

Aug. 14, 1956

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2,758,778

WINDOW DISPLAY CARTON

Filed Nov. 6, 1952

2 Sheets-Sheet 1

Fig. 1

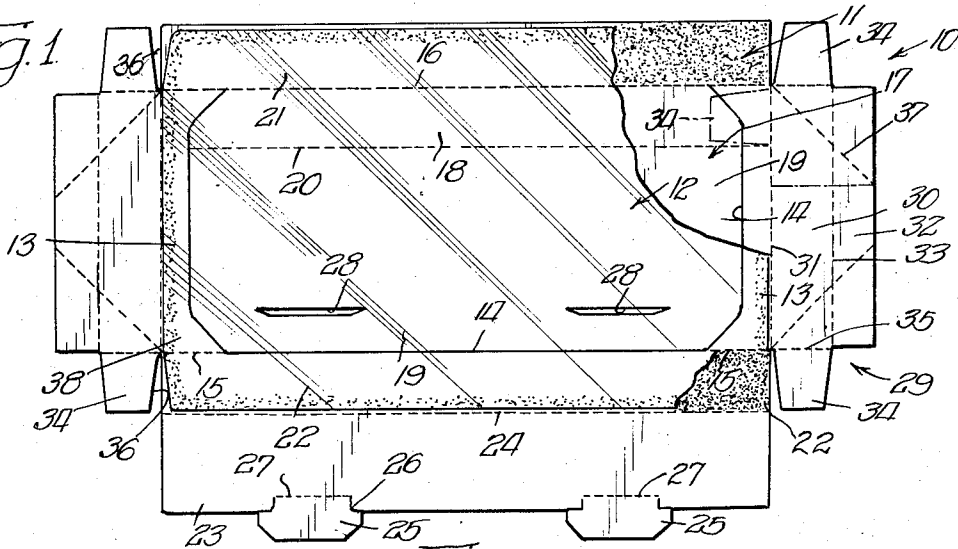


Fig. 2

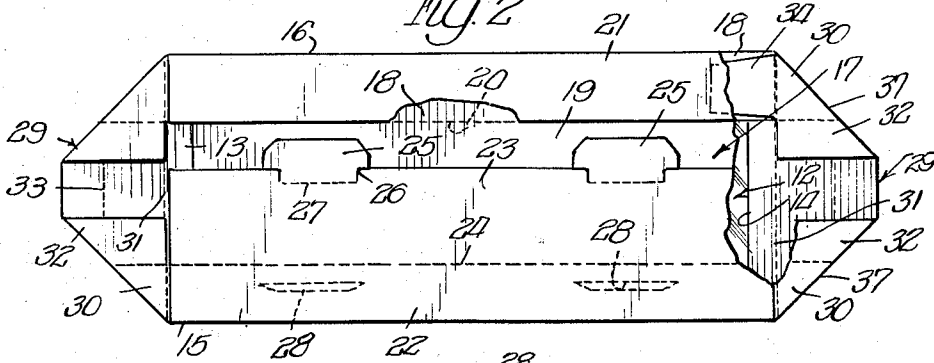
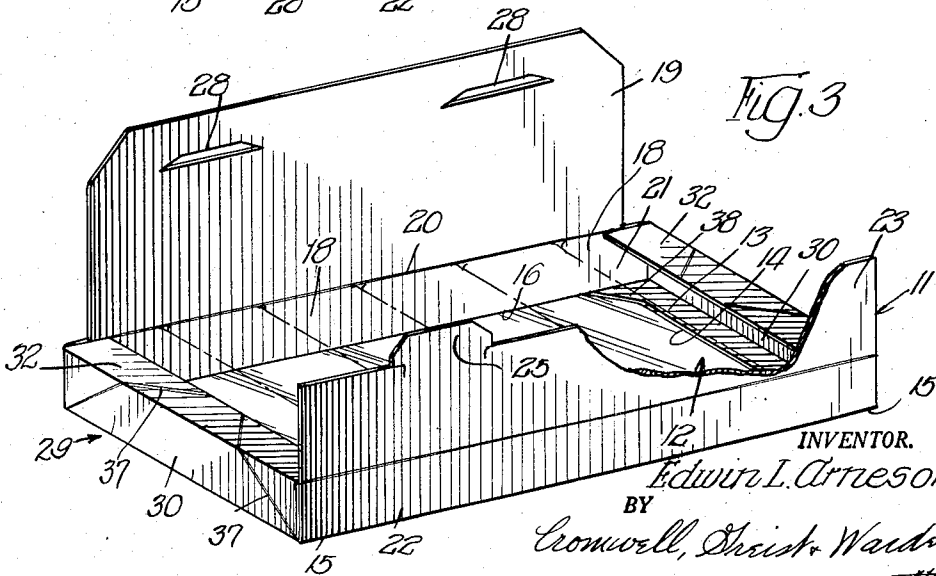


Fig. 3



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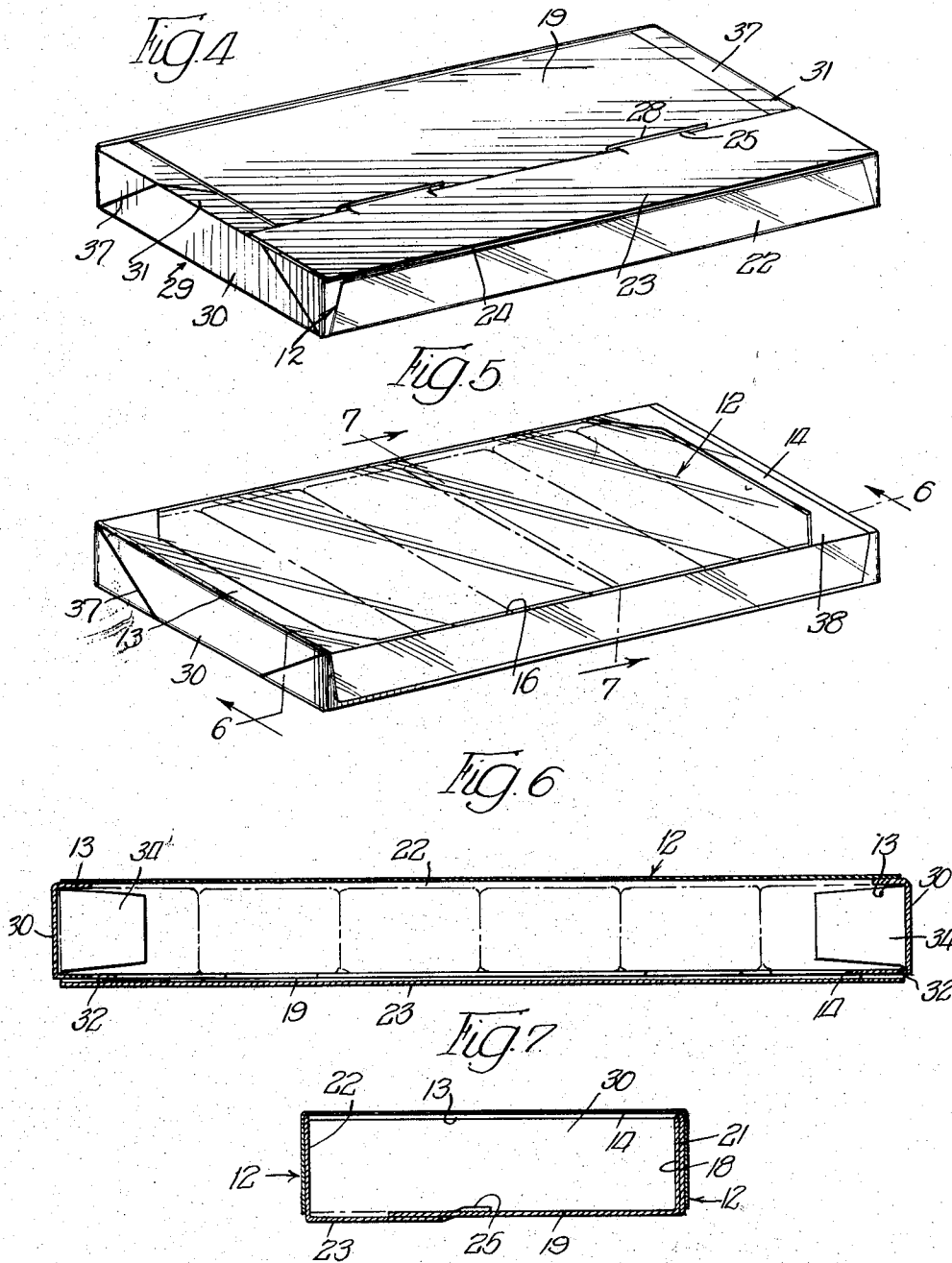
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2 Sheets-Sheet 2



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WINDOW DISPLAY CARTON

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7 Claims. (Cl. 229—30)

The present invention relates to an improved window type display carton fabricated from a paperboard blank having novel provisions to substantially rigidify the carton without using additional material, while at the same time providing a window opening and a bottom panel as incidents in the derivation of the rigidifying means, and without appreciable further forming operations.

It is an object of the invention to provide an improved window type display carton, featuring a window opening died out in a top panel of the carton and wall reinforcing and bottom forming panels integrally hinged to the top window panel, which reinforcing and bottom forming panels are constituted by an area of the carton blank freed in the formation of the window opening, the arrangement being such that a strong and attractive window carton is made from a paperboard blank of minimum size.

Yet another object is to provide an improved window type carton characterized by a window opening of relatively large size made in a top panel by means of a U-shaped slit and a hinge crease connecting the termini of the slit, this crease preferably coinciding with a side margin of the panel in which the opening is formed, the material thus partially separated from the panel being inwardly folded and adhesively secured to a wall adjoining said side margin and terminating in a panel of substantial size which is employed as a bottom forming and locking panel, coacting with a similar panel hinged to an opposite wall in sealing the carton contents.

It is a still further object of the invention to provide an improved display carton of the character described in the preceding paragraphs, in which a flexible transparent sheet is adhesively secured over the window panel and side walls of the carton to seal the window opening and contain the carton contents.

The foregoing statements are indicative in a general way of the nature of the invention. Other and more specific objects will be apparent to those skilled in the art upon a full understanding of the construction and operation of the improved carton.

A single embodiment of the invention is presented herein for purpose of illustration. It will be appreciated that the invention may be incorporated in other modified forms coming equally within the scope of the appended claims.

In the drawings:

Fig. 1 is a top plan view of a two-ply completed carton forming blank from which the improved carton is formed, including a paperboard carton body member and transparent window sheet adhered thereto, the view illustrating preliminary slitting, creasing and gluing of the body member and being partially broken away to more clearly indicate the relationship of the two component parts;

Fig. 2 is a top plan view of a carton completed from the blank of Fig. 1, in a flat, knocked-down and upside-down condition thereof;

Fig. 3 is a perspective view, partially broken away, illustrating the manner in which the carton of Fig. 2 is manipulated to a partially erected, article receiving con-

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dition, showing the same prior to final manipulation to closed condition;

Fig. 4 is a bottom perspective view of the closed carton;

Fig. 5 is a perspective view showing the same in properly inverted, article display condition; and

Figs. 6 and 7 are, respectively, views in longitudinal and transverse vertical section along lines corresponding respectively to lines 6—6 and 7—7 of Fig. 5.

The composite blank 10 from which the improved carton is fabricated is illustrated in flat condition in Fig. 1 of the drawings. It consists of a generally rectangular carton body forming member 11 of flexible paperboard stock, and a transparent window sheet 12 of regenerated cellulose or chlorinated rubber, the sheet being adhesively secured to body member 11 by marginal stripes of transparent adhesive indicated by light stippling in Fig. 1.

Body member 11 comprises a face or top panel 13, visible primarily adjacent the opposite ends of the blank, inasmuch as a generally rectangular window opening 14 of relatively large size is formed in the panel and occupies practically all of the area thereof. The sides of panel 13 are defined by short longitudinally aligned creases 15, at one margin thereof, and by an elongated longitudinal crease 16 at the other margin thereof. Crease 16 constitutes a hinge for a generally rectangular panel 17 which is excised from panel 13, in forming window opening 14, by a generally U-shaped, angular cornered slit, the legs of which terminate at crease 16. The longitudinal portion of U-slit 14 coincides with the line of creases 15.

Panel 17 is internally subdivided, by elongated slit crease 20 paralleling marginal crease 16, into a relatively narrow wall reinforcing section 18 and a relatively wide bottom forming section 19. A side wall forming panel 21 is hinged to top panel 13 and to section 18 of excised panel 17 by means of crease 16, and a similar side wall forming panel 22 is similarly hinged to the opposite margin of panel 13 by the creases 15. Wall panel 22 in turn has a bottom forming panel 23 hinged integrally thereto by a longitudinal crease 24.

Bottom panel 23 is provided with a pair of projecting T-shaped locking tongues 25, certain L-shaped slits 26 which partially define tongues 25 extending into the material of panel 23 and termini of the pairs of slits 26 being joined by longitudinal creases 27. Bottom forming section 19 of panel 17 is provided with elongated locking slots 28 transversely aligned with and adapted to receive tongues 25 when the carton is completed, filled and closed.

The ends of the body member 11 of the composite blank 10 are provided with like end wall structures, generally designated 29. Each comprises an end wall forming panel 30 integrally hinged to top panel 13 by a transverse crease 31, a bottom end flap 32 hinged to panel 30 by a crease 33 paralleling crease 31, and a pair of like, transversely extending side wall engaging end flaps 34, hinged to opposite ends of panel 30 by longitudinal creases 35. Creases 35 are, in effect, extensions of the longitudinally aligned marginal creases 15 and 16. Flaps 34 are separated from the respective wall forming panels 11, 22 by means of V-shaped notches 36, and 45° angularly creases 37 converge endwise in panels 30, 32 from the apices of the notches, thus defining hinge lines for subsequent infolding of end wall structures 29. As illustrated in Fig. 1, window sheet 12 extends over onto the side wall forming panels 21, 22, but preferably terminates short of the creases 31 which define end margins of top panel 13.

In completing the carton from the blank of Fig. 1, adhesive is first applied, as indicated by stippling in Fig. 1, over practically the entire area of the side wall forming panel 21, but on the side thereof opposite win-

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down sheet 12, and also to the ends of wall forming panel 22, also on the side opposite sheet 12. Viewing the blank as in Fig. 1, end wall structures 29 are first folded downwardly and inwardly 180° about their respective diagonal creases 27, causing flaps 34 to adhere to the ends of panels 21, 22. Following this side wall forming panel 21 is folded downwardly 180° about crease 16 and adhered to the large area of wall reinforcing section 18 of excised panel 17 which lies between the flaps 34. Opposite side wall panel 22, together with its integrally attached bottom forming panel 23, is now folded 180° about creases 15, bringing the same in overlapping relation to bottom forming panel 19. This completes the carton which, as viewed from its bottom, now has the appearance depicted in Fig. 2. Crease 20 which subdivides slitted out panel 17 coincides with the bottom side margin of wall 21, the section 18 of panel underlying and being adhesively secured to the infolded wall 21 over practically its entire area. The wall and the carton as a whole are materially strengthened and stiffened by panel section 18. Bottom forming panel 19 underlies the other infolded bottom forming panel 23 and end wall structures 29 extend outwardly in a flat folded condition.

In completing the carton, it is only necessary to deflect end wall structures 29 upwardly and inwardly to a vertical position of panels 30, which manipulation is accompanied by automatic elevation of side wall panel 22 and reinforced side wall panel 21 to upstanding position. The bottom forming panels 19, 23 also take upright position, as illustrated in Fig. 3. The contents of the carton are then inserted, whereupon bottom end flaps 32 of end wall structures 29 are folded inwardly, and bottom forming panels 19, 23 are folded, in the order named, inwardly and downwardly into face-to-face engagement with one another, the locking tongues 25 being inserted in slots 28.

The carton is illustrated in filled and closed condition in Figs. 4-7, inclusive. One of the walls is strongly reinforced by adhered panel section 18 and a great part of the bottom structure of the carton is constituted by an integral extension section 19 of the reinforcing member. The material of both of these is taken from the area of the blank 10 in which window opening 14 is formed, which signifies maximum economy of stock used in manufacturing the carton. It is, moreover, assembled by existing box manufacturing equipment, with alterations of a very simple nature. The package is an attractive one and is substantially rigidified by the triangular end web formations at the corner of top panel 13, in conjunction with section 18. The filled cartons may therefore be stacked in considerable numbers.

I claim:

1. A window type carton comprising a top forming panel having side walls integrally connected by creases to opposite side margins thereof, said top panel having a window opening of substantial area formed therein, a wall reinforcing panel section hingedly removable from coplanar relation with said top panel and depending within the carton adjacent one side wall thereof, and a bottom forming panel section integrally hinged to said reinforcing panel section, said sections being constituted by a panel severed by a cut from said top panel in forming said window opening, said reinforcing section being secured to the side wall adjacent which it depends, the other side wall having a bottom forming section hinged to the bottom margin thereof and lockingly engaged releasably with said bottom forming panel section to solely constitute an outer bottom for said carton.

2. A window type carton comprising a top forming panel having side walls integrally connected by creases to opposite side margins thereof, said top panel having a window opening of substantial area formed therein and a margin of said opening coinciding with a side margin connecting one side wall and the top panel, a wall reinforcing panel section hingedly removable from coplanar

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relation with said top panel by a side wall marginal crease coinciding with said side margin of said window opening, and a bottom forming panel section integrally hinged to said reinforcing panel section by a crease paralleling said last named marginal crease, said sections being constituted by a panel severed by a cut from said top panel in forming said window opening, said reinforcing section being secured in face contacting relation to the first named side wall adjacent which it depends, the other side wall having a bottom forming section hinged to the bottom margin thereof and lockingly engaged releasably with said bottom forming panel section to solely constitute an outer bottom for said carton.

3. A carton in accordance with claim 2 in which end walls are integrally hinged to opposite end margins of said top panel and hingedly attached to adjacent side walls, said end walls being provided with hinge creases about which they are outwardly foldable with reference to said top panel to a substantially coplanar relation to the same, in a flat knock-down condition of the carton, said side walls and reinforcing section being inwardly foldable about said first named side marginal creases to said substantially coplanar relation.

4. A window type carton comprising a top forming panel having end walls integrally hinged to opposite ends thereof and side walls integrally connected by creases to opposite side margins thereof, said top panel having a window opening of substantial area formed therein and a margin of said opening coinciding with a side margin connecting one side wall and the top panel, a wall reinforcing panel section hingedly removable from coplanar relation with said top panel by a side wall marginal crease coinciding with said side margin of said window opening, a bottom forming panel section integrally hinged to said reinforcing panel section by a crease paralleling said last named marginal crease, said sections being constituted by a panel severed by a cut from said top panel in forming said window opening, said reinforcing section being secured in face contacting relation to the first named side wall, and a further bottom forming panel integrally hinged to the bottom of other side wall and coacting with said bottom forming section in constituting the total parts of an outer bottom structure for said carton, said end walls being provided with inturned flaps internally overlying said further bottom forming panel and panel section.

5. A carton in accordance with claim 4 in which said end walls are hingedly attached to adjacent side walls and are outwardly foldable with reference to said top panel to a substantially coplanar relation to the same, in a flat knock-down condition of the carton, said side walls and reinforcing section being inwardly foldable about said first named side marginal creases to said substantially coplanar relation.

6. A window-type carton comprising a top forming panel having side walls integrally connected by creases to opposite side margins thereof, a cut out side and bottom forming panel section hingedly removable from coplanar relation with said top panel to provide said top panel with a window opening, said cut out section depending within the carton adjacent one side wall thereof and having the side forming panel section thereof attached to said adjacent carton wall, the other side wall of said carton having a bottom forming section hinged thereto and lockingly engaged releasably with said bottom forming cut out panel section to constitute therebetween a complete outer bottom for said carton.

7. A window-type carton comprising a top forming panel having side walls integrally connected by creases to opposite side margins thereof, said top panel including an integral cut out side and bottom forming panel section hingedly removable from coplanar relation with said top panel to provide said top panel with a window opening, said cut out section depending within the carton adjacent one side wall thereof and having the side forming panel section thereof attached to said adjacent carton wall, the

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other side wall of said carton having a bottom forming section hinged to the bottom margin thereof and lockingly engaged releasably with said bottom forming cut out panel section to constitute therebetween a complete outer bottom for said carton.

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