

Sept. 2, 1958

C. D. PAINTER
CELLULAR BOTTLE CARRIER

2,850,205

Filed Oct. 6, 1953

2 Sheets-Sheet 1

FIG. 1

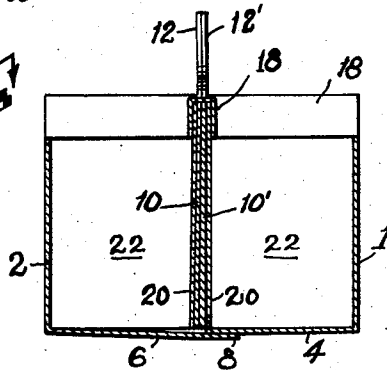
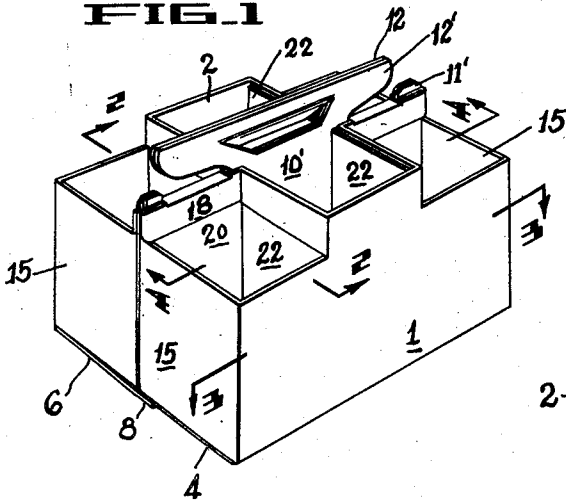


FIG. 2

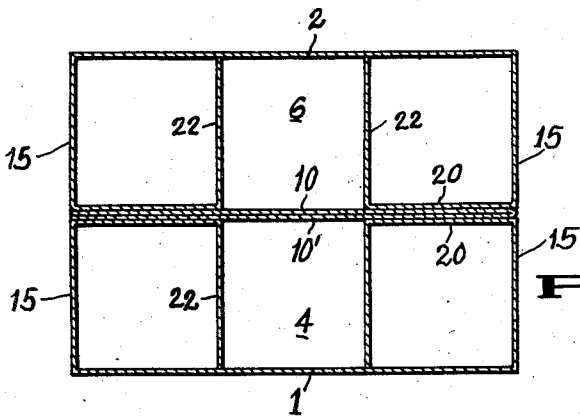


FIG. 3

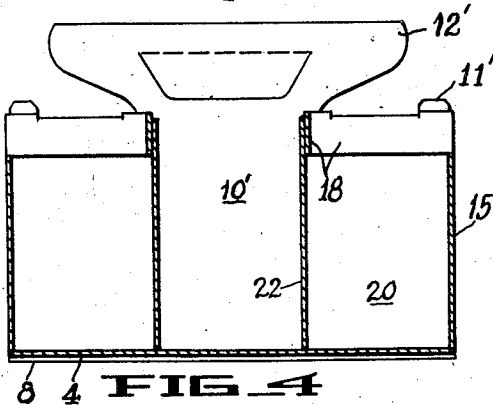


FIG. 4

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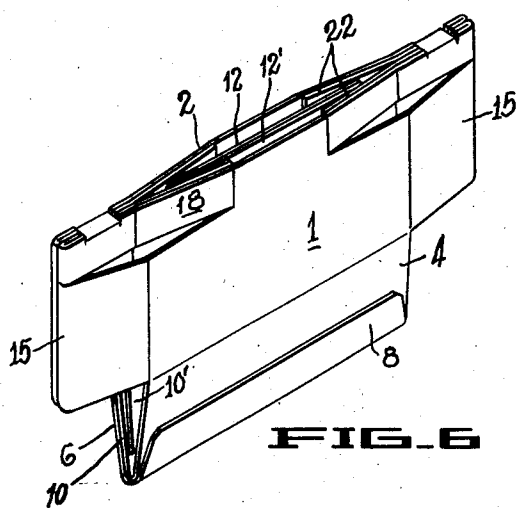
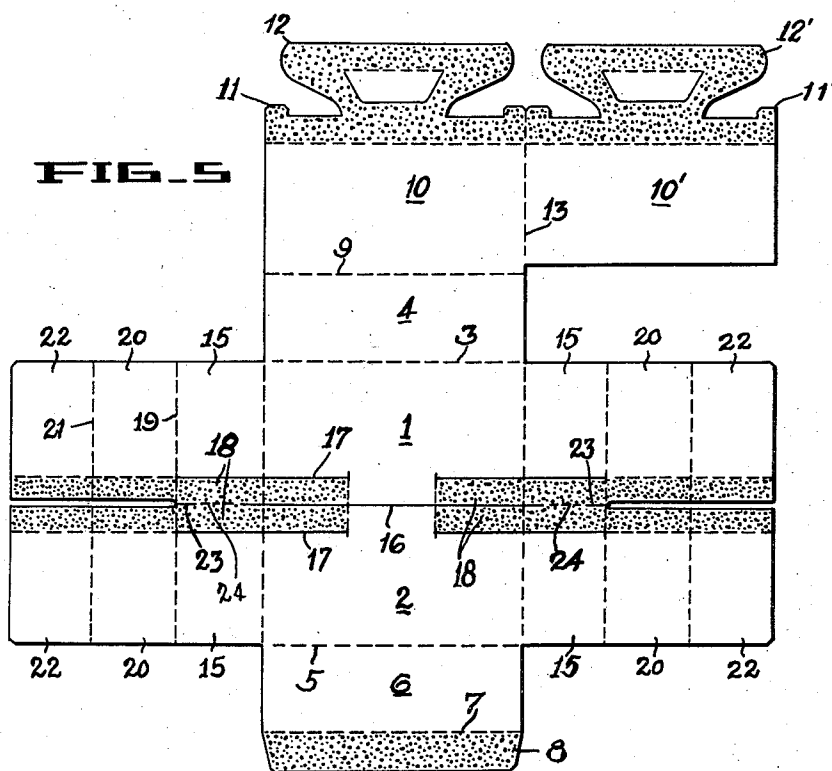
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CELLULAR BOTTLE CARRIER

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2 Sheets-Sheet 2



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CELLULAR BOTTLE CARRIER

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Application October 6, 1953, Serial No. 384,390

2 Claims. (Cl. 220—105)

This invention relates to an improved bottle carrier of the type having a number of rows of compartments for holding a plurality of bottles.

The bottle carrier constituting the present invention embodies a substantially flat folded cardboard structure which may be easily converted into a cellular carrier wherein a number of bottles may be supported and carried in upstanding positions. My improved bottle carrier is made from a pre-cut cardboard blank which is capable of being mechanically folded into substantially flat compact collapsed form for convenience in packing and storage. From its collapsed form the cardboard structure may be easily set up by hand and converted into a cellular carrier wherein a number of rows of cells having bottoms and side walls are provided for holding a plurality of bottles in upright positions. The arrangement of the walls of the cells is such that the bottles supported in the carrier are not allowed to contact one another, thereby normally avoiding breakage when the loaded carrier is carried from place to place.

The primary object of my invention is to provide an improved cellular bottle carrier which is adapted to be collapsed for convenience in shipping or storage, and which embodies a number of open compartments for holding a plurality of bottles in spaced upright positions.

Another object of my invention is to provide an improved cellular bottle carrier of the kind characterized, one which is formed with a handle for use in conveniently carrying the carrier and the bottles held therein.

Other and further objects of my invention will be pointed out hereinafter, or will be indicated in the appended claims or will be obvious to one skilled in the art upon an understanding of the present disclosure. For the purpose of this application I have elected to show herein certain forms and details of a cellular bottle carrier embodying my invention; it is to be understood, however, that the embodiment of my invention herein shown and described is for purposes of illustration only and that therefore it is not to be regarded as exhaustive of the variations of the invention.

In the accompanying drawings:

Fig. 1 is a perspective view illustrating a cellular bottle carrier embodying my invention;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a plan view of a blank from which the bottle carrier shown in the preceding figures is formed;

Fig. 6 is a perspective view showing the bottle carrier illustrated in the preceding figures in collapsed form;

Fig. 7 is a perspective view showing another embodiment of my invention;

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 7;

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Fig. 9 is a sectional view taken on the line 9—9 of Fig. 7;

Fig. 10 is a sectional view taken on the line 10—10 of Fig. 7;

Fig. 11 is a plan view of a blank from which the bottle carrier shown in Fig. 7 is formed; and

Fig. 12 is a plan view of the bottle carrier shown in Fig. 7 in partially collapsed form.

The blank from which the bottle carrier illustrated in Figs. 1 to 6 is formed is cut from a fairly stiff sheet of cardboard or other suitable material. This blank comprises an upper centrally disposed rectangular member or side 1 which forms one of the longitudinal vertical sides of the bottle carrier, and the said blank also comprises a similarly shaped lower centrally disposed rectangular member 2 which forms the other or opposed longitudinal vertical side of the carrier. Connected to the upper longitudinal edge of the upper rectangular member or side 1 along a crease line 3 is a rectangular member or bottom portion 4 which forms a half of the bottom of the bottle carrier. Connected to the lower longitudinal edge of the lower rectangular member 2 along a crease line 5 is a lower rectangular member or bottom portion 6 which forms the other half portion of the bottom of the bottle carrier. Connected to the lower rectangular member 6 along a longitudinal crease line 7 is a flap 8 which has a layer of adhesive on its upper side which makes it possible when the blank is folded for the said flap to be secured to the underneath side of the upper rectangular member or bottom portion 4 adjacent a longitudinal crease line 9. After the flap 8 is secured by the adhesive to the rectangular member 4 in the folding of the blank, the rectangular members or bottom portions 4 and 6 are firmly connected together so they form a fairly rigid bottom for the carrier.

Connected to the upper rectangular member 4 along the crease line 9 is a substantially rectangular panel 10 which has two upwardly projecting spaced tongues 11 and a handle member 12 formed thereon. Connected to the vertical side edge of the panel 10 along a crease line 13 is a similarly shaped panel 10' having similarly shaped and correspondingly positioned spaced tongues 11' and a handle member 12' formed thereon. The panel 10' together with its tongues and handle member are folded against and secured to the panel 10 by an adhesive (which is shown by the stippling) when the blank is folded and converted into a carrier. The two attached panel members 10 and 10', when the blank is folded, form a rigid longitudinally disposed vertical member which is centrally positioned between the sides 1 and 2 and serves to give the bottle carrier rigidity as well as provide a centrally disposed longitudinal vertical partition.

Connected to each of the lateral vertical edges of the rectangular members or sides 1 and 2 along vertical crease lines 14 are pairs of smaller rectangular members or end portions 15 which form the ends of the bottle carrier when the blank is folded and set up. The two larger rectangular members 1 and 2 forming the opposed longitudinal sides of the carrier are disconnected one from the other along their inner adjacent longitudinal edges by a centrally disposed elongated slit 16 which also has lateral extensions that partially but not entirely separate the two smaller rectangular members or end portions 15 of each pair one from the other. Two other shorter slits 17 arranged in parallel relationship with respect to the longer central slit 16 and spaced at uniform distances above and below the latter, form two pairs of smaller elongated rectangular members or strips 18. These strips are provided with adhesive layers on their upper surfaces, which when the blank is folded and set up permit their attachment to the upper portions of the inner partitions of the carrier, for reinforcement pur-

poses. The vertical crease lines 14 extend vertically and transversely across the centers of the strips 18, thereby permitting the creasing thereof so each of such strips when the blank is set up may form two similarly shaped rectangular reinforcing portions arranged at right angles to each other.

Connected along vertical crease lines 19 to the outer lateral edges of the pairs of rectangular members or end portions 15 are pairs of rectangular longitudinal partition members 20. The longitudinal partition members 20 of each pair are separated at their inner adjacent edges. When the blank is folded or set up the longitudinal partition members 20 of each pair are positioned vertically alongside and in parallel relation to each other with the panels 10 and 10' intervening. Connected to the outer lateral edges of the pairs of longitudinal partition members 20 along vertical crease lines 21 are two pairs of rectangular transverse partition members 22. The transverse partition members 22 of each pair are separated at their inner adjacent edges. The inner adjacent edge portions of the partition members 20 and 22 as well as the strips 18 are coated with an adhesive as shown by the stippling in Fig. 5, thereby providing means when the blank is folded and set up for securing the transverse portions of the strips to the transverse partition members 22 and the longitudinal portions of the strips to the longitudinal partition members 20. While the outer half portions of each pair of strips 18 are connected together at their adjacent longitudinal edges, there are two short slits 23 which are in longitudinal alignment with the central slit 16, such slits 23 being sufficiently long to snugly receive the tongues 11 and 11' when the blank is folded and set up.

In folding the blank the pairs of longitudinal and transverse partition members 20 and 22 are first folded as units inwardly along the vertical crease lines 19 to overlying positions with respect to the rectangular end portions 15 and the sides 1 and 2. When such initial folding is completed the longitudinal partition members 20 will be superimposed upon the end members 15 and the outer half portions of the strips 18, and the transverse partition members 22 will overlie portions of the sides 1 and 2 and the inner half portions of the strips 18. The gummed or adhesive coated surfaces (shown by the stippling in Fig. 5) of the partition members 20 and 22 and the strips 18 are thereupon secured together. The panel 10' and its handle member 12' are swung inwardly to superimposed positions with respect to the panel 10 and the latter's handle member 12, and the gummed or adhesive coated surfaces (shown by the stippling in Fig. 5) of the panels and handle members are thereupon secured together. The panel members are then folded downwardly along the crease line 9 to a superimposed position with respect to the rectangular bottom portion 4, the side 1 and the transverse partition members 22. The lower half of the then folded blank is next folded upwardly along longitudinal crease lines 24 (which are in line with the longitudinal slit 16) to a position overlying the partially folded upper portion of the blank. The gummed or adhesive coated flap 8 is then bent around the crease line 9 and secured to the outer surface of the bottom member 4. After the blank is folded in the manner described but is still in collapsed form, the opposite ends of the folded blank are pressed inwardly toward each other until the pairs of end portions 15 are in substantially parallel vertical planes. When the opposite ends of the folded but collapsed carrier are pressed inwardly toward each other the bottom portions 4 and 6 automatically swing upwardly toward a common horizontal plane and at the same time the inner transverse partitions 22 swing outwardly until they and the transverse half portions of the strips 18 attached thereto are positioned at substantially right angles to the sides 1 and 2. When the outer ends of the end portions 15 have been pressed inwardly sufficiently to bring the pairs

of said end portions into substantially parallel vertical planes the pairs of longitudinal partition members 20 will have been shifted toward each other sufficiently to position the tongues 11 and 11' of the panels 10 and 10' directly beneath the slits 23. Then by pressing upwardly on the bottom portions 4 and 6 to bring the said bottom portions into a common horizontal plane, the said tongues are projected through the slits 23 to provide a firm locking engagement with the sides of such slits, thereby normally preventing the sides, end portions and bottom portions from returning to their collapsed positions. When the panels 10 and 10' as a unit are shifted upwardly the handle members 12 and 12' are also projected upwardly to positions where they are adapted to be grasped by a person's hand.

It is to be noted that the bottle carrier comprising the present invention embodies a structure having six open compartments or cells of substantially the same size and shape wherein a similar number of beverage bottles may be supported in vertical positions. The carrier may be safely carried from place to place with the bottles held in separated positions by the transverse and horizontal partition members.

As shown in Figs. 7 to 12 my improved bottle carrier may embody another form. Referring to these figures and particularly the illustration in Fig. 11 of the blank from which the carrier is formed, the numeral 25 designates a rectangular shaped side member having a bottom portion 26 of slightly less width secured thereto along a longitudinal crease line 27. Connected to the lower edge of the bottom portion 26 along a longitudinal crease line 28 is a similarly shaped bottom portion 26'. Connected to the lower edge of the bottom portion 26' along a longitudinal crease line 29 is another side member 30. The side members 25 and 30 are identical in size and shape, and when the blank is folded and set up they form the opposed vertical sides of the carrier. The bottom portions 26 and 26' form the bottom of the carrier when the blank is folded and set up. Connected to the right hand vertical edge of the side member 25 along a vertical crease line 31 is an end portion 32 which has a gummed or adhesive coated narrow extension or flap 33 connected to its lateral vertical edge along a vertical crease line 34. Connected to the left hand vertical edge of the side member 30 along a vertical crease 35 is an end portion 36 which has a gummed or adhesive coated narrow extension or flap 37 connected to its lateral vertical edge along a vertical crease line 38. The end portions 32 and 36 are substantially the same shape and size and they form one end of the carrier when the blank is folded and set up. Connected to the left hand vertical edge of the side member 25 along a vertical crease line 39 is an end portion 40, and connected to the right hand edge of the side member 30 along a vertical crease line 41 is an end portion 42. The end portions 40 and 42 are substantially the same shape and size and they form the opposite end of the carrier when the blank is folded and set up. The end portions 32, 36, 40 and 42 are all substantially the same shape and size. Connected to the outer lateral edge of the end portion 40 along a vertical crease line 43 is a longitudinal inner partition member 44 which has a laterally disposed elongated handle portion 45 extending upwardly from its upper end. The underneath side (not shown) of the inner longitudinal partition member 44 is gummed or coated with an adhesive. Connected to the handle portion 45 along the vertical crease line 43 is a similarly shaped handle portion 45'. Both handle portions 45 and 45' are provided with gummed or adhesive coated upper surfaces which make it possible to attach such surfaces together when the blank is folded. Connected to the longitudinal partition member 44 along a vertical crease line 46 is a transverse partition member 47. Connected to the outer or free end of the transverse partition 47 along a vertical crease line 48 is a gummed or adhesive coated flap or

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extension 49. Connected to the outer edge of the longitudinal partition 44 along a vertical crease line 50 is another transverse partition member 51, and connected to the lateral edge of the latter along a vertical crease line 52 is a gummed or adhesive coated flap or extension 53. The transverse partition member 47 and its extension or flap 49 are cut from the longitudinal partition 44 and the transverse partition member 51, respectively, as indicated by the cut line 54. Connected to the outer lateral edge of the end portion 42 along a vertical crease line 55 is a longitudinal inner partition member 56 which has an elongated handle portion 57 extending downwardly from its lower end. The underneath side (not shown) of the inner longitudinal partition member 57 is gummed or coated with an adhesive. Connected to the handle portion 57 along the vertical crease line 55 is a similarly shaped handle portion 57'. Both handle portions 57 and 57' are provided with gummed or adhesive coated upper surfaces which make it possible to attach such surfaces together when the blank is folded and set up. Connected to the longitudinal partition member 56 along a vertical crease line 58 is a transverse partition member 59. Connected to the outer or free end of the transverse partition member 59 along a vertical crease line 60 is a gummed or adhesive coated flap or extension 61. Connected to the outer edge of the longitudinal partition member 57 along a vertical crease line 62 is another transverse partition member 63, and connected to the lateral edge of the latter along a vertical crease line 64 is a gummed or adhesive coated flap 65. The transverse partition member 63 and its extension or flap 65 are cut from the longitudinal partition member 59 and the transverse partition member 63, respectively, as indicated by the cut line 66. The underneath sides of the longitudinal partition member 56 and both flaps 33 and 37 are gummed or coated with an adhesive, it being here noted that the underneath sides of the longitudinal partition members 44 and 56 are secured together by such adhesive when the blank is folded and set up, and similarly the underneath sides of the flaps 33 and 37 are attached together in the formation of the carrier. The underneath sides of the handle portions 45 and 57 are gummed or coated with an adhesive so they may be secured together when the blank is folded and set up.

In the folding of the blank shown in Fig. 5, the longitudinal partition members 44 and 56 together with the handle portions 45, 57, the transverse partition members 47, 59, the flaps 49, 61, the transverse partition members 51, 63, and the flaps 53, 65, are folded inwardly as units along the crease lines 43 and 55 upon the end portions 40, 42, the side members 25, 30, and the handle portions 45', 57'. The flaps 49 and 61 thereupon become attached by the adhesive material thereon to the side members 25 and 30 respectively, and similarly the flaps 53 and 65 also become attached by the adhesive material thereon to these same side members 25 and 30, respectively. Since the flaps 49 and 53, as well as the flaps 61 and 65, become attached to their respectively associated sides 25 and 30 at uniformly spaced distances from each other, and since the widths of the transverse partition members 47, 51, 59, and 63 are the same, the said transverse partition members will maintain the sides 25 and 30 in spaced parallel positions when the blank is folded and finally set up. The handle portions 45 and 45' are securely attached together by means of the adhesive coating on the upper side of the handle portion 45', and similarly the handle portion 57 is secured to the handle portion 57' by the adhesive material on the latter. The adhesive coatings applied to the upper surfaces of the various parts of the blank, as indicated by the stippling on Fig. 5, are preferably so applied before the initial folding of the blank. The end portions 32, 36, and the flaps 33, 37 are next folded inwardly as units along the crease lines 31 and 35. The end member 32 becomes

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superimposed upon the side member 25 and the flap 53 while the flap 33 becomes superimposed upon and is secured to the right hand end of the handle portion 45 by the adhesive on such flap. Similarly the end member 36 becomes superimposed upon the side member 30 and the flap 65 while the flap 37 becomes superimposed upon and is secured to the right hand end of the handle portion 57 by the adhesive on the said flap. At this point adhesive coatings are applied to the then upper surfaces of the longitudinal partitions 44 and 56, or either of them, as well as to the then upper surfaces of the flaps 33 and 37 or either of them. The upper half of the partially folded blank is then folded downwardly along the crease line 28 upon the lower half of the partially folded blank. The contacting surfaces of the longitudinal partition members 44 and 56 are thereupon secured together by the adhesive coating thereon, and similarly the contacting surfaces of the flaps 33 and 37 are secured together.

By pressing the opposite ends of the folded blank inwardly toward each other the then outer end portions 40 and 42 are swung outwardly about the crease lines 43 and 55 respectively until they become positioned in substantially the same plane. At the same time the end portions 32 and 36 are also swung outwardly about the crease lines 31 and 35 respectively, until they become positioned in substantially the same plane. When thus set up the end portions 24, 40 form one end of the carrier while the other end portions 32, 36 form the opposite end thereof, both of the said ends being in parallel vertical planes. During the same setting up movement the sides 25 and 30 are separated and brought into parallel positions, the transverse partitions 47 and 59 swing outwardly into a common transverse plane, and the transverse partitions 51 and 63 also swing outwardly into a common transverse plane. The flaps 33 and 37 have projecting tongues 33' and 37' formed on their inner adjacent ends, and when the blank is finally set up these tongues become positioned against each other and are latched onto the bottom members 26 and 26' along the crease line 28 at a notch 28' formed in said bottom members, thereby securely holding the bottom members in a common plane.

What I claim is:

1. A one piece open top cellular bottle carrier formed from cardboard or like material and comprising, when erected opposed side walls, opposed end walls each comprising two end portions foldably joined to corresponding ends of said side walls, a bottom wall comprising two bottom portions foldably joined to the bottoms of corresponding side walls and to each other respectively, a longitudinal central partition and two pairs of transverse partitions, the end walls, side walls and partitions forming six enclosed compartments disposed in two rows of three each, the longitudinal partition being partially formed by a longitudinal panel formed integrally with and extending upwardly from one of the bottom portions at its foldable joint with the other bottom portion, and those parts of the longitudinal partition between each pair of the end compartments being partially formed by integral extensions extending from and foldably joined to the inner ends of the corresponding end wall portions, the said integral extensions being arranged in parallel adjacent straddling relationship with the longitudinal panel but not normally connected thereto, and the transverse partitions between the end compartments and the middle compartments being formed by outward integral folded extensions on the inner ends of the extensions connected to the end wall portions, top strips being slit from the outer walls of the four end compartments and folded inwardly and glued to the upper ends of the inner walls of the corresponding compartments and foldably joined to each other at the top, adjacent the longitudinal panel, to form saddles over corresponding portions of the upper edge of said longitudinal panel.

2. The combination as set forth in claim 1 including tongue elements on the outer ends of the upper edge portions of said longitudinal panel extending over and engageable with said saddles.

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