June 4, 1957 F. W. FIELDING 2,794,571

THREE-BOTTLE COLLAPSIBLE CARRIER

Filed March 14, 1955 3 Sheets-Sheet 1

Fig. 1

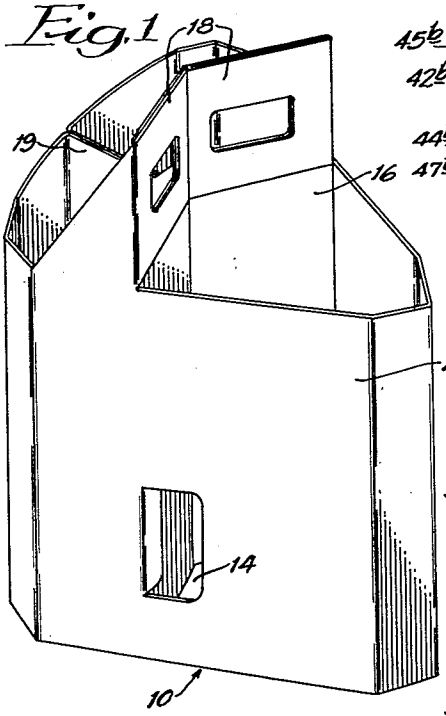


Fig. 2

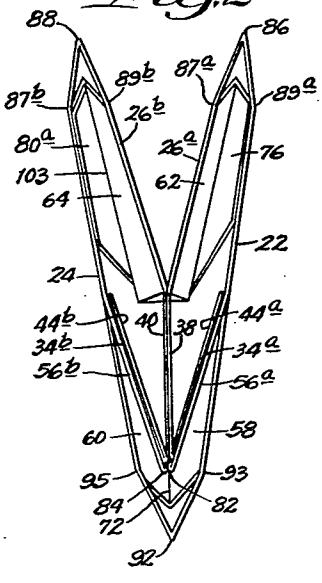
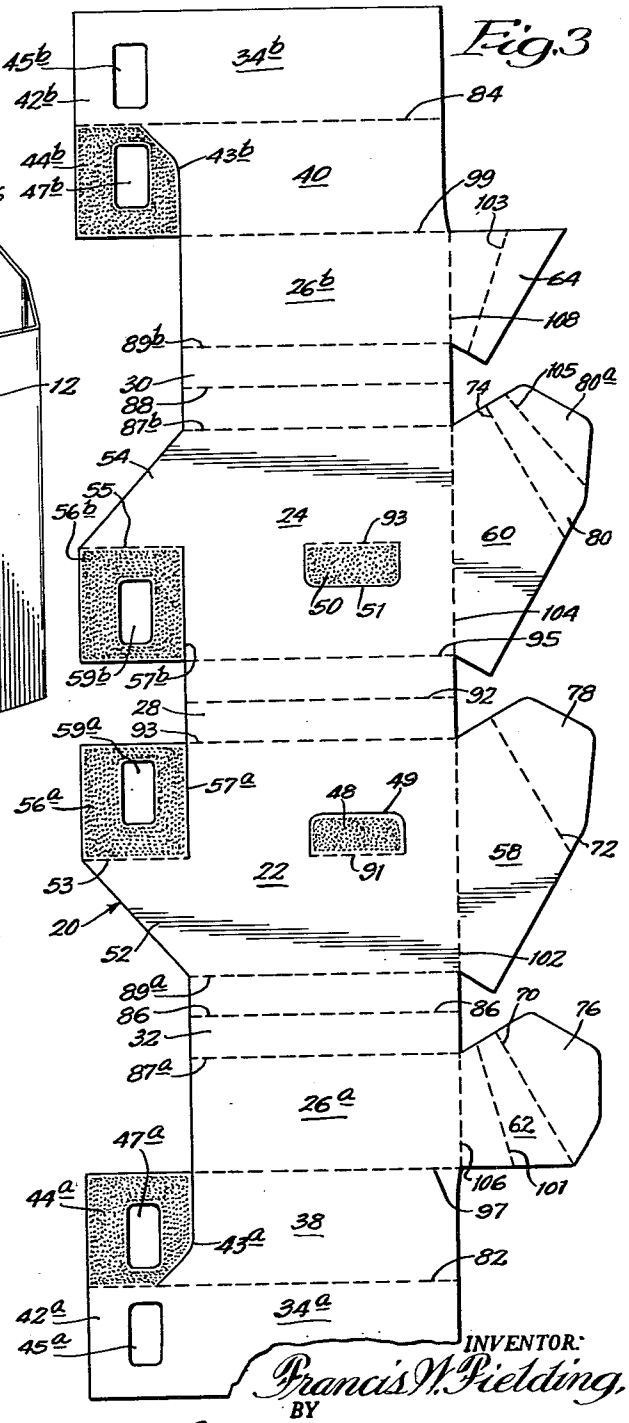


Fig. 3



INVENTOR:
Francis W. Fielding,
BY
Bair, Freeman & Molinare
ATTORNEYS.

June 4, 1957 F. W. FIELDING 2,794,571

THREE-BOTTLE COLLAPSIBLE CARRIER

Filed March 14, 1955 3 Sheets-Sheet 2

Fig. 4

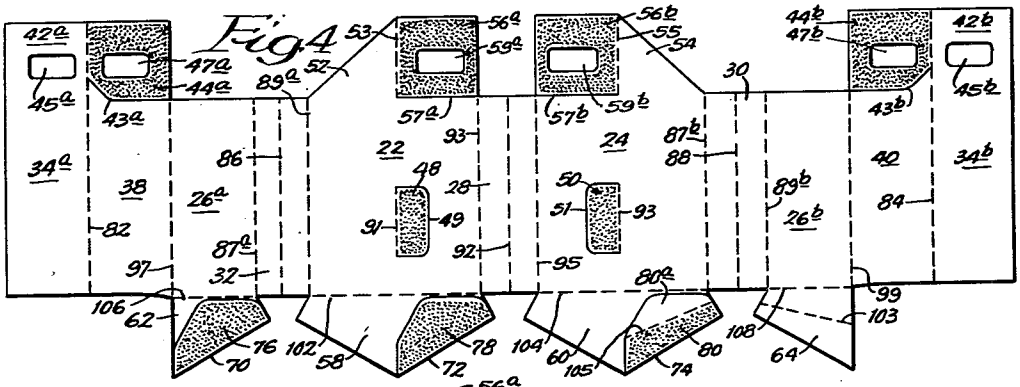


Fig. 5

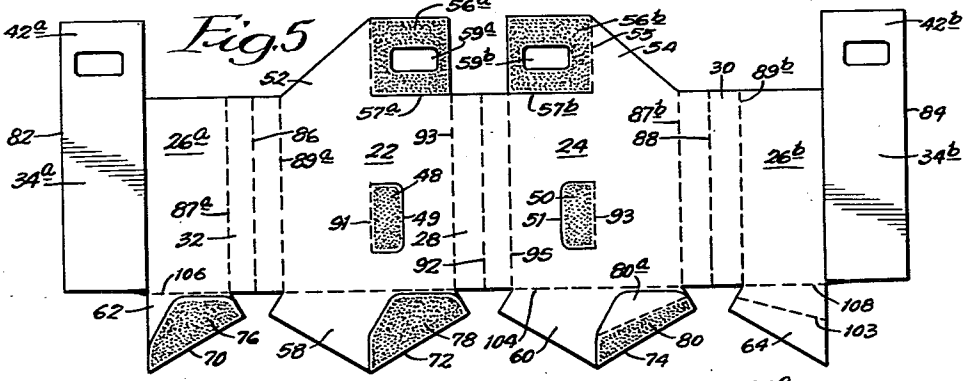


Fig. 6

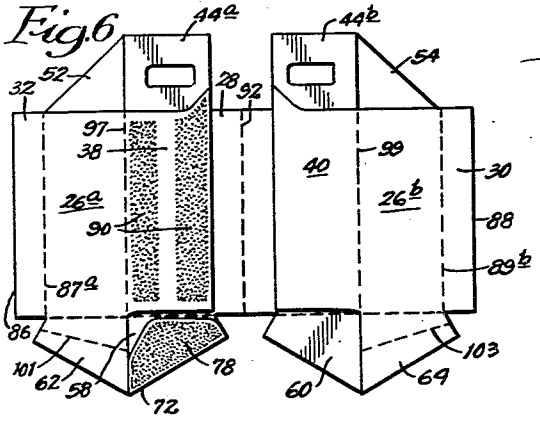
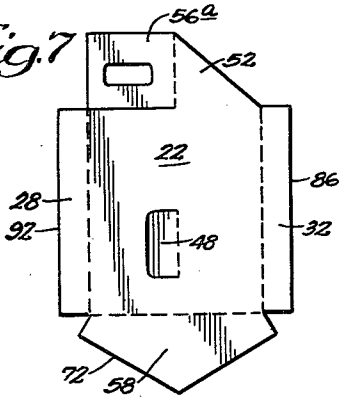


Fig. 7



INVENTOR.
Francis W. Fielding,
BY
Bair, Freeman & Molinare
ATTORNEYS.

June 4, 1957 F. W. FIELDING 2,794,571

THREE-BOTTLE COLLAPSIBLE CARRIER

Filed March 14, 1955 3 Sheets-Sheet 3

Fig. 8

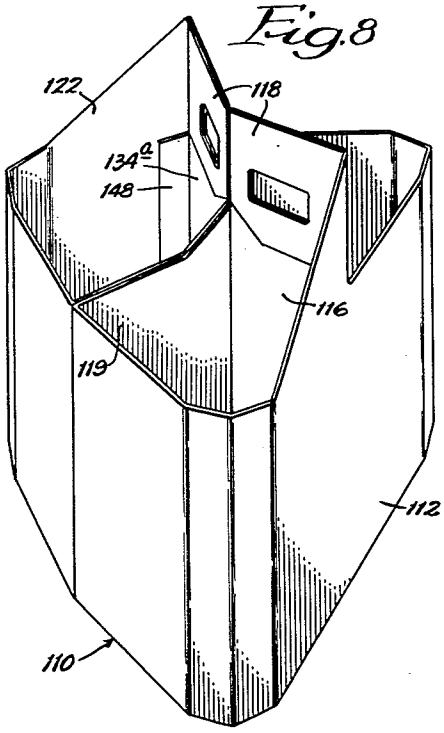
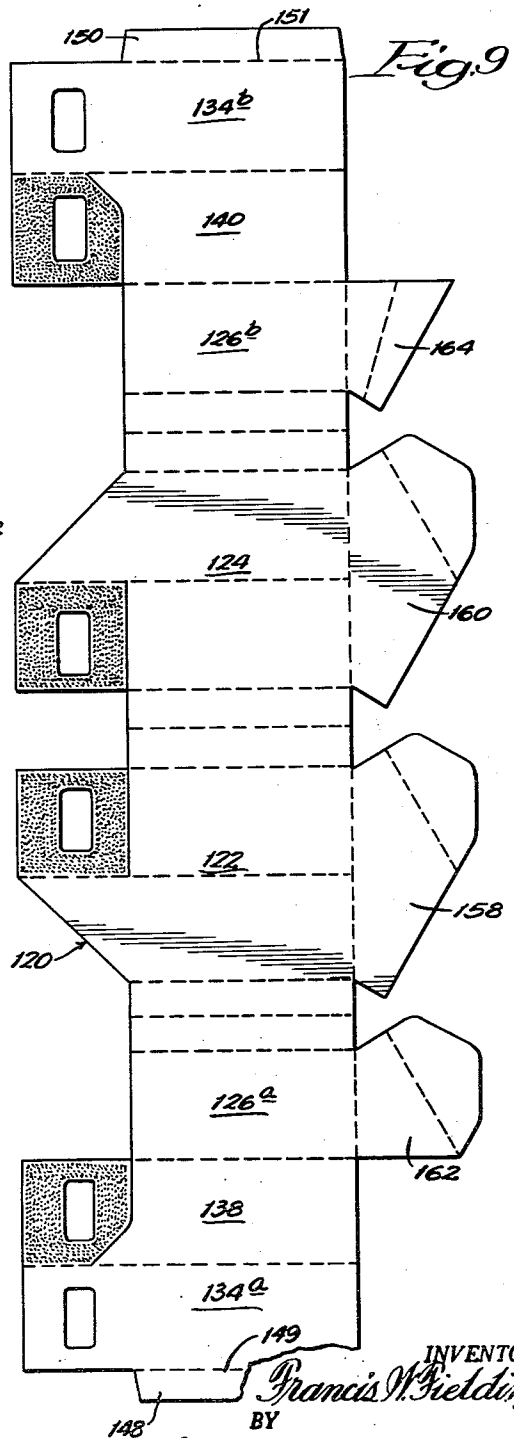


Fig. 9



INVENTOR:
Francis W. Fielding,
BY
Bair, Freeman & Molinare
ATTORNEYS.

United States Patent Office

2,794,571

Patented June 4, 1957

2,794,571

THREE-BOTTLE COLLAPSIBLE CARRIER

Francis W. Fielding, New Orleans, La., assignor to Lengsfield Brothers, Inc., New Orleans, La., a corporation of Louisiana

Application March 14, 1955, Serial No. 493,897

9 Claims. (Cl. 220—113)

This invention relates generally to a collapsible bottle carrier, and more particularly to a novel construction of this type providing three separately defined bottle-receiving compartments.

Collapsible containers defining a plurality of article receiving compartments separated by partition means forming a carrying handle are well-known. Such structures have generally provided an even number of compartments symmetrically arranged on opposite sides of a center partition means. A particular need has arisen for a collapsible bottle carrier of sturdy construction capable of receiving relatively large bottles of quart or 25 oz. capacity in groups of three bottles. The methods of construction known to the prior art are not adaptable to the fulfillment of this need.

The present invention, therefore, contemplates as a primary object the provision of an improved collapsible carrier construction, formed from a single sheet of cardboard or like foldable material, and defining three separated compartments of high strength and structural rigidity.

It is another object of this invention to provide a collapsible carrier having side walls defining a body contiguous with bottom wall portions which are adapted to separably engage the lower edge of a foldable center partition providing handle means, whereby the side walls may be collapsed into folded engagement against the central partition, and the bottom wall portions may be folded downwardly away from the partition lower edge into collapsed relation.

It is a further object of this invention to provide a collapsible container formed from a single piece of flat stock such as cardboard or like foldable material, which is particularly cut, folded, glued, and self-reinforced to provide a container of high strength and structural rigidity when erect, and which is readily capable of being collapsed into flat, folded relation.

It is still another object of this invention to provide a collapsible bottle-carrier having three-bottle receiving compartments separated from each other by foldable center partition means cooperating with the side and bottom wall portions to impart structural rigidity and fixed conformation to the carrier when erect.

The above and other objects and features of the invention will be more readily apparent from the following description when read in connection with the accompanying drawing, in which:

Figure 1 is a perspective view of a three-compartment bottle carrier constructed in accordance with the present invention and shown in erected position for receiving three bottles therein;

Figure 2 is a top view of the bottle-carrier of Figure 1 shown in near fully collapsed relation;

Figure 3 is a layout view of a single piece of sheet stock which has been appropriately cut, scored for folding, and coated with glue for subsequent assembly to form the carrier shown in Figures 1 and 2;

Figures 4 through 7 are plan views on a reduced scale showing the consecutive folding steps to be performed on the pattern of Figure 3 for providing the final bottle-carrier structure;

Figure 8 is a perspective view similar to Figure 1, taken from the opposite side of the central partition, and showing a modified form of construction; and

Figure 9 is a layout view similar to Figure 3 showing a piece of sheet stock which has been appropriately cut, scored for folding, and coated with glue for subsequent assembly to form the carrier shown in Figure 8.

Referring now more particularly to Figures 1 through 7 of the drawing, I have shown a three-compartment collapsible bottle carrier **10** having peripherally continuous side walls **12**, contiguous bottom wall portions **14**, a center partition **16** providing carrying handle portions **18**, and a cross partition **19** cooperating with the center partition **16** and side walls **12** to effect rigid locking of the carrier in erect relation.

As best seen in Figure 3, a single integral pattern **20** is cut from a flat sheet of cardboard stock or like foldable material. The pattern **20** defines a first side panel **22**, a second side panel **24**, and third side panel-forming portions **26***a* and **26***b*. Intermediate adjacent areas **28**, **30**, and **32** extending contiguously between the side panels **22**, **24** and panel portions **26***a*, **26***b*, serve to form the three corners of the bottle-carrier **10**.

End panels **34***a* and **34***b* are provided for cooperation when the sheet stock is completely folded to form the center partition **16**. Intermediate adjacent areas **38** and **40** extending contiguously between the end panels **34***a* and **34***b* and the side panel portions **26***a* and **26***b*, serve to form the cross partition **19** of the bottle-carrier **10**.

The end panels **34***a* and **34***b* extend upwardly above the top edges of the side panels to provide handle-forming portions **42***a* and **42***b*, respectively. Reinforcement portions **44***a* and **44***b* extend contiguously from the handle-forming portions **42***a* and **42***b*, and are formed by upper extensions of the areas **38** and **40**, being separated therefrom by cut lines **43***a* and **43***b*. The handle-forming and reinforcing portions **42***a*, **42***b*, **44***a*, and **44***b* are provided with cut-outs **45***a*, **45***b*, **47***a*, and **47***b*, respectively, cooperating in a manner to be described to form finger grips for manually supporting the bottle-carrier.

Connector flaps **48** and **50** are defined by cut lines **49** and **51** in the side panels **22** and **24**, respectively. Upwardly extending portions **52** and **54** of side panels **22** and **24** provide bracing supports for the center partition **16**, and are contiguous with additional reinforcements **56***a* and **56***b* which are formed by upper extensions of the side panels **22** and **24** being separated therefrom by cut lines **57***a* and **57***b*. Fold lines **53** and **55** permit folding movement between the center partition and the side walls. Cut-outs **59***a* and **59***b* are formed in the reinforcements **56***a* and **56***b* for cooperation with corresponding pairs of the cut-outs **45***a*, **45***b*, **47***a*, and **47**, to provide finger grips in a manner to be described.

Bottom flaps **58** and **60** extend downwardly below the lower edge of the side panels **22** and **24**. Bottom wings **62** and **64** extend in similar manner below the side panel portions **26***a* and **26***b*.

Referring now to Figures 4 through 7 of the drawing, a consecutive series of folding and gluing steps to be performed on the pattern of Figure 3 will be described to illustrate the formation of the completed bottle-carrier structure shown in Figures 1 and 2. The first folding step is made along fold lines **70**, **72**, and **74** of the wing **62** and bottom flaps **58** and **60**, respectively. The top surfaces **76**, **78** and **80** exposed by the first folds each provide a coating of a suitable glue or similar bonding material, as indicated by the shading in Figure 4. As also shown by shading in Figures 3 and 4, the handle

reinforcements 44*a* and 44*b*, the additional handle reinforcements 56*a* and 56*b*, and the connector flaps 48 and 50 also provide glue coatings. The second folding step is made along fold lines 82 and 84 (see Figures 3 and 4) between end panel 34*a* and area 38, and between end panel 34*b* and area 40, repectively. When this folding is completed, as shown in Figure 5, the handle portions 42*a* and 42*b* will be glued to the handle reinforcements 44*a* and 44*b*, respectively. It should be noted that the upper ends of the fold lines 82 and 84 permit the end panels 34*a* and 34*b* to be freely swung relative to the areas 38 and 40 without restriction by the reinforcements 44*a* and 44*b* which are separated by the cut lines 43*a* and 43*b* from the areas 38 and 40. The cut-outs 45*a* and 47*a*, and 45*b* and 47*b* will register to define a single opening therethrough.

The third folding step is made along fold lines 86 and 88 intermediate the corner areas 30 and 32. Additional fold lines 87*a* and 89*a*, and 87*b* and 89*b*, on either side of the fold lines 86 and 88, respectively, serve to permit swinging movement of the side panel portions 26*a* and 26*b* relative to the side panels 22 and 24 adjacent the respective corners formed therebetween.

After the third folding has been made, along the lines 86 and 88, the surface of handle portion 42*a* opposite the surface already in glued contact with the reinforcement 44*a* will then be glued to the additional handle reinforcement 56*a*, thereby forming a three-ply handle. The cut-out 59*a* will register with the finger grip formed by the cut-outs 45*a* and 47*a*. Similarly, the handle portion and reinforcements 42*b*, 44*b*, and 56*b* will also form a three-ply handle providing a finger grip. In addition, the glue flap 76 of bottom wing 62 will be glued to the bottom flap 58, and the bottom wing 64 will be glued to the glue flap 80 of bottom flap 60. Still further, the connector flaps 48 and 50 will be glued to the end panels 34*a* and 34*b*, respectively. Fold lines 91 and 93 are provided for the connector flaps 48 and 50 to permit the center partition to be swung relative to the side panels 22 and 24, while at the same time effecting a reinforcing interconnection therebetween.

The surface of the area 38, which is upwardly exposed after the third folding (see Figure 6), provides glue strip coatings 90. The glue flap 78 of bottom flap 58 and the glue strips 90 of area 38 at this point are the only glued surfaces remaining exposed.

The fourth and last folding step is next performed. A fold line 92 intermediate the corner area 28 defines the fourth fold. Additional fold lines 93 and 95 are provided on opposite sides of the fourth fold line 92 to permit freedom of folding movement between the side panels 22 and 24 adjacent the corner therebetween. The fourth folding serves to glue the area 38 to the corresponding area 40, thereby defining the cross partition 20. Additional fold lines 97 and 99 are provided to permit freedom of folding movement between the cooperatively connected cross partition areas 38 and 40 relative to the adjacent side panel portions 26*a* and 26*b*. The fold lines 97 and 99 are disposed in closely adjacent relation when the fourth folding has been completed.

The fourth folding also serves to attach the glue flap 78 of the bottom flap 58 to the bottom flap 60, completing the structural assembly. It will be noted that supplemental fold lines 101 and 103 are provided on the bottom wings 62 and 64, respectively, to enable collapsibility of the carrier bottom 14, when folding the side walls 12, center partition 16, and cross partition 19, while retaining integral connection between the side wall and bottom portions. A supplemental fold line 105 on bottom flap 60 defines a free end flap 80*a* (see Figures 2 and 3) within the assembled carrier. Major fold lines 102, 104, 106 and 108 are also provided for the bottom portions 58, 60, 62 and 64, respectively.

It will be understood that the various fold lines of the pattern 20 are suitably scored to facilitate folding in the proper direction away from the plane of the initial flat sheet, as required. In order to facilitate repeated bendings along the fold lines when successive erecting and folding of the carrier is performed during normal use, slits or perforations may be provided where needed along certain of the fold lines.

Referring now more particularly to Figures 8 and 9 of the drawing, I have shown a second embodiment of the present invention, wherein the collapsible carrier employs a variation in the manner of effecting attachment and support of the center partition relative to the side walls. In Figure 8 I have illustrated a carrier 110 in erected position for receiving three bottles therein. In basic construction, the carrier 110 is substantially identical with the carrier 10 of Figure 1, and includes peripherally continuous side walls 112 having contiguous bottom wall portions, a center partition 116 providing carrying handle portions 118, and a cross partition 119.

A comparison of Figures 3 and 9 will serve to demonstrate the general similarities between the modified construction and the carrier shown in Figures 1 through 7. In Figure 3, an integral pattern 120 is shown, which provides first and second side panels 122 and 124, and third side panel-forming portions 126*a* and 126*b*. End panels 134*a* and 134*b* cooperate to form the center partition 116. Intermediate areas 138 and 140 serve to form the cross partition 119. It will be noted that the vertical height of the side walls and partition members is somewhat shorter in the carrier 110 than in the carrier 10. The particular wall height selected for any design in accordance with this invention will be predetermined by the particular geometry and size of the bottle to be received. The carrier 110 is intended for use with 25 oz. capacity bottles, whereas the carrier 10 is intended for use with quart size bottles. It is desirable in the case of carrier 110 to provide a relatively shorter wall height.

Bottom flaps 158 and 160, and bottom wings 162 and 164, are provided in substantially the identical manner of flaps 58, 60, 62, and 64 of carrier 110. These portions cooperate to provide the foldable bottom wall of the carrier.

The essential difference between pattern 120 for carrier 110 and pattern 20 for carrier 10 resides in the omission of connector flaps 48 and 50 formed in the side panels 22 and 24 of carrier 10, and the substitution therefor of connector end flaps 148 and 150 in carrier 110. The end flaps 148 and 150 are disposed at the opposite ends of the pattern 120, and are contiguous with the end panels 134*a* and 134*b*, respectively. These connector end flaps are provided with suitable glue coatings on the concealed surfaces opposite the exposed surfaces shown in Figure 9. Fold lines 149 and 151 are provided intermediate the end flaps and the adjacent end panels.

Upon folding assembly of the carrier 110 from the pattern 120, in substantially the same manner as that described in connection with Figures 4 to 7, the end flaps 148 and 150 will be glued to the abutting panels of the center partition 116. This connection may be seen in Figure 8 with respect to flap 148 of end panel 126*a* and side panel 122. In this way, rigid supporting connection is provided at the foldable connection between the abutting panels of the center partition 116 and the side walls 122 and 124 along substantially the full vertical height of the side walls. It will be apparent that either version of connector flap construction, flaps 48 and 50 of carrier 10 or flaps 148 and 150 of carrier 110, may be employed as desired.

Changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by the claims any modified forms of structure or use of mechanical improvements which may be reasonably included within their scope.

What is claimed is:

1. A collapsible article carrier formed from a pattern

of foldable sheet material, comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, and a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby three separated article receiving compartments are defined.

2. A collapsible article carrier formed from a pattern of foldable sheet material, comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides and providing handle means for supporting said carrier, and a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby three separated article receiving compartments are defined.

3. A collapsible article carrier formed from a pattern of foldable sheet material, comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby three separated article receiving compartments are defined, said center portion extending in height above said side wall and providing handle means for supporting said carrier, and bracing supports for said center partition formed by extensions of said first two sides foldably connected to the upwardly extended portion of said center partition.

4. A collapsible article carrier formed from a pattern of foldable sheet material, comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby three separated article receiving compartments are defined, and upwardly extending portions of said first two side walls and said center and cross partitions being overlappingly engaged to provide handle means of three ply thickness for supporting said carrier.

5. A collapsible article carrier formed from a pattern of foldable sheet material, comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, the third of said sides being formed by the abutment of two panels from opposite ends of said pattern, and a cross partition comprising integral foldable portions of said center partition and interconnected extensions of the panels forming said third side foldable relative thereto, whereby three separated article receiving compartments are defined.

6. A collapsible article carrier formed from a pattern of foldable sheet material, comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby three separated article receiving compartments are defined, and connector flaps foldably reinforcing the interconnections of said first two side walls and said center partition.

7. A collapsible article carrier formed from a pattern of foldable sheet material comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby three separated article receiving compartments are defined, and a pair of connector flaps comprising cut-out portions of said first two sides for foldably reinforcing the interconnections of said sides and said center partition.

8. A collapsible article carrier formed from a pattern of foldable sheet material comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides foldable relative to each other and to said sides, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby three separated article receiving compartments are defined, and a pair of connector flaps comprising foldable extensions of said center partition at its interconnection with said sides.

9. A collapsible article carrier formed from a pattern of foldable sheet material comprising a peripherally continuous side wall defining three sides, a bottom wall formed by interconnected extensions of said sides, said bottom wall being slotted and foldable against itself, an interior center partition extending between a first two of said sides and being foldably connected thereto, said center partition being foldable intermediate said two sides, the third of said sides being foldable against itself, and a cross partition extending between said center partition and the third side and being foldably connected thereto, whereby are defined, and whereby, when said carrier is collapsed into substantially flat form without articles therein, three separated article receiving compartments, said bottom wall is folded downwardly away from the bottom edges of said partition and against itself, said first two sides are folded against each other and said third side against itself therebetween, said center partition is folded between said first two sides and against itself, and said cross partition is disposed between the folded portions of said center partition.

References Cited in the file of this patent

UNITED STATES PATENTS

663,238	Neumann	Dec. 4, 1900
1,035,258	Stegman	Aug. 13, 1912
2,575,654	Casler	Nov. 20, 1951
2,706,578	Ringler	Apr. 19, 1955