Oct. 17, 1967 D. KOSSNAR 3,347,356

TWO-CELL DISPLAY CARTON

Filed Feb. 21, 1966 3 Sheets-Sheet 1

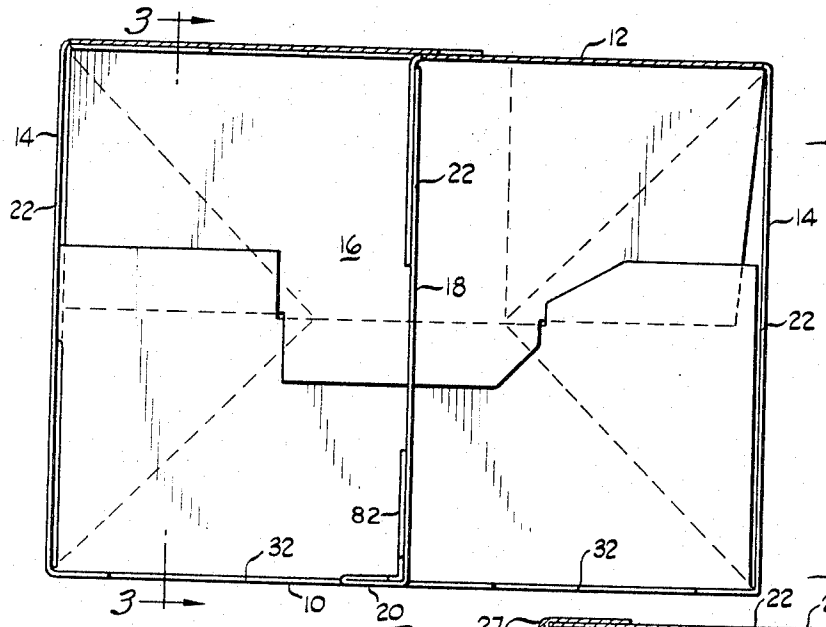


Fig. 2

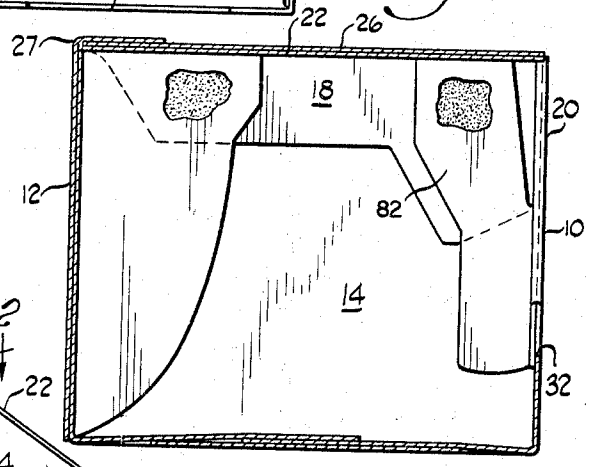


Fig. 3

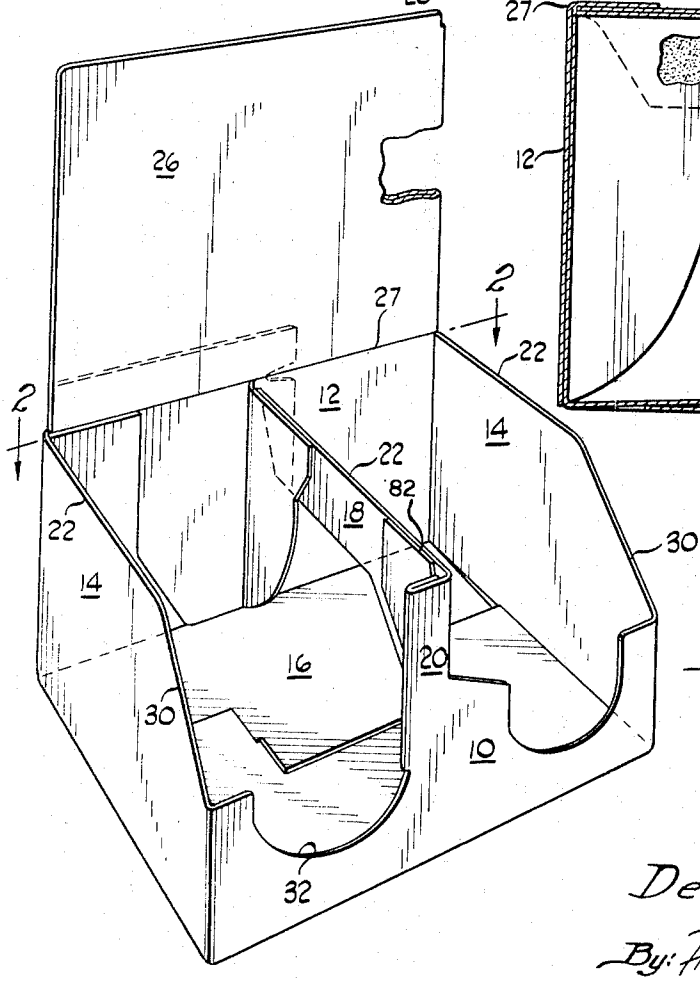


Fig. 1

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Oct. 17, 1967 D. KOSSNAR 3,347,356

TWO-CELL DISPLAY CARTON

Filed Feb. 21, 1966 3 Sheets-Sheet 2

Fig. 4

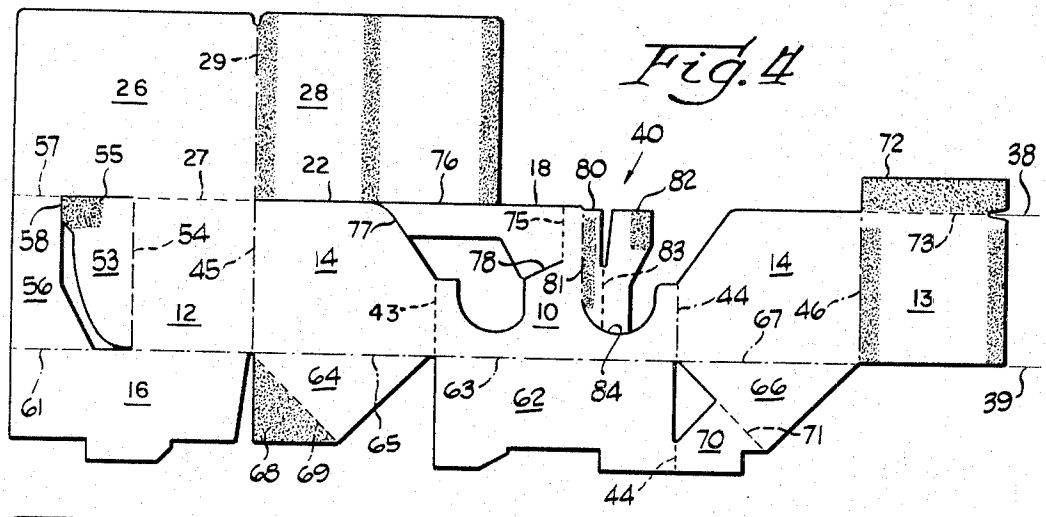


Fig. 6

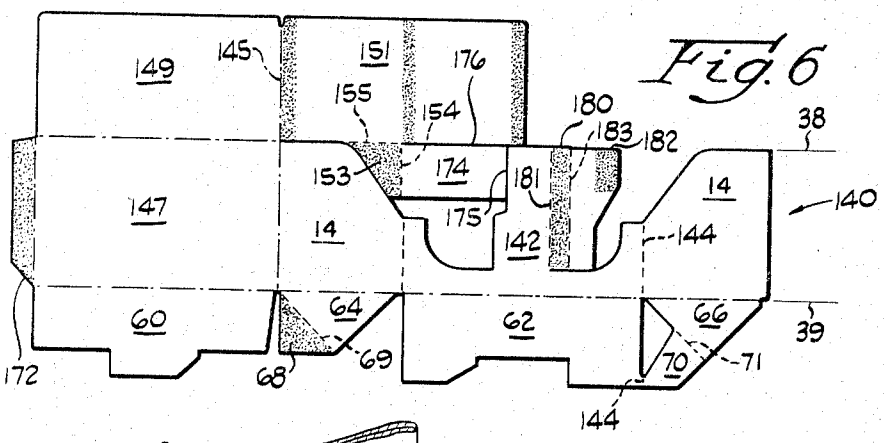
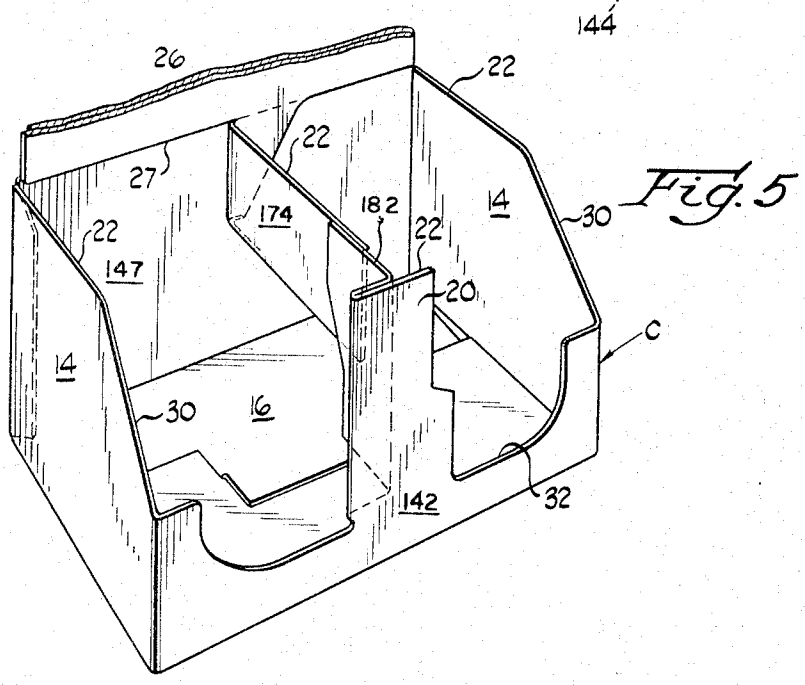


Fig. 5



Oct. 17, 1967 D. KOSSNAR 3,347,356

TWO-CELL DISPLAY CARTON

Filed Feb. 21, 1966 3 Sheets-Sheet 3

Fig. 9

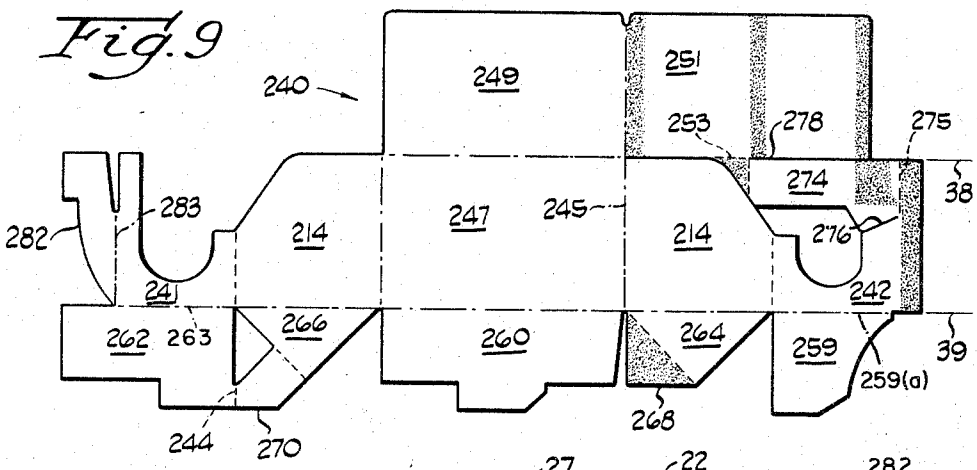


Fig. 8

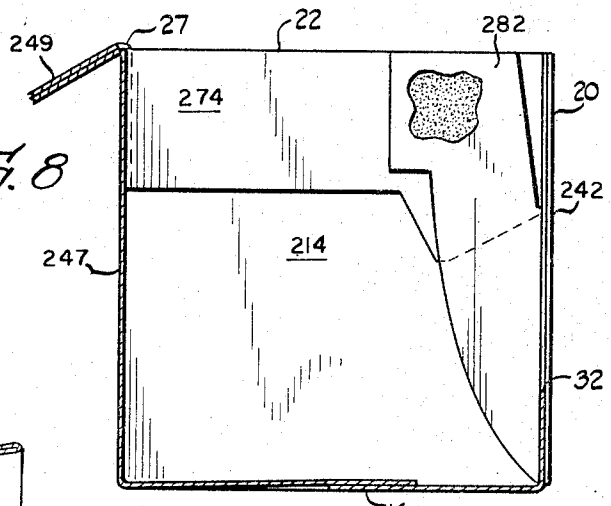
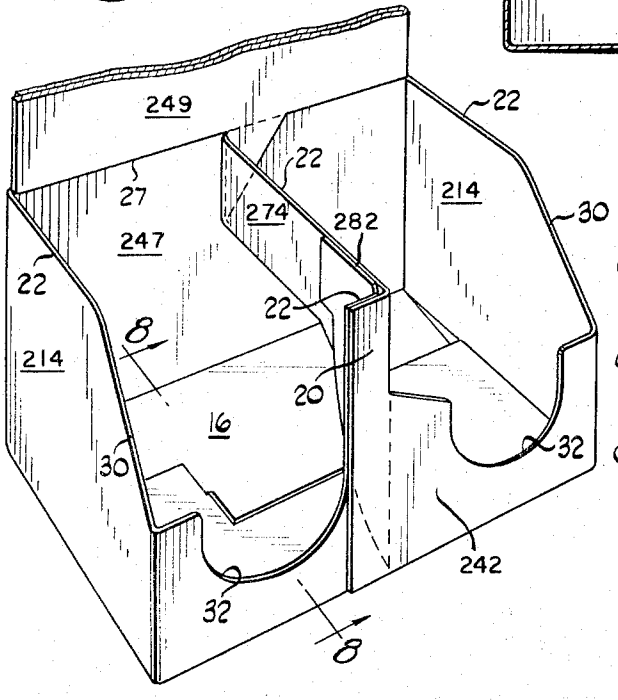


Fig. 7



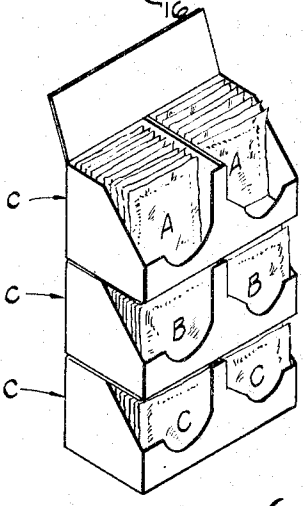


Fig. 10

United States Patent Office 3,347,356 Patented Oct. 17, 1967

3,347,356

TWO-CELL DISPLAY CARTON

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Filed Feb. 21, 1966, Ser. No. 528,753
11 Claims. (Cl. 206—45.29)

ABSTRACT OF THE DISCLOSURE

A two-cell carton having a particular construction to permit stacking of like cartons on one another while simultaneously withdrawing the product carried in the carton from the carton; this construction including having the upper edges of the central portion of the front wall, the rear wall, the rear portion of the end walls, and a central partition strap of the same height, and having the upper edges of the end portions of the front wall and the forward portions of the end walls of a lesser height.

This invention relates to a two-cell carton for holding and displaying a plurality of relatively thin packages in adjacent upright positions, and more particularly, to structural modifications that improve the ability to stack like cartons on one another while simultaneously providing for the removal of the packages from the carton.

The style carton for which this invention forms an improvement is typically used for displaying and merchandising relatively thin packages or pouches arranged on end in the cartons. Products merchandised in this type package include the powdered concentrates for soft drinks, seasonings and soup mixes, and generally come in a complete line of flavors and kinds. Each display carton holds many separate packages, and like cartons commonly are stacked on one another to display the complete product line. The front wall of the carton is generally cut away to permit removal of the packages from the carton even with another carton stacked on it. However, existing cartons cannot be stacked on one another effectively since the displayed packages provide rigidity to the carton, so that frequently after some packages have been removed from lower cartons of a stack, the carton collapses and the stack topples over.

Accordingly, a main object of this invention is to provide an improved display carton having a full height central portion on the front wall and a front to rear partition strap between the front wall central portion and the rear wall to form a firm base upon which like cartons can be stacked and be supported.

A more detailed object of this invention is to provide a double-ply construction for either the full height of the narrowed central portion of the front wall or at least a partial height of this area to reinforce this section of the front wall and the partition strap to add rigidity to the carton independently of the packages carried therein to permit more effective stacking of like cartons.

These and other objects of this invention will be more fully appreciated after reviewing the following specification including as a part thereof the accompanying drawings, wherein:

FIG. 1 is a perspective view of a first embodiment of the subject two-cell partitioned display carton;

FIG. 2 is a top plan view, partly in section as seen generally from line 2—2 in FIG. 1, of the carton shown in FIG. 1;

FIG. 3 is a side elevational view, partly in section, as seen generally from line 3—3 in FIG. 2 of the carton shown in FIG. 1;

FIG. 4 is a plan view, as seen from the unprinted or inside surface of the finished carton, of a blank suitable for forming the carton disclosed in FIGS. 1–3;

FIG. 5 is a perspective view of a second embodiment of the subject two-cell partitioned display carton;

FIG. 6 is a plan view, as seen from the unprinted or inside surface of the finished carton, of a blank suitable for forming the carton disclosed in FIG. 5;

FIG. 7 is a perspective view of still a third embodiment of the subject two-cell partitioned display carton;

FIG. 8 is a side elevational view, partly in section, as seen generally from line 8—8 in FIG. 7, of the carton shown in FIG. 7;

FIG. 9 is a plan view, as seen from the unprinted or inside surface of the finished carton, of a blank suitable for forming the carton in FIGS. 7 and 8; and

FIG. 10 is a perspective view of a plurality of like cartons, having the construction disclosed herein, shown in a typical display where they are stacked on one another.

FIGS. 1, 5 and 7 show individual embodiments of the subject two-cell display carton, and FIG. 10 shows how a plurality of like cartons can be stacked on one another for typical display purposes. Each of the cartons, generally designated C, includes a tubular vertical wall structure having a cut-away front wall **10**, a full rear wall **12**, and opposing partially cut-away end walls **14**. The tubular structure is open at its top, but is closed at its bottom by a bottom wall **16** hinged at its lower edges. A partition strap **18** hinged to an elevated central portion **20** of the front wall, extends front to rear of the carton between the end walls **14** and is in turn hinged to the rear wall **12**. The top of the rear wall **12**, and the top edges **22** of the rearward portions of the end walls **14**, the central portion **20** of the front wall **10**, and the partition strap **18** all are substantially equally spaced from the bottom wall **16** and define thereby a top edge plane which extends parallel to the bottom wall. The distance between the top edge plane and the bottom wall is slightly in excess of the height of the packages to be displayed by the carton so that the tops of the packages do not protrude above the top of the carton.

A cover and display panel **26** is hinged at **27** along its lower rear edge to the top of the rear wall **12** and provides, in the position shown in FIGS. 1, 5, and 7, a display for the carton. The panel can be folded about its hinge **27** to engagement with the previously mentioned top edges **22** to lie in substantially coplanar relationship with the top edge plane to cover and close the open top of the carton. In this carton closed position, panel **26** is firmly supported so that other cartons of similar style can be stacked on it in the manner shown in FIG. 10. The forward portion of the end walls and the end portions of the front wall have their top edges **30** and **32** trimmed away to be disposed between the cover panel **26** in the carton closed position, and the bottom wall **16**. This displays the packages when the carton is in the closed and stacked position (see FIG. 10) while further permits easy removal of the package from the carton through the open front wall. To permit multiple stacking of these cartons, a double-ply reinforcing strut **82** is provided adjacent the partition strap **18** at the central portion **20** of the front wall and extends the full height of the central portion. Preferably, the reinforcing strut **36**, the partition strap **18**, and the front wall central portion **20** are adhesively secured together.

Having thus described the basic carton structure as well as its association with a typical package to be displayed therein, the manner of construction will now be described. For this purpose, attention is directed to FIGS. 4, 6, and 9 which disclose, respectively, the blank suitable for forming the cartons of FIGS. 1, 5, and 7. Each blank consists of an elongated strip of paperboard divided into three sections by parallel lines **38** and **39** running longitudinally

of the blank. The portions of the blank located between the two parallel lines define the tubular wall structure of the carton, the partition strap, and the reinforcing strut. The portions of the blank located above the upper line **38** define generally the cover and display panel **26**; while the portions of the blank located below the lower line **39** define the bottom wall structure **16**.

Referring now specifically to blank **40** (FIG. 4), front wall panel **6** is hinged by score lines **43** and **44** to the end wall panels **14**, which are hinged in turn on score lines **45** and **46** to the rear wall panels **12** and **13**. Cover panel **26** is hinged along score line **27** to the panel **12**, and display panel **28** is hinged to the top panel **26** on the score line **29** and is separated from panel **14** along cut **52**. The cover panel **26** extends the full width of the carton, and partition strap panel **53** is hinged on score line **54** to rear wall panel **12** and is separated from cover panel **26** along cut **55**. Rear wall panel **56** fills out the tubular structure portion of the blank to the end of panel **26**, and is hinged to the panel **26** along score line **57** and is separated from panel **53** along the cut **58**.

The bottom wall structure **16** shown is of an automatic lock bottom type and includes a rear bottom panel **16** hinged along the score line **61** to panels **12** and **56**, a front bottom panel **62** hinged along score line **63** to the bottom edge of front panel **10**, and end bottom panels **64** and **66** respectively, hinged on score lines **65** and **67** to the bottom edges of the end wall panels **14**. The bottom end wall panels **64** and **66** are of triangular configuration and each has hinged thereto on a diagonal score line a triangular panel adapted to be glued to the adjacent bottom wall panel. Thus, panel **68** is hinged on diagonal score line **69** to panel **64**, while triangular panel **70** is hinged on diagonal score line **71** to panel **66** and along a continuation of score line **44** to the front bottom wall panel **62**. A rear glue panel **72** is hinged on score line **73** along upper divider line **38** to the rear wall panel **12**.

Partition strap and reinforcing strut panels are formed from the blank adjacent the front panel and are hinged to the front panel. Thus, partition strap panel **18** is hinged along score line **75** to the full height central portion of the front wall panel **20**. The partition strap panel **18** is elongated to extend toward the end wall **14**, but is separated by cuts **76** and **77** from the display panel **28** and end wall respectively, and by cut **78** from the front panel **10**. The reinforcing structure includes two panels **80** and **82** hinged respectively, on score lines **81** and **83** to the front wall panel **42** and to the panel **80**. The panels are separated by cut **84** from the lower portion of the front wall panel **10**. The width of panel **80** between the score lines **81** and **83** is substantially equal to the width of the central portion between the hinge lines **75** and **81**.

To form the carton disclosed in FIGS. 1–3, blank **40** is conveyed, with its unprinted side up, along typical folding and gluing equipment. Adhesive is applied to the blank on the reinforcing strut panels **80** and **82** and the panels **80** and **82** are folded about hinge **81** to bond panel **80** to the front wall panel **10** and panel **82** to panel **18**. The bottom wall forming panels **16**, **62**, **64**, and **66** are then folded upwardly about their respective score lines along line **39**, and the triangular panel **68** is backfolded onto panel **64** about score lines **69**. Adhesive is then applied to the exposed triangular panels **68** and **70** on the unprinted side of the panel **69** and on the printed side of panel **70**, and to the areas indicated on the display panel **28**, the rear partition strap panel **53**, and the rear wall panel **12** and the glue panel **72**. The panels **26**, **56**, **53** and **12**, and **60** are then folded upwardly about the score line **45** so that the cover and display panels are adhesively secured together, so that the partition strap panels **53** and **75** are adhesively secured together, and so that the rear bottom wall panels **16** is adhesively secured to triangular panel **68**. The panels **14**, **66** and **70**, and **13** and **72**, are then folded about the hinge line **44** to adhesively secure panels **13** to panels **12** and **56**, panel **72** to panel **49**, and panel **70** to panel **62**.

Note that the automatic bottom wall panels fit within the carton structure in the collapsed position hereof below the partition strap to permit, without interference, the unfolding of this automaic lock bottom during the opening of the carton.

FIGS. 5 and 6 show an alternate embodiment of the subject two-cell carton. In this embodiment, the central portion **20** of the carton extends to both sides of the partition strap **174** for the full height of the central portion to provide package retaining lips for each cell. Referring to the blank **140** in FIG. 6, the tubular structure is seen to include a single rear wall panel **147**, opposed end wall panels **14**, front wall panel **142** and lapped glue panel **172**. The bottom wall structure **16** is substantially identical to the FIG. 4 embodiment and includes panels **16**, **62**, **64**, **66**, **68** and **70**, hinged to the tubular structure wall about line **39** and to one another in a manner described for FIG. 4. Cover panel **149** is hinged to the top of the rear panel **147** and the display panel **151** is hinged on score line **145** to the side of the cover panel.

In FIG. 6, the partition strap panel **174** is hinged at score line **154** to a triangular panel **153** in turn hinged along score line **155** to the lower edge of the display panel **151**. The partition strap panel is separated from the central portion of front panel **142** by cut **175** and from the panel **151** by cut **176**. Reinforcing strut panels **180** and **182** are hinged about score lines **181** and **183** to the central portion of front wall panel **142** and to the panel **180**, respectively.

To form the carton from the blank **140**, the reinforcing strut panels **180** and **182** are glued and folded about the score line **181**, as previously noted, to bond panel **180** to the unprinted side of the front panel and to bond panel **182** to the reinforcing strap panel **174**. The bottom wall structure is then folded upwardly about line **39** and panel **68** about score **69**, and panels **68**, **70**, **151**, **153** and **172**, are adhesively coated in a manner noted above for FIG. 4. The end wall panel and bottom wall panels **66** and **70** are folded about score line **144**, and the cover panel **149**, rear panel **147**, and bottom wall panel **60** are then folded about the hinge line **145** to adhesively secure the cover and display panels **149** and **151** together and to overlap the lap panel **172** with the end wall panel **14**. The triangular panel **153**, when secured to the rear wall panel **147**, establishes a rigid connection for the partition strap. The carton opens to that shown in FIG. 6.

The carton embodiment of FIGS. 7, 8, and 9 will now be described, blank **240** in FIG. 9 being quite similar to those disclosed in the previous embodiments. In FIG. 9, the blank **240** includes front wall panels **241** and **242**, a single rear wall panel **247**, and end wall panels **214**. The cover and display panels **249** and **251** are hinged to the rear panel **247** and each other, respectively, and the partition strap panel **274** is hinged by means of the triangular panel **253** to the display panel **251** as was noted for the corresponding elements in FIG. 6. The bottom structure differs from the previously described bottom structure in that two front wall bottom panels **259** and **262** are hinged, respectively, to the separate front wall panels **242** and **241** on score lines **259***a* and **263**. The other panels **261**, **264**, **266**, **268**, and **270** are similar to the corresponding bottom wall panels previously noted.

In FIG. 9, the partition strap **274** is hinged along hinge line **275** to the central portion of the front wall panel **242** and is separated from the remaining portion of the front wall panel and from the cover panel **251** by cuts **276** and **278**, respectively. The strut reinforcing panel **282** is hinged about hinge line **283** to the central section of the front wall panel **241**.

The carton is formed from the blank by first folding the bottom wall panels about the respective scores on line **39** and applying adhesive to the triangular panels **268** and **270** as noted in the previous embodiments. The inner

front wall panel **241**, the reinforcing strut panel **282** and bottom wall panel **262** are folded about the score **244**, and the partition strap panel **274**, cover panel **251**, triangular panel **253**, and front wall panel **242** are adhesively coated in the areas noted in the figure. The display panel **251**, the end wall **214**, and outer front wall panel **242**, partition strap panel **274** and bottom wall panels **259**, **264**, and **268** are then folded about the score line **245** to bond together a narrow strip between the front wall panels **241** and **242**, and further to secure the reinforcing strut **282** to the partition strap **274** in the areas noted. The carton opens to that shown in FIG. 7.

While several embodiments of the carton have been shown, it can be noted that each discloses a full height central portion on the front wall and a partition strap connected thereto that together improve the stacking ability of the carton. Further, the double ply of board at the reinforcing strut adjacent the central portion of the front wall and the partition strap strengthens the carton in the area required to form a rigid carton independently of the product in the carton. The partially cut-away front wall still provides for display of the carried package and permits its removal from even stacked cartons as is shown in FIG. 10.

What is claimed is:

1. A two cell carton for holding and displaying a plurality of thin packages in adjacent upright positions in two parallel rows, comprising:

(a) opposed front and rear walls and opposed end walls hingedly interconnected at their side edges to form a tubular structure open at the top and bottom;

(b) a bottom wall including panels hinged to the lower edges of the tubular structure walls for closing the open bottom of said tubular structure;

(c) the rearward portions of the end walls, the central portion of the front wall, and the rear wall being of equal height to define at the top edges thereof a top edge plane extending parallel to the bottom wall and spaced from said bottom wall by a distance greater than the height of the packages to be displayed;

(d) a partition strap connected between the front wall center portion and the rear wall and extending substantially parallel to the end walls, and having a top edge substantially coplanar with the top edge plane;

(e) the forward portions of the end walls and the end portions of the front wall having top edges disposed below the top edge plane suitable to display and provide for ready removal of the packages from the front of the carton even if a like carton is stacked on said carton.

2. A carton according to claim **1**, wherein a display and cover panel is hinged at its lower rear edge to the top edge of the rear wall to fold between a carton closed position supported by at least the previously mentioned partition strap top edge in the top edge plane and a carton open position spaced from the top edge plane.

3. A carton according to claim **1**, wherein a reinforcing strut is formed in the front wall central portion and includes panels secured to the rear side of the front wall and to the partition strap, said strut extending substantially the full height of the front wall central portion.

4. A carton according to claim **1**, wherein said tubular structure is collapsible to a flattened condition having the front wall and one end wall disposed adjacent and in opposing relation to the other end wall and rear wall, and wherein adjacent pairs of said bottom wall panels are hinged to adjacent walls of the tubular structure and are secured to each other to define an automatic lock bottom, and are further foldable into the tubular structure between the opposing walls in the collapsed condition of said tubular structure.

5. A carton according to claim **1**, wherein the carton is formed from a unitary paperboard blank having the partition strap formed from the blank area between the front wall and one end wall adjacent the cut away top edges of said front and end walls.

6. A carton according to claim **1**, wherein said partition strap includes panels integrally hinged to the front wall central portion and rear wall and that overlap and are adhesively secured to one another.

7. A carton according to claim **1**, wherein the partition strap is hinged to the front and rear walls about hinge lines extended parallel to the longitudinal axis of the tubular structure.

8. A carton according to claim **2**, wherein said carton is formed from a unitary paperboard blank having panels for the front wall, rear wall, end walls, and partition strap confined between two parallel lines extended across the blank, and wherein the cover and display panel is hinged to the rear wall panel on a score line and is separated from the adjacent end wall panel and partition strap on a cut extended along one of the previously mentioned parallel lines.

9. A carton according to claim **2**, wherein a reinforcing strut is formed along the full height of the front wall central portion and includes panels adhesively secured to said front wall central portion and partition strap.

10. A carton according to claim **9**, wherein said cover and display panel is double ply having both the front and rear surfaces thereof printed with copy.

11. A carton according to claim **4**, wherein said carton is formed from a unitary paperboard blank having only four bottom wall panels hinged, respectively, to the opposed end, and opposed front and rear walls.

References Cited

UNITED STATES PATENTS

1,949,987	3/1934	Archer	206—44
2,260,428	10/1941	Barr et al.	206—44
2,330,927	10/1943	Rous et al.	206—45.29
2,457,291	12/1948	Wenzel	206—45.29
2,710,131	6/1955	Geller	229—15
2,741,399	4/1956	Arneson	220—113
2,747,767	5/1956	Bergstein	229—28 X
2,893,593	7/1959	Toensmeier	229—28 X
2,942,756	6/1960	Collura et al.	229—27 X
3,166,213	1/1965	Holmes	229—28 X
3,195,797	7/1965	De Feo	229—27
3,208,659	9/1965	Blasdell et al.	229—27
3,227,266	1/1966	Soma	206—44

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