June 30, 1953 H. V. BOLDING 2,643,811

DISPLAY CARTON

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Fig. 1.

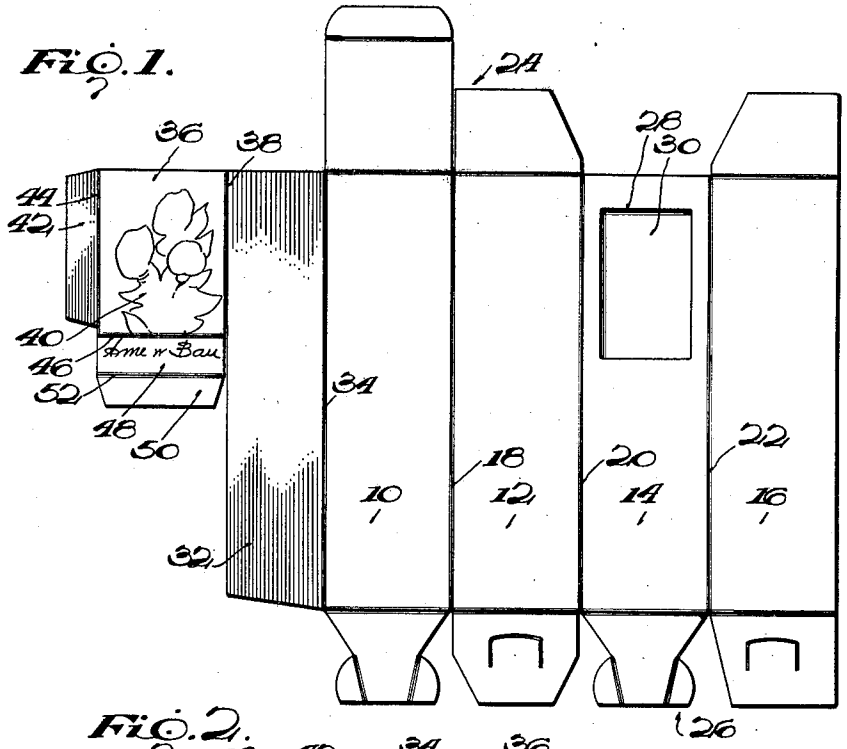


Fig. 2.

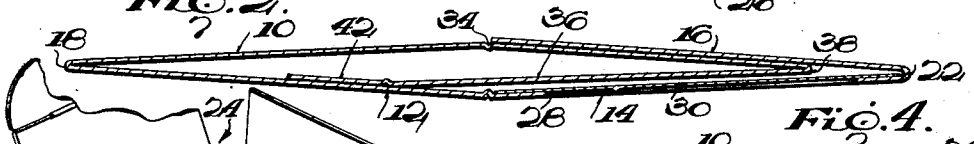


Fig. 4.

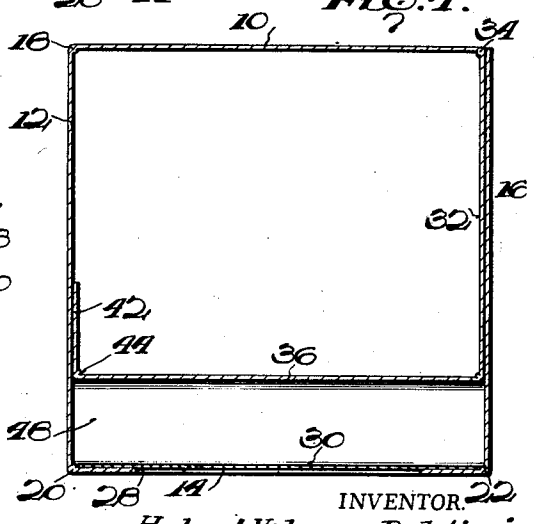
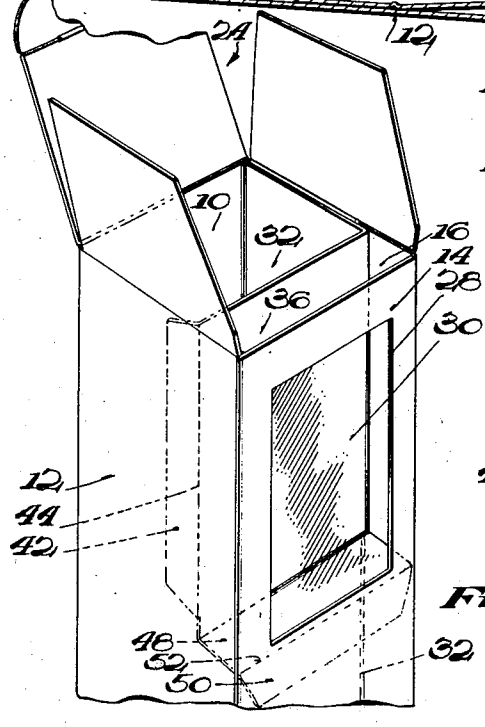


Fig. 3.



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FIG. 5.

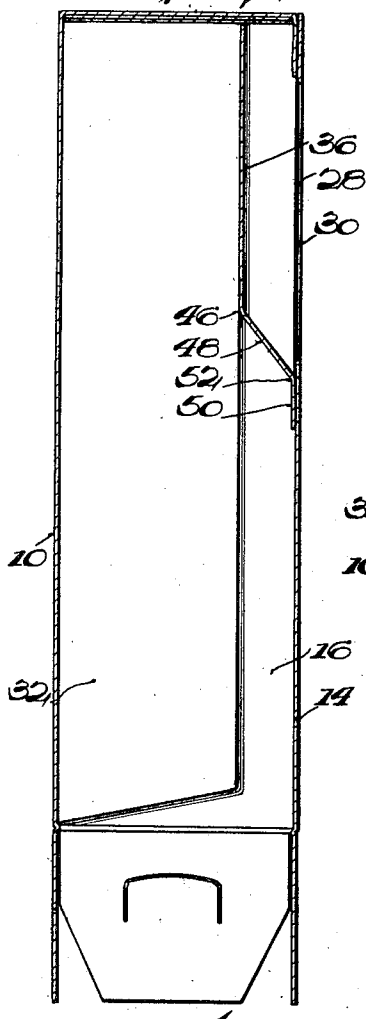


FIG. 6.

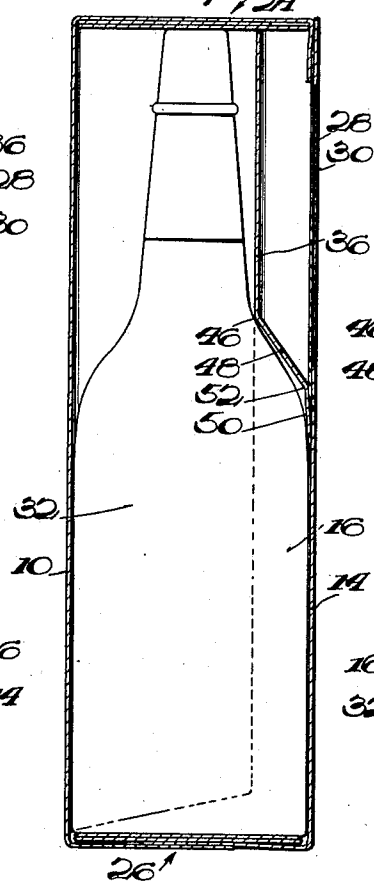


FIG. 7.

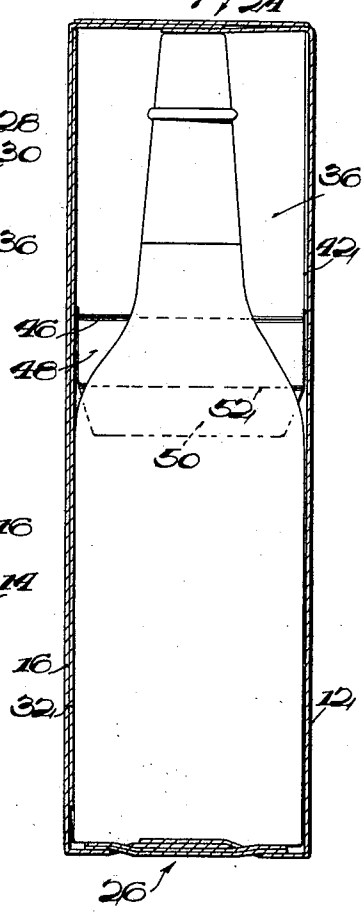
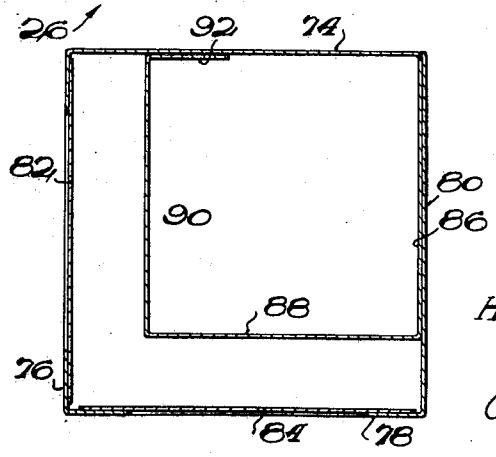


FIG. 12.



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DISPLAY CARTON

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Fig. 8.

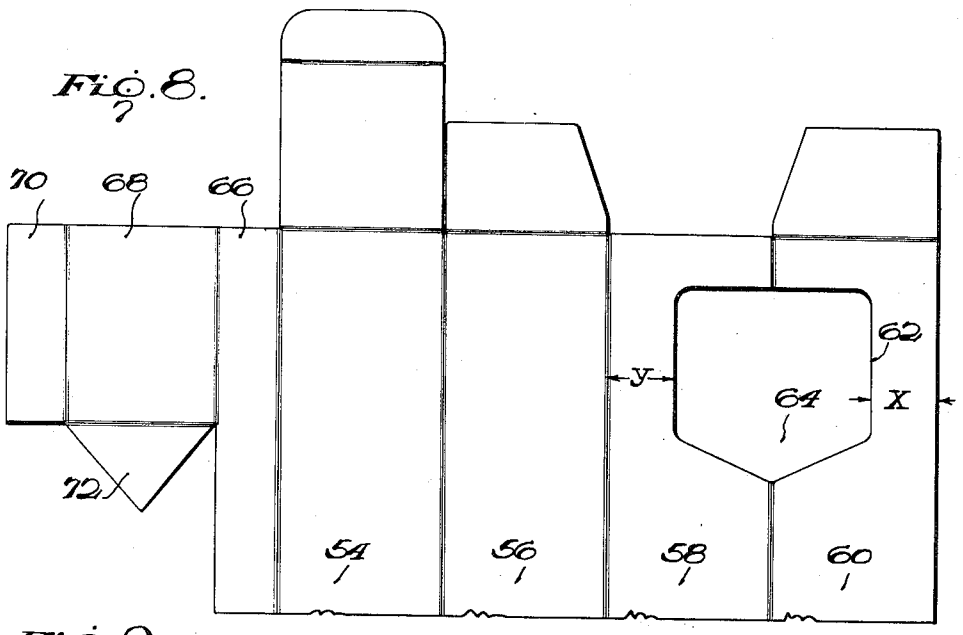
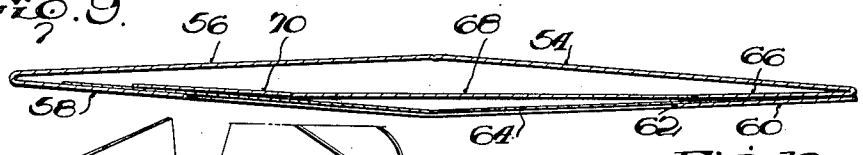


Fig. 9.



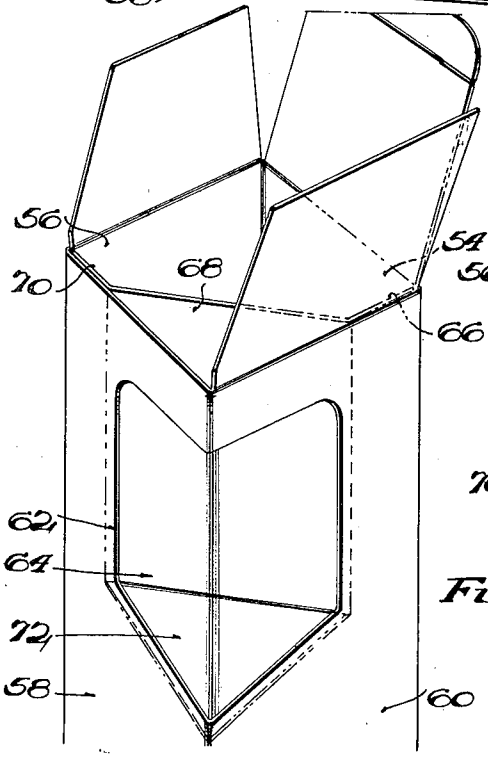


Fig. 10.

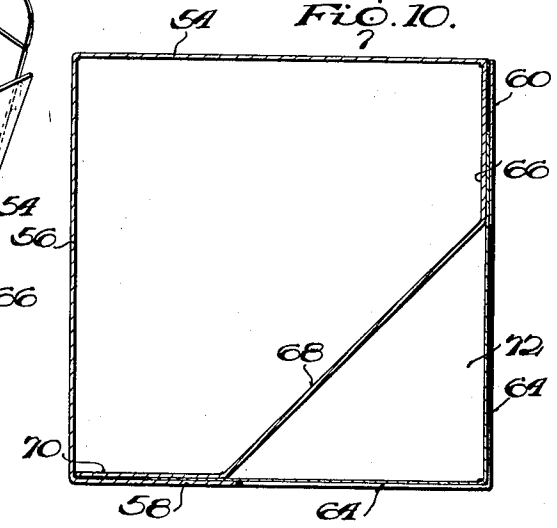


Fig. 11.

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UNITED STATES PATENT OFFICE

2,643,811

DISPLAY CARTON

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Application April 14, 1949, Serial No. 87,430

3 Claims. (Cl. 229—27)

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This invention relates to cartons and has particular reference to a container embodying dual compartments which render the product susceptible to attaining numerous different and desirable ends, and also to the blank from which the container is formed.

Among the objects of the invention is the provision of a compartmented carton formed from a single blank of sheet material. An important phase of the invention resides in the basic concept of a blank which, by only slight variation in the proportioning of its several foldable sections, may be formed into a carton providing a very large container portion or compartment and a relatively small compartment therein or, at the other extreme, compartments of equal size.

A further object of the invention is to so construct a single integral blank of foldable material, such as cardboard or the like, that when the blank is formed into a container there is also formed an attractive visual display which has distinct advantages in advertising and sales promotional work.

Still another object of the invention is to embody in the blank, formed as described above to present an attractive visual display, means producing an unusually rigid and tension-resistant carton. An important feature of the invention resides in the arrangement whereby the carton, when assembled from the blank, is both rigidified and strengthened as well as enhanced in appearance by virtue of the same constructional features.

Another important object of the invention is to so arrange the integral blank that the bottle container or carton, when assembled, embodies a display which produces a distinct effect of depth or three-dimensional characteristic and at the same time utilizes the means for creating such effect to impart rigidity to the carton walls by cooperation with the content of the carton when loaded.

An important phase of the invention resides in the manner in which the above described objectives are obtained from a single integral blank which may be stamped from a sheet of flexible material, such as cardboard or the like, the blank being scored along simple, easily attainable lines and printed for decorative effect while in flat form. A correlated feature of substantial importance is the relative arrangement of panels forming the various constituent portions of the carton when assembled. The panels are delineated along such simple lines that the blank is quickly folded and secured in assembled form.

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The construction is such that the assembled carton may be flattened for shipment in stacks and quickly set up for loading when desired.

Various other objects and meritorious features of the invention will be apparent from the following description taken in conjunction with the drawings, wherein like numerals refer to like parts throughout the several figures, and wherein:

Fig. 1 is a plan view of an integral blank formed in accordance with the invention;

Fig. 2 is a section through the assembled carton in collapsed form;

Fig. 3 is a perspective of the upper portion of the assembled carton;

Fig. 4 is a transverse section through a formed carton;

Fig. 5 is a longitudinal section through an unloaded carton;

Fig. 6 is a longitudinal section through a loaded carton;

Fig. 7 is a longitudinal section at right angles to that of Fig. 6;

Fig. 8 is a plan view of a somewhat modified form of blank from which a different embodiment of the basic carton concept is formed;

Fig. 9 is a section through the assembled carton in collapsed form;

Fig. 10 is a transverse section through the container formed from the blank in Fig. 8;

Fig. 11 is a perspective thereof, and

Fig. 12 is a transverse sectional view, similar to Figs. 4 and 10, of a third embodiment.

Referring now particularly to Fig. 1 wherein the flat integral blank which constitutes a portion of this invention is illustrated, the blank comprises a transversely aligned series of wall sections designated by the numerals **10**, **12**, **14** and **16** separated from one another, or flexibly connected to one another, respectively, by score lines **18**, **20** and **22**. The top margins of certain of these sections are provided with closure flaps broadly designated by the numeral **24**, score lines separating the wall sections from the closure flaps. In like manner the lower margins of the wall sections have flexibly connected thereto by score lines closure flaps broadly designated by the numeral **26**. These closure flaps may be varied in numerous ways and, inasmuch as they constitute no portion of the invention, the particular manner in which they are constructed in the form illustrated will not be dwelt upon herein.

Wall section **14** is provided adjacent its top margin with an opening **28**. The opening may be covered with a transparent window of plastic such as cellulose acetate, the window being indi-

cated by the numeral 30. A joinder section 32 is flexibly connected to the free margin of wall section 10 by means of score line 34. It is important to note that wall section 14 which carries the window 30 is one wall section removed from the free side margin of the blank and two wall sections removed from the score line 34 which connects joinder section 32 with wall section 10. This arrangement makes for simplification in forming the blank and speed and accuracy in assembling the same into carton form.

To the upper portion of the outer margin of joinder section 32 what may be designated a utility or display panel 36 is flexibly connected by means of score line 38. At least a portion of this panel is in transverse alignment with opening 28 in wall section 14. For carrying out one object of the invention, display material of any suitable form such as that indicated at 40 may be printed upon the panel itself or positioned thereon in any suitable fashion, as by means of adhering a previously printed display, etc. A bearing or rigidifying flap 42 is flexibly connected to the outer or free margin of display panel 36 by score line 44. Below and extending along the lower margin of display panel 36 is a free flap, connected to the panel itself by score line 46, and divided into an upper portion 48 and a lower portion 50 by means of score line 52.

In the embodiment illustrated the joinder panel 32 extends along the entire marginal edge of wall section 10. As will be brought out more clearly hereinafter, the longitudinal dimension of this joinder panel need not coincide with that of its adjacent wall section. However, it is important that the said joinder section 32 be of less width than the opposite wall section 16 to which, as will be made apparent hereinafter, the joinder panel is adhered in face-to-face contact when the blank is assembled into carton form.

The display panel 36 of this embodiment should be of substantially the same width as wall section 14 in which the windowed opening is positioned. While in the form illustrated all of the wall sections have been shown as of the same width, thus making a carton when assembled which is square in cross section, it should be understood that opposite side walls only need be of the same transverse dimension, thus rendering it possible to make cartons which are rectangular in cross section as distinguished from square. For one contemplated use, the packaging of whiskey bottles, identically dimensioned wall sections are obviously desired.

The formed or assembled carton and the structural and functional relationships of the various panels are clearly illustrated in Figs. 2, 3 and 4. To assemble, the blank is folded along score lines 18, 20, 22 and 34 to bring joinder panel 32 into overlapping relationship with the inside face of wall section 16. These two overlapping sections are secured to each other in face-to-face contacting relation, preferably by means of adhesive which has been deposited along the outer margin of panel 16 along the underside thereof as viewed in Fig. 1. Inasmuch as joinder section 32 is of less width than wall section 16, the display panel 36 when folded about score line 38 into parallelism with windowed wall section 14 will lie inside said section. As heretofore stated, the display deposited on the display panel lies in transverse alignment with opening 28 and may be viewed through it, providing a three-dimensional or depth effect which is both unique and appealing.

While flap 42 is not essential to obtaining the display desired, it is advantageous in rigidifying and positioning the display panel 36 in precise relationship with the window opening. This flap folds along score line 44 so that its outside face lies in face-to-face contact with the inside of wall section 12, as most clearly illustrated in Fig. 4. The outer surface of flap 42 may be adhesive-coated or not, but preferably such a coating is utilized to obtain rigidity of the carton as a whole.

The carton is adapted for diverse packaging operations and to various and sundry commodities. Invention lies broadly in the windowed, reinforced, and rigidified structure heretofore described and also specifically in the packaging of long-necked bottles. In conjunction with this more specific phase of the invention it should be noted that the bottles are loaded from the lower opening or lower end of the carton, which is left open for this purpose as clearly illustrated in Fig. 5. Since the neck of the bottle will not interfere with the display panel which is spaced inwardly from the wall section, the loading operation is a simple and rapid one. In the embodiment illustrated the vertical dimensions of display panel 36 and flap portions 48 and 50 have been correlated to the almost standard dimensions of a whiskey bottle, and correlated as well to the substantially standard contour and proportioning between the body of the bottle and its neck.

As the bottle is loaded into the opening at the lower end of the container, the neck will move freely up past the display panel 36 and the convex curvature of the bottle wall joining the neck with its main body portion will force the flap portions 48 and 50 outwardly toward adjacent wall section 14. The lower free portion 50 of the flap will be held against the wall section as illustrated in Fig. 6, being jammed in between the wall of the body portion of the bottle and the adjacent wall section of the container. Such positioning brings the portion 48 of the flap into the angular position more particularly illustrated in Fig. 6. The name portion of the display or any other suitable display feature may be carried by the portion 48 of this flap.

For other uses the outer face, as viewed in Fig. 1, of flap portion 50 may be spotted with adhesive and adhered to the inner face of wall section 14 as part of the assembly operation. This alternative arrangement is illustrated in Fig. 5, but substantially the same position will be assumed if the flap is left free where a bottle is loaded into the container.

It will be apparent that the display panel not only performs the function of providing a desirable visual characteristic to the container and its contents but, in addition, constitutes a rigidifying and reinforcing wall extending between two opposite side walls and engaged therewith, lying inwardly of and in parallelism with the wall section provided with the window opening. Thus any weakening of wall section 14 resulting from provision of the window opening is more than compensated by the display panel lying adjacent the opening itself. Securement of flap 42 to the inner face of wall section 12, as by means of adhesive, further strengthens and rigidifies the carton when assembled in open position ready for loading, although the mere bearing of the face of this flap against the side wall obtains this effect in substantial measure. The same is true in connection with the lower or free portion 50 of the flap extending along the lower margin of the display panel, the rigidifying or reinforcing

effect being present without securing the same to its adjacent wall section but being further enhanced by adhering the same to one another in face-to-face contact.

As has been suggested heretofore, it is not essential that the joinder section 32 be coextensive with the margin of wall section 10. The joinder section may consist of a mere strip extending from the margin of wall section 10. Furthermore, the difference in width between joinder section 32 and wall section 16 to which it is secured in face-to-face contact controls the depth within which the display is sunk into the carton rearwardly of the window in panel 14. The depth to which the display may be usefully sunk within the container depends upon the nature of the article to be loaded therein and, accordingly, the width of joinder section 32 may be determined within the limits of the width of wall section 16 to which the joinder section is to be secured.

It will be apparent that the same desirable objectives are obtained whether or not a plastic window of transparent material such as has been indicated at 30 it utilized. The opening may be left free and clear, in which case the three-dimensional or depth effect is actually enhanced.

It will also be apparent that within one phase of my invention the joinder section 32 and its connected display panel 36, with its associated flaps, may be produced separate and apart from the wall sections of the container or carton. Under such circumstances the joinder and display sections, etc., are introduced into the carton after the same has been formed and are secured to the inside faces of the wall sections at that time. However, an important feature of the invention resides in the integral nature of the blank from which the ultimate carton is obtained.

In Figs. 8–11 is disclosed a modified arrangement wherein the window opening extends across one corner of the carton and the utility or display panel extends diagonally across that corner within the carton so as to be clearly visible through the opening. A blank suitable for fashioning the corner display modification is illustrated in Fig. 8 wherein the wall sections 54, 56, 58 and 60 are separated by score lines as already described in conjunction with the embodiment disclosed in Fig. 1. The window opening 62 is die cut into adjacent wall sections 58 and 60 across the score line separating these two sections and is preferably symmetrical in respect to said wall sections. A cellophane window 64 covers the opening and is adhered to the margins thereof on the underside of the blank.

A joinder section 66 is flexibly connected to wall section 54 by a score line, and to the margin of the joinder section a display panel 68 is flexibly connected by a score line. Flap 70 is connected to the panel 68 by a score line, and to the lower free margin of panel 68 a triangular flap 72 is flexibly connected by a score line.

In this corner window arrangement the joinder section 66 is of slightly less width than that portion of wall section 60 designated *x* and joinder section 70 is of slightly less width than that portion of wall section 58 designated *y*. Thus when the blank is folded along the score lines in the general manner described in conjunction with the embodiment illustrated in Figs. 1–7, the joinder section 66 will be adhered to the inside face of wall section 60 along its free margin and flap 70, if adhered, will be secured to the inside face of wall section 58 adjacent the score line separating wall sections 56 and 58. This is clearly illustrated in Fig. 10.

The triangular flap 72 flexibly connected to the lower free margin of panel 68 may be moved outwardly so that the margins of the flap rest against the wall sections 58 and 60 and the apex of the triangle abuts the corner between these sections.

In Fig. 12 a somewhat different arrangement is disclosed wherein what has hitherto been described as a display panel extends across two adjacent wall sections of the carton in inside spaced relation to said walls and in registry with separate window openings in the respective wall sections. Fig. 12 corresponds to the showing in Figs. 4 and 10 of the earlier described modifications. This arrangement comprises wall sections 74, 76, 78 and 80. Wall sections 76 and 78 are provided with window openings 82 and 84.

To the free margin of joinder section 86 are flexibly connected by score lines two display panel sections 88 and 90, which sections are separated by a score line. The end flap 92 may be adhered to the inside face of wall section 74 in the same manner that the joinder section 86 is adhered to the inside face of wall section 80.

Thus it will be seen that the display portions of sections 88 and 90 are in registry, respectively, with window openings 84 and 82 in adjacent wall sections 78 and 76, forming an attractive and novel appearance and at the same time providing extreme rigidity and strength by reason of the bracing function of the display sections 88 and 90. It will be understood, of course, that to the lower free margins of what we have designated display sections 88 and 90 may be connected flaps of the type illustrated in the Figs. 1–7 modification and designated 48 and 50.

While the sections which appear in spaced relation to the window openings and on the inside of the carton have been referred to throughout herein as "display" or "utility" sections, it should be understood that the invention contemplates wider usages than mere display. By reason of these sections and the depending flaps such as 48 and 50 in Fig. 5, the latter of which may be adhered to the inside face of the adjacent wall section 14, a container within a container is formed. This container within the main container may be used for numerous purposes, either with the window opening in the adjacent wall section or without it. In each of the modifications described, and in various other modifications which lie within the scope of the inventive concept disclosed herein, the small container may be used to hold a sample of the product packaged in the main container. Some object or product correlated to the main contents of the package and adapted for use in conjunction with it might be inserted in the small inside container.

It should be further understood that the various sections of the blank may be so proportioned and sized that what has just been alluded to as the small container within the main container may be as large as the latter, thus forming two container sections within the carton which are substantially equal in cubic content. This is readily accomplished in conjunction with the embodiment disclosed in Figs. 1–7, for instance, by making the joinder section 32 substantially half as wide as wall section 16 to which it is adhered and carrying the so-called display section 36 down the full length of the carton walls, adher-

ing the flap 42 to the carton bottom if desired. In such an arrangement the so-called "display section" 36 would function as a dividing mid-partition extending through the middle of the container throughout its length and in effect forming a two-compartment carton.

If the shape of the product to be packaged in the container were such that it needed to be held firmly in position without shifting in any way, the inside panel or what has been designated the display section could be die cut to fit the product, accomplishing the desired anchoring of the product and facilitating the packing thereof.

Where used as a dual compartment carton or for providing a small container within a larger container, the invention may be utilized for packaging food products which should be maintained separate until the time for cooking, at which point they are mixed. The smaller compartment could be used as a pocket for containing auxiliary parts or booklets, recipes, instructions, etc., and in many such instances it would be immaterial whether the window opening was or was not provided.

Having described and illustrated certain embodiments of the invention, various modifications lying within the inventive concept will be apparent to those skilled in the art and for that reason I wish to limit myself only within the scope of the appended claims.

What I claim is:

1. A carton having a main body portion comprising side walls and end closure flaps, two adjacent side walls being apertured to provide a continuous opening extending across a corner of the carton, a utility panel of such width as to extend diagonally across the open corner and engage the side walls adjacent said opening, and flaps on opposite sides of said panel and integral therewith for engagement with said side walls adjacent said opening, one of said flaps being integral with both the utility panel and a side wall of the carton.

2. The arrangement described in claim 1 wherein the utility panel bears display material in registry with the corner opening.

3. A carton having a main body portion comprising side walls and end closure flaps, two adjacent side walls being apertured to provide a continuous opening extending across a corner of the carton, a utility panel of substantially the length of said opening and of such width as to extend diagonally across the corner opening in registry therewith and engage the side walls adjacent said opening, flaps on opposite sides of said panel and integral therewith for engagement with said side walls adjacent said opening, one of said flaps being integral with both the utility panel and a side wall of the carton, and a flap flexibly connected to the lower margin of the utility panel and adapted to form a bottom for the corner space delineated by the side walls and the utility panel.

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