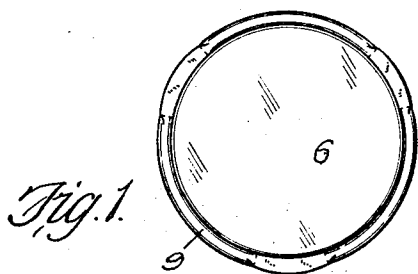
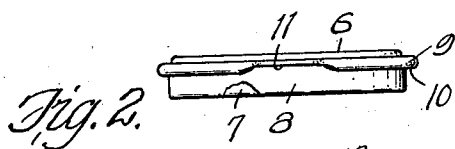
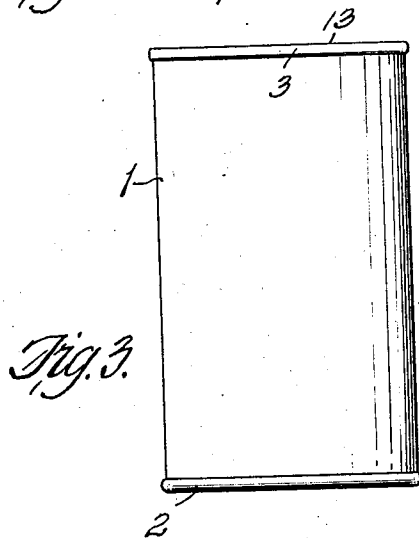
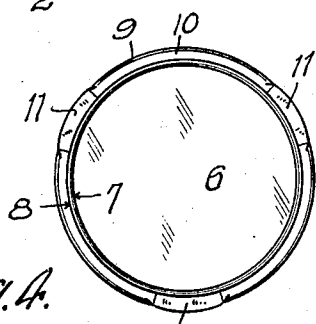
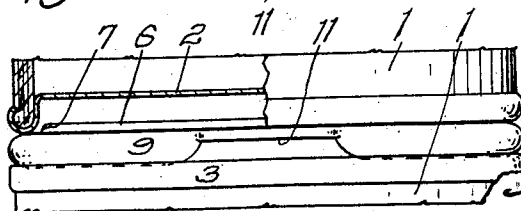
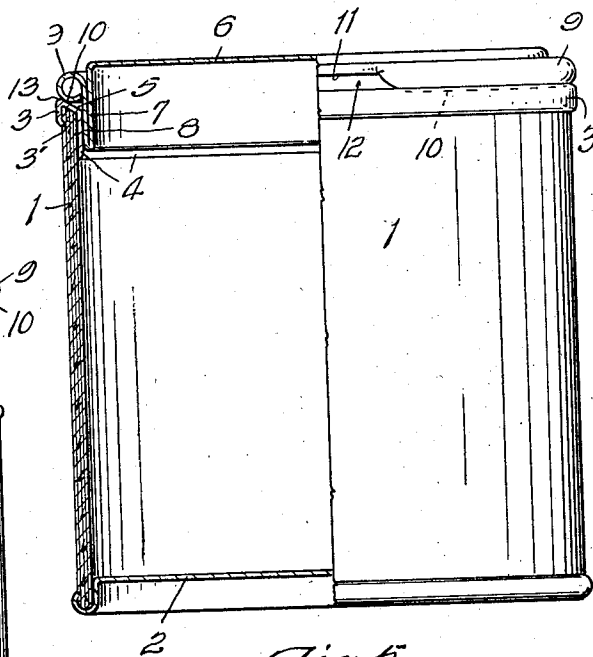
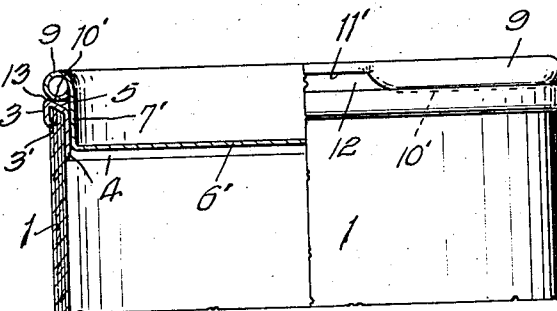


Aug. 5, 1941.

W. L. RUTKOWSKI
FRICTION CLOSURE CONTAINER

2,251,808

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UNITED STATES PATENT OFFICE

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FRICTION CLOSURE CONTAINER

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2 Claims. (Cl. 229-5.5)

This invention relates to combination paper and metal containers, and, more particularly to the friction closure type container.

An object of the invention is to provide a full mouth, or open top container, which can be quickly and tightly closed and sealed and conveniently opened to uncover the mouth, or open top of the container.

A further object of the invention is to provide the edge portion of the top, or open end of the paper container body with a channeled reinforcing ring to provide an inner friction seating wall for a friction closure, and, to provide an inclined surface at the upper end of the friction surface to facilitate centering of the closure upon the ring and guiding it to closed and sealing position.

A further object of the invention is to provide a friction type closure having a flange provided with a rolled peripheral edge which overlies the ring, and, which has spaced under surface portions thereof flattened so that an instrument may be placed beneath said flattened portions and used to pry the closure from the container ring.

A still further object of the invention is to provide the friction closure with a double skirt, or wall, the outer skirt, or wall having a flange and the peripheral edge portion of the outer skirt, or wall being rolled and provided at spaced intervals with flattened surface portions.

A still further object of the invention is to provide a container having bottom and top closures which enables containers to be uniformly stacked in vertical axial alignment.

With the above and other objects in view, as will be apparent hereinafter, the invention consists in the novel features of construction, arrangement and combination of parts hereinafter more clearly described and illustrated in the accompanying drawing.

Referring to the drawing forming a part of this specification, wherein like characters of reference denote similar parts throughout the several views:

Fig. 1 is a top plan view of the friction closure.

Fig. 2 is a side elevation of the friction closure.

Figure 3 is a side elevation of the container body.

Fig. 4 is a bottom plan view of the friction closure.

Fig. 5 is an enlarged view partly in sectional elevation and partly in side elevation of the friction closure container.

Fig. 6 is an enlarged view similar to Fig. 5,

showing a slightly modified form of friction closure.

Fig. 7 is a detail showing one container stacked upon another.

A container of the friction closure type embodying the features of my invention, comprises a body portion 1, formed from suitable paper or cardboard material having a lower, or bottom end closure 2, formed of sheet metal and secured thereto in the usual well known manner.

The other, or top end of the container body 1 is provided with a sheet metal reinforcing and friction ring which is suitably secured to the top edge portion of the body, and, when so positioned, the container body has a filling and discharge opening, or mouth substantially of the same diameter as the inside diameter of the container body 1.

The metal of said ring is so shaped, finally, as to provide a securing flange 3, which is forced into contact with the outer face of the container body with its free edge 3' thereof embedded in the body material to securely hold the ring in position at the upper edge portion of the body, and, to provide an inner or friction seating wall 4 engaging the inner surface of the body 1 and disposed parallel with the securing flange 3. The upper end portion of the friction seating wall 4, which joins the securing flange 3, is slightly inclined, or beveled, so as to form a closure centering surface 5. The lower edge of the friction seating wall 5 terminates a suitable distance below the free edge 3' of the securing flange 3. This arrangement provides the container body 1 with a full filling and discharging opening at the upper end thereof when the friction closure hereinafter described is removed therefrom.

The container body 1 being formed of the paper material and the reinforcing and friction ring being formed of thin sheet metal, provides a top opening for container which is more or less flexibly resilient, which is essential as the opening varies slightly from being truly circular, but which becomes truly circular when the friction closure is applied to the container, due to the flexibility of the ring and body material, thus insuring a perfectly tight seal and joint between the closure and the friction seating wall of the reinforcing and friction ring when the friction closure is forced to home position into the ring.

In one embodiment of the friction closure or plug, the same comprises a top body portion, or head 6, which terminates at its peripheral edge in a downwardly projecting skirt, or wall 7, and which skirt, or wall terminates in an upwardly

projecting outer skirt, or wall 8 folded to lie in contact with the inner skirt, or wall 7. The upper edge portion of the outer skirt, or wall 8 terminates short of the upper plane of the closure head 6 and it is rolled outwardly to provide a rolled flange 9 having a lower seating surface 10.

In the final shaping of the rolled flange 9, the metal is flattened, or squeezed together at spaced intervals to provide recessed prying surfaces 11, and when the closure is applied to the reinforcing and friction ring for closing the container opening, provides pockets 12 overlying the upper edge 13 of the ring so that an instrument may be placed into any of the pockets 12 beneath the flattened surfaces of the rolled flange 9 and used to pry the friction closure from the container ring to uncover the container opening. The upper edge 13 of the ring serves as a seat for the instrument to rest upon while prying the closure from the container ring.

I have shown in Fig. 6, a friction closure of the usual sunken head type, comprising a head portion 6', and a single upwardly projecting skirt, or wall 7' which terminates at its upper end in an outwardly rolled flange 9 having a lower seating surface 10', which rolled flange, in its final shaping, is flattened, or squeezed together at spaced intervals to provide recessed friction surfaces 11' so that an instrument may be placed beneath the flattened surfaces and used to pry the friction closure from the container ring in the same manner as when the friction closure shown in Fig. 5 is used.

The only difference between the two types of friction closures, is that one has double friction skirts, or walls and is not of the sunken head type, whereas, the other type of closure is of the sunken head type and is provided with but a single friction skirt, or wall, each, of course, being provided with a rolled flange having spaced flattened prying surfaces.

It will be noted that the rolled and flattened flange of the friction closure overlies the ring when in home position, that the lower surface 10 is seated on the inclined surface of the ring and that the flattened prying surfaces 11 on the closure flange are spaced from the upper edge 13 of the container ring, thus facilitating removal of the closure from the ring by means of an instrument prying against the flattened surfaces. Also it will be noted, that the inclined seating surface at the upper end of the friction wall of the ring facilitates centralizing of the closure in the ring opening for guiding the closure

skirts into the opening for frictional and sealing contact with the friction wall of the ring.

As clearly shown in Fig. 7, the type of container shown in Fig. 5 can be easily stacked one upon the other without danger of the containers being shifted out of vertical axial alignment due to the fact that the rolled edge of the recessed bottom closure 2 can be properly seated upon the rolled edge 9 of the top closure, and because the upper end of the inner skirt 7 serves as a stop or annular shoulder which prevents lateral displacement of one container upon another, thus assuring uniform stacking of the containers one upon the other.

From the foregoing description, it will be evident that a combined paper and sheet metal container of the friction closure type has been devised, the many advantages of which will be readily apparent to those skilled in the art to which the invention appertains.

I now particularly point out and distinctly claim my invention being aware, of course, that changes may be made regarding the details described, provided the features stated in the claims, or the equivalents of such, are employed.

What I claim is:

1. A friction closure container comprising a fibre body, a sheet metal ring secured thereto, said ring providing an open end for the container body, the metal of said ring being drawn to form a securing flange, a friction wall and an intermediate inclined outer end wall portion, said friction wall being substantially parallel to and spaced from said securing flange, a friction plug type closure for said ring having an inverted depressed portion forming a substantially vertical inner wall terminating in an upwardly folded portion to provide an outer vertical friction wall adapted to engage the friction ring wall, said friction ring wall having a flange projecting outwardly therefrom, the flange having rolled portions and the remaining portions being flattened to provide lower prying surfaces.

2. A closure for containers having a flat top wall, said wall terminating in a downwardly projecting skirt, said skirt terminating in an upwardly projecting outer skirt in contact with the first mentioned skirt, the upper edge of the outer skirt terminating in an outstanding rolled flange disposed below the upper plane of the top wall, and said rolled flange being flattened at spaced intervals on its under surface to provide tool prying surfaces.

WALTER L. RUTKOWSKI.