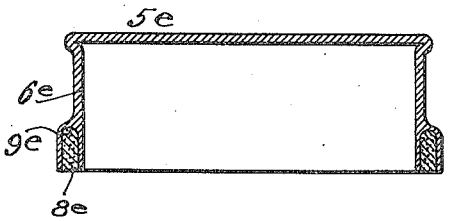
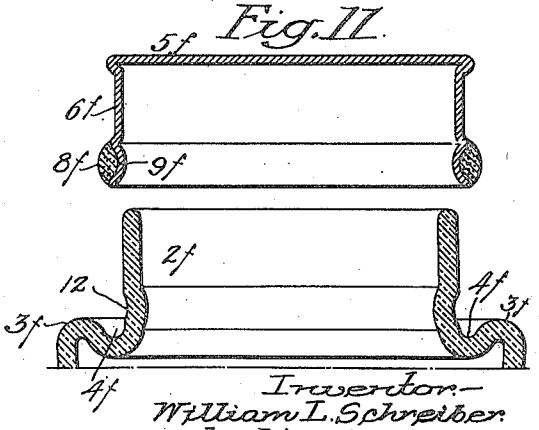


Fig. 11.



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UNITED STATES PATENT OFFICE.

WILLIAM L. SCHREIBER, OF PHILADELPHIA, PENNSYLVANIA.

MEANS FOR CLOSING JARS.

1,222,036. Specification of Letters Patent. Patented Apr. 10, 1917.

Application filed January 9, 1915. Serial No. 1,290.

To all whom it may concern:

Be it known that I, WILLIAM L. SCHREIBER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Means for Closing Jars, of which the following is a specification.

One object of my invention is to provide a simple and efficient means for sealing the caps of jars and other containers.

A further object of the invention is to provide a cap with a fusible sealing substance which will be fused by the heat of the jar and which will accumulate in a recess in the jar, forming an air tight joint between the cap and the jar.

These objects I attain in the following manner, reference being had to the accompanying drawings, in which:

Figure 1 is a perspective view of a jar, showing the cap sealed;

Fig. 2 is a sectional view of the upper portion of the jar, and the cap prior to its being applied to the jar;

Fig. 3, is a view similar to Fig. 2 with the cap on the jar and the fusible material forming the seal;

Fig. 4 is an enlarged sectional perspective view of a portion of the jar showing the roughened surface of the groove;

Fig. 5 is an enlarged sectional perspective view showing the flange of the cap in the groove and sealed; and

Figs. 6 to 11 inclusive are sectional views illustrating modifications of the cap and showing different methods of attaching the fusible material thereto.

Referring in the first instance to Figs. 1 to 3 inclusive, 1 is the jar, of any shape desired, having a neck 2, in the present instance, slightly tapered and between the shoulder 3 and the neck is formed an annular recess 4 for the fusible material. 5 is the cap having a deep flange 6, which fits over the neck 2 of the jar and the flange is so proportioned that the lower edge rests in the recess 4, but preferably does not touch the bottom thereof. 8 is a body of fusible material secured to the lower edge of the flange of the cap 5 and there is sufficient of this material on the flange to form a seal within the annular recess 4 within the jar for the lower portion of the flange 5 of the cap so as to make the joint air tight. This material may be formed on the flange in many different ways and the shape of the flange which holds this material in position may be varied.

In Figs. 2 and 3, I have illustrated the flange as having an internal annular groove 9 near its lower edge formed by the shaped flange and the lower edge of the flange is slightly greater in diameter than that portion directly above the groove, as clearly illustrated in said figures.

The fusible material, such, for instance, as paraffin wax, is placed in this groove and preferably extends to the edge of the flange, as shown in Fig. 2, so that it will be protected by the flange as, in its solidified condition, it is apt to be brittle and to break from the cap.

In Fig. 6, I have shown a cap 5^a with a plain flange 6^a and an annular body of material 8^a secured to the exterior of the flange directly above its lower end.

In Fig. 7, I have illustrated a cap 5^b having an outwardly projecting flange 10 at its lower edge and the fusible material 8^b located above the flange, the flange acting as an additional retainer for the material.

In Fig. 8, I have illustrated the ordinary screw cap 5^c, the flange of which is screw threaded as at 6^c and the cavity 9^c is formed at the lower edge of the flange by spinning. The fusible material 8^c is mounted in this cavity.

In Fig. 9, I have shown a cap 5^d having a comparatively thick flange 6^d in which is a recess 9^d for the material 8^d and formed in the flange is a right angled notch 11 to fit a lug on the jar when it is desired to provide a fastening in addition to the seal.

In Fig. 10, I have shown a cap having a recess 9^e formed in the lower portion of the flange for the fusible material 8^e.

In Fig. 11, I have illustrated a cap 5^f having a recess 9^f formed by spinning, with the fusible material 8^f secured to the exterior of the flange, the interior of the flange being slightly rounded by the spinning action and in this instance there is a slight recess 12 in the lower portion of the neck 2 of the jar so that when the cap is applied it is forced down over the neck and there is sufficient spring to the material to allow it to yield slightly in order that the rounded portion may pass into the cavity 12, forming a lug which will prevent accidental displacement of the cap. This recess is very slight

and there is sufficient spring in the material of the cap to allow it to be readily applied.

While I have designated the fusible material as paraffin wax, it will be understood that any suitable material may be used which will fuse under a comparatively moderate heat.

This invention is used especially for sealing jars containing preserves, the preserves being placed in the jar while hot. In some cases the jar is slightly heated before the contents are poured in. The sealing material is carried by the cap and is not fused until applied to the jar, as in Fig. 3, and flows into the annular recess 4. When the jar cools the fusible material hardens, forming an air tight joint between the lower edge of the cap and the jar.

As the jar is usually made of glass, it has a smooth surface, therefore, I preferably roughen the bottom and sides of the recess 4 by grinding, or otherwise, so that the fusible material will more readily adhere to the glass.

I claim:

The combination of a jar and a cap, said jar having an external shoulder and a neck and having an annular recess between the neck and shoulder, and said cap having a flange to extend into said recess and terminate short of the bottom thereof, said flange having a fusible sealing material secured thereto so that when the jar is heated, said material will be displaced and will flow from the cap into the recess of the jar and will seal the joint.

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

WILLIAM L. SCHREIBER.

Witnesses:
JOS. H. KLEIN,
WM. A. BARR.