

[54] **FABRICATED PARTITIONS**

[76] Inventor: **Hubert James Whisson**, 86 King
William Rd., Hyde Park, Australia
5061

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52/398, 399, 400, 627, 628, 621

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Primary Examiner—Frank L. Abbott

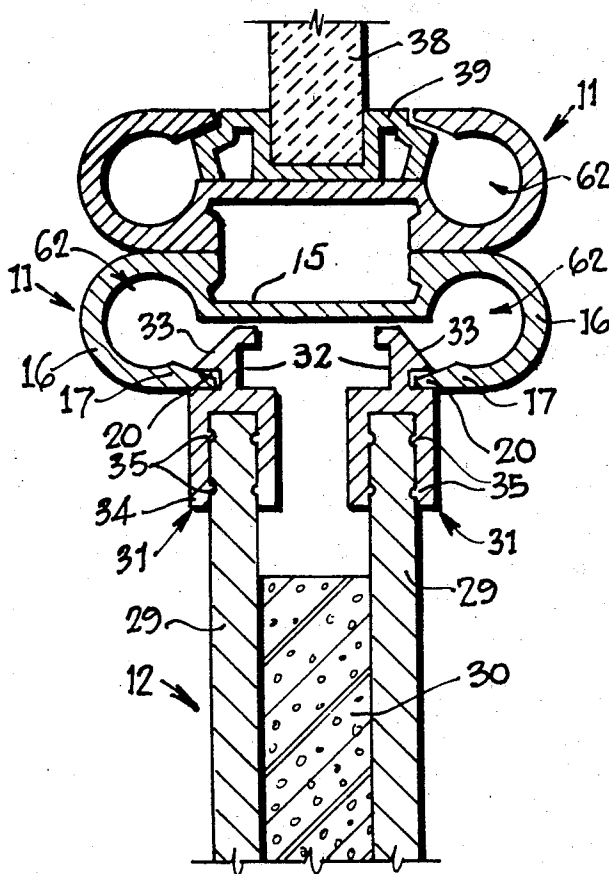
Assistant Examiner—Henry Raduazo

Attorney, Agent, or Firm—Jay L. Chaskin, Esq.

[57] **ABSTRACT**

A fabricated partition having spaced parallel upright members and panels extending therebetween, the upright members engaging lips on the sides of the panels while deformed and retained in position by resilient means. The upright members are shaped to form pairs of apertures at each end which are engaged by joining members, each joining member having a pair of parallel spigots engaging the apertures.

4 Claims, 10 Drawing Figures



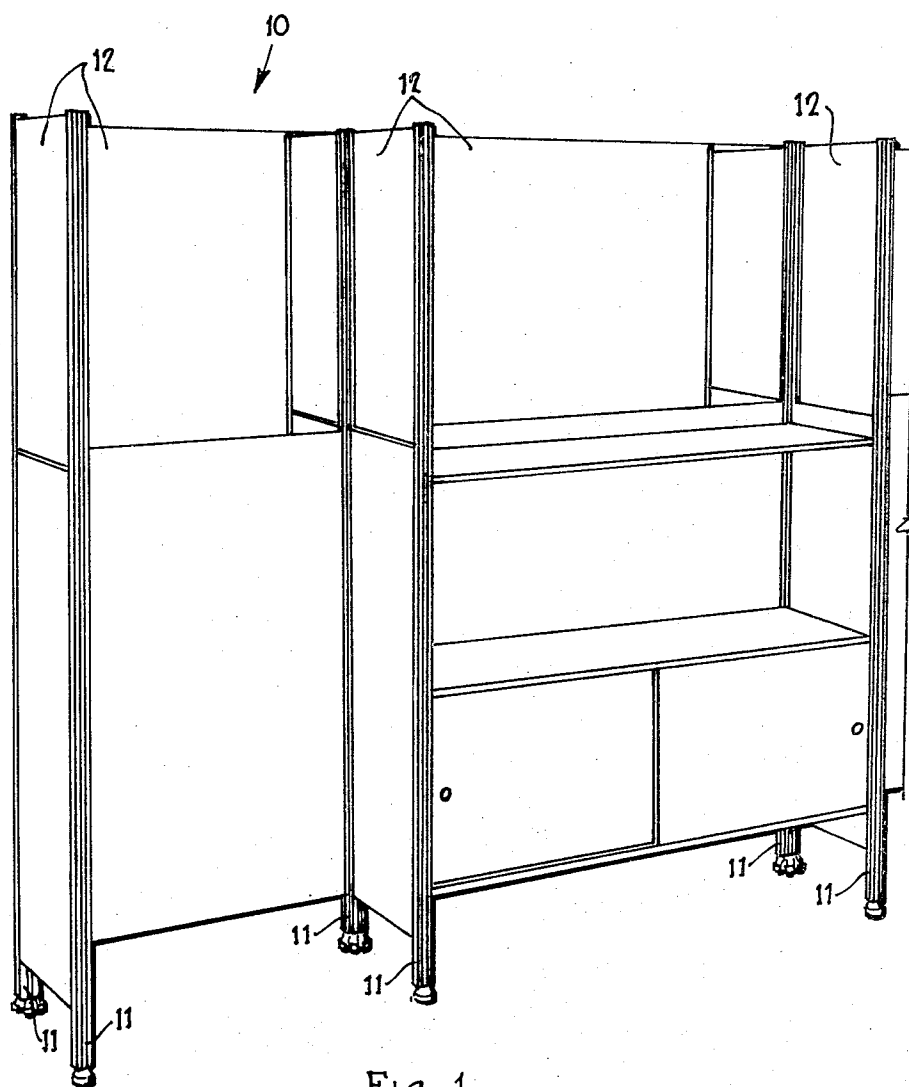
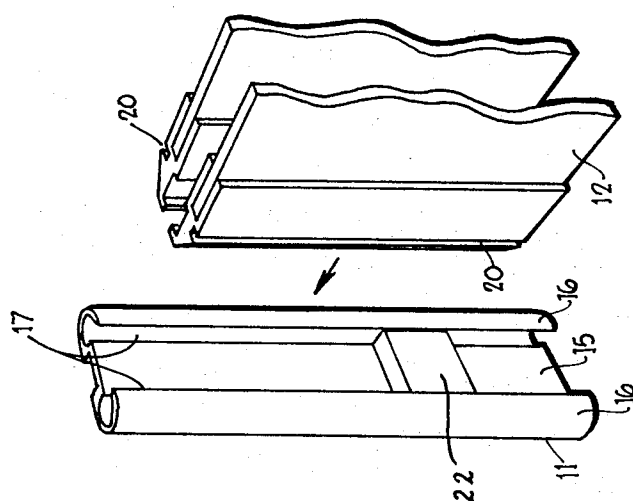
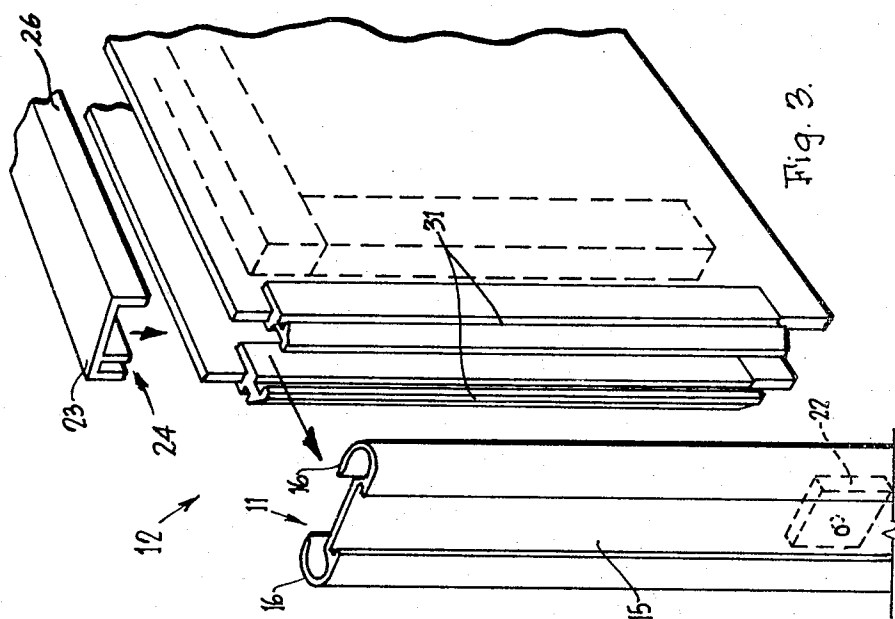
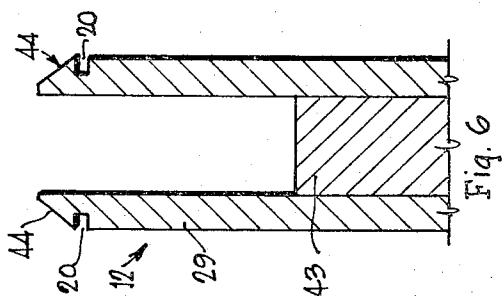
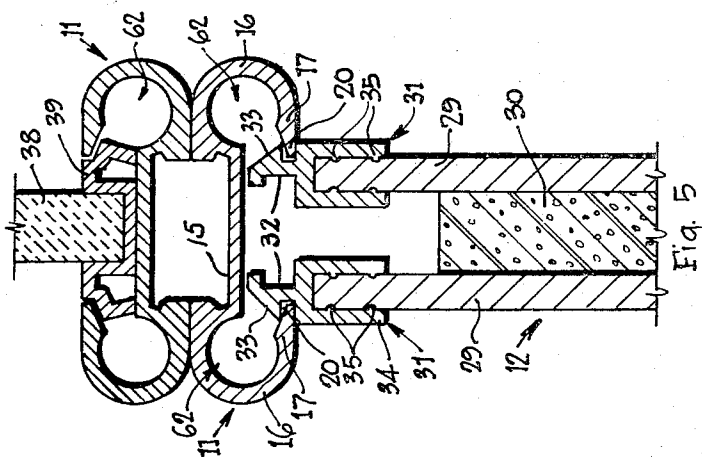
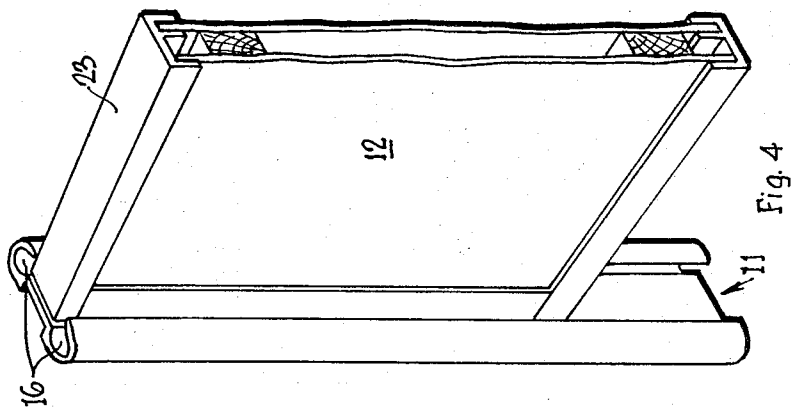


Fig. 1





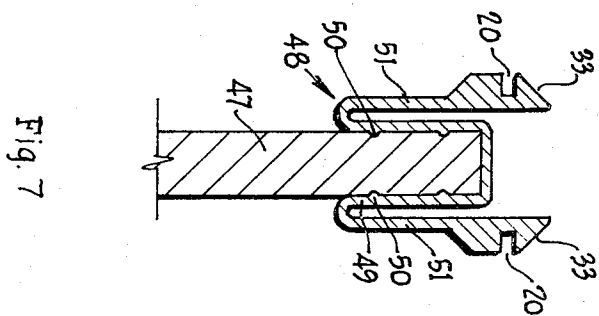


Fig. 7

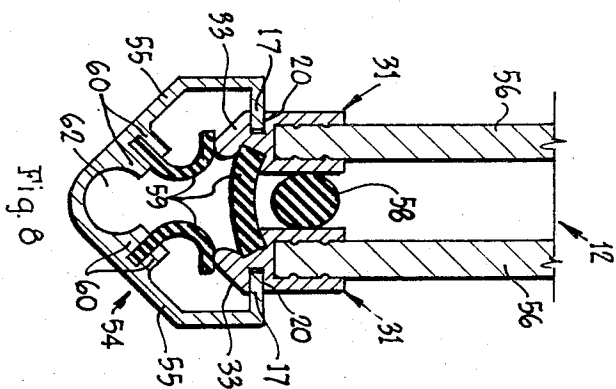


Fig. 8

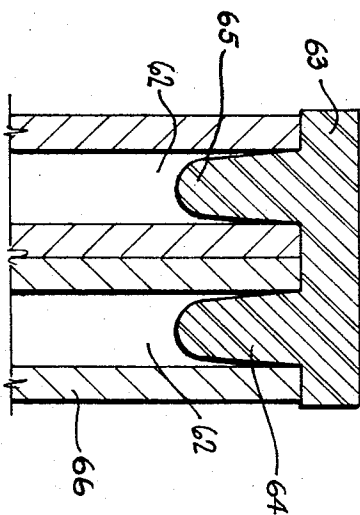


Fig. 10

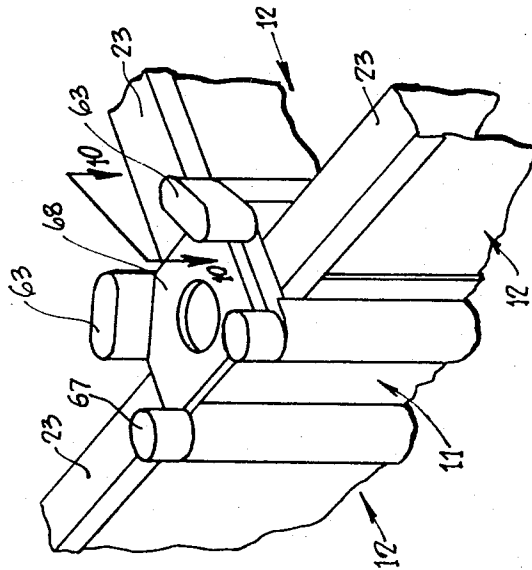


Fig. 9.

FABRICATED PARTITIONS

This invention relates to fabricated partitions of the type wherein a partition is formed from a series of panels extending between upright members.

BACKGROUND OF THE INVENTION

The prior art closest to the subject matter of this invention known to the Inventor is his own Australian Pat. No. 405,876, which contained a disclosure of upright members having a cross-sectional configuration; lying within the definition contained in the claims appended to this Specification.

Partitions (or display panels) are well known and are in common use but are frequently subject to a number of disabilities. The first disability is that the assembly or disassembly of the partitions is very time consuming, the frame members usually being joined together by fastening members such as screws, while the panels are separately joined again by fastening members to the frame members. Another fault with many existing partitions is that they are of high cost, and in some cases notwithstanding high cost are not rigid. Furthermore, they do not always incorporate means for joining panels to one another other than in a straight line.

BRIEF SUMMARY OF THE INVENTION

Briefly the invention features upright members having return portions extending along each side which terminate in lips, panels having edge members; a recess in each edge member and resilient means between the edge members arranged to allow the edge members to be moved towards each other, but upon release to urge the recesses into firm engagement with the lips said recesses thereby constituting lip engaging portions.

The panel skins may be provided with a resilient slab or strip of material between them, for example a slap of polystyrene or a strip of polyurethane, or alternatively a bead of rubber may be utilised for urging the lip engaging portions apart.

The invention may be utilised with vertical uprights of varying configurations, and for example one configuration which is particularly suitable employs a substantially flat web joining the two return portions which are each of part circular shape containing a part circular groove and terminating in a tapered lip. The invention has the advantage that the engagement recesses in the panel skins or the panel edge members thereon retain such a member against any "wind" thereby ensuring a close fit face to face with adjacent uprights. However, there are some cases wherein it is desirable to utilise a more rigid upright, and in a further example of the invention there is provided an upright which is of general triangular cross-section, having two sloping webs terminating at their ends in tapered return flanges which are arranged to engage the panel skins or the panel edge members thereon, sloping webs joining at an apex which however is of curved form and which defines within it a part circular groove. The hollow portion of the upright may contain strips adapted to abut surfaces of the panel skins or the panel edge members thereon.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings there are illustrated several embodiments of the invention.

FIG. 1 is a perspective view of a fabricated partition;

FIG. 2 is a fragmentary perspective "exploded" view illustrating support means on an upright member for the support of a panel, according to a first embodiment of the invention,

FIG. 3 is a fragmentary perspective "exploded" view illustrating a method of assembly of a panel to an upright member, according to the first embodiment of the invention,

FIG. 4 is a fragmentary perspective view corresponding to FIG. 3 but illustrating a panel after assembly to an upright member,

FIG. 5 is a fragmentary enlarged section showing a typical assembly of a panel, an upright member, and a glass pane, in accordance with the first embodiment,

FIG. 6 is a fragmentary enlarged section showing a panel wherein the lip engaging portions are projecting recessed ends of skins comprised in the panel,

FIG. 7 is a fragmentary enlarged section showing a panel wherein an edge member is itself resilient and comprises the pair of lip engaging portions,

FIG. 8 is a fragmentary enlarged section showing a panel wherein the lip engaging portions are urged apart by a bead of rubber, and also showing an upright member of general triangular cross-section, according to a second embodiment of the invention,

FIG. 9 is a fragmentary perspective view illustrating a T join between panels, and

FIG. 10 is a fragmentary section taken on plane 10-10 of FIG. 9.

FIG. 1 illustrates a fabricated partition 10 which comprises a plurality of spaced parallel upright members 11 and panels 12 extending therebetween.

As shown in other drawings but best seen in FIG. 5, each upright member 11 comprises a web 15 flanked on each side with a return portion 16 which terminates in a lip 17, the lips 17 extending towards one another being spaced apart and co-operating with the web 15 to form a channel shape cross-section.

Each panel 12 comprises a pair of spaced parallel lip engaging portions extending along each of its two vertical edges, there being an outwardly facing recess 20, and resilient means between the lip engaging portions. Different embodiments employ different resilient means and these are described hereunder in some detail.

As shown in FIGS. 2 and 3, panel support blocks 22 are secured to the web 15 of respective upright members 11 and support the panels 12, which abut the support blocks. As shown in FIG. 3, the panels 12 terminate along their upper and lower edges in closure members 23, each closure member being a constant cross-sectional shaped extrusion of plastics material having a pair of closely spaced flanges 24 which engage one skin of a panel and a further flange 26 along the opposite edge, so that while one skin of a panel 12 is engaged the other skin is free to move against resilient means.

As said, the resilient means and the panels can be of different forms. For example in the embodiment which is illustrated in some detail in FIG. 5, the panel 12 comprises a pair of panel skins 29 having a lamina of foam plastics material 30 therebetween, the foam plastics material 30 constituting resilient means which tends to urge the skins 29 away from one another. Each of the skins 29 terminates along its vertical edge in a metal extrusion designated 31 constituting an edge member, each metal extrusion 31 containing a said recess 20 which engages over a lip 17, the recess 20 constituting

the lip engaging portion. The recess 20 are contained in outwardly projecting beads 32, there being a ramp face 33 extending outwardly from each recess 20 to facilitate a "snap in" assembly condition. The condition before assembly is illustrated in FIG. 3 and after assembly in FIG. 4. Each edge member 31 is also provided with a pair of spaced parallel flanges which are designated 34, and each flange 34 has inwardly directed ribs designated 35 which firmly engage the respective skins 29 near their ends.

As shown in FIG. 5, the upright member 11 also supports a glass panel 38 which is contained in a plastic extrusion 39, the extrusion 39 slides into upright 11 and a resilient plastic member supports the glass edge.

In FIG. 6, the skins 29 are of relatively hard resilient material (for example thermosetting plastics material) and are spaced by battens 43. The ends of the panels however overhang the battens and the panel skins 29 thereby constitute the resilient means. The ends of the panel skins 29 are provided with bevel edges 44, the recesses 20 being in the outer faces of the panel skins 29. This avoids the need for use of the edge members 31 if the skins are provided with sufficient inherent rigidity.

As illustrated in FIG. 7, a single sheet member 47 may be used in place of a pair of panel skins. In FIG. 7, the edge member is designated 48 and forms from an extrusion of suitable metal, for example aluminium, having channel forming portions 49 with beads 50 functioning to engage the edge of the sheet member 47. However the edge member 48 is provided with two flanges 51 which are resilient, and which contain the outwardly facing recesses 20. Ramps 33 are provided as in the embodiment of FIG. 5 again to enable the panel to have a "snap in" facility.

In certain applications it is desirable that the uprights themselves should have considerable rigidity, and in the embodiment of FIG. 8 the upright member which is designated 54 is provided with a web 55 having two portions extending at right angles with one another. The web 55 however is again provided with the return portions on each side, each of which terminates in a lip 17 which is again engageable in a recess 20 as in the previous embodiments. In the embodiment of FIG. 8 however the skins (designated 56) of the panel 12 are retained along their edges in the edge members 31, and the edge members 31 are separated by a bead of resilient rubber designated 58. The rubber bead 58 functions to seal between the two edge members 31, but the beads 32 also engage against rubber or plastics strips 59 which are of U-shape, and which are retained by flanges 60 within the upright member 54, (for weather resistance).

In the embodiment described in FIG. 5 the return portions 16 define two part circular recesses 62, while in the embodiment described with respect to FIG. 8, the two portions of the web 55 also form between them a part circular recess 62. In FIGS. 9 and 10, there is shown the arrangement whereby panels are joined in edge to edge relationship at the localities of the upright members 11, by means of joining members 63 having

depending spigots 64 which engage in the respective part circular recesses 62 of the upright members 11 (or 54 as the case may be). The spigots 64 have reduced diameter portions 65 near their lower ends, and these are surrounded by resilient sleeves 66 which frictionally and firmly engage the inner surfaces of the part circular recesses 62. This provides means whereby considerable manufacturing tolerances may be provided and yet a "rattle free" assembly achieved. Where it is desirable to merely close the upper ends of part circular recesses, use is made of closure spigots 67 as shown in FIG. 9. The hollow formed by the upright members 11 when interengaged as shown in FIG. 9 is partly closed by a small plate 68.

It will be understood that the foregoing disclosure of preferred embodiments of the present invention is for purposes of illustration only, and that the various structural and operational features disclosed may be modified and changed in a number of ways none of which involves any departure from the spirit and scope of the invention as defined in the hereto appended claims.

What I claim is:

1. A fabricated partition having spaced parallel upright members and panels extending therebetween, each upright member having a web flanked on each side with a return portion terminating in a lip, the lips extending towards one another but being spaced apart and co-operating with the web to form a channel shaped cross section,
- each panel comprising a pair of spaced panel skins, a pair of spaced parallel edge members extending along each of the two vertical edges of the panel, each edge member being a metal member secured to a respective panel skin edge and having a ramp face extending along its outer surface and an outwardly facing recess in its outer surface,
- and resilient means separating respective pairs of edge members, so constructed and arranged that the edge members of each pair may be moved towards one another by deforming said resilient means, positioned with the recesses aligned with the lips of an upright member, and when released urged into firm engagement with the lips by the resilience of said resilient means.
2. A fabricated partition according to claim 1 wherein an interior surface of each said web defines a part circular recess, and joining members join adjacent upright members, each joining member having a pair of spigots which engage respective said part circular recesses of adjacent upright members.
3. A fabricated partition according to claim 1 wherein the web of a single upright member has two portions lying in respective planes which are at an angle to one another so that the upright member has a generally triangular cross-section.
4. A fabricated partition according to claim 1 further comprising closure members extending along upper and lower edges of said panel, each closure member comprising a channel shaped member having flanges which abut the outer surfaces of said skins.

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