Nov. 17, 1959 J. B. DAILY 2,913,101

DISPLAY CARTONS

Filed Aug. 1, 1957 2 Sheets-Sheet 1

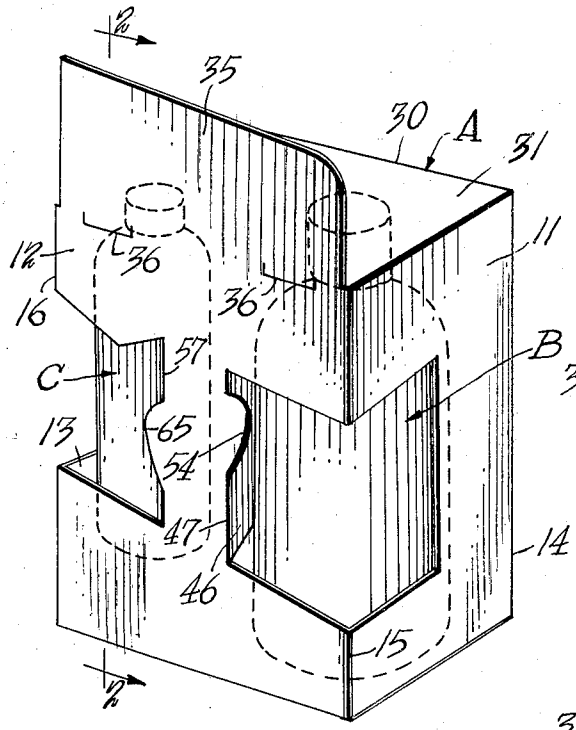

FIG. 1

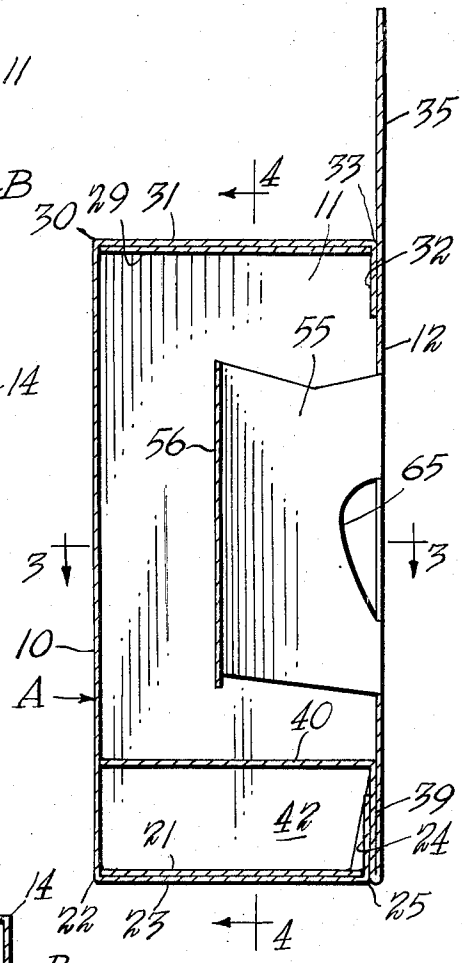

FIG. 2

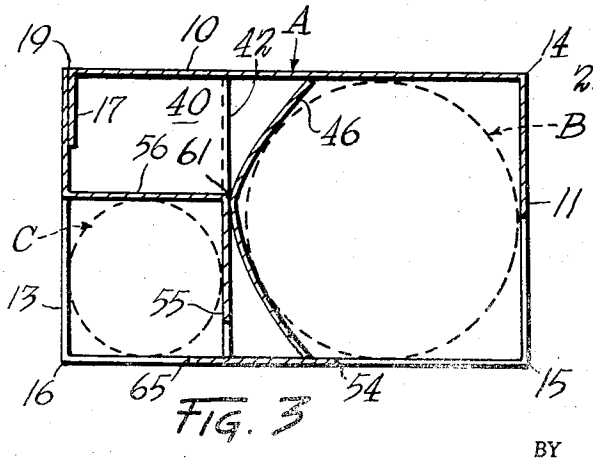

FIG. 3

INVENTOR

John B. Daily

BY Robert M. Running

ATTORNEY

Nov. 17, 1959 J. B. DAILY 2,913,101

DISPLAY CARTONS

Filed Aug. 1, 1957 2 Sheets-Sheet 2

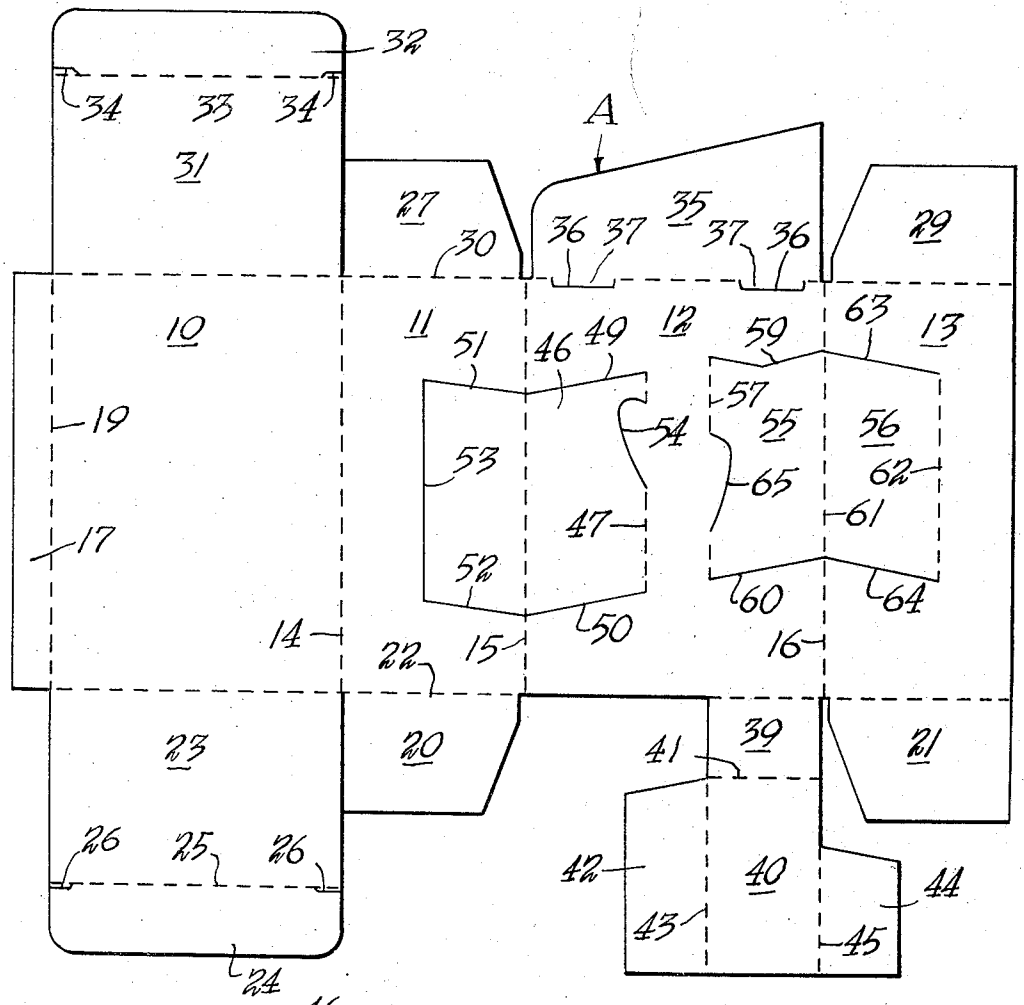

FIG. 5

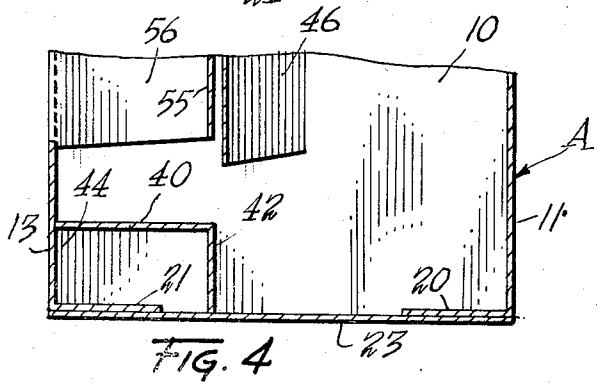

FIG. 4

INVENTOR

John B. Daily

BY Robert M. Dunning

ATTORNEY

United States Patent Office 2,913,101 Patented Nov. 17, 1959

2,913,101

DISPLAY CARTONS

John B. Daily, Chicago, Ill., assignor to Waldorf Paper Products Co., Ramsey County, Minn., a corporation of Minnesota

Application August 1, 1957, Serial No. 675,692

8 Claims. (Cl. 206—45.19)

This invention relates to an improvement in display cartons and deals particularly with a carton capable of displaying a pair of articles having substantially different dimensions.

In the operation of unitizing a pair of articles which are of different shape and size, some difficulty is often experienced in properly supporting the articles so that they can be properly handled and shipped with the articles remaining in their proper positions. For example, in the shipment of cartons containing a pair of bottles which are of materially different size it is necessary to provide a means of holding the bottles in proper relation so that they will not come into contact during handling and therefore will not be broken in transit. Shipping rules require that there be a certain thickness of paperboard between adjacent bottles in a single package if the safe delivery of the bottles is to be guaranteed. This rule is particularly important where the bottles contain fluids which might be injurious to surfaces and objects which they contact. It is an object of the present invention to provide such a carton.

A feature of the present invention resides in the provision of a carton containing tubularly connected walls, two of which are spaced apart a distance equal to the thickness of the larger of the two articles and the remaining two walls of which are spaced apart a distance sufficient to accommodate both of the articles that are between. Means is provided for confining the smaller of the articles to a corner of the carton in such a manner that it will not come in physical contact with the larger of the articles.

A feature of the present invention resides in the provision of a carton of the type described having a pair of connected flaps hingedly connected to two adjoining walls of the carton at points spaced from the upper and lower edges of these walls. These connector flaps may be folded inwardly so that each flap extends in substantially right angular relation to the wall from which it is cut. When folded in this manner, the flaps form a rectangular cell between the folded flaps and the walls from which they are cut into which the smaller of the articles may be inserted, the flaps holding this smaller article from lateral movement within the carton.

A further feature of the present invention resides in the provision of a carton of the type described having flaps cut from two adjoining panels in the manner described, the flaps not only acting to confine the article in a predetermined position but also to provide a window in the outer surface of the carton through which the article may be viewed.

An added feature of the present invention lies in the provision of a flap cut from portions of two adjoining walls and folded inwardly toward the wall of the carton opposite that to which the flap is hinged to provide a partition panel between the two articles confined. This flap combines with the pair of hingedly connected flaps to form a partition of double thickness between the articles, this structure being particularly useful where the carton is used to contain a pair of bottles.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification:

Figure 1 is a perspective view of a display carton showing the general arrangement thereof.

Figure 2 is a vertical sectional view through carton shown in Figure 1, the position of the section being indicated by the line 2—2 of Figure 1.

Figure 3 is a sectional view on a horizontal plane through the center portion of the carton, the position of the section being indicated by the line 3—3 of Figure 2.

Figure 4 is a sectional view through the carton on a vertical plane parallel to the front and rear surfaces of the carton, the position of the section being indicated by the line 4—4 of Figure 2.

Figure 5 is a diagrammatic view of the blank from which the display carton is formed.

The display carton is indicated in general by the letter "A" and includes in sequence, a rear panel 10, a side wall panel 11, a front wall panel 12, and a second side wall panel 13.

The panels described are foldably connected along parallel fold lines 14, 15, and 16. A glue flap 17 is hingedly connected to one end panel of the series such as the rear panel 10 along a fold line 19. This glue flap 17 is designed to be secured in surface contact with a marginal edge of the side wall panel 13 to provide a tubular carton structure.

A pair of closing flaps 20 and 21 are foldably connected to the side wall panels 11 and 13 respectively along a common line of fold 22. A bottom panel 23 is also connected to the edge of the rear wall 10 along the line of fold 22 and is folded to underlie the flaps 20 and 21 in the assembled form of the carton. The bottom panel 23 is provided with a tuck flap 24 hingedly connected thereto along a line of fold 25. This tuck flap 24 is designed to extend upwardly into the interior of the carton between the forward edges of the flaps 20 and 21 and the front wall panel 12.

Locking cuts 26 hold the tub flap in place in the manner well known in the art.

The upper ends of the side wall panels 11 and 13 are provided with closing flaps 27 and 29 which are hingedly connected thereto along a substantially common line of fold 30. A top closure panel 31 is hingedly connected to the upper edge of the rear panel 10 along an extension of the fold line 30. Thus the top panel 31 is provided with a tuck flap 32 hingedly connected thereto along a fold line 33. This tuck flap 32 is designed to extend downwardly into the carton between the forward edges of the flaps 27 and 29 and the front panel 12 and locking cuts 34 are provided for holding the tuck flap in proper position.

In the particular arrangement illustrated, a display panel 35 is hingedly connected to the front wall panel 12 along an extention of the fold line 30. At this point, the fold line 30 is interrupted by a pair of substantially U-shaped cut lines 36 which extend into the front panel 12 below the level of the fold line 30. These cut lines 36 define downwardly projecting tabs 37 which bind against the upper portion of the front panel 12 and assist in holding the display panel 35 in an upright position.

A flange 39 is foldably connected to a portion of the bottom edge of the front wall 12 along an extension of the fold line 22. The width of this flange 39 is substantially equal to the width of the smaller article contained. As is indicated in Figures 1 and 3 of the drawings, the particular carton illustrated is designed for con-

taining a larger diameter bottle B and a smaller diameter bottle C. The smaller diameter bottle C is also shown to be substantially shorter in height than the bottle B. In the particular arrangement illustrated, the flange 39 is substantially equal in width to the diameter of the smaller bottle C and serves as a means of supporting a false bottom or platform which holds the bottle C with its upper end at substantialy the same elevation as the upper end of the larger bottle B.

A platform panel 40 is foldably connected to the flange 39 along a fold line 41 which extends parallel to the fold line 22. A flange 42 is hingedly connected along an edge of the platform panel 40 along a fold line 43. A second flange 44 is shown connected to the opposite edge of the platform panel 40 along a fold line 45. This flange 44 is not shown in the other figures of the drawings as it was found unnecessary in the particular arrangement illustrated and as the provision of the flange 44 made the carton blank somewhat more difficult to strip.

A flap 46 is hingedly connected to the front panel 12 along a fold line 47 which is spaced from the fold line 15 a distance substantially equal to the outer diameter of the smaller bottle C. In the arrangement illustrated, the flap 46 is defined by cut lines 49 and 50 which extend from the fold line 47 to the fold line 15 and connecting cut lines 51 and 52 extending transversely of the side panel 11. A vertical cut line 53 connects the ends of the cut lines 51 and 52 and thus defines the end of the flap 46. The fold line 15 is shown as continuing through the flap 46 to divide the flap into an anchoring portion adjoining the fold line 47 and an end portion cut from the panel 11. The fold line 47 may be interrupted by cut lines such as 54 which change the shape of the front panel 12 when the flap 46 is folded out of the panel thereof.

A pair of connected flaps 55 and 56 are formed in the front panel 12 and the adjoining end wall panel 13. As the bottle C is circular in section, these flaps are of equal width although this need not necessarily be true if the cell for containing the smaller article would not best be accommodated in a square shape. The flap 55 is connected to the front panel 12 along a fold line 57 which is preferably spaced from the fold line 16 a distance substantially equal to the diameter of the bottle C. A pair of cut lines 59 and 60 connect the upper and lower ends of the fold line 57 to the center fold line 61 which in the arrangement illustrated is aligned with the fold line 16. The flap 56 is foldably connected to the panel 13 along a fold line 62 and cut lines 63 and 64 join the upper ends of the fold line 62 with the ends of the cut lines 59 and 60 to form continuous cuts between the fold lines 57 and 62. In the arrangement illustrated, the fold line 57 is interrupted by a cut line 65 which changes the shape of the remaining portion of the front panel 12 when the flap 55 is folded into right angular relation thereto.

In the formation of the carton, the blank illustrated in Figure 5 is folded along two of its fold lines such as along the fold lines 14 and 16 and the glue flap 17 is marginally connected to the side wall 13. The blank is stored and shipped in this flat condition.

In erecting the carton for use, the carton is folded into rectangular shape and the flaps 55 and 56 are folded inwardly into right angular relation to the walls to which they are hinged. The platform is then formed by folding the flange 39 upwardly into surface contact with the front wall 12, and folding the flange 42 into right angular relation to the supporting panel 40. The opposed flaps 20 and 21 are bent into right angular relation to the side walls to which they are connected and the bottom panel 23 is folded to underlie the flaps 20 and 21 and the tuck flap 24 is forced upwardly between the forward ends of the flaps 20 and 21 and the inner surface of the front wall 12.

The larger bottle B is then inserted and just prior to insertion, the flap 46 is folded rearwardly as indicated in Figure 3 to form a loose partition wall extending across the carton. When this flap 46 is folded into the position shown, the lower edge of the flap may engage against the flange 42 on the platform panel 40 near the upper edge thereof so as to guide the bottle B alongside the flange 42.

The bottle C may then be dropped into place to rest upon platform 40 and the top of the carton may be closed. This is accomplished by folding downwardly the flaps 27 and 29 into a common plane, folding the cover flap 31 forwardly to overlie the flaps 27 and 29, and tucking the tuck flap 32 into the carton forwardly of the flaps 27 and 29 and inwardly of the rear surface of the front panel 12. During shipment, the display panel 35 may be folded to overlie the cover panel 31. When the carton is used as a display, the display panel is merely hinged upwardly into the plane of the front panel 12 in the manner illustrated in Figure 1 of the drawings.

An examination of Figure 3 of the drawings will indicate that there are two thicknesses of paperboard between the bottles contained and the shape of the flap 46 is such as to hold the bottle B out of surface contact with the bottle C. The platform panel 40 supports the bottle C so that the top of this bottle is at approximately the same elevation as the top of the bottle B.

In accordance with the patent statutes, I have described the principles of construction and operation of my display carton, and while I have endeavored to set forth the best embodiments thereof, I desire to have it understood that obvious changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A display carton in combination with two articles of different thickenss, the carton including a tubular body having a front wall, a rear wall, and parallel side walls connected in tubular relation, said front and rear walls being spaced apart a distance sufficient to accommodate there-between the thicker of said objects and said side walls being spaced apart a distance sufficient to accommodate both said articles in side-by-side relation, a carton bottom panel, a flap cut from portions of said front wall and one adjoining side wall along a fold line parallel to the fold lines connecting said walls, said flap being spaced from the top and bottom edges of the walls from which it is cut and folded inwardly toward said rear wall between said articles, a pair of connected flaps cut from portions of said front wall and the other side wall along fold lines parallel to the lines of fold connecting said walls, the flap of said pair formed in said front panel being folded inwardly toward said rear wall and the flap of said pair cut from said other side wall, being folded inwardly from said one side wall said pair of flaps being spaced from the top and bottom edges of said walls and enclosing the smaller article between said pair of flaps and the walls from which they are cut.

2. The structure of claim 1 and in which said first named flap is vertically folded intermediate its ends.

3. The structure of claim 1 and including a top cover panel.

4. The structure of claim 1 and including a display panel foldably connected to the upper edge of said front panel.

5. The structure of claim 1 and including a cover panel hinged to the upper edge of said rear wall, and a display panel foldably connected to the upper edge of said front wall.

6. A display carton in combination with two articles of different thickness, the carton including a tubular body having a front wall, a rear wall, and parallel side walls connected in tubular relation, said front and rear walls being spaced apart a distance sufficient to accommodate

there-between the thicker of said objects and said side walls being spaced apart a distance sufficient to accommodate both said articles in side-by-side relation, a carton bottom panel, a pair of connected flaps cut from portions of said front wall and one side wall along fold lines parallel to the lines of fold connecting said walls, the flap of said pair formed in said front panel being folded inwardly toward said rear wall and the flap of said pair cut from said one side wall being folded inwardly from said one side wall, said pair of flaps being spaced from the top and bottom edges of said walls and enclosing the smaller article between said pair of flaps and the walls from which they are cut, said articles also being of different height, and a platform supporting the shorter of said articles to hold the upper ends of said articles at the same elevation, said platform being hingedly connected to the lower edge of one of said walls and resting upon said bottom panel.

7. The structure of claim 6 and in which said platform includes a flange hinged to the lower edge of one of said walls and folded upwardly parallel thereto, a platform panel hinged to the upper edge of said flange and extending parallel to said bottom panel and a supporting flange hinged to an edge of said platform panel and extending downwardly into contact with said bottom panel.

8. A display carton in combination with two articles of different thickness and different height, the carton including a tubular body having a front wall, a rear wall, and parallel side walls connected in tubular relation, said

front and rear walls being spaced apart a distance sufficient to accommodate there-between the thicker of said objects and said side walls being spaced apart a distance sufficient to accommodate both said articles in side-by-side relation, a carton bottom panel, a pair of connected flaps cut from portions of said front wall and one adjoining side wall along fold lines parallel to the lines of fold connecting said walls, the flap of said pair formed in said front panel being folded inwardly toward said rear wall and the flap of said pair cut from said one side wall being folded inwardly from said one side wall, said pair of flaps being spaced from the top and bottom edges of said walls and enclosing the smaller article between said pair of flaps and the walls from which they are cut, and including a platform supporting the shorter of said articles to hold the upper ends of said articles at the same elevation, said platform being hingedly connected to the lower edge of one of said walls and resting upon said bottom panel.

References Cited in the file of this patent

UNITED STATES PATENTS

2,060,513	Marx	Nov. 10, 1936
2,249,244	Guyer	July 15, 1941
2,358,664	Shailer	Sept. 19, 1944
2,650,702	Shanahan	Sept. 1, 1953
2,789,689	Lewis	Apr. 23, 1957