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(54) **COLLAPSIBLE MERCHANDISING DISPLAY**

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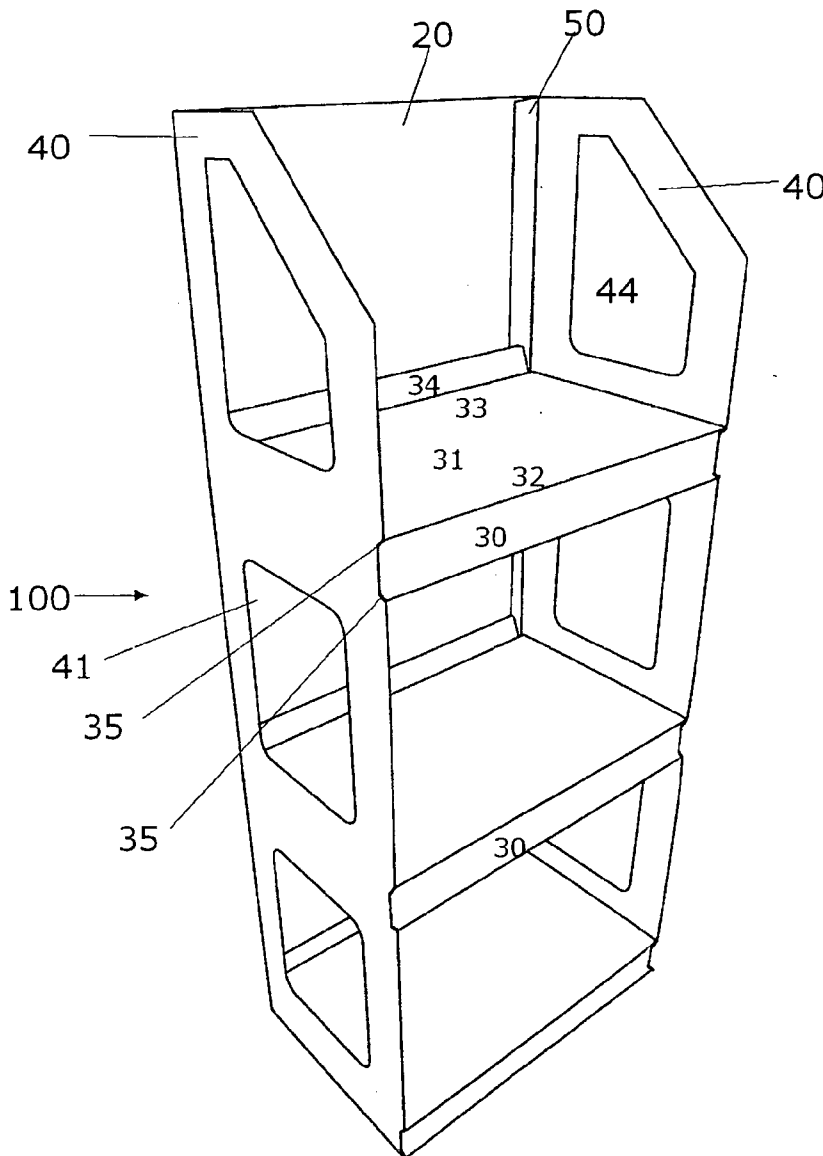
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(57) **ABSTRACT**

A one-piece, easily erected, collapsible cardboard display for merchandise. Shelves formed from its rear and front panels attach to a longitudinally displaceable center panel providing support for the device and facilitating assembly and disassembly thereof.

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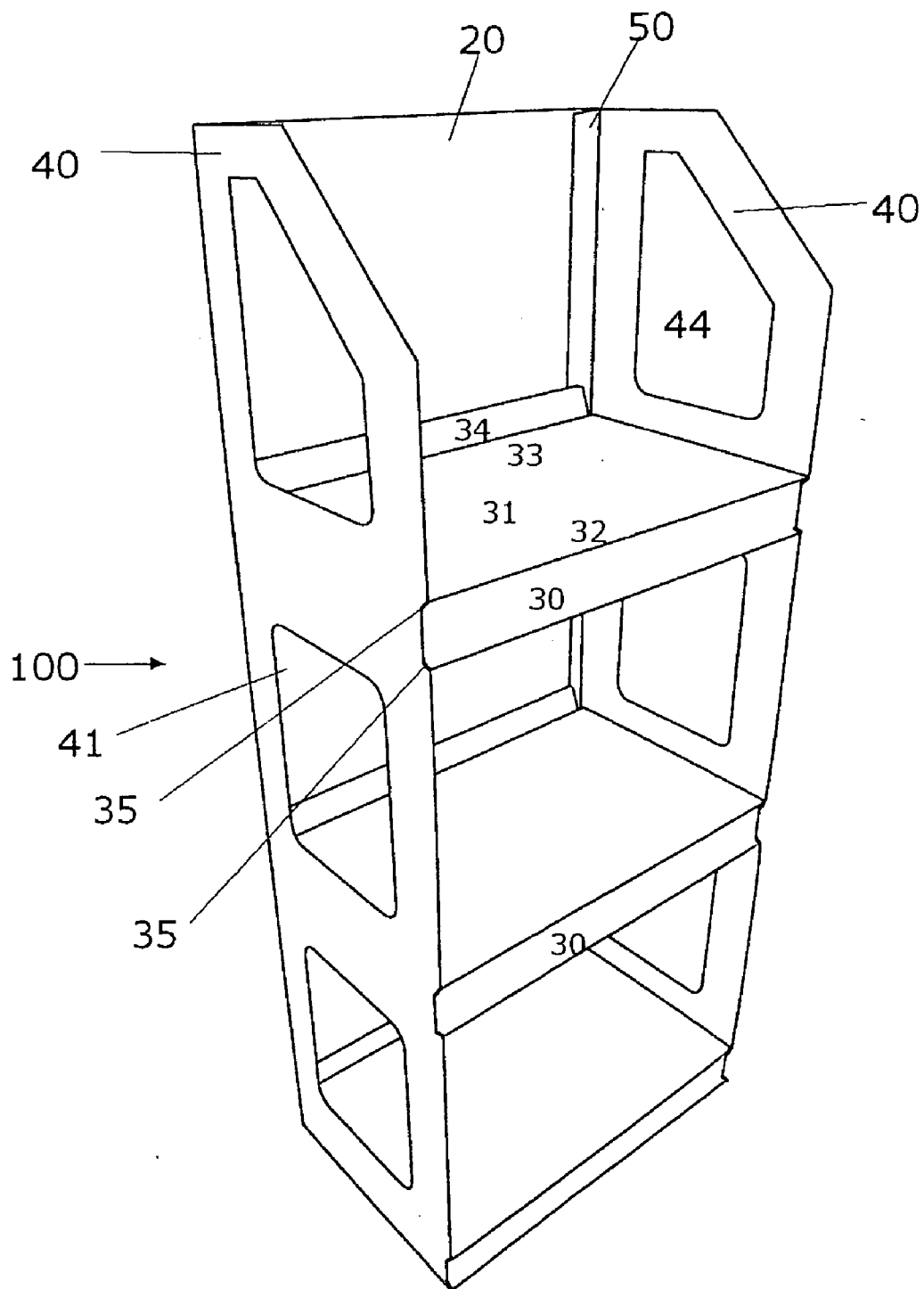


FIG.1

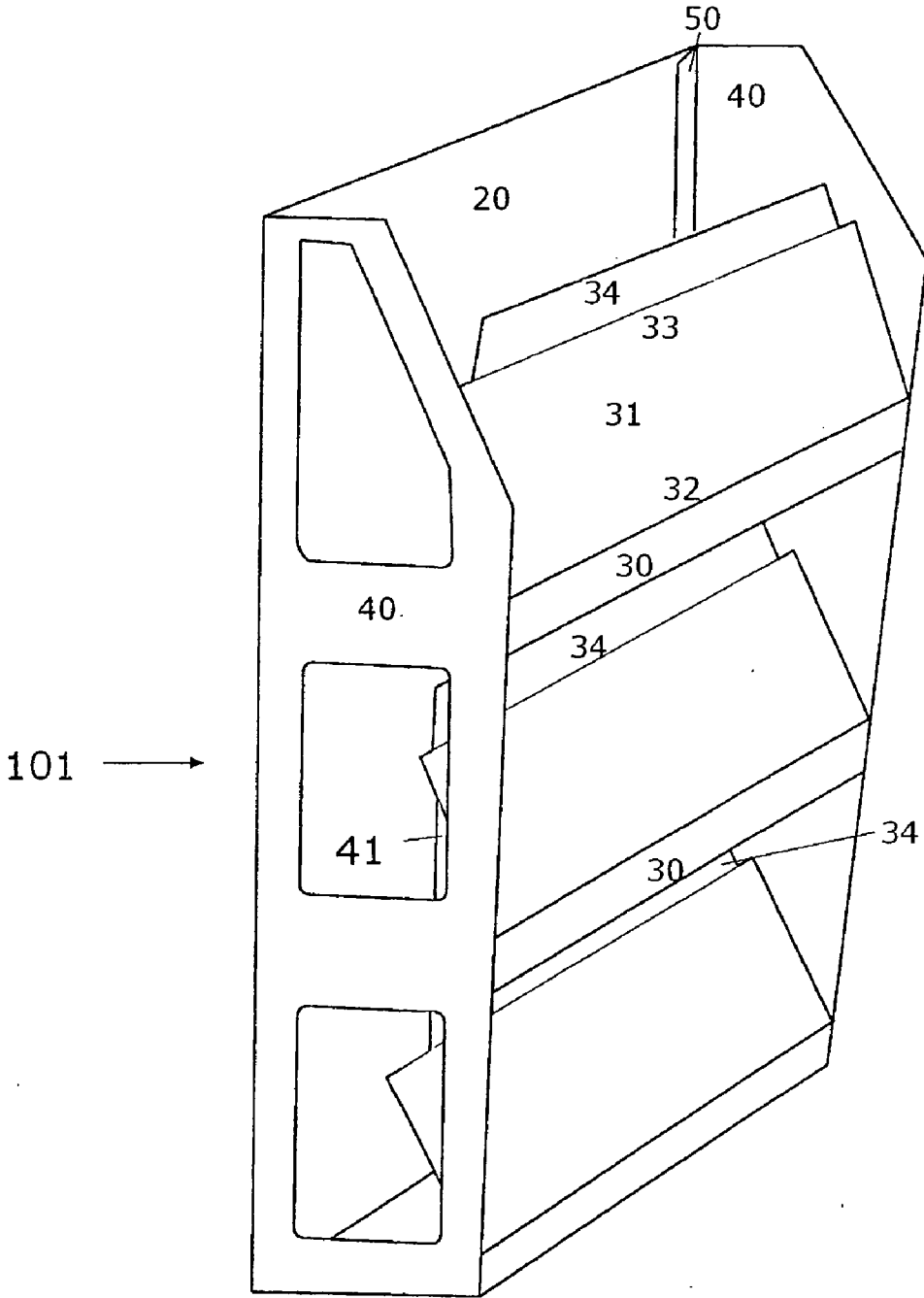


FIG.2

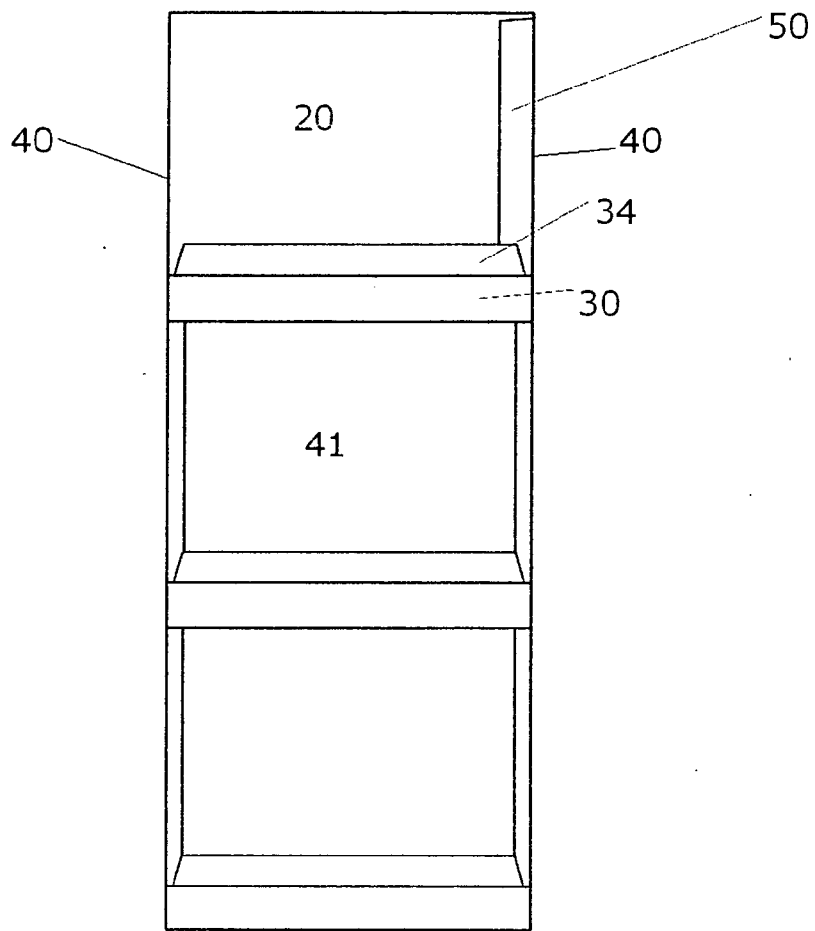


FIG.3

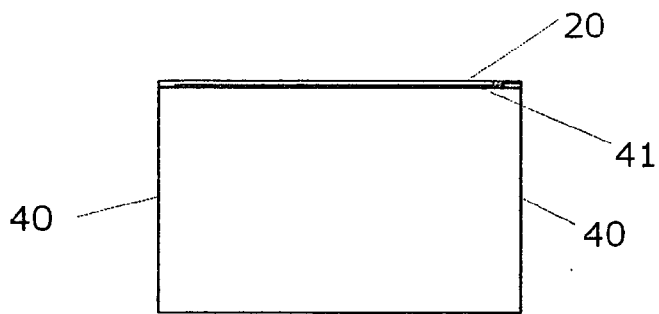


FIG.4

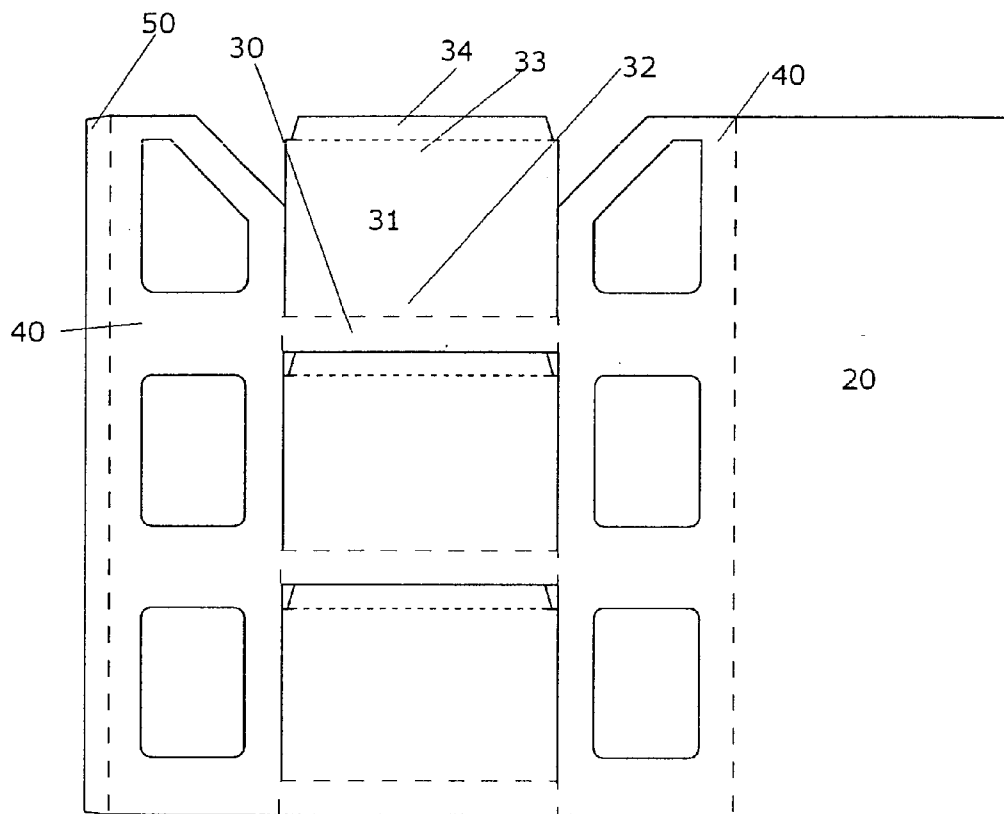


FIG. 5

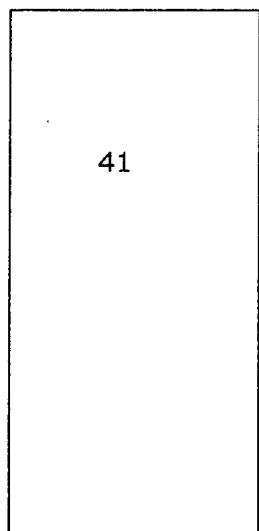


FIG. 6

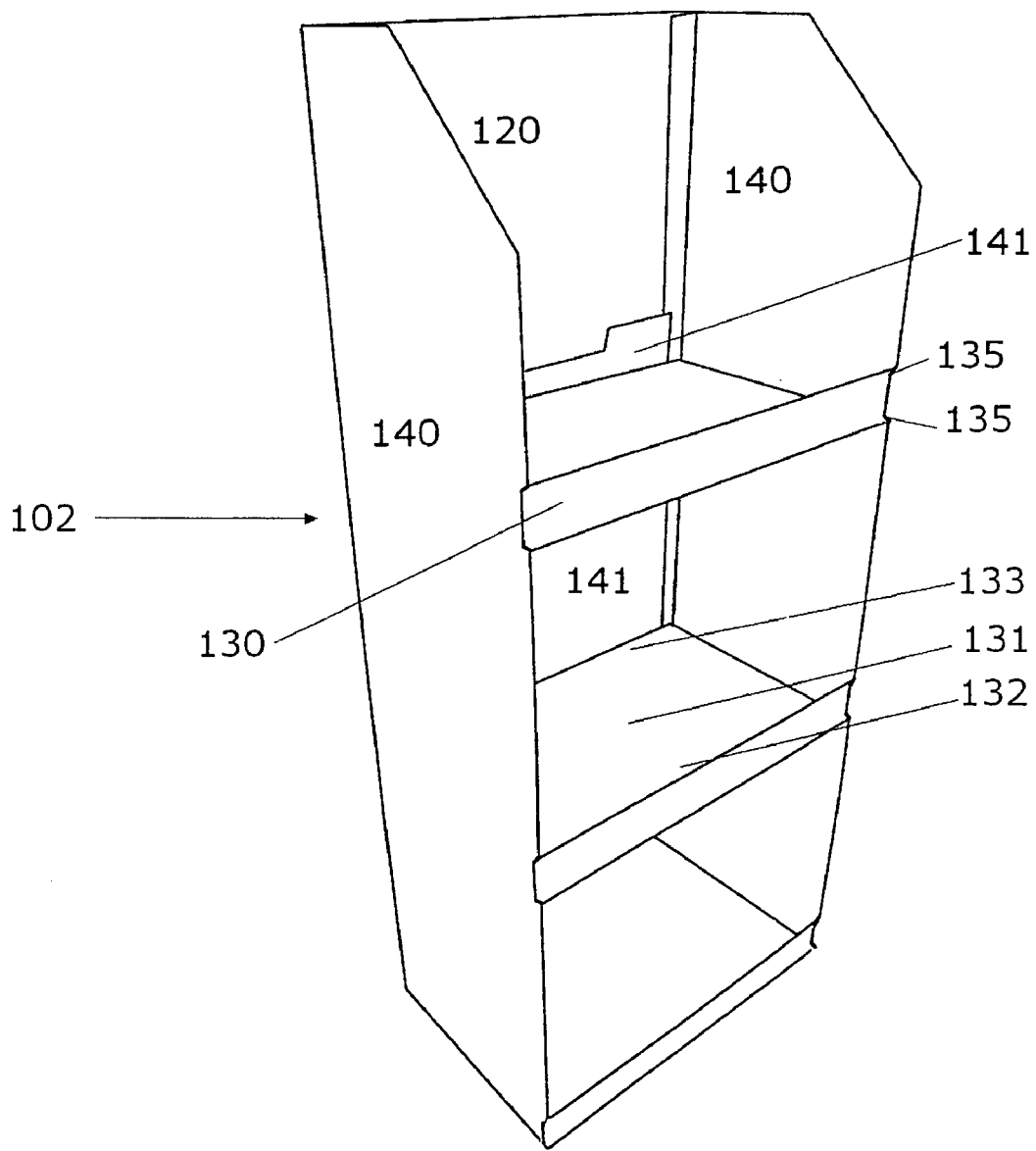


FIG.7

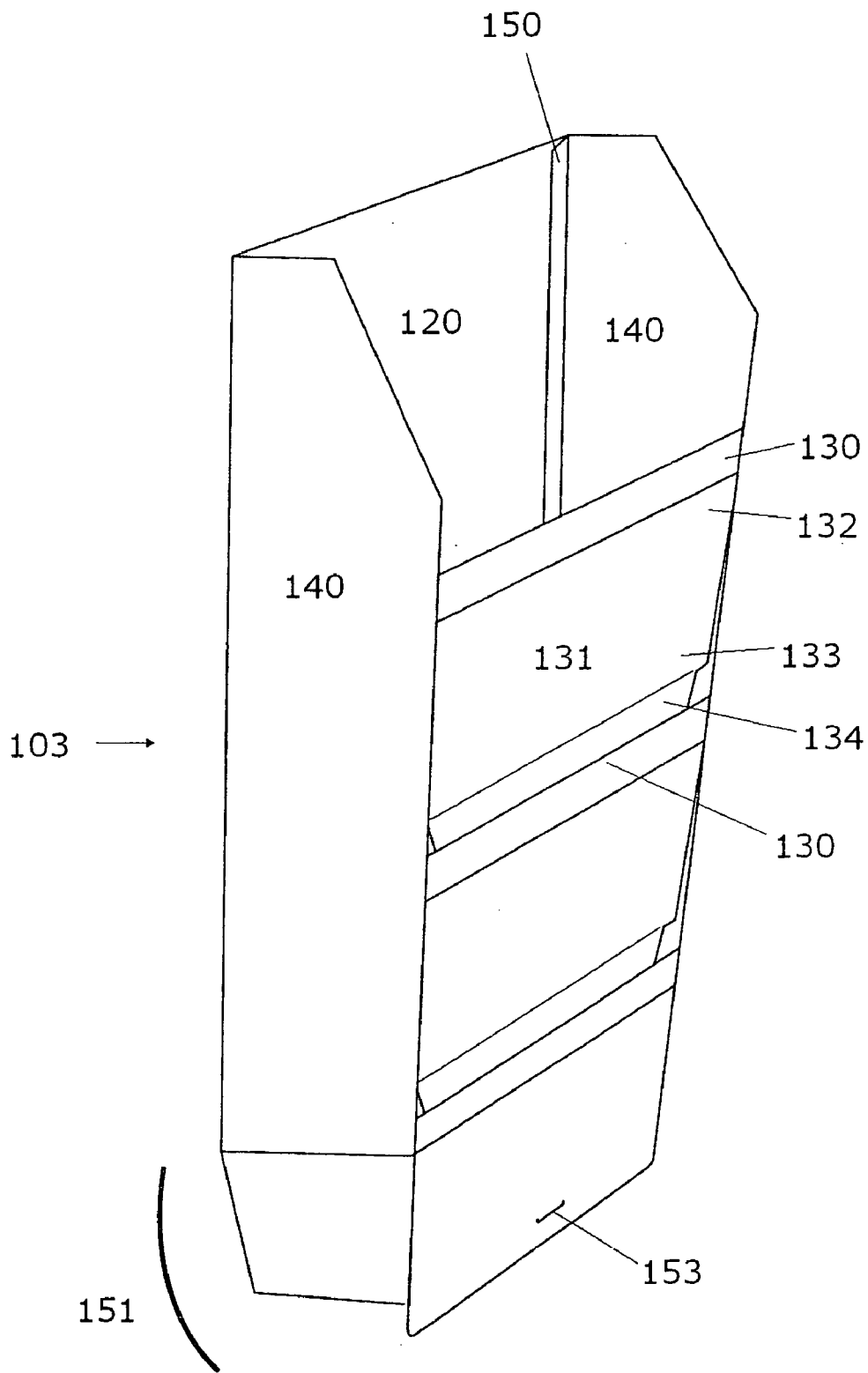


FIG. 8

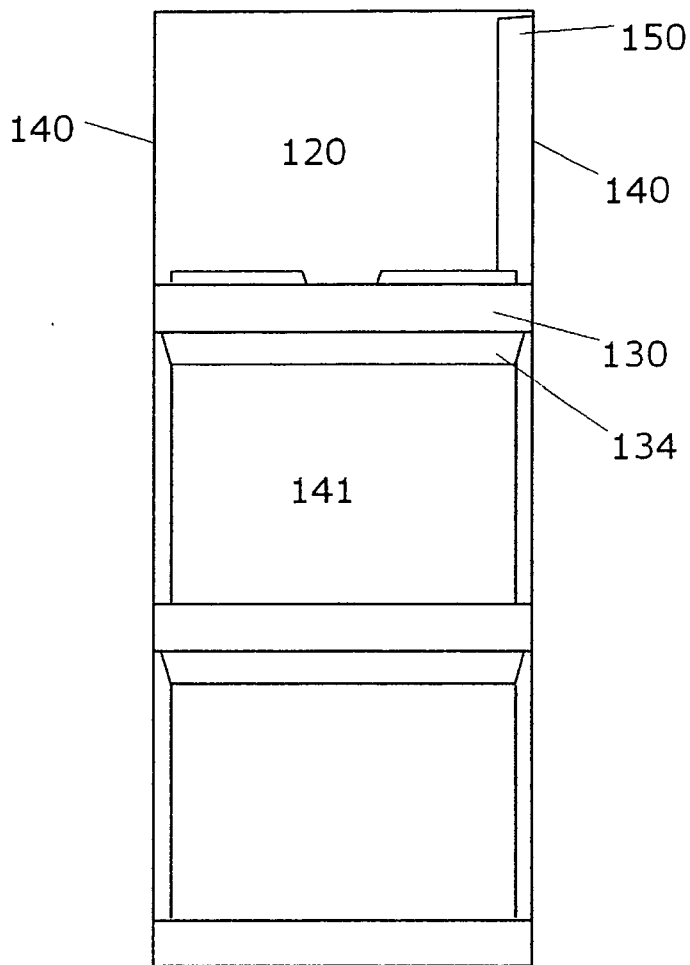


FIG. 9

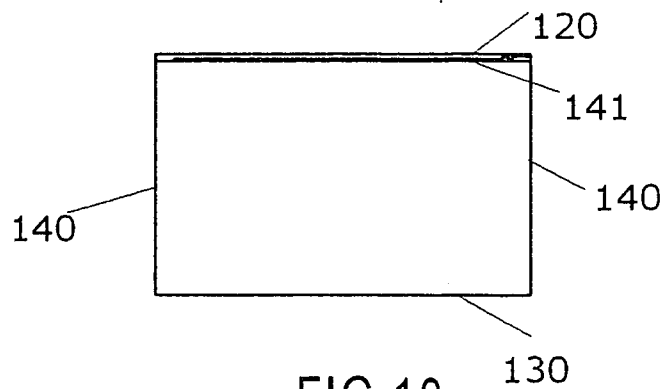
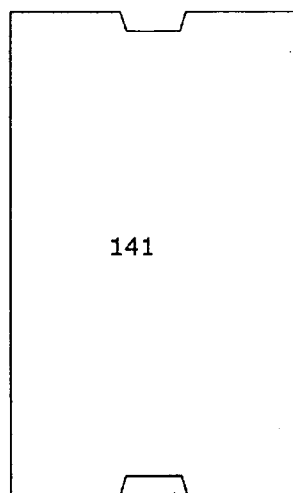
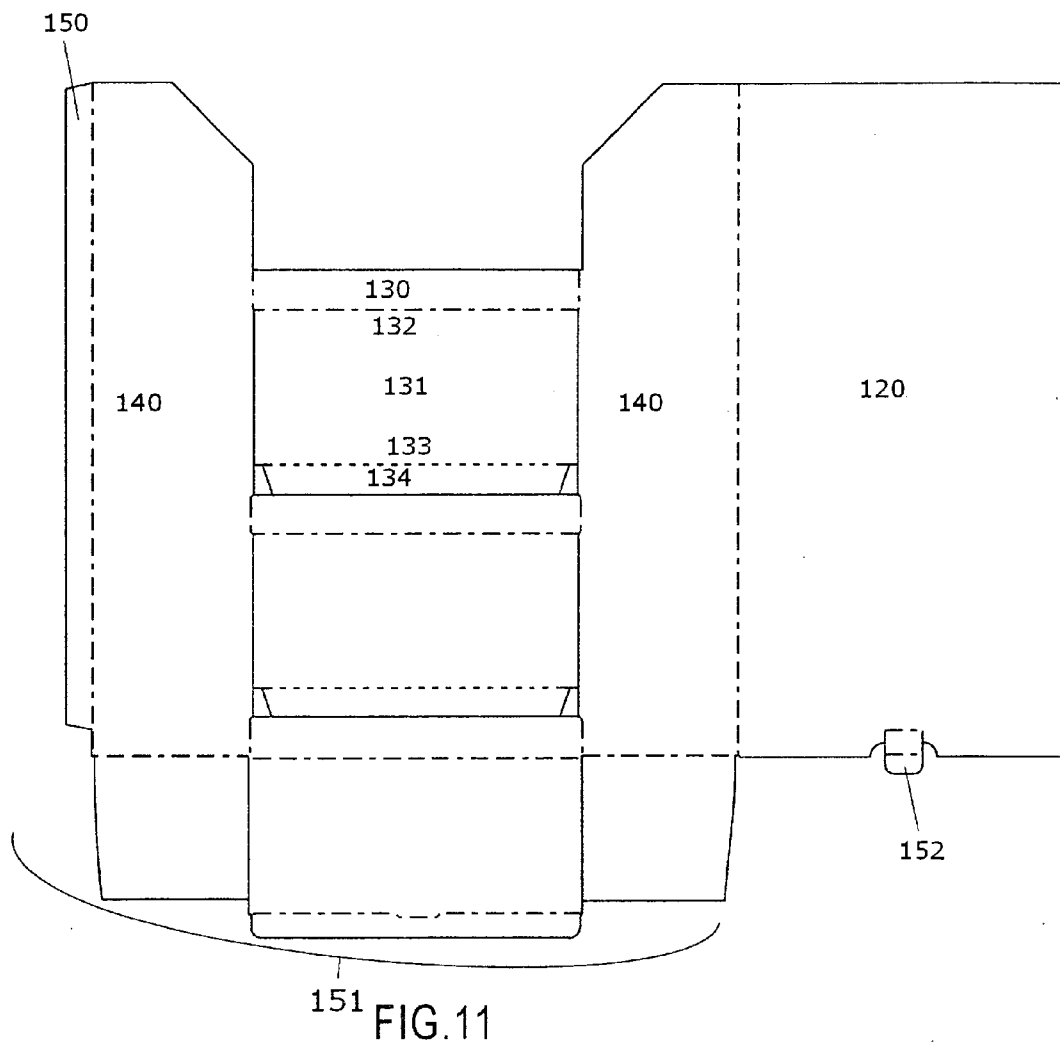


FIG. 10





**COLLAPSIBLE MERCHANDISING DISPLAY**

RELATED APPLICATIONS

[0001] There are no related applications.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not applicable.

REFERENCE TO SEQUENCE LISTING, A TABLE, OR A COMPUTER PROGRAM LISTING COMPACT DISC APPENDIX

[0003] None.

FIELD OF THE INVENTION

[0004] The present invention relates to display devices, and more particularly, to a foldable, portable cardboard display for supporting articles of merchandise.

BACKGROUND OF THE INVENTION

[0005] Corrugated fiberboard (i.e., cardboard) is a well-known structural material commonly used for manufacturing storage boxes and the like. The relative inexpense of the material, its structural qualities, and the ease with which it can be manipulated has resulted in an ever growing number of items manufactured from it. The use of this material in merchandising displays is well known and range from its use as a structural component with an advertising message to various support structures for display of merchandise in an aesthetically pleasing manner. In general, these merchandising displays are box-like structures with bins or shelves sized to hold the merchandise for sale. The displays can be quite bulky and difficult to transport in their assembled state and hence are generally shipped flat and assembled at the point of use. The displays, however, often consist of multiple pieces and, as these displays become ever more sophisticated, the degree of expertise and training necessary to assemble them increases accordingly.

[0006] What is currently needed is a merchandising display device that is easy to assemble, yet equally sturdy and aesthetically pleasing in use. Preferably, the device ships flat for easier transport and is then assembled on site when needed. More preferably, the device can also be easily disassembled and re-used. Any such display should be easy to manufacture and its design should entail a minimum of wasted material during construction.

[0007] Collapsible displays that may be used for merchandising are known in the prior art. U.S. Pat. No. 2,150,743 issued Mar. 14, 1939 is a foldable display device for merchandise constructed from a single sheet of material. The device includes front and rear members "foldably connected" to one another at opposing edges and an "upright sheet member" displaced between them. Flap-like shelves cut from the center panel form shelves that are attached to the front member and the floors of the pockets at the front side are formed from foldable flaps 20 cut from an upright sheet member 21. The shelves of the '743 patent are formed from the apparatus' center panel and the material is cut out to create the openings in its exterior panels. Additional material must also be affixed to the center panel. In contrast, the present invention utilizes material from its exterior panels to form its shelves, thereby

minimizing waste and simplifies construction by eliminating the need for additional materials to form its rearward facing shelves.

[0008] U.S. Pat. No. 4,854,246 issued Aug. 8, 1989 is a free standing device for supporting and displaying merchandise. Shelves cut from and hingedly attached to its front and rear walls partially overlap and interlock to form individual shelving units. No center panel is used to coordinate positioning of the shelves or for additional support, and the strength of the shelving is therefore limited.

[0009] Similarly, U.S. Pat. No. 1,625,294 issued Apr. 19, 1927, and U.S. Pat. No. 6,848,371 issued Feb. 1, 2005 are heavier duty structures, and in the '294 patent is made from sheet metal. Both employ centrally hinged folding shelves. Like the '246 patent discussed above, no center panel is present and the strength of the shelves is due exclusively to the interlocking of their components, therefore limiting their ability to support substantial merchandise weight.

SUMMARY OF THE INVENTION

[0010] The present invention is a multi-shelved merchandising display made from corrugated cardboard or a similar lightweight board-like material. In its collapsed state it is substantially flat thereby minimizing the space needed for storage and ensuring easier transport. When needed, the apparatus is assembled by simply squeezing its sides towards one another or displacing a central panel, thereby extending its front and rear panels causing the attached shelves to position themselves in a horizontal orientation. Locking tabs in the center panel interlock with slots formed in the side panels of the display in order to lock it into place.

[0011] The instant invention is simple to manufacture, minimizes waste, is easy to assemble, and otherwise solves the aforementioned problems noted in the discussion of the prior art. The primary superstructure of the device is die-cut from a single sheet of corrugated cardboard and folded along score or fold lines to create its front, rear, and side panels. Its center panel may also be cut from the same sheet of cardboard material. Whereas previously known devices utilize shelves formed from a center panel, thereby requiring additional materials and additional manufacturing steps, the instant invention employs flap-like shelves cut into its front and rear panels. The free ends of these shelves are then attached to the center panel in order to support them when assembled. In assembling the display, the user need only displace the center panel lengthwise or press the sides of the device towards one another. Movement of the center panel thereby erects the display, including positioning the shelves in a generally horizontal position.

[0012] Known display devices require that apertures be cut from the front and rear panels for access to the shelves formed from the center panel, with the additional result that the waste material from creating these apertures is usually discarded. Forming the shelves of the instant invention from the front and rear panels of the device also creates the apertures through which items displayed on the shelves may be accessed or more clearly visualized, thereby minimizing waste and the materials needed for manufacture. Additionally, the present design allows the center panel to remain intact, if desired, (i.e., without shelves cut therefrom) in order to maximize the structural rigidity of the device.

[0013] It is an object of the invention to provide an inexpensive display device which is sturdy in construction and capable of supporting the weight of the articles of merchandise being exhibited thereon.

[0014] It is another object of this invention to provide an attractive display device for arranging articles of merchandise thereon.

[0015] It is yet another object of this invention to provide a box-like display device having display niches, pockets, or shelves therein for the merchandise.

[0016] It is still another object of this invention to provide a merchandising display device having article displaying areas on opposing front and rear sides.

[0017] It is another object of this invention to provide a display device suitable for displaying articles of merchandise.

[0018] It is a further object of this invention to provide a display device which is easily set up and collapsed by simple folding operations and when set up in its display position, is locked against being collapsed accidentally.

[0019] It is an object of this invention to provide a display device which is easily collapsed for transport and is reusable.

[0020] It is yet another object of this invention to provide a merchandising display which is easy to assemble and does not require any particular degree of skill or training to assemble.

[0021] It is another object of this invention to provide a corrugated cardboard merchandising display which is simple to manufacture, with minimum waste.

[0022] The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0023] FIG. 1 is a perspective view of the inventive display device;

[0024] FIG. 2 is a partially collapsed perspective view of the display invention shown in FIG. 1;

[0025] FIG. 3 is a front elevation of the display invention shown in FIG. 1;

[0026] FIG. 4 is a top plan view of the display invention shown in FIG. 1;

[0027] FIG. 5 is a top plan view of the primary die-cut sheet of the display invention shown in FIGS. 1-4;

[0028] FIG. 6 is a top plan view of the center panel of the display invention shown in FIGS. 1-4;

[0029] FIG. 7 is a perspective view of another embodiment of the display invention;

[0030] FIG. 8 is a partially collapsed perspective view of the display invention shown in FIG. 7;

[0031] FIG. 9 is a front elevation of the display invention shown in FIG. 7;

[0032] FIG. 10 is a top plan view of the display invention shown in FIG. 7;

[0033] FIG. 11 is a top plan view of the primary die-cut sheet of the display invention shown in FIGS. 7-10; and,

[0034] FIG. 12 is a top plan view of the center panel of the display invention shown in FIGS. 7-10.

#### DETAILED DESCRIPTION OF THE INVENTION

[0035] While the invention is described in connection with certain preferred embodiments, it is not intended that the

present invention be so limited. On the contrary, it is intended to cover all alternatives, modifications, and equivalent arrangements as may be included within the spirit and scope of the invention as defined by the appended claims.

[0036] This invention may be constructed from any board-like material that is amenable to precision cutting and is easily foldable. In preferred embodiments, the invention is manufactured from corrugated cardboard. The invention may also be constructed from fiberboard, pulpboard, or corrugated board.

[0037] The preferred embodiment of the apparatus and best mode is rendered in FIGS. 1 through 6. An alternative embodiment is depicted in FIGS. 7 through 12. The elements described herein apply to both the aforementioned preferred and alternative embodiments.

[0038] FIGS. 1-2 are perspective views of the preferred embodiment. In FIG. 1, the display device 100 is depicted fully erect and ready for use. FIG. 2 is a partially collapsed view 101 of the display device. The present device is constructed with a rear panel 20, front panel 30, and side panels 40 comprising its superstructure. Flap-like shelves 31 are formed from the rear 20 and front 30 panels with a leading edge section 32 being the remainder of the respective rear panel 20 and front panel 30 after shelf 31 has been folded back. The leading edge section 32 is perpendicular to the ground with biased end cuts 35 shown in FIGS. 1 and 2 which allow it to be folded in a recessed manner back into the side panels 40 so that it will not engage passersby. A trapezoidal shaped center panel engagement flap 34 is also formed on the trailing end section of the shelves which facilitates mounting of the shelves 31 to a center panel 41. The center panel engagement flaps 34 have a length which is less than the shelf length, with the top of the flaps 34 or trailing end being positioned adjacent the bottom of the center panel apertures 45. The center panel 41 is longitudinally displaced during erection and disassembly of the apparatus 100 and serves to position and provide support to the shelves 31 at their trailing end section 34. Locking tabs 43 on the center panel 41 engage locking slots 42 cut formed along score lines 47 in the side panels 40 of the device to lock the device in its erect position. The top and bottom tabs 43 define an upper vertical slot 48 while the middle tab 43A has a trapezoidal shape without a slot.

[0039] FIGS. 5-6 show the die cut material from which the display device 100 is constructed. Solid lines indicate cuts through the material. Dashed lines indicate score lines or creases created, for example, by embossing pressure or by a plurality of periodic incisions along the desired crease. Apertures 44 are formed in the side panels 40 of the display 100 to create an aesthetically pleasing effect and allow viewing of the stored merchandise. Center panel apertures 45 permit the viewing of merchandise on either the rearward facing or forward facing shelves 31 and eliminate weight. The center panel apertures 45 facilitate use of each adjacent rearward facing shelf 31 as a single contiguous shelf. The shelves 31 which are formed from the rear and front panels 20, 30 of the device are single piece shelves. It is also clear from these figures that in order for the device to function properly, the depth of the shelves 31 formed from the rear and front panels 20, 30 are approximately one half the width of the side panels 40.

[0040] The apparatus is assembled by simply affixing assembly flap 50 of the die cut sheet to the opposing free end of the sheet thereby forming a box structure. The side panels

40 are folded along the longitudinal side panel score lines 47, which during disassembly facilitates collapsing the box. The center panel 41 is then inserted and the trailing end section or center panel engagement flaps 34 of the shelves 31 are then affixed to the center panel 41 such that, when erected, the shelves 31 are in a generally horizontal position with the center panel engagement flaps 34 parallel and adjacent the center panel 41. Locking slots 42 incised in the side panels 40 congruent with the side panel score lines 47 engage locking tabs 43 and 43A on the center panel 41 maintaining the apparatus in an erect sturdy position. It is noted that the general position of the shelves 31 relative to the base of the display 100 may be varied according to the positioning of the center panel engagement flaps 34 on the center panel 41. Mounting the center panel engagement flaps 34 at relatively higher or lower positions on the center panel will result in shelves 31 having a forward or rearward cant as desired.

[0041] To operate the preferred embodiment 100, one need only press the initially folded side panels 40 towards one another thereby causing the center panel 41 and shelves 31 attached thereto to move downward until locking tabs 43 of the center panel 41 engage the locking slots 42 of the side panels 41. Simple manipulation of the locking tabs 43 and slots 42 locks the apparatus 100 in its fully erect position with generally flat, horizontal shelves ready to display the desired merchandise.

[0042] FIGS. 7-8 are perspective views of an alternative embodiment. In FIG. 7, the display device 102 is depicted fully erect and ready for use. FIG. 8 is a partially collapsed view 103 of the display device. The apparatus is constructed with a rear panel 120, front panel 130, and side panels 140 comprising its superstructure. Flap-like shelves 131 are formed from the rear 120 and front 130 panels with their leading ends sections 132 being the remainder of the respective panel 120, 130 after shelf 131 has been folded back. The leading end section 132 of the shelf 131 is perpendicular to the ground with biased end cuts 135 which allow it to be folded in a recessed manner back into the side panels 140 so that it will not engage passersby, as is seen in FIG. 8. A trapezoidal center panel engagement flap or rear end section 134 is also formed from the rear and front panels 120, 130, which facilitates mounting of the shelves 131 to a center panel 141. The flap 134 is folded downward from the plane of the shelf 131. The center panel engagement flaps 134 have a length which is less than the shelf length, with the top of the flaps 134 being positioned above the top of the center panel apertures 145. The center panel 141 is longitudinally displaced during erection and disassembly of the apparatus 102 and serves to position and provide support to the shelves 131 at their trailing end sections 134. Locking tabs 143 in the center panel 141 engage locking slots 142 cut along score lines 147 in the side panels 140 of the device to lock the device in its erect position. The locking tabs 143 define a downwardly oriented slot 148, as shown in FIG. 12, which allows the center panel 141 to be secured in locking slots 142 of side panels 140.

[0043] FIGS. 11-12 show the die-cut material from which the present display device is constructed. Similar to FIGS. 5-6, solid lines indicate cuts through the material and dashed lines indicate score lines or creases. Center panel apertures 145 permit the viewing of merchandise on either the rearward facing or forward facing shelves 131, eliminate weight, and facilitate use of each adjacent rearward facing and forward facing shelf 131 as a single contiguous shelf.

[0044] The display device 102 is assembled by simply affixing assembly flap 150, shown in FIG. 11, of the die cut sheet to the opposing free end of the sheet thereby forming a box structure. The side panels 140 are folded along the longitudinal side panel score lines 147, which during disassembly facilitates collapsing the box. The center panel 141 is then inserted and the center panel engagement flaps 134 of the shelves 131 are affixed to the center panel 141 such that the shelves 131 are in a generally horizontal position with the center panel engagement flaps 134 parallel and adjacent the center panel 141. Locking slots 142 formed in the side panels 140 engage locking tabs 143 of the center panel 141 thereby maintaining the apparatus in its erect position.

[0045] Embodiment 102 is assembled similarly to display 100 by displacing its center panel 141 upward, thereby causing the initially folded side panels 140 of the device to unfold into their erect position. The shelves 131 of the embodiment 102 move upwards in conjunction with the upward displacement of its center panel 141 until they reach their erect, generally horizontal position thereby forming lipped display surfaces which may be locked into place via a set of locking tabs 143 and locking slots 142. Because the center panel 141 and shelves 131 are displaced upwardly in the alternative embodiment 102, an additional display bin 121 is created on the top-most shelf 131A and the upper portions of the apparatus' rear, side, and front panels 120, 140, 130 define an open-topped, flat bottom volume. The upper portions of the rear, side, and front panels 120, 140, 130 are then simply folded onto themselves to create an aesthetically pleasing display bin 121. The bottom portion of rear and front panels 120 and 130 are cut out at 125 to form the appearance of legs 126.

[0046] The principles, preferred embodiments and modes of operation of the present invention have been described in the foregoing specification. However, the invention should not be construed as limited to the particular embodiments which have been described above. Instead, the embodiments described here should be regarded as illustrative rather than restrictive. Variations and changes may be made by others without departing from the scope of the present invention as defined by the following claims:

What I claim is:

1. A collapsible merchandising display comprising:
  - a display assembly with a rear panel, a front panel, and side panels defining a generally rectilinear box shape having top and bottom portions;
  - said side panels being foldable along a score line running between said top and bottom portions bifurcating said side panels;
  - a plurality of rear and front shelves formed from said rear and front panels, said shelving having leading edges foldably secured to said rear and front panels, a center section and a rear lip section engaging a center panel; and,
  - a center panel mounted to said display assembly side panels.
2. A collapsible merchandising display as claimed in claim 1 wherein said merchandising display is manufactured from a material selected from the group consisting of cardboard, card board, fiberboard, fiber board, fibreboard, fibre board, pulpboard, pulp board, and corrugated board.
3. A collapsible merchandising display as claimed in claim 2 wherein said display assembly is a single sheet of material.

4. A collapsible merchandising display as claimed in claim 1 wherein said central panel has locking tabs which are mounted in locking slots formed in said side panels to maintain said merchandising display in an assembled conformation.

5. A collapsible merchandising display as claimed in claim 1 wherein said center panel defines a plurality of apertures, said apertures in said center panel being adjacent to and positioned above single contiguous shelves when said display is in an assembled condition.

6. A collapsible merchandising display as claimed in claim 1 wherein said leading edge of said shelves is recessed in said side panels.

7. A collapsible merchandising display as claimed in claim 1 wherein said display is substantially flat when collapsed.

8. A collapsible cardboard merchandising display comprising:

a cardboard rear panel, front panel, and side panels defining a generally rectilinear box shape having top and bottom portions;

said cardboard side panels being foldable along a score line running between said top and bottom portions bifurcating said cardboard side panels;

cardboard rear and front shelves excised from and rearwardly folded from said rear and front panels, with leading end sections of said cardboard shelves being foldably attached to said cardboard rear and front panels and the trailing end sections being adapted to engage a center panel;

said side panels defining a plurality of apertures adjacent said flat cardboard rear and front shelves; and,

a cardboard center panel, with the trailing end sections of said cardboard shelves mounted thereto, said center panel defining apertures adjacent to and positioned above said shelves.

9. A collapsible cardboard merchandising display as claimed in claim 8 wherein said merchandising display is manufactured from a single sheet of cardboard.

10. A collapsible cardboard merchandising display as claimed in claim 8 wherein said central panel has locking tabs which are mounted in locking slots formed in said side panels to maintain said merchandising display in an assembled conformation.

11. A collapsible cardboard merchandising display as claimed in claim 8 wherein said center panel defines a plurality of apertures, said apertures in said center panel being adjacent to and positioned above single contiguous shelves when said display is in an assembled condition.

12. A collapsible cardboard merchandising display as claimed in claim 8 wherein said leading end of said shelves is recessed in said side panels.

13. A collapsible merchandising display as claimed in claim 8 wherein said display is substantially flat when collapsed.

14. A collapsible cardboard merchandising display comprising:

a unitary cardboard rear panel, front panel, and side panels defining a generally rectilinear box shape having top and bottom portions;

said cardboard side panels being foldable along a score line running between said top and bottom portions bifurcating said cardboard side panels;

lipped cardboard shelves excised from and upwardly folded from said rear and front panels to form front and rear shelves with a leading end section of said cardboard shelves being foldably attached to said cardboard rear and front panels;

a cardboard center panel engaging the trailing end sections of said cardboard shelves, said center panel defining apertures adjacent said cardboard shelves; and,

said cardboard rear panel, front panel, side panels, and shelves defining an open-topped, generally rectilinear volume.

15. A collapsible cardboard merchandising display as claimed in claim 14 wherein said merchandising display is manufactured from a single sheet of cardboard.

16. A collapsible cardboard merchandising display as claimed in claim 14 wherein said central panel has locking tabs which are mounted in locking slots formed in said side panels to maintain said merchandising display in an assembled conformation.

17. A collapsible cardboard merchandising display as claimed in claim 14 wherein said center panel defines a plurality of apertures, said apertures in said center panel being adjacent to and positioned above single contiguous shelves when said display is in an assembled condition.

18. A collapsible cardboard merchandising display as claimed in claim 14 wherein said leading end section of said shelves is recessed in said side panels.

19. A collapsible merchandising display as claimed in claim 14 wherein said display is substantially flat when collapsed.

20. A collapsible merchandising display as claimed in claim 14 wherein said cardboard rear panel and said cardboard front panel define cutouts to form legs.

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