

[54] **FUNCTIONAL AND DECORATIVE TRIM AND SUPPORT BRACKET STRUCTURES**

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Related U.S. Application Data

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[52] U.S. Cl. **52/27, 52/582**

[51] Int. Cl. **E04h 1/12**

[58] Field of Search **52/27, 582, 584, 285, 241,**
52/238, 239, 300, 274, 38, 36, 477

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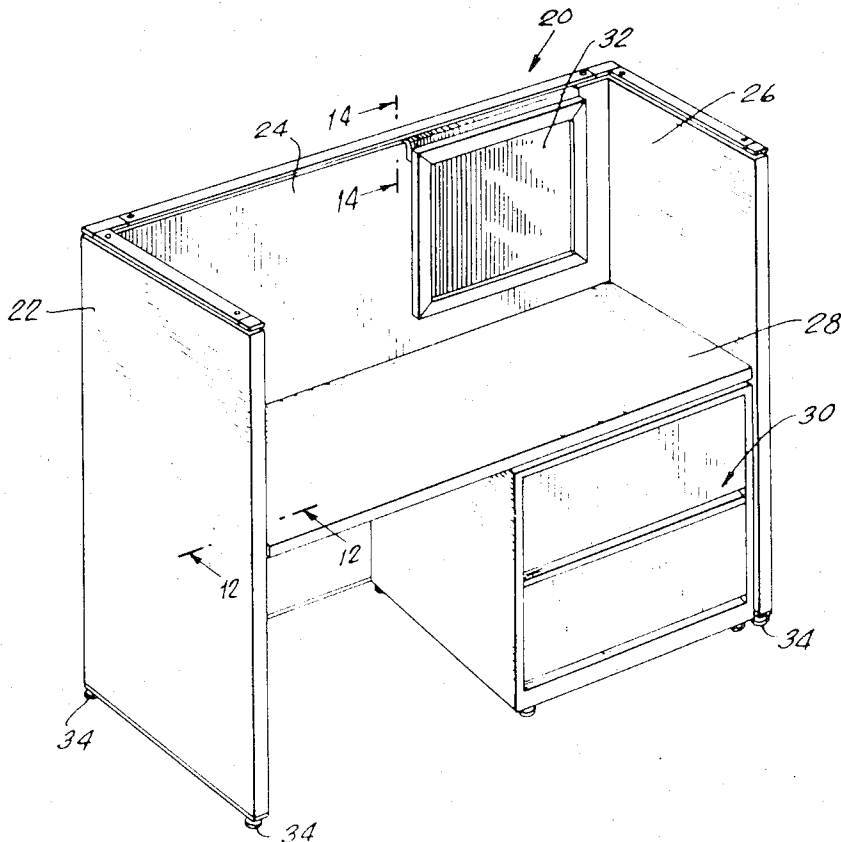
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 Griffin & Moran

[57] **ABSTRACT**

Structure serving as decorative trim and also to join panels together and to provide a support for the "hanging" of an item attached to an L-shaped support bracket. A base portion bears against the top edge of one or more panels, and a flange portion overlies the base portion. The upper and side surfaces of the flange portion serve as the exposed decorative trim. The flange portion has an outwardly and then downwardly extending outer part on each side thereof which terminates above a support surface to hold one leg of the L-shaped support bracket and to maintain the other leg of that bracket resting on the support surface.

A bracket for supporting a shelf or the like is disclosed. The bracket includes a first horizontally extending leg that is supported on the top edge of one or more panels and which is held in place by the base portion of the decorative trim/panel joining/hanging support structure. A second downwardly extending leg is included which fits between adjacent edges of panels. A third leg extends horizontally away from the large exposed area of a panel.

4 Claims, 20 Drawing Figures



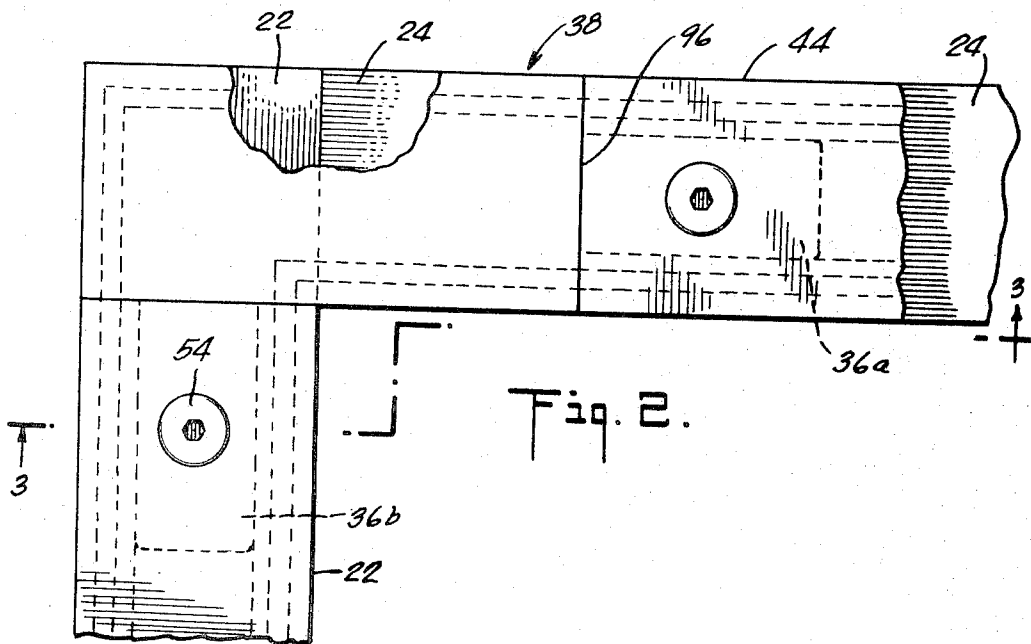
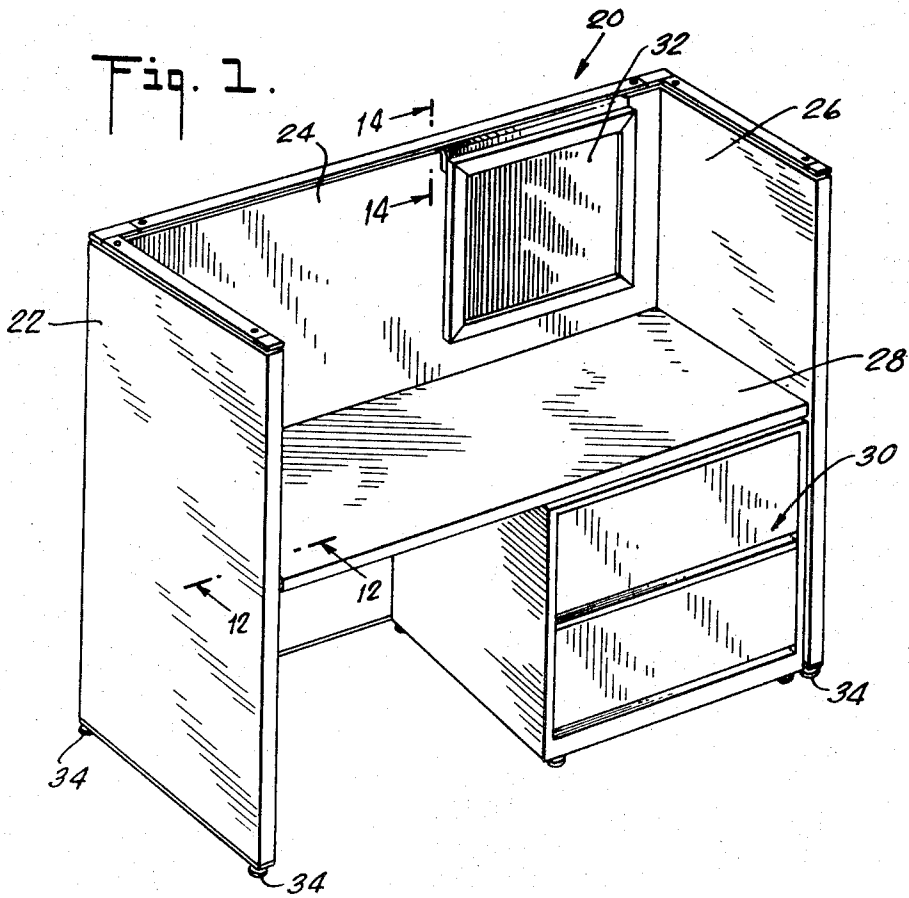


Fig. 3.

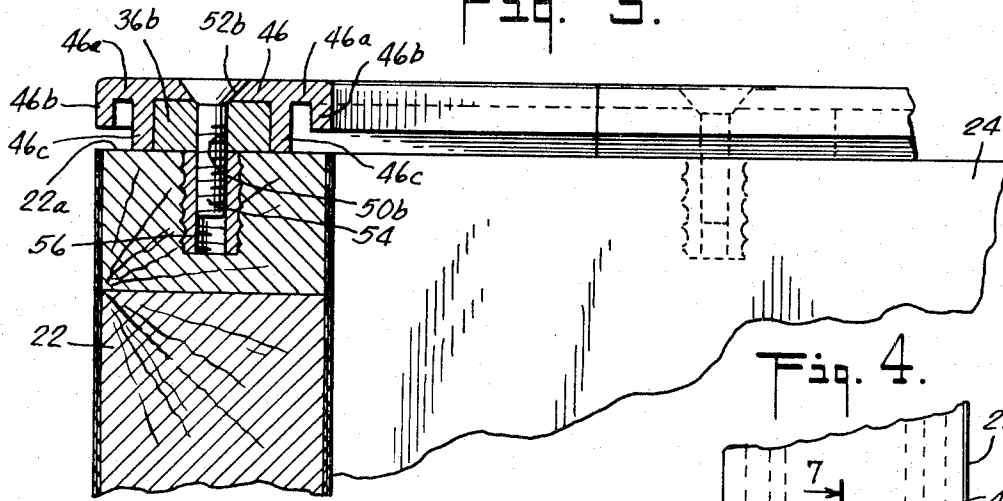


Fig. 4.

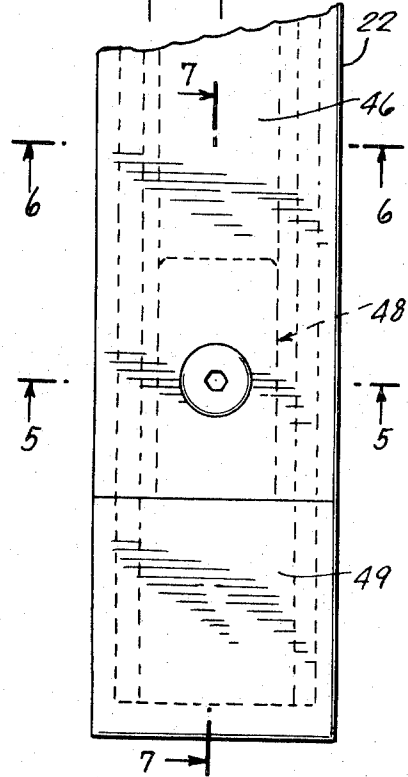


Fig. 5.

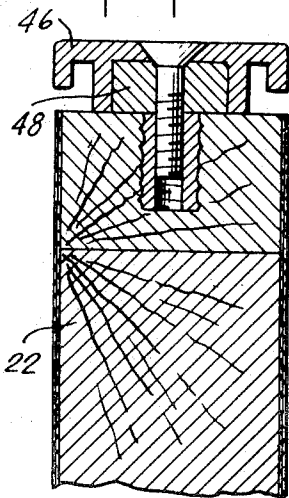


Fig. 6.

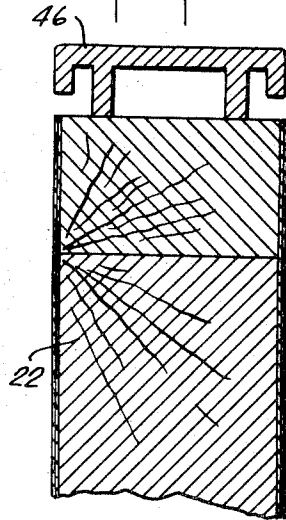


Fig. 7.

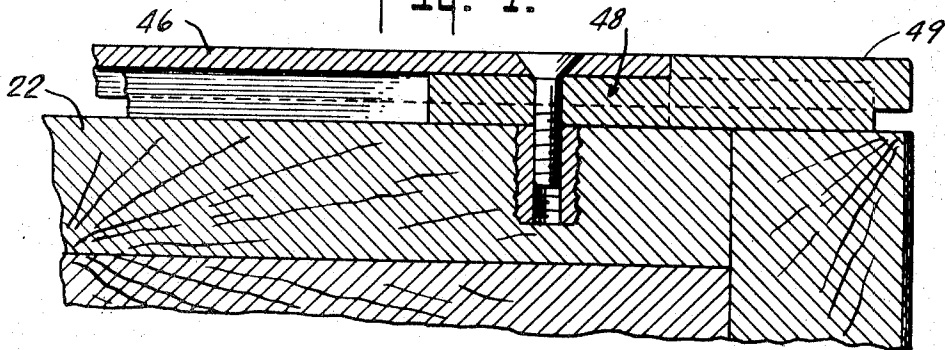


Fig. 8.

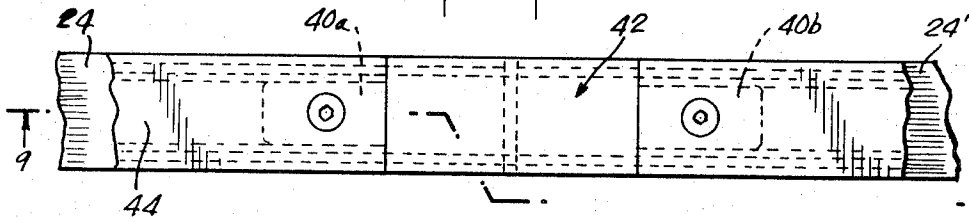


Fig. 9.

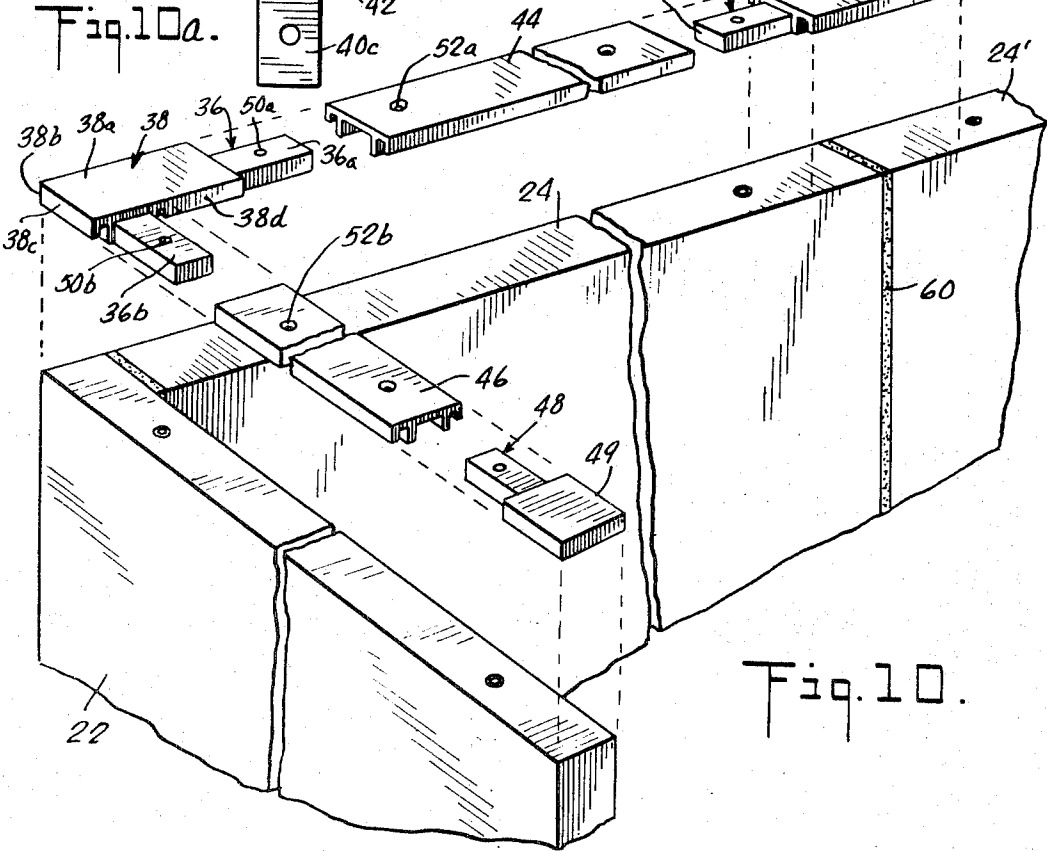
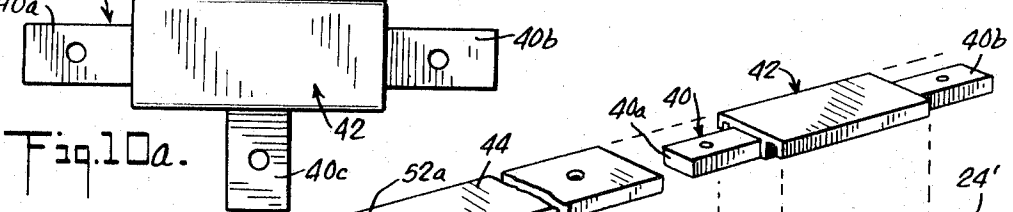
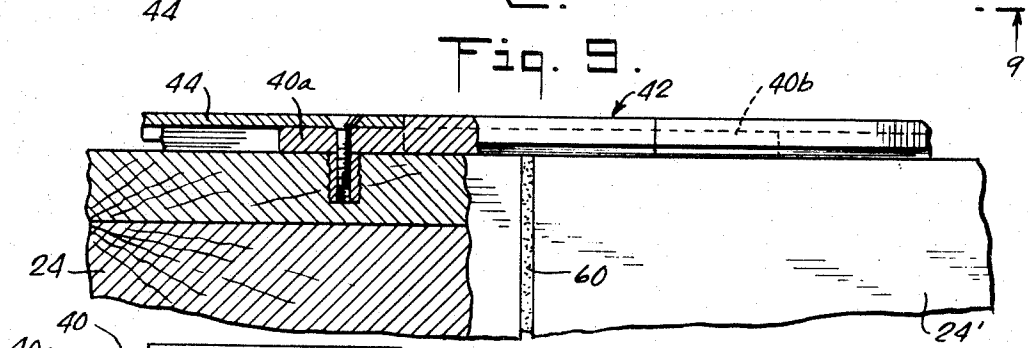
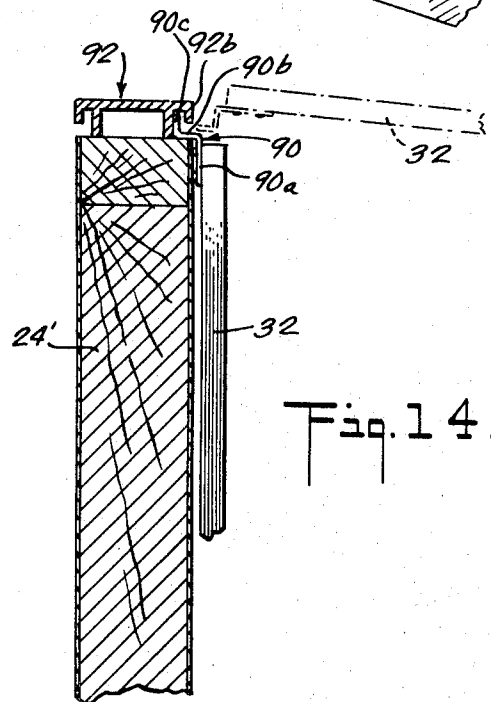
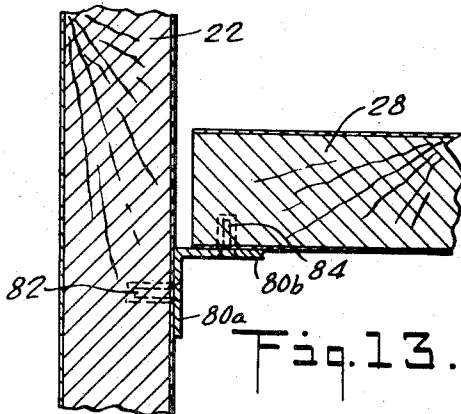
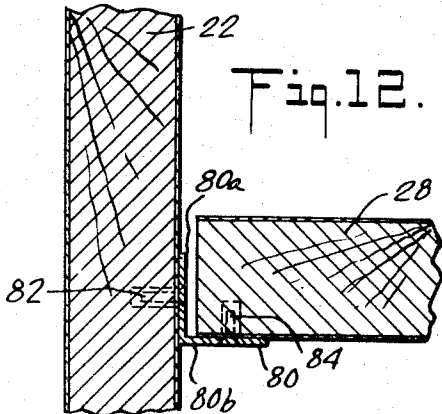
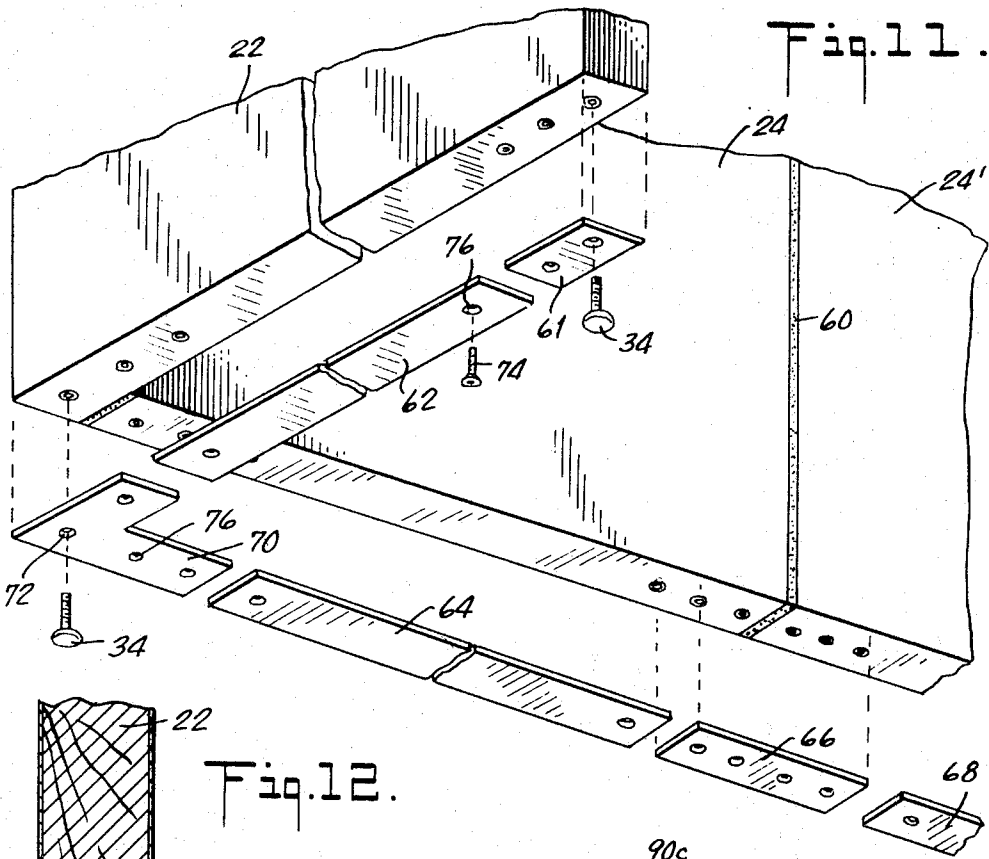


Fig. 10.



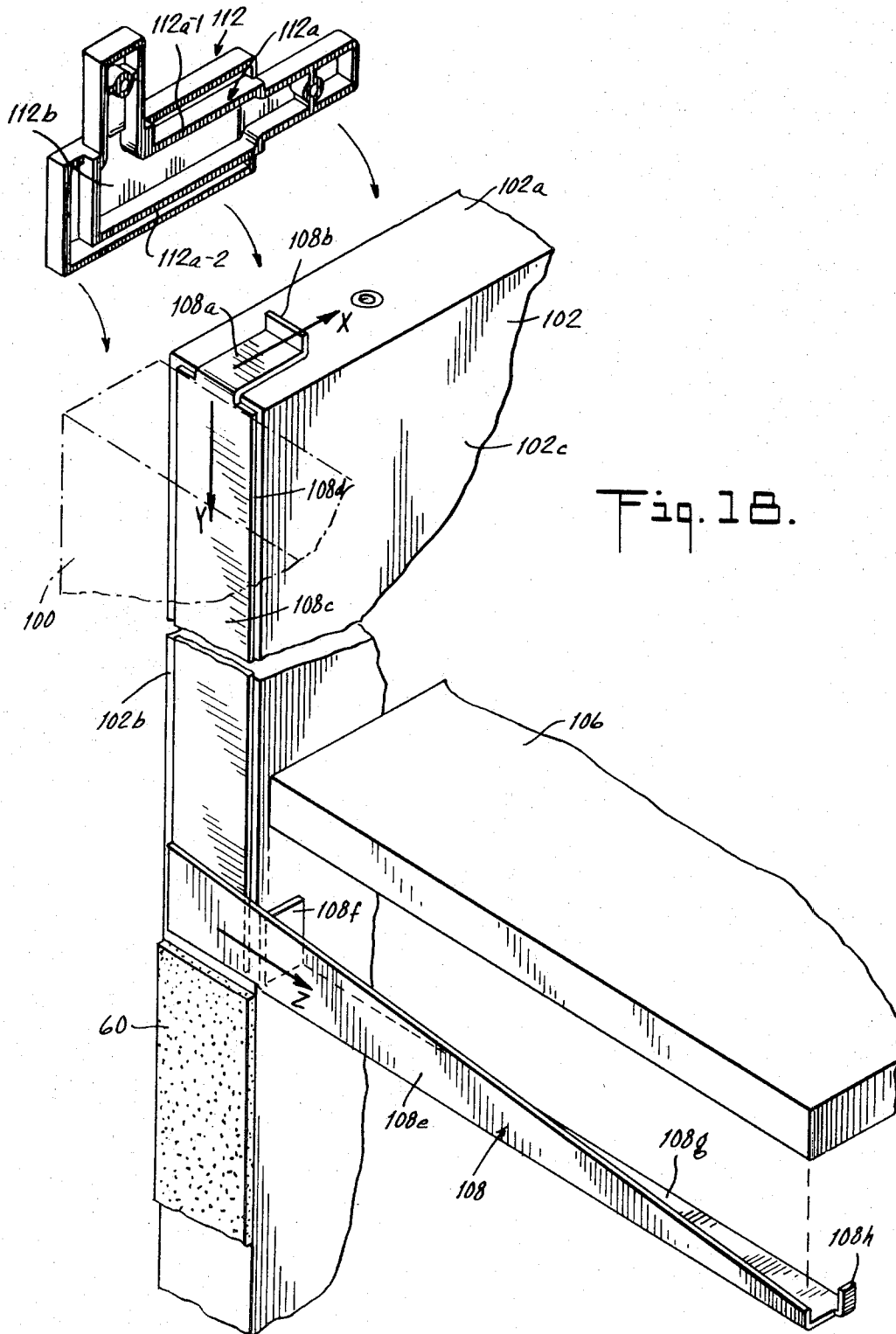


Fig. 1B.

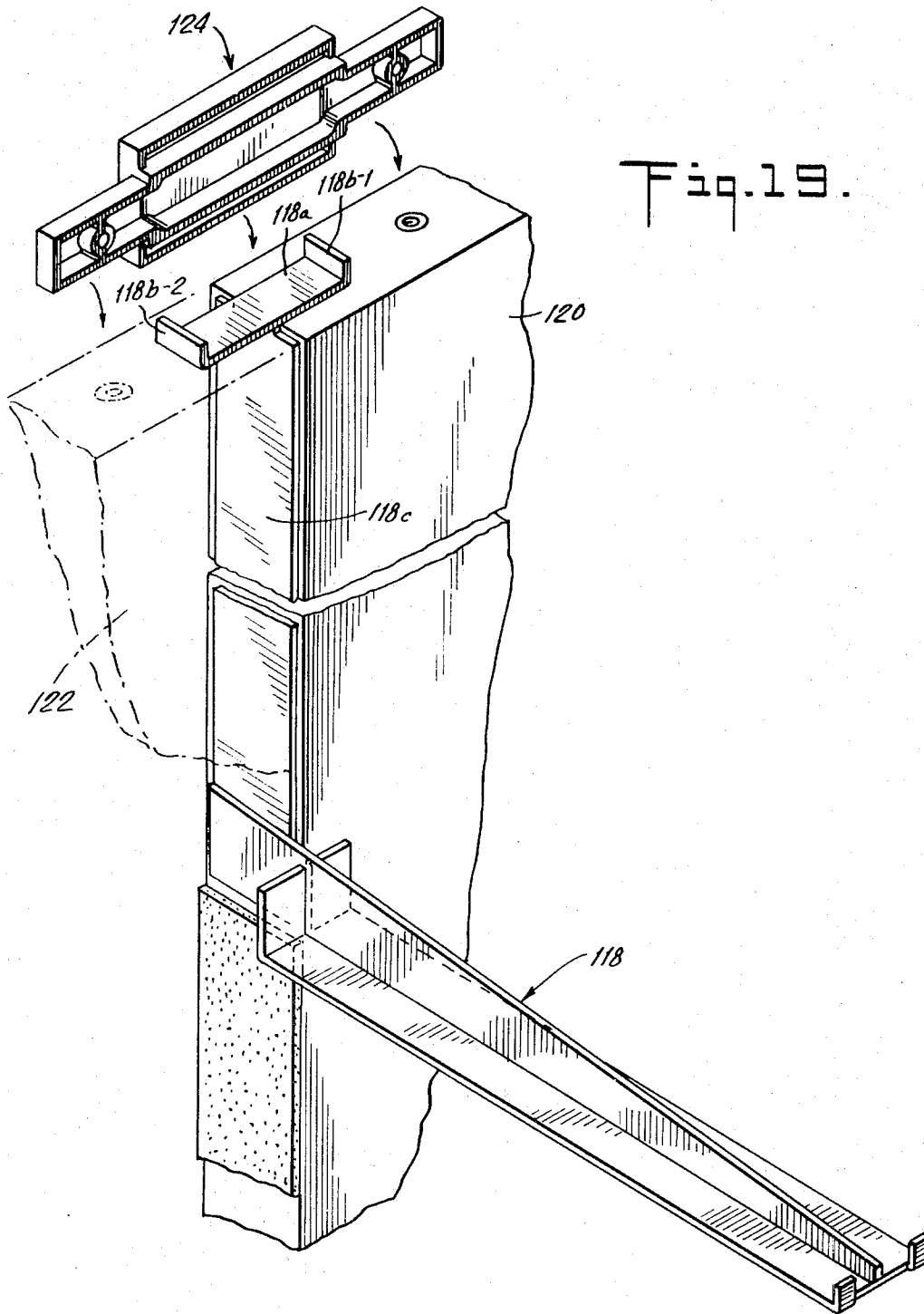


Fig. 19.

FUNCTIONAL AND DECORATIVE TRIM AND SUPPORT BRACKET STRUCTURES

This is a division, of application Ser. No. 119,457 filed 1 Mar. 1971.

BACKGROUND AND BRIEF DESCRIPTION OF THE INVENTION

This invention relates to furniture construction. More particularly, it relates to structure that functions as decorative trim while also serving to join panels together and to provide a support for the "hanging" of an item attached to an L-shaped support bracket. The invention also relates to a unique bracket for supporting a shelf or the like.

This invention finds particular application in the office landscaping field in which panel structures are used to define various work areas. Various approaches have been taken in the past to join together different panels to form an individual work station. Most of the past approaches have proceeded on the basis that it is necessary to have a complete interlocking of all panels in an area encompassing a number of work stations. This approach is undesirable inasmuch as it limits the flexibility of the system once a number of work stations have become interconnected.

Accordingly, the present invention is directed toward the joining together of panels in such a fashion as to maintain needed flexibility while at the same time providing stable support for adjacent panels in order to complete an individual work station. The invention involves unique panel joining structure which serves as decorative trim and also provides support for the "hanging" of various items attached to L-shaped support brackets and which are suspended from the top edge of one or more panels.

This novel decorative trim/panel joining/hanging support structure includes a base portion that bears against the top edge of one or more panels. A flange portion overlies the base portion and includes outwardly exposed surfaces that serve as the decorative trim. The flange portion has an outwardly and then downwardly extending outer parts on each side thereof which terminates above the top edge surface of one or more panels to hold, on either side of the flange portion, one leg of the L-shaped support bracket and to maintain the other leg of the bracket resting on the top edge surface.

The present invention also involves a bracket for supporting a shelf or the like. The bracket is adapted to have a major portion thereof hidden by the decorative trim/panel joining/hanging support structure just described as well as by the panels themselves, inasmuch as part of the bracket is positioned between abutting panel edges. The bracket includes a first horizontally extending leg that is supported on the top edge of one or more of the panels and which is held in place by the base portion of the decorative trim/panel joining/hanging support structure described above. A second downwardly extending leg is positioned between adjoining side edges of adjacent panels and is thereby mainly obscured from view except for an exposed side edge of this downwardly extending bracket leg. A third leg extends horizontally away from the large area surface of one or more of the panels and serves as the support for a shelf or the like. Thus this third leg, which may be positioned a substantial distance down from the top edge of one or more of the panels and which appears to ema-

nate from a mid portion of such panels, is nonetheless supported at the top edge by virtue of the first and second legs just described.

Accordingly, an object of the present invention is to provide better structure serving as decorative trim and/or panel joining and/or hanging support structure.

Another object of the invention is to provide an improved support bracket for supporting a shelf or the like.

The invention will be more completely understood by a reference to the following detailed description, which is to be read in conjunction with the appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a work station involving three joined-together panels and embodying the present invention;

FIG. 2 is a top view of a part of the work station of FIG. 1 showing the joining together of two adjacent panels;

FIG. 3 is a sectional view of the structure of FIG. 2, taken along the section 3—3 of FIG. 2;

FIG. 4 is a top view of the novel decorative trim/panel joining/hanging support structure of the present invention included at the free end of one panel;

FIGS. 5, 6 and 7 are sectional views of the structure of FIG. 4, taken along the sections 5—5, 6—6 and 7—7 in FIG. 4;

FIG. 8 is a top view of another embodiment of the invention involving decorative trim/panel joining/hanging support structure in the joining together of two panels in a straight line section;

FIG. 9 is a sectional view of the structure of FIG. 8, taken along the section 9—9 in FIG. 8;

FIG. 10 is an exploded perspective view showing various embodiments of the decorative trim/panel joining/hanging support structure of the present invention;

FIG. 10a is a plan view of the decorative trim/panel joining/hanging support structure used to form a T joint;

FIG. 11 is an exploded perspective view of the bottom of adjacent panels joined together;

FIGS. 12 and 13 are sectional views showing the techniques of hanging a shelf at different heights with respect to a panel; FIG. 12 is a sectional view taken along the section 12—12 in FIG. 1;

FIG. 14 is a sectional view taken along the section 14—14 in FIG. 1 showing the technique by which an item is "hung" in accordance with the present invention;

FIG. 15 is a perspective view of a work station including support brackets for supporting a shelf in accordance with the invention;

FIG. 16 is a sectional view, to an enlarged scale, of the structure of FIG. 15, taken along the section 16—16 in FIG. 15;

FIG. 17 is a sectional view of part of the structure of FIG. 16, taken along the section 17—17 in FIG. 16;

FIG. 18 is an exploded perspective view showing functional and decorative trim and a support bracket in accordance with the present invention;

FIG. 19 is a perspective view showing another trim piece and another support bracket in accordance with the invention.

DETAILED DESCRIPTION

Referring to FIG. 1 a work station 20 formed from three panels 22, 24 and 26 is shown. The work station may include a writing surface 28 and a two-drawer filing module 30. The writing surface 28 is supported by panels 22 and 26 as shown in detail in FIG. 12, to be described later, while the storage module 30 is usually simply placed beneath the writing surface 28 and against the panels 24 and 26. An item, such as a tack board 32, is mounted on the back panel 24 and is suspended from the top of that panel as shown in detail in FIG. 14, also to be described later. Hanging cabinets and/or book shelves above the work surface may also be included, if desired. Casters 34 or the like may be included at the bottom of the panels 22, 24 and 26 as suitable support for the panels over a floor.

FIGS. 2, 3 and 10 should be considered together; they show the manner in which the panels 22 and 24 are joined together along the top edges thereof. Structure serving as decorative trim and also to join the panels 22 and 24 together and to provide a support for the "hanging" of the tack frame 32 or other structure such as a cabinet is shown. The structure involves a base portion 36; at the corner, where the two panels 22 and 24 join, the base structure is comprised of two base portions 36a and 36b. The base portion 36a bears against the top edge of the panel 24, while the base portion 36b bears against the top edge of the panel 22. A flange portion 38 overlies the base portion 36. Outwardly exposed surfaces 38a, 38b, 38c and 38d may be polished to provide the decorative trim aspect of the element just described. This element is typically a one-piece casting.

There are different shapes of base and flange portions depending upon whether these elements are used to join two panels at a corner, to join two panels in a straight line, or at a T, or to terminate a panel. Thus, for example, base and flange portions 40 and 42 (typically one piece as noted above) in FIG. 10 are used to join together two panels 24 and 24' in a straight line. Also in FIG. 10 bridging element 44 is used to bridge base portions 36a and 40a in spanning the gap between the left and right-hand ends of the panel 24. Similarly, bridging element 46 is used to span the gap between base portions 36b and 48 between the left and right-hand ends of the panel 22 shown in FIG. 10.

The flange portion of the decorative trim/panel joining/hanging support structure of the present invention is best shown in FIG. 3. There the bridging element 46 is shown in detail. At each side of the flange portion there is an outwardly (46a) and downwardly (46b) extending part. The downwardly extending part 46b terminates above a support surface 22a which is the upper edge of the panel 22. The bridging element 46 also includes a second downwardly extending part 46c on each side thereof which engages the sides of the base portion 36b and which itself serves as a base portion. In this fashion the bridging element 46 is maintained in position against the base portion 36b, particularly against the outer edges of that base portion.

As shown in FIG. 10, and at the corner forming the junction of panels 22 and 24, holes are included in the base portions 36a and 36b (respectively holes 50a and 50b). These holes are aligned with corresponding holes in the bridging elements 44 and 46 (respectively holes 52a and 52b). A screw 54 (FIG. 3) passes through the

holes 52b and 50b and engages a threaded fastening 56 in the panel 22.

In this fashion all the panels are joined together. It will be noted that a base portion and a flange portion structure (albeit a one-piece casting) is used throughout in the joining and ending of all panels. At the corners, such as at the corner formed by the joining of panels 22 and 24, the base and flange structures 36 and 38 may be integrally formed if desired, or individual pieces might be employed if desired. The same is true with the joining of adjacent panels in a straight line, as by the base and flange portions 40 and 42, as well as the termination of a panel as by the base and flange portions 48 and 49. Normally, bridging elements, such as the bridging elements 44 and 46, are employed in the mid regions of the top edges of the panels to conserve material.

In the figures, FIGS. 2 and 3 show the joining together of panels at a corner, such as the corner formed by the panels 22 and 24. FIGS. 4 and 7 show the termination of a panel, as at the right-hand end of panel 22 (FIG. 10).

FIGS. 8 and 9 show the joining together of adjacent panels in a straight line, as for example panels 24 and 24'. It will be noted that in this case a foam-type substance 60 may be advantageously positioned between adjacent panels. Such gasket material is normally used at all joints between panels.

FIG. 10a shows the structure used to join together panels in a T configuration, involving segment 40c.

FIG. 11 shows the joining together of panels at the bottom. The joining structure is simply representative and could take the form of the top trim structure just described. However, for purposes of economy it is better to use the structure shown in FIG. 11 to save material costs. All that is involved is simply strips of material such as strips 61, 62, 64, 66 and 68 as well as a corner bracket 70. Flat strips, angle irons or channels may be used, as desired. The strips and corner bracket are drilled as at 72, for example, to permit a caster 34 to be held in place. Additional holes are included such as the hole 76 to accommodate screws 74 which pass upwardly through the strip or bracket and into the corresponding panel to hold the strip or bracket in place.

FIGS. 12 and 13 show the support of the writing surface 28. For this purpose an L-shaped bracket 80 is employed. The bracket includes segments 80a and 80b. If the bracket 80 is positioned as shown in FIG. 12 the writing surface 28 is maintained in a lower one of two positions, while if the bracket 80 is positioned as shown in FIG. 13, the writing surface 28 is positioned in a higher one of these two positions. The bracket 80 is secured to the panel 22 and the writing surface 28 respectively by screws 82 and 84.

FIG. 14 shows how an item such as a tack board or cabinet, for example, may be supported in place by the novel structure of the present invention. A bracket 90 is employed which includes a portion 90a affixed to the tack board 32 and L-shaped remaining portions 90b and 90c. The portion 90c first behind downwardly extending part 92b of flange portion 92. The section 90b of the L-shaped bracket rests upon the top edges of the panel 24', which top edge in this case acts as a support surface for this section of the L-shaped bracket. Thus the bracket is supported at the section 90b, while the section 90c is prevented from moving outwardly by the downwardly extending part 92b of the flange portion

which maintains the tack board in position. All that is required is a simple pivoting of the tack board, to the position shown in dash and dotted lines in FIG. 14, to remove or position the tack board in place.

The advantages of the novel trim/panel joining/hanging support structure just described is that the flange and base portions may be made integral or separately as desired. It should be noted that the abutting together of adjacent flange portions, for example, flange portions 38 and 44 in FIG. 10 along a straight line 96 shown in FIG. 2 prevents the pivoting of the flange portion 44. Hence, only a single screw need be employed passing through hole 52a at this end of the flange portion 44 to prevent such pivoting movement; normally two screws at each end of the flange portion would be required to prevent such pivoting movement.

It should also be noted that the base portion, e.g., the base portion 36, is less in height than the corresponding flange portion 38 and is less in width than the flange portion. This provides for the advantageous nesting of associated flange and base portions in completing the decorative trim/panel joining/hanging support structure of the present invention.

The drawings show illustrative forms. Further joints, such as + shaped may be used, and joints at other than right angles are possible.

FIGS. 15 to 19 show the details of a support bracket for supporting a shelf or similar unit. In FIG. 15 three panels, 100, 102 and 104, are shown maintained in position through use of the decorative trim/panel joining/hanging support structure described above. A shelf 106 is shown supported by brackets 108 and 110. FIGS. 16 and 17 show the details in which the right-hand bracket 110 in FIG. 15 is positioned in the space between abutting or adjoining edges of panels 102 and 104. FIG. 18 shows the left-hand bracket 108 in FIG. 15. Because FIG. 18 is an exploded view, reference will be made to that figure to explain the support brackets 108 and 110.

The left-hand support bracket 108 is, as shown in FIG. 18, comprised of a first leg 108a which extends in the horizontal or X direction. The leg 108a is for supporting the bracket from top edge 102a of panel 102. The leg 108a terminates in an upwardly extending lip 108b; the lip 108b extends in the Y direction. A second leg 108c extends downwardly in the vertical or Y direction. The leg 108c is normally much longer than the leg 108a. The leg 108c extends along side edge 102b of the panel 102 that adjoins a side edge of panel 100. Thus the vertical leg 108c is positioned between the adjoining or abutting edges of the panels 100 and 102, and is completely concealed from view except for the edge 108d of this vertical leg which is visible to an observer looking toward the large area surface 102c of the panel 102. Positioned beneath the vertical leg 108c is the gasket material 60 described above.

A third leg 108e extends outwardly in the Z direction away from the large area surface 102c of the panel 102. The leg 108e serves as the actual support for the shelf 106 and for this purpose includes flanged portions 108f, 108g and 108h.

It will be noted from FIG. 18 that the horizontal leg 108a that is supported on the top edge 102a of the panel is positioned within decorative trim/panel joining/hanging support structure 112 shown removed in FIG. 18. The trim piece 112 is as described above and includes a base portion 112a that bears against top

edge 102a of the panel 102. The base portion 112a as shown in FIG. 18 is made up of two flanged pieces 112a-1 and 112a-2. The horizontal leg 108a of the support bracket fits between the flanges 112a-1 and 112a-2, with the upwardly extending lip 108b bearing against the under surface 112b of the trim piece. In this fashion the support bracket 108 is maintained in position. FIG. 17 shows the manner in which the upwardly extending lip 110b of the support bracket 110 bears against under surface 114b of trim piece 114.

FIG. 19 shows the details of a similar support bracket 118 adapted to be positioned with respect to two panels 120 and 122 that join in a straight line rather than at right angles as in the construction of FIG. 15. For this purpose the bracket includes a first leg 118a that extends horizontally in the X direction on both sides of the vertical leg 118c (leg 118a need only extend on one side of leg 118c). The leg 118a includes upwardly extending lips 118b-1 and 118b-2 that fit within trim piece 124 in the same fashion as explained above with respect to the lips 108b and 110b. In this case the vertical leg 118c of the support bracket is positioned between the abutting edges of the two panels 120 and 122.

With respect to the support bracket, there are three basic configurations just disclosed. The first is for a "left-hand" bracket (bracket 108), the second is for a "right-hand" bracket (bracket 110), and the third is for an "intermediate" (bracket 118) that is adapted for use between two panels that abut in a straight line. Other bracket configurations are possible departing from the specific configurations shown in FIGS. 15 to 19. The brackets are characterized by the fact that the actual article support portion that is constituted by the third horizontal leg which extends in the Z direction away from the large area surface of one or more panels is positioned a substantial distance below the top edges of these panels giving the illusion that the bracket itself is "floating".

It should be realized that the invention is subject to modification. The invention should be taken to be defined, therefore, by the following claims.

We claim:

1. Panel structure, comprising a pair of panels having abutting edge portions, and a bracket for supporting a fixture, said bracket comprising a vertically extending leg positioned between said abutting edge portions, an means attached to said leg and extending from said abutting edge portions for supporting a fixture, said bracket including a horizontally extending leg supported on the top edge of at least one of said panels.

2. A work station comprising at least two vertically disposed panels that together bound a work area, each panel having a top edge surface and a bottom edge surface, first panel joining means attached to said panels only adjacent the top edge surfaces thereof, and second panel joining means attached to said panels only adjacent the bottom edge surfaces thereof, said first and second panel joining means constituting the only means of joining together said panels, in which said first panel joining means includes means for securing a support bracket for support of the bracket by the top edge surface of at least one of said panels, and a support bracket resting on a part thereof on said top edge surface and secured in plane by said securing means.

3. A work station according to claim 2, in which said first panel joining means comprises a base portion that

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bears against the top edge surface of at least one of said panels, and a flange portion overlying the base portion, said flange portion having an outwardly and then downwardly extending outer part which comprises said securing means.

4. A work station comprising a panel structure having a top edge surface, a trim structure comprising a base member that bears against said top edge surface and a

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flange member extending from above said top edge surface outwardly and downwardly and terminating above said top edge surface, and a support bracket resting on a part thereof on said top edge surface and held from moving off said top edge surface by said flange member.

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