CONTAINER COVER STRUCTURE

Inventor: Arthur K. Bunnell, Etobicoke, Canada

Assignee: Carling O'Keefe Limited, Toronto, Canada

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ABSTRACT

A container cover structure for a container in which a plurality of items, typically beer bottles, are situated in separate compartments includes individual seals for each of the separate compartments. The seals are constructed to allow each to be broken for removal of the item from its compartment without breaking the seal of any other compartment.

17 Claims, 9 Drawing Figures
CONTAINER COVER STRUCTURE

FIELD OF THE INVENTION

This invention relates to container structures, more particularly to the cover of a container structure.

BACKGROUND OF THE INVENTION

Beverages, typically beer, are sold in containers which are packaged in convenient pluralities, typically 6, 12 and 24 containers in the case of beer. The containers usually are glass having a neck at the top closed by a crown cap.

In Canada, the beer bottles are packaged in the appropriate numbers in sealed containers which, when opened, provide immediate access to all of the bottles in the container. In many instances this may be undesirable, since dust and debris may accumulate in the container, and, additionally, the bottles may be exposed to sunlight, which may cause deterioration of the bottled beer.

SUMMARY OF INVENTION

In accordance with the present invention, there is provided a container structure which allows single bottles to be removed from the container without the necessity for complete opening of the container. The cover of the container is provided in a novel manner which seals the bottles in individual compartments in the container, and allows individual bottles to be removed from and returned to their individual compartments without breaking the seals of the remainder of the compartments. In this way, the prior art problems of containers which, when opened, allow access to all the bottles in the container, are avoided.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 is a perspective view of a beer case with parts removed and constructed in accordance with the invention; FIG. 2 is a plan view of part of the external surface of one embodiment of a cover panel utilizable in the beer case structure illustrated in FIG. 1; FIG. 3A, 3B and 3C show three stages of opening of a seal and removal of beer bottle; FIG. 4 is a plan view of part of the external surface of one alternative form of the cover panel illustrated in FIG. 2; FIG. 5 is an elevational, part-sectional view of an additional alternative form of the cover panel illustrated in FIG. 4; FIG. 6 is a perspective view, with parts removed, of another embodiment of the cover panel utilizable in the beer case structure illustrated in FIG. 1; and FIG. 7 is a plan view of part of the external surface of one alternative form of the cover panel illustrated in FIG. 6.

DESCRIPTION OF PREFERRED EMBODIMENTS

In FIG. 1, there is illustrated a container structure 10 consisting of a tray 12 and an enclosing sleeve 14. The tray 12 has a base 16, side walls 18 and end walls 20. The tray 12 may be constructed of any suitable material, such as rigid plastic or cardboard.

In the sale of beer in Canada, beer bottles are sold in sealed cases containing 6, 12 or 24 bottles and the empty bottles are returned with the used cases to the retail outlet. It is preferred that the tray 12 has sufficient strength and durability to allow it to be employed in the sale and return of beer bottles several times, full beer bottles replacing the used ones on return of the used case to the factory.

The tray 12 has a plurality of integral dividing walls 22 which segregates the interior of the tray into a plurality of individual compartments 24 in each of which is positioned a beer bottle 26. While the embodiment of FIG. 1 is described particularly with reference to bottled beer, it will be apparent that the invention may be utilized for the scale of bottles containing other types of beverage, or other flowable items. Similarly, while integral dividing walls 22 are described, any other form of dividing walls may be used.

The side end walls 18 and 20 of the tray 12 extend upwardly from the base 16 to substantially the height of the beer bottles 26. The dividing walls 22 may extend upwardly from the base 16 any convenient height to provide the individual compartments 24, typically to the height of the side and end walls 18 and 20.

The sleeve 14 is constructed of light cardboard or the like and is intended to be disposed of on the return of the used case containing empty bottles to the manufacturer, and, after the positioning of the full beer bottles in the tray 12, a new sleeve 14 is applied prior to resale.

The sleeve 14 includes a top panel 28 which is coextensive with the open top of the tray 12, and side panels 30 and end panels 32, depending downwardly from the top panel 28 substantially the height of the side and end walls 18 and 20 of the tray 12. The depending side end panels 30 and 32 have their adjacent edges joined together in any convenient manner and are in gripping frictional engagement with the appropriate side and end wall 18 and 20 of the tray 12. This gripping frictional engagement may be over the whole or a part of the adjacent walls and panels, depending on the form of the walls 18 and 20. The gripping engagement between the sleeve 14 and the tray 12 resists the removal of the sleeve 14 from association with the tray 12.

Handhole slots 34 are provided in the end walls 20 of the tray 12 and appropriate slots 36 corresponding to the handhole slots 34, are provided in the end panels 32 of the sleeve 14 so that the container structure 10 may be readily carried.

The top panel 28 of the sleeve 12 is provided with a plurality of openable seals 38, one associated with each compartment 24 containing a beer bottle 26. Upon opening of a seal 38, the beer bottle 26 located in the particular compartment 24 may be withdrawn and, after consumption of the contents of the bottle, the empty bottle may be returned to the particular compartment 24. The removal of the bottle 26 after breaking the seal 38 occurs without breaking the seal 38 of any other of the individual compartments 24. Hence, the prior art problems associated with exposure of all the contents of the case upon opening of the top are overcome.

As indicated above, while this invention is described particularly with reference to the packaging of beer bottles, the invention has wider applicability, and may be used in packaging a variety of containers which are readily removed from an individual compartment. In the event the item may be such that the contents of the container are not utilized at one time, the container may be returned to the individual compartment 24.
after partial use of the contents and stored there until next required. The container structure 10, as described with reference to FIG. 1 includes a tray 12 and a separate sleeve 14. The invention is not limited to such a structure and the top closure panel 28 may be of any convenient form, for example, integrally formed with or otherwise attached to the tray.

The seal 38 for the individual containers 24 may take on of several forms, for example, as illustrated in FIGS. 2 to 7. As illustrated in FIG. 2, which shows part of the top panel 28 for a typical 12-bottle case of beer bottles, each seal 38 may have a scored outline defining tear lines in the top panel 28.

The scored outline of each seal 38 includes score lines 40 which extend radially outwardly substantially equidistantly from a circular score line 42 towards the lateral extremities of the portion of the top panel 28 covering the one compartment 24 with which the particular seal 38 is associated. The circular score line 42 defines the periphery of a circular member 43. In the embodiment illustrated in FIG. 2, each seal 38 is substantially planar and completely encloses each individual compartment 24.

In the embodiment illustrated in FIG. 2, eight score lines 40 are used and define eight segments 44 of material. If desired, other numbers of score lines 40 may be used, giving the resulting number of segments of material, but eight has been found to be the most convenient number. The outer extremities of adjacent score lines 40 are joined by crease lines 46, although there may be omitted if ready bending of the segments 44 is achievable without them.

The outer extremities of the score lines 40 should form a circle whose diameter is at least and preferably is substantially that of the beer bottle 26 situated in the individual compartment 24. The score lines 40 may be formed in any desired manner to allow severing thereof. The outer extremities of the score lines 40 may be provided with a circular opening of small diameter to inhibit tearing of the material of the seal 38 other than along the score lines 40.

The seals 38 of adjacent compartments 24 are formed with their score lines 40 extending in different directions. As may be seen in FIG. 2, if the eight score lines 40 in one seal 38 are considered to extend to points of a compass which are substantially N, NE, E, SE, S, SW, W and NW, then in the adjacent seals 38 extend to points of the same compass which are substantially NNE, ENE, ESE, SSE, SSW, WSW, WNW and NWN. This configuration is utilized to provide the maximum amount of the material of the top panel 28 at the locations where score lines 40 terminate close to an adjacent seal 38. Additional reinforcement may be provided at these areas, if desired.

As mentioned above, the dividing walls 22 preferably extend upwardly to substantially the height of the side underside of the top panel 28, thereby providing support for each seal 38 at the lateral extremities of each compartment 24.

The beer bottles 26 may be removed from the individual compartments 24 by breaking the seal 38 which involves pushing down on the seal 38, generally with the fingers one hand, causing the material to sever along the score lines 40 and 42. The support provided by the upper extremity of the appropriate side, end and dividing walls 18, 20 and 22 assists in ensuring that severing occurs only at the score lines 40 and 42. Continued inward pushing of the separated segments 44, causes the segments 44 to bend inwardly about crease lines 46, and allows gripping of the neck of the bottle 26 present in the compartment 24. Upon commencement of withdrawal of the bottle 26, the segments 44 are bent outwardly about the crease lines 46, and, after complete withdrawal of the bottle 26, tend to return under the force of their natural resilience towards their original position. The opening of the seal 38 and the withdrawal of the bottle 26 is illustrated partly in FIGS. 3A, 3B and 3C. After consumption of the contents, the empty bottle may be after consumption of the contents, the empty bottle may be returned to the compartment 24 by pushing the segments 44 inwardly, thereby the segments 44 bending about crease lines 46, using the bottom of the bottle, when the bottle is fully returned to the compartment 24, the segments 44 tend to return towards their original position and again close the compartment 24.

The breaking of the seal 38, withdrawal of the bottle 26 from the compartment 24 associated with the broken seal and return of the empty bottle to the compartment 24 is accomplished without the need to break any other of the seals 38. Therefore, each individual beer bottle 26 is sealed in its own compartment until required.

FIG. 4 illustrates an alternative form of the seal 38 shown in FIG. 2. In this alternative form, the circular member 43 is omitted and the inner extremities of the segments 44 define the periphery of a circular opening 48. In another alternative of the embodiment illustrated in FIG. 2, the score lines 42 may be omitted and the score lines 40 may extend radially inwardly to a point of termination which is the centre of the circle on which lie the outer extremities of the score lines 40.

In the embodiments illustrated in FIGS. 2 and 4, the seals 38, when intact, are planar. However, in the embodiment shown in FIG. 5, the alternative form of the seal 38 illustrated in FIG. 3 is provided inwardly dished, with the circular periphery of the opening 48 engaging the neck 50 of the bottle 26. Score lines similar to score lines 40 in the embodiments of FIGS. 2 and 4 are used as tear lines for the opening of the seal 38. In the embodiment of FIG. 4, the breaking of the seal 38 and the withdrawal of the bottle 26 are accomplished in like manner to that described above with reference to the embodiment shown in FIG. 2.

Referring now to FIGS. 6 and 7, there are disclosed two aspects of another embodiment of cover structure utilizable in the invention. As seen in FIG. 6, each seal 38 consists of two parts, an upper cardboard part 52, and a lower plastic sheet part 54. The upper cardboard part 52 is of planar form and includes radial score lines 56 which project from the periphery of an opening 58 towards the lateral edges of the compartment, terminating on an imaginary circle having a diameter which is at least and preferably is substantially that of the greatest diameter of the bottle. Crease lines 60 join the outer ends of the score lines 56.

The thin plastic sheet part 54 generally extends as a continuous sheet over the whole inner surface of the panel 28, although individual plastic sheets may be utilized for each seal 38, if desired. The plastic sheet 54 is constructed of material which readily stretches and tears under an applied pressure, thereby allowing ac-
cess to the bottle 26 situated in the compartment 24. Usually the plastic sheet 54 is transparent although it may be translucent. Preferably, a transparent plastic sheet 54 should be coloured, typically amber, to decrease the penetration of light through the seal 38 to the bottle 26.

The seal 38 in the embodiment of FIG. 6 may be opened by pressing down on the plastic sheet 54 and the score lines 56, causing tearing of the plastic sheet and severing along the score lines 56. The bottle 26 may be then be removed by pulling thereon and, after consumption of the contents may be returned to the compartment 24.

FIG. 7 illustrates an alternative form of the seal illustrated in FIG. 6. The seal 38 in this instance also consists of two parts, the upper of which is a cardboard or similar material panel 62 having circular opening 64 therein, the diameter of the opening 64 being at least and usually is substantially the same as the largest diameter of the bottle 26 situated in the compartment 24.

The second portion of the seal 38 is a plastic sheet 66. The plastic sheet 66 is of deformable and tearable plastic and is preferably transparent, although it may be translucent. When transparent plastic is used, preferably it is coloured, typically amber, in order to decrease the penetration of light to the bottle 26 in the compartment 24.

The plastic sheet 66 of each seal 38 preferably is part of an integral plastic sheet which extends coextensively with the open top of the tray, although individual sheets 66 may be used for each seal 38.

The seal 38 is broken by pushing downwardly on the plastic until it tears, after which the bottle 26 may be withdrawn, and replaced after consumption of the beer.

As in the embodiments of FIGS. 2 to 5, in the embodiments of FIGS. 6 and 7, the breaking of the seal 38 of individual compartments 24 allows access to the beer bottle in that compartment while leaving the remainder of the compartments completely sealed.

The bottles 26 may be seen through the seal 38 in the embodiment of FIGS. 6 and 7, so that the customer may readily check that initially each compartment 24 has a beer bottle 26 situated therein. In addition, this construction allows a visual check to be made prior to despatch of the case from the manufacturer.

Modifications are possible within the scope of this invention.

What I claim as my invention is:

1. A container structure including:

a tray member having a base and side walls and end walls upstanding from said base and terminating in an open top,

divider means situated in said tray member and extending upwardly from said base, said divider means forming with said side and end walls a plurality of individual compartments in each of which is situated a digit-grip removal item,

2. A container structure comprising:

a tray member having a base and side walls and end walls upstanding from said base and terminating in an open top,

closure means comprising:

a outer peripheral layer of said container structure, said outer peripheral layer being of cardboard material, said closure means including a strip seal disposed over the top of said outer peripheral layer in frictional gripping engagement with the side and end walls of said tray member and the height of said walls inhibiting removal of said sleeve from association with said tray member, and

a plurality of openable seal means located in said closure means, one of said plurality of said means being associated with each of said individual compartments,

each of said plurality of openable seal means being formed in said top panel and including a plurality of score lines along which the material of said top panel may tear and extending radially towards the lateral extremities of the compartment sealed thereby, the radially outer extremities of said score lines lying on a circle, said score lines defining a plurality of segments bendable about crease lines extending between the outer extremities of said score lines, whereby, upon breaking open one of said seal means by tearing along the plurality of score lines thereof, access may be had to the item in the compartment with which the broken sealing means is associated without breaking open the sealing means of other of said compartments.

3. The structure of claim 1 wherein said divider means are walls integral with said tray member extending upwardly from said base substantially equal to the height of said bottles.

4. The structure of claim 3 wherein each of said seals is planar and the radially inner extremities of said score lines are connected by a circularly-formed score line which defines the periphery of a circular member.

5. The structure of claim 4 wherein each of said seals is planar and the radially inner extremities of said score lines lie on the periphery of a circular opening in said top panel.

6. The structure of claim 5 wherein the radially outer extremities of said score lines lie on the periphery of a circular opening in said top panel, each of said seals is disposed inwardly of said top panel and said periphery of the opening surrounds and engages the neck of the bottle in each compartment.

7. A container structure including:

a tray member having a base and side walls and end walls upstanding from said base and terminating in an open top,

divider means situated in said tray member and extending upwardly from said base, said divider means forming with said side and end walls a plurality of individual compartments in each of which is situated a digit-grip removal item,

closure means closing said open top to provide a cuboid form closed structure, said closure means being a disposable sleeve of light cardboard material, said disposable sleeve including a top panel extending coextensively with the open top of the tray member and side and end panels integral with said top panel and extending downwardly from said top panel in frictional gripping engagement with the side and end walls of the tray member and the height of said walls inhibiting removal of said sleeve from association with said tray member, and

a plurality of openable seal means located in said closure means, one of said plurality of said means being associated with each of said individual compartments,
each of said plurality of openable seal means including two parts consisting of an upper part formed in said top panel and a lower part of tearable plastic material.

8. The structure of claim 7 wherein the lower part of each seal means is an integral part of a sheet of transparent plastic material which extends coextensively with the open top of the tray in contact with the underside of said top panel.

9. The structure of claim 8 wherein each of said openable seal means comprises circular opening in said top panel, the diameter of the opening being at least the largest diameter of the bottle situated in the relevant compartment, and the lower part thereof.

10. The structure of claim 9 wherein said opening has a diameter which is substantially the same as the largest diameter of the bottle.

11. The structure of claim 8 wherein each of said openable seal means comprises the lower part thereof a plurality of score lines formed in said top panel along which the material of said top panel may tear extending radially towards the lateral extremities of the compartment sealed thereby, the radially outer extremities of said score lines lying on a circle, said score lines defining a plurality of segments bendable about crease lines extending between the outer extremities of said score lines, the radially inner extremities of said score lines lying on the periphery of a circular opening in said top panel.

12. The structure of claim 1 wherein eight of said score lines are used.

13. The structure of claim 4 wherein eight of said score lines are used.

14. The structure of claim 5 wherein eight of said score lines are used.

15. The structure of claim 6 wherein eight of said score lines are used.

16. The structure of claim 11 wherein eight of said score lines are used.

17. The structure of claim 12 wherein the plurality of score lines in one seal means extend radially in compass point-like directions N, NE, E, SE, S, SW, W and NW and the plurality of score lines in the seal means adjacent to said one seal means extend in compass point-like directions N by NE, E by NE, E by SE, S by SE, S by SW, W by SW, W by NW and N by NW.

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