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3,122,301

RECLOSABLE CONTAINER

Filed March 30, 1962

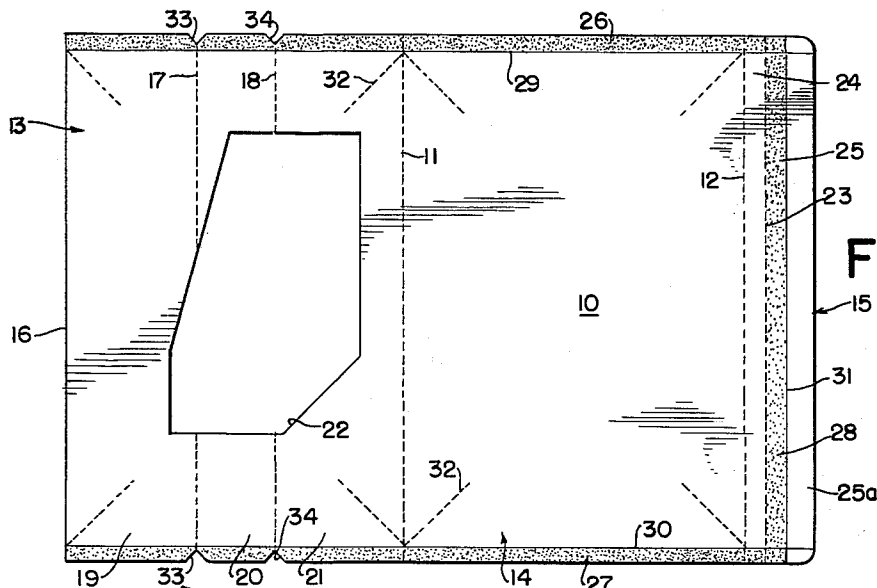


FIG. 1

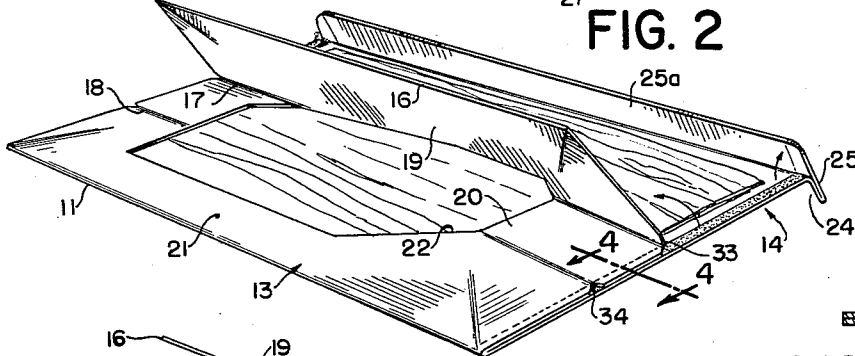


FIG. 2

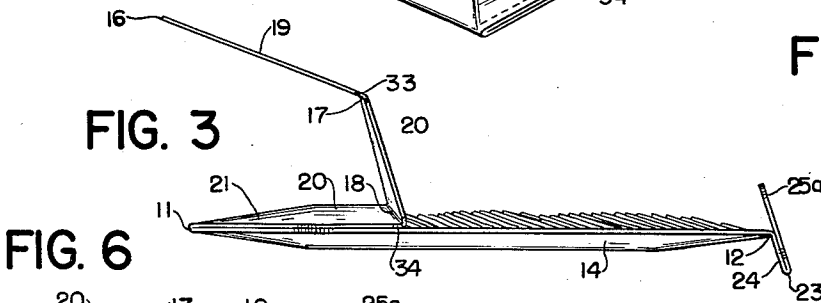


FIG. 3

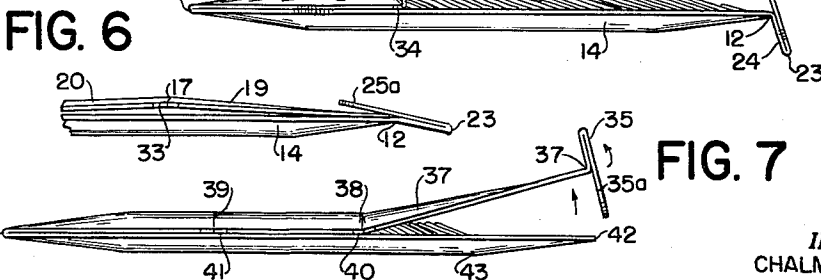


FIG. 6

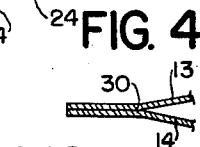


FIG. 5

FIG. 7

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RECLOSABLE CONTAINER

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6 Claims. (Cl. 229-40)

The present invention relates to containers, formed of paperboard and similar materials, and more particularly to a reclosable, generally flat container, adapted especially for the packaging of bacon and similar contents of a generally flat nature.

As a general objective, the present invention seeks to provide a novel and improved container, formed of paperboard or like sheet material, which is especially adapted for the packaging of bacon or like contents and is characterized particularly by its low cost, ease of filling and closing, facility of opening by the consumer, and also by its ability to be reclosed by the consumer. The container of the present invention is, in certain respects, similar to the container of my prior United States Patent No. 2,996,236, granted August 15, 1961, but incorporates specific improvements over the patented container, regarding specific structural features of the container accommodating convenient opening and reclosing by the consumer. In addition, the package of the present invention, like that of my prior patent, is adapted for automated closing, employing apparatus substantially as disclosed and claimed in my copending application Serial No. 58,259, filed September 26, 1960. The container of the present invention also incorporates certain structural features common to the container disclosed in my beforementioned copending application.

As one of the specific features of the invention, a novel and improved envelope-type container is provided which is formed of a generally rectangular blank of paperboard or similar sheet material and which is arranged to be folded about a transverse score line to form top and bottom walls of the container. The lower edge of the container is closed by the fold line itself, while novel and improved closure flap arrangements are provided for closing the side and upper edges.

A particularly advantageous feature of the invention resides in the provision of a novel closure arrangement for the upper edge of the container, including a fold-over flap which overlies the upper edge of the top wall and utilizes the inherent resilience of the paperboard or other sheet material to hold the container in a closed condition. Thus, after opening of the container for partial consumption of its contents, the container may be quickly and conveniently closed and thereafter maintained in a closed condition by the improved closure flap construction.

As another specific aspect of the invention, an improved envelope-type container is provided, particularly for contents such as bacon slices, for example, which can be opened conveniently in a manner to expose only part of the packaged contents, where desired, affording improved protection for the remaining contents when the container is reclosed for further storage. Specifically, in this respect, the improved container of the invention includes novel arrangements for accommodating the opening of predetermined portions of the container, facilitating removal of a preselected part of its contents. Thus, in a typical one-pound bacon package, for example, facilities are provided for incremental opening of the container for removal of approximately one-fourth or one-half of its contents, for example.

For a better understanding of the invention, and for further consideration of the above and other advantageous features thereof, reference should be made to the

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following detailed description and to the accompanying drawing, in which:

FIG. 1 is a top plan view of a blank of paperboard or like sheet material used in forming the container of the invention;

FIG. 2 is a perspective view of the container of the invention, showing the container in a partially opened condition;

FIG. 3 is a side elevational view of the container of FIG. 2 showing the container in a second partially opened condition;

FIG. 4 is an enlarged, fragmentary cross-sectional view, taken generally along line 4-4 of FIG. 2, illustrating the manner of sealing the top and bottom walls of the container;

FIG. 5 is an enlarged, fragmentary cross-sectional view, similar to FIG. 4, illustrating the condition of the seal after opening of the container;

FIG. 6 is a fragmentary elevational view of the container of FIG. 2, illustrating the container after partial opening and subsequent reclosing; and

FIG. 7 is a side elevational view of a modified form of the container of FIG. 2.

Referring now to the drawing, and initially to FIG. 1, thereof, there is shown a blank designated generally by the reference numeral 10, which is substantially of rectangular shape and is formed of paperboard or other suitable folding sheet material. The blank 10 is provided with a transverse score 11, near the center of the blank, and a score 12, spaced inward a predetermined distance from the right-hand edge, dividing the blank into a top wall panel 13, a bottom wall panel 14 and a flap panel 15, progressing from left to right in FIG. 1. The top and bottom wall panels 13, 14 are of substantially the same size and shape, such that, when the blank is folded about the score 11, the top wall will directly overlie the bottom wall, and the upper edge 16 of the top wall will lie substantially along the score 12.

For reasons to be described in greater detail, the top wall panel 13 is subdivided by transverse scores 17, 18 into separate top wall panel sections 19-21. In addition, the top wall panel may be provided with an opening or cut-out 22, advantageously intercepting the scores 17, 18, which may be covered by a section of transparent film (not shown) so that contents of the container may be viewed through its top wall.

The flap panel 15 is likewise divided by a transverse score 23 into upper and lower flap sections 24, 25, to be described in further detail.

Extending along both side edges of the blank are adhesive strips 26, 27 which, in accordance with the invention, terminate a predetermined distance short of the edge extremity of the flap 15. A third adhesive strip 28 extends transversely across the flap section 15, along the outer side of the score 23, and joins with the ends of the longitudinal adhesive strips 26, 27.

Advantageously, the inner edges of the longitudinal adhesive strips 26, 27 are formed by longitudinal cut scores 29, 30, which extend part way through the sheet material and perform the dual functions of effectively limiting the inward spreading of the adhesive during application and of facilitating release of the sheet material during opening of the container, as will be described. Likewise, the outer edge of the transverse adhesive strip 28 is formed by a cut score 31 extending part way through the sheet material and forming an effective boundary to prevent the spread of adhesive onto the outer or "free" portion 25a of the upper flap section 25. If desirable or expedient, a cut score may be provided along the inner edge of the transverse adhesive strip 28; however, accurate definition of the inner boundary of the strip 28 is

not required, normally, and, in the illustrated form of the invention, the inner boundary of the transverse adhesive strip is formed by the folding score 23. Advantageously, the cut score 31 extends completely across the flap section 25, such that the end extremities of the cut score form boundaries for the ends of the longitudinal adhesive strips 26, 27.

The container of the present invention, being of the envelope type, as distinguished from the box type, has no end walls or side walls in the usual sense. Accordingly, accommodations are made for the outward bulging of the top and bottom walls when the container is closed over its contents. Advantageously, such accommodations take the form of short folding scores 32 extending from the effective corners of the top and bottom wall panels inward, toward the centers of the panels, at angles of substantially 45°. In this connection, it will be observed in FIG. 1 that the effective side edges of the top and bottom wall panels are formed by the cut scores 29, 30.

The blank illustrated in FIG. 1 is intended particularly for the packaging of flat contents, such as strips of bacon in pound or half-pound quantities, for example, and likewise is adapted particularly to be filled and closed in an apparatus for the type shown in my copending application Serial No. 58,259, filed September 26, 1960, for "Container Sealing Machine." To this end, the bottom wall panel of the container is arranged to receive and support the flat contents, such as bacon strips, arranged in shingle formation, after which the blank is folded along the dividing score 11 to bring the top wall panel 13 into overlying relation with respect to the bottom wall panel 14. Thereafter, and advantageously as a part of a continuous, automatic procedure, the top and bottom wall panels are secured together along the respective adhesive strips 26, 27. At this point in the procedure, the container is, in effect, an open top envelope, with the flap sections 24, 25 projecting outward beyond the upper edge 16 of the top wall panel. Thereafter, the flap panel 15 is folded along the score 23, such that the outer flap section 25 overlies the inner flap section 24 and extends also over a predetermined marginal portion (e.g. 1/2 inch) of the top wall panel 13. Simultaneously, the flap is secured in its thus folded position by bonding of the adhesive strip 28 to the inner flap section 24, it being understood that the inner flap section is approximately of the same width as the transverse adhesive strip 23.

In the novel and advantageous container thus described, the top wall panel 13 is secured along its side edges by the adhesive strips 26, 27, but is unsecured along its upper edge 16. However, the upper edge of the top wall is overlapped and held closed by the projecting "free" portion 25a of the top flap. In this connection, in the closing and sealing of the container, no fold is made about the folding score 12, and the inner flap section 24 therefore remains substantially in the plane of the bottom wall panel 14 and causes the free flap portion 25a to overlie the top wall panel 13 in substantially flat relation. The arrangement is such that the unsealed center portions of the edge 16 of the top wall are effectively held in closed condition, affording the desired protection of the contents of the container.

To open the container of the invention, the flap 15 is gripped and folded about the score 12 to raise the free flap portion 25a, substantially as indicated in FIG. 2. The top panel 13 may then be gripped along its upper edge 16 and drawn outward to expose the contents of the container. In drawing the top wall panel outward, the adhesively sealed side edge portions are torn free. In practice, the separation may occur between layers of the sheet material itself, rather than in the plane of the adhesive, and opening of the container in this manner is accommodated by the cut scores 26, 27 which enable a layer of sheet material to be released without producing an uneven and unsightly tear in the container wall. This is illustrated schematically in FIGS. 4 and 5, which

indicate some of the sheet material of the bottom wall panel 14 being detached and carried away by the top wall panel 13.

Where the container of the invention is used in the packaging of strips of bacon, for example, it may be desirable to remove less than all of the contents of the container. To this end, and as one of the specific features of the invention, the top wall panel 13 is provided along its opposite edges with pairs of V-shaped notches 33, 34 aligned with the folding scores 17, 18. As illustrated particularly in FIG. 1, the notches 33, 34 are formed to a depth slightly less than the width of the adhesive strips 26, 27, so that, when the container is closed and sealed, a continuous adhesive seal is provided along the side edges.

The effect of the pairs of notches 33, 34 is to substantially weaken the adhesive bond in the immediate region of the folding scores 17, 18. Accordingly, as the container is opened by drawing outward on the upper section 19 of the top wall panel, the adhesive bond at the side edges will give way under predetermined resistance, until the first pair of notches 33 is reached, whereupon the opening resistance noticeably weakens. The arrangement is such that the user of the container is made aware of the fact that the first folding score 17 has been reached. Moreover, proper folding the panel section 19 about the score 17 is promoted, such that partial opening of the container to a predetermined condition is greatly facilitated.

In an advantageous form of the new container, the first fold line 17 and its associated edge notches 33 may be spaced from the free edge 16 of a top wall panel a distance equal to between 35 and 40% of the length of the panel. Accordingly, when the package is opened to the first fold line, substantially as indicated in FIG. 2, convenient access is had to approximately one-fourth of the contents of the package. The second fold line 18 advantageously is spaced from the free edge 16 a distance equal to about 60% to 65% of the length of the panel 13, such that, when the top panel is opened to the second fold line, substantially as illustrated in FIG. 3, approximately one-half of the contents of the package is exposed for easy removal.

To facilitate opening of the package to the respective fold lines 17, 18, it is advantageous to so locate the visual access opening 22 as to intercept the fold lines at some point. This arrangement promotes satisfactory folding of the top wall panel substantially along the designated fold lines, even though the panel may be bulged outward to some extent to accommodate the contents of the package.

On any occasion that the container is only partially opened for removal of only a portion of its contents, it may be desirable to reclose the container for protection of the remainder of the contents during further storage. In accordance with the invention, convenient and effective reclosure of the container is accomplished by inserting the free edge 16 of the top wall panel under the free portion 25a of the closure flap. The flap tends to return to its initial, flat condition, into a position substantially as indicated in FIG. 6, and the edge of the top wall panel is lightly clamped under the flap to maintain a container in the desired, closed condition.

In one advantageous modification of the container of FIGS. 1-6, the closure flap may be foldably connected to the top wall panel, rather than to the bottom wall panel, substantially as indicated in FIG. 7. Thus, in the modified container structure, a closure flap 35 is formed along a folding score 36 and thereby hingedly connected to the free edge of the top wall panel 37. As in the case of the first-described embodiment, the top wall panel 37 is provided with transverse folding scores 38, 39 and pairs of notches 40, 41 aligned therewith, for accommodation of partial opening of the container. Likewise, a visual access opening (not specifically shown) may be

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provided in the panel 37. The free edge 32 of the bottom wall panel 43 underlies the folding score 37, when the container is in a closed condition, so that the free portion 35a of the closure flap underlies a marginal portion of the bottom wall panel. In other pertinent respects, the modification of FIG. 7 incorporates the various principles described more specifically in connection with the modification of FIGS. 1-6.

Generally, the form of container illustrated in FIGS. 1-6 is considered to be more conveniently usable, particularly from the standpoint of facility in opening the container. However, the modified form of container shown in FIG. 7 is advantageous for certain applications, particularly where it is desired to provide the top wall panel of the container with uninterrupted advertising material, for example.

In either of the illustrated forms of the invention, and in the various modifications thereof falling within the scope of the invention, substantial advantages are realized in connection with ease and economy of closing and sealing the package, while, at the same time, providing exceptional convenience in the opening and use of the container. Specifically, the new container, of an envelope type, is provided with an unsealed closure flap which, by reason of the inherent resilience of the paperboard material from which the container is made, is retained in overlying relation with respect to an unsecured edge of one of the carton panels. Convenient opening of the carton is provided by merely folding back the closure flap to gain manual access to the unsecured panel edge, which then may be pulled back to rupture the adhesive seal along its side edges. Subsequent reclosure of the container is accomplished by tucking the free edge of the detached panel back under the closure flap, in a highly expeditious and convenient manner.

The container of the invention also includes novel arrangements of a specific nature, including the provision of transverse folding scores dividing the top panel and the further provision of V-shaped notches aligned with the folding scores, to accommodate convenient partial opening of the container for exposure of only a predetermined portion of its contents.

The container of the present invention incorporates many of the desirable and advantageous features of the container described and claimed in my Patent No. 2,996,236, while incorporating certain specific improvements over the patented container, with particular regard to the provision of facilities for more conveniently opening and reclosing the container.

It should be understood that the specific forms of the invention herein illustrated and described are intended to be representative only, as certain changes may be made therein without departing from the clear teachings of the disclosures. Specifically, and without implying any limitation, the sheet material used in the forming of the new container may be characterized by heat sealing properties or may be provided with a heat sealable coating either in selected areas or over its entire surface, and references made herein to adhesives, adhesive sealing and the like, are intended to include such clear equivalents as bonds produced by heat seal. Accordingly, reference should be made to the following appended claims in determining the full scope of the invention.

I claim:

1. A reclosable, generally flat, bacon wrapper comprising:

- (a) a blank of foldable sheet material folded upon itself along a medial score line to provide top and bottom walls of unequal length;
- (b) said top and bottom walls having rigid side edge portions in sealed face-to-face relation closing the sides of said wrapper and generally defining a bacon receptacle of predetermined shape;
- (c) the longer of said walls defining along its free end edge a closure flap section;

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- (d) said closure flap section being folded upon itself into overlapping relation along a score line spaced outwardly from the edge of the shorter one of said walls to form a rigid closure flap overlying the end edge region of said shorter wall;
 - (e) the folded overlapping portions of said flap section lying outwardly of the end edge of said shorter wall and substantially in the plane of said longer wall;
 - (f) the folded overlapping portions being rigidly secured to each other in face-to-face relation;
 - (g) said rigid closure flap overlying the free end of said shorter wall in a sealing but substantially free relation;
 - (h) said top and bottom walls being provided with score lines extending from points adjacent the corners of said walls toward the centers thereof to accommodate controlled deformation of said walls;
 - (i) said top and bottom walls being adapted to be selectively and progressively separated from one another along said side edges by the folding and outward bending of said walls to destroy temporarily the original shape of said receptacle;
 - (j) said bacon receptacle being adapted to be restored to said original predetermined shape by a light clamping of said free edge of said shorter wall between said rigid closure flap and said longer wall.
2. A bacon wrapper according to claim 1, in which:
- (a) at least one of said top and bottom walls being provided with at least one transverse score line extending between said side edge portions.
3. A bacon wrapper according to claim 2, in which:
- (a) said walls defining at least one window;
 - (b) said window being intersected by said transverse score lines.
4. A generally flat bacon wrapper comprising:
- (a) a blank of foldable sheet material folded upon itself along a medial score line to provide overlapping top and bottom walls;
 - (b) said top and bottom walls having rigid side edge portions in sealed face-to-face relation closing the sides of said wrapper and generally defining a bacon receptacle of predetermined shape;
 - (c) said top and bottom walls being provided with score lines extending from points adjacent the corners of said walls toward the centers thereof to accommodate controlled deformation of said walls;
 - (d) at least one of said top and bottom walls being provided with at least one transverse score line extending between said side edge portions;
 - (e) said one wall defines a window;
 - (f) said window being intersected by said transverse score lines;
 - (g) whereby said walls may be readily folded back upon themselves along said transverse score lines to provide greater access to the inner portions of said bacon receptacle.
5. A bacon wrapper according to claim 4, in which:
- (a) said top and bottom walls are of unequal length;
 - (b) the longer of said walls defining along its free end edge a closure flap section;
 - (c) said flap section is folded into overlapping relation upon itself along a transverse score line spaced outwardly from the edge of the shorter one of said walls to form a rigid closure flap overlying the end edge region of said shorter wall;
 - (d) the folded overlapping portions of said flap section lie outwardly of the end edge of said shorter wall and substantially in the plane of said longer wall;
 - (e) the folded overlapping portions being rigidly secured to each other in face-to-face relation;
 - (f) said closure flap overlying said end edge in a sealing but substantially free relation;
 - (g) said top and bottom walls being adapted to be selectively and progressively separated from one another

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other along said side edges by folding and outwardly bending said walls to destroy temporarily said predetermined bacon receptacle;

(h) said receptacle being adapted to be restored to said original shape by a clamping of said free edge of said shorter wall between said rigid closure flap and said longer wall.

6. A bacon wrapper according to claim 4, in which:

(a) said walls are provided with areas of weakness in said side edge portions at the terminal points of said transverse score lines.

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