

[54] **DISPLAY PANEL FOR MERCHANDISE OR THE LIKE**

[72] Inventor: **Karl F. Weber**, 1290 Inverness, Pasadena, Calif. 91103

[22] Filed: **Aug. 7, 1970**

[21] Appl. No.: **62,042**

[52] U.S. Cl. ....**211/87, 211/126, 248/301**

[51] Int. Cl. ....**A47f 5/08**

[58] Field of Search ....**248/301, 300; 211/86, 87, 88, 211/94, 94.5, 90, 103, 106, 13 A, 126, 176, 177, 184; 52/519, 542**

[56] **References Cited**

**UNITED STATES PATENTS**

|           |         |                 |           |
|-----------|---------|-----------------|-----------|
| 1,240,908 | 9/1917  | Weis.....       | 211/126   |
| 1,627,084 | 5/1927  | Fritz .....     | 211/126 X |
| 2,974,807 | 3/1961  | Furrer .....    | 211/126   |
| 3,047,158 | 7/1962  | Scholl.....     | 211/126   |
| 3,222,117 | 12/1965 | Schwartz .....  | 211/126 X |
| 3,252,614 | 5/1966  | Evans .....     | 211/126 X |
| 3,100,556 | 8/1963  | De Ridder ..... | 52/542 X  |
| 968,887   | 8/1910  | Roth.....       | 52/519 X  |
| 1,706,924 | 3/1929  | Kane.....       | 52/542 X  |
| 1,917,603 | 7/1933  | Schultz.....    | 310/88    |
| 1,969,918 | 8/1934  | Wright.....     | 52/542 X  |
| 2,823,808 | 2/1958  | Hindi.....      | 248/301 X |
| 3,172,540 | 3/1965  | Berge.....      | 211/90 X  |

Primary Examiner—Nile C. Byers, Jr.  
Attorney—Miketta, Glenny, Poms and Smith

[57] **ABSTRACT**

A unitary panel section has a continuous longitudinally extending horizontal male connecting member including a rib with an outwardly facing edge surface and an inwardly facing shoulder integrally joined at the upper edge of a vertical wall, the wall having a plurality of continuous longitudinally extending ribs extending outwardly therefrom to an outer edge, at which a longitudinally continuously extending upstanding flange extends upwardly to terminate in an upper edge spaced from the wall portion to provide lips each defining an upwardly opening trough, the panel section vertical wall at the lower edge thereof having integral upper and lower continuous longitudinally extending horizontal ribs defining a female connecting member channel opening to the back side of the wall, with a mating inwardly facing bottom surface and an outwardly facing shoulder. The panel sections may be connected along adjacent upper and lower longitudinal edges by the mating of the male and female connecting members to interlock the panel sections into a support panel for receiving the hooked ends of fasteners on the merchandise or the like to be displayed thereon. The panel sections may be rolled from sheet metal or extruded.

**10 Claims, 4 Drawing Figures**

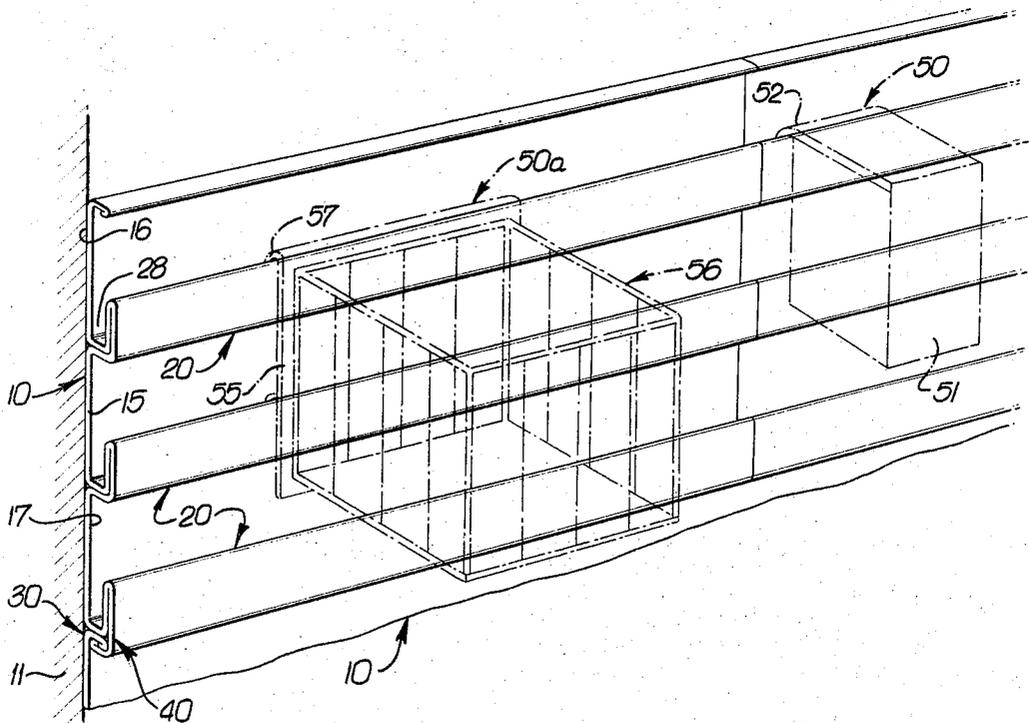


FIG. 1.

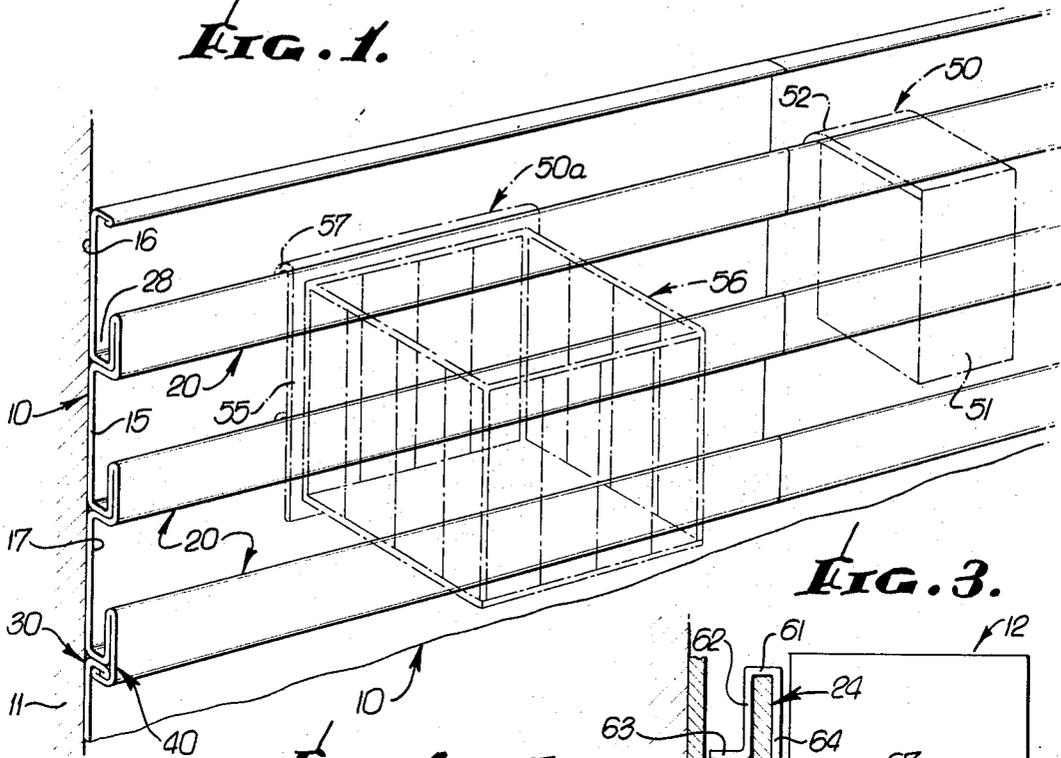


FIG. 3.

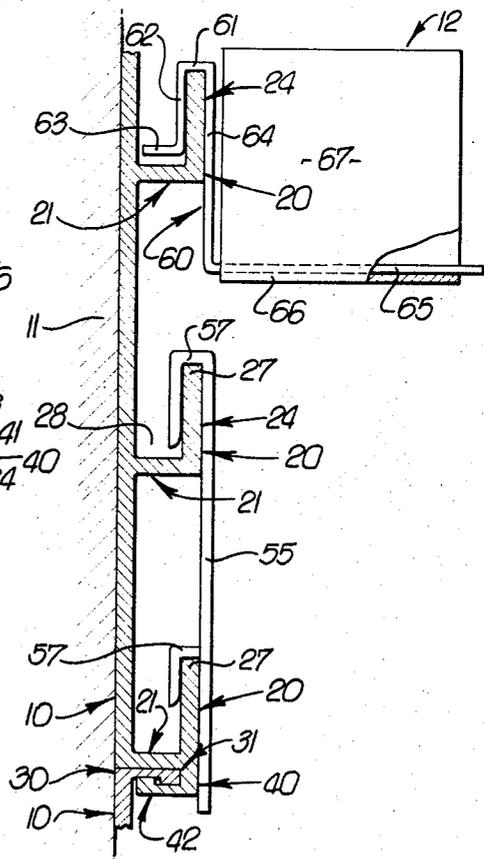


FIG. 2.

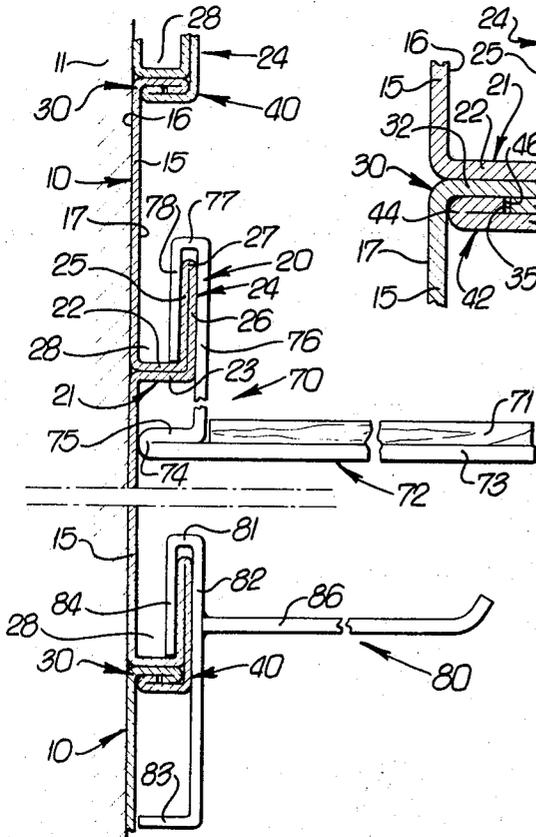
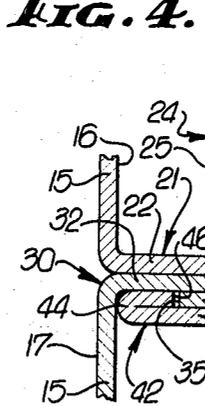


FIG. 4.



INVENTOR.  
**KARL F. WEBER**

By  
*Miketta, Glenn, Poma & Smith*  
ATTORNEYS.

## DISPLAY PANEL FOR MERCHANDISE OR THE LIKE

### BACKGROUND OF THE INVENTION

This invention relates to an article display apparatus and more particularly to a generally flat panel type of display device on which articles having hooks or shelving supported by brackets with hooks may be placed.

Heretofore, the most popular type of display board has been a pegboard. The pegboard is a flat board having a plurality of holes therethrough arranged in horizontal rows and vertical columns of a given modular spacing. Specially shaped hooks are provided for use with the pegboard having one end for mounting the merchandise, and the other end for insertion into the desired hole on the pegboard. Usually, two or more hooks are needed to mount the article of merchandise to the pegboard for effective display. Oftentimes, the two or more hooks cannot be secured to the merchandise with such spacing which permits them to be inserted into the holes provided in the pegboard. In such case, either a new hole must be drilled in the pegboard or one of the hooks relocated horizontally along the article of merchandise. This process of mounting and remounting of the hooks in the merchandise and the pegboard is time consuming and wasteful of effort.

Another disadvantage to the pegboard type of display board or panel is that the article once located on the board cannot be repositioned horizontally without removing it from the board. The continual removal and relocation of merchandise from the board in order to move the merchandise horizontally thereon for artistic reasons or to make room for more merchandise is also wasteful of effort.

Still another disadvantage of the conventional pegboard is the requirement that the board be spaced outwardly from the wall to which it is attached by wooden cleats or the like so that the hooks may be positioned through the pegboard holes. This results in a bulky and space consuming configuration. It also limits the strength characteristics of the display device.

Some display boards have been produced which have horizontally extending channels for receiving the hooks on the merchandise such as is shown in U.S. Pat. No. 3,172,540. These display boards permit horizontal adjustment without removing the merchandise from the board and so present advantages over the pegboard type of display board. However, all of these boards heretofore have required many parts which must be assembled to form the channels which receive the hooks. One such board uses longitudinally extending spring members extending between vertical side members to form the channel. This particular board requires special hooks which are insertable into the openings between the spring members by spreading of the spring members with the spring members holding the hooks after insertion. The drawback to this type of board is the requirement of special hooks and of vertical side members which limit horizontal adjustability.

Another prior art channel display board is made of wood having the horizontal channels cut therein with metal plates screwed to the board below each channel and extending into the channel to provide a ridge for receiving the attaching hooks to hold the merchandise. Yet another prior display board has inwardly formed grooves extending beyond the back side of the board

with the grooves receiving elongated extensions on shelves to mount the shelves thereto with the articles being placed on the shelves. All of the heretofore described composite display boards with horizontal channels because of the multiplicity of parts and the intricacy thereof are expensive to produce and are limited in size variations which makes them commercially unacceptable.

### BRIEF DESCRIPTION OF THE INVENTION

It is therefore the primary object of this invention to provide a commercially acceptable display board with horizontal channels for displaying merchandise or the like.

Other and additional objects of this invention are to provide such a display panel which is an effectively continuous fixture of any size for mounting to a suitable wall, to provide such a display panel which has no fixed horizontal module and therefore no horizontal limit to flexibility, to provide such a display which accepts almost any size, length or separation of hook ends on the display attachments for the merchandise, whether permanent or disposable, to provide such a display panel which accepts directly integrally formed hook ends or folds on the merchandise packaging, to provide a display panel which may be manufactured from a single sheet of material so as to increase the strength of the sheet, and to provide such a panel which is inexpensive to produce, easy to install, and simple to mount merchandise thereon.

Generally, the panel sections according to this invention are for use singly, or together with a companion panel section, as a support panel for the display of merchandise or the like having fasteners with downwardly extending hook ends secured thereto, each panel section includes a unitary structure having a wall with a flat back surface and a front surface from which a plurality of vertically spaced integrally formed continuous longitudinally extending lips extend outwardly and upwardly to terminate in an upper edge to form an upwardly opening trough for receiving the hook ends to hold the merchandise for display. The lip may include a horizontal rib and upstanding flange. Male and female members may be provided on adjacent upper and lower longitudinal edges of vertically adjacent panel sections to hold the panel sections against vertical separation. Mating surfaces and shoulders may be provided on such male and female members to prevent fore and aft separation and thereby maintain a flat back surface to the display panel. The panel section may be bent from a single sheet of material with double layers of material provided for the lips, or the panel section may be extruded.

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a support panel for the display of merchandise or the like composed of panel sections according to this invention with a display basket on a hook plate and a box with integrally formed flaps, mounted thereto;

FIG. 2 is a cross-sectional view of the support panel of FIG. 1 showing the panel sections thereof as being rolled from a single sheet of material, and mounting fasteners suitable for holding shelves on which merchandise may be placed;

FIG. 3 is a cross-sectional view similar to FIG. 2 but showing the panel sections as being extruded, and showing other merchandise fasteners, mounted thereon; and

FIG. 4 is an enlarged view of the male and female connecting means of the panel sections shown in FIG. 2.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings and particularly to FIG. 1, a support panel is made up of any number of horizontally aligned and vertically connected panel sections according to this invention and generally indicated by the numeral 10. The panel sections are conventionally secured to a building wall 11 by such means as adhesive, nails, screws, etc. The support panel mounts articles 12 of merchandise or the like either boxed or loose thereon for purposes of display. Each panel section 10 includes a wall portion 15 from which a plurality of continuous longitudinally extending vertically spaced lips 20 extend. The panel sections 10 are connected to companion panel sections 10 to form the support panel by connecting means which include male and female members 30 and 40. The merchandise or other display articles are provided with fastening means, such as 50 (FIG. 1), either integrally formed with the article or its container, or secured thereto, with hook ends or a flap which engages the lip 20 to mount the articles.

The panel sections 10 according to this invention are of unitary construction either as in the preferred embodiment from a single sheet of material as is shown in FIGS. 2 and 4 or as in the alternative embodiment by extrusion as is shown in FIG. 3. The wall portion 15 of the panel section 10 includes a flat back surface 16 for placement against the building wall 11 to be mounted thereto. The wall portion 15 also includes a generally flat front surface 17 from which the plurality of lips 20 protrude.

The lips 20 of the panel sections 10 each include a continuous longitudinally extending rib portion 21 extending outwardly from the wall generally normal to the front surface 17 to terminate in an outer edge from which a continuous longitudinally extending upstanding flange portion 24 extends generally parallel to the front surface 17 to terminate at an upper edge 27. When the panel section 10 is bent from a single sheet of material as shown in FIG. 2, the rib portion 21 includes an upper rib portion 22 bent outwardly from the wall 15 which is, in turn, bent upwardly at the outer edge thereof to form an inner flange portion 25 extending upwardly to the return bent upper edge 27. An outer flange portion 26 extends downwardly from the return bent upper edge 27 alongside the inner flange portion 25 past the outer edge of the upper rib portion, to be bent into a lower rib portion 23 directly underneath the upper rib portion 22 to extend inwardly to be bent again into the vertically aligned wall 15 and so on. The upper edge 27 of each lip 20 is spaced vertically above the juncture of that lip 20 with the wall portion 15 and is spaced below the next upper lip 20 as well as being spaced from the front surface 17 of the wall portion 15 to define therewith a longitudinally continuously extending upwardly opening trough 28. The use of dou-

bled sheet material to form the rib portion 21 and flange portion 24 provides a high strength lip 20 and strengthens the wall portions 15 as well.

The connecting means of the panel sections 10 of the preferred embodiment (see FIG. 1) include a male member 30 located at the upper edge of the wall portion 15 and female member 40 located at the lower edge of the wall portion 15. Of course the male and female members 30 and 40 could be reversed with respect to the top and bottom of the panel section.

The male member 30 of the preferred embodiment (see FIG. 4) includes a longitudinally continuously extending horizontal male rib portion 31 extending outwardly generally normal to the front surface 17 of the wall portion 15 at the upper edge thereof. The male rib 31 is provided with an outwardly facing edge 33 and an inwardly facing shoulder 35 for a purpose which will appear later. When the panel section is formed from a single sheet of material, the male rib 31 has an upper male side member 32 bent from the wall portion 15 to extend outwardly therefrom to the return bent outer edge 33. From the return bent outer edge, a lower male side member 34 extends inwardly to terminate at the inner edge 35 before reaching the front surface 17.

The female member 40 of the connecting means of the preferred embodiment includes the lowermost lip at the lower edge of the wall portion 15. The lowermost rib flange portion, indicated generally at 24, has a longitudinally continuously extending flange extension portion 41 extending downwardly below the outer edge of the lowermost rib portion 21. At the lower edge of the flange extension portion 41, a lower rib portion 42 extends inwardly therefrom to terminate at the plane of the front surface 17. The lower rib portion 42 is spaced downwardly from the rib portion 21 to define a female channel opening toward the back surface of the wall portion 15. The female channel has a lower female rib member 43 and an outwardly facing shoulder 46 formed by the lower rib portion 42. The lower rib portion 42 is spaced below the lower surface of rib 21 a distance equal to twice the material thickness and extends inwardly to a return bent inwardly facing edge 44 at the plane of the front surface 17. From the return bent inner edge, a middle female rib member 45 extends inwardly alongside the lower rib member 43 and spaced from the lower surface of the rib 21 to terminate in the outer edge 46 while the inner surface of the outer flange extension portion 41 forms an inwardly facing abutment surface.

The male member 30 of a lower panel section 10 slidably or snappingly mates with the female member 40 of an upper panel section 10 to form a support panel. One method of assembly involves sliding the male member 30 longitudinally into the female channel until the panel sections 10 are vertically aligned. Another method of assembly includes snapping the male member 30 into the female channel. The engagement of the male rib portion 31 with the female lower rib portion 42 prevents vertical separation of the panel sections 10 and the abutment between the male outer edge 33 and the inner surface of extension 41 and abutment between the shoulders 35 and 46 prevent fore and aft separation of the panel sections 10 to maintain a flat back surface 16 to the support panel.

The support panel comprised of the panel sections 10, when suitably mounted to the building wall 11, may receive a multiplicity of different types of fastening means for mounting merchandise, articles, paintings or the like. A few of the more common types of fastening means are nail heads, hooks, flaps, etc. Attached to boards or directly to the articles of merchandise. A few of the less common types of fasteners or fastening means for use with the display panel are illustrated in the drawings but these illustrations are by no means exhaustive of the possible types of fastening means that may be used with the support panel.

One type of fastening means 50 as seen in FIG. 1 includes a merchandise package 51 with an integrally formed top flap 52. The flap 52 is receivable in any desired trough 28 for engagement with the lip 20 thereof while the package 51 rests against the next lower lip 20 to mount the package 51 vertically on the support panel. It should be obvious that the package 51 can be easily slid horizontally to any position along the support panel as well as easily removed by a purchaser.

Another fastening means 50a shown in FIGS. 1 and 3 (lower portion) has a vertical plate 55 to which a wire basket 56 is secured. At the upper edge and along the backside of the plate 55 are longitudinally continuously extending lips 57 extending outwardly and downwardly therefrom with the identical vertical spacing of the lips 20 to hook into vertically adjacent lips 20 to mount the vertical plate 55 and the basket 56 carried thereby.

Yet another type of fastening means 60 (see FIG. 3) is bent from a wire. This type of device has an inverted U-shaped upper hook 61 from the inner leg 62 of which an inwardly extending foot 63 protrudes and from the outer leg 64 of which an outwardly extending arm 65 extends to support a package, for example, by inserting the arm 65 between the lower flaps 66 of a cardboard package 67 to mount the package and the merchandise therein to the support panel.

A shelf 70 as seen in FIG. 2 may also be mounted to the support panel. The shelf 70 may include a wooden board 71 with a plurality of wire supports 72 thereunder and horizontally spaced therealong. Each wire support has a horizontal shelf mounting leg 73 terminating at a return bent corner 74 for engaging the front surface 17 of the wall portion 15 of the support panel. A reinforcing leg 75 extends outwardly from the return bent corner 74 a short distance before being bent upwardly to form the outer leg 76. Leg 76 terminates in an inverted U 77 from which an inner leg 78 depends. Leg 78 is spaced from the outer leg 76 to be received over the upstanding flange portion 24 of a desired lip 20 with the leg 78 in the trough 28.

A second type of shelf 80 is also shown in FIG. 2 (lower portion). This shelf includes an inverted U-shaped hook portion 81 with an outer leg 82 thereof extending downwardly below the rib to be bent inwardly forming an inwardly extending foot 83 for engaging the front surface 17 of the panel. The inner leg 84 of the hook 81 is inserted into trough 28 when the hook 81 is over a lip 20. The flat shelf plate 86 is secured to the outer leg 82 midway thereof to extend outwardly for receiving merchandise 12 thereon.

It will be noted that in both of the types of shelves 70 and 80 the inner legs 78 and 84 have a length greater than the depth of the trough 28 and the flange portion

24. This feature is provided so that the load of the articles place on the shelf, which may be numerous and heavy, will be carried by the rib portion 21 of the lips 20 adjacent the wall 15 where the lip 20 is the strongest. Conversely, the fastening means 60 of FIG. 3 is made of a weak material and will support only a very light load; therefore, the inner leg 62 or downwardly extending lip 57 will be shorter than the depth of the trough 28 or the flange portion 24 with the load being carried by the upper edge 27 of the lips 20 from the upper hook 60 adjacent the vertical plate 55 or outer leg 64 where the fastening means is the strongest.

It is important to note as one of the advantages of this invention that any merchandise mounted by any of the fastening means can be positioned horizontally anywhere on the support panel and can be easily removed from the support panel by lifting. The support panel being made of any number of panel sections 10 vertically secured together and horizontally aligned on a building wall 11 achieves the aforementioned objects to provide a commercially acceptable display board or support panel for articles, such board being useable therefore in the home or in commercial and industrial buildings.

I claim:

1. A display panel for merchandise articles or the like comprising:

at least one panel section including a single sheet of material disposed in a vertical plane and including a wall portion with a plurality of vertically spaced integrally formed longitudinally continuously extending lips, each lip including a rib extending outwardly generally normal to said wall portion and terminating at a front edge and an integral upstanding flange extending upwardly from said rib at the front edge, said flange being generally parallel to said wall portion and terminating at an upper edge, in vertically spaced relation to the rib of the next adjacent lip, so as to form an upwardly opening trough, said flange being horizontally spaced from said wall portion a distance less than the vertical distance from the upper edge of said flange to the rib of the next adjacent lip; and

at least one article supporting fastener having a downwardly extending member received in at least one said lip trough to support an article at a selected vertical height.

2. The display panel of claim 1 wherein said panel comprises a plurality of panel sections disposed in vertically adjacent relation, each panel section having integrally formed longitudinally continuously extending male and female members adjacent the upper and lower longitudinal edges of said panel section, male and female members of adjacent panel sections being in engagement to hold the panel sections against vertical separation.

3. The display panel of claim 2 wherein said male connecting member comprises a rib extending outwardly generally normal to the front surface of said panel section, and said female connecting member comprises upper and lower spaced rib members to form a continuous longitudinally extending female channel opening toward the back surface of said panel section, said lower female rib terminating at an inner edge at the plane of the front surface of the panel wall portion.

4. The display panel of claim 3, wherein the male member has an outwardly facing edge and an inwardly facing shoulder, and the female member has a mating inwardly facing edge and an outwardly facing shoulder, the shoulders and edges of the male and female members engaging to interlock the panel sections against fore and aft separation and to maintain the back surface of the panel sections in a flat plane.

5. A display panel for merchandise articles or the like comprising:

at least one panel section including a single sheet of material disposed in a vertical plane and including the wall portion with a plurality of vertically spaced integrally formed longitudinally continuously extending lips, each lip comprising an upper lip portion protruding from the plane of said wall portion outwardly and then upwardly to longitudinally continuously extending return bent upper edge from which a lower lip portion extends downwardly and inwardly beneath and adjacent the upper lip portion to provide a double layer lip, said return bent upper edge being spaced outwardly from said wall portion and vertically spaced from the adjacent above-spaced lip and forming an upwardly opening trough; and

at least one article supporting fastener having a downwardly extending member received in at least one of said lip troughs to support an article at a selected vertical height.

6. The display panel of claim 5 wherein said panel comprises a plurality of panel sections disposed in vertically adjacent relation, each panel section having male and female connecting means adjacent the upper and lower longitudinal edges in engagement with connecting means on the adjacent panel section to hold the panel sections against vertical separation.

7. The display panel of claim 6 wherein said male connecting means includes a continuous longitudinally extending rib extending outwardly generally normal to the front surface of said panel sections, and said female connecting means includes continuous longitudinally extending upper and lower spaced ribs to form a continuous longitudinally extending female channel opening toward the back surface of each said wall portion,

said lower rib terminating at an inner edge at the plane of the front surface of the panel wall portion.

8. The display panel of claim 6 wherein: the male means has an outwardly facing edge and an inwardly facing shoulder, and

the female means has a mating inwardly facing edge and an outwardly facing shoulder, the shoulders and edges of the male and female means engaging to interlock the panel sections against fore and aft separation and to maintain the back surface of the support panel in a flat plane.

9. The display panel of claim 8 wherein said male means includes a male horizontal rib at the upper edge of each panel section extending outwardly generally normal to the wall portion and said female means includes upper and lower spaced ribs forming a continuous longitudinally extending female channel opening toward the back surface of said panel sections, said lower rib terminating at an inner edge at the plane of the front surface of the panel section, said male rib portion being received in the female channel of the next upper panel section to join the two panel sections together and hold the panel sections against vertical separation.

10. The display panel of claim 9 wherein the male rib includes an upper male rib portion extending outwardly from the wall portion to terminate in a return bent outer edge from which a lower male rib portion extends inwardly beneath the upper male rib portion to terminate in an inwardly facing shoulder spaced from the plane of the front surface of said wall portion and the lower rib of the female means is spaced greater than twice the sheet material thickness from the upper rib of the female means, the lower rib having a lower rib portion terminating in a return bent edge at the plane of the front surface of the wall portion from which an inner upper rib portion extends outwardly into the space between the upper and lower ribs along the lower rib portion to terminate in an outwardly facing shoulder, the engagement of the shoulders and surfaces of the male rib when mated in the female channel interlocking the panel sections against fore and aft separation to provide a flat back surface for the display panel.

\* \* \* \* \*

45

50

55

60

65