Dec. 31, 1935. W. F. PUNTE 2,026,431

METHOD OF MAKING METAL CONTAINERS

Original Filed May 11, 1934

FIG. 1.

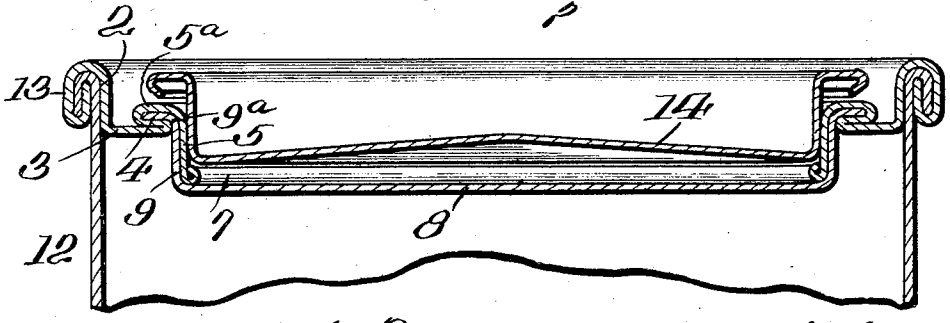


FIG. 2.

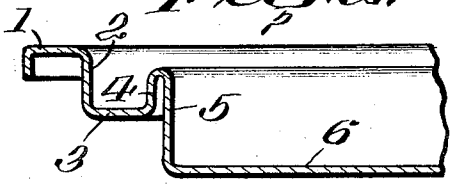


FIG. 5.

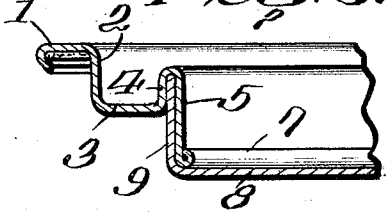


FIG. 3.

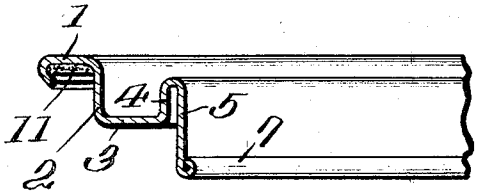


FIG. 6.

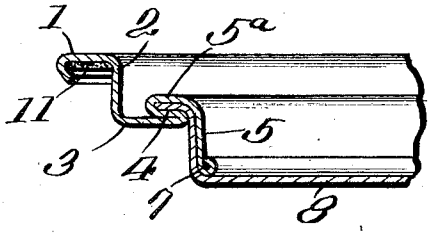


FIG. 4.

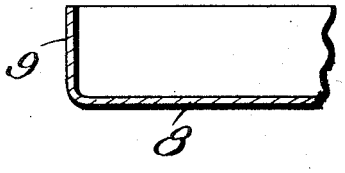
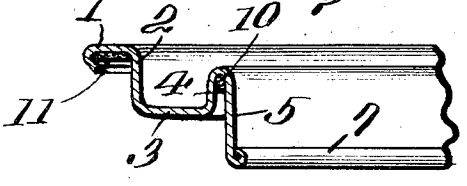


FIG. 7.



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UNITED STATES PATENT OFFICE

2,026,431

METHOD OF MAKING METAL CONTAINERS

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Original application May 11, 1934, Serial No. 725,149. Divided and this application February 4, 1935, Serial No. 4,943

2 Claims. (Cl. 113—121)

In my copending application, Serial No. 725,149, filed May 11, 1934, there is shown and described a metal container of the friction plug type wherein the sealing disk closing the opening through the container top is attached to the container top by interfolding the same with the metal of the container top between the vertical friction wall of the can top and the seam which secures the can top to the body of the container. The present invention has to do with the method of making this container.

An object of the invention is to provide a method whereby a sealing disk may be attached to the portion of the can top between the vertical friction wall and the double seam by a bending of the metal forming the can top.

In the drawing:

Figure 1 is a view partly in side elevation and partly in vertical section showing a container embodying the improvements, with the friction plug in place.

Figure 2 is a view showing the blank as die-drawn so as to provide a depressed portion in the container top, with spaced vertical walls, one of which extends above and below the depressed portion of the container top and is to serve as the friction seat for the friction plug.

Figure 3 is a view similar to Fig. 2, but showing the central portion of the blank cut out to form an opening and the lower edge of the vertical depending wall curled to provide a smooth edge.

Figure 4 is a view of a sealing disk which is drawn so as to provide a flange extending at right angles to the plane of the disk.

Figure 5 is a view showing the sealing disk and the container top assembled preparatory to the bending or folding of the metal parts to secure the sealing disk firmly to the can top.

Figure 6 is a vertical sectional view through the finished container top ready for attachment to the body portion of the container.

Figure 7 is a view similar to Fig. 3, but showing a sealing composition in the recess between the spaced walls which receives the flange of the sealing disk and which will aid in the forming of a tight seal when said sealing disk is clamped between the walls.

In carrying out the invention, a blank is die-shaped so as to produce a can top such as shown in Fig. 2 of the drawing. This can top is provided with a central portion 6 which is of course cut out to form an opening, as shown in Fig. 3. It also has a vertical friction wall 5 which is adapted to receive a friction plug closure. The lower edge portion of this vertical friction wall 5 is rolled inwardly, as shown in the drawing, to provide a rounded face or shoulder at the lower end of said wall. In the forming of the can top, the blank is drawn so as to provide a depressed portion 3, leaving a portion 2 which is dimensioned so as to fit within the body wall of the container, as shown in Fig. 1 of the drawing. The blank also is die-shaped to provide a flange 1 inwardly curled at its outer end and thus forming a pocket for a sealing material 11. This flange is rolled with the flange at the upper end of the body wall 12 of the container into a double seam which is indicated at 13 in Fig. 1 of the drawing.

Between the depressed portion 3 of the can top thus formed and the vertical friction wall 5 is an upstanding wall 4 forming therebetween a pocket in which is preferably placed a plastic sealing material indicated at 10 in Fig. 7.

The sealing disk 8 which is preferably made of aluminum is shaped so as to provide an upstanding portion 9. This upstanding portion 9 is dimensioned so that when the cup-shaped sealing disk is placed on the can top, the portion 9 will extend up along the outer face of the vertical friction wall and the peripheral edge portion of the disk will extend into the pocket and be imbedded in the sealing material 10. When these parts are properly assembled, the sealing disk contacts with the lower rounded shoulder 7 of the vertical wall 5 and, as noted, the portion 9 extends up along the outer face of the vertical wall 5 and into the pocket. While the disk is held firmly in place against the shoulder 7, the upper portion of the vertical wall 5 and the wall 4 are bent outwardly and downwardly into horizontal position as shown in Fig. 6. It is the upper portion 5^a of the vertical wall that is turned down into this horizontal position. This turning down of the walls of the pocket into horizontal position and the squeezing of the walls together brings about a very firm gripping of the edge portion of the frangible sealing disk.

After the parts have been assembled, as shown in Fig. 6, and the sealing disk clamped to the can top, then the can top and sealing disk may be handled as a unit and they are applied to the end of the container and the can top seamed thereto. While the sealing disk is preferably made of aluminum, it may also be made of Tagger's tin, paper, or any other material which may be easily ruptured or severed for the opening of the container. When the sealing disk is clamped at its peripheral edge between the walls of the pocket formed by the bending of the metal

of the can top, a very tight seal can be produced and thus the container hermetically closed so as to prevent air from having access thereto, even though the container is closed by a friction plug. When it is desired to use the contents of the container, the metal seal is ruptured, preferably by severing the same along the curled portion 7 of the vertical friction wall 5. This of course is accomplished after the friction plug is removed, and then the friction plug may be used for reclosing.

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

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

1. The method of forming a metal closure top for containers consisting in providing a container top with a vertical depending wall to serve as a friction seat for a sealing disk, shaping said top between the friction wall and the outer edge thereof so as to provide a pocket having closely spaced vertical walls, providing a sealing disk with a flange dimensioned so as to contact with the lower edge of said depending wall and with the upper edge portion of the flange extending into said pocket in the container top, and bending the metal forming the walls of said pocket with the sealing disk therebetween while said sealing disk is held in contact with the lower edge of the depending wall for placing said walls in a substantially horizontal position and in contact with the sealing disk for securing the same to the can top.

2. The method of forming a metal closure top for containers consisting in die-drawing a blank to form a container top having a depressed portion adapted to extend into the body of the container and providing said depressed portion with a vertical depending wall extending above and below said depressed portion and forming a friction wall for a sealing plug, providing said depressed portion with a vertically extending wall surrounding a portion of said depending wall above the depressed portion and integrally connected thereto at its upper end, said vertical wall and said depending wall being spaced to receive the flange of a sealing disk, forming a sealing disk with a flange extending at right angles to the plane thereof, which flange is dimensioned so as to contact with the outer face of the depending wall of the container top and extend between the spaced walls at the upper portions thereof when said sealing disk is in contact with the lower edge of said depending wall, assembling said sealing disk and said container top so that the flange extends between said spaced walls, and bending the spaced walls above the depressed portion of the container top and the portion of the sealing disks extending therebetween outwardly and downwardly into parallelism with the depressed portion of the container top for firmly clamping the sealing disk to the container top.

WILLIAM F. PUNTE.