April 18, 1961 K. T. BUTTERY ET AL 2,980,316

CARTON

Filed Nov. 9, 1959 3 Sheets-Sheet 1

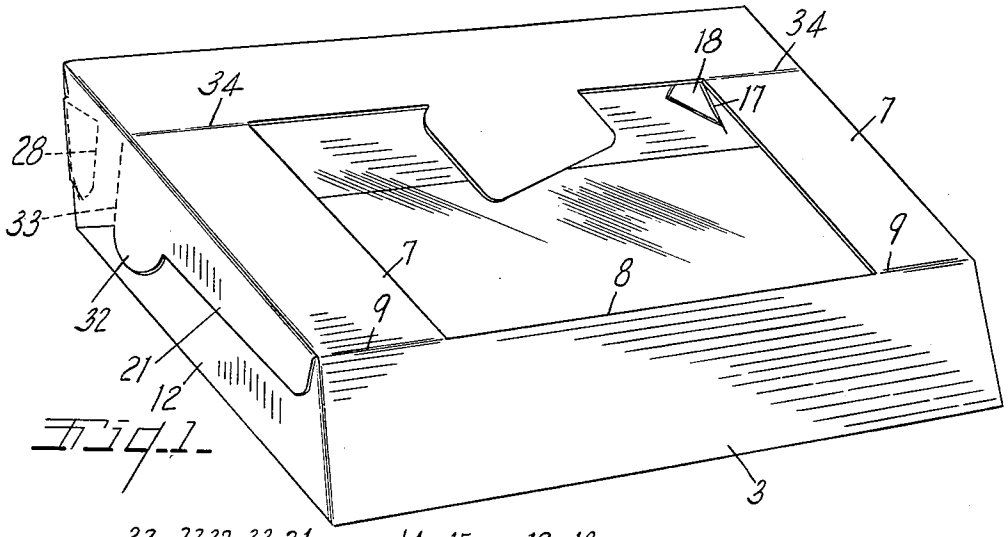


Fig. 1

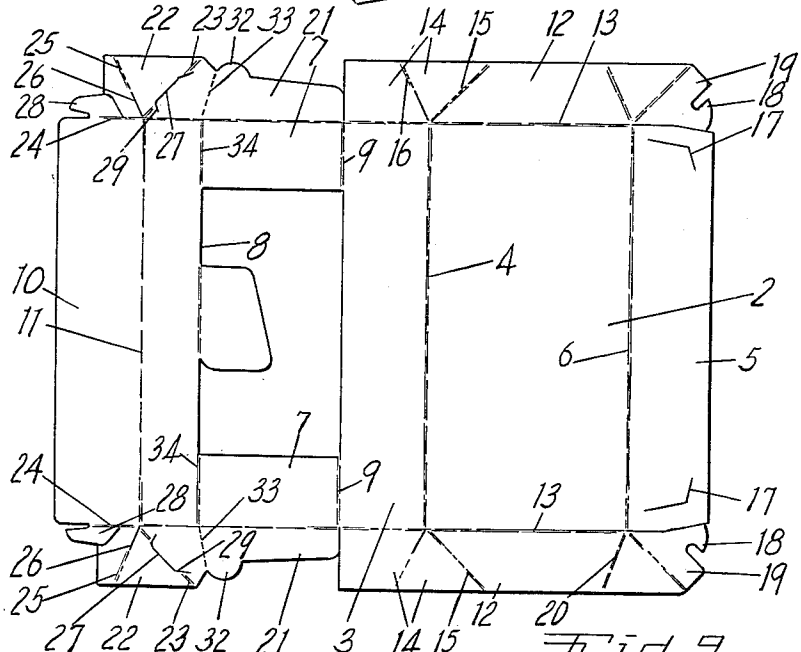


Fig. 3

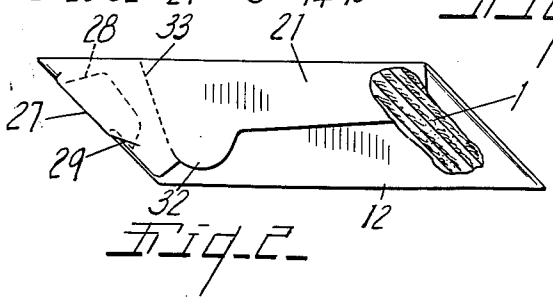


Fig. 2

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3 Sheets-Sheet 2

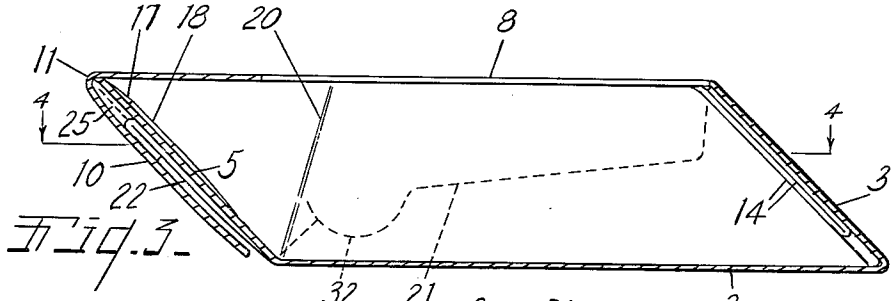


Fig. 3

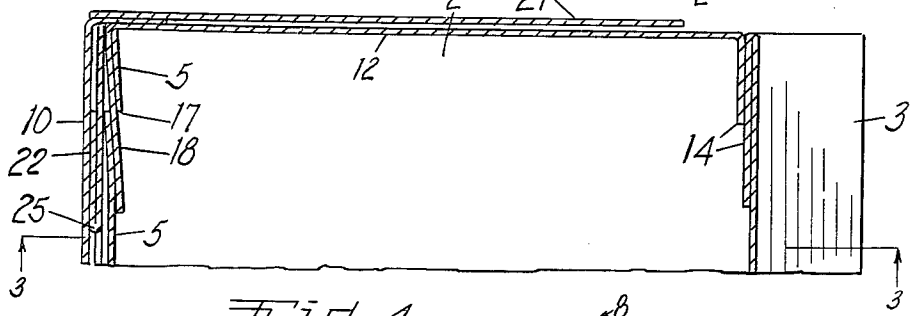


Fig. 4

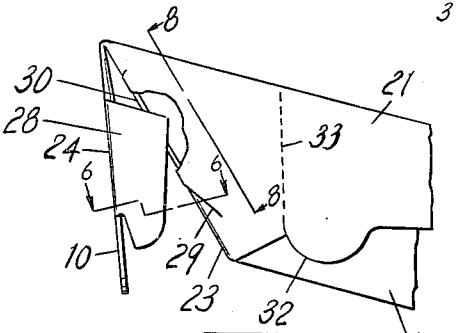


Fig. 5

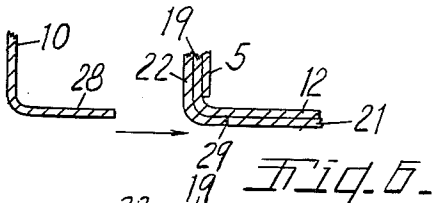


Fig. 6

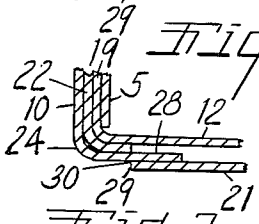


Fig. 7

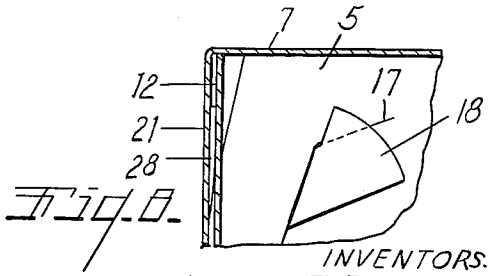


Fig. 8

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April 18, 1961 K. T. BUTTERY ET AL 2,980,316

CARTON

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3 Sheets-Sheet 3

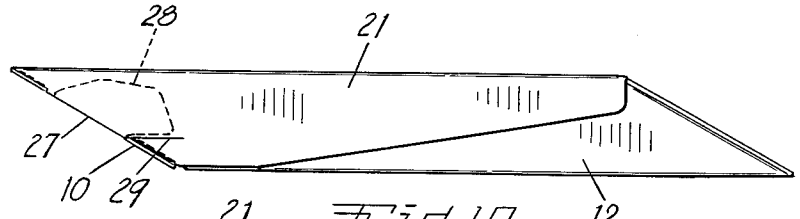


Fig. 10.

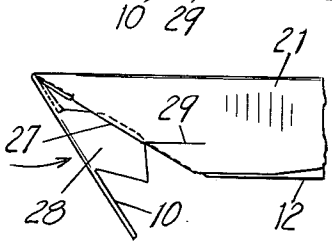


Fig. 12.

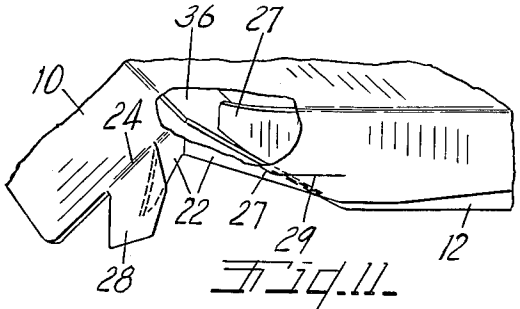


Fig. 11.

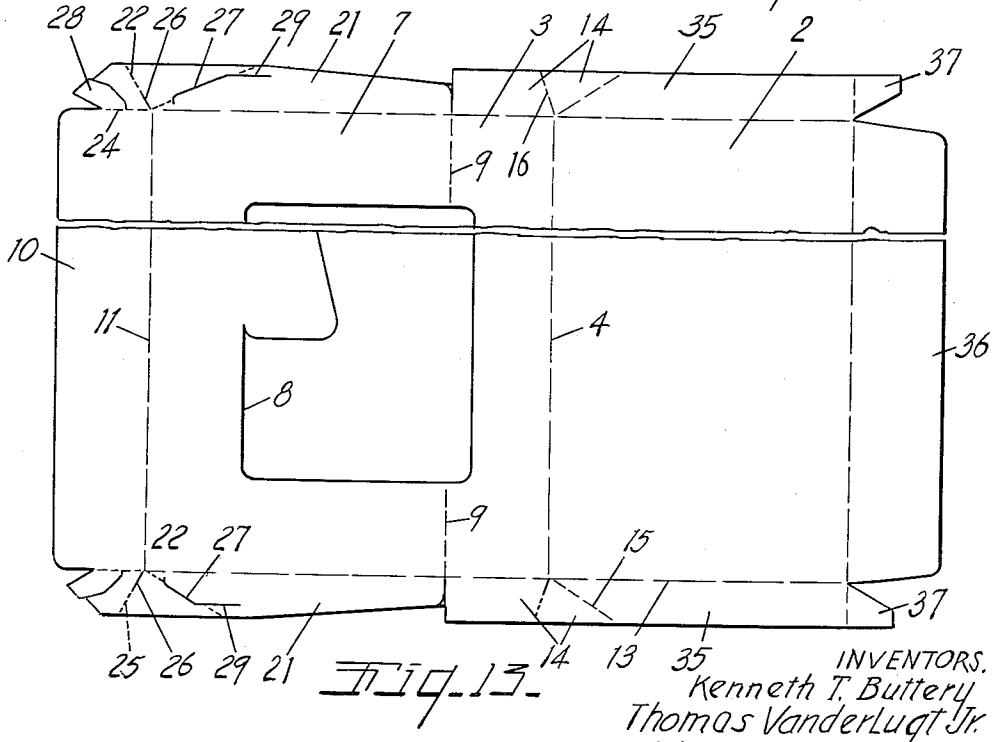


Fig. 13.

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United States Patent Office 2,980,316 Patented Apr. 18, 1961

2,980,316

CARTON

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Filed Nov. 9, 1959, Ser. No. 851,588

9 Claims. (Cl. 229—87)

This invention relates to improvements in packaging cartons including cartons suitable for the packaging of products such as sliced bacon and the like, which is relatively heavy in proportion to the dimensions of the product. The main objects of this invention are:

First, to provide a carton for packaging food products which is generally parallelogram in shape viewed endwise thereof, and at the same time is resistant to load crushing or distorting stresses applied to the top thereof.

Second, to provide a carton having these advantages formed of a cut and scored blank of container board which may be of relatively light stock and at the same time is strong and rigid when erected, and may be repeatedly handled without distortion.

Third, to provide a carton having these several advantages which may be quickly erected to receive the product inclosed and may be quickly opened.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of a carton embodying my invention.

Fig. 2 is an end elevational view of the erected carton partially broken away to disclose contents thereof.

Fig. 3 is a transverse sectional view on a line corresponding to line 3—3 of Fig. 4.

Fig. 4 is a fragmentary horizontal section on a line corresponding to line 4—4 of Fig. 3.

Fig. 5 is a fragmentary end elevational view illustrating certain of the erecting steps.

Fig. 6 is a fragmentary diagrammatic view generally corresponding to the broken line 6—6 of Fig. 5, further illustrating steps in assembling.

Fig. 7 is a fragmentary sectional view illustrating the parts shown in Fig. 1 illustrating parts corresponding to Fig. 6 in erected position.

Fig. 8 is a fragmentary sectional view on a line corresponding to line 8—8 of Fig. 5 showing the manner in which the tongues are engaged in the slot-like openings.

Fig. 9 is a plan view of the blank of the embodiment of my invention shown in Figs. 1 to 9 inclusive.

Fig. 10 is an end elevational view of a modified form or embodiment of my invention.

Fig. 11 is a fragmentary perspective view illustrating certain structural details and steps in assembling of the embodiment of my invention shown in Fig. 10.

Fig. 12 is a fragmentary end elevational view showing further steps in assembling.

Fig. 13 is a plan view of the blank of the embodiment of my invention shown in Figs. 10, 11 and 12.

In the accompanying drawing, I have illustrated my invention in an embodiment thereof adapted for the packaging of sliced bacon, which is conventionally illustrated at 1 in Fig. 2. It should be understood, however, that other material or products may be packaged and that size and shape may be very greatly varied. The embodiment of my invention illustrated in Figs. 1 to 9 inclusive comprises a bottom 2, front wall 3 hingedly connected thereto by the score line 4, inner rear wall panel 5 hingedly connected to the rear edge of the bottom by the folding score 6. The cover 7 of the embodiment illustrated has a window opening 8 therein. It is hingedly connected to the upper edge of the front wall by the hinging scores 9 at each side of the opening therein. The outer rear wall panel 10 is hingedly connected to the swinging edge of the cover by the hinging scores 11. The inner end wall members 12 are hingedly connected to the ends of the bottom by the scores 13 to be positioned in upright position when the carton is erected.

The inner end wall members 12 are of generally polygonal shape in this embodiment illustrated and the foldable corner flaps 14 which are connected to the front ends of the inner end wall members 12 by the scores 15, and the flaps are scored for folding upon themselves at 16. The inner rear wall panel is provided with angular slits 17 adapted to be engaged by the tongues 18 on the corner flaps 19. The end wall members 12 have weakened lines 20 therein diverging rearwardly from the scores 21 connecting the flaps 19 to the inner end wall members. These weakening scores 20 are provided to facilitate the engagement of the tongues 18 with the slits 17. The engaged position is illustrated in Figs. 3 and 8, for example.

The outer end wall members 21 are, in the embodiment illustrated, of less vertical width than the inner wall members 12 and they are connected at their rear ends to the outer rear wall panel 10 by means of the foldable corner flaps 22. These corner flaps 22 are connected to the outer end wall members by the score line 23 and to the outer rear wall panel 10 by the score lines 24. The corner flaps 22 are scored at 25 and have slits 26 at the inner ends of these scores to insure folding in the right direction when the parts are adjusted to erected position. At the folding juncture of the corner flaps with the outer end wall members slits 27 are provided adapted to receive the tongues 28 on the ends of the outer rear wall panel. These slits 27 desirably have angularly disposed portions 29 at their ends so that when the corner flaps are folded inwardly, slot-like openings 30 result, facilitating the engagement of the tongues 28 therein.

With the parts in erected position, as is illustrated in Figs. 1, 2, 3 and 4, the rear wall panel is securely held in locked supporting engagement with the rear wall panel 10. To facilitate opening of the carton, the outer rear wall panel in this preferred embodiment is provided with a downwardly projecting finger tab 32 and a fracturing line 33 at the rear of the tab. In this embodiment the top is provided with weakened hinging or flexing lines 34 aligned with these weakened lines 33 so that if desired the carton may be opened by grasping the tabs 32 and pulling upwardly and outwardly. However, there are many uses, domestic for example, where it is desirable to reclose the carton after a portion of its contents have been removed, and it may be repeatedly opened and closed by manipulation of the interlocking tongues 28.

When erected the carton is very rigid in proportion to the weight of stock, and it is capable of withstanding relatively heavy loads, for example such as results from stacking a plurality of packages one upon another. The shape is also maintained, which is a desirable feature where the carton is provided with a window as in the embodiment illustrated to display the contents.

The embodiment of the invention illustrated in Figs. 10 to 13 inclusive is essentially the same as that described, with the exception that certain structural details are omitted and the inner wall members 35 corresponding to the wall members 12 of the preferred embodiment are not

connected to the inner rear wall panel 36 by interlocking tongues and slits as in the preferred embodiment, but are merely provided with inwardly foldable corner flaps 37. The structure of this embodiment has the advantage of being somewhat more quickly erected, but it has less crushing resistance than in the structure of the preferred embodiment. In this embodiment there are no weakened zones 33 and 34 to facilitate rapid opening.

I have used corresponding numerals on most of the parts and have not repeated the description of the parts which are essentially duplicated in the embodiments. I have not illustrated or described other embodiments or adaptations of my invention, as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

What is claimed as new is:

1. A carton having a generally parallelogram transverse contour when erected formed integrally of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, and an outer rear wall member hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said inner end wall members and front wall having inwardly foldable corner flaps integral therewith and hingedly connected thereto and foldable inwardly on the inner side of the front wall when the carton is erected, said inner end wall members having upwardly facing tongues on their rear ends hingedly connected thereto for positioning on the inner side of said inner rear wall panel, said rear wall panel having angled slits therein with which said tongues are engageable, the inner end wall members having diagonal scores therein facilitating the manipulation of said corner flaps, outer end wall members hingedly connected to said top, said outer end wall members and said outer rear wall panels having inwardly foldable rear corner flaps hingedly connected thereto, there being angled slits at the juncture of said rear corner flaps with said outer end wall members providing slot-like tongue receiving openings when the outer end wall members and corner flaps are in erected position, said outer rear wall panel having upwardly facing tongues on its end edges positionable in said slots engageable with the upper edges thereof.

2. A carton having a generally parallelogram transverse contour when erected formed integrally of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, and an outer rear wall member hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said inner end wall members and front wall having inwardly foldable corner flaps integral therewith and hingedly connected thereto and foldable inwardly on the inner side of the front wall when the carton is erected, said inner end wall members having upwardly facing tongues on their rear ends hingedly connected thereto for positioning on the inner side of said inner rear panel, said rear wall panel having angled slits therein with which said tongues are engageable, the inner end wall members having diagonal scores therein facilitating the manipulation of said corner flaps, outer end wall members hingedly connected to said top, said outer end wall members and said outer rear wall panels having inwardly foldable rear corner flaps hingedly connected thereto, there being slits at the juncture of said rear corner flaps with said outer end wall members, said outer rear wall panel having tongues on its end edges.

3. A carton having a generally parallelogram transverse contour when erected formed integrally of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, and an outer rear wall member hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said inner end wall members having upwardly facing tongues on their rear ends hingedly connected thereto for positioning on the inner side of said inner rear wall panel, said rear wall panel having slits therein with which said tongues are engageable, the inner end wall members having diagonal scores therein facilitating the manipulation of said corner flaps, outer end wall members hingedly connected to said top, said outer end wall members and said outer rear wall panels having inwardly foldable rear corner flaps hingedly connected thereto, there being angled slits at the juncture of said rear corner flaps with said outer end wall members providing slot-like tongue-receiving openings when the outer end wall members and corner flaps are in erected position, said outer rear wall panel having upwardly facing tongues on its end edges positionable in said slots engageable with the upper edges thereof.

4. A carton having a generally parallelogram transverse contour when erected formed integrally of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, and an outer rear wall member hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said inner end wall members having upwardly facing tongues on their rear ends hingedly connected thereto for positioning on the inner side of said inner rear wall panel, said rear wall panel having slits therein with which said tongues are engageable, the inner end wall members having diagonal scores therein facilitating the manipulation of said corner flaps, outer end wall members hingedly connected to said top, said outer end wall members and said outer rear wall panels having inwardly foldable rear corner flaps hingedly connected thereto, there being slits at the juncture of said rear corner flaps with said outer end wall members, said outer rear wall panel having tongues on its end edges engageable with said corner flaps.

5. A carton having a generally parallelogram transverse contour when erected formed integrally of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, and an outer rear wall member hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said inner end wall members and front wall having inwardly foldable corner flaps integral therewith and hingedly connected thereto and foldable inwardly on the inner side of the front wall when the carton is erected, said outer end wall members and said outer rear wall panels having inwardly foldable rear corner flaps hingedly connected thereto, there being angled slits at the juncture of said rear corner flaps with said outer end wall members providing slot-like tongue receiving openings when the outer end wall members and corner flaps are in erected position, said outer rear wall panel having upwardly facing tongues on its end edges positionable in said slots engageable with the upper edges thereof.

6. A carton formed of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, and an outer rear wall member hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said inner end wall members having tongues on their rear ends engageable with said inner rear wall panel, and outer end wall members hingedly connected to said top, said outer end wall members and said outer rear wall panels having inwardly foldable rear corner flaps hingedly connected

thereto, there being angled slits at the juncture of said rear corner flaps with said outer end wall members providing slot-like tongue-receiving openings when the outer end wall members and corner flaps are in erected position, said outer rear wall panel having upwardly facing tongues on its end edges positionable in said slots engageable with the upper edges thereof.

7. A carton formed of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, and an outer rear wall member hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said outer end wall members and said outer rear wall panels having inwardly foldable rear corner flaps hingedly connected thereto, there being slits at the juncture of said rear corner flaps with said outer end wall members, said outer rear wall panel having tongues on its end edges engageable in said slits, said outer end wall members having downwardly projecting finger tabs disposed in forwardly spaced relation to said rear corner flaps and vertically extending fracturing zones disposed rearwardly of said finger tabs for facilitating the opening of the carton.

8. A carton formed integrally of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, an outer rear wall panel hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, said inner end wall members and front wall having foldable corner flaps integral therewith and foldable inwardly on the inner side of the front wall when the carton is erected with

the front wall in rearwardly inclined position, said inner end wall members and inner rear wall panel having co-engaging parts acting to hold said inner rear wall panel and inner end wall members in erected position with the inner rear wall in rearwardly inclined position, and outer end wall members hingedly connected to said top to overlap said inner end wall members, said outer end wall members and said outer rear wall panel having manually manipulatable co-engaging parts for maintaining them in erected position with the outer rear wall panel in overlapping supporting relation to said inner rear wall panel.

9. A carton formed integrally of paperboard cut and scored to provide a bottom, a front wall at the front edge of the bottom, an inner rear wall panel at the rear edge of the bottom, a top hingedly connected to the upper edge of the front wall, an outer rear wall panel hingedly connected to the swinging edge of the top, inner end wall members hingedly connected to the bottom, and outer end wall members hingedly connected to said top to overlap said inner end wall members, said outer end wall members and said outer rear wall panel having manually manipulatable co-engaging parts for maintaining them in erected position, said outer end wall members having vertically extending fracturing zones at the front of the co-engaging elements of said outer end wall member and outer rear panel for facilitating the opening of the carton.

References Cited in the file of this patent

UNITED STATES PATENTS

1,736,874	Bellin	Nov. 26, 1929
2,934,253	Buttery et al.	Apr. 26, 1960

FOREIGN PATENTS

752,811	France	July 24, 1933