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3,206,102

RECLOSABLE ICE CREAM BOX

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2 Sheets-Sheet 1

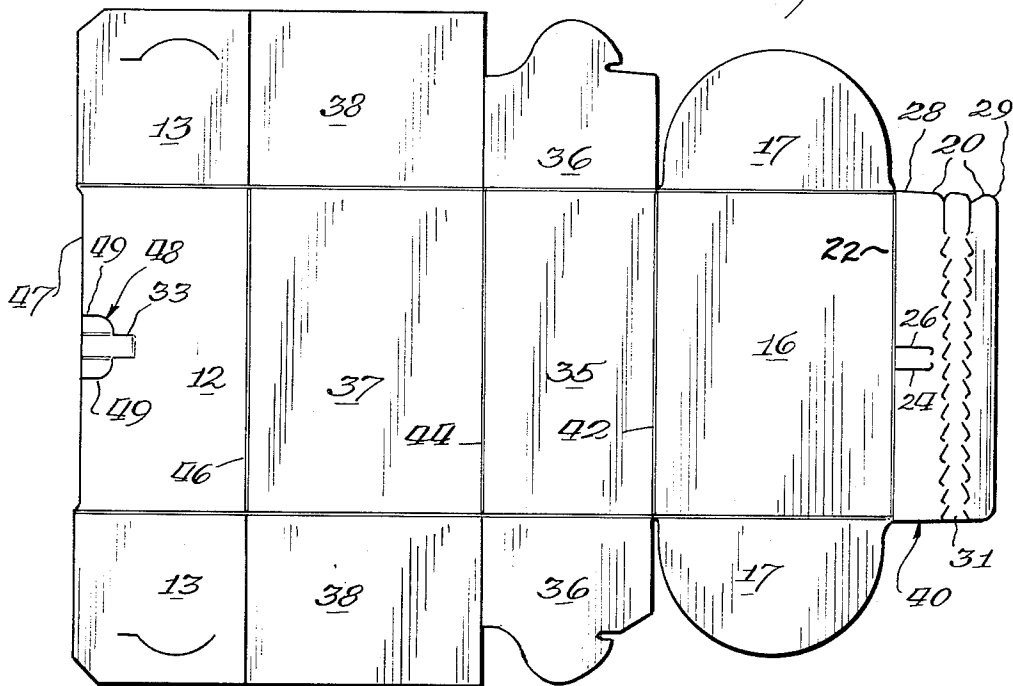
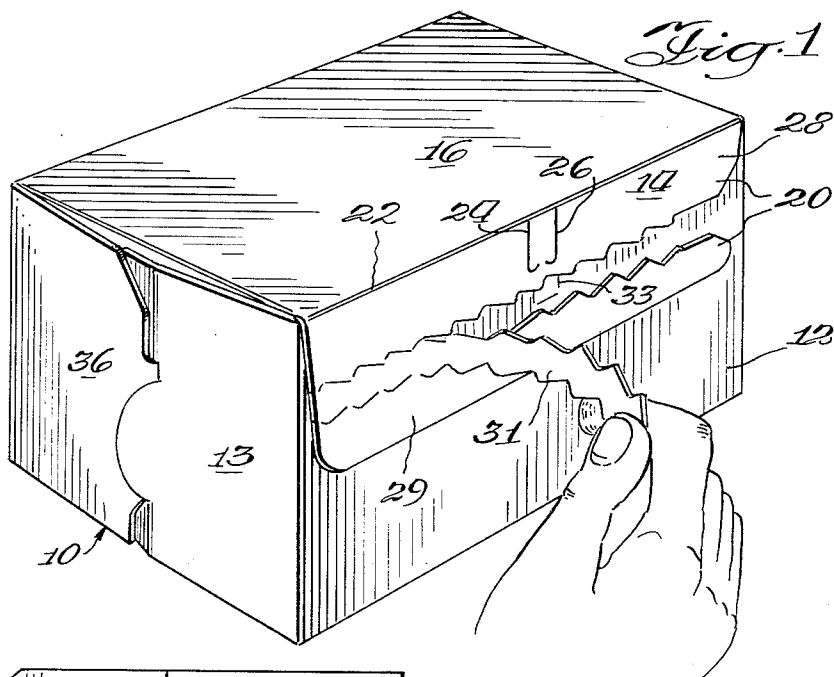


Fig. 2

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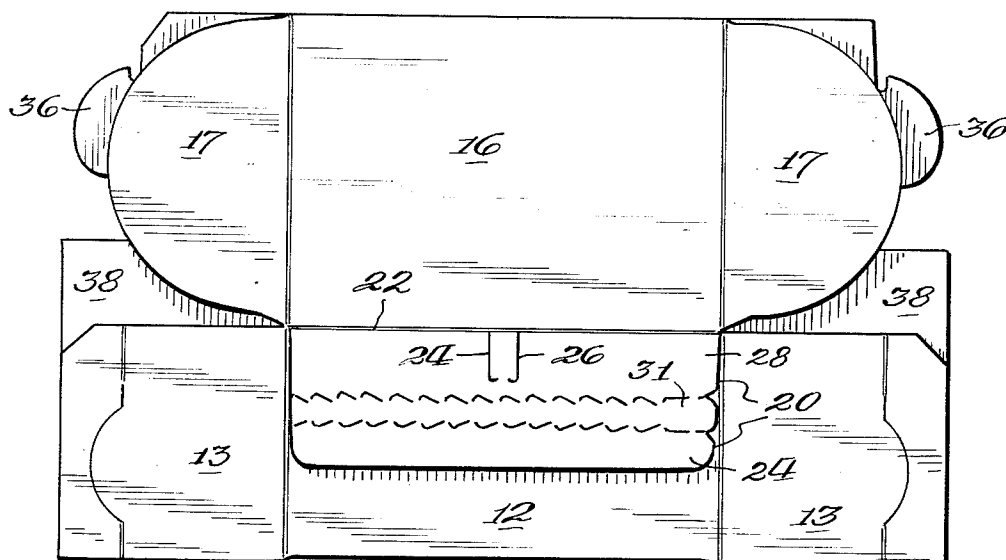
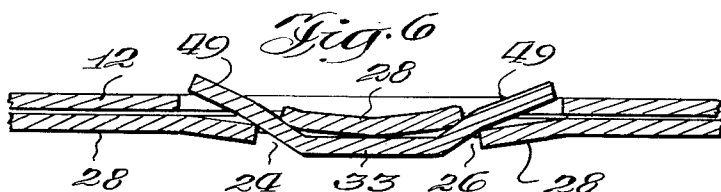
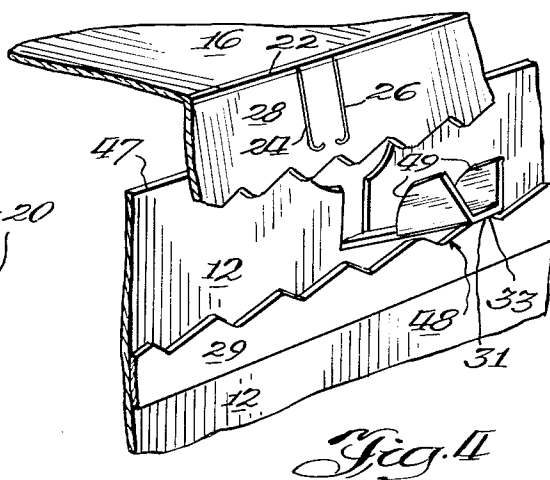
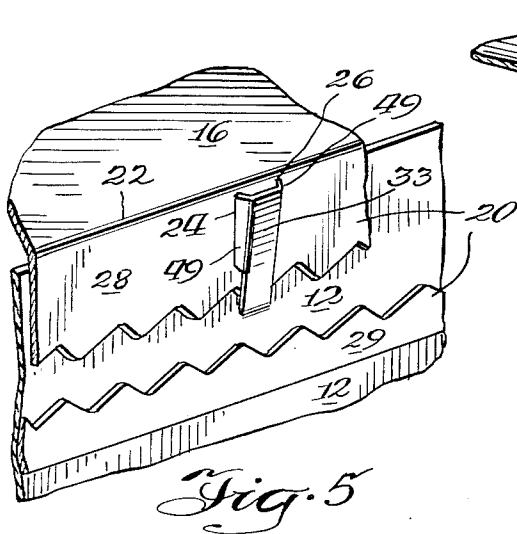
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RECLOSABLE ICE CREAM BOX

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2 Sheets-Sheet 2



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RECLOSABLE ICE CREAM BOX

Arlington C. Henry, Jr., Chicago, and George A. Hachlein, Mokena, Ill., assignors to Stone Container Corporation, Chicago, Ill., a corporation of Illinois
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1 Claim. (Cl. 229—51)

This invention relates generally to collapsible cartons made of fibrous material such as cardboard, for packaging ice cream and other comestibles of this type, and more particularly, relates to a blank of such material for forming a carton of the type described which may be resealed in a closed condition after opening thereof.

There have been known heretofore many carton forming arrangements in which a plurality of longitudinally extending panels are joined together along longitudinally extending edges and folded transversely of these edges to form a closed product-containing configuration. Longitudinally extending tear strips have been disposed in one of these panels for convenient operation to open the container. Similarly, there have been known heretofore, arrangements in which opened containers of foldable material, such as cardboard, have included tab arrangements for reclosing the containers after once being opened.

These tear strip arrangements known heretofore have, unhappily, been subject to the objection that the container, having once been opened, was destroyed for thereafter conveniently protecting the product contained therein. Typically, in packaging ice cream, failure to reseat the package led to the formation of ice crystals upon subsequent, incomplete reclosure. Further, the various tab arrangements for effecting reclosure known heretofore have contributed to an unwieldy appearing package which prejudiced saleability of the product contained therein. And, still further, such tab arrangements heretofore have weakened the structural integrity of the container. Too, complex closure tabs and similar arrangements have rendered container forming blanks similarly complex and difficult of manufacture.

Accordingly, it is an object of the present invention to provide a container forming structure wherein there is provided a tear strip for simply and effectively opening the container to enable consumption of the product contained therein and to provide a tab member for reclosing the container after operation of the tear strip.

It is a still further object of the invention to provide a resealable container operative to preclude entry therein of water vapors which lead to ice formation on storage in a refrigerated space.

It is yet a further object of the invention to provide a container forming blank amenable to simple manufacturing processes.

It is a further object of the invention to provide tab members for container reclosure which tab members are disposed in concealed relation beneath a conveniently operable tear strip, such that the reclosure tab members have no adverse effect on the container appearance.

It is a still further object of the invention to provide a reclosable container of substantial strength and structural integrity.

The invention will be more clear and other objects and advantages thereof will become apparent from a consideration of the following brief description of an illustrative embodiment of the invention shown in the drawings and from a consideration of the appended claim.

In the drawings:

FIG. 1 is an isometric drawing of a container structure, formed in accordance with the invention, in the process of being opened;

FIG. 2 is a plan view of a blank for forming a container structure in accordance with the invention;

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FIG. 3 is a plan view illustrating a partially assembled container in accordance with the invention in a collapsed, flattened condition;

FIG. 4 is an isometric drawing of a detail of a container in accordance with the invention and illustrates a step in the reclosure of such a container;

FIG. 5 is a further isometric drawing of a detail of a container in accordance with the invention which, taken together with the showing of FIG. 4, illustrates a further step of reclosure of a container in accordance with the invention; and

FIG. 6 is an end view of a detailed portion of two panels of a container in accordance with the invention in relation for effecting reclosure in accordance with the invention.

The invention comprises generally a blank of cardboard or other suitable container-forming material having plural longitudinally extending panels defined by creases therein, the several panels being contiguous one to another for transverse folding to establish a closed tube or container. In this tube or container, a first panel laps with a last panel of the plural, longitudinally extending, contiguous panels established in the one container forming blank. The first panel of the plural longitudinal panels which defines the front wall of the container, is arranged and disposed for folding to lap underneath the last or closure panel and for fixing thereto by appropriate means to establish a closed container tube. The closure panel comprises a tear strip extending longitudinally throughout the extent thereof for separating the closure panel into first and second longitudinal parts. The second of these parts is arranged for affixing to the first panel, as by gluing, and is commonly called a glue strip, and the tear strip enables the first or refastening part of the last panel to be separated from the first or front wall panel for opening the container.

The front wall panel comprises a transversely disposed tab member having a central strip of fixed width which is foldable outwardly from the front wall panel about a longitudinal crease therein. This tab member also comprises first and second ear members which are disposed on either side of the central strip and are foldable with respect to said strip about creases extending transversely of the longitudinally extending front wall panel to a free edge thereof.

The last panel, it has been noted, is divided into first and second longitudinal parts by a tear strip. The second of these parts is adapted for being permanently affixed to the first panel and the first part of the last panel is defined by a longitudinally extending crease for folding over the free longitudinal edge of the first panel. This first part comprises first and second score marks transverse of the longitudinal extent of the last panel and extending to that longitudinal edge thereof which is foldably contiguous with a next but last panel. These score marks correspond in longitudinal position to the longitudinal positioning of the edges of the central strip in the first panel.

A closed container or tube is formed by affixing the last panel second part or glue strip to the first or front wall panel in suitable fashion such that the longitudinal edge of the last or closure panel is adjacent to and co-extensive with a longitudinal free edge of the first panel and the two score marks in the first panel are positioned above the central strip edges in that first or front wall panel.

Thus, a container in accordance with the invention may be opened simply by separating the last panel first and second parts by tearing the tear strip. Thereafter the container may be reclosed simply. This is done by bringing the first panel tab member central strip outward through the space vacated by removal of the tear strip.

Thereafter, this central strip is brought over the bottom portion of the first panel first part and the tabs on either side of this central strip are inserted into the two similarly, longitudinally positioned score marks, or slots, in the last panel. Folding the first and second ear members of this tab member within the last panel first part defined between the two longitudinally spaced apart slots thus recloses the container. This reclosure is maintained positively by the central strip and the two ear members inserted into the last panel pair of slots. Hence, the reclosed container is a structurally sound one.

Referring now more particularly to the drawings, in FIG. 1 there is shown a container 10 in accordance with the invention in the process of being opened. This container 10 comprises a front panel 12 extending longitudinally thereof. A closure panel 20 is folded over the upper longitudinal edge of the front panel 12 in closing relation.

This panel 20 is divided into a first part 28 and a second part 29 by a centrally positioned, longitudinally extending tear strip 31. Strip 29 is fixed to the front panel 12, as by gluing, to effect closure of the container 10. This closure panel is joined with a top panel 16 along a longitudinally extending crease 22 which, in this assembled situation of the container 10, is coextensive with an upper longitudinal edge of the panel 12 and of the closure panel 20, as well as with a longitudinal edge of the panel 16. The closure panel 20 comprises first and second score marks or slots 24 and 26 longitudinally spaced apart and extending inwardly from the longitudinal edge 22 which forms a juncture of panels 16 and 20. These parallel slots 24 and 26 are longitudinally spaced apart along the edge 22 by a distance corresponding to the longitudinal spacing of a central strip portion 33 of a tab member which is not shown completely in this FIG. 1. This tab member central strip portion 33 is formed in the front panel 12 for outward folding from that panel about a longitudinal crease.

Turning next to FIG. 2, here is shown a complete blank 40 configured in accordance with the invention for forming the container 10 of FIG. 1. As appears, this blank is a simple planar structure readily amenable to simple manufacturing by straightforward processes, e.g., stamping. This blank 40 comprises a closure panel 20, a top panel 16, a rear panel 35, a bottom panel 37 and a front panel 12, each contiguous with other panels and connected thereto as shown. Longitudinal creases 22, 42, 44 and 46 form junctures between the several connected panels 20, 16, 35, 37 and 12 successively. The several panels 16, 35, 37 and 12 are respectively terminated in end portions 13, 17, 36, 38 and 13, as shown, for providing end closure of a container formed by the blank 40 in familiar fashion. Such end closure is illustrated in FIG. 1 and is therefrom evident to those skilled in the art without there having been made specific reference to the several panels of that isometric drawing. Clearly, as the blank 40 is folded away from the viewer along the several longitudinal crease lines 22, etc., a closed container tube is formed with the panel 20 overlapping the panel 12 at the left-hand longitudinal edge thereof. A tab member 48 is defined in the panel 12 extending from the left-hand longitudinal edge of the latter panel. This tab member extends in a direction transverse to this longitudinal edge toward a contiguous panel 37. This tab 48 comprises a central strip portion 33 and oppositely positioned ear members 49. These ear members are foldable inwardly from the central strip for insertion in slots 24, 26 of panel 20.

As appears from an inspection of this FIG. 2, the central tab member strip 33 is substantially co-linear with the slots 24 and 26, such that the ears 49 on this central strip tab member portion are foldable inwardly for insertion in the slots 24 and 26. This follows upon recalling that, in assembly of the blank 40 to a closed tubular configuration, the panel 20 is folded over the panel

12 with the edges 22 and 47 in engagement. It then becomes clear that sealing of this container forming tube is effected by joining the inner, or away surface of glue strip 29 with the near surface of the panel 12. Thereafter, tearing of the strip 31 leaves the panel 20 first part 28 free to open, barring any interaction between the panel end portions 17, 36, 38 and 13.

With equal clarity, tearing of the strip 31 having left the first portion 28 of the panel 20 free to open outward, subsequent folding of the tab ears 49 and insertion in slots 24, 26 enables these slots to hold the panels 12 and 20 in closed engagement in a structure in accordance with the invention.

This may be more clear by examination of the collapsed container structure in accordance with the invention as shown in FIG. 3. In this FIG. 3, a container blank such as the blank 40 is shown in partially assembled relation to form a closed tube which is thereafter collapsed. The closure panel first part 28 is shown, as is the second part 29 which is fixed to the panel 12. The tear strip 31 extending longitudinally of the panel 20 is illustrated joining the first panel part 28 with the second part 29. The two slots 24 and 26 are illustrated for receiving the tab ears 49 illustrated heretofore in connection with FIG. 2. Clearly the panel 20 is folded over the appropriate portion of panel 12 such that, in this flat disposition, the tab member 48 is not visible and thus advertising labels on the container exterior are not disfigured.

Turning next to FIG. 4, in this isometric view of a detailed portion of a container in accordance with the invention, the strip member, designated 31 in FIG. 3, has been removed for opening the container, and, practically, for removal of a portion of the contents thereof. The central tab strip portion is folded outwardly from the panel 12 and the ear members 49 are folded upwardly from this central strip portion. For reclosure of the container, the upper panel 16 is brought downwardly into engagement with the free longitudinal edge 47 of the front panel 12, the while the tab member 48 is folded outwardly from this front panel 12. The tab member ears 49 on either side of the central tab portion 33 are folded upwardly, as shown, for mating engagement with the slots 24 and 26 in the first part or refastening strip 28 of the front panel member 20. This first part, it will be recalled, is separated from the second part 29 by tearing of strip 31.

In FIG. 5, a next step in the reclosure of a container in accordance with the invention, is illustrated. Here the central strip portion 33 and the ear members 49 are shown in the course of reassembly with the ear members 49 partially entered into the slots 24, 26, in the first part 28 of the front panel 20 to hold this part 28 in engaged relation with the panel 12. This engaged relation of the two panels, thus, effects reclosure of the box of which a portion is illustrated in FIG. 5.

Turning next to FIG. 6, in this figure there is shown an end view of the panel members 12 and 28 in engaged, closed relationship. The central tab portion 33 and the ears 49 are shown in engagement through slots 24 and 26, thereby to hold panel 12 engagedly with panel 28.

There has been described heretofore one illustrative embodiment of the invention. Clearly, within the spirit and scope of the invention, numerous and varied embodiments of the invention will occur to those skilled in the art of the container field.

The invention is defined and limited only by the appended claim.

What is sought to be secured by Letters Patent of the United States is defined by the claim appended hereto.

We claim:

In a carton having a front wall, rear wall and a top wall and interlocking sidewalls, a closure panel hingedly connected along a fold line to said top wall, said closure panel comprising:

(a) a glue strip situated at the end of said panel furthest from said top wall fold line, said glue strip joining

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said closure panel to said front wall in overlapping relationship,
(b) a refastening strip situated adjacent to said top wall fold line,
(c) and a tear strip situated between said glue strip 5
and said refastening strip, said tear strip being operable to separate said closure panel from said front wall and thereby permit said refastening strip and said top wall to be pivoted upwardly to expose the interior of the carton, 10
the improvement which comprises:
refastening means for joining said refastening strip to said front wall,
said refastening means comprising: a pair of spaced slots formed in said refastening strip; 15
cooperating tab means formed in said front wall for insertion into said slots,

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said tab means comprising a central member pivotable about a longitudinal crease line in said front wall into a position overlying the exterior of said refastening strip,
and a pair of matching spaced ears on said central member for insertion into said slots,
said overlapping cover panel concealing said tab means prior to removal of said tear strip.

References Cited by the Examiner

UNITED STATES PATENTS

1,234,483	7/17	Luke.	
2,125,042	7/38	Bergstein	229—51
2,218,509	10/40	Goodyear	229—51
2,267,320	12/41	Berch	229—51

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