FULL OPENING CONTAINER END

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ABSTRACT OF THE DISCLOSURE

An end wall member for a metal container or can formed with an end-panel-defining score line immediately adjacent the can side wall is provided with a ring pull tab for severing the can end along the score line to remove the entire end panel so that the contents of the can may be removed readily. The pull tab has special formations for readily severing the end panel along the score line. The can end has special formations facilitating easily peeling the end panel from the can and minimizing any tendency of the end panel to dip into the contents of the can during end panel removal. The can end also is provided with formations to prevent damage thereto from movement of the can end during heating and processing of food in the sealed can.

BACKGROUND OF THE INVENTION

Field of the invention

The invention relates to an end wall structure for a metal can which, upon removal of an end panel from the can end, provides a full opening for the can and permits ready and complete access to and removal of the can contents. More particularly, the can end is provided with a ring pull tab structure and can end wall formations, which protect against can end wall flexure damage during heating of foods processed in the can, which permit a can end panel to be peeled easily from the can for removal, and in which the pull tab may be manipulated easily for can end panel removal.

Description of the prior art

Prior removable can end structures have included a pryng lever pivoted or hinged to the can end which has a piercing formation that punctures the can end at a score line adjacent the can side wall when the lever is moved. A lever manipulating pull ring usually was associated with the lever movable relative to the lever. Sometimes a pull tab has been formed with an integral pull ring and with the pull ring movable relative to the tab body, and the tab body has been formed and associated with the can end in such a manner that a considerable length of metal along the score line has to be fractured at one time during the initial severing of the score line. Sometimes the prior lever structures have been formed of sheet metal secured to the can end by a rivet-like connection with the sheet metal landed around a portion of the rivet head to permit bending of the sheet metal during manipulation of the pull tab to open the can.

Difficulties have been experienced with prior structures, including among others the tendency to tear a sheet metal pull tab from the can end when secured thereto by rivet-like means; the requirement of a relatively large pulling force to sever the initial portion of the score line so that the end panel thereafter can be torn easily along the score line; resistance to readily tearing the end panel along the score line progressively from the extremities of the initial tear; the tendency of the end panel to dip into the contents of the can at the completion of the tearing operation; damage to or bursting of the can end along the score line incident to drum action of the end panel as a result of changes in differential pressure on the can end arising from heating and cooling of the can and its contents during processing of food in a sealed can; and uneven stacking characteristics when stacking cans one on top of another, producing tilting incident to the presence of the pull tab.

SUMMARY OF THE INVENTION

Objectives of the invention include providing a new can end and riveted ring pull tab construction with a pull tab having a minimum tendency to tear away from the can end during can end removal; providing a construction which readily severs a very short portion of the score line to initiate the tearing of the end panel from the can end, thereby enabling the end panel to be removed by a progressive peeling action overcoming the normal stiffness characterizing a can end adapted to resist changes in relative pressures on the surfaces of the can end; providing a construction which inhibits a dipping of the end panel into the can contents during removal and minimizing a lifting of the flange portion of the can end remaining as a part of the can at the upper end of the can side wall after end panel removal; and providing for elimination of difficulties heretofore encountered, and achieving the stated objectives simply, effectively and inexpensively.

These objectives and advantages are obtained by the can end construction, the general nature of which may be stated as including a metal end wall member adapted to be secured to the side walls of a metal can by a usual seam, the end wall member having spaced outer and inner score lines adjacent the seam, the outer score line defining an end panel and being formed to a greater depth than the inner score line, thus providing a tear line on which the end panel may be torn from the end wall member; metal pull tab means, rivet means securing the pull tab means to the end panel within the inner score line, a series of curved debossed corrugations formed in the end panel presenting concavity toward the location of the rivet means; the pull tab means being formed of sheet metal with a top wall, the pull tab having a bottom wall and an outer edge formed in one end of said pull tab top wall, a pull ring opening formed in the other end of the pull tab top wall, the top wall being formed with spaced parallel side edges extending perpendicular to said parallel side edges; a recessed channel having a channel bottom wall extending from said recess to said one end of said top wall, the bottom walls of said recess and channel being in the same plane spaced below said top wall, the channel bottom wall terminating in a rounded nose projecting from said one end of the pull tab means, the recess bottom wall being formed with an opening through which said rivet means extends, the recess bottom wall being lanced around said opening; said lance including a semi-circular lance portion located closer to the rivet means than to said outer edge of said recess, said lance also including spaced outwardly diverging straight lance portions connected with the semi-circular lance portion and directed toward said one end of said pull tab means and terminating in inwardly curved hook-like portions; the rounded nose extending radially outward of and overlapping the outer score line when the pull tab means is secured by said rivet means to the end panel; said hook-like lance ends defining between them a hinge area along which the pull tab means may bend when pulled to tear the end panel from the end member, said pull tab means being formed of heavier sheet metal than the end panel, the end panel
bending on a hinge area spaced from the pull tab hinge area when the pull tab means is manipulated to tear the end panel from the end member, the curved nose wiping and retracting across the outer score line and during such retraction forming a recess in the end panel below the pull tab means channel when the pull tab is manipulated for end panel removal; and the end panel in small sized can end wall structures being formed with a pair of projecting bosses triangularly arranged with respect to the pull tab rounded nose, said bosses cooperating with corrugations formed in the bottom wall of an adjacent can for stacking cans one upon another in a stack without tilting.

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred embodiments of the invention—illustrative of the best modes in which applicants have contemplated applying the principles—are set forth in the following description and shown in the drawings and are particularly and distinctly pointed out and set forth in the appended claims.

FIGURE 1 of the drawings is a top plan view of a can provided with the new can end wall structure;

FIG. 2 is a side view of the can shown in FIGS. 1 and 2, with parts broken away, showing the initial stage of manipulating the improved ring pull tab for end panel removal;

FIG. 3 is a perspective view similar to FIG. 2 showing a later stage in the operation of tearing out the end panel;

FIG. 4 is a view similar to FIG. 3 but showing the relative position of the parts as the end panel has been peeled further from the end wall member;

FIG. 5 is a fragmentary sectional view on a larger scale of a portion of FIG. 2 illustrating the ring pull tab in its normal position prior to manipulation for end panel removal;

FIG. 6 is a view similar to a portion of FIG. 5 but showing the ring pull tab moved to a position similar to that shown in FIG. 3 in the initial stage of removing the end panel;

FIG. 7 is a view similar to FIGS. 5 and 6 but showing the relative position of the parts as the end panel has been removed completely from the can;

FIG. 8 is a view similar to FIGS. 3, 4 and 5 showing the removed end panel and pull tab illustrated in FIG. 8;

FIG. 10 is a view looking upward in the direction of the arrows 10—10, FIG. 6, illustrating the shape of the end panel during the initial stage of end panel removal;

FIG. 11 is a fragmentary sectional view taken on the line 11—11, FIG. 9 illustrating the relation of certain of the parts to one another after removal of the end panel;

FIG. 12 is an enlarged top plan view of the improved ring pull tab structure;

FIG. 13 is a side view looking toward the left-hand end of FIG. 12;

FIG. 14 is a fragmentary sectional view looking in the direction of the arrows 14—14, FIG. 12;

FIG. 15 is a sectional view taken on the line 15—15, FIG. 12;

FIG. 16 is a fragmentary sectional view taken on the line 16—16, FIG. 12;

FIG. 17 is a fragmentary sectional view taken on the line 17—17, FIG. 12;

FIG. 18 is a fragmentary view looking in the direction of the arrows 18—18, FIG. 12;

FIG. 19 is a top plan view similar to FIG. 1 of a smaller sized can provided with the new full opening container end wall structure;

FIG. 20 is a bottom plan view of the container illustrated in FIG. 19;

FIG. 21 is a view similar to FIG. 19 with parts broken away illustrating the relationship between can top and can bottom wall formations;

FIG. 22 is a vertical section looking in the direction of the arrows 22—22, FIG. 19 illustrating two cans stacked one on top of the other;

FIG. 23 is an enlarged fragmentary sectional view of a portion of FIG. 22, looking in the direction of the arrows 23—23, FIG. 21;

FIG. 24 is an enlarged fragmentary sectional view looking in the direction of the arrows 24—24, FIG. 21;

FIG. 25 is an enlarged sectional view looking in the direction of the arrows 25—25, FIG. 21.

Similar numerals refer to similar parts throughout the drawings.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

First embodiment

The invention is illustrated typically in FIGS. 1 through 18 as applied to one can size that is larger than the can illustrated in FIGS. 19 through 24.

A typical container or can, generally indicated at 1, is generally of conventional construction including a cup-shaped body providing side walls 2 and a bottom wall 3. The can body side walls 2 are closed at upper end of the can by the improved can end wall structure indicated generally at 4 secured to the side walls 2 by a conventional double seam 5. End wall structure 4 has a portion recessed at 6 with respect to the double seam 5 (FIGS. 2 and 3); and recessed wall portion 6 is formed with a curved score line 7 immediately adjacent the double seam 5 and the upper end of the can side wall 2, the score line 7 thus defining an end panel 8. End panel 8 is completely removable from the remainder of the end wall structure 4 when severed along score line 7 to provide a full opening at the top of the can 1. The improved end wall structure 4 also includes an improved ring pull tab structure generally indicated at 9.

Ring pull tab 9 (FIGS. 12–15) preferably is formed of sheet metal of somewhat heavier gauge than the sheet metal from which the end wall 4 is formed. The members 4 and 9, preferably, but not necessarily, may be formed of aluminum. Ring pull tab 9 has a main or top wall 10, and an end 11 of wall 10 is reduced in width by curved portions 12. A generally circularly-shaped recess 13 is formed in said one end 11 having a connected channel portion 14 extending from the recess 13 to the outer edge 15 of said one end 11 of the top wall 10. The bottom wall 16 of recess 13 is in the same plane as the bottom wall 17 of channel 14, and walls 16 and 17 are spaced below the top wall 10. A pair of loupers 18 are stamped upward from the top wall 10 outside the right-hand end of recess 13 (FIG. 12) for a purpose to be described.

A ring opening 19 is formed in the other or opposite end 20 of the top wall 10 of member 9, so that recess 13 is located in the one end 11 and opening 19 is located in the opposite end 20 of member 9. Ring opening 19 forms a finger hole or ring which may be grasped when the member 9 is manipulated. Opposite end 20 of member 9 is formed with an outer reversely curved bead 21 extending semi-circularly around the right-hand half of opening 19 (FIG. 12). Top wall 10 is formed around the periphery of opening 19 with an inner reversely curved bead 22 circularly continuous in extent. Beads 21 and 22 at the right hand or opposite end 20 of member 9 from a false wire bead generally round in cross section (FIG. 5) as indicated at 23.

Member 9 is provided with straight parallel edges 24 extending between the curved portions 12 at said one
end 11 and the semi-circular portion at the opposite end 20 of the top wall 10 of member 9.

Parallel edges 24 and curved end portions 12 are formed with outer reversely curved beads 25 which are formed as a continuation of the bead 21.

The top wall outer edge 15 at said one end 11 of member 9 is substantially straight at either side of channel 14 (FIG. 12) and said outer edge 15 is perpendicular to an axis or centerline (such as section line 16-16) passing through the center of opening 19 and the center of recess 13. The flat wall 17 which is a continuation recess bottom wall 16 and forms the bottom of channel 14 has a sharply curved rounded nose 26 which projects outwardly to the left of top wall edge 15 (FIGS. 5 and 12). Curved nose 26 has a curvature different from that of the curved score line 7.

An opening 27 is punched close to the one end 11 of pull ring 9 generally centrally through the bottom wall 16 of recess 13 (FIG. 12) for receiving a rivet formation to connect member 9 with end wall 4. This rivet connection 28 for assembling members 9 and 4 may be made in a conventional manner, or the fastening may be accomplished as set forth in Heming et al. Pat. No. 3,346,948.

Bottom wall 16 of recess 13 in member 9 is lanced at 29 with a special lance shape, the configuration and location of which are of special importance. The lance configuration is shown in FIGS. 1 and 12. Lance 29 includes a semi-circular portion 30 close to the opening 27 and immediately adjacent the head of the rivet 28 (FIG. 1). Semi-circular portion 30 then is extended by straight portions 31 at either end which diverge outwardly toward the one end 11 of member 9 (FIG. 12). Diverging straight portions 31 terminate in small hook-like shapes 32.

The metal in recess bottom wall 16 of member 9 extending between hook portions 32 provides a hinge-like bend area indicated at 33 (FIGS. 6, 7 and 8) along which member 9 pivots when the rear pull tab 9 is manipulated to open the can. The outward divergence of the straight portions 31 of lance 29 provides a maximum length for this hinge area so as to retain maximum strength of the connection between member 9 and the portion 16a of recessed bottom wall 16 within lance 29 and surrounding rivet opening 27.

At the same time, semi-circular lance portion 30 is located as close as possible to the opening 27 so as to, on one hand, leave sufficient metal in the lanced bottom portion 30 to provide a strong and stable rivet connection, and so as to, on the other hand, leave as much recessed bottom wall metal 16 surrounding lance 29 as possible, to retain stiffness and strength for the portion of member 9 to the left (FIG. 12) of opening 19. This stiffness and strength results from the offset flat wall portions provided by the top wall 10 and recessed bottom wall 16 at the bottom of recess 13.

The hook-like portions of curved ends 32 of lance 29 prevent the metal from tearing outwardly toward the end 11 of member 9 at the extremities of the straight portions 31 of lance 29, as member 9 is bent along bend area 33.

It is important, in connection with the new structure, that member 9 be very accurately located in a proper position with respect to the end wall 4 when the two members are assembled and the rivet 28 is formed. The straight edges 24 of member 9 provide aligning edges to be engaged by the assembly tools in one direction (horizontally across FIG. 12), and the edges 18a of the louvers 18 (FIGS. 12 and 17) provide locater edges engaged by assembly tools in a vertical direction or perpendicular to the edges 24 of member 9.

The shape and location of the rounded nose 26 at the end of the bottom wall 17 of channel 14 is important in achieving the objectives of the invention. First of all, the rounded nose 26 as described should project outward to the left of top wall outer edge 15 (FIGS. 5 and 12). Next, when member 9 is riveted to member 4 (FIG. 5), rounded nose 26 should overlap appreciably the circular score line 7 in member 4. Next, the outer curved beads 25 along the curved portions 12 of the one end 11 of top wall 10 are cut back and relieved as illustrated by the curved edge 34 in FIGS. 12 and 13.

Opening of a can provided with the improved ring pull tab member and end wall structure 4 and the progress of the opening operation are illustrated in FIGS. 3 through 11. The parts in their normal position as assembled on a closed can are shown in FIG. 5. The round portion 23 at the right-hand end of member 9 is grasped between the thumb and fingers of one hand and pulled upward toward the position diagrammatically shown in FIG. 6 and also generally in FIG. 3. During pivotal movement of member 9 from the horizontal position of FIG. 5 to the vertical position of FIG. 6, the metal of member 9 bends and pivots along the hinge area 27. During this action, the opening of rounded nose 26 across score line 7 and during reforming of the metal at 35, initiates severing of metal in end wall 4 along score line 7 outward of the reform area 35, with a minimum of effort required to move member 9 between the horizontal position of FIG. 5 and the vertical position diagrammatically illustrated in FIG. 6.

After the initial severing along reform area 35, the metal tears from the ends of initial severance circumferentially along score line 7 in both directions quite easily. When the position of the parts generally shown in FIG. 3 is reached, the end wall metal of the severed portion is curved concavely laterally of member 9 as illustrated generally at 36 in the drawings during bending at 37. Meanwhile, vertical pull on the member 9 continues the tearing action of end panel 8 along score line 7 as illustrated in FIGS. 4 and 7 until the end panel 8 is completely removed when it has the shape generally shown in FIGS. 8 and 9. Although the opening action has been described as comprising hinge movement of member 9 from the horizontal position to the vertical position and then a vertical pull on member 9, the shear operation these movements are combined and the vertical pull is exerted while hinge and before the vertical position of member 9 shown diagrammatically in FIG. 6 is reached. Thus, the concave curved portion 36 bent about bend area 37 actually never enters or dips into the interior of the can to the degree shown on an enlarged scale diagrammatically in FIG. 6.

During the formation of the concave curved shape 36, the end wall metal bends or hinges along an area 37 quite close to the location of the edge of rivet 28 and spaced from the bend area 33 (FIGS. 6 and 7) because of the thinner metal in the end wall 4 than in the ring pull member 9. This spacing is indicated by the clearance 38 in FIGS. 6 and 7. The spaced and offset locations of the bend areas 33 and 37 result in a retraction of the rounded nose 26 along the top of end panel 8 from the location of the severed edge 39 of end panel 8 (FIG. 7) for a considerable distance as indicated at 40 in FIG. 7.

Because the beads 25 are relieved by the curved edges 34 at either side of the rounded nose 26 (FIGS. 12, 13, 14 and 18), as nose 26 wanes along end panel 8 and forms the reformed indentation 35 (FIGS. 10 and 11), and as member 9 bends along area 33 and end panel 8 bends along area 37, and as nose 26 retracts from
severed edge 39 as indicated at 40, the one end 11 of member 9 does not engage end wall metal except by the undercut portion 33 may be bent upward slightly as indicated at 42, thus providing easier access to grasp the ring as shown in FIG. 5.

It has been discovered that end wall structures with pull rings intended to tear out an end panel around a score line 7 generally shown in FIG. 1, during the hinge-sealed can for processing for 9, because of stiffness of metal in end wall 44, the end wall 4 has a tendency to form convexly upward in a trough-like manner with the trough extending from left to right from the zone of initial severance viewing FIG. 1. This tendency has caused the tearing out operation of the end panel to be difficult. We have discovered further that this difficulty is eliminated, the stiffness relieved, and the undesirable trough-like formation is inhibited from forming, by providing debossed lines or areas indicated at 43 in the end wall. These debossed lines preferably each should be curved on the same arc and should be quite shallow with the concavity of curvature facing the location of the right connection 28. The first debossed indentation at the left, indicated at 43a, preferably should extend from either side of the rivet formation 28.

This curved line debossment accomplishes a number of results. First of all, it facilitates a peeling action illustrated in FIGS. 4, 7, 8 and 9 of the end panel 8 as it is removed from the can. Next, it prevents a dip-down of end panel 8 at the completion of the operation of tearing end panel 8 from the can. Next, it minimizes the lift on the flange 44 (FIG. 7) which is left on the can structure as the remainder of the end wall after the end panel 8 is torn out. Also, it strengthens the end wall against retort flexing and flipping up and down of the end wall 4 during cooking of food products within a sealed can.

The score line 7 along which the end panel 8 is torn when removing the end panel is located substantially in line with the inside surface 45 of the can side wall 2 (FIG. 5 and 7). In accordance with the invention, a second or inner score line 46 is formed in end panel 8 close but spaced from score line 7. The inner score line 46 is shallower than the main or tear score line 7. Inner score line 46 acts to relieve main score line 7 of movement from flexing incident to changes in relative pressures within and outside of the can during heating of a sealed can. Thus, flexing of the can end wall 4 during heating imparts most of the flexing force to the shallower inner score line 46 which thus relieves the deeper tear score line 7 of forces which might otherwise tend accidentally to fracture main score line 7.

Second embodiment.

The improved structure of the invention is illustrated in FIGS. 9 through 25 incorporated as an end wall structure generally indicated at 47 for a smaller sized can 48 than that indicated in FIGS. 1 and 2. End wall structure 47, excepting for having a smaller diameter, is substantially identical with the end wall structure 44 and has the same improved ring pull tab structure 9 assembled thereto by rivet means 28. The same curved debossed lines 49 are formed in the end wall 47 to facilitate the peeling action during removal of the end panel 80 tearing along score line 51. The rounded nose 26 of ring pull tab 9 slightly overlaps score line 51 in the same manner as described in connection with FIGS. 1 through 18. In the structure shown in FIGS. 19 to 25, the pull ring recess 52 is formed in the end panel 50 beneath the right-hand end of ring pull tab 9 in the same relative location with respect to the opening 19 in ring pull tab 9, as illustrated in FIG. 1 with respect to the larger sized can 1.

The structure 47 differs from the larger sized end wall 4 in that preferably a plurality of rounded bosses or knobs 53 are formed in end panel 50 preferably located triangularly at two corners of a triangle, the third corner of which is defined by the rounded nose 26 of pull ring 9.

The smaller sized can 48 when using the same sized pull ring 9 that is used on the larger can, has a tendency to lean or tilt in one direction when cans are stacked one on top of another as illustrated generally in FIG. 22, unless the rounded bosses 53 are provided. The bottom wall 54 of can 48 is formed of a series of circular corrugations indicated by inner corrugation 55, intermediate corrugation 56 and outer corrugation 57 which not only strengthen and reinforce the can bottom wall 54 but cooperate with various portions of a can 48 next below in a stack so that cans may be stacked without tilting.

Referring to FIGS. 24 and 25, the rounded bosses 53 engage intermediate bottom wall corrugation 56 to provide two points of support for the upper can 48 stacked on or supported by a similar lower can 48. The third point of support is provided by the outer bottom wall corrugation 57 supported on top wall 10 at the one end 11 of pull ring 9.

The intermediate corrugation 56 and the inner corrugation 55 in bottom wall 54 of can 48 are progressively offset upwardly of the can bottom so that can bottom wall upwardly offset portions clear the remaining portions of the pull ring (FIGS. 23, 24 and 25) of a can 48 next below in a stack. Note in FIGS. 23, 24 and 25 how the upwardly bent portion 42 of pull ring 9 still has clearance below the bottom wall 54 of the can 48 next above.

The improved construction combines a number of important features and advantages resulting from the shape and location of the can in the pull tab, from the perpendicular locator means on the pull tab for accurately controlling the location of the rounded nose with respect to the end panel, from the shape and location of the rounded nose, from the space between the hinge areas of the pull tab and end panel, from the curved debossed lines or corrugations and their location providing easy peeling for end panel removal, from the relationship between the differential depth double score lines, and from the rounded stacking bosses or knobs and the bottom wall corrugations cooperating therewith; provides structures which eliminate difficulties encountered with prior devices; and provides structures which achieve the objectives and solve problems existing in the art in a simple and readily controlled manner.

In the foregoing description, certain terms have been used for brevity, clearness and understanding; but no unnecessary limitations are to be implied therefrom beyond the requirements of the prior art because such terms are used for descriptive purposes and are intended to be broadly construed.

Moreover, the description and illustration of the invention is by way of example, and the scope of the invention is not limited to the exact details shown or described since the features of the invention may be applied to end walls for different sized cans.

Having now described the features, discoveries and principles of the invention, the manner in which the improved end structure is made, assembled and used, the characteristics of the new construction, and the advantageous, new and useful results obtained; the new and useful structures, devices, elements, arrangements, parts, combinations and subcombinations, and the cooperative relationship therebetween, and mechanical equivalents obvious to those skilled in the art are set forth in the appended claims.
We claim:

1. In metal end wall construction for a full opening container of the type in which a continuous marginal outer score line defines a removable end panel in the end wall and in which pull ring tab means is secured by rivet means to the end panel; the combination of a sheet metal member having a top wall forming said pull ring tab means, a channel recess formed in one end of said top wall, said channel recess terminating in a projecting rounded nose, a pull ring opening formed in the other end of said top wall, the top wall being formed with spaced parallel edges connecting said one and other ends, and lower means formed in said top wall having locator edge means extending perpendicular to said parallel side edges.

2. In metal end wall construction for a full opening container of the type in which a continuous marginal outer score line defines a removable end panel in the end wall and in which pull ring tab means is secured by rivet means to the end panel; the combination of a projecting rounded nose formed at one end of the pull ring tab means, a pair of bosses formed in said end panel and projecting upwardly therefrom, and said bosses being triangularly arranged with respect to the pull tab rounded nose, whereby cans closed at one end with the end wall construction may be stacked one upon another and supported on said triangularly arranged bosses and pull tab nose end without tilting.

3. In metal end wall construction for a full opening container of the type in which a continuous curved marginal outer score line defines a removable end panel in the end wall and in which pull ring tab means is secured by rivet means to the end panel; the combination of a projecting rounded nose formed at one end of the pull ring tab means, said rounded nose having a curvature different from that of the curved outer score line and normally being located immediately above and extending across and beyond said outer score line, means forming a hinge-like bend area in said pull ring tab means between and spaced from said rounded nose and said rivet means, and the end panel having a bend area closer to said rivet means than said pull tab bend area, whereby said rounded nose wipes and retracts across said outer score line and reforms metal in the end panel within the outer score line immediately below said nose to the shape of the nose when the pull ring tab means is pulled for end panel removal and while the pull ring tab means and end panel are bending on said spaced bend areas.

4. The construction defined in claim 3 in which a series of spaced curved debossed corrugations is formed in the end panel presenting concavity toward the location of the rivet means.

5. The construction defined in claim 3 in which the pull ring tab means is secured by said rivet means to said one end of the pull ring tab means; in which a pull ring opening is formed in the other end of said pull ring tab means; in which the pull ring tab means is formed with spaced parallel side edges connecting said one and other ends; and in which lower means is formed in said pull ring tab means having locator edge means extending perpendicular to said parallel side edges.

6. The construction defined in claim 3 in which a continuous inner score line is formed in said end panel adjacent to, within, and spaced from said outer score line; and in which said outer score line is scored to a greater depth than the inner score line.

7. The construction defined in claim 3 in which a pair of bosses is formed in said end panel projecting upwardly and triangularly arranged with respect to the pull tab rounded nose.

8. The construction defined in claim 4 in which one of the debossed corrugations extends from either side of rivets means.

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