Nov. 11, 1947. R. GUYER 2,430,609

DISPLAY CONTAINER

Filed Jan. 24, 1944 2 Sheets-Sheet 1

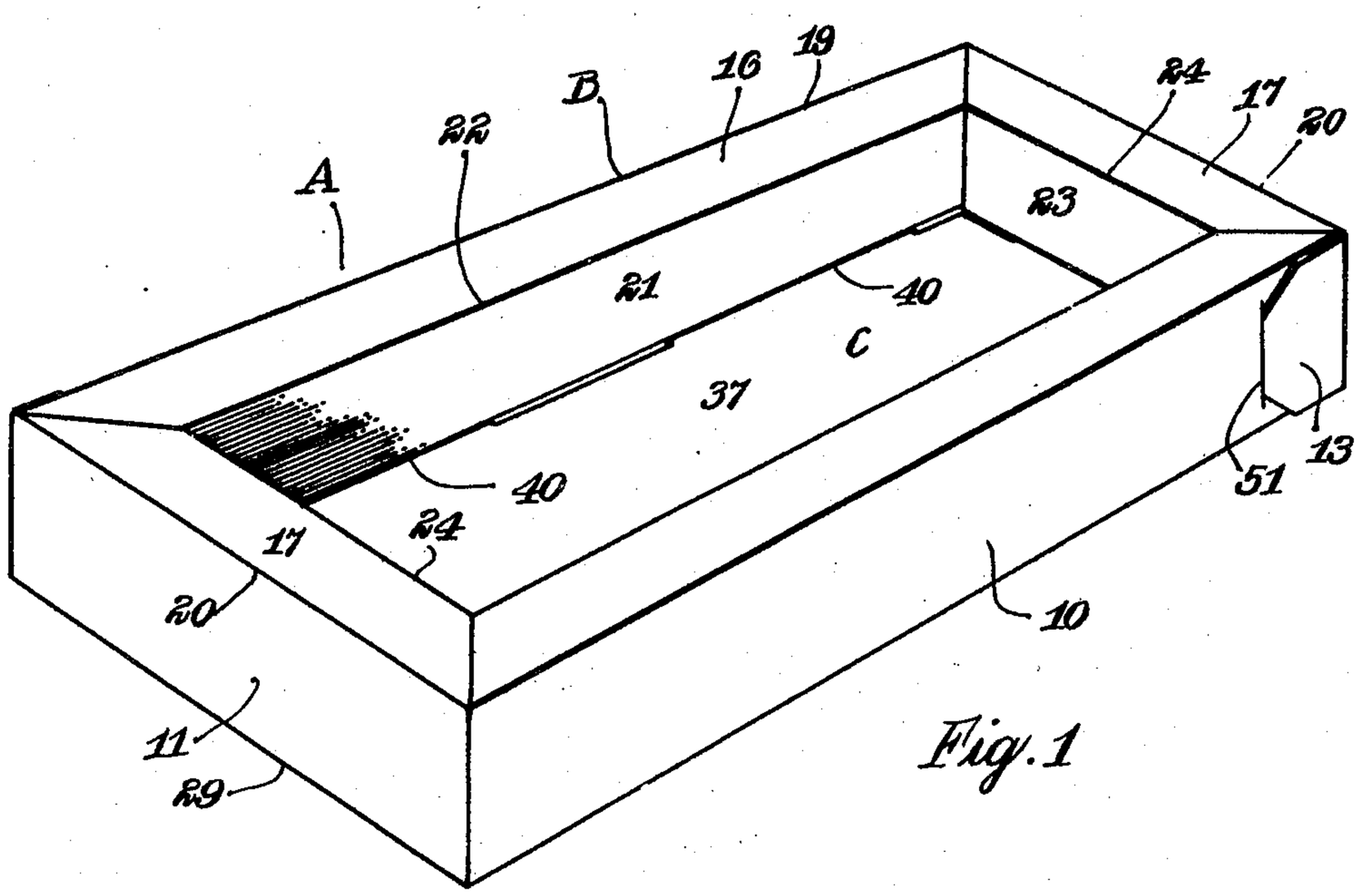

Fig. 1

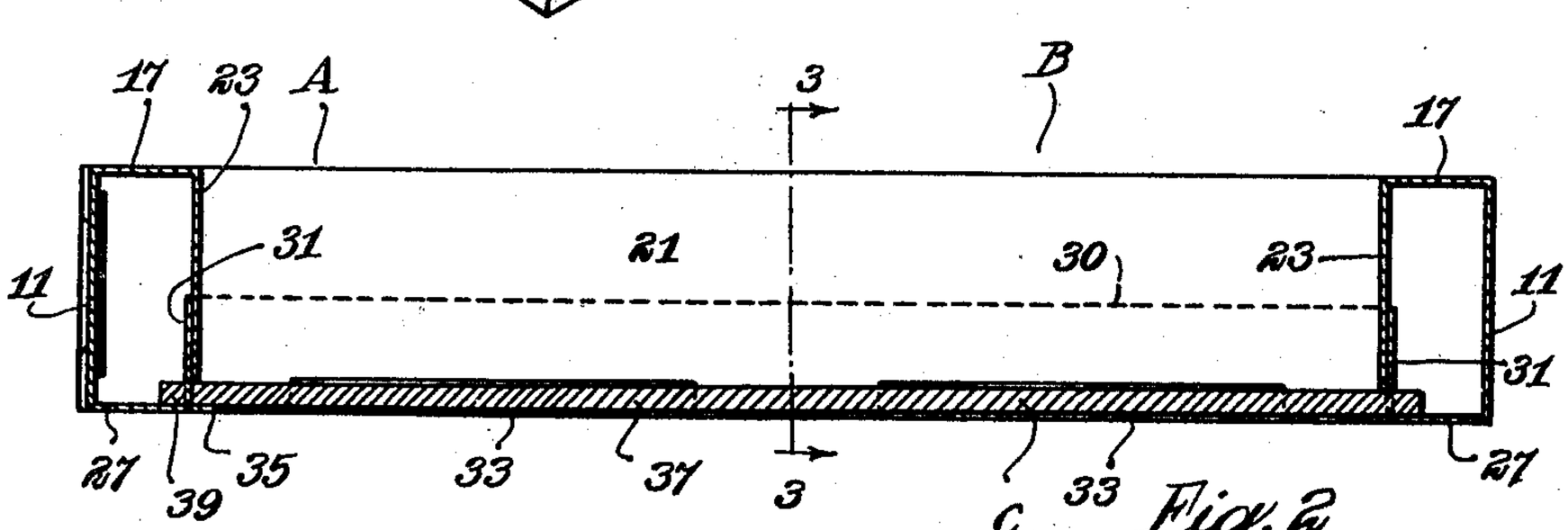

Fig. 2

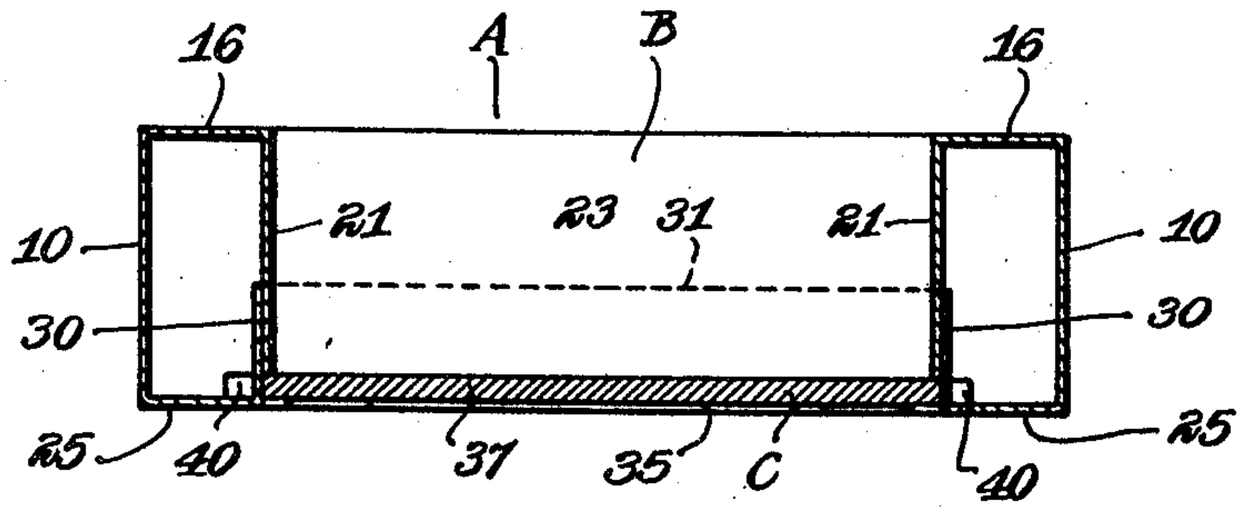

Fig. 3

Inventor
Reynolds Guyer

By Robert M. Dunning
Attorney

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DISPLAY CONTAINER

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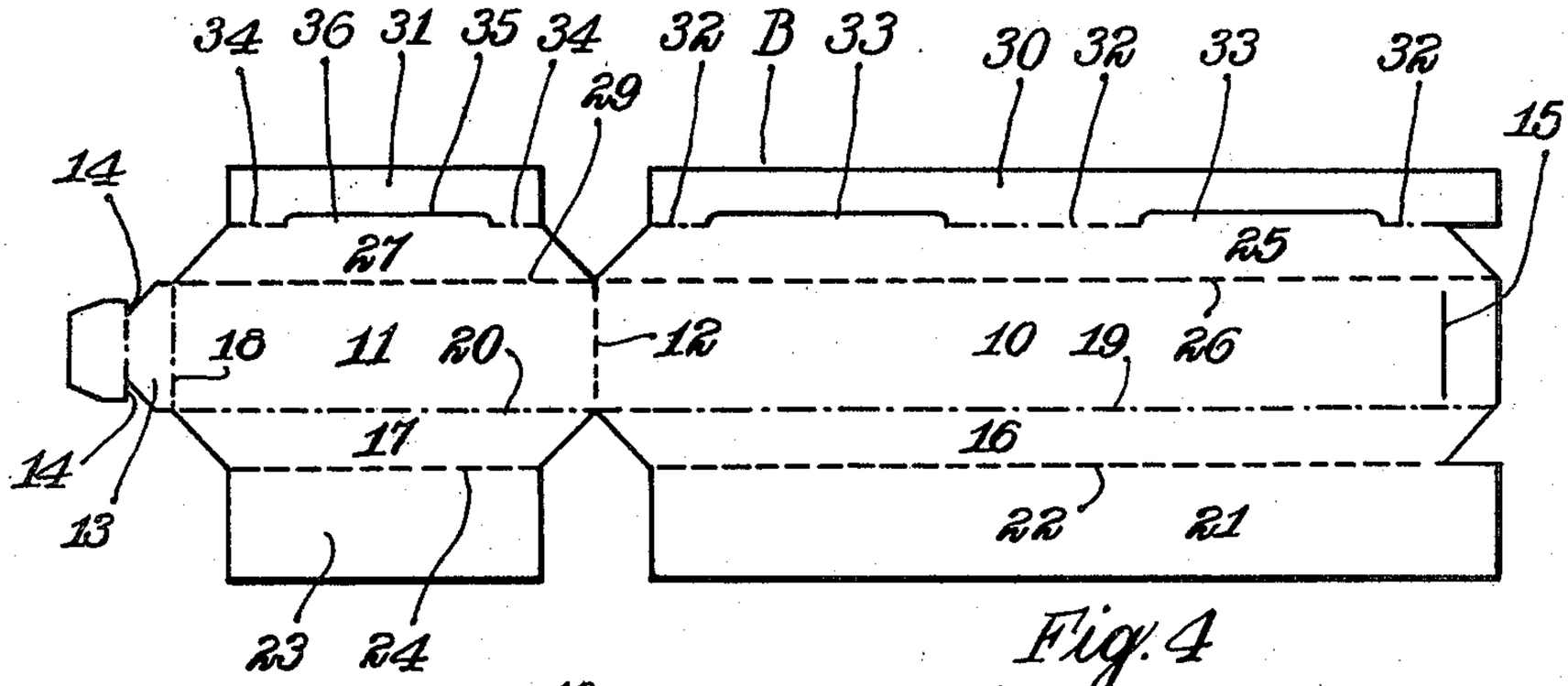

Fig. 4

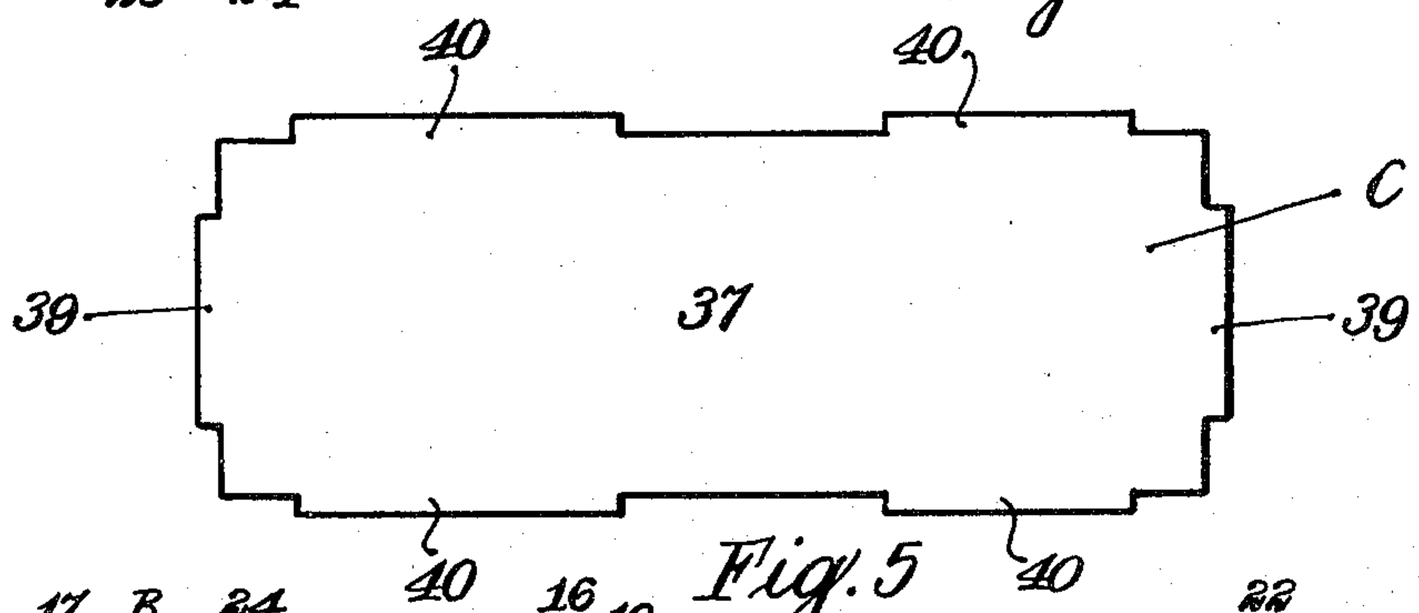

Fig. 5

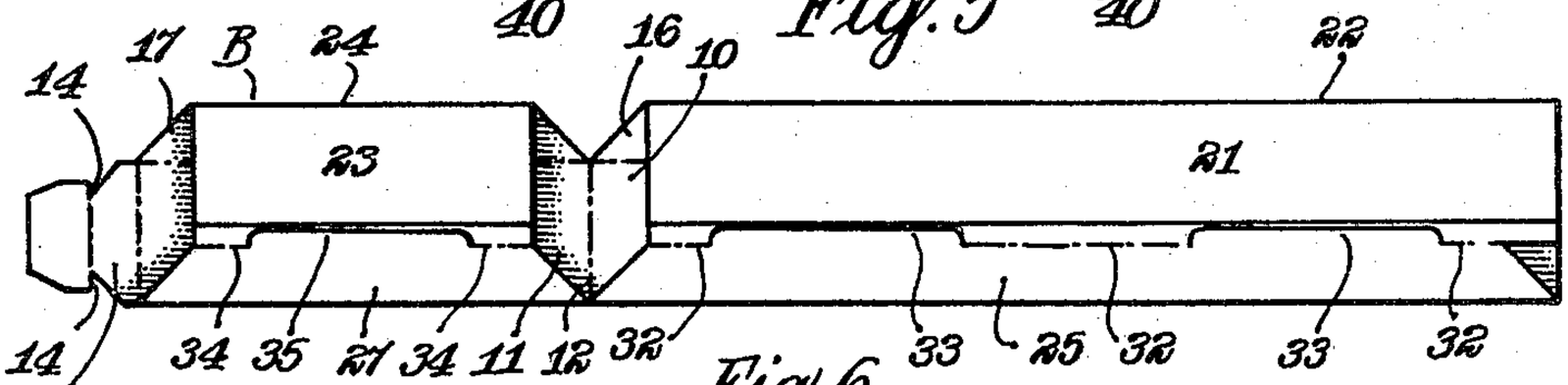

Fig. 6

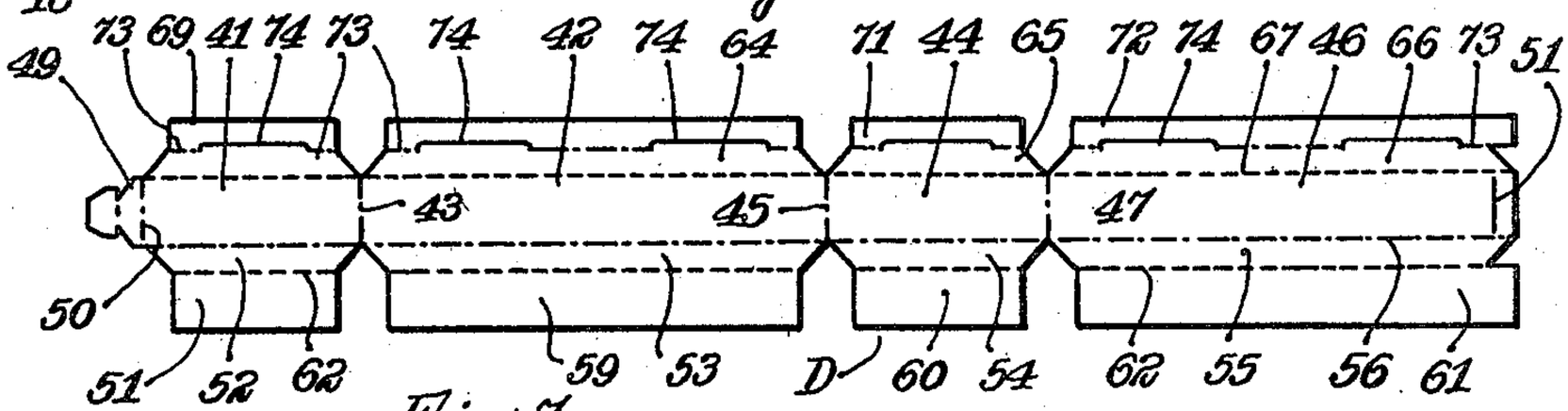

Fig. 7

Inventor

Reynolds Guyer

By Robert M. Dunning

Attorney

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DISPLAY CONTAINER

Reynolds Guyer, St. Paul, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota

Application January 24, 1944, Serial No. 519,493

5 Claims. (Cl. 229—30)

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My invention relates to an improvement in display container, wherein it is desired to provide a double walled display tray capable of protecting and supporting fragile articles.

In the packaging of certain articles such as brittle cookies and the like, it has been found sometimes desirable to support these articles within a carton having a wall of double thickness so as to prevent shocks or blows upon the outer wall of the container from being directly transmitted to the articles supported. A container having an outer substantially rectangular wall composed of two spaced parallel wall members has been found effective in preventing breakage of such articles.

It is the purpose of the present invention to provide a display carton of the type described which utilizes less paper and which requires less waste than other similar containers with which I am familiar. Most such cartons are formed having an integral bottom and side wall construction, the side walls being foldably connected to the bottom panel. The provision of a double thickness wall necessitates wall forming flaps or flanges of considerable length, thus leaving notched corner portions in the carton blank which are waste stock. My construction eliminates much of this previously encountered difficulty.

A further feature of the present invention lies in the fact that the bottom wall is formed of one piece of stock while the side walls are formed of one or two strips of stock requiring little waste. As a result most of the stock from which the blank is cut is utilized in the wall construction.

A further feature of the present invention resides in the fact that the bottom panel of the container may be formed of corrugated board or the like, if it is so desired. Thus with my carton construction the undersurface of the box is protected as well as the side walls thereof and a sudden shock or blow against the bottom wall will not be directly transmitted to the contents of the box.

A further feature of the present invention resides in the fact that my display cartons may be assembled in flat formation, the side walls being formed by gluing the stock into tubular form and the bottom panels being naturally of flat formation. As a result the display cartons may be shipped in unassembled form, utilizing but little shipping space, and may be quickly assembled into display form in a short period of time.

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

In the drawings forming a part of my specification:

Figure 1 is a perspective view of my display carton showing the construction thereof.

Figure 2 is a longitudinal sectional view through the carton shown in Figure 1.

Figure 3 is a cross-sectional view of the carton, the position of the section being indicated by the line 3—3 of Figure 2.

Figure 4 is a blank showing the manner in which two adjacent side walls of the carton may be formed.

Figure 5 is a diagrammatic plan view of the blank forming the container bottom.

Figure 6 is a diagrammatic view of the side wall structure folded into tubular formation and lying substantially flat.

Figure 7 is a modified form of construction in which all four walls of the rectangular blank are formed in a single elongated strip.

The display carton A is composed of a side wall structure indicated in general by the letter B, and a bottom panel indicated in general by the letter C. These two structures are assembled together and connected to form the display carton having an open top, a closed bottom, and double thickness side walls.

The side wall structure B is illustrated diagrammatically in Figure 4 of the drawings. In the form of construction illustrated in Figures 1 through 6 of the drawings the side wall structure is disclosed as being formed of two parts connected together at diagonally opposite corners. Each wall forming section includes an outer side wall panel 10 foldably connected to an outer end wall panel 11 by a fold line 12. A locking tab 13 is foldably connected along the line 14 to the end wall panel 11. The locking tab 13 is provided with opposed notches forming shoulders 14 arranged to lock in a slot 15 near the end of the side wall panel 10 of the cooperating wall structure section.

Top flanges or panels 16 and 17 are connected along the aligned fold lines 19 and 20 to the side wall panel 10 and the end wall panel 11, respectively. An inner side wall panel 21 is connected to the top panel 16 along the fold line 22, while the inner end wall 23 is connected to the top panel 17 along the fold line 24.

A side wall structure bottom panel 25 is connected to the outer side wall 10 along a fold line 26. A bottom wall or panel 27 is connected to the

end wall 11 along the fold line 29. Thus the panels 10, 16, 21 and 25 form a substantially tubular side wall structure while the panels 11, 17, 23 and 27 form a substantially tubular end wall structure.

In order to hold the various panels described in the tubular formation I provide an overlapping glue flap 30 connected to the bottom panel 25 and a glue flap 31 connected to the bottom end panel 27. The overlapping panel 30 is connected to the bottom panel 25 along a series of aligned fold lines 32. Between the spaced aligned fold lines 32 are provided tongues 33 which are formed by cutting the stock forming the flap 30 along lines spaced from, but parallel to the fold lines 32. The ends of the cut lines forming the tongues 33 extend to the fold lines 32 so that when the glue flap 30 is folded along the fold lines 32 the tongues 33 remain coplanar with the bottom panel 25, while the glue flap 30 is provided with apertures from which the tongues 33 have been cut.

The glue flap 31 is similarly connected to the bottom panel 27 along spaced aligned fold lines 34. These fold lines 34 are connected by a cut line 35 which is off-set from the fold lines 34 and which is connected at its ends thereto. Thus a tongue 36 is formed which remains coplanar with the bottom panel 27 when the glue flap 31 is folded with respect thereto, and the glue flap 31 is provided with an aperture from which the tongue 36 was cut.

The bottom panel C comprises a flat sheet of suitable stock which may, if desired, comprise a sheet 37 of corrugated board or the like. Tongues 39 project outwardly from the opposed ends of the sheet and spaced tongues 40 project from the side edges of the sheet 37. The tongues 39 are of proper dimension to fit in the apertures produced by cutting the tongues 36 from the glue flaps 31. The tongues 40 are of proper dimension to fit in the apertures formed by the cutting of the tongues 33 from the glue flap 30.

In the formation of the carton it is usual practice to cut crease the aligned fold lines 22 and 24 and the aligned fold lines 26 and 27 as indicated by the dotted lines. The remaining fold lines 19 and 20 and 32 and 34 are merely creased. As a result the blank folds most readily along the cut creased fold lines indicated by the dotted line to simplify the folding operation during the gluing of the carton. The panels 25 and 27 together with the attached glue flaps 30 and 31 are folded along the fold lines 26 and 29 to overlie the side wall panels 10 and 11. The panels 21 and 23 are then folded along the fold lines 22 and 24, respectively to overlie the glue flaps and are adhered thereto. Thus as shown in Figure 6 of the drawings, the side wall structure B is folded in tubular formation.

When it is desired to assemble the display container for use the side walls are folded into hollow formation with the vertical walls and the horizontal walls extending at substantially right angles. The two wall forming sections may then be connected together by inserting the locking tongue 13 of one section in the receiving slot 15 in the other section. The thus assembled side wall structure B is folded about the base panel C so that the tongues 39 and 40 are engaged in the apertures formed by cutting the tongues 33 and 36. The tongues 33 and 36 then underlie portions of the bottom panel 37 in the manner best illustrated in Figures 2 and 3 of the drawings and the tongues 39 and 40 engage in their respective apertures. The remaining locking tongue 13 is then engaged in its receiving slot 15 and the display container is in readiness for use.

It will be noted that the inner side wall panels 21 and 23 are not as wide as the outer side walls 10 and 11 so that the inner side walls terminate above the upper level of the panel 37 when the carton is assembled. The base panel 37 holds the side walls in proper relationship while the side walls are held in hollow tubular form by their connection with one another and with the bottom panel.

In Figure 7 of the drawings I disclose a modified form of side wall structure indicated in general by the letter D. This structure is identical to the construction previously described with the exception that all of the side walls of the container are connected in a single elongated strip. The end wall outer panel 41 is connected to the side wall outer panel 42 along a fold line 43. The end wall 44 is connected to the side wall panel 42 by the fold line 45. The end wall panel 44 is connected to the side wall panel 46 along the fold line 47. A locking tongue 49 is connected along the fold line 50 to the end wall panel 41 and this locking tongue 49 is engageable in the slot 51 to hold the ends of the side wall structure in proper formation.

Top wall panels 52, 53, 54, and 55 are connected to the outer wall panels 41, 42, 44 and 46 respectively, along aligned fold lines indicated by the numeral 56. Inside wall panels 57, 59, 60 and 61 are connected to the top panels 52, 53, 54, and 55 along aligned fold lines 62. The inner wall panels are shorter in length than the outer wall panels and the top panels are cut along diagonal lines to form mitered corners.

Bottom wall panels 63, 64, 65, and 66 are connected to the side wall panels 41, 42, 44 and 46 along aligned fold lines 67. Glue flaps 69, 70, 71, and 72 are connected to their respective bottom panels along aligned fold lines 73. Ears 74, identical to the ears 33 and 36 are formed adjacent the fold lines 73 in order to provide apertures in the glue flaps as described in connection with the side wall structure B. These apertures in the side walls are for receiving the ears or tongues 39 and 40 on the bottom panel 37.

The side wall structure D is erected by folding the structure along the cut crease fold lines 62 and 67 and adhering the glue flaps 69, 70, 71 and 72 to the inside of the inner wall panels 57, 59, 60 and 61. In assembling the box the side wall members are folded into hollow tubular cross-section and the locking flap 49 is engaged in the slot 51 to hold the parts assembled.

It will be noted that goods placed within the display carton are protected by the double side walls and a sudden shock or blow against an outer panel of the side wall structure will not be directly transmitted to the goods. By providing a sheet of corrugated board or the like to serve as the bottom panel 37 the goods are likewise protected from shock in this direction. The top of the carton is open for display purposes and may be covered in any suitable manner if it is to be transported while filled. The cover sheet may be of such nature as to protect the contents of the carton.

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 including collapsible hollow side walls comprising upper and lower panels connected by inner and outer side wall panels, said inner side wall panels having apertures therein formed by cutting tongues therefrom adjacent the fold line connecting the inner side walls to the lower panels, a bottom panel encircled by said wall sections and resting upon said tongues, and tongues on said bottom panels engaging in said apertures.

2. A display carton including side wall sections foldably connected together, said side wall sections being substantially tubular in cross-section and having upper and lower panels connected by inner and outer side wall panels, the connection between said upper, lower, and side wall panels being along fold lines, tongues formed integral with the lower panels and formed by cutting into the inner side wall panels, apertures in the inner side wall panels formed by cutting said tongues therefrom, said tongues lying coplanar with said lower panels, a base sheet overlying said tongues and resting thereupon, said base sheet being encircled by said side wall sections.

3. A display carton including side wall sections foldably connected together, said side wall sections being substantially tubular in cross-section and having upper and lower panels connected by inner and outer side wall panels, the connection between said upper, lower, and side wall panels being along fold lines, tongues formed integral with the lower panels and formed by cutting into the inner side wall panels, apertures in the inner side wall panels formed by cutting said tongues therefrom, said tongues lying coplanar with said lower panels, a base sheet overlying said tongues and resting thereupon, said base sheet being encircled by said side wall sections, and tongues on said base sheet extending into said apertures.

4. A display carton comprising a series of hollow tubular wall sections foldably connected together along mitered corners, each wall section comprising in cross-section upper and lower wall panels, and inner and outer connecting wall panels foldably secured thereto, tongues formed integral with the lower panels by cutting into the inner wall panels, said tongues extending coplanar with the lower panels and leaving apertures in the inner wall panels, and a base sheet resting upon said tongues and enclosed by said wall sections.

5. A display carton including tubular wall sections foldably connected together, each wall section comprising upper and lower panels and inner and outer wall panels foldably connected thereto, tongues connected to the lower panels and cut from the body of the inner wall panels, said tongues extending coplanar with the lower panels, a base sheet encircled by said wall sections and resting upon said tongues, and locking means connecting the ends of said wall sections to lock said wall sections encircling said base sheet.

REYNOLDS GUYER.

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