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RECLOSURE CONTAINER
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Fig. 1

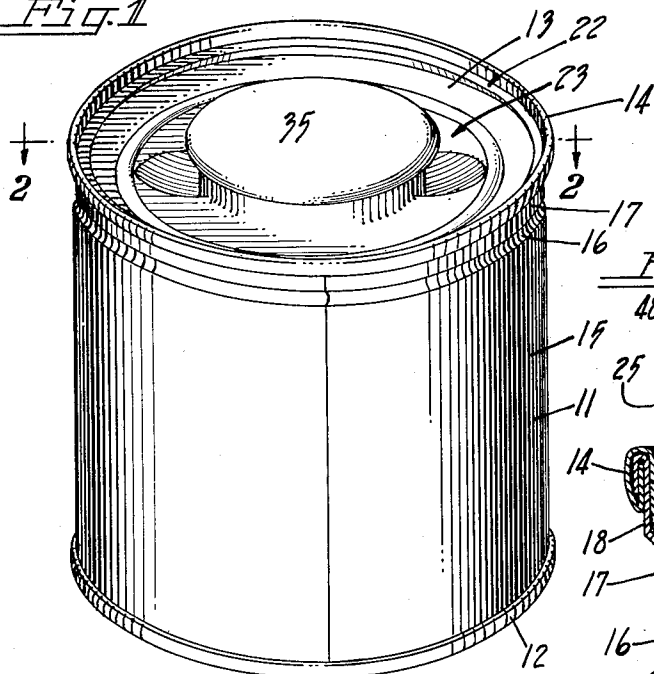


Fig. 3

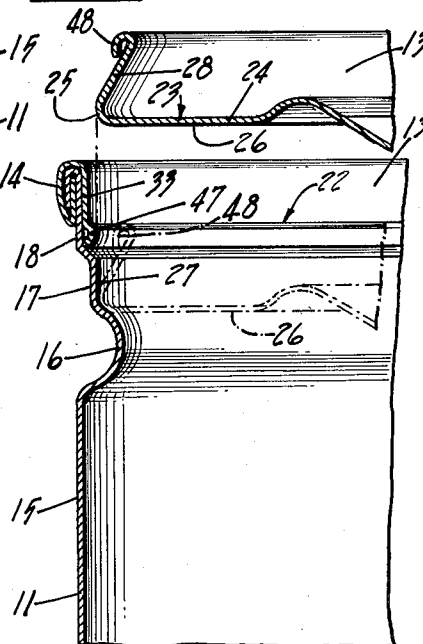
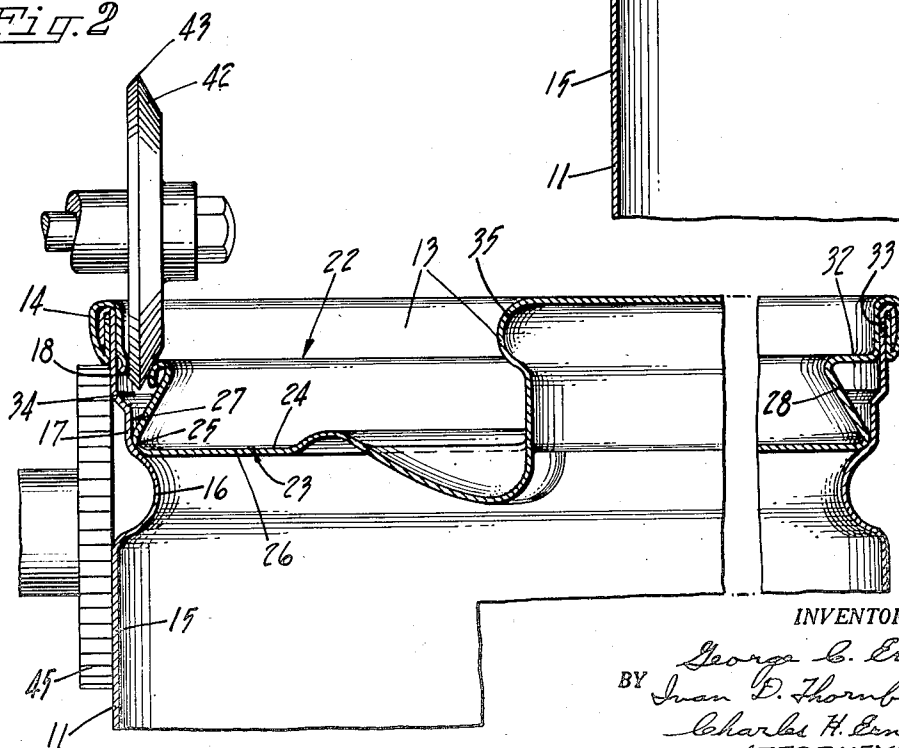


Fig. 2



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RECLOSURE CONTAINER

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2 Claims. (Cl. 220-48)

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This invention relates to cans or containers and more particularly to a novel end construction of container body and end closure which is readily severable to open the container the act of opening rendering the container parts free from exposed sharp edges produced during the severing operation so as to provide a suitable cover reclosure.

An object of the invention is the provision of a container having a severable end closure which may be utilized as a reclosure wherein the sharp edges produced by severance of the end closure from the container are automatically reformed and are brought into a shielded condition by the severing operation so as to protect the consumer against injury while handling the opened container.

Another object of the invention is the provision of such a container wherein the cut-through edges of the end closure are bent into an unexposed shielded position so that they are inaccessible to the consumer.

Another object of the invention is the provision of a reenforced collarless can body of a container of the character described having a novel end closure construction wherein its various parts are cooperatively arranged to solidly support the end closure during the cutting and reforming operation so that the cut or severed sections of the end closure are folded back against the wall of the body and against the can end to avoid sharp and unprotected edges.

Another object of the invention is the provision of such a novel body and end closure construction which can be formed economically with a slight change in existing body and end formation tools and which does not interfere with the attainment of a tight and a hermetic joint between container body and end closure and which upon being opened provides a suitable reclosure type container.

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 container embodying the present invention;

Fig. 2 is an enlarged fragmentary sectional view of the container illustrated in Fig. 1 showing the can end construction and also showing the cutting and feeding parts of a rotary cutter type opener in position for the cutting operation; and

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Fig. 3 is an enlarged sectional view of the container and a cut-out portion of the can end adapted as a reclosure the severed end being shown in separated, superposed position, as such an end appears following the cutting operation.

As a preferred embodiment of the invention the drawings illustrate a cylindrical container of sheet metal such as tin plate or other suitable material having a tubular can body 11, a bottom can end secured to the body in an end seam 12 and a top can end or cover 13. The latter is secured to the body 11 in an end seam 14. The end seams 12 and 14 preferably are of the double seam variety which have a packing or sealing compound interposed between the folds of the seam to effect a hermetic seal for the container. The seam forming is done in any suitable and well known manner.

The body 11 for its major part has a straight cylindrical wall 15. Near its top and below the double seam 14, the material of the body wall is bent inwardly to form a circumferential body bead 16. From this bead the body extends in a vertical wall part 17 which is slightly inside of but is parallel to the wall 15. Wall part 17 merges into a wall part extension 18 which is in vertical alignment with the straight body wall 15. Wall part 18 terminates at the upper end of the container in the end or double seam 14.

The top can end or cover 13 is formed to provide a novel end construction which is readily severable for opening of the container and the cut-out portion thereafter serves as a suitable reclosure. For this purpose the can end 13 is drawn with a stepped annular shoulder 22 and with a countersunk section 23. It is the wall of this annular shoulder that is cut through in opening the container. The countersunk section 23 extending below the shoulder 22 has a depressed panel wall 24.

The peripheral or outer marginal edge of the panel wall 24 is rounded as at 25 to provide a plug-like element 26 for the can end or cover. The rounded edge of this plug-like element preferably is of a predetermined size and frictionally fits an interior friction surface 27 which is the inner surface of the wall part 17. This is when the can end is in assembled position with the plug element engaging against the body bead 16.

A circular inwardly sloping or inclined wall 28 extends inwardly and upwardly from the rounded periphery 25 and at the top merges into a horizontal outwardly extended annular wall 32. This is a part of the stepped shoulder 22. The sloping

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wall 28 reinforces the annular wall 32 and after the seam 14 is formed acts to fully seat the periphery 25 against the body bead 16. This is particularly desirable during the cutting operation in opening the container and will be described more fully hereinafter. Wall 32 terminates in an upstanding wall 33 also part of the stepped shoulder 22, and enters into the double seam 14.

The annular wall 32 and the sloping wall 28 together with the can body wall set off a clearance space 34 which allows opening of the container as hereinafter described.

The panel wall 24 may be formed with a central finger hold embossment 35 (Figs. 1 and 2). The top of such an embossment preferably is flush with or may be below the upper edge of the end seam 14. Such an embossment 35 makes it convenient for removing and replacing the top can end or cover as a reclosure for the container after it has been opened. The body bead 16 and the friction wall 17 insure proper seating of the cover reclosure (Fig. 3).

To open the container just described most any commercial can opener may be used. For the purpose of illustration Fig. 2 of the drawings shows an opener of the rotary cutter type having a roller 42 formed with a sharp annular cutting edge 43. A propelling or feeding roller 45 is adapted to frictionally engage and ride beneath the end or double seam 14 and to cooperate with the cutter roller 42 in such a well known form.

In the opening operation the cutting edge 43 transcribes a circular line of severance which is near the center of the horizontal annular wall 32. The cutting edge enters into the clearance space 34 and unrestricted action is had. Thus a clean cut is effected and the severed portion of the cover including the plug-like element 26 is separated from the container (see also Fig. 3).

It should be noted that during the cutting operation the cover is supported by the body bead 16. This supporting action is utilized so that the cut edge sections of the severed wall may be reformed or bent into protected position.

The result of this combined cutting and bending operation is clearly shown in Fig. 3. It will be observed that there is produced a downwardly curled wall part 47 at the base of the body wall 33. This is on the opened can. There is also produced a turned-back wall part 48 which is curled or folded against the sloping wall 28. This is on the severed cover.

Thus the severed edge 47 is shielded by the body wall 18 and the severed edge 48 is shielded by the cover wall 28. The dot and dash outline of the severed cover, shown in Fig. 3, indicates the position the cover assumes in the can just after opening, this also being the reclosed position.

It will be understood that the body and cover construction above described may be used for either the bottom or for the top end of the container. It can be used for both ends if both ends are cut out.

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

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invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A reclosure container comprising, a tubular body having an inwardly projecting peripheral bead, and an end member secured to said body in an end seam, said end member adjacent said seam having an inwardly extending substantially planar annular wall adapted to be severed by a cutting tool to open the container, said annular wall merging into a depending outwardly inclined wall engaging against said body bead to set off a closed annular clearance space between the body and end members for the reception of said cutting tool, the resistance of said body bead engaged inclined wall of the end member cooperating with the cutting tool in opening the container to simultaneously turn back the peripherally severed edges of said end member annular wall to provide a smooth plug reclosure member for the container engaging against and supported by said body bead, said end member having an integral closure panel merging with said outwardly inclined wall at said bead.

2. A sealed reclosure container comprising a tubular body having an inwardly projecting peripheral bead, and a countersunk end member secured to said body in a double seam and having a depressed panel wall engaging said body bead, said end member adjacent said seam having an inwardly extending substantially planar annular wall adapted to be severed by a cutting tool to open the container, said annular wall merging into a depending outwardly inclined wall engaging against said body bead to set off a closed annular clearance space between the body and end members for the reception of said cutting tool, said inclined wall of the end member thence extending inwardly to constitute the depressed panel wall of the end member, said depressed end member panel wall having an integral centrally disposed upstanding embossment thereon to constitute a finger hold for a reclosure cover member for the container, the resistance of said body bead engaged inclined wall of the end member cooperating with the cutting tool in opening the container to simultaneously turn back the peripherally severed edges of said end member annular wall to provide a smooth friction plug reclosure member for the container for frictionally engaging against the interior body wall above said body bead and supported by said bead.

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