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3,145,906

CONTAINER WITH INTEGRAL HINGED-COVER

Filed Dec. 17, 1959

2 Sheets-Sheet 1

Fig. 1.

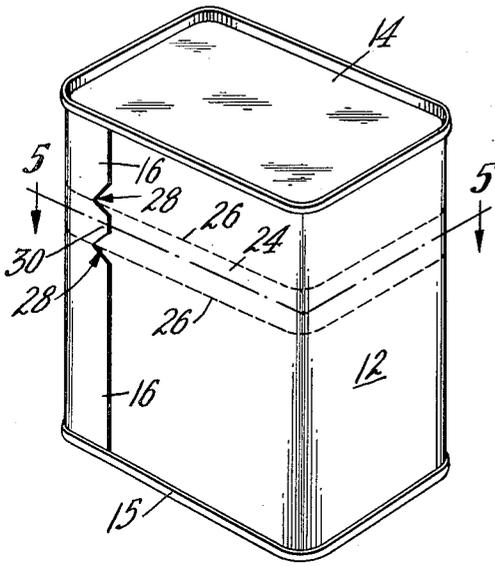


Fig. 2.

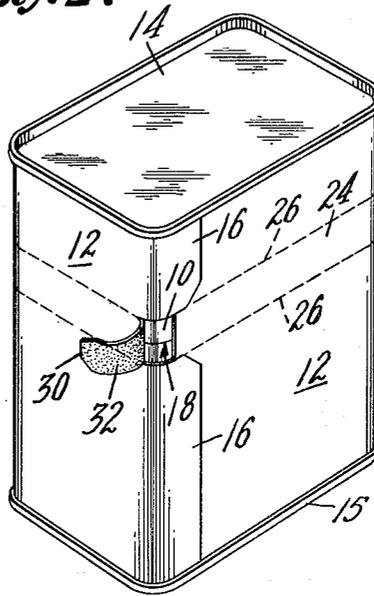
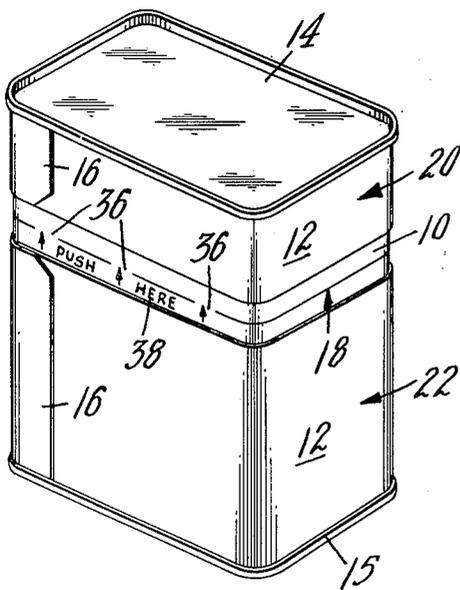


Fig. 3.



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AGENT

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**CONTAINER WITH INTEGRAL
 HINGED-COVER**

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2 Claims. (Cl. 229—51)

The present invention relates to labelled, convolutedly 10
 wound fibre-bodied containers, and has particular refer-
 ence to such a container wherein a simple inexpensive
 opening feature is provided at little or no cost for extra
 material.

There is a considerable need at the present time for 15
 a sturdy inexpensive fibre-bodied container which is
 initially sealed to prevent tampering with the container
 contents, but which can be easily opened by the ultimate
 purchaser. There are several container constructions 20
 presently available which are intended to satisfy this
 need, but these constructions are somewhat complicated
 and rely on separate pull members, such as cords or tapes,
 to provide the opening means, and are fairly expensive
 since they involve not only the extra material cost of the 25
 pull members, but necessitate rather expensive extra
 equipment for incorporating the separate pull members
 in the container bodies.

The present invention contemplates a satisfaction of 30
 this need by providing a container which can for the most
 part be made on standard equipment at little or no addi-
 tional material cost. In its preferred form, the invention
 provides a convolutedly wound composite container where-
 in a circumferential cut is formed in the body adjacent
 one of the container ends in order to divide the container
 into a cover portion and a base portion. The circum- 35
 ferential cut is initially covered over and sealed by a
 label which is secured around the outside of the body,
 but the cut is exposed when a tearing strip, formed inte-
 grally in the label and positioned outwardly of the cut,
 is removed. To reinforce the fibre body so that the 40
 strength of the label alone need not be relied upon to
 hold the container together prior to opening, the circum-
 ferential cut is interrupted so that a plurality of
 uncut bridge portions or lands are provided, these bridge
 portions preferably being positioned in the outer body 45
 ply.

In the preferred form of invention, the body is rectan-
 gular in form, and one or more of such bridge portions,
 sufficiently short in length so that they can easily be
 broken through, are positioned in one of the wide body 50
 walls, while a longer bridge portion, not designed to be
 broken, is positioned in the opposite body wall to serve
 as a cover hinge which becomes operable after the short-
 er bridge portions have been broken through.

Thus, at little expense, a simple, convenient opening 55
 feature is incorporated in an otherwise conventional
 container.

An object of the invention, therefore, is the provision
 of an easily opened container which is divided into read- 60
 ily separable cover and base portions by a circumferen-
 tial cut formed in the container body, the cut, prior to
 opening of the container, being covered over by a remov-
 able tear strip formed in the overlying container label.

Another object is the provision in such a container of

means to maintain the cut body as a unitary structure
 prior to removal of the tear strip to thereby reinforce
 the container against premature inadvertent opening.

A further object is the provision in such a container of
 means formed integral with said body to hingedly con-
 nect the cover and base portions, said hinge means also
 being operable to reinforce the body structure prior to
 removal of the tear strip.

Still another object is the provision in such a con-
 tainer of means to prevent adherence of the tear strip
 to the underlying body to facilitate its removal, when
 desired, by the ultimate purchaser.

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

Referring to the drawings:

FIGURE 1 is a perspective view of a labelled con-
 tainer made according to the principles of the instant
 invention;

FIG. 2 is a perspective view of the container of FIG.
 1, showing an initial stage in the removal of the label
 tear strip;

FIG. 3 is a view similar to FIG. 1, showing the tear
 strip completely removed, but prior to the breaking
 through of the reinforcing break-through portions formed
 in the underlying container body;

FIG. 4 is a view showing the container after the rein-
 forcing bridge portions have been broken through, the
 cover portion being swung backwardly along a hinge
 which is formed by an uncut portion of the outer body
 ply, and

FIG. 5 is an enlarged sectional view taken substantially
 along the line 5—5 of FIG. 1.

As a preferred and exemplary embodiment of the in-
 stant invention, the drawings disclose a rectangular
 container comprising a tubular fibre body 10 which is exter-
 nally covered by a suitable label 12 and is closed at its
 end by clinched, imperforate top and bottom metal end
 closures 14, 15. The container, is of course, filled with
 its contents (not shown) prior to being closed. As best
 seen in FIGS. 4 and 5, the body 10 is formed from a
 single blank of comparatively thin stock which is con-
 volutedly wound upon itself a plurality of times, all of
 the mutually engaging ply surfaces being glued together
 to form a solid laminated structure. The glue bond be-
 tween the plies is omitted from the drawing for the sake
 of simplicity. In the illustrated container, the body 10
 is shown as formed of three plies, but it will be understood
 that the invention is not limited to any particular number
 of body plies.

The label 12 may be decorated in the usual manner,
 and is made from any suitable material, such as thin paper,
 or metallic foil or plastic film laminated to a paper back-
 ing. It may or may not be waterproof, greaseproof, etc.,
 as the need may be. The label 12 extends completely
 around the body 10 and has its ends overlapped adjacent
 one corner of the body to form a glued lap seam 16. The
 inner surface of the label 12 is preferably glued to the
 outer surface of the can body 10, the adhesive (not shown)
 completely adhering the mutually contacting surfaces of
 the label and body except for a removable portion of the
 label, as will be hereinafter described. In the normal

course of manufacture of the container, this adhesive is applied to the outer surface of the body 10 as an incident to the body winding operation, which takes place just before the label 12 is applied to the body 10. It is thus necessary, as a separate operation, to apply adhesive to the bottom surface of the overlap edge of the label 12 in order to obtain a glued lap seam 16 since this portion of the label would otherwise not have adhesive applied to it.

In order to provide for easy opening of the sealed container, a peripheral cut or line of severance 18 is formed in the body 10 adjacent the top end 14 of the container. The cut 18 extends completely through all of the body plies, with the exception of certain portions of the outer body ply, as will be hereinafter described. In effect, the cut 18 divides the container into a cover portion 20, which includes the top closure 14 and the portion of the body 10 above the cut 18, and a base portion 22, which includes the bottom closure 15 and the portion of the body 10 below the cut 18. However, even though the body is thus divided into two parts by the circumferential cut 18, the label 12 bridges the cut 18 and normally maintains the cover and base portions 20, 22 in closed and sealed position.

The label 12 is formed with an integral, removable tear strip 24 which extends completely around it and is disposed outwardly of the circumferential body cut 18. The tear strip 24 is set off by a pair of spaced and parallel weakening lines 26 which are formed in the label 12 and so positioned as to straddle the body cut 18. The weakening lines 26 may be formed in any suitable manner, as by scoring the label 12, or by providing a series of short, aligned cuts or perforations which extend completely through the label 12 and are separated by uncut lands in the usual manner.

A pair of notches 28 (see FIG. 1) is provided in the outer lap of the label lap seam 16, the apex of each notch 28 being in alignment with a weakening line 26 to thereby set off a tear strip tongue 30 which may be easily grasped to initiate a tearing action along the weakening lines 26 (see FIG. 2) which results in the complete detachment of the tear strip 24 and the consequent exposure of the body cut 18, as seen in FIG. 3.

In order to provide for clean and easy removal of the tear strip 24, provision is made to insure that it is not adhesively secured to the surfaces which underlie it. In the preferred form of the invention, this is done by spot coating the entire inner surface of the tear strip 24, prior to the application of the label 12 to the container body 10, with an adhesive repellent or resistant material 32 (see FIG. 2) such as paraffin or a microcrystalline wax. Thus, although the label 12 is applied to the body 10 in the usual manner, and its entire inner surface, which includes the inner surface of the tear strip 24 and the tear tongue 30, is coated with adhesive in the usual manner, neither the tear strip 24 nor the tear tongue 30 adhere to the surfaces immediately underlying them because of the presence of the adhesive repellent material 32. Consequently, the tear strip 24 can be easily and cleanly detached when it is desired to open the container.

Another manner of preventing adherence of the tear strip 24 is to spot apply the adhesive to both the body 10 and the label overlap in such manner that the inner surface of the tear strip 24 is left free of adhesive.

It will be understood that in some instances, as where in the contents of the container comprise a solid block (not shown) which completely fills the container, and/or when the container is not subjected to any abuse during shipment and storage, the circumferential cut 18 can extend completely through all of the body plies so that upon removal of the tear strip 24, the cover portion 20 of the container is detached from the lower portion and the opening of the container is immediately effected. However, it will be clear that in some circumstances, as where the contents do not solidly fill the container, it may be desirable to provide a reinforced construction wherein the

upper and lower body portions are held together as a unitary structure prior to removal of the tear strip 24.

In order to thus substantially reinforce the body 10, spaced portions of the outer body ply are left uncut to provide lands or bridge portions which directly connect the cover and base portions 20, 22. In the preferred form of the invention, one such bridge portion, designated as 34, extending for a major portion of the width of the container, is provided in the rear body wall, while a plurality of spaced bridge portions 36 are provided in the opposing, front body wall, the bridge portions 36 being much shorter than the bridge portion 34 and thus easily broken through by digital pressure. The body 10 is provided with a suitable legend 38, initially disposed beneath the tear strip 24, which indicates where the break-through bridge portions 36 are located.

Upon complete removal of the tearing strip 24, the legend 38 as well as the circumferential cut 18 and the break-through bridge portions 36 are uncovered (see FIG. 3). Thereupon, the purchaser, in following the directions of the legend 38, presses upon the body 10 at the indicated break-through portions 36 and severs the body material in those areas. After this has been done, the cover portion 20, now completely severed from the base portion 22 along three sides of the body, may be swung backwardly on the bridge portion 34 (see FIG. 4) to uncover the container contents. Thus, the bridge portion 34, in addition to strengthening the body 10, also functions as a hinge and permits the cover portion 20 to be utilized as a reclosure.

It will be understood the number and positioning of the uncut bridge portions of the body 10 may be varied to suit specific container requirements. Thus, if desired, a plurality of short break-through portions 36 may be spaced completely around the container and the hinge portion 34 completely eliminated, or as an alternative, the hinge portion 34 may be provided and the break-through portions 36 omitted. Also, the bridge portions 36 may be formed in any of the body plies, and need not be limited to the outer ply.

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 container comprising a convolutely wound multi-ply tubular fibre body of substantially rectangular cross section,

said body having lines of severance therethrough disposed in a plane substantially normal to the axis of said body to divide the body into an upper portion and a lower portion,

said severance lines extending completely through all body plies inwardly of the outermost ply around all sides and corners of the container,

said severance lines further extending entirely through said outermost ply along two parallel walls and around the four corners of said body,

said severance lines further dividing a major portion of said outermost ply along one of the remaining two parallel walls, a minor portion of said outermost ply between said severance lines defining an uncut portion of said outermost body ply bridging said upper and lower portions for subsequent manual fracture thereof, said outermost ply along the other remaining parallel wall being uncut between said corner severance lines to define an integral hinge connection between said upper and lower body portions, whereby manual fracture of said uncut bridging portion of the outermost ply of said one remaining wall permits separation of said upper and lower body portions by relative pivotal movement therebetween

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about said hinge connection of said outermost ply along the other remaining wall to gain access to the container contents.

2. The container of claim 1 further including:

a label surrounding and permanently adhesively secured to the outermost ply of said upper and lower body portions on either side of said lines of severance, and an integral removable tear strip formed in said label and overlying said lines of severance in non-secured relation to said body,

the removal of said tear strip serving to expose said lines of severance and uncut bridging portions of

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said outermost ply therebetween to permit fracture thereof in opening the container.

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