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Kassimir

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[45] **Aug. 20, 1974**

[54] **STRAP PEG BOARD ASSEMBLY FOR MERCHANDISE GONDOLA**

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[73] Assignee: **Levin Fixture Corporation,** Flushing, N.Y.

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[21] Appl. No.: **247,442**

[52] **U.S. Cl.** **211/1,** 52/616, 211/134, 248/DIG. 3

[51] **Int. Cl.** **A47f 5/00**

[58] **Field of Search** ..... 211/1, 177, 134, 148; 287/189.36 H; 40/155, 125 H; 52/616, 615, 620; 248/DIG. 3

[56] **References Cited**

UNITED STATES PATENTS

3,170,456	2/1965	Moss et al.	52/616 X
3,295,283	1/1967	Griffith et al.	52/616 X
3,346,124	10/1967	Sobel	211/148
3,471,978	10/1969	Fenwick	52/615 X
3,577,973	5/1971	Katona	52/616 X
3,591,993	7/1971	Reeves	52/615 X

Primary Examiner—Ramon S. Britts
Attorney, Agent, or Firm—Pennie & Edmonds

[57] **ABSTRACT**

An assembly of at least one panel having two parallel panel sheets having characteristic uniformly arranged openings held in compression by peripheral channel members in combination with vertical end supports and a base rigidly connected to provide integral support.

10 Claims, 16 Drawing Figures

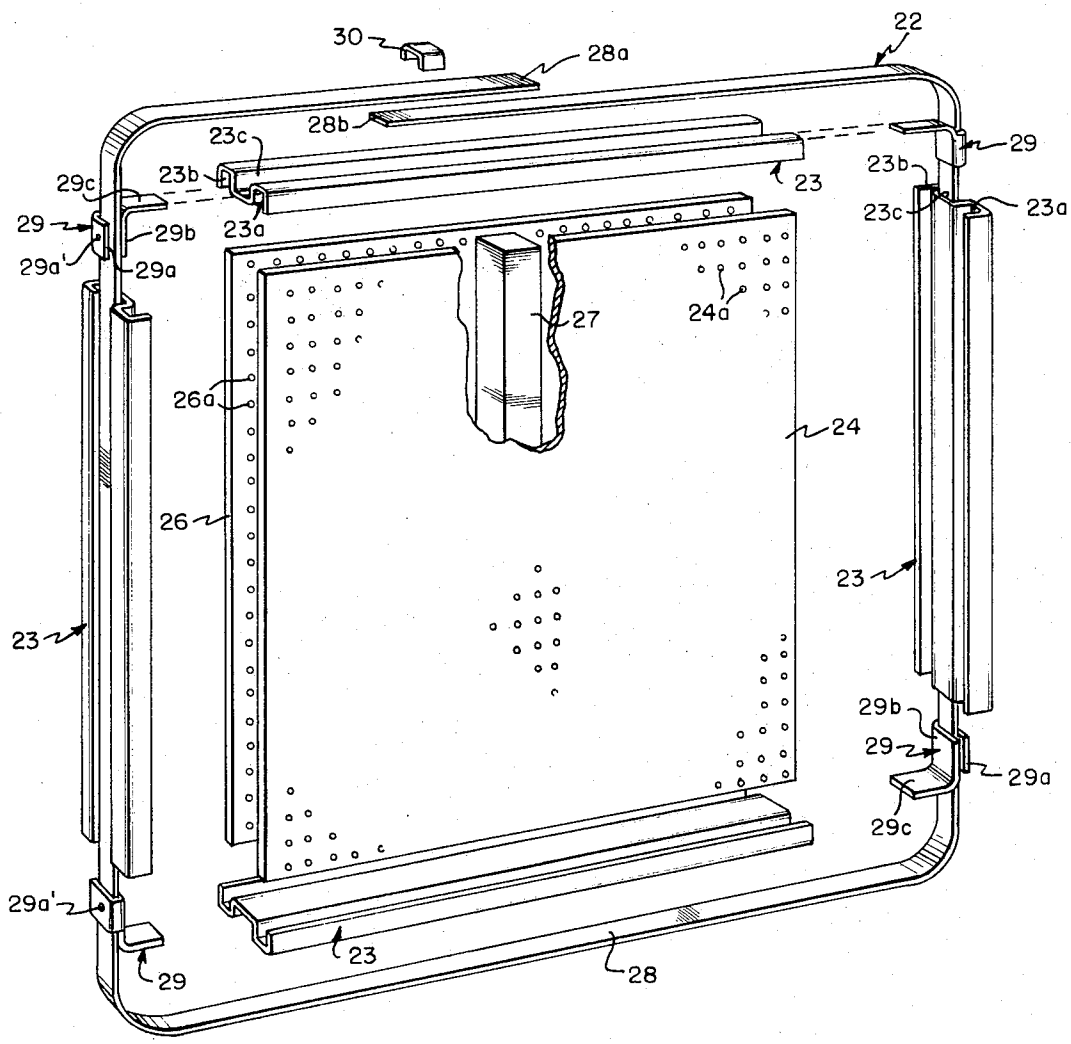


FIG. 1

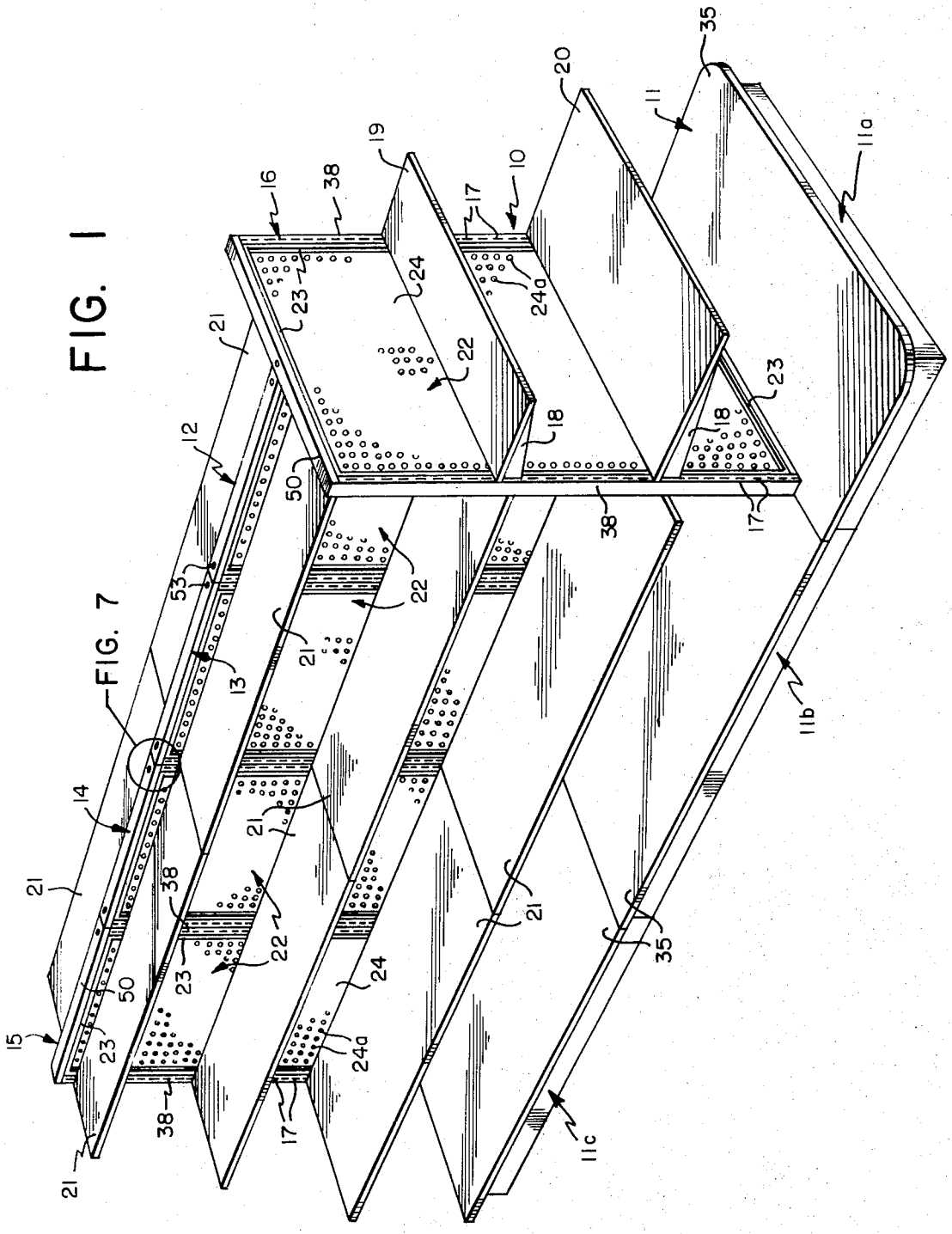

FIG. 7
10
11
11a
11b
11c
12
13
14
15
16
17
18
19
20
21
22
23
24
24a
35
38
50
53

FIG. 2

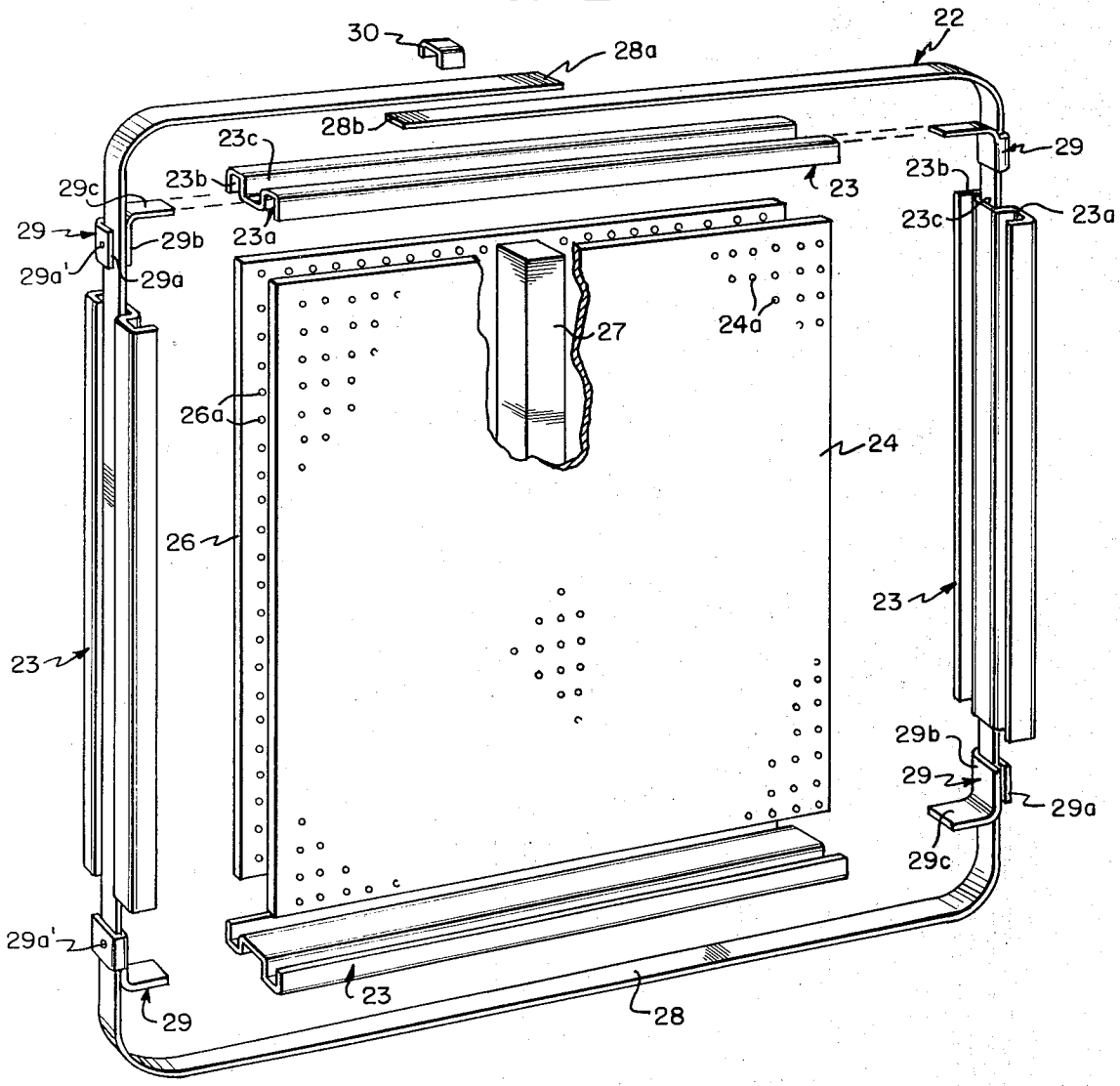
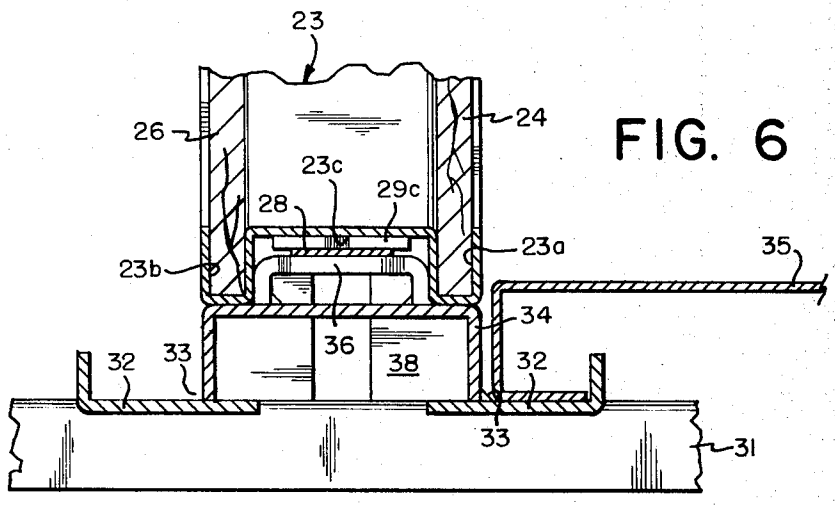

30
28a
22
28b
23c
23b
29
29c
23
23b
23a
29
29b
23c
29a'
29a
27
24a
26a
24
26
23
23
29b
29
29a
29c
29a'
23
29
28

FIG. 6


23
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23c
29c
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23a
23b
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38
32
33
32
33
31

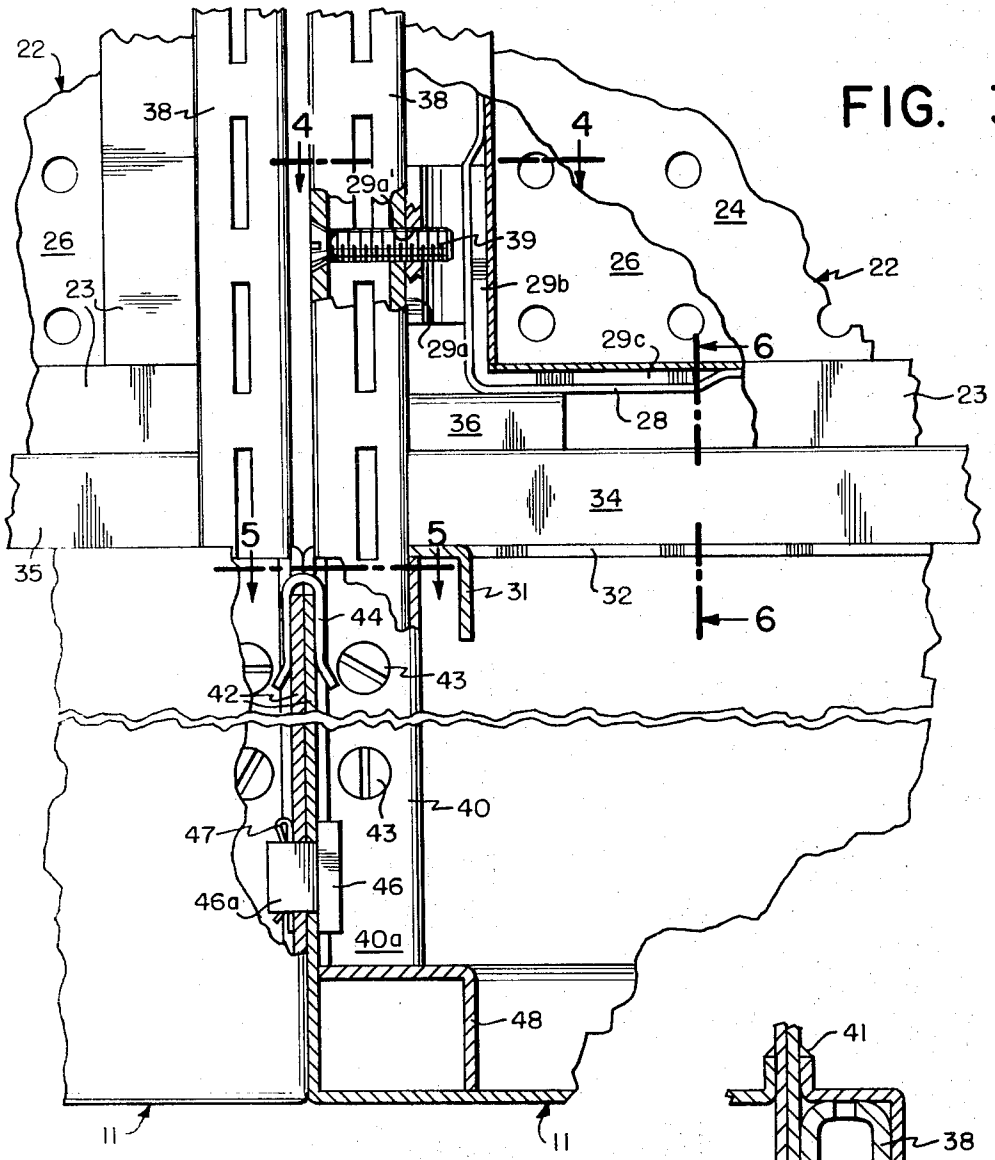
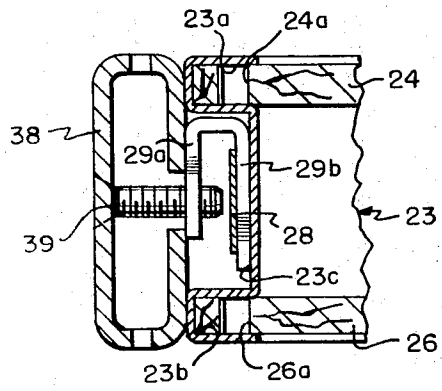


FIG. 3

FIG. 4



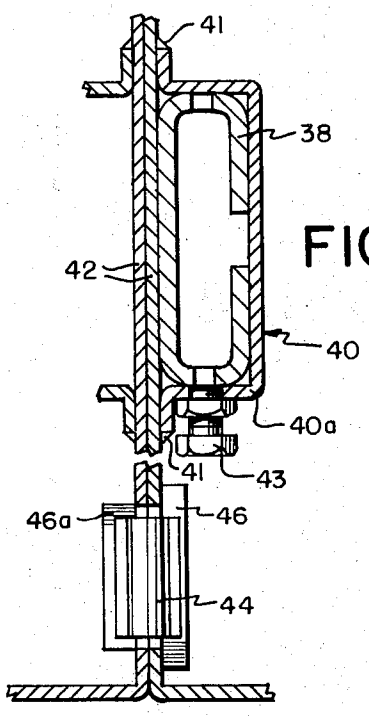


FIG. 5

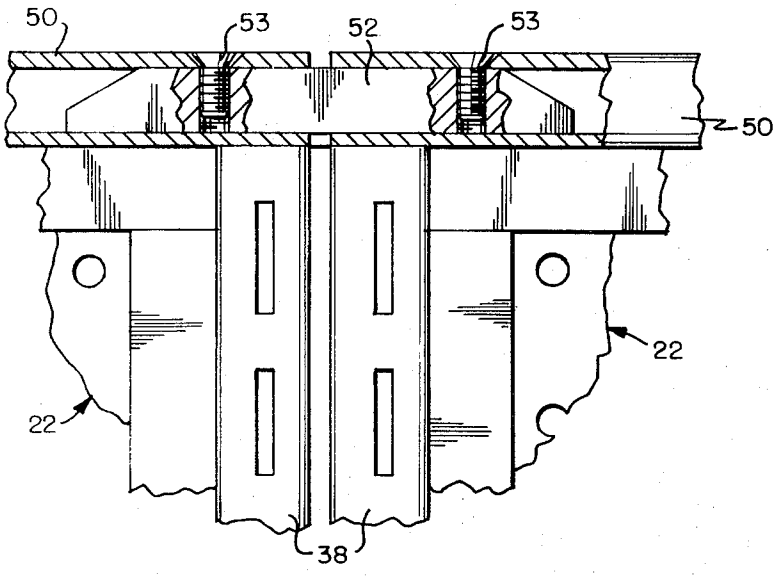


FIG. 7

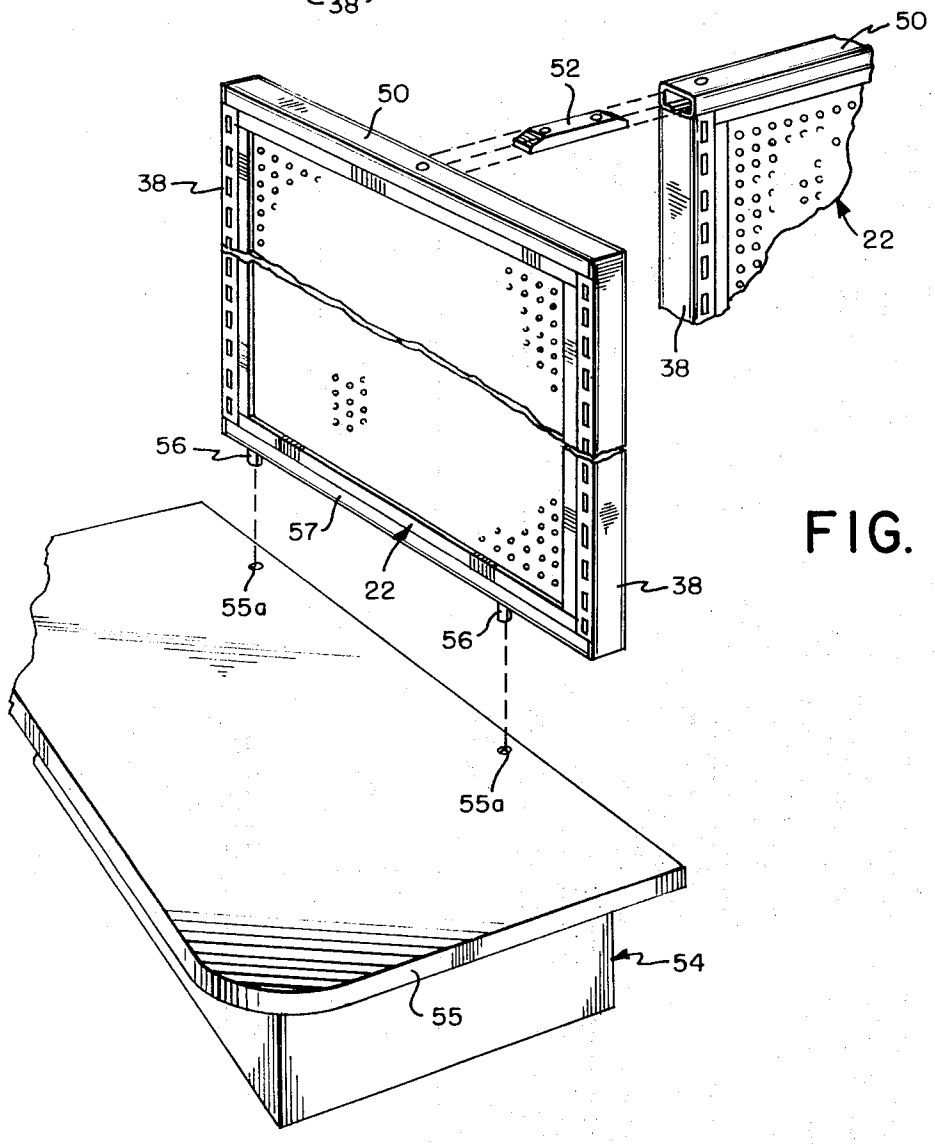


FIG. 8

FIG. 9

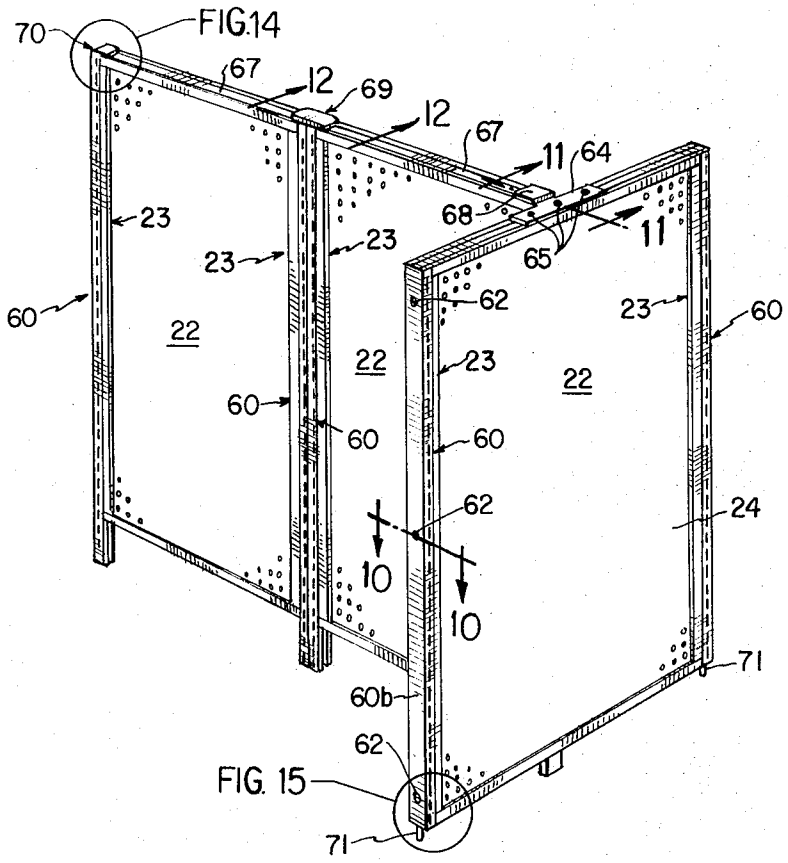


FIG. 11

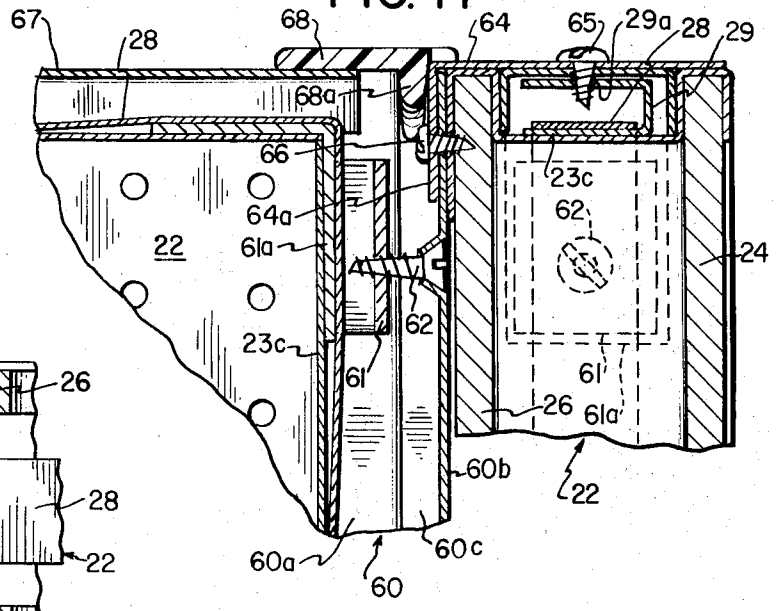


FIG. 10

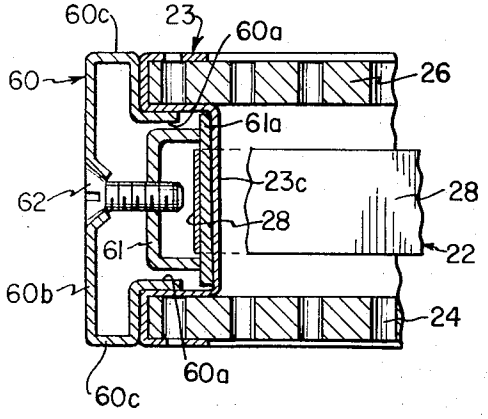


FIG. 12

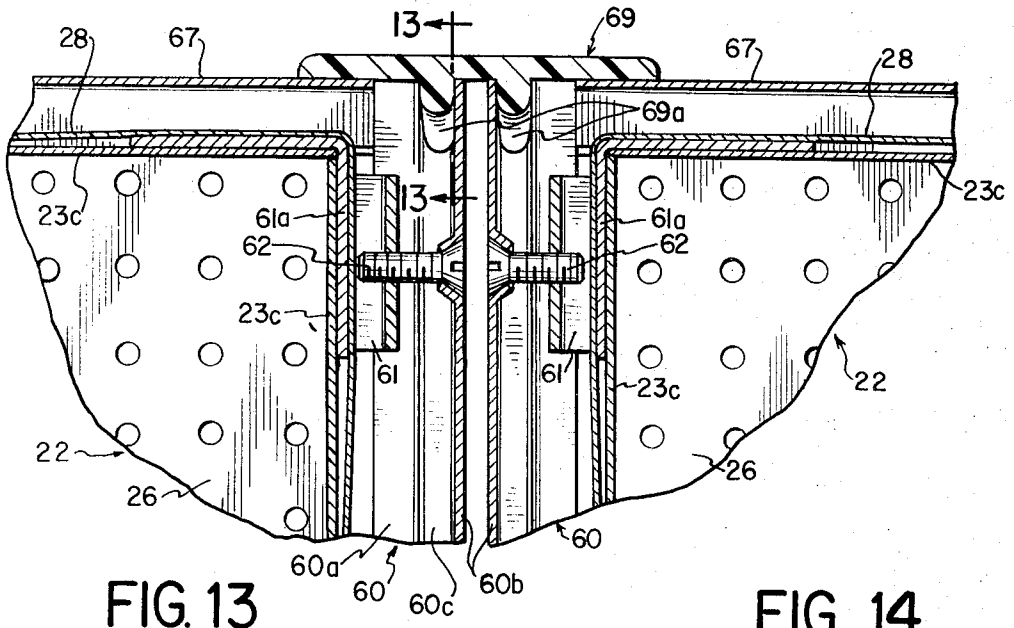


FIG. 13

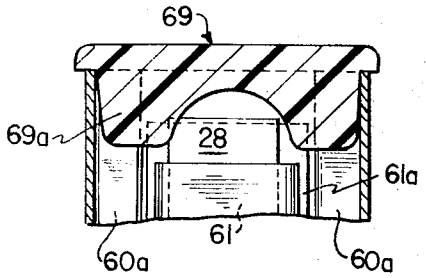


FIG. 14

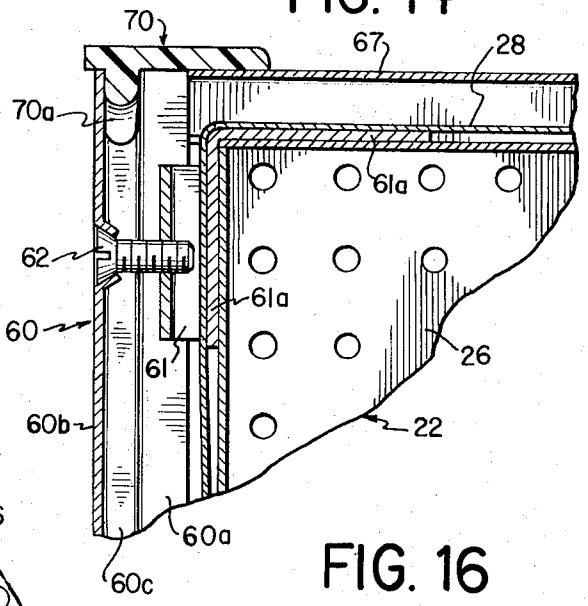


FIG. 15

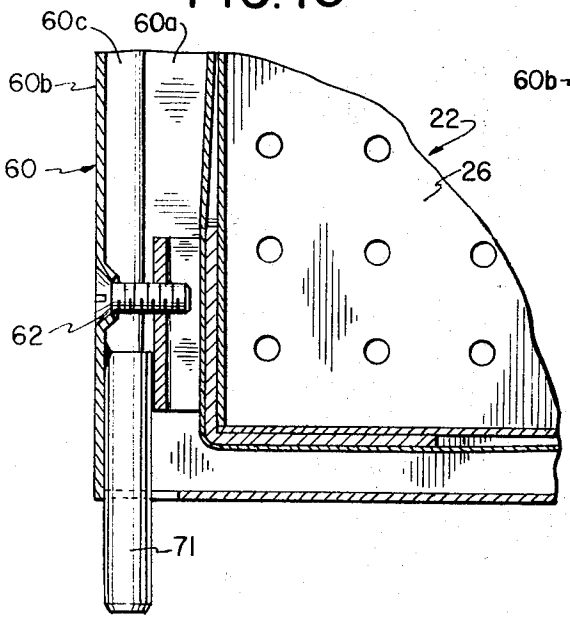
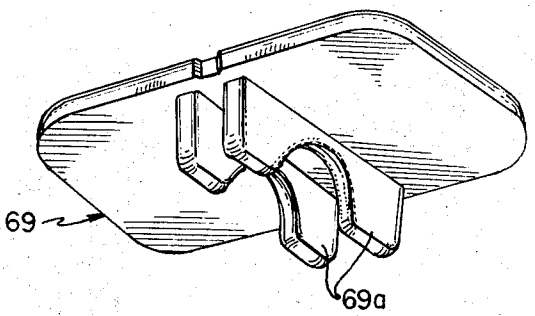


FIG. 16



STRAP PEG BOARD ASSEMBLY FOR MERCHANDISE GONDOLA

BACKGROUND OF THE INVENTION

The present invention relates to display apparatus and specifically to merchandising structures known in the trade as gondolas. Such units are typically of modular construction, each module having two vertical end supports which are channelled to slidably receive an intermediate panel. Brackets are hung upon the vertical supports on opposite sides of the panel for the display of merchandise. Such gondolas can be made up of one or two panels of 50 or more feet long for supermarket use, for example.

One of the problems associated with conventional gondola construction is how to attain a high degree of structural rigidity and load bearing capability commensurate with economy of construction. Units must be able to withstand severe loading without sagging, bending or structural failure.

Contrary to known types of gondola construction, the present invention uniquely provides a modular center panel of novel sandwich design interconnected to the upright support members of the gondola in such a manner as to lead greatly improved strength to these support members.

SUMMARY OF THE INVENTION

In accordance with the present invention, a gondola is constructed having a modular central panel comprising a sandwich panel preferably of two rectangular sheets of panel board held in spaced, coincident parallel relation along their edges by channel members having grooves for the reception of said edges. The panel board is preferably one having characteristic uniformly arranged openings and known by the trademark Peg Board. A tension strap is contained in the channel members about the periphery of the panel assembly. A reinforcing angle is placed in each corner to distribute the stress of the tension strap to the channel members which thus bear with considerable compression force against the edges of the peg boards. An attaching flange is added to the reinforcing angle for attachment of the panel to upright supports as a rigid and structurally integral part of the gondola. The invention further provides for multiple interconnecting panels and upright supports and for attachment of the upright supports to a gondola base.

The above construction, for the first time, permits the center panels of a gondola to assume the vertical loads imposed thereupon by weighted shelving which is supported by the upright members. Consequently, an integrated load bearing structure is provided wherein the normal upright frame members at the ends of each peg board center panel can be considerably lightened and mass-produced, thus reducing cost.

These and other aspects of the invention will become clear upon examination of the following detailed specification and of the accompany drawing in which:

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a perspective view of a gondola constructed according to the principles of the present invention;

FIG. **2** is an exploded view of a sandwich panel forming part of the gondola of FIG. **1**;

FIG. **3** is an enlarged fragmentary detail illustrating various interconnecting members of the gondola of FIG. **1**;

FIGS. **4, 5** and **6** are respectively cross sections taken in the direction of arrows **4—4, 5—5** and **6—6** of FIG. **3**;

FIG. **7** is an enlarged fragmentary detail of various interconnecting members as indicated on FIG. **1**;

FIG. **8** is an exploded view of a means of connecting two sandwich panels and an alternate means of connecting sandwich panels to the base of the gondola;

FIG. **9** is a perspective view of an alternate embodiment of the invention;

FIGS. **10–12** are respectively cross sections taken in the direction of arrows **10—10, 11—11** and **12—12** of FIG. **9**;

FIG. **13** is a cross section taken in the direction of arrow **13—13** of FIG. **12**;

FIG. **14** is an enlarged fragmentary detail of a portion of the gondola of FIG. **9**;

FIG. **15** is an enlarged fragmentary detail showing how a fastening means is arranged for connecting a sandwich panel to the base of a gondola; and

FIG. **16** is a detail in perspective of a clip for joining the top portions of two adjacent sandwich panels.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring now to the drawing and initially to FIG. **1** thereof, a gondola **10** constructed according to the principles of the present invention has been illustrated. Gondola **10** includes a base **11** which is formed in sections **11***a*–**11***c* upon which are mounted vertical sections **12–16.** Each of these sections is uniquely constructed and interconnected in accordance with the present invention as will be described in detail. As further illustrated in FIG. **1**, each section **12–16** includes variable height openings **17** mounting shelf brackets **18** for the support of a plurality of shelves **19, 20, 21** etc.

Referring now to FIG. **2**, there has been illustrated a sandwich panel **22** which is an essential feature of the construction of the gondola **10** in accordance with the present invention. Each sandwich panel **22** includes four peripherally arranged channel members **23** whose inwardly defined channel **23***a*, **23***b* are adapted to receive edge portions of two adjacent panels **24** and **26.** In the illustrated forms of the invention, panels **24** and **26** are of high density, compressed fiber of the type known as hardboard Peg Board having characteristic uniformly arrranged openings **24***a*, **26***a* therein. Such openings provide for decoration and for display purposes using suitable hooks. An elongated block of wood **27** is glued between each of the panels **24** and **26** to provide additional rigidity.

A tension strap **28** is contained within outwardly defined channels **23***c* in each of the channel members **23,** the strap being connected at the four corners of the panel to an L-shaped attachment clip **29.** When height is considerable, a third internal clip will be used. Each clip **29** has two legs **29***a*, **29***b* which straddle both sides of the strap **28,** while a third leg **29***c* is received within opposite ends of channel **23***c*. Leg **29** has a threaded opening **29***a*′ therein for a reason which will be explained subsequently. When the tension strap **28** is drawn taut, ends **28***a*, **28***b* thereof slide upon each other in opposite directions to take up any excess length of the strap. Using a known technique for securing tension

straps of this type, a clip **30** will be crimped about the ends **28***a* and **28***b* to prevent further movement of the strap. During this process, channel members **23** will be brought to bear quite forceably against the edges of panels **24** and **26** and thus secure the entire sandwich panel **22** together as a unitary body.

Referring to FIGS. **3** and **6**, it will be seen that the base of the gondola **10** includes transverse support members **31** upon braces **32** and **33** extending longitudinally. Deck members **35** are supported along their entire length upon braces **32** and **33.** Also extending longitudinally upon members **31** are L-shaped members **32** to which is welded at **33** a channel member **34.** A centering rib **36** is in turn welded atop channel **34** at each end thereof. The lowermost channel member **23** rests upon channel member **34** and is centered with respect thereto by ribs **36,** ribs **36** being received within outwardly disposed channel **23***c*.

Referring to FIGS. **3–5,** it will be seen that adjacent to each vertical end of a sandwich panel **22,** there is a vertical upright **38** connnected to each sandwich panel **22** by means of a threaded screw **39** which extends through each upright member **38** and into the threaded opening **29***a'* in leg **29***a* of the attachment **29.** As best seen in FIG. **5,** each upright member **38** extends downwardly and is snugly received within a channel member **40,** welded at **41** to a vertical section **42** of the base of the gondola. Screws **43** are threaded into leg **40***a* of the channel to securely clamp the upright members **38** and channel members **40** together. As seen in FIG. **3,** adjacent vertical sections **42** of the frame are connected together in modular form by clips **44** and by a connector **46** whose leg **46***a* is secured immovably by a cotter pin **47.** At the extreme lower limit of the base of the gondola, a series of hollow, rectangular members **48** provide support for the ends of the upright members **38** and for the remainder of the gondola superimposed thereon.

Referring to FIG. **7,** it will be seen that a channel strip **50** is welded to the top of each upright member **38,** thereby forming a frame which accepts the sandwich panel **22.** A connecting member **52** is received within the strips **50** joining adjacent strips **50** together by screws **53.** As shown in FIG. **8,** a similar type of connection is provided where a sandwich panel **22** is joined at right angles to an adjacent sandwich panel. In the embodiment of FIG. **8,** a base **54** includes a deck member **55** in which holes **55***a* have been bored. These holes in turn receive pins **56,** which have been fastened to a channel member **57** replacing channel **34** of the prior embodiment.

Referring to FIGS. **9–11,** an alternate form of gondola has been illustrated wherein the same reference numerals indicate parts similar to those of the gondola of FIGS. **1–8.** The gondola of FIG. **9** consists of sandwich panels **22** constructed in the same manner as before-described joined to vertical uprights **60** which are roll-formed of sheet steel. This construction permits the member **60** to be mass-produced of lighter gage metal than that used in the construction of the vertical uprights **38** of the previous embodiment. Since the members **60** are of light gage construction, they are not so able by themselves to withstand the loads normally imposed upon gondolas of this type,; however, it is the function of the present invention to provide a construction wherein the panels **22** so reinforce the vertical upright members of each embodiment that the considerable load forces imposed upon the gondola will be essentially absorbed and carried by the sandwich panels.

Each of the members **60** includes L-shaped legs **60***a* which abut against the panel boards **24** and **26** of the sandwich panel. Outer sections **60***c* are in alignment with the outer surfaces of peg board **24, 26.** A clip **61,** generally U-shaped in cross section, is attached to an angle bracket **61***a* which is held against the leg **23***c* of channel member **23** by compression strap **28.** The vertical upright members **60** are connected to the clip **61** by means of the attaching screws **62.**

FIG. **11** illustrates the right angle juncture of two sandwich panels **22** as illustrated in FIG. **9.** In order to form this connection, a clip **29** of the type disclosed in the previous embodiment is attached to leg **23***c* of the channel member by the compression strap **28.** Leg **29***a* of the clip is secured to a bracket **64** by means of the attaching screw **65.** Bracket **64** includes a leg **64***a* which extends over the outer flange **60***b* of the adjacent vertical upright which is attached to the end of the adjacent panel **22.** Screw **66** connects the bracket **64** to the flange **60***b*. A U-shaped finishing member **67** is received within the upper channel member **23** of the adjacent panel **22.** The plastic clip **68** bridges the gap between the adjacent panels for finishing purposes.

FIG. **12** illustrates the joining of two panels **22** in an inline arrangement. In this arrangement, a plastic clip **69** (See FIG. **16** as well) having two depending legs **69***a* bridges the gap between adjacent panels **22** and the vertical uprights **60** thereof. The legs **69***a* extend down into the open ends of the adjacent member **60** alongside of the flanges **60***b* thereof.

FIG. **14** illustrates the use of a plastic clip **70** having a single leg **70***a* which likewise fits down alongside of the flange **60***a* of the vertical upright **60** forming the end of a series of panels **22.**

FIG. **15** illustrates the base connection between a panel **22,** its upright **60** and the base of a gondola (not shown). In this form of connection, a pin **71** is welded to the lower part of flange **60***a* which is received within a matching opening in the gondola base as in FIG. **8.**

By way of summary, the present invention provides uniquely, a gondola having center panels which, for load bearing purposes, are integrated with the vertical end supports for each panel and which interconnect the panels in a series. Consequently, the vertical frame members of the gondola need not wholly support the load which greatly helps in designing units to have truely modular construction, and permits the use of lighter, mass-produced frame members.

It will be understood that the foregoing description has been of particular embodiments of the invention and is, therefore, representative. In order to appreciate the scope of the invention, reference should be made to the appended claims.

I claim:

1. In a merchandise gondola which includes a pair of rigid vertical end supports and an intermediate section held therebetween for the display of merchandise, the improvement comprising, a sandwich panel having two substantially parallel sides of rigid sheet material, a channel member arranged along each edge of the periphery of said sides, said channel members defining spaced apart substantially parallel grooves for the reception of respective edge portions of said sides, tension strap means for fastening said channel members

together in compression against said sides, said channel members having an outward central channel to contain said strap, and means for rigidly and integrally connecting said channel members to said end supports, said means being held in said channel member under said strap and including a portion disposed outwardly of said strap as an attachment means to said end supports.

2. The merchandise gondola according to claim **1** wherein a single separate channel member is arranged along each edge of the periphery of said sides.

3. In a merchandise gondola which includes a pair of rigid end supports and an intermediate section held therebetween for the display of merchandise, the improvement comprising, a sandwich panel having two substantially rectangular sides of rigid sheet material, a channel member arranged along each edge of the periphery of said sides, said channel members defining spaced apart substantially parallel grooves for the reception of respective edge portions of said sides, a tension strap for fastening said channel members together in compression against said sides, said channel members having an outward central channel to contain said strap, means for rigidly and integrally connecting said channel members to said supports and including attaching clips between said channel members and said strap, each clip having two substantially perpendicular legs received respectively in the outward central channels of adjacent channel members, said clips further including a leg outwardly of said strap as an attachment means to said end supports.

4. The merchandise gondola according to claim **3** which includes a base frame, and means for anchoring said end supports into said base frame.

5. The merchandise gondola according to claim **4** wherein said frame includes centering means received within a horizontal, outward central channel of each said sandwich panel, said base frame including channel sections for receiving the ends of said end supports, said base frame being in section coextensive with each sandwich panel and a pair of end supports, and means for securing said base frame sections together.

6. The merchandise gondola according to claim **5** wherein a channel strip is mounted across the top of said sandwich panels and means for interconnecting said channel strips.

7. In a merchandise gondola which includes a pair of rigid end supports and an intermediate section held therebetween for the display of merchandise, the improvement comprising, a sandwich panel having two substantially rectangular sides of rigid sheet material, a channel member arranged along each side of the periphery of said sides, a tension strap for fastening said channel members together in compression against said sides, said channel members having an outward central channel to contain said strap, said end supports being of roll-form construction having an outer flange and an inner L-shaped leg connected to said outer flange by an intermediate side portion, said sides of said sandwich panel, being receiving in abutting relation with respect to said L-shaped legs to form a generally continuous surface with said side portions, means for rigidly and integrally connecting said channel members to said supports and including a U-shaped clip connected to a base bracket through which passes said tension strap, and means for attaching the outer flange of said members to said clip.

8. The merchandise gondola according to claim **7** wherein two panel members with vertical end supports are arranged in adjacent inline relation, a clip having a horizontal portion with two depending legs therefrom, said legs fitting alongside the outer flanges of said vertical end supports to connect the adjacent panels together, and members received within the channel members of said sandwich panels to form a generally continuous upper surface with the horizontal surface of said clip.

9. The gondola according to claim **7** wherein a second sandwich panel is arranged at right angles with respect to a first said sandwich panel, a bracket is connected to the top portion of said second sandwich panel, said bracket having a leg fitting over the outer flange of a vertical support of said adjacent sandwich panel and means for attaching said leg and flange together.

10. In a merchandise gondola which includes a pair of rigid vertical end supports and an intermediate section held therebetween for the display of merchandise, the improvement comprising, a sandwich panel having two substantially parallel sides of rigid sheet material, a channel member arranged along each edge of the periphery of said sides, said channel members defining spaced apart substantially parallel grooves for the reception of respective edge portions of said sides, tension strap means for fastening said channel members together in compression against said sides, said channel members having an outward central channel to contain said strap, and means for rigidly and integrally connecting said channel members to said end supports and including attaching clips between said channel members and said strap, each clip having two perpendicular legs received respectively in the outward central channels of adjacent channel members.

* * * * *