

[72] Inventor **Floyd L. Phillips, Jr.**  
 Winston-Salem, N.C.  
 [21] Appl. No. **875,788**  
 [22] Filed **Nov. 12, 1969**  
 [45] Patented **July 13, 1971**  
 [73] Assignee **R. J. Reynolds Tobacco Company**  
 Winston-Salem, N.C.

2,753,102 7/1956 Paige..... 206/45.31 UX  
 2,891,710 6/1959 Repling..... 206/44 R  
 2,990,950 7/1961 Alexander..... 206/57 R  
 3,285,399 11/1966 Snow..... 206/44 R  
 3,334,733 8/1967 Ebelhardt..... 206/44 R

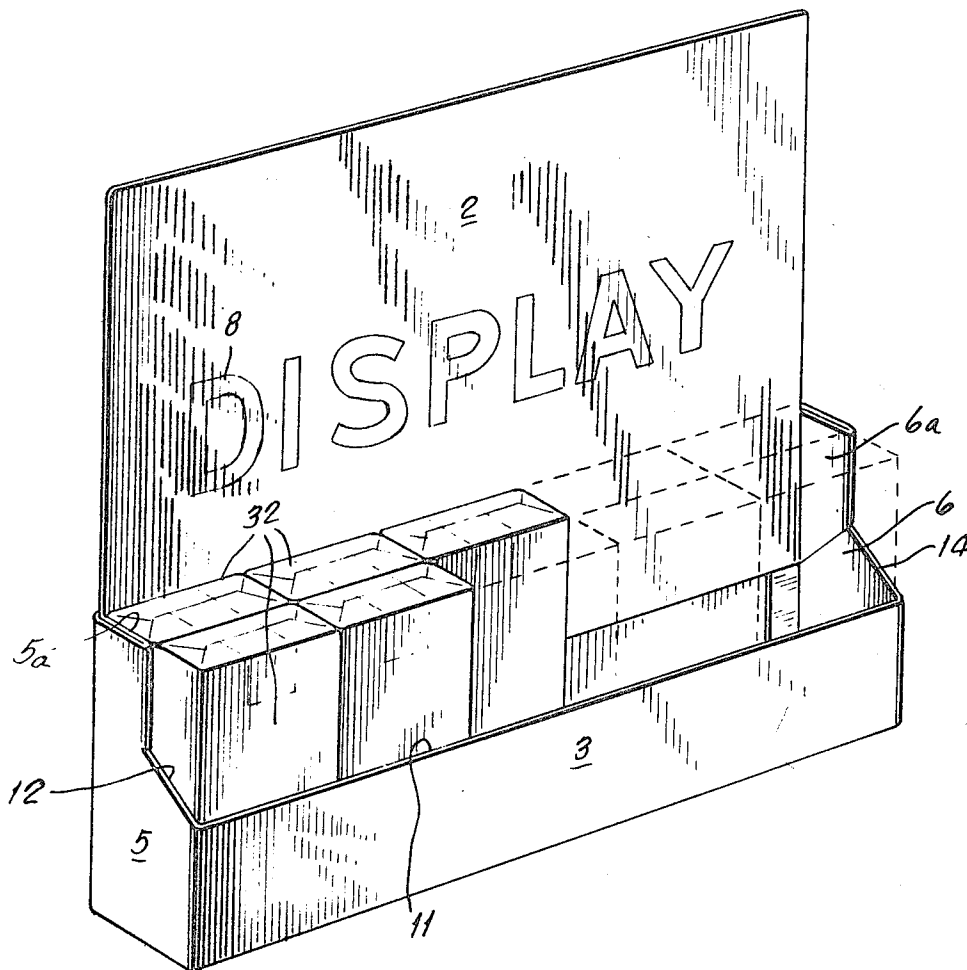
*Primary Examiner*—Joseph R. Leclair  
*Assistant Examiner*—Steven E. Lipman  
*Attorneys*—Lester W. Clark, Robert S. Dunham, P. E.  
 Henninger, Thomas F. Moran, Gerald W. Griffin, R.  
 Bradlee Boal, Christopher C. Dunham and Robert Scobey

[54] **DISPLAY CARTON**  
 8 Claims, 13 Drawing Figs.

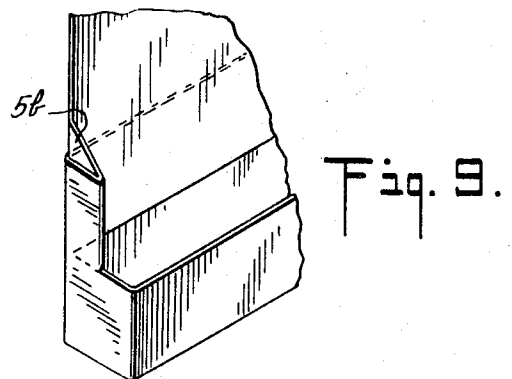
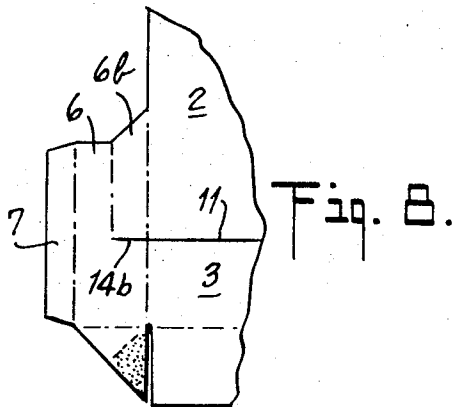
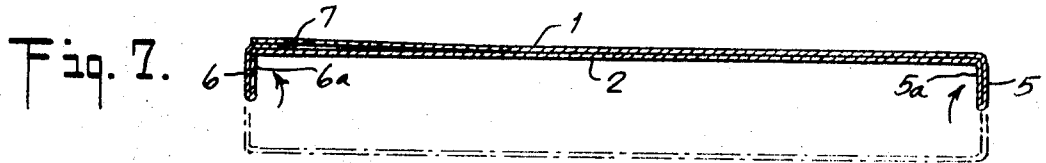
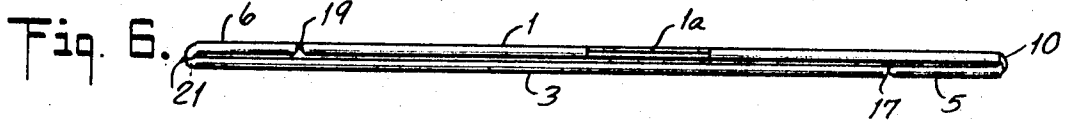
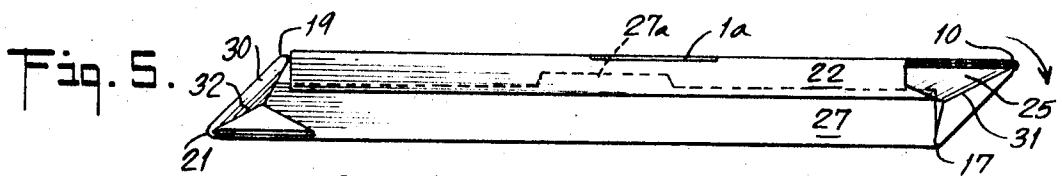
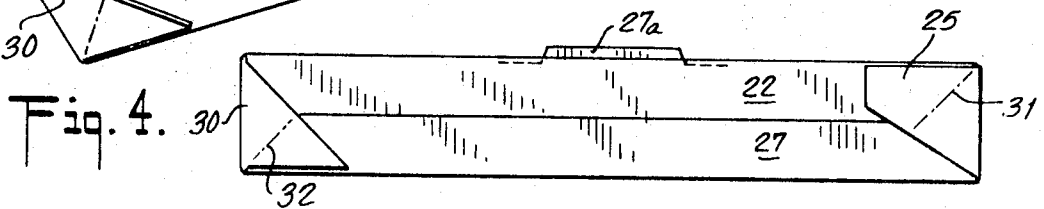
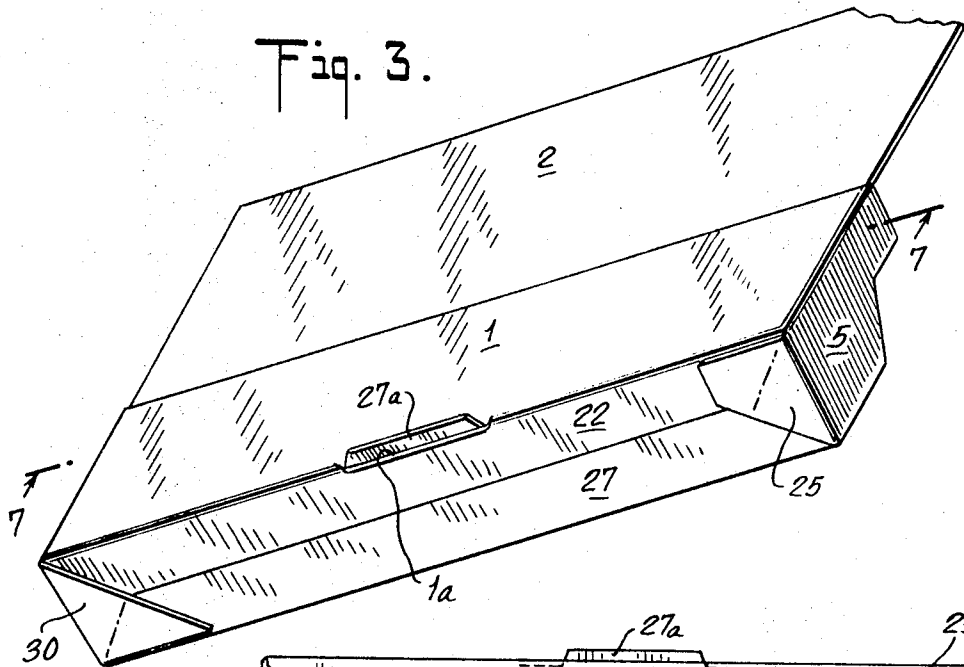
[52] U.S. Cl..... 206/44 R,  
 206/DIG. 18, 229/16 D, 229/38  
 [51] Int. Cl..... B65d 5/50  
 [50] Field of Search..... 206/44 R,  
 44.12, 45, 45.31, 45.34, DIG. 8, DIG. 18; 229/16  
 D, 37 R, 38, 41 R, 41 B

[56] **References Cited**  
**UNITED STATES PATENTS**  
 2,105,025 1/1938 Curtis..... 206/DIG. 8  
 2,523,250 9/1950 Pantalone..... 206/45 R

**ABSTRACT:** A display carton having an open-topped frame to enclose articles to be displayed, with a display panel extending upwardly from the backside of the frame. The blank for forming the carton is cut so that the upwardly extending display panel is formed as part of the front panel, but is folded back and overlaps part of the back panel when the carton is set up, so that the back panel reinforces the display panel. The blank is foldable so that it may be shipped flat. A modification has projecting end tabs which may be fastened down to an underlying surface with tape.







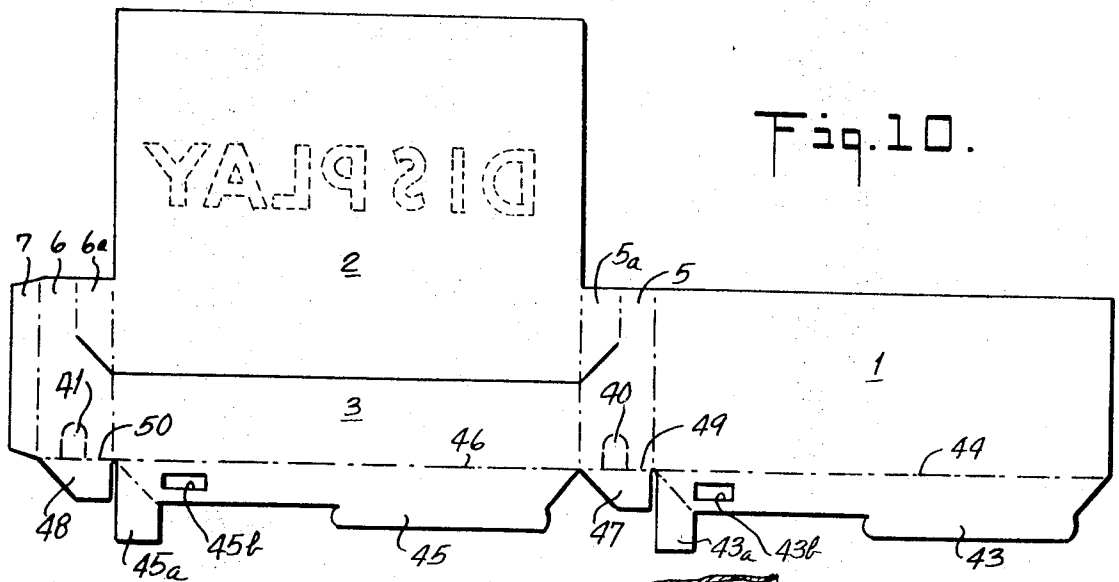


Fig. 10.

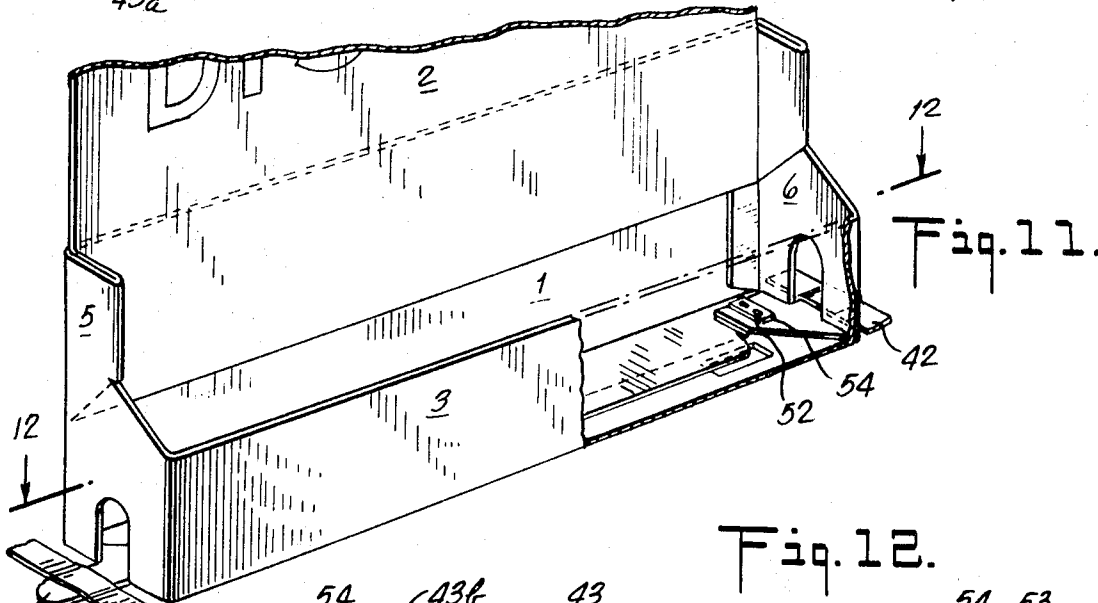


Fig. 11.

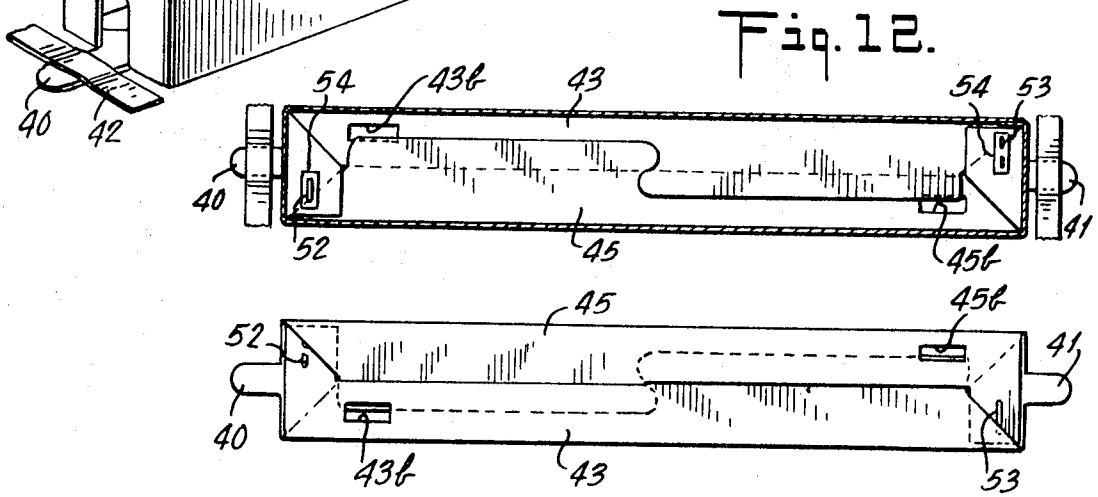


Fig. 12.

Fig. 13.

# 1

## DISPLAY CARTON

### BRIEF SUMMARY OF THE INVENTION

A display carton comprising a front panel, a back panel and two end panels. The front panel is made with a longitudinal cut extending from one end to the other. Each end panel is provided with a transverse cut extending from the adjacent end of the cut in the front panel to the centerline of the end panels. Score lines run vertically along the centerlines of the end panels from the ends of the transverse cuts in the end panels to the tops of the end panels. This arrangement permits the upper portion of the front panel to serve as the display panel. For that purpose, the upper portions of the end panels are folded back upon themselves, carrying the upper portion of the front panel against the back panel. The bottom part of the display panel is thus reinforced by the top part of the back panel. In one modification, the end panels are provided with pushout sections, each connected at its bottom edge to the bottom edge of an end panel and frangibly connected at its other edges to the end panel, so that it is pushable outwardly of the end panel to provide a horizontally extending tab adapted to be taped down on an underlying surface.

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of a blank for making a display carton in accordance with the invention;

FIG. 2 is a perspective view of a complete display carton constructed in accordance with the invention, with articles displayed in the carton;

FIG. 3 is a bottom rear perspective view of the display carton of FIG. 2;

FIG. 4 is a bottom plan view of the display carton of FIGS. 2 and 3;

FIG. 5 is a view similar to FIG. 4, but illustrating the collapsing of the carton in order to make it flat for shipment;

FIG. 6 is a view similar to FIG. 5, but showing the completely collapsed carton ready for shipment;

FIG. 7 is a view taken along the line 7-7 of FIG. 3, showing how the end panels are folded to bring the display panel into its displaying position;

FIG. 8 is a fragmentary view similar to a portion of FIG. 1, showing a modification;

FIG. 9 is a fragmentary view, similar to a portion of FIG. 2, illustrating the modification of FIG. 8;

FIG. 10 is a plan view of a blank showing another modification of the invention;

FIG. 11 is a perspective view, partially broken away, showing a carton constructed from the blank of FIG. 10;

FIG. 12 is a view taken along the line 12-12 of FIG. 11, showing the folded bottom panel; and

FIG. 13 is a bottom plan view of the carton of FIGS. 11 and 12.

### DETAILED DESCRIPTION

#### FIGS. 1-7

FIG. 1 shows a blank for forming a carton shown completed in FIGS. 2 to 7. The blank comprises a back panel 1, and upper display panel section 2, and a lower panel section 3. The panel sections 2 and 3 together form a front panel 4. Panel 5 connects one end of the back panel 1 to the end of the front panel 4. Another end panel 6 is connected along one edge to one edge of the front panel 4 and along its opposite edge to a flap 7. Adhesive is applied at 9 along the end of the back panel 1 to allow attachment of the flap 7. The display panel 2 carries a printed display 8 on its outer surface (i.e., the surface of the blank which forms the outside surface of the carton when erected).

The back panel 1 is connected to the end of panel 5 along a score line 10. The display section 2 is separated from the display panel section 3 by a cut 11 extending from end-to-end of the front panel 4. A cut 12 extends diagonally upwards from

the right-hand end of the cut 11, as viewed in FIG. 1 to the vertical centerline of the end panel 5. A score line 13 extends vertically along that centerline from the end of the cut 12 to the top of the panel 5.

Another cut 14 extends diagonally upward from the left-hand end of the cut 11 to the centerline of the end panels 6. Another score line 15 extends upwardly from the end of the cut 14 to the top of the panel 6. The end panel 5 is connected to the upper display panel section 2 by a score line 16 and is connected to the lower display panel 3 by a score line 17. Similarly, the end panel 6 is connected to the upper display panel section 2 by a score line 20 and is connected to the lower panel section 3 by a score line 21. A score line 19 connects one panel 6 to flap 7.

It may be seen that the cut 12 and the score lines 13 and 16 define a portion 5a of the end panel 5 which serves as a connecting panel. Similarly, the cut 14 and score lines 15 and 20 define a connecting panel 6a.

The back panel 1 is connected along its lower edge to a bottom flap 22 by means of a score line 23. The end panel 5 is connected by a score line 24 to a bottom flap 25. The lower panel section 3 is connected by a score line 26 to a bottom flap 27. The end panel 6 is connected by a score line 28 to a bottom flap 30. The bottom flaps 25 and 30 are divided by diagonal score lines 31 and 32 respectively. The areas below the score lines 31 and 32, as they appear in FIG. 1, are coated with adhesive.

The bottom flap 27 is provided with a short elongated tab 27a which is adapted to project through a cut 1a provided in the end panel 1 along its lower edge.

The plan view of FIG. 1 is taken from the inside of the blank. The carton may be erected by moving the back panel 1 toward the front and to the right, then bending the end panel 6 backward, and bending over the tab 7 to lie under the edge of the adhesively coated margin of the back panel 1.

The connecting panels 5a and 6a are then folded back upon the end panels 5 and 6, as best seen in FIG. 7, so that the display panel 2 is carried backwardly, out of alignment with the front panel section 3 and into a position overlapping the top half of the back panel 1. By virtue of this overlap, the back panel 1 reinforces the display panel section 2, so that it is less likely to be dislodged from its upright position by wind or by accidental contacts. This upright position of the display panel 2 is further insured when goods, for example, packages of cigarettes, as shown at 32 in FIG. 2 are placed in the open-topped frame now defined by panels 1, 3, 5 and 6. The packages of cigarettes are taller than the front panel 3, and extend upwardly so that their upper ends are aligned with the overlapping bottom of the display panel 2 and the back panel 1. The articles 32 thereby assist in maintaining the panels 2 and 1 close together in overlapping reinforcing relationship, and contribute to the stiffening of the erected carton and to the maintaining of the panel 2 in an upright position.

FIGS. 3 and 4 show the bottom of the carton after the bottom flaps 22, 25, 27 and 30 have been folded at right angles to their respective panels and the end flaps 25 and 30 have been fastened by adhesive to the flaps 22 and 27, respectively. The tab 27a has been pushed through the slot 1a provided to receive it. The four bottom flaps are then held in a rigid position at right angles to the front, back and end panels, forming a rigid bottom panel for the carton.

After erecting the carton to the position shown in FIGS. 3 and 4, it may be collapsed by retracting the tab 27a from the cut 1a through which it projects and then folding the bottom panel along the score lines 31 and 32. A partially collapsed position of the parts of the carton is shown in FIG. 5, and a completely collapsed position is shown in FIG. 6. Note that panels 3 and 5 are flattened at score line 17 and panels 1 and 6 are flattened at score line 19. Panel 6 is folded back on panel 3 at score line 21, and panel 5 is folded back on panel 1 at score line 10.

FIGS. 8-9

These figures illustrate a modified form of carton constructed in accordance with the invention. The carton shown in FIGS. 8 and 9 differs from the carton shown in FIGS. 1 to 7 only in the contour of the connecting panels 5b and 6b. Referring to FIG. 8, it will be noted that the upper edge of the connecting panels 6b extends diagonally upward from the top of the end panel 6 to the side of the display panel 2. Compare the top of the connecting panel 6a in FIG. 1, which is a continuation of the top of the end panel 6, rather than extending at a diagonal angle to it. Also, the bottom of the connecting panels 6b in FIG. 8 is a straight continuation, shown as cut 14b, extending in line with the cut 11 separating the display panel 2 from the bottom panel section 3. A similar difference may be observed in the case of the connecting panel 5b in FIG. 9.

FIGS. 8 and 9 illustrate that the direction of the cuts at the bottom of the connecting panels 5b and 6b, and the direction of the upper edges of those panels are not critical, but may be varied widely without departing from the invention.

#### FIGS. 10-13

The carton of these figures differs from the carton of FIGS. 1 to 7 in two respects.

At the bottom of the end panels, there are provided a pair of partially cutout pushout sections 40 and 41. When the carton is erected, and these sections are pushed out, as illustrated in FIG. 11, they extend flat with the bottom of the carton, and may be fastened to an underlying surface by strips of adhesive tape, as shown at 42, thereby fastening the carton down and rendering it more stable.

The other respect in which the carton of FIGS. 10 to 13 differs from the carton of FIGS. 1 to 7 is in the construction of the base panel. As shown in FIG. 10, a bottom flap 43 is connected to the bottom edge of the base of the back panel 1 by means of a score line 44. Another bottom flap 45 is connected to the bottom edge of the back panel 3 by a score line 46. End bottom flaps 47 and 48 are connected to the bottoms of the end panels 5 and 6, respectively, by score lines 49 and 50.

After the carton has been erected by folding the score lines between the front and back panels and the end panels to form a frame, the bottom flaps may be folded in and fastened together to form a bottom panel. The flaps 43 and 45 are provided with interlocking edges for that purpose.

The flaps 43 and 45 are L-shaped with tabs 43a and 45a forming the toe of the L. When these flaps are folded in, the overlapping ends of the flaps may be stapled together, by the staples 52, 53 in FIGS. 12 and 13. Reinforcing sheets 54 may be inserted under the staples 52 and 53. The flaps 43 and 45 are provided with rectangular openings 43b and 45b through which a stapling tool or an anvil can be inserted to assist in the stapling operation.

FIGS. 10 to 13 thus illustrate an alternative arrangement of flaps for forming a bottom panel, which may successfully be used in a carton constructed in accordance with the invention. Numerous other alternatives are known in the art.

#### I claim:

1. A blank for forming a display carton having an open-topped frame adapted to enclose articles to be displayed, and a display panel adapted to extend upwardly from the backside of the frame, said blank comprising:

- a. a sheet of paperboard divided by score lines into:
  1. a front panel;
  2. a back panel;
  3. two end panels, one connected by score lines to said front and back panels and the other connected by a score line along one edge to one edge of the front panel; and
  4. a flap connected by a score line along the other edge of the other end panel and adapted to be adhesively secured to one margin of the back panel;

- b. said front panel having a cut extending lengthwise thereof from end-to-end and separating the front panel into an upper display panel section and a lower panel section;
  - c. each of said end panels having a cut extending laterally thereof from the adjacent end of the cut in the front panel to the centerline of the end panel; and
  - d. score lines in said end panels from the ends of said end panel cuts upwardly along the centerlines of the end panels to the tops of the end panels.
2. A blank as defined in claim 1, including a printed display on the outside of the upper display panel section.
  3. A blank as defined in claim 1, including bottom flaps on said panels, said bottom flaps being foldable inwardly and connectable to form a bottom panel.
  4. A blank as defined in claim 1, including two pushout sections, each connected at its bottom edge to the bottom edge of an end panel and frangibly connected at its other edges to said end panel so that it is pushable outwardly of said end panel to provide a tab extending laterally from said frame and adapted to be taped down on an underlying surface.
  5. A display carton including front and back panels and two end panels cooperating to form an open-topped frame adapted to enclose articles to be displayed and a display panel extending upwardly at the rear of the frame, comprising:
    - a. a front panel;
    - b. a back panel;
    - c. two end panels, one connected by score lines to said front and back panels and the other connected along one edge by a score line to one edge of the front panel;
    - d. a flap connected by a score line to the other edge of the other end panel and adhesively secured to one margin of the back panel;
    - e. said front panel having a cut extending horizontally from end to end and separating the front panel into an upper display panel section and a lower panel section;
    - f. each of said end panels having a cut extending laterally thereof from the adjacent end of the cut in the front panel to the centerline of the end panel; and
    - g. score lines in said end panels from the ends of said end panel cuts upwardly along the centerlines of the end panels to the tops of the end panels;
    - h. said carton being foldable flat for shipment by flattening two diagonally opposite score lines between the end panels and the front and back panels, and folding the panels at the other two diagonally opposite score lines against each other.
  6. A display carton as defined in claim 5, in which:
    - a. said end-to-end cut in the front panel is located below the upper ends of the end panels; and
    - b. the portions of each said end panel above the lateral cut therein forms a connecting panel foldable backwardly at the end panel centerline so that the upper display panel section may be positioned against the back panel, so that the back panel and the display panel reinforce one another.
  7. A display carton as defined in claim 5, in which:
    - a. the articles being displayed in the carton,
    - b. the articles being taller than the lower panel section; and
    - c. said articles when placed within said frame being effective to hold the bottom of the display panel firmly against said back panel.
  8. A display carton as defined in claim 5, including a plurality of pushout sections, each connected at its bottom edge to the bottom edge of an end panel, and frangibly connected at its other edges to said panel, so that each pushout section is pushable outwardly of its panel to provide a tab extending laterally from the bottom of the panel and adapted to be taped down on an underlying surface.