Feb. 18, 1958 P. WASYLUKA 2,823,845

ARTICLE CASE

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FIG. 1.

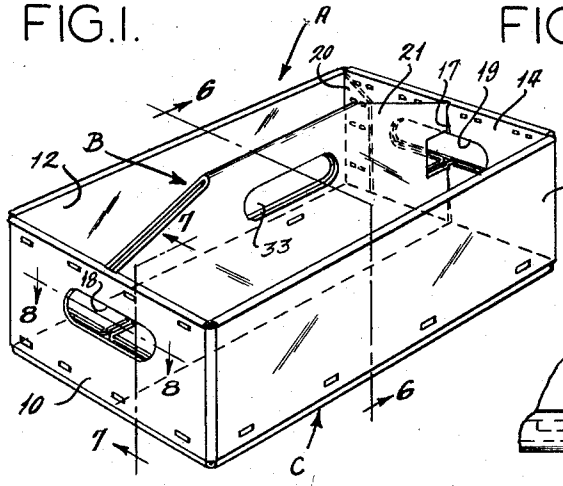


FIG. 2.

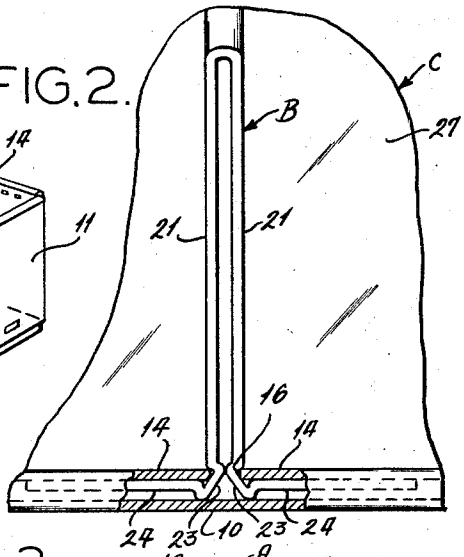


FIG. 3.

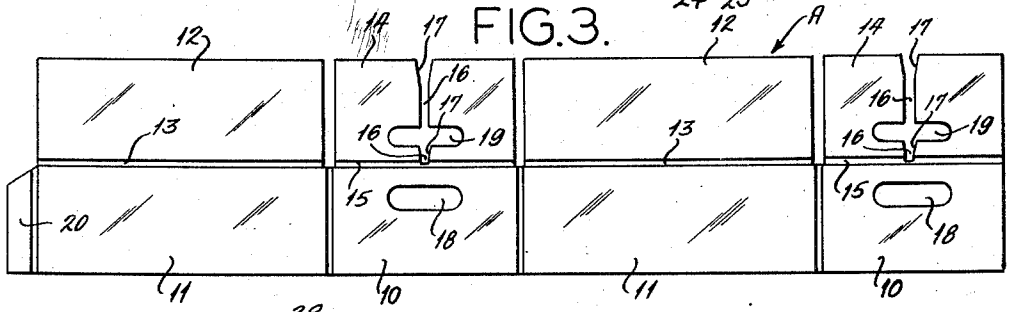


FIG. 4.

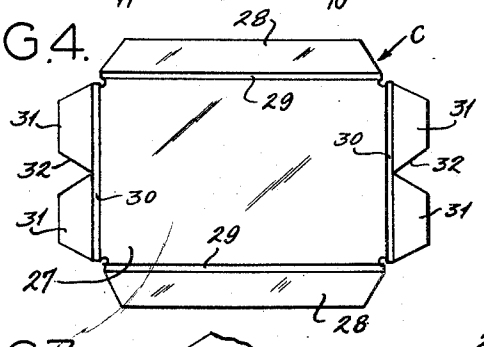


FIG. 5.

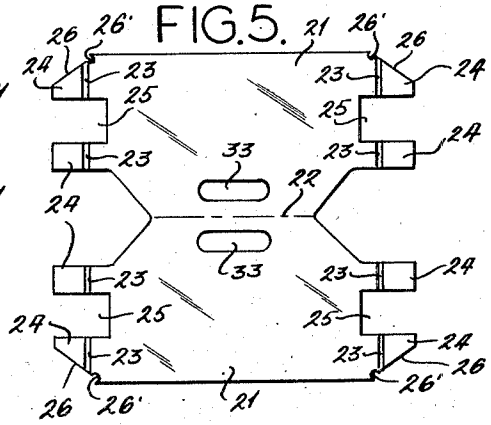
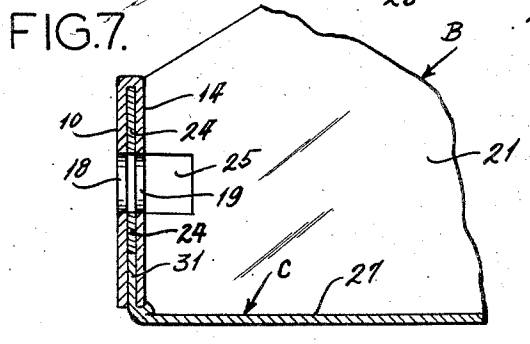


FIG. 7.



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FIG.6.

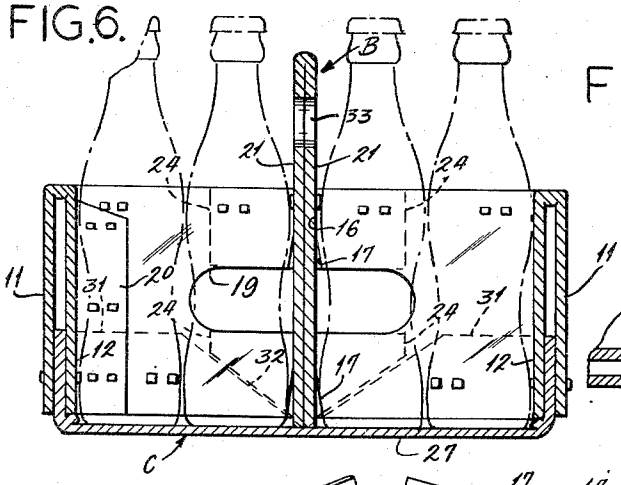
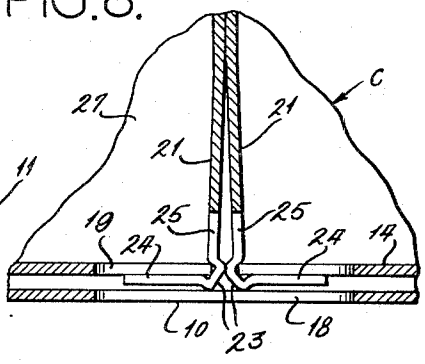


FIG.8.



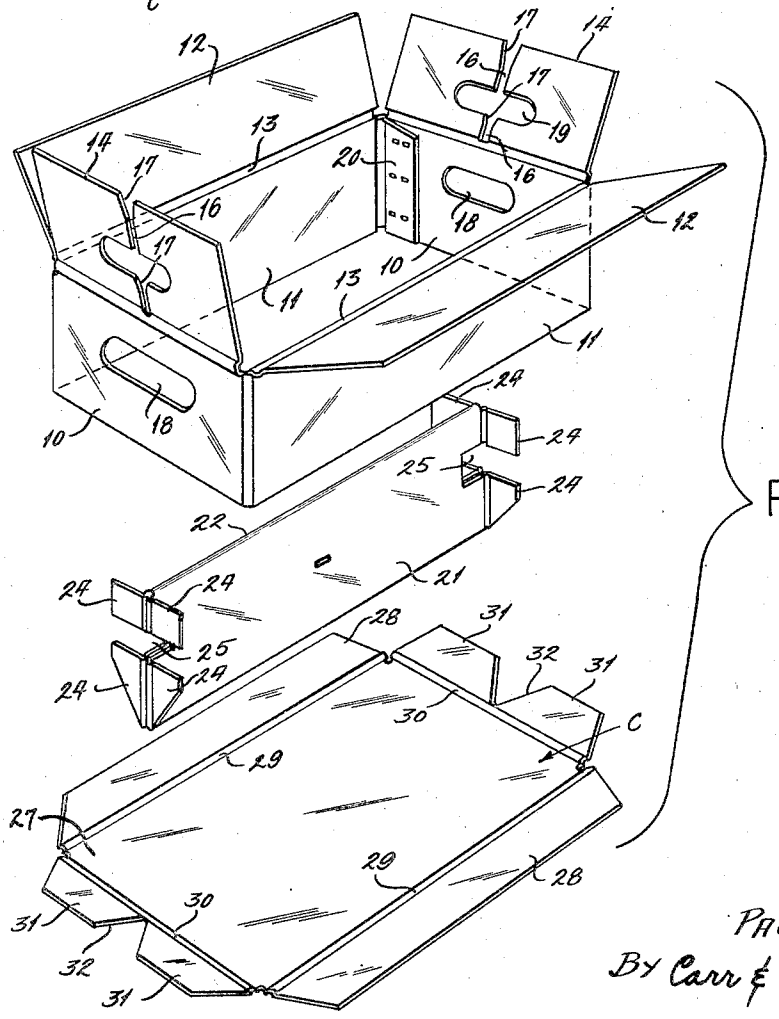


FIG.9.

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FIG. 10.

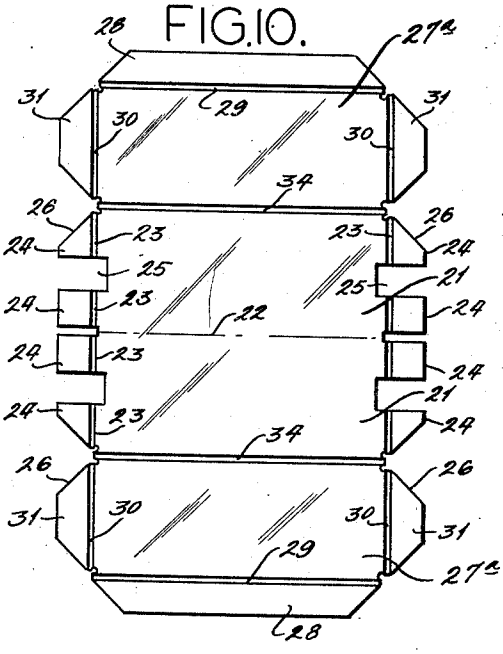


FIG. 13.

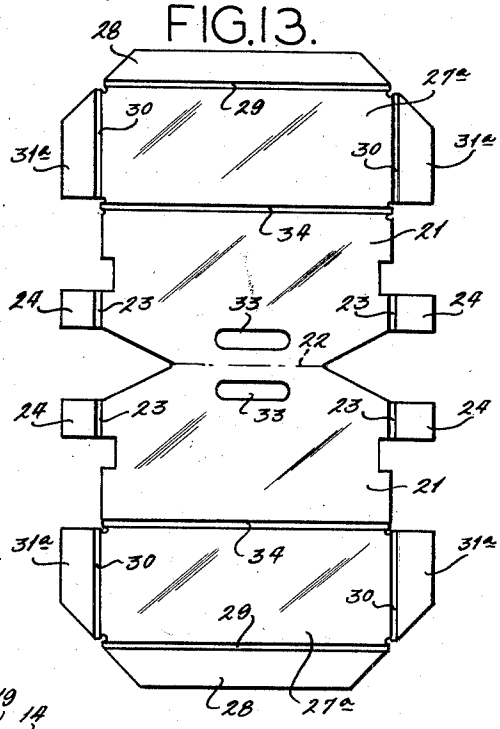


FIG. 11.

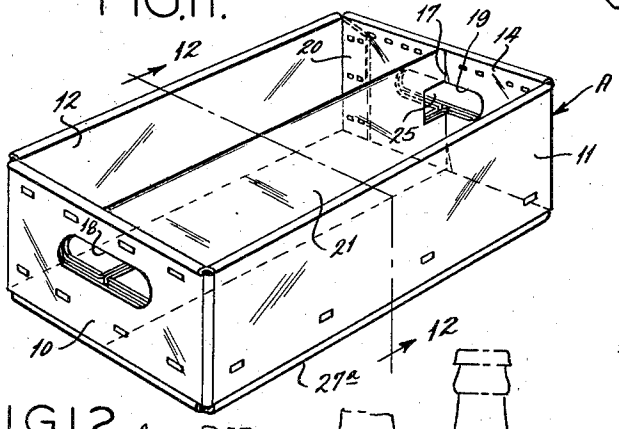
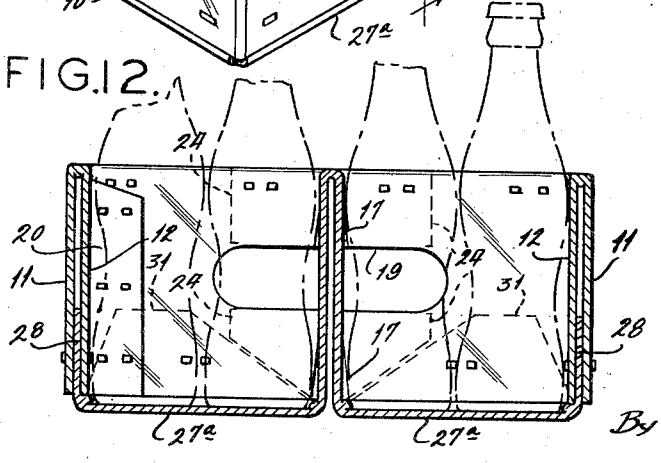


FIG. 12.



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2,823,845

ARTICLE CASE

Paul Wasyluka, St. Louis, Mo., assignor, by mesne assignments, to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Application December 1, 1951, Serial No. 259,379

5 Claims. (Cl. 229—15)

This invention appertains to a novel open carrying case having a body portion, a dividing reinforcing partition and a bottom member with body reinforcing portions thereon. The invention is particularly adapted for multiple trip use in transporting a relatively large number of articles from the retail market to the home of the user, for example, 24 bottles of beverage or the like. Solid fibreboard, corrugated fibreboard or any other suitable material may be used in the construction of this invention.

Virtually all multi-trip open trays and cases for carrying a relatively large number of fragile articles such as 24 standard beverage bottles and the like, have heretofore been constructed solely of wood and metal. In addition to being relatively hard and inflexible, such trays have the further disadvantage of being expensive and relatively heavy in weight. Another disadvantage is found in the hazard of splinters and protruding nails and irregular reinforcing portions often found in trays of this type. It is therefore an object of this invention to provide an inexpensive, light weight, open bottle carrying case which will resiliently but firmly contain the articles therein without presenting hazards to person or property.

It is contemplated that the case employing this invention will be constructed of relatively heavy duty stiff, resilient fibreboard or material of similar characteristics. It is therefore an object to provide a carrying case which will readily admit of rapid, easy, manual set-up and fabrication without requiring the use of expensive dies and jigs or special machinery which is usually required in the fabrication of articles using materials of this description. Furthermore, it is an object that the components inter-act to hold and retain the parts of the case in proper sequence and orientation during fabrication without outside support.

The multi-piece construction makes it possible to provide a case having a high degree of adaptability for different uses. For example, an extremely heavy bottom panel may be used with relatively light body portions. Thus the useful life of the carrier may be prolonged without unduly increasing the overall cost. Similarly, colors may be varied by using different colored materials for the various components. Thus dark colors can be used for the bottoms which are subject to dirt while lighter, more brilliant colors may be used in the body of the container for advertising or other purposes.

It is a further object of this invention to provide a substantially rigid carrying case which will firmly contain, support and contact the vertical faces of the articles carried so as to prevent excessive movement and displacement thereof, without the need for individual cellular compartments.

Another object is to provide a carrying case which requires a minimum amount of material and is light in weight yet sturdy enough for heavy duty multiple trip use.

A further object of this invention is to provide a heavy duty carrying case constructed to permit ready replacement of the reinforcing bottom panel without injury to the adjacent component parts of the case.

Another object of this invention is to provide a heavy duty carrying case having smooth, unobstructed flush exterior faces thereby providing a maximum area for advertising and other printed matter and yet display the contents.

A further object of this invention is to provide a reinforcing partition having scores therein which engage the slot forming edges of the body wall flaps throughout their length and maintain the parts in proper assembled relation.

A still further object is to provide a carrying case having an unobstructed upwardly opening body portion adapted to receive articles drop loaded by high speed automatic loading equipment.

Another object of this invention is to provide a bottle carrying case having two-ply upstanding handle and reinforcing partition member foldably connected at its upper edge, the foldable connection being flush with the outer face of each ply to provide operating clearance for automatic drop loading machinery.

Another object is to provide in a novel bottle carrying case a carrying handle positioned below the level of the tops of the bottles to provide an operating clearance for high speed automatic drop loading machinery wherein the carrying case walls are of resilient construction to permit the necks of the bottles to readily spread and separate to provide clearance to accommodate the hand of the person lifting the case, and return to their original position upon the removal of the hand.

Another object of this invention is to provide a central reinforcing partition which may be easily rigidly secured in the completed carrying case without the use of glue, staples or other securing means.

Other objects and advantages will be apparent upon a full and complete understanding of this invention.

This invention is embodied in a novel carrying case comprising a body section and a reinforcing partition section, each body section wall having a flap foldably connected to the upper margin thereof, an opposing pair of the body section wall flaps being centrally slotted to snugly receive the ends of the partition section, the ends of the partition section being adapted to snugly retain and position the slotted, opposing inner flaps in spaced relation to the body walls from which they depend, the bottom section having a foldably connected upwardly disposed flap on each edge thereof, each of said flaps being adapted to be secured in reinforcing relation between the body section walls and the inwardly disposed body wall flaps, the reinforcing partition section having foldably connected marginal portions secured between the slotted body wall flaps and the adjacent body section wall.

The invention also consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed. In the accompanying drawings which form a part of this specification and wherein like numerals and symbols refer to like parts wherever they occur:

Fig. 1 is a perspective view of an assembled carrying case embodying my invention,

Fig. 2 is an enlarged fragmentary top plan view of a portion of the case shown in Fig. 1,

Fig. 3 is a plan view of the blank from which the body section is made,

Fig. 4 is a plan view of the blank from which the bottom section of Fig. 1 is made,

Fig. 5 is a plan view of the blank from which the partition section of Fig. 1 is made,

Fig. 6 is a vertical cross sectional view taken along the line 6—6 of Fig. 1,

Fig. 7 is a vertical cross sectional view taken along the line 7—7 of Fig. 1,

Fig. 8 is an enlarged fragmentary horizontal cross sectional view taken along the line 8—8 of Fig. 1,

Fig. 9 is an exploded view in perspective showing all parts of the carrying case shown in Fig. 1 with a partition section modified to the same height as the body walls and the handhole eliminated,

Fig. 10 is a plan view of a blank for a combination partition section and bottom section for a modified form of carrying case embodying my invention,

Fig. 11 is a perspective view of a carrying case employing the combination partition section and bottom section shown in Fig. 10,

Fig. 12 is a vertical cross sectional view taken along the line 12—12 of Fig. 11, and

Fig. 13 is a plan view of a blank of another combination partition section and bottom section.

Referring now to the drawings in detail, particularly Figs. 1–9 thereof, it will be seen that the embodiment of the invention which has been illustrated and which is preferred comprises a body section A, a partition section B and a bottom member C.

The body section A is provided with a pair of opposing end walls **10** and a pair of opposing side walls **11**. The side walls **11** are provided with side wall flaps **12** defined by side wall scores **13**. The end walls **10** are provided with end wall flaps **14** connected to the upper edge thereof, said end wall flaps **14** being defined by end wall scores **15**. The end wall flaps **14** are provided with central slots **16**. The slots **16** may be beveled as shown at **17** to facilitate easy assembly. A handhole **18** is provided in each of the end walls **10**. A registering handhole **19** is provided in each end wall flap **14**. The handhole **19** is positioned to register with the handhole **18** when the end wall flaps **14** are folded about the end wall scores **15** to a position parallel with the inner face of the end wall **10**. The handhole **18** and the registering handhole **19** are optional features of convenience and may be omitted if desired. A stitch flap **20** is foldably connected to the end of the side wall **11**, however, the stitch flap **20** may be connected to the free end portion of any suitable body wall. Also, if desired, the stitch flap **20** may be omitted and the body walls secured together by adhesive or other suitable means.

The partition and reinforcing section B is provided with a pair of partition panels **21** which are foldably connected to each other along a panel score **22**. The panel score **22** is preferably very narrow and made on the reverse side of the handle panels. This is desirable because when the partition panels **21** are folded in back-to-back relation, the fold will be absolutely flush with the exposed faces of the partition panels **21**. This is important if the cases are to be used with automatic bottle dropping machinery, since maximum clearances must be provided in the center of the case or the bottle loading mechanism will quickly damage the container. The end edges of each of the partition panels **21** are provided with end scores **23** which in turn, define the inner edges of foldably connected partition flaps **24**. In the embodiment shown, the partition flaps **24** and the end portion of the partition panels **21** are cut, as at **25**, to provide handhole clearance. The lower corners of the partition flaps **24** are mitered or beveled as shown at **26** for additional strength and to facilitate assembly. The panels **21** are provided with small cut-outs **26'**.

The bottom member C is provided with a bottom panel **27** and side connecting and reinforcing flaps **28** foldably connected to the panel **27** along the side scores **29**. End scores **30** define the inner margin of a pair of divided end connecting and reinforcing flaps **31**. The flaps **31** are preferably provided with a V-shaped partition receiving notch **32**, which in assembled relation, cooperates with the mitered corners **26** of the partition flaps **24**.

The tray embodying the preferred form of the invention may be fabricated and assembled in any suitable manner. One preferred method of assembly is to form

the body section A into substantially rectangular shape and secure the stitch flap **20** to the inner face of the adjacent end wall **10**. The side wall flaps **12** are folded inwardly about the side wall scores **13** into spaced parallel relation with the inner faces of the side walls **11**. The end wall flaps **14** are folded inwardly about the end wall scores **15** into spaced parallel relation with the inner faces of the end walls **10**.

The partition section B is erected by folding the partition panels **21** about the panel score **22** into substantially flatwise back-to-back relation. The partition flanges **24** are bent about the respective end scores **23** so that each partition flange is in substantially right angular relation with the main panel **21** to which it is connected as shown in Fig. 9.

The partition section B is inserted into the erected body section A by holding the partition section in an upright position and sliding said partition section vertically upwardly through the flap slots **16** of the end wall flaps **14**. The partition flaps **24** are thereby simultaneously positioned between the end wall flaps **14** and the end walls **10**.

As the partition section B is moved upwardly, the edges of the end wall flaps **14** forming the flap slots **16** act to snugly engage the partition section B at the scores **23** as shown in Figs. 2 and 8. This action tends to snugly position the partition section B within the fabricated body section A. In this assembled position the end wall flaps **14** engage the scores **23** and the interposed partition flaps **24** maintain the end wall flaps **14** in spaced parallel relation with the end walls **10**. The beveled portions **17** act to guide the partition section into the flap slots **16**.

The side connecting and reinforcing flaps **28** of the bottom member C are folded upwardly about the side scores **29** into substantially right angular relation with the bottom panel **27**. In a similar manner, the divided end connecting and reinforcing flaps **31** are folded upwardly about the end scores **30** into substantially right angular relation with the bottom panel **27**.

The erected bottom panel C is inserted into the previously assembled body section A and the partition section B by placing the side connecting and reinforcing flaps **28** between the side wall flaps **12** and the side walls **11**, and placing the divided end connecting and reinforcing flaps **31** between the end wall flaps **14** and the end walls **10**. With the assembled container in this position, stitches or other fastening means are secured through the lower margin of the end walls **10** and the side walls **11**, thereby securing the upturned spacer and reinforcing flaps **28** and **31** between the body walls **11** and **10**, and the body wall flaps **12** and **14** respectively.

The carrying tray is now in condition for use.

The upper edge of the partition member B of the preferred embodiment of the invention may be flush with the top of the body walls **10** and **11**, as shown in Fig. **9**, or may be extended upwardly and provided with registering handholes **33** as shown in Figs. 1 and 5 to provide a centrally located carrying portion for transporting the container.

A modified form of container embodying this invention employs a one piece bottom and reinforcing partition as shown in Figs. 10–13. Referring now to Fig. 10, this novel combination partition member and bottom member has partition panels **21** with a score **22** therebetween. The panels **21** are provided with partition flaps **24** which are defined by the scores **23**. The partition flaps **24** are beveled, as at **26**. The panels **21** are provided with bottom panels **27*a*** defined by scores **34**, said bottom panels **27*a*** having side connecting and reinforcing flaps **28** defined by scores **29** and end connecting and reinforcing flaps **31** defined by scores **30**.

To assemble this combination partition section and bottom section, the partition panels **21** are folded about the panel score **22** into back-to-back relation. The half bottom panels **27*a*** are folded outwardly about the par-

tition bottom scores **34** into right angular relation to the partition panels **21**. The side connecting and reinforcing flaps **28** are folded upwardly about the side scores **29** and the divided end connecting and reinforcing flaps **31** are similarly folded upwardly about the end scores **30**. The partition flaps **24** are bent about the end scores **23**. The beveled edges **26** of the partition flaps **24** cooperate with the beveled edge of the end flap **31** to form a mitered corner. The modified combination partition member and bottom member is now ready to be inserted into the body section and attached thereto in the same manner as hereinbefore described.

Referring now to Fig. 13, a combination partition member and bottom member is shown with a partition panel **21** having an upper portion with registering handholes **33** therein. Some of the partition flaps **24** have been eliminated and the end connecting and reinforcing flaps **31***a* have square corners which occupy the space which would have been occupied by the eliminated partition flaps.

As best shown in Figure 12, the connecting and reinforcing flaps **28** and **31** not only provide the means for attaching the bottom panel **27***a* to the body section, but act as reinforcing spacers for the body wall flaps **12** and **14**. By interposing the connecting and reinforcing flaps **28** and **31** between the wall flaps **12** and **14** Fig. 9 and the body walls **10** and **11**, the body wall flaps are oriented in substantially vertical relation parallel to the adjacent body walls. The article carried is thereby contacted by the walls of the case throughout a considerable portion of its vertical height. This obviates undue vibration and movement of the contents. Such a construction also provides resilient shock absorbing inner walls. By positioning the body wall flaps in parallel relation to the body walls rather than in flatwise relation, the body of the case acts to absorb any shock rather than transmit it to the contents. Furthermore, the connecting and reinforcing flaps **28** and **31** together with the mitered or beveled lower portion **17** of the partition flaps **24**, form an unbroken, reinforcing and stiffening inner rim to further protect the contents carried and promote the length of the life of the case.

This invention is intended to cover all changes and modifications of the examples of the invention herein chosen for purposes of the disclosure which do not constitute departures from the spirit and scope of the invention.

What I claim is:

1. A carrying tray having a pair of opposing side walls and a pair of opposing end walls, and a separate reinforcing partition member with an integral bottom section, each of said end walls having an upper marginal flap foldably connected to the upper edge thereof, each of said flaps being positioned in spaced parallel relation to the inner face of said end wall, each of said upper marginal end wall flaps having a central vertical slot therein, said partition member having a pair of main panels foldably connected along their upper edge in back-to-back relation, the said foldable connection being flush with the outer faces of the main panels, each of said main partition panels being provided at their vertical end edges with vertical scores defining the inner marginal of foldably connected end flaps, said vertical scores providing grooved recesses for receiving and firmly gripping the edges of said end wall flaps which define said vertical slots therein to maintain said partition main panels in upright rigid relation, said partition flaps being positioned between the said upper marginal end wall flaps and said end walls, each of said main partition panels being provided at its lower edge with a substantially right angular disposed foldably connected half-bottom panel member, each of said half bottom panel members being provided with relatively narrow upturned end flaps on the free end margins thereof, said bottom panel end flaps being positioned and secured in fixed relation between said end walls and said end wall flaps.

2. A carrying tray having a pair of opposing side walls and a pair of opposing end walls, and a separate reinforcing partition member with an integral bottom section, each of said end walls having an upper marginal flap foldably connected to the upper edge thereof, each of said flaps being positioned in spaced parallel relation to the inner face of said end wall, each of said upper marginal end wall flaps having a central vertical slot therein, said partition member having a pair of main panels foldably connected along their upper edge in back-to-back relation, the said foldable connection being flush with the outer faces of the main panels, the upper folded edge of the partition extending at least to substantially the height of the walls, each of said main partition panels being provided at their vertical end edges with vertical scores defining the inner margin of foldably connected end flaps, said vertical scores providing grooved recesses for receiving and firmly gripping the edges of said end wall flaps which define said vertical slots therein to maintain said partition main panels in upright rigid relation, said partition flaps being positioned between the said upper marginal end wall flaps and said end walls, each of said main partition panels being provided at its lower edge with a substantially right angularly disposed foldably connected half-bottom panel member, each of said half bottom panel members being provided with relatively narrow upturned end flaps on the free end margins thereof, and said bottom panel end flaps being positioned and secured in fixed relation between said end walls and said end wall flaps.

3. A carrying tray having a pair of opposing side walls and a pair of opposing end walls with handholes having upper and lower edges therein and a separate longitudinal reinforcing partition member and a bottom structure, each of said end walls having an upper marginal flap foldably connected to the upper edge thereof, each of said end wall flaps being positioned in spaced parallel relation to the inner face of said end wall with its free end edge in abutting relation with the bottom and having a handhole aligned with the end wall handhole, each of said upper marginal end wall flaps having a central vertical slot therein through which the end portions of the partition extend, said partition member having a pair of main panels foldably connected along their upper edge in back-to-back relation, each of said main partition panels being provided at their upper vertical end edges with vertical scores defining the inner margin of oppositely right angularly folded end flaps, said partition end flaps being positioned between said upper margin of the end wall flaps and said end walls above the handholes therein, the end margins of the partition main panels having clearance cut-outs below the partition end flaps, the cut-outs being opposite the handholes, said bottom having at least one separate elongated vertically aligned upturned end flap on the free end margins thereof, the bottom end flaps being substantially coplanar with the partition end flaps, the bottom flaps being positioned between each said end wall and its associated flap below the handholes therein, and means for securing the end wall flaps into substantially parallel relationship with the end wall with the partition flaps and the bottom member flaps therebetween and in their coplanar relationship.

4. A bottle carrying case including a side wall structure comprising side and end walls connected in tubular relation, lining flaps on said side and end walls and foldably connected to the upper edges thereof, said lining flaps being folded into substantial surface contact with the side and end walls to which they are attached, said end walls having hand holes therein, the lining flaps on said end walls having registrable hand holes therein registering with the hand holes of said end walls, a bottom structure including a pair of partition walls foldably connected along their upper edges, registering hand holes in said partition walls, a flap connected to each end of each said partition wall folded to lie inwardly of a corresponding

end wall above the hand hole therein, said last named flaps being substantially below the level of the upper edges of said partition walls said last named flaps being sandwiched between said end walls and said lining flaps secured thereto, said bottom structure including bottom panels secured to the lower edges of said partition panels and extending outwardly therefrom in a common plane, end flaps on the ends of said bottom panels and secured between said end walls and the lining flaps secured thereto below the level of the hand holes in said end walls, and side flaps on said bottom panels secured between said side walls and the lining panels secured thereto.

5. The structure described in the preceding claim and in which said parition panels taper upwardly and inwardly from said end walls toward the center of said partition panels.

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