Dec. 25, 1951 S. BIRKLAND 2,579,465

CONTAINER WITH FOLDED TOP SEAM

Filed July 31, 1947

Fig. 1

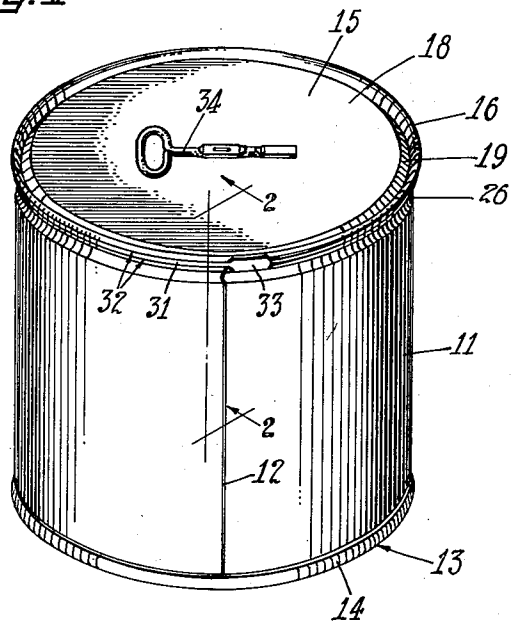


Fig. 2

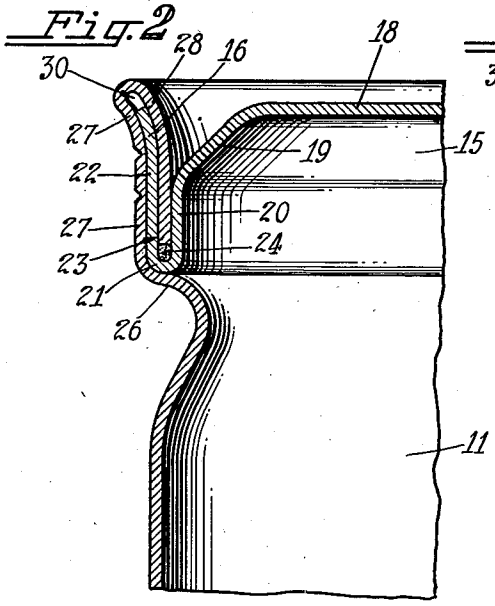
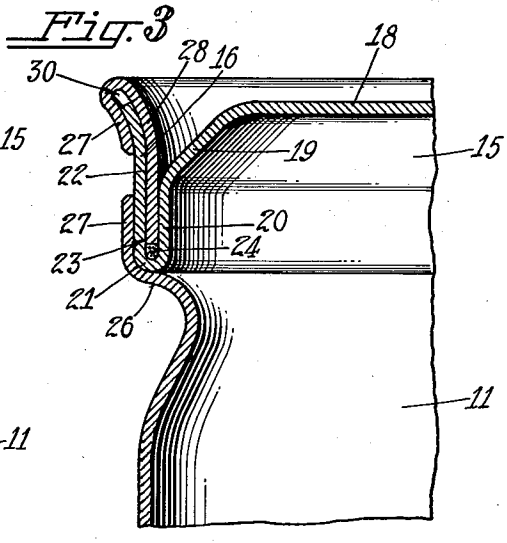


Fig. 3



INVENTOR.
Stellan Birkland
BY Ivan D. Thornburgh
Charles H. Erne
ATTORNEYS

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CONTAINER WITH FOLDED TOP SEAM

Stellan Birkland, San Francisco, Calif., assignor to American Can Company, New York, N. Y., a corporation of New Jersey

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2 Claims. (Cl. 220—54)

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This invention relates to sheet metal cans or containers and has particular reference to a container having a novel and material-saving end seam construction which permanently and hermetically secures a closure member to the container and which permits of the removal of the closure member so that it may be used as a reclosure.

An object of the invention is the provision of an inexpensive key opening can provided with a reclosing feature which may be manufactured at a saving in materials to make it economically attractive for products not now packed in such cans.

Another object is the provision in such a container of a narrow type of tearing strip formed in the body wall of the can in a portion of the end seam joint which may be removed easily to effect a substantial full opening in the top of the can, which after initially being opened, is reclosable without a reduction in the head space of the can.

Another object is the provision in such a can of an end seam joint formed by overlapped or interfolded flanges of the can body and the can end member, the flange of the body being embedded in a sealing material within the recess of the end member to effect a hermetic seal and the flange of the end member being secured in a recess of the body and having its terminal end bent outwardly in a flared top edge of the end seam for strengthening the seam, thereby forming a permanent joint and for providing a handy grip to facilitate the removal of the cover when the tearing strip is removed.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawing:

Figure 1 is a perspective view of a can or container embodying the present invention;

Fig. 2 is an enlarged fragmentary vertical section of the container top before tearing strip is removed, taken substantially along a plane indicated by the line 2—2 in Fig. 1; and

Fig. 3 is a view similar to Fig. 2 after the can has been opened and showing its cover in position as a reclosure.

As an exemplary embodiment of the present invention the drawing illustrates a sheet metal can or container comprising a tubular body 11 provided with a side seam 12 and having a bottom 13 permanently secured to the body in any suitable manner as by an end seam 14 and a special reclosure top or end member 15 secured to the body in a novel interfolded end seam 16.

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The reclosure top 15 is formed with a substantially flat raised central panel 18 having a surrounding obliquely disposed wall section 19 merging into an annular depending inner wall 20. The wall 20 adjacent its lower end is formed with a curl or U-shaped portion 21 which curves upwardly into an upright outer cover flange 22 which extends up adjacent the inner wall in spaced and parallel relation thereto providing a deep narrow channel or recess 23 of a width substantially equal to the thickness of the material from which the body is made. This channel contains or may contain a deposit of rubber compound or other sealing material 24.

When the reclosure top 15 is in sealing position on the can, it fits snugly in the top of the can, just below the upper terminal edge of the can, with its curl 21 fully seated and supported against displacement on an inwardly extending bead 26 formed in the can body 11 and with its outer flange 22 in engagement with an outer wall portion 27 of the body 11. The body wall 27 extends up along the outer flange 22 of the reclosure top 15 in parallelism therewith and after flaring outwardly a short distance curves inwardly over the top terminal edge of the reclosure outer flange 22 and merges into a depending inner flange 28. This inner flange 28 of the body 11, extends down into the recess 23 of the reclosure top 15 and is or may be embedded in the sealing material 24.

If desired the sealing material 24 may be placed in the recess 30 formed by the body wall parts 27, 28 or the sealing material 24 may be present in both the recesses 23 and 30. This overlapping and interfolding of the outer body wall portion 27 and inner flange 28 of the body 11 with the inner cover wall 20 and outer cover flange 22 of the reclosure top 15, results in the novel and seam 16 hereinbefore mentioned and provides a permanent, hermetic and economical seam which efficiently seals the container.

Provision is made for readily opening the container by removal of the top 15 in a manner which permits the use of the removed top as a reclosure member. For this purpose the body outer wall 27 is provided with a narrow removable tearing strip 31. This tearing strip is defined by a pair of spaced and parallel score lines or weakened areas 32 which are formed in the outer wall 27 of the body and which encircle the

body and terminate in the body side seam 12. One end of the tearing strip is formed with a tongue 33 which extends beyond the side seam and is engageable by a key 34 or other suitable tool, for removing the tearing strip in the usual manner.

When the tearing strip 31 is removed from the body outer wall 27, as shown in Fig. 3, the upper portion of this wall 27 together with the body inner flange 28 and the reclosure top 15 still permanently secured thereto, may be readily lifted out of the upper end of the body 11, leaving a full open mouth in the body for easy removal of the contents of the can.

To facilitate removal and replacement of the reclosure top 15, the upper portions of the interfolded outer wall 27 and inner flange 28 of the body and the outer flange 22 of the reclosure top, are flared outwardly along a gradual curved line of bend which porvides a convenient hand grip and which also reenforces the end seam 16 against separation of its interfolded flange walls. Reclosing of the container replaces the reclosure member 15 in its former position on the body bead 26 (Fig. 3) without reducing the head space of the container.

It is evident upon perusal of the drawing that the present container is produced without requiring an extra part, such as a collar or additional wall folds, in making a permanent end seam. In fact, the seam is formed with one less fold or flange on the outer periphery of the end member 16. This effects substantial savings in the amount of metal or other material required for producing such an end seam and thus reduces the cost of tearing strip containers so that they may be used for a greater variety of products.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A hermetically sealed sheet metal container comprising a tubular body having a wall terminating at its outer end in a depending flange spaced inwardly from the body wall, said body having an inwardly extending peripheral bead disposed beneath said flange, an end member seated on said body bead on the interior of the container and secured to said body wall in an end seam, said end member having an annular depending inner wall terminating in an integral upstanding outer flange disposed between and snugly engaging against said body wall and depending body wall flange, a sealing material disposed between the depending inner wall and upstanding outer flange of said end member and embedding therein said depending flange of said body wall to provide a hermetic seal therebetween, and a tearing strip set off by spaced score lines in said body wall adjacent said upstanding end member flange, removal of said strip effecting severance of said end member from the body to open the container, said end member being thereafter again supported by said inner peripheral body bead as a reclosure cover without reducing the head space of the container.

2. A hermetically sealed sheet metal reclosure container comprising a tubular body having an outwardly flared wall at an end thereof terminating in a depending flange spaced inwardly from the body wall, said body having an inwardly extending peripheral bead disposed beneath said flange, an end member seated on said body bead on the interior of the container and secured to said body wall in an end seam, said end member having a raised central panel merging into an annular outwardly and downwardly inclined wall portion in turn merging into an annular depending inner wall snugly engaging against said depending body wall flange and terminating in an integral upstanding outer flange, said upstanding end member flange being disposed between and snugly engaging against said body wall and said depending body wall flange, a sealing material disposed in the annular space between the depending inner wall and upstanding outer flange of said end member and embedding therein said depending flange of said body wall to provide a hermetic seal therebetween, and a tearing strip set off by spaced score lines in said body wall adjacent said upstanding end member flange, removal of said strip effecting severance of said end member from the body to open the container, said end member being thereafter again supported by said inner peripheral body bead as a reclosure cover without reducing the head space of the container.

STELLAN BIRKLAND.

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