

April 15, 1958

R. E. PAIGE

2,830,697

COMBINED SHIPPING AND DISPLAY CARTON

Filed June 23, 1955

2 Sheets-Sheet 1

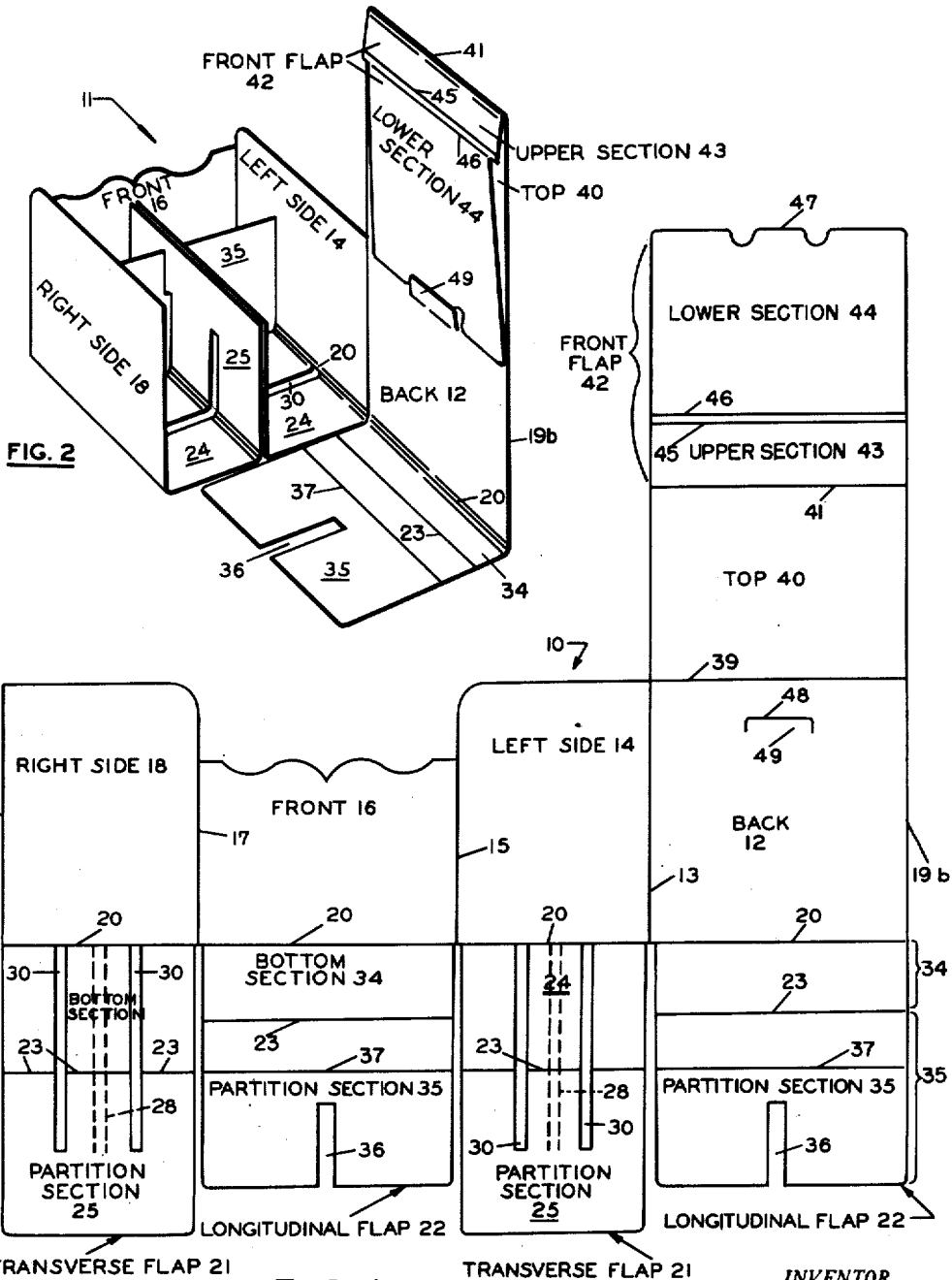


FIG. 1

INVENTOR.
 RICHARD E. PAIGE
 BY
Arthur Robert
 ATTORNEY

April 15, 1958

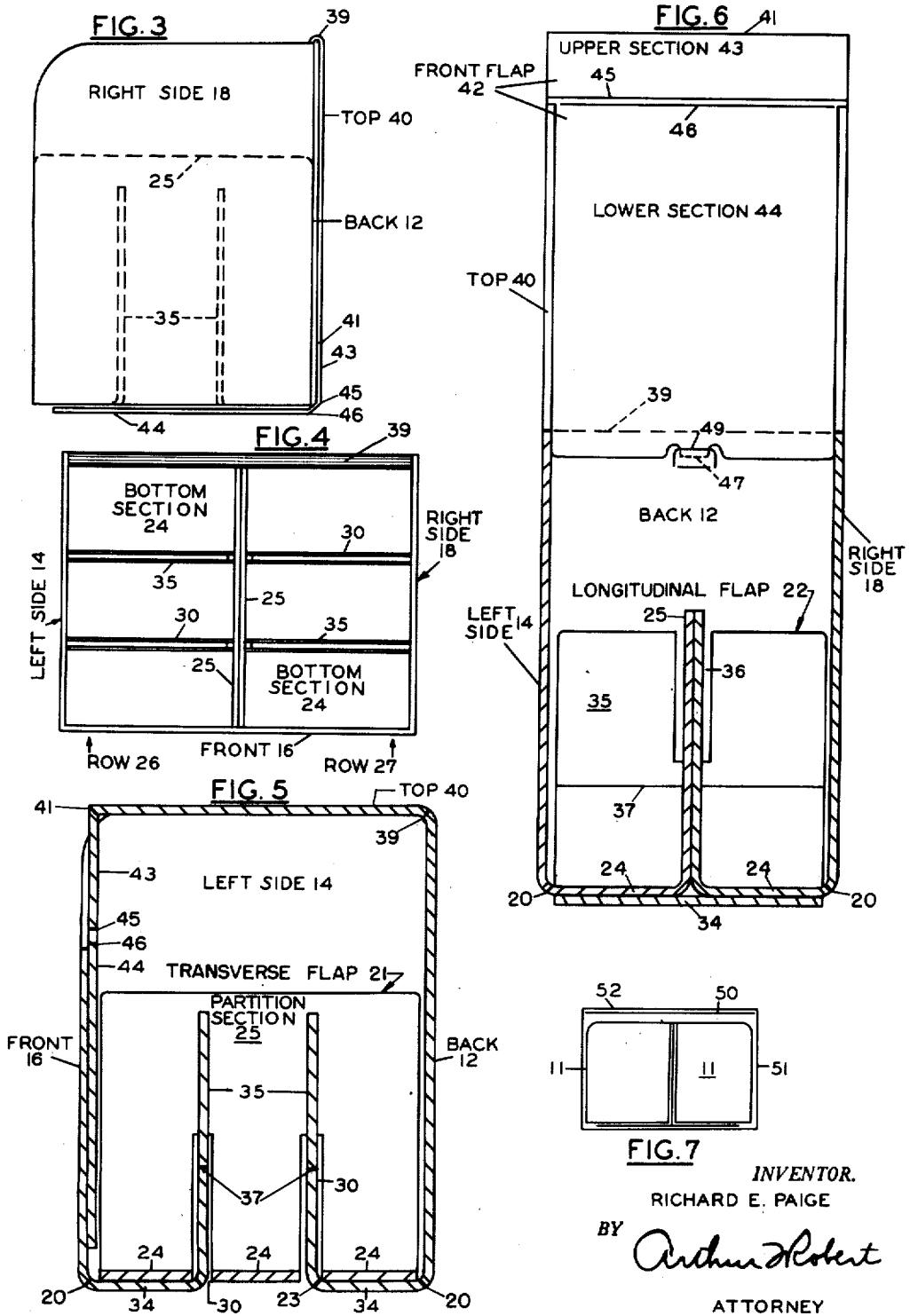
R. E. PAIGE

2,830,697

COMBINED SHIPPING AND DISPLAY CARTON

Filed June 23, 1955

2 Sheets-Sheet 2



INVENTOR.

RICHARD E. PAIGE

BY

Arthur Robert

ATTORNEY

1

2,830,697

COMBINED SHIPPING AND DISPLAY CARTON

Richard Eaton Paige, New York, N. Y., assignor to Brown-Forman Distillers Corporation, Louisville, Ky., a corporation of Delaware

Application June 23, 1955, Serial No. 517,443

2 Claims. (Cl. 206—45.29)

This invention relates to a combined shipping and display carton of the type normally composed of cardboard.

In preparing for and handling bottled case goods, for example, it is customary for the carton manufacturer to supply the bottle manufacturer with case and fractional case cartons all in knockdown form. The bottle manufacturer assembles say four of the six bottle fractional case cartons within a twenty-four bottle case carton, fills the assembly with its regular quota of twenty-four empty bottles, closes the resulting package and ships it to the bottled goods manufacturer. The latter opens the package, removes the bottles, cleans, sterilizes, fills, labels and stamps them, if necessary, and finally refills the package, closes it and then ships it to the distributor who is then in a position to deliver to his customers either full or fractional cases.

The principal object of the present invention is to provide a novel, fractional case carton which enables the practice of preparing for and handling the goods down through the distributor and retailer to be substantially improved.

Another important object is to provide a novel, fractional case carton which may substantially reduce the handling costs from the bottle manufacturer down to the retailer and which provides the retailer with an effective display for such goods.

Another important object of this invention is to provide a fractional case carton with a novel bottom structure which facilitates the assembly of the original blank into a fractional case carton of novel form, which, when assembled, not only forms the bottom of the carton but also subdivides the interior of the carton into bottle compartments and which, packed within a full case carton, meets all shipping requirements.

Another important object of this invention is to provide a fractional case carton with a novel top structure which may be readily moved during initial assembly to an out-of-the-way position where it does not obstruct access to the bottle compartments and which may be left in such position by all parties down to the distributor so as to facilitate all necessary bottle packing and unpacking operations up to that time and which may thereafter be readily moved to closed or display positions, as desired.

Another important object of this invention is to provide an inexpensive fractional case carton having a novel bottom structure which is easy to assemble to form the bottom and interior compartments of the carton and a novel top structure which is readily movable to any of three positions comprising a closed position, an open extended display position, and an open retracted out-of-the-way position.

An embodiment of the invention is illustrated in the accompanying drawings wherein:

Figure 1 is a plan view of scored cardboard blank;

Figure 2 is a perspective view of a partly assembled carton;

2

Figure 3 is a side elevation of the assembled carton with its top structure in the out-of-the-way, carton packing and unpacking or bottle processing position;

Figure 4 is a top plan view of the carton in Figure 3;

Figure 5 is a vertical section, extending from front to rear longitudinally through the carton when it is in its closed position, this section looking toward the central partition;

Figure 6 is a vertical section, extending transversely from side to side transversely through the carton when it is in its display position, this section looking in the direction of the display face; and

Figure 7 is a more or less schematic view illustrating the relationship between two fractional case cartons packed in a full case carton with their top structures in their out-of-the-way positions, the spacing of the elements in this view being exaggerated for the sake of clarity.

My invention is particularly suited for but not necessarily limited to application to fractional case cartons. The embodiment used to illustrate my invention comprises: a box body open at bottom and top; a novel bottom structure composed of two pairs of opposed flaps cooperating not only to form the bottom but also to partition the interior of the box into bottle receiving compartments; a novel top closure composed of a top wall and a front flap hinged together for movement to various positions including an open processing position, a closed position and an open display position; and means to latch or lock it in the display position.

BOX BODY

The blank and the assembled box made therefrom are hereinafter generally designated by the numerals 10 and 11 respectively. The body of the box 11, as can be readily seen from the blank 10 of Fig. 1, includes back wall 12 hinged at 13 to left side wall 14 which is hinged at 15 to front wall 16 which is hinged at 17 to right side wall 18. The adjacent edges 19a and 19b of the back 12 and the right side wall 18 are to be taped or otherwise secured together.

BOTTOM STRUCTURE

Each vertical wall has a bottom flap hinged at 20 to its lower edge, opposed bottom flaps of either pair designated 21 or 22 being identical in structure and adjacent flaps 21 and 22 being different in structure. For clarity, the bottom flaps of one pair of opposed vertical walls are called "transverse flaps 21" to distinguish them from the bottom flaps of the other pair of opposed vertical walls which are called "longitudinal flaps 22."

Each flap, whether transverse or longitudinal, contains a horizontal bottom section hinged at 23 to a vertical partition-forming section. The partition-forming section of one pair of flaps divides the interior of the box into two rows, while the partition-forming section of the other pair of flaps subdivides each row into either two or three bottle-forming compartments. While the "longitudinal" flaps may be placed on the side walls and designed to form rows with the "transverse" flaps placed on the front and rear walls and designed to subdivide rows, the reverse arrangement is used to illustrate the present invention and is therefore described hereinafter.

Transverse flaps

Accordingly, it is noted that each side wall has, hinged to its lower edge at 20, a transverse flap 21 which contains a hinge 23 connecting its bottom section 24 to its partition section 25. The bottom section 24 extends from said lower edge hinge 20 partway across the bottom where it terminates in a hinged edge 23 which lies in abutting relationship with the corresponding hinged edge 23 of the

3

bottom section 24 of the other transverse flap of the same pair. The partition section 25 extends from the abutting hinged edge 23 of its bottom section 24 upwardly into the box alongside the partition section 25 of the other transverse flap of the same pair.

These adjacent face-to-face partition sections 25 cooperate to form one partition of double thickness extending from the front to the back of the box. As particularly indicated in Fig. 4, this one partition of double thickness divides the interior of the box into two equal longitudinal rows 26 and 27, each of which extend from the front to the back of the box. Each row is intended to receive two or more bottles.

If each row is designed for two bottles, each transverse flap 21 will be divided into a front section and a back section, by a single slot 28 (shown in dotted lines) extending transversely across the bottom section 24 of the flap from its side wall hinge 20 to its partition hinge 23 and then continuing partially across its vertical partition section 25. This dotted slot 28 will divide the bottom section into equal front and back parts or halves.

Where, as here, three bottles are desired in each row, each flap 21 is slotted twice at 30 to divide it into thirds. Each transversely extending slot 30, on one transverse flap 21, thus extends horizontally half-way across the bottom section 24 of the assembled box and then extends vertically part way across the partition section 25. The horizontal portion of the transverse slot 30 on one transverse flap cooperates with the horizontal portions of the corresponding transverse slot 30 on the other transverse flap 21 to provide one continuous transverse slot extending horizontally all the way from one side wall to the other. The vertical portions of slots 30 similarly cooperate to form a vertical slot 30 extending partway across (or through the lower half of) the vertical partition sections 25 of the transverse flaps 21. These transverse slots 30 are for the purpose of receiving partitions from the "longitudinal" flaps 22, which are to be hereinafter described.

Longitudinal flaps

Each "longitudinal" flap 22 contains a bottom section 34 and a partition section 35. The bottom section 34 extends from the lower edge hinge 20 (of its front or rear wall) partway across the bottom where it terminates in an edge 23 hinged to the partition section 35. The partition section 35 extends upwardly through corresponding transverse slots 30, in both of said side wall flaps 21, to separate two adjacent bottle spaces in each row, one from the other.

For a two bottle per row arrangement, these partition sections 35 will project upwardly through the cooperating dotted slots 28, in each of the side wall flaps 21, so as to extend vertically within the box in face-to-face relationship.

Where, as here, three bottles per row are preferred, the bottom section 34 of each "longitudinal" flap 22 will extend one-third (forwardly or rearwardly) across the bottom area so as to terminate at a point spaced, from the corresponding edge of the corresponding bottom section 34 of the opposed flap 22, a distance equal to the remaining third of the bottom area. Necessarily the partition sections 35 of these opposed flaps 22 will also be spaced at equal one-third distances so as to divide the interior of the box into thirds. Each partition 35 in this case, therefore, extends through a different pair of transversely aligned "transverse" slots 30 in the partitions 25 of the "transverse flaps" 21. In order to permit the longitudinal partitions 35, of the longitudinal flaps 22, to extend to a higher elevation within the box, each longitudinal flap 22 is slotted at 36 from the upper edge of its partition section 35 downwardly for a distance equal to the desired extension.

4

Assembled bottom

With this arrangement, it will be appreciated that the bottom of the box, when assembled, has two layers of flap cardboard throughout its entire extent where a two bottle per row arrangement is employed. With a three bottle per row arrangement, two-thirds of the bottom area will have double thickness while the central one-third section will be of single cardboard thickness.

In order to facilitate the assembly of the box, each longitudinal flap 22 is scored across its partition section 35 along a fold line 37 which facilitates the entry of the free end of the longitudinal (front and rear wall) flaps 22 into the transverse slots 30 of the transverse or side wall flaps 21 during assembly.

TOP STRUCTURE

The top structure comprises: a top wall 40 hinged at 39 to the upper end of the back wall 12; and a front flap 42 hinged at 41 to the forward end of the top wall 40.

Top wall

The top wall 40 is hinged at 39 to the back wall for movement to any of three positions comprising: (a) the open out-of-the-way or processing position of Figs. 3, 4, and 7, in which it extends vertically downward along the outer face of the back wall 12 to a point short of the bottom thereof; (b) the closed position of Fig. 5, in which it extends horizontally forward over the top opening; and (c) the open display position Figs. 2 and 6, in which it projects vertically upward from the rear or back wall as an extension thereof.

Front flap

The front flap 42 is hinged at 41 to the top wall 40 so that, when that wall is moved to its different positions, the flap may be made to extend as follows: (a) in the open processing position of Figs. 3, 4, and 7, downwardly along the lower portion of the outer face of the back wall and thence under the outer face of the bottom wall; (b) in the closed position of Fig. 5, downwardly along the inner face of the front wall; and (c) in the open display position of Figs. 2 and 6, downwardly along the inner face of the top wall.

The front flap 42 has upper and lower sections 43 and 44 pivotally connected together through a pair of parallel and adjacent hinges 45 and 46. In the open processing position, the upper section 43 of the front flap 42 cooperates with the entire top wall 40 in forming a wall of the same height as the back wall 12 so that the lower section 44 of the front flap 42 may be manipulated or folded under the outer bottom face of the bottom wall. In the closed position, the entire front flap is used as a second front wall, the upper section 43 bridging the space between the top of the box and the upper edge of the front wall 16. In the display position, the entire front flap 42 is used as a display wall.

DISPLAY POSITION LOCK

To lock the front flap 42 in its display position, the lower end of its lower section 44 cooperates with the upper part of back wall 12 to provide a tongue and slot connection therebetween. Thus the flap has a tab 47 at the lower free end of its lower section 44 while the back wall 12 is slitted along a path 48 of inverted U-shape in outline to provide an upwardly directed tab 49. When tab 49 is swung or pushed slightly inward, it forms a slot into which the flap tab 47 can be directed. Once the tab 47 is slipped into the slot behind tab 49, it normally will be held there until manually pulled out.

HANDLING OPERATION

In the use of this invention, a full-case carton is to be loaded with say four quarter-case cartons; hence the carton manufacturer, for each full-case carton ordered,

5

will send the bottle manufacturer one full-case carton 51 and four quarter-case cartons 11.

The bottle manufacturer first assembles the full-case cartons and quarter-case cartons into open top containers, folds the top wall 40 and front flap 42 around the outer faces of the back and bottom walls of the quarter-case cartons 11 into the out-of-the-way processing position and, keeping them in such position, loads them into the open top carton 51 in any desired arrangement such as that indicated in Figure 7. Obviously, it is now an easy and simple matter to load each carton 51 with twenty-four bottles, by placing one bottle into each of the six unobstructed spaces provided in each open quarter-case carton 11. When a cardboard sheet 50 is placed over the open top quarter-case cartons and when the full-case carton 51 is closed at its top 52, the resulting package will meet all shipping requirements. Accordingly, the bottle manufacturer can ship the package in that condition to a distillery, for example.

At the distillery, the full-case carton 51 is opened to expose the open ends of the quarter-case cartons 11, the bottles are removed, sterilized, filled, closed, labeled, and stamped. Now they can be repacked with the quarter-case cartons still in the processing position. Once again, when the quarter-case cartons 11 are covered by a cardboard sheet 50 and the full-case carton 51 closed at 52, the resulting package will meet all shipping requirements and is therefore ready to be shipped to the distributor.

Upon receipt by the distributor, he can either deliver a full case to a dealer or open the full case and remove one or more quarter-case cartons for delivery to the dealer. The distributor, thereafter, closes each quarter-case carton and delivers it in a closed condition to the dealer. The dealer may now store all full-case or quarter-case cartons except those quarter-case cartons which are to be put on display. Each such carton may be placed in the position where it is to be displayed and its top wall and front flap may thereupon be moved to the display position of Figs. 2 and 6. As bottles are sold from that quarter-case carton, it may be refilled so as to maintain it as a display carton. On the other hand, when emptied, it can be replaced by another quarter-case carton.

6

Having described my invention, I claim:

1. An improved cardboard box comprising: a box body having a top opening, four vertical walls forming the opposed side walls and opposed front and back walls and a bottom wall; a top wall hinged to the upper edge of the back wall; and a front flap hinged to the front edge of the top wall and composed of upper and lower sections, the upper section extending between the top wall and the lower section and being hinged to both; the combined length of said top wall plus said upper section being equal to the height of said back wall; said top wall and front flap being movable between first, second and third positions, the first being a closed position wherein the top wall extends horizontally forward over the top opening of the box and the flap extends downwardly along the inner face of the front wall, the second being an open out-of-the-way processing position wherein the top wall extends vertically downward along the outer face of the back wall to a point short of the bottom thereof and the front flap extends from the top wall downwardly along the remaining lower portion of the outer face of the back wall to the bottom thereof and thence forwardly under the outer face of the bottom wall, and the third being an open display position in which the top wall projects vertically upward from the back wall as an extension thereof and the front flap extends downwardly along the inner face of the top wall.

2. The structure of claim 1 wherein: the lower end of the front flap and the upper part of the back wall cooperate to provide a tongue and slot connection therebetween to hold the top wall and front flap in the display position.

References Cited in the file of this patent

UNITED STATES PATENTS

1,879,105	Corigliano	Sept. 27, 1932
2,022,721	Hompe	Dec. 3, 1935
2,212,630	Anderson	Aug. 27, 1940
2,335,366	Stearn	Nov. 30, 1943
2,548,001	Butterfill	Apr. 10, 1951
2,599,800	Wolfe	June 10, 1952
2,693,308	Giroux et al.	Nov. 2, 1954