

Aug. 21, 1934.

L. R. N. CARVALHO

1,971,307

CLOSURE

Filed March 9, 1931

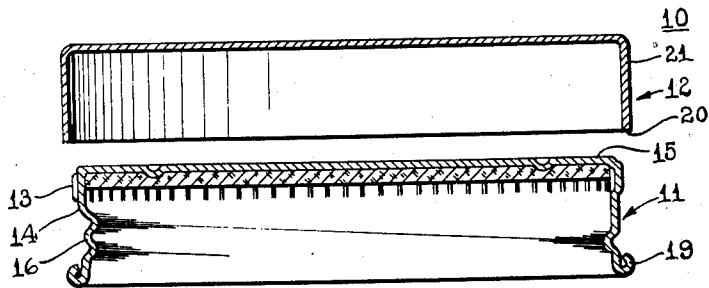
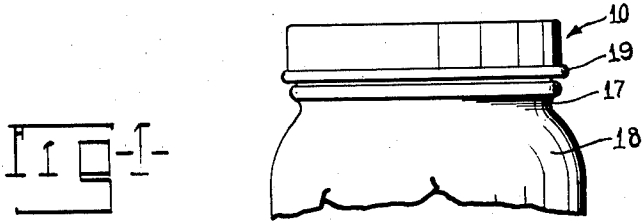


Fig-2-

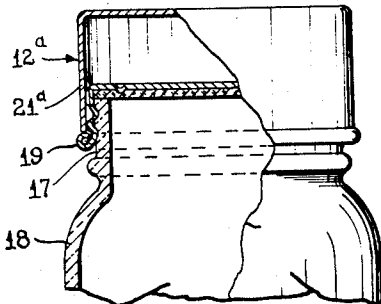
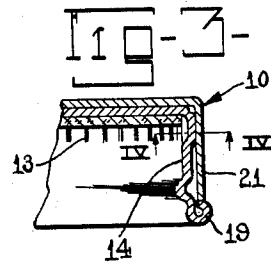


Fig-4-

Fig-5-

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UNITED STATES PATENT OFFICE

1,971,307

CLOSURE

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Application March 9, 1931, Serial No. 521,108

1 Claim. (Cl. 215—43)

The present invention relates to improvements in closures for bottles and jars and more particularly to that type including an attaching flange formed with inward projections or threads adapted to take over external threads or projections provided on the neck portions of the receptacles to be sealed.

An object of the present invention is the provision of a novel closure construction in which the attaching threads or equivalent projections are obscured from view by an outer shell or cover which is telescoped over the thread or projection carrying portion, said construction also including a shoulder or the like, arranged to conceal the lower edge of the outer shell of the closure.

The present application discloses a modification of the closure device shown in my United States Patent Number 1,879,082, September 27, 1932.

Another object of the present invention is the provision of a closure construction in which the advantages of a relatively deep cap are obtained without necessitating the provision of a proportionately deep threaded flange for attachment to a receptacle. In this connection it is obviously desirable that a closure be so constructed as to provide a relatively large area whereby one may obtain a firm grip thereon and easily apply or remove the closure. At the same time, the necessity of providing a deep threaded portion is to be avoided if possible. To this end, and incidentally for the purpose of improving the general appearance of metal closures and the like, the present invention contemplates a construction including a relatively shallow inner shell and a relatively deep outer shell which are secured together and adapted to be attached to a receptacle by means of threads or other suitable projections which are provided on the inner shell.

Other objects will be in part apparent and in part pointed out hereinafter.

In the drawing:

Fig. 1 is a fragmentary side elevational view illustrating my invention.

Fig. 2 is a vertical sectional view showing in separated relation, the inner and outer shells which comprise the closure.

Fig. 3 is a fragmentary sectional view showing the shells assembled, and the manner in which the wire edge or bead, on the inner shell protects the raw edge of the outer shell.

Fig. 4 is a sectional view taken substantially along the line IV—IV of Fig. 3.

Fig. 5 is a fragmentary sectional elevational view of another form of the invention.

In one form of the invention (Figs. 1 to 4, in-

clusive), the closure 10, which is formed of sheet metal, comprises inner and outer shells 11 and 12, respectively, telescoped one over the other, and held against relative rotation by friction and the presence of a series of ribs 13 extending transversely of the skirt portion 14 or flange, of the inner shell 11. This inner shell includes the circular top portion 15 from the margin of which the skirt 14 depends. Screw threads 16, or equivalent projections, on the skirt 14 are adapted to cooperate with threads (not shown) on the neck portion 17 of a jar 18, or the like receptacle. The lower margin of the skirt 14 is folded or rolled upon itself to provide a continuous bead 19 or "wire edge", which, in addition to providing a smooth lower margin for the inner shell, functions as a stop, limiting telescoping movement of the outer shell 12 over the inner shell 11. The raw lower edge 20 of the skirt 21 or flange, on the outer shell is intended to contact with the upper surface of the continuous bead 19, when the shells are assembled, with the result that said raw edge is completely protected by the bead 19. Thus, a closure is provided in which there are no raw or sharp edges exposed to injure persons handling it. In addition, the general appearance of the closure is materially improved by covering the threads with an outer shell, the surface of which is perfectly smooth, and, if desired, may bear suitable surface ornamentation or embody varied shapes.

In a slightly different form of the invention (Fig. 5) the outer shell 12^a is formed with a comparatively deep skirt 21^a or flange, which, as in the preceding form, telescopes over the skirt 14 of the inner shell 11. By resorting to the use of an outer shell, the skirt portion 21^a of which is considerably deeper than the inner shell, it is apparent that there is a material increase in the surface which may be gripped by a person in removing or applying the closure. Thus it is quite evident that removal and application of closures are materially facilitated by the construction above described.

Modifications may be resorted to within the spirit and scope of the appended claim.

I claim:

A closure comprising, in combination, an inner shell and an outer shell, each including a circular top portion and a skirt depending from the margin of the top portion, the lower margin of the inner skirt being rolled outwardly, upwardly, and thence inwardly to form a continuous hollow bead, the bottom edge of the outer

skirt resting upon said bead and concealing said edge of the inner skirt, the skirt on the inner shell being formed with an annular series of exterior ribs or corrugations adjoining the top portion of the shell, the skirt on the inner shell also being formed beneath said corrugations with screw threads for attachment of the closure to a receptacle, said ribs being in frictional engagement with the inner surface of the skirt on the outer shell and holding the shells against relative rotary movement, the skirt on the outer shell being of substantially greater depth than that of the inner shell, whereby the top portion of the outer shell is spaced above the top portion of the inner shell.

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10	85
15	90
20	95
25	100
30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150