United States Patent [19]

Ross

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[54] **COMBINATION CARDBOARD SHIPPING AND DISPLAY CARTON**

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[52] **U.S. Cl.** ..... **206/45.12;** 229/15; 229/51 DB

[51] **Int. Cl.** **B65d 5/48;** B65d 5/54; B65d 81/00

[58] **Field of Search** .... 206/44, 44.12, 45.11, 45.12, 206/45.14, 45.19; 229/15, 16 D, 51 TS, 51 DB

[56] **References Cited**

UNITED STATES PATENTS

2,617,578	11/1952	Fischer	206/45.19 X
2,723,026	11/1955	Paige	206/45.12
3,172,530	3/1965	Grabosky et al	206/45.11
3,403,836	10/1968	Farquhar	229/51 DB
3,653,495	4/1972	Gray	206/44.12 X

FOREIGN PATENTS OR APPLICATIONS

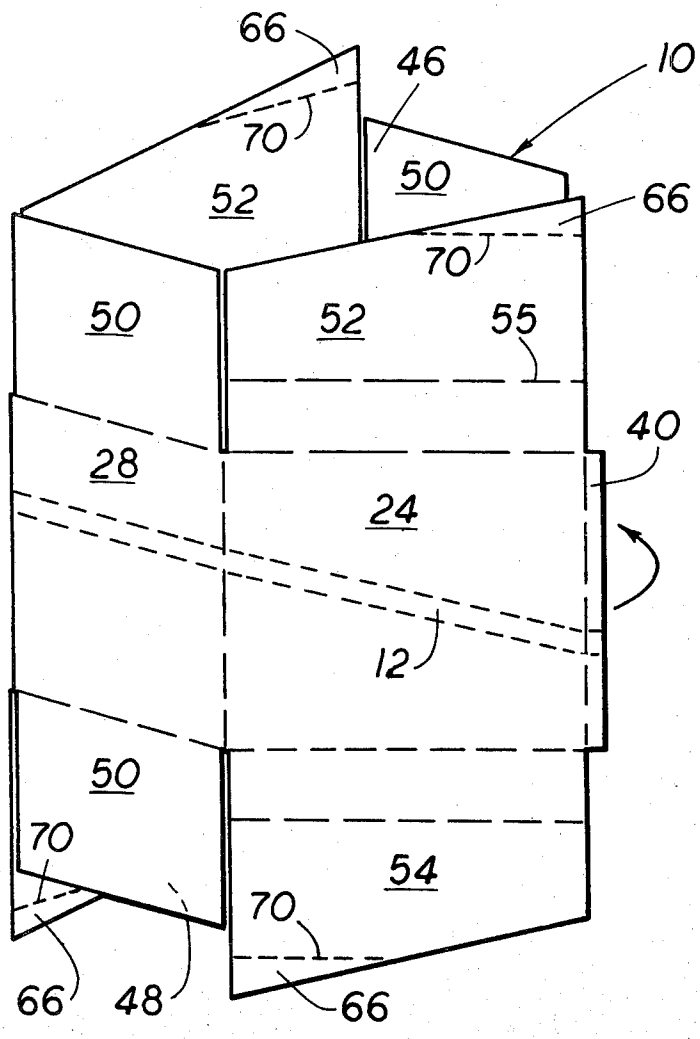
90,794	7/1961	Denmark	206/45.12
1,218,016	1/1971	United Kingdom	229/51 DB

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Assistant Examiner—Steven E. Lipman
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[57] **ABSTRACT**

A carton, fabricated of corrugated cardboard or other suitable material, which at its shipping destination, i.e. a retail store, is adapted to be separated along a tear strip into two parts, to thereby enhance the display and sale of the products within the carton. To minimize any tendency of the carton to burst during shipping service because of said tear strip, the side flaps are oversized and are folded into the clearance between rows of the shipped products to minimize any shifting movement in these products, and thus to correspondingly minimize the strain imposed on the external carton walls.

4 Claims, 7 Drawing Figures



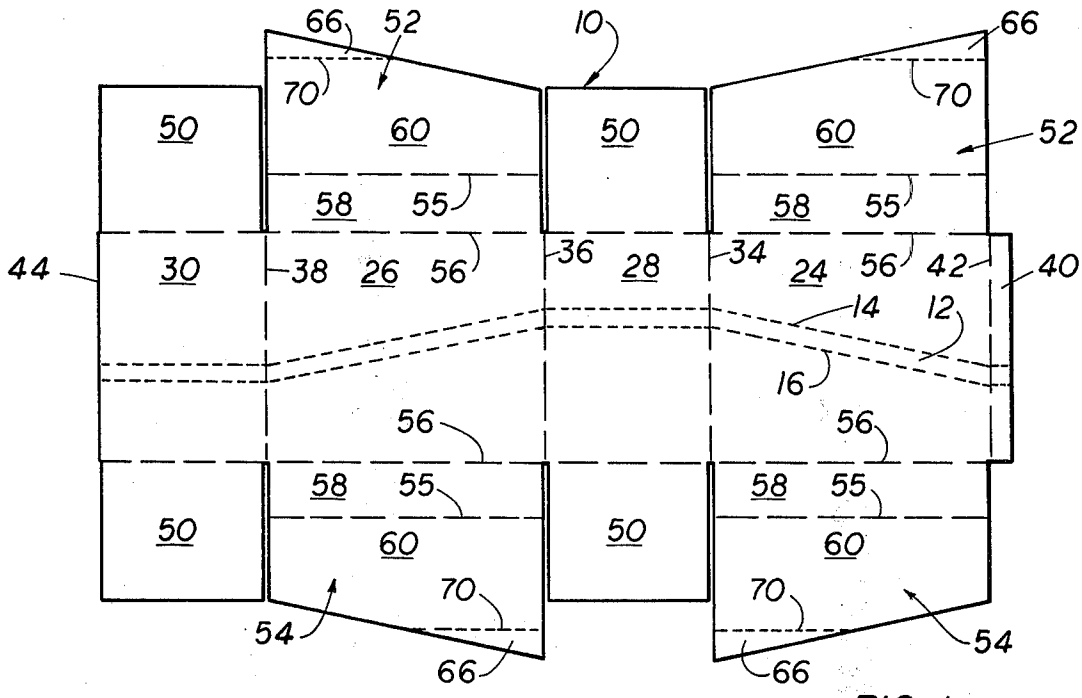


FIG. 1

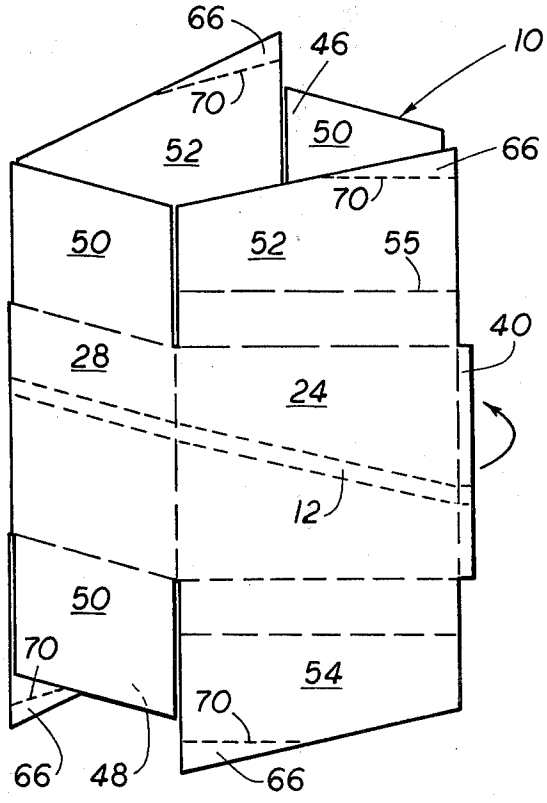


FIG. 2

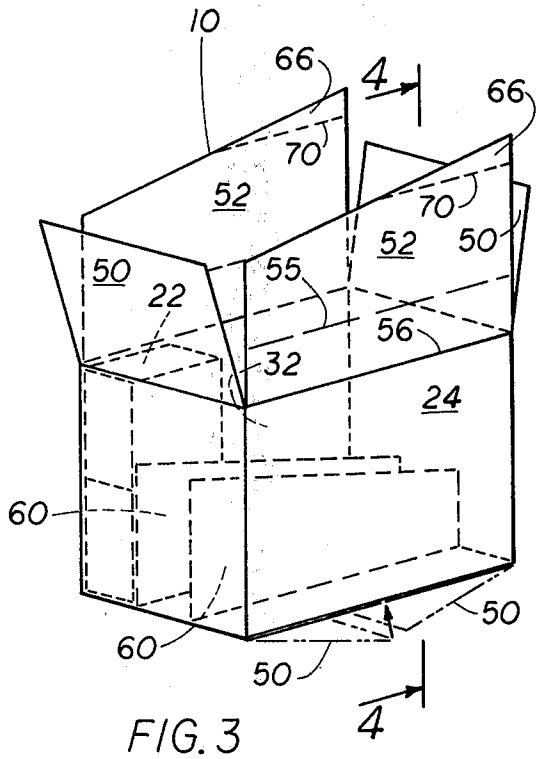


FIG. 3

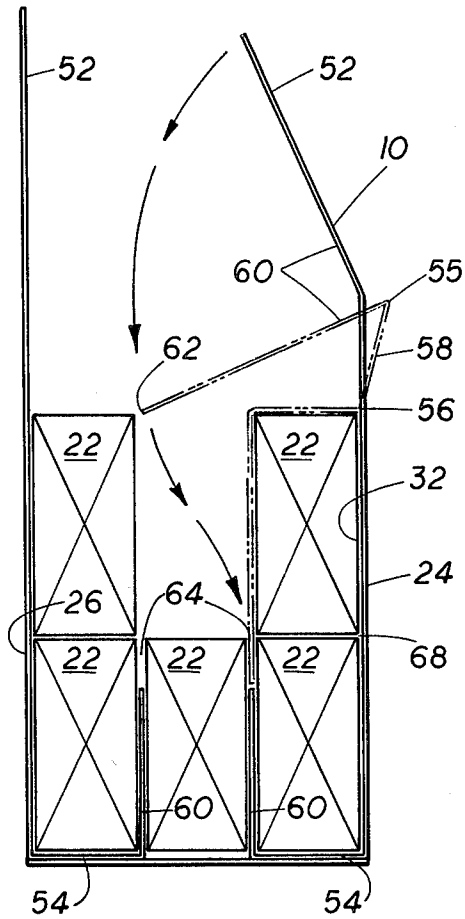


FIG. 4

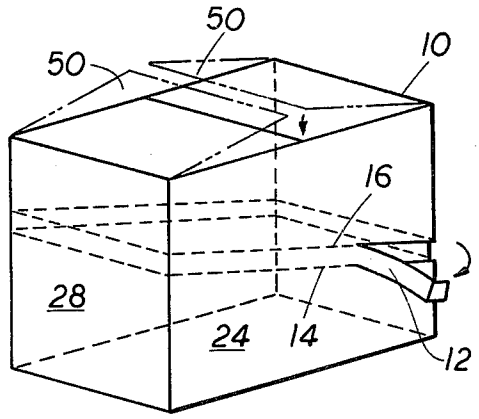


FIG. 5

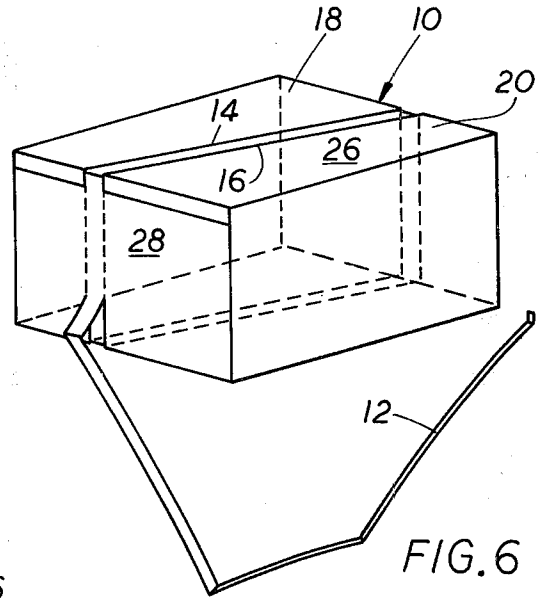


FIG. 6

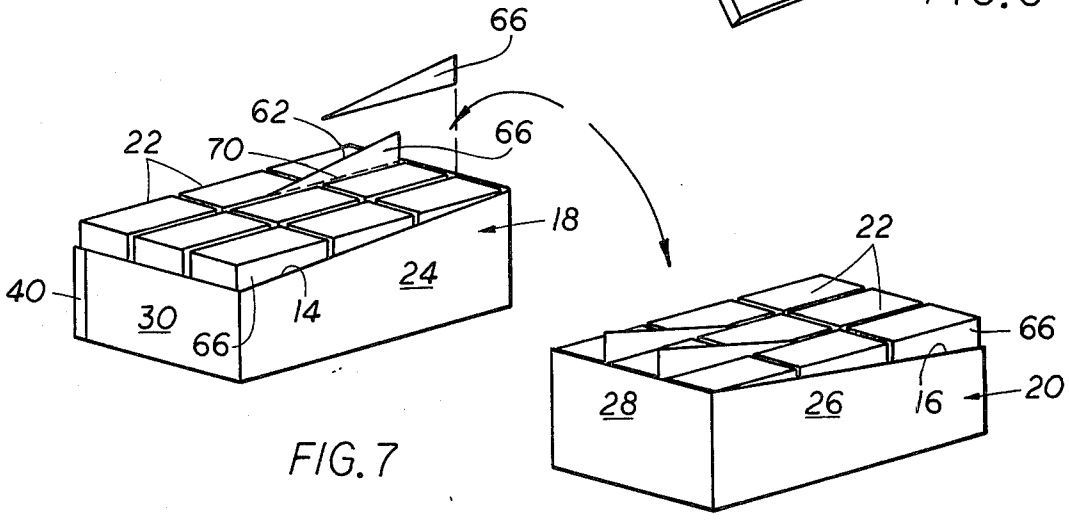


FIG. 7

COMBINATION CARDBOARD SHIPPING AND DISPLAY CARTON

The present invention relates generally to cardboard cartons, and more particularly to improvements for a cardboard carton which facilitate converting it into a product display, but without adversely affecting its main function of protecting products during shipment.

It is a common practice in retail stores to cut apart cartons preparatory to using the resulting separated parts as a display for the contents. The patent literature, as exemplified by U. S. Pat. Nos. 776,042, 2,487,168 and **3,669,251,** discloses an effort to achieve the same objective by using a tear strip in the carton which, when removed, divides the carton in two. The perforations in the cardboard carton walls which permit removal of the tear strip, however, also render these walls vulnerable to rupture. It is undoubtedly because of this that shipping cartons with tear strips are not in popular use.

Broadly, it is an object of the present invention to provide an improved tear strip-type carton overcoming the foregoing and other shortcomings of the prior art. Specifically, it is an object to obviate any tendency of the external carton walls to rupture, despite the tear strip therein, by effectively immobilizing the shipped products against any shifting movements as would subject the carton walls to undue stress and strain.

A combination shipping and display carton demonstrating objects and advantages of the present invention includes panels, fabricated of cardboard, which cooperate to bound a shipping compartment, and which further includes an encircling tear strip for separating the carton into two display halves. Supplementing the external construction of the carton are internally positioned flaps which extend between the rows of the products to maintain the position of the products, i.e. prevent any shifting therein, during shipping use of the carton. As a consequence, an optimum minimum degree of force is exerted outwardly against the carton walls, and the carton also has been found in practice to be better adapted to withstand shearing and other forces which might otherwise cause premature rupture and disengagement of the tear strip.

The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following detailed description of a presently preferred, but nonetheless illustrative embodiment in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. **1** is a plan view of a cardboard blank which forms into the carton of the present invention;

FIG. **2** is a perspective view illustrating the folding procedure for forming said carton;

FIG. **3** is a perspective view illustrating the carton hereof in its folded condition preparatory to use in shipping products;

FIG. **4** is a side elevational view, in section taken on line **4—4,** illustrating structural features of the carton, and wherein positions of one of the carton flaps is illustrated in full line and phantom line perspective;

FIG. **5** is a perspective view illustrating the manner in which a tear strip is removed to separate the carton into halves preparatory to using each half for display purposes;

FIG. **6** is a view similar to FIG. **5,** but illustrating the almost complete removal of the tear strip, and also a preferred position for the carton to facilitate its separation; and

FIG. **7** is a perspective view illustrating the display that is provided by the separated portions of the carton.

Reference is now made to the drawings, and initially to FIGS. **5–7** which best illustrate the benefits obtained by using the carton hereof. Said carton, generally designated **10,** includes a tear strip **12** which is readily removed along spaced apart perforations, at **14** and **16** (note FIG. **5**), with the result that upon its complete removal, carton **10,** as illustrated in FIG. **6,** divides into two parts **18** and **20.** By laying carton **10** on its side, and after removal of the strip **12,** it is thus possible to separate the carton parts **18** and **20,** and more particularly the products, individually and collectively designated **22,** which are contained within the carton **10.** As illustrated in FIG. **7,** the carton separation, as just generally described, contributes to the use of the resulting two carton protions or parts **18** and **20** for display purposes. To enhance the display provided by the carton parts **18** and **20,** the lines of perforations **14** and **16** which, as noted above enable removal of the tear strip **12,** are advantageously angularly oriented so as to provide correspondingly angularly oriented edges to the carton parts. At the low side of the carton this, in an obvious manner, provides the customer with visibility of the brand name of the product **22** and also makes it easier for the customer to remove the product from the carton.

Although it is well known in the patent literature to provide cartons with tear strips so as to facilitate their division, these prior art cartons do not provide dependable shipping service because the weakness in their construction, represented by the tear strip, made the same vulnerable to rupture during shipping. In contrast, the strength of carton **10** hereof is sufficient to withstand rupture and to meet commercial standards, despite the existence of the tear strip **12.**

As illustrated in FIGS. **1–4,** tear strip **12** is embodied in a pair of side panels **24, 26** and a pair of end panels **28, 30,** all of which cooperate in a conventional manner to form a body for the carton **10** which bounds an internal shipping compartment **32** (see in particular FIG. **3**). That is, in forming the blank of FIG. **1** into a carton shape as illustrated in FIG. **3,** the body panels are folded along three fold lines **34, 36** and **38,** and flap **40** is then folded, as at **42,** and adhesively secured along edge **44** of end panel **30.** In this partially completed condition of the carton **10,** the panels bound opposing rectangular openings **46** and **48** into the shipping compartment **32.**

Thus far what has been described is conventional. Also conventional are extensions on opposite sides of the end panels **28** and **30** which serve as closure flaps, individually and collectively designated **50,** and which are appropriately sized and adapted, when folded into the openings **46** and **48,** to function as a closure for said openings. This function of the flaps **50** is illustrated in FIG. **4.**

Prior to closing the carton with the flaps **50,** however, use is made of novel side flaps to supplement, as noted earlier, the strength and ability of the carton **10** to withstand rupturing forces. In other words, it is the use of the side flaps in a manner which will now be described, which constitutes the novelty of the present invention and which makes it possible to use a tear strip **12** in the

construction of the carton **10** without detracting from the shipping performance of the carton. These side flaps, designated **52** and **54,** are formed as extensions on opposite sides of the side panels **24** and **26.** Since the side flaps are identically constructed, the description of one such flap suffices for all and, for the sake of brevity, a functional description once given will not be repeated if it does not contribute to an understanding of the invention.

Taking flap **52,** by way of example, which extends from the upper portion of side panel **24,** and referring specically to FIGS. **3** and **4,** it will be noted that this flap is constructed so as to provide a product-positioning function for the products **22** in shipping condition within the shipping compartment **32** of carton **10.** More specifically, said product-positioning flap **52** has a fold line **55** spaced from and parallel to its connected edge **56** which delineates a first portion **58.** Portion **58** is well adapted by its location and size to fold over the top of the row of products **22** located adjacent the side panel **24.** The remaining portion **60** of flap **52** is then folded into an operative position projected internally within the shipping compartment **32** wherein it occupies a position along the side of the row of products **22,** just referred to as being adjacent the panel **24.** It is to be noted, in fact, that the edge **62** of the flap portion **60** is conveniently projected within the clearance **64** existing between adjacent rows of the products **22.** As a consequence of this, and also as a result of placement of a row of products in the medial section of the shipping compartment **32** after providing flap portions **60** with their operative position, the vertically oriented flap portions **60** of the flaps **52** of both openings **46** and **48** cooperate to function in much the same manner as vertical dividers within the carton shipping compartment **32.** As a result of these vertically oriented flap portions **60** between the rows of products **22,** said rows are prevented from shifting within the compartment **32** during shipping use of the carton **10.** This, in practice, has been found to minimize and, for all practical purposes, obviate any tendency in the carton **10** to rupture when subjected to handling forces and compressive forces which are the normal consequences of shipping use or service of the carton **10.**

Returning again to FIG. **7,** it will be noted that to enhance the display provided by the separated carton parts **18** and **20,** that the lines of perforations **14** and **16** are advantageously embodied in the body side panels **24** and **26** at an angular orientation, as illustrated. As already noted, this aids in exposing the brand name of the products **22,** which may be located in areas **66** on the product. Since the edges **14, 16** are angularly oriented, it is preferable also that the same or a substantially similar angular orientation exist in the free edge **62** of each of the flap portions **60.** As illustrated in FIG. **7,** the orientation of edge **62** is actually somewhat steeper than that of the edges **14** and **16** in order to provide the triangular section **66** which extends more than one-half the height of the shipping compartment **32** and thus into the clearance **64** to prevent any relative shifting between the products **22** which might otherwise occur between the upper and lower layers of the products, as at **68** (see FIG. **4**). When carton **10** is separated into its two display parts **24** and **26,** the holding sections **66** are no longer necessary, and to enhance the display, they are therefore preferably removed, which is the reason for the line of perforations **70.**

From the foregoing it should be readily appreciated that there has been described herein a carton **10** fabricated of cardboard which readily permits not only scoring to provide fold lines, but also the incorporation of lines of perforations to define a tear strip **12.** While the use of perforations ordinarily detracts from the strength of the cardboard, and thus would render the carton **10** vulnerable to rupture along the tear strip **12,** this is overcome in a novel fashion wherein the carton makes use of side product-positioning flaps **52** and **54** to retain, as the name implies, the position of the products **22** within the shipping compartment during shipping service of the carton. Since the products **22** are prevented from shifting relative to each other, there are no shearing forces imposed upon the carton **10** which could produce rupturing in the lines of perforations **14,** 16.

A latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What is claimed is :

1. A combination cardboard shipping and display carton comprising plural body panels in a medial location in said carton cooperating to define a shipping compartment for products, said body panels bounding opposing rectangular openings into said shipping compartment, a continuous tear strip disposed at an angular orientation and in encircling relation in said body panels so as to cause a division of said carton upon removal of said strip preparatory to display exposure of the products in said shipping compartment, and along the edges of each said rectangular opening a pair of opposing closure flaps sized to form a closure for said opening and a pair of opposing product-positioning flaps, each said product-positioning flap having a fold line spaced from said edge to delineate two portions therein, one said portion being adapted to fold in overlying relation to products positioned adjacent the body panel and the other portion having an operative position during shipping service of said carton projected at a right angle to said one portion along the sides of said products to minimize any shifting movements in said products within said shipping compartment, said last-named portion of said product-positioning flap terminating in an edge which is angularly oriented similar to said tear strip and sized to extend only into said shipping compartment to a location coincident with the location of said tear strip in said body panels, whereby the carton is separable along said tear strip with half the products in each separated carton portion and at least some part of said products in display position above the low side of the angularly oriented edges of the separated carton portion.

2. A combination cardboard shipping and display carton as claimed in claim **1** wherein the angular orientation of aligning product-positioning flaps bounding said carton body opposing openings are complementary, to thereby contribute to forming a continuous barrier internally of said shipping compartment against shifting movements of products in shipping position within said compartment.

3. A combination cardboard shipping and display carton as claimed in claim **2** including removable sec-

tions at the high sides of said angular edges of said product-positioning flaps to enhance the display provided by said carton.

4. A combination cardboard shipping and display carton as claimed in claim 3 wherein said product-positioning flaps are connected along the long sides of said rectangular openings.

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