June 25, 1957 G. E. STRUBLE 2,796,978

DISPLAY BOX

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FIG. 1.

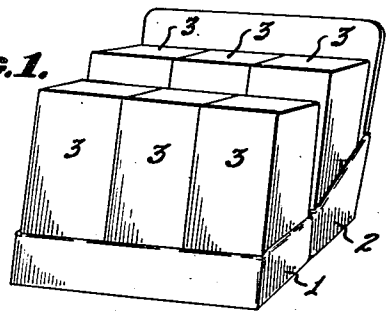
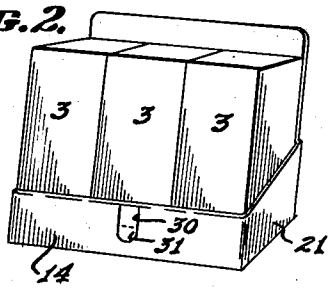


FIG. 2.



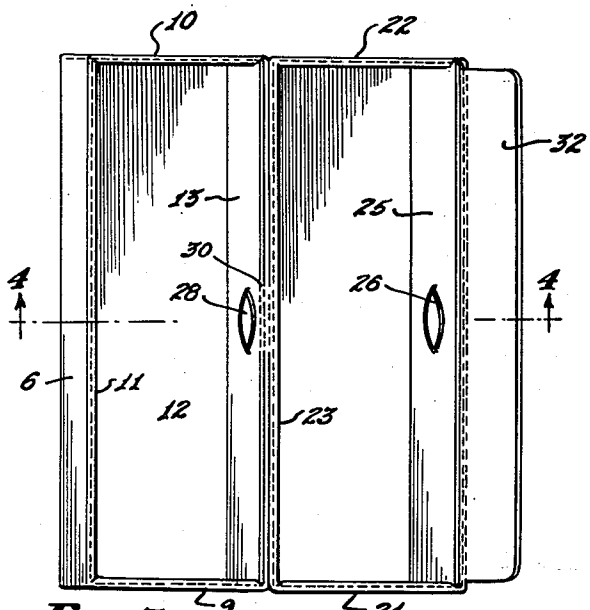


FIG. 3.

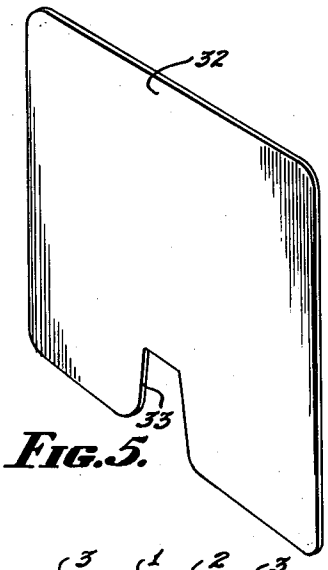


FIG. 5.

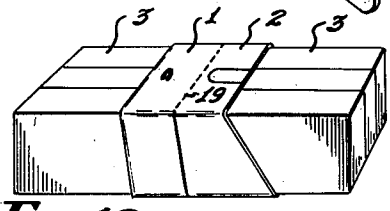


FIG. 12.

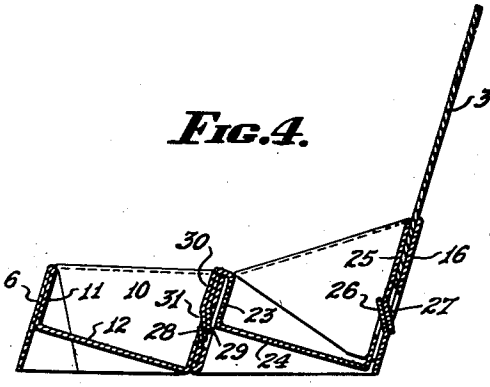


FIG. 4.

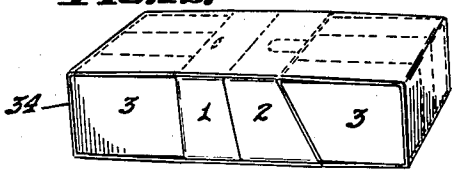


FIG. 13.

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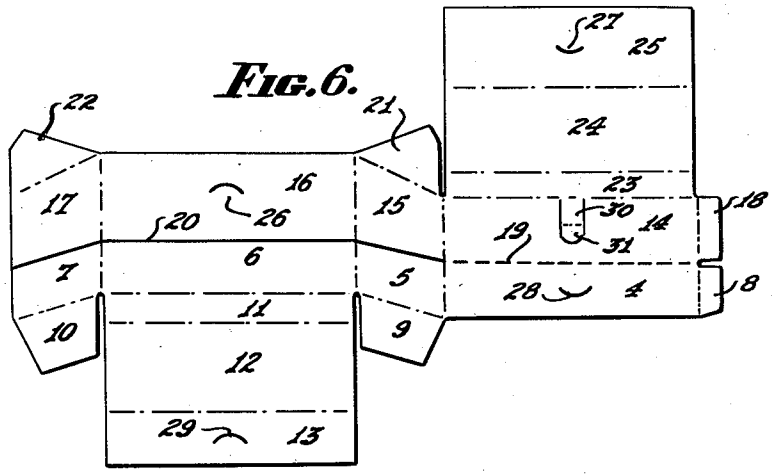
FIG. 6.



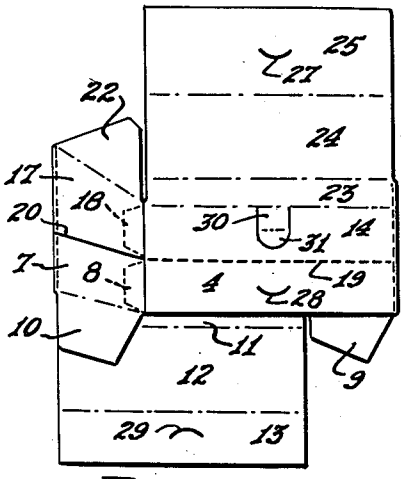


FIG. 7.

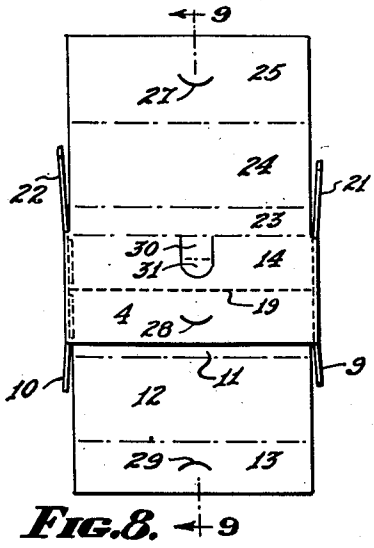


FIG. 8.

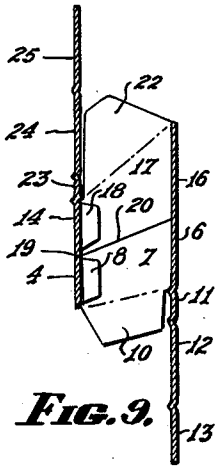


FIG. 9.

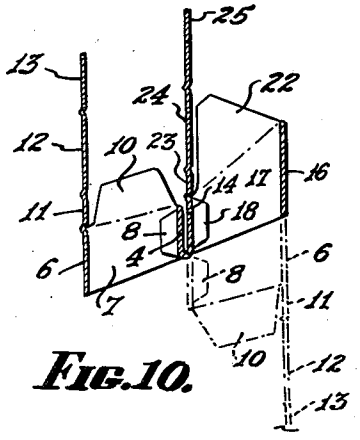


FIG. 10.

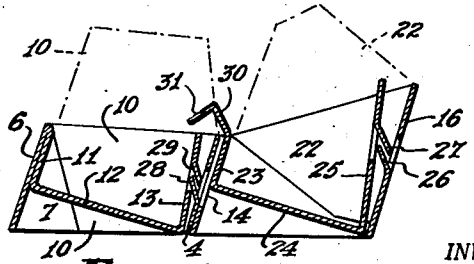


FIG. 11.

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United States Patent Office 2,796,978 Patented June 25, 1957

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DISPLAY BOX

Glenn E. Struble, Hamilton, Ohio, assignor to The Gardner Board and Carton Company, Middletown, Ohio, a corporation of Ohio

Application July 25, 1955, Serial No. 524,122

8 Claims. (Cl. 206—45.11)

My invention relates to display boxes and more particularly to a two part display box in which rows of packaged merchandise may be conveniently displayed for sale.

It is a principal object of my invention to provide a display box in the form of a pair of interconnected trays arranged one in front of the other, the trays being arranged to display the merchandise in step-wise relation.

A further object of my invention is the provision of a display box of the character described formed from a unitary paperboard structure, the arrangement of parts being such that the two trays may be readily secured together for joint use or separated for use apart from each other.

Yet a further object of my invention is the provision of a double tray display box formed from a one-piece blank which may be folded and glued by simple folding and gluing operations to form the knocked-down structure, whereupon the structure may be shipped to the user for assembly by a series of hand manipulations which do not require gluing of the parts.

Still a further object of my invention is the provision of a double tray display box in which the side and end walls of the trays are adapted to be supported on a planar surface and yet the bottom walls of the structure are such that they will incline the merchandise placed therein rearwardly for more ready inspection by the purchaser.

These and further objects of my invention which will appear hereinafter or which will be apparent to the skilled worker in the art upon reading these specifications, I accomplish by that construction and arrangement of parts of which I shall now describe an exemplary embodiment.

Reference is now made to the accompanying drawings wherein:

Figure 1 is a perspective view illustrating the display box in erected and filled condition.

Figure 2 is a perspective view illustrating the rear tray of the display box used separately from the remainder of the box.

Figure 3 is a plan view of the erected display box.

Figure 4 is a vertical sectional view taken along the line 4—4 of Figure 3.

Figure 5 is a perspective view of a display card which may be associated with the box.

Figure 6 is a plan view of the cut and scored blank from which the display box is formed.

Figure 7 is a plan view illustrating the blank of Figure 6 in tubed or flat-folded condition.

Figure 8 is a plan view similar to Figure 7 illustrating the tubed blank of Figure 7 in squared-up condition.

Figure 9 is a sectional view taken along the line 9—9 of Figure 8.

Figure 10 is a sectional view similar to Figure 9 illustrating a successive step in the erection of the box structure.

Figure 11 is a sectional view illustrating the final steps in the erection of the structure.

Figure 12 is a perspective view illustrating a filled display box in shipping position.

Figure 13 is a perspective view similar to Figure 12 illustrating the association of a sleeve with the filled display box to form a shipping container.

Referring first to Figure 1 of the drawings, I have therein illustrated a display box comprising a front tray 1 and a rear tray 2 each adapted to receive a plurality of articles of merchandise 3 in the form of paperboard cartons in which the merchandise is packaged. The tray assembly or display box is adapted to be placed on the dealer's counter or shelf where it may be conveniently viewed by the purchaser and one or more of the articles of merchandise removed therefrom. The display box is particularly suited for the display and merchandising of toilet articles and the like, although it will be apparent that its utility is not so limited but susceptible to a wide range of consumer merchandise.

Referring now to Figure 6 of the drawings, I have therein illustrated the blank from which the display box is formed. It will be understood that the blank will be formed from paperboard suitably cut and scored to define the several component parts of the structure. Essentially, the blank is divided into two parts, one portion of the blank defining the members of the front tray and the remainder of the blank the members of the rear tray. The front tray is composed of a rear wall 4, an end wall 5, a front wall 6 and an end wall 7 all in articulation in the order named. An attachment flap 8 is carried on the free end of the rear wall 4; and inner end wall flaps 9 and 10 are articulated to the upper edges of the end walls 5 and 7, respectively. A bottom forming assembly consisting of the front panel 11, the bottom panel 12, and the rear panel 13, is articulated to the upper edge of front wall 6.

The rear tray comprises a front wall 14, an end wall 15, a rear wall 16 and an end wall 17, all in articulation; and an attachment flap 18 is articulated to the free end edge of the front wall 14. The front walls 4 and 14 of the front and rear trays lie in side-by-side relation and are articulated together by means of a line for severance 19 whereas the rear and end walls of the front and rear trays are separated from each other by the line of cut 20. The rear tray portion of the blank is additionally provided with inner end wall flaps 21 and 22 and a bottom forming section articulated to the free side edge of rear wall 14 and made up of a front panel 23, a bottom panel 24 and a rear panel 25.

In addition, the rear wall 16 and the rear panel 25 of the rear tray are provided with a mating pair of oppositely directed tabs 26 and 27; and a similar mating pair of tabs 28 and 29 are provided in the rear wall 4 and rear panel 13 of the front tray. A locking tongue 30 having a foldable projection 31 is struck from the front wall 14 of the rear tray, being integrally joined to the front panel 23 in the manner illustrated.

The blank just described is tubed by folding the part to the position illustrated in Figure 7 of the drawings with the end walls 7 and 17 overlying and adhesively secured to the attachment flaps 8 and 18, respectively, thereby forming a flat-folded tubular structure which may be shipped in such condition to the user.

In the hands of the user, the flat-folded structure is erected and assembled by first erecting the front, rear and end walls of the tray parts to the position illustrated in Figures 8 and 9 of the drawings whereupon the front tray part is folded along the line for severance 19 to the position illustrated in Figure 10, in which position the rear wall 4 of the front tray is juxtaposed to the front wall 14 of the rear tray. Thereafter the inner end wall flaps 9, 10 and 21, 22 are infolded followed by the infolding of the bottom forming sections of the two trays

so as to juxtapose the front panels **11** and **23** to the inner surfaces of the front walls **6** and **14**, respectively of the two trays. The infolding of the bottom sections will serve to lock the inner end wall flaps in their infolded condition. The front panels **11** and **23** are of lesser depth than the front walls to which they are connected, and hence the front edges of the bottom panels **12** and **24** will be suspended above the bottom edges of the front walls. The rear panels **13** and **25**, on the other hand, have a depth equal to the depth of the rear walls to which they are juxtaposed, and consequently the bottom panels of the two trays will be inclined downwardly from front to rear in the manner illustrated in Figure 11. It will be noted that as the rear panels are juxtaposed to their respective rear walls, the pairs of mating tabs **26**, **27** and **28**, **29** are interlocked in the manner best seen in Figure 11, thereby securing the trays in the erected position.

As an incident to the assembly of the trays, the tongue **30** and its projection **31** will be displaced from the plane of the front wall **14** and, after the rear wall **4** and rear panel **13** are juxtaposed and their mating tabs interlocked, the tongue will be folded downwardly to the position illustrated in Figure 4, with the projection **31** inserted between the engaging portions of the tabs **28** and **29**, thereby securing the two trays together.

As seen in Figure 5, the display box may be provided with a display card **32** of a length to fit between the rear wall **16** and the rear panel **25** of the rearmost tray, the display card being provided with a centrally disposed opening **33** of a size to permit the display card to pass downwardly to either side of the mating tabs **26** and **27**.

When in use the display box, as already indicated, is adapted to receive a plurality of articles of merchandise in the front and rear trays. Once all of the merchandise has been removed from the front tray, the front tray may be readily detached from the rear tray simply by releasing the locking tongue **30** and separating the two trays along the line for severance **19**, whereupon the rear tray will stand alone in the manner illustrated in Figure 2. Of course, if desired, the two trays may be separated and used individually. To this end, it will be obvious that the display card **32** may be readily inserted between the rear wall **4** and the rear panel **13** of the front tray.

The display box may also become a part of a shipping container for goods sent from the manufacturer to the dealer. Thus, as seen in Figure 12, the front and rear trays may be disposed bottom to bottom with the articles of merchandise sticking outwardly therefrom in opposite directions, whereupon a tubular sleeve **34** may be provided into which the entire assembly may be fitted in the manner illustrated in Figure 13, thereby providing a convenient shipping container for the filled display box. It will be evident that the sleeve **34** will serve to retain the packaged article **3** in the tray.

Modifications may, of course, be made in my invention without departing from the spirit of it. Having, however, described my invention in an exemplary embodiment, what I desire to secure and protect by Letters Patent is:

1. In a display box formed from a one-piece blank, a front tray part having a front, rear and end walls in articulation, and a bottom section comprising a front panel articulated to the upper edge of said front wall and juxtaposed to the inner surface thereof, a bottom panel extending between said front and rear walls, and a rear panel juxtaposed to said rear wall; and a rear tray part having a front, rear and end walls in articulation, with the bottom edge of the front wall of said rear tray hingedly connected to the bottom edge of the rear wall of said front tray, said rear tray including a bottom section comprising a front panel articulated to the upper edge of said front wall and juxtaposed to the inner surface thereof, a bottom panel extending between said front and rear walls, and a rear panel juxtaposed to said rear wall; the front panels of said bottom sections being of a depth less than the depth of the walls to which they are articulated, the rear panels of said bottom sections being of a depth substantially equal to the depth of the rear walls to which they are juxtaposed, and the said bottom sections being positioned with the free edges thereof coinciding with the upper edges of the said rear walls, whereby to incline said bottom panels downwardly from front to rear.

2. The display box claimed in claim 1 including mating tabs formed in the rear walls and rear panels of said tray parts to secure the bottom sections in the erected condition.

3. The display box claimed in claim 2 including a tongue struck from the front wall of said rear tray and adapted to be folded over the upper edges of the read wall and rear panel of the front tray and engaged therewith to secure the said trays together.

4. The display box claimed in claim 3 wherein the hinged connection between the rear wall of the front tray and the front wall of the rear tray is a line for severance by means of which the two trays may be separated from each other.

5. The display box claimed in claim 4 wherein the end walls of said trays include inner end flaps on their upper edges which, when infolded to contact the inner surfaces of the said end walls, are retained in the infolded position by means of said bottom sections.

6. The display box claimed in claim 5 including a display card engageable between the rear wall and rear panel of either of said tray parts.

7. A display box comprising a front tray part and a rear tray part integrally joined together along a line for severance connecting the bottom edge of the rear wall of the front tray part and the bottom edge of the front wall of the rear tray part, said tray parts each including a bottom forming section articulated to the upper edge of the front wall thereof, said bottom forming part comprising, in articulation in the order named, a front panel of lesser depth than the front wall to which it is attached, a bottom section extending between the front and rear walls of the tray, and a rear section juxtaposed to the rear wall of the tray and of a depth substantially equal to the depth of the rear wall, said rear panels having their free side edges coinciding with the top edges of the rear walls, whereby to incline said bottom panels downwardly from front to rear.

8. A display package comprising a front tray part and a rear tray part integrally joined together along a hinge line connecting the bottom edge of the rear wall of the front tray part and the bottom edge of the front wall of the rear tray part, said tray parts being folded bottom to bottom, a plurality of packaged articles extending outwardly from each of said tray parts in opposite directions, and a tubular sleeve surrounding said tray parts and said packaged articles to form a shipping container therefor, said sleeve being positioned so as to have opposite wall portions thereof in direct contact with the outermost ends of the said packaged articles of merchandise, whereby to maintain said articles in position in said trays.

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