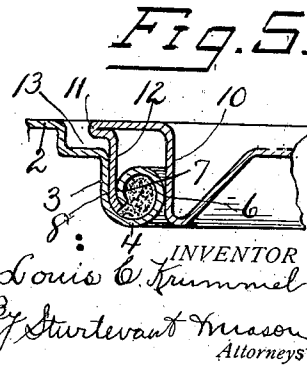
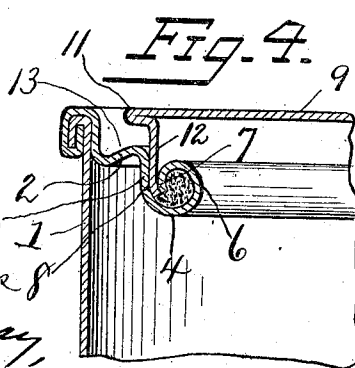
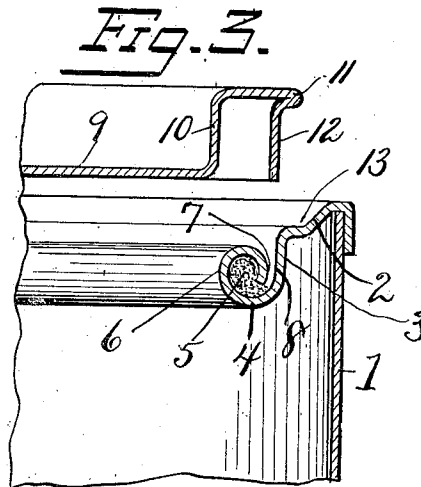
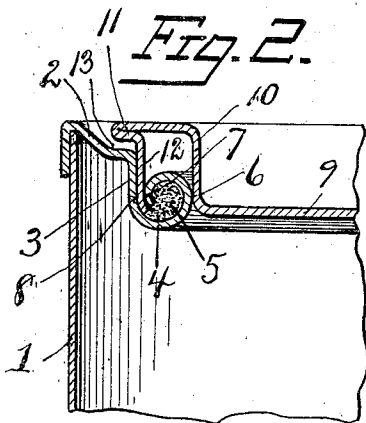
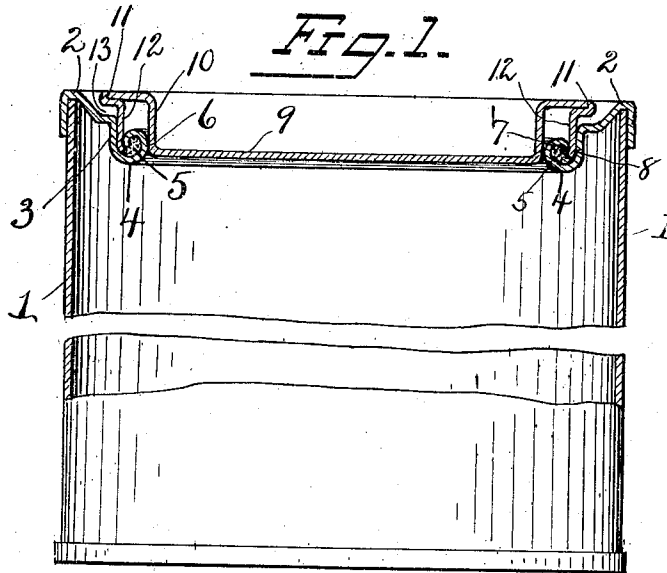


L. C. KRUMMEL.
 FRICTION TOP CAN.
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1,084,451.

Patented Jan. 13, 1914.



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FRICTION-TOP CAN.

1,084,451.

Specification of Letters Patent.

Patented Jan. 13, 1914.

Application filed August 31, 1912. Serial No. 718,125.

To all whom it may concern:

Be it known that I, LOUIS C. KRUMMEL, a citizen of the United States, residing at Clinton, in the county of Middlesex, State of Connecticut, have invented certain new and useful Improvements in Friction-Top Cans, of which the following is a description, reference being had to the accompanying drawing and to the figures of reference marked thereon.

The invention relates to new and useful improvements in sheet metal cans, and more especially to what is known in the trade as friction top cans.

An object of the invention is to provide a can of the above type wherein the cover is held in place on the can top partly by friction and partly by bending the cover flange during the seating of the cover.

A further object of the invention is to provide a can of the above type wherein the cover is held in place by a vertical friction wall on the cover engaging a friction wall on the can top, and wherein said cover is also formed with an outer downwardly projecting flange which is gripped by friction seating walls formed in the can top, which walls are so spaced as to bend the cover flange to aid in holding the cover seated.

These and other objects will in part be obvious and will in part be hereinafter more fully disclosed.

In the drawings, which show by way of illustration the invention, Figure 1 is a side view of a friction top can, partly in vertical section, having my improvements applied thereto; Fig. 2 is an enlarged detail showing in vertical section a portion of the cover, the can top, and a portion of the body of the can, the cover being seated on the can top; Fig. 3 is a view similar to Fig. 2, showing the cover before it is forced onto the can top. Fig. 4 is a view similar to Fig. 2, showing a modified form of the invention. Fig. 5 is a similar view showing a further modification.

In carrying out my invention I have provided a metal can which consists of the usual can body, to which is attached an apertured can top. This apertured can top is formed with a curled or rolled portion at its inner edge, which forms an inner friction seat for the cover and also spaced friction seating walls which are located between said inner friction seat and the outer edge of the can top. The cover is formed with a verti-

cal friction wall adapted to engage the inner friction wall on the can top, and also a downwardly projecting flange adapted to be gripped by the spaced friction seating walls on the can top. These spaced seating walls are curved so as to give a slight bend to the flange on the cover when said cover is forced onto the can top for closing the can.

Referring more in detail to the drawing, my improved friction top can consists of a can body 1, on which is mounted at the upper edge a can top 2. This can top may be formed with an outer flange which is soldered to the can body, or with a flange which is rolled into a double seam with a corresponding flange on the can body. Either form of securing the can top to the can body may be used, or other methods may be employed. The particular manner of securing the can top to the body of the can has nothing to do with my invention. This can top is formed with a circular aperture. Said can top is also formed with a downwardly projecting vertical wall 3, which is provided with a curl or roll 4 at its lower edge. This curl, as shown in the drawings, is preferably an open or loose curl which forms a pocket in which may be placed a plastic sealing substance 5, if desired. The curling of the lower edge forms an annular seating wall 6. The edge is further curled so as to form a second curved friction wall 7, which is spaced from the curved friction wall 8 formed on the inner face of the flange 3 at the point where the curled edge of the flange begins. The cover 9 is formed with a circular depression which provides a vertical friction wall 10. This vertical friction wall 10 is adapted to engage the inner annular friction seat 6 on the can top. The outer edge of the cover is bent backward as at 11 to form a prying off rib, and thence downward to form a depending flange 12. This depending flange 12 is so proportioned that the outer face thereof engages the inner face of the flange 3, and the lower edge of the flange 12 and extends between the friction walls 7 and 8 on the can top. The distance between the friction walls 7 and 8 can be approximately equal to the thickness of the metal forming the flange in the cover, so that when said flange 12 is forced between the spaced friction walls 7 and 8, it will be firmly gripped thereby. At the time, or before said flange 12 is gripped by the spaced friction walls 7 and 8, the vertical friction

wall 10 on the cover will engage the annular friction wall 6 on the can top. This annular wall 10 on the cover is reinforced, or held in place by the material of the cover at the bottom of the depression in the cover. That is to say, the vertical wall 10 at one side of the cover, through the connecting metal, reinforces and braces the vertical wall 10 at the other side of the cover. Therefore, the vertical wall 10 is practically unyielding. As this wall is forced into the apertured top, the curled or rolled edge of the top will be firmly held in place, and any tendency on the part of the flange 12 to unroll the curl or unduly separate the walls 7 and 8 will be prevented by this backing up, or reinforcing the curled edge by the friction wall 10 on the cover. Therefore, when the cover is seated in the can top, the flange 12 will be firmly gripped by the friction walls 7 and 8, and the friction walls 6 and 10 forming the inner friction seat for the cover will further assist in holding the cover seated. In order to further aid in holding the cover on the can body the parts are so proportioned that the flange 12 will be carried down between the friction walls 7 and 8 along the curved portions thereof, to a certain extent. These curved walls forming the friction seats 7 and 8, will bend the extreme outer edge of the flange 12, and this bending of the flange surface is a further and an additional lock for holding the cover seated. When the curled portion of the can top is provided with a sealing material, the flange 12 will engage said sealing material and substantially embed therein, which will form an effectual seal at the points of contact between the flange 12 and the friction walls 7 and 8. It is obvious that from certain aspects of the invention, this sealing material may be omitted. Furthermore, it will be apparent that in my improved friction top I have a point of sealing where the friction wall 10 on the cover engages the friction seat 6 on the curled part of the can top. I also have two additional points of sealing where the flange 12 engages respectively the walls 7 and 8.

It will be obvious that when my improved can is used for packing materials containing gummy substances, that said substance will lodge at some one of the three sealing points and thus aid in the efficient closing or sealing of the can.

The can top is depressed adjacent the wall of the can body so as to form a recess 13. The outer edge of the cover, when seated, overhangs said recess and the cover is preferably so proportioned that the extreme outer face of the cover, when seated, is flush with the outer edge of the can. By this proportioning of the parts the can cover can be forced into its seat and the edge of the can body will serve as a limiting means to

determine the proper seating of the cover. By providing a recessed portion 13, the outer edge of the can cover is raised above the can top so that a suitable implement may be inserted underneath the flange on cover for prying the same off from the can body.

While I have described the parts as so proportioned as to bend the flange of the cover to assist in locking the cover to the can body, it will be obvious that from certain aspects of the invention the flange on the cover may be shortened so as to be firmly gripped by the spaced friction walls 7 and 8 without any resulting bend in the extreme edge of the flange of the cover. It will therefore, be understood that I do not limit myself to a construction wherein a flange is necessarily bent during the seating of the cover. It is also to be noted that while the lower edge of the flange 12 is frictionally clamped between the friction walls 7 and 8, the vertical walls of the flange 12 also frictionally engage the vertical portion of the flange 3, so that, in effect, I have at this part of the cover a vertical friction seating surface, which terminates in the spaced friction seating surfaces 7 and 8.

In Fig. 4, I have shown a slightly modified form of construction, in that the cover is not provided with a circular depressed portion. The construction in this figure is otherwise in all respects the same as that shown and described in connection with Figs. 1 to 3. In this modified construction the cover is held on the can top solely through a frictional engagement of the vertical wall on the flange 12 with the frictional wall on the face of the flange 3, and the gripping friction between the walls 7 and 8 as they engage the lower edge of the flange 12. As to the construction shown in this figure, the flange may also be sufficiently long so that when the cover is seated, it will be slightly bent by the curved surfaces forming the friction walls 7 and 8, as clearly shown in the drawings, or said wall may be terminated so that the lower edge thereof will be frictionally gripped by the walls 7 and 8 without any bending of the flange.

In Fig. 5 I have shown the central depression as carried down farther so that the friction wall 10 engages the friction wall 6 before the projecting flange 12 is gripped by the friction walls 7 and 8. In this figure the cover is also cupped centrally.

It is obvious that minor changes in the details of construction and the arrangement of parts may be made without departing from the spirit of the invention, as set forth in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A friction top can comprising an apertured top having a vertical flange curled

at its lower edge inwardly, upwardly and backwardly toward itself to form spaced curved friction walls, and a cover having a downwardly projecting vertical flange adapted to have extended vertical frictional engagement between its outer wall and the flange on the can top and adapted to have the lower free edge thereof seated between and engaging the spaced friction walls on the can top.

2. A friction top can comprising an apertured top having a vertical flange curled at its lower edge inwardly, upwardly and backwardly toward itself to form spaced curved friction walls, a cover having a downwardly projecting vertical flange adapted to have extended vertical frictional engagement between its outer wall and the flange on the can top and adapted to have the lower free edge thereof seated between and engaging the spaced friction walls on the can top, and a sealing material in said curled edge of the can top in which the downwardly projecting flange of the cover may be seated.

3. A friction top can comprising an apertured top having a vertical flange curled at its lower edge inwardly, upwardly and backwardly toward itself to form spaced curved friction walls, a cover having a downwardly projecting vertical flange adapted to have extended vertical frictional engagement between its outer wall and the flange on the can top and adapted to have the lower free edge thereof seated between and engaging the spaced friction walls on the can top, and a sealing material in said curled edge of the can top in which the downwardly projecting flange of the cover may be seated, said cover having at the upper portion of the flange an outwardly projecting prying off rib.

4. A friction top can comprising an apertured top, having a vertical flange, curled at its lower edge to form spaced curved friction walls and a cover having a single down-

wardly projecting flange having its lower free edge adapted to seat between said walls and frictionally engage each wall, said cover also having a circular depression forming a vertical friction wall, adapted to engage the inner face of said curled edge the engaging and gripping surfaces between the vertical walls and the curled edge being arranged in substantially a horizontal line.

5. A friction top can comprising an apertured top, having a vertical flange, curled at its lower edge to form spaced curved friction walls and a cover having a downwardly projecting flange adapted to seat between said walls and frictionally engage each wall, said cover also having a circular depression forming a vertical friction wall, adapted to engage the inner face of said curled edge, said cover flange, when seated, projecting into the curved portions of the spaced friction walls and partaking of the curvature thereof.

6. A friction top can comprising an apertured top, having a vertical flange, curled at its lower edge to form spaced curved friction walls and a cover having a downwardly projecting flange adapted to seat between said walls and frictionally engage each wall, said cover also having a circular depression forming a vertical friction wall, adapted to engage the inner face of said curled edge, said cover flange, when seated, projecting into the curved portions of the spaced friction walls and partaking of the curvature thereof, said curled portion of the can top having a plastic sealing material therein, in which the flange of the cover is adapted to be embedded.

In testimony whereof, I affix my signature, in the presence of two witnesses.

LOUIS CHARLES KRUMMEL.

Witnesses:

CHAS. A. POST,
S. BURDETTE REED.