Nov. 3, 1936. K. A. ROBINSON 2,059,707

CLOSURE FOR BOTTLES, JARS, AND LIKE CONTAINERS

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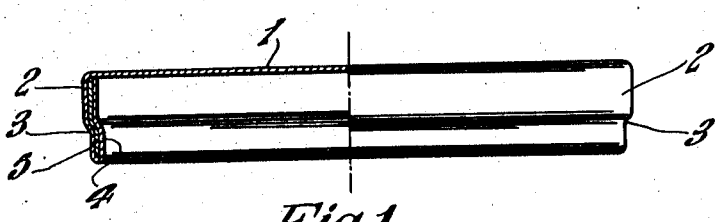


Fig. 1.

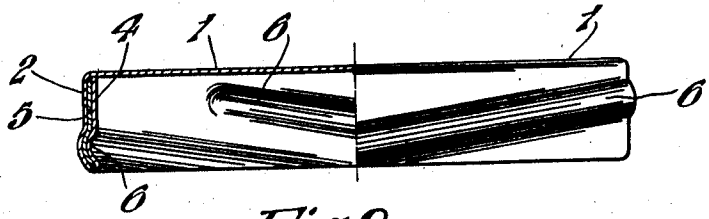


Fig. 2.

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CLOSURE FOR BOTTLES, JARS, AND LIKE CONTAINERS

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In Great Britain June 27, 1932

3 Claims. (Cl. 215—38)

This invention relates to closures for bottles, jars and like containers and has reference to closures of the type comprising a disc of sheet material having at its periphery a continuous depending flange on the inner surface of which there are formed projections or depressions adapted to engage with corresponding depressions or projections on the container with which the closure is used.

According to the present invention a closure of this type is made from paper, millboard, cardboard, metal lined paper or the like which has been treated with a strengthening liquid. A suitable strengthening liquid is a solution of soap in water. The closure may be further strengthened by doubling the flange upon itself and a strengthening ring may be included between the two thicknesses of the flange.

The invention is illustrated in the accompanying drawing, in which the two figures are side elevations in half section of as many different forms of closure.

The closure shown in Figure 1 is formed by a disc 1 of paper, millboard, cardboard, metal-lined paper or the like which has been treated with a soap solution to increase its strength and resilience and whose periphery has been turned down to form a continuous flange 2; this flange may be formed by drawing the disc over a circular die which is preferably heated. An annular groove 3 is pressed into the outer surface of the flange; the annular ridge thus formed on the inner surface of the flange is adapted to engage under a shoulder formed on the container with which the closure is used. The resilience of the material of which the closure is constructed allows the flange to yield to an extent permitting the ridge on the flange to be snapped over the shoulder on the container. The closure may thus be removed and replaced both readily and repeatedly.

The closure shown in Figure 1 has its flange yet further strengthened by the inclusion of a stiffening ring 5 between the two thicknesses 2 and 4 of the flange. This ring may be formed from a strip of the same material as the remainder of the closure or of heavier material; the strip may simply be bent to the required form or its ends may be secured by adhesive. In one form a strip of the same material as the closure is bent into a double circle and secured by adhesive, thus producing a ring of double thickness. In making the closure the disc is formed with a flange of double the required depth and the stiffening ring laid inside this flange, which is then doubled inwardly over it.

The inclusion of the stiffening ring 5 allows the flange to be formed with projections or depressions other than the annular ridge shown in Figure 1. In particular, as shown in Figure 2, it may be formed with a screw-thread 6 which may be either full or interrupted.

Closures in accordance with the invention may be treated by dipping in molten paraffin wax or by spraying with paints or liquid metals, to give them any desired finish.

What I claim and desire to secure by Letters Patent is:

1. A bottle closure comprising, in combination, a disc of resilient fibrous material constituting its top and having a composite two-ply seamless flange folded therefrom and integral and continuous therewith the inner ply of said flange terminating against the inner side of said top and an annular separately formed reinforcement interposed between the two plies of the composite flange.

2. A bottle closure comprising, in combination, a disc of resilient fibrous material constituting its top and having a composite two-ply seamless flange folded therefrom and integral and continuous therewith the inner ply of said flange terminating against the inner side of said top and an annular separately formed reinforcement interposed between the two plies of the composite flange said composite flange and said reinforcement being pressed inwardly adjacent the free edge of said composite flange, whereby a constricted portion adapted to co-operate with a projection on a container is provided.

3. A bottle closure comprising, in combination, a disc of resilient fibrous material constituting its top and having a composite two-ply seamless flange folded therefrom and integral and continuous therewith the inner ply of said flange terminating against the inner side of said top and an annular separately formed reinforcement interposed between the two plies of the composite flange said composite flange and said reinforcement being formed to provide a screw thread to co-operate with screw threads upon a container.

KEITH ALEXANDER ROBINSON.