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N. J. ANDERSEN
 INTERIOR COLLAR TEARING STRIP CONTAINER
 WITH RECLOSURE HOLDING MEANS
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2,743,033

Fig. 1

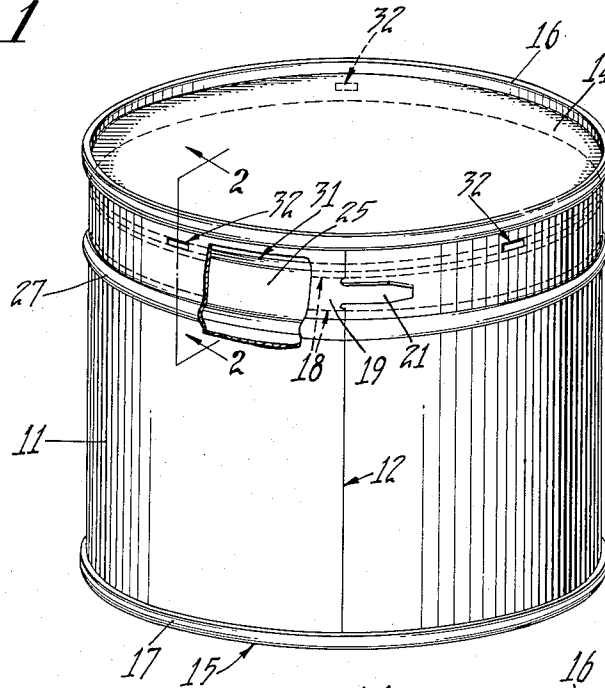


Fig. 4

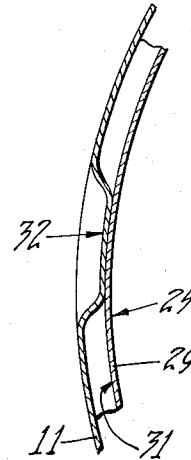


Fig. 3

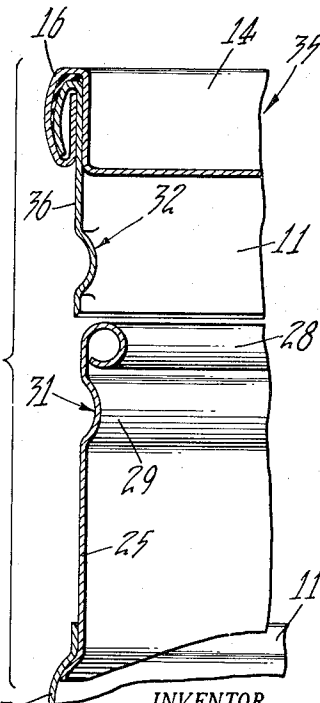
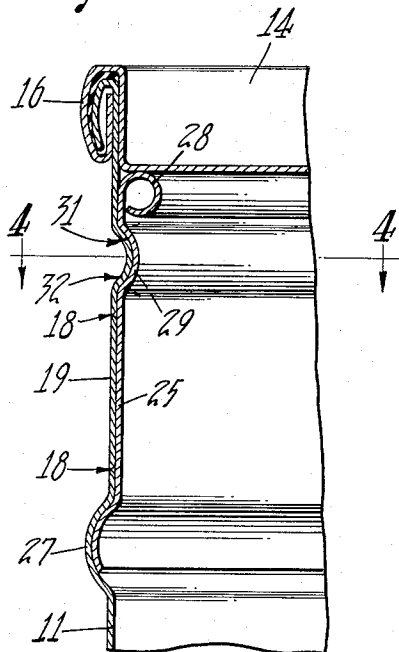


Fig. 2



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INTERIOR COLLAR TEARING STRIP CONTAINER WITH RECLOSURE HOLDING MEANS

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2 Claims. (Cl. 220—54)

The present invention relates to improvements in interior collar tearing strip cans and has particular reference to an improved and economical lug and recess locking connection between the reclosure and collar portions of the cans.

In interior collar tearing strip cans heretofore in use, removal of the tearing strip leaves the top end member or cover and the severed portion of the body attached thereto as a depending skirt which serves as a reclosure in cooperation with the collar. Usually this reclosure member has a mere loose slip fit with the collar, with the result that the top end member becomes unseated during removal of the tearing strip and again during its subsequent use as a reclosure. Where the contents of the can are of a powdery or ground nature such as coffee, accidental unseating or displacement of the top end member and later as a reclosure often results in objectionable spilling of the contents.

Attempts at partial solution of the unseating problem have been made as in United States Patent 1,725,957, issued August 27, 1929, to Harry Craver, wherein the severed reclosure provided with spaced threads, interlocks with similar threads on the collar. However the interlocking of the reclosure with the collar only takes place after the tearing strip is removed and thus does not solve the problem of contents spilling during the removal of the strip. A further attempt to partially solve this problem has been made in United States Patent 2,355,108, issued August 8, 1944, to Garland W. Reese wherein lugs in the can cover itself interlock with a hem on the inside of the collar. However this construction requires an expensive cover of extra deep countersink which is difficult to manufacture.

An object of the invention is the complete and effective solution of these problems by the provision of an interior collar tearing strip can wherein the reclosure portion to be severed by the removal of the tearing strip is already or initially locked in place on the collar to prevent its accidental displacement during removal of the tearing strip and also has a resilient locking function during each subsequent reclosure operation.

Another object is the provision of such an improved can wherein the resilient locking connection between the reclosure and collar portions of the can comprises simple but effective projecting lugs in one of the portions and an annular groove or recess in the other of the portions so that the reclosure may be readily snapped and locked over the collar without undue attention being required to the peripheral location of the lugs and the groove.

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 drawings:

Figure 1 is a perspective view of a sealed interior collar tearing strip can embodying the instant invention, with

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a portion of the can body broken away to illustrate the interior collar;

Fig. 2 is an enlarged fragmentary vertical sectional view of the upper portion of the can, the view being taken substantially along a vertical plane indicated by the lines 2—2 in Fig. 1;

Fig. 3 is a view similar to Fig. 2, showing the tearing strip of the can removed and illustrating the reclosure member thus produced, disposed in a displaced relation to the collar; and

Fig. 4 is a horizontal sectional view taken substantially along the line 4—4 in Fig. 2.

As a preferred or exemplary embodiment of the instant invention the drawings illustrate a cylindrical sheet metal tearing strip can of the character disclosed in the United States Patent 1,725,957 mentioned above.

Such a can comprises a tubular body 11 (Fig. 1) having a side seam 12 and top and bottom countersunk panel end members 14, 15 permanently secured to the ends of the body in suitable seams, such as double seams 16, 17, produced by interfolding flange portions of the body and the end members. Adjacent its upper end and in spaced relation to the top end seam 16, the body 11 is provided with a pair of spaced and parallel score lines 18 (Figs. 1 and 2) which extend entirely around the body and which set off between them in the body wall a removable tearing strip 19. At the body side seam 12, the tearing strip 19 terminates in a tongue 21 (Fig. 1) which extends beyond the side seam in overlapping relation to the body for the reception of a winding key or other instrumentality to be utilized in tearing out or winding up the strip 19 to open the can.

The tearing strip area of the body preferably is backed-up by a sheet metal tubular internal collar 25 which fits snugly within the can body 11 in engagement with the inner face of the body wall. The height of the collar 25 is sufficient to span the width of the tearing strip 19 and extend below and above the strip. Immediately below the tearing strip 19, the lower terminal edge of the collar 25 is embedded in an outwardly projecting annular bead 27 formed in the wall of the body 11. This bead 27 permanently locks the collar in place in the can body 11. The upper terminal edge of the collar 25 is preferably formed with an inwardly extending curl 28 (Figs. 2 and 3) which provides a smooth rounded edge for the collar. The curl 28 preferably engages against or may be spaced slightly below the inner face of the countersunk panel of the top end member 14 as best shown in Fig. 2.

Intermediate the upper score line 18 in the body 11 and the curl 28 of the collar 25, the collar is formed with an inwardly extending annular bead 29 (Figs. 2 and 3) which provides on the outer face of the collar an annular, shallow, arcuate or curved bottom, groove or recess 31 which extends entirely around the collar. This groove 31 in the collar 25 is disposed directly opposite to and receives a plurality of peripherally spaced inwardly projecting locking lugs or projections 32 formed in the wall of the body 11 intermediate the upper score line 18 and the top end seam 16. The drawing preferably shows three of these locking lugs 32 equally spaced around the periphery of the body 11. The contour of the lugs 32 preferably is of the same curvature as the curved bottom of the groove 31 so as to nest or snugly interlock with the groove. Thus the collar 25 as initially assembled with the can is locked in place permanently adjacent its lower edge by the body bead 27 and temporarily adjacent its upper edge by the interengagement of the body lugs 32 with the collar groove 31.

Hence when the tearing strip 19 is torn out of the body 11 by the consumer to open the can, a reclosure member 35 (Fig. 3) is produced which comprises the top end member 14, the top end seam 16, and the upper severed

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portion of the wall of the body 11 which depends from the top seam 16 and constitutes a short reclosure skirt 36 (Fig. 3). The depending skirt portion 36 of the severed reclosure 35 contains the spaced locking lugs 32 as shown in Fig. 3. Since these lugs 32 are initially in locking position in the collar groove 31, they retain the reclosure 35 in position on the collar 25 during removal of the tearing strip 19 and thereby prevent spilling of the contents of the can through accidental unseating or displacement of the reclosure from the collar.

Upon complete removal of the tearing strip 19 from the body 11, the severed reclosure member 35 may be readily pulled off the collar 25 by snapping the locking lugs 32 upwardly out of the collar groove 31 as shown in Fig. 3 to gain access to the contents of the can. No turning or rotating of the reclosure member is necessary. In a similar manner the reclosure member 35 may be readily reapplied to the can by placing the reclosure member over the collar 25 and snapping the locking lugs 32 back into locking engagement with the collar groove 31 without paying any attention to any particular alignment between the reclosure lugs 32 and the collar groove 31. The reclosure member 35 thus serves to reclose the container with a tight fitting top which is locked in position against accidental displacement. Since the locking groove 31 extends entirely around the collar 25, the reclosure member 35 may be reapplied to the collar without any regard for the relative peripheral alignment of the lugs with other portions of the can. The lugs readily snap into the groove anywhere around its periphery. While the described container is especially suitable for products such as powdered or ground coffee, powdered milk, etc., it has of course many other uses.

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 tearing strip container, comprising a body having an end member secured thereto in an end seam, spaced score lines extending around said body to define a removable tearing strip for severing the upper body portion including said end member for use as a reclosure for

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the container, a collar member having an inwardly extending annular groove therein secured to the inner wall of said body with said groove disposed above said score lines, and a plurality of peripherally spaced inwardly projecting locking lugs on said upper severable body portion, said lugs being resiliently seated in said collar groove to hold said body portion against inadvertent displacement from said collar member during removal of said tearing strip to prevent spilling of the container contents, said locking lugs on the thus severed upper body portion being thereafter resiliently engageable at random with the thus exposed peripheral collar groove when said severed body portion and secured end member is employed as a tightly fitting reclosure for the container.

2. A tearing strip container, comprising a body having an imperforate end member secured thereto in an end seam, spaced score lines extending around said body to define therebetween a removable tearing strip for severing the upper body portion including said end member for use as a reclosure for the container, an interior collar having an inwardly extending annular arcuate groove therein secured to the inner wall of said body with said groove disposed above said score lines, the upper end of said collar terminating in an inwardly curled seat for said end member, and a plurality of peripherally spaced inwardly projecting curved locking lugs on said upper severable body portion, said lugs being resiliently seated in said collar groove to hold said body portion against inadvertent displacement from said collar during removal of said tearing strip to prevent spilling of the container contents, said locking lugs on the thus severed upper body portion being thereafter resiliently engageable at random with the thus exposed peripheral collar groove in any relative circumferential position thereof when said severed body portion and secured end member is employed as a tightly fitting slip reclosure for the container.

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