A modular structure for enclosing a privacy booth, for example, in restrooms. The modules are integrally molded from plastic material such as high impact polystyrene foam. Shells, webs and fins are integrally molded onto the panel structure and extend generally at right angles to the panel structure thereby providing reinforcement. A door jamb and hinge mounting structures are molded into the modules. Recesses are molded in the module for the locks and hinges. The panels have bifurcated rear ends which may be received in wall brackets. In one embodiment of the invention, two sheets of material, each having ribs on one side, are put together with the ribs abutting to provide a partition structure.

3 Claims, 21 Drawing Figures
PARTITION MADE OF FOAM MATERIAL

REFERENCE TO PRIOR ART

Patents showing the general type of structure disclosed herein are U.S. Pat. Nos. 3,010,548 and 2,042,721.

OBJECTS OF THE INVENTION

It is an object of the invention to provide an improved panel structure.

Another object is to provide a panel structure that is simple in construction, economical to manufacture, and simple and efficient to use.

Another object is to provide panels for partitions made from foam material.

With the above and other objects in view, the present invention consists of the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawing and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportions, and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

GENERAL DESCRIPTION OF THE DRAWINGS

FIG. 1 is an isometric view of the panel partition installation using panels according to the invention.

FIG. 2 is a side view of one of the panels used in the structure shown in FIG. 1.

FIG. 3 is a cross-sectional view taken on line 3—3 of FIG. 2.

FIG. 4 is an inside view of the door shown in FIG. 1.

FIG. 5 is a cross-sectional view of the door shown in FIGS. 1 and 4.

FIG. 6 is a cross-sectional view taken on line 6—6 of FIG. 8.

FIG. 7 is a cross-sectional view taken on line 7—7 of FIG. 8.

FIG. 8 is a side view of the panel.

FIG. 9 is a top view of the outside of the panel shown in FIG. 2.

FIG. 10 is a side view of another embodiment of the invention.

FIG. 11 is a cross-sectional view of a part of the assembly shown in FIGS. 10 and 13 taken on line 11—11 of FIG. 10.

FIG. 12 is a cross-sectional view showing a typical joint section between the parts which form the panel shown in FIG. 10 and 13.

FIG. 13 is a top view of the embodiment of the invention shown in FIG. 10.

FIG. 14 is a front view of a panel assembly shown in FIG. 13.

FIG. 15 is a top view of one-half of the panel shown in FIG. 13.

FIG. 16 is a top view of the other half of the panel shown in FIG. 13.

FIG. 17 is a cross-sectional view of an end panel shown in FIG. 14.

FIG. 18 is an inside view of another embodiment of the invention.

FIG. 19 is a top view of the panel shown in FIG. 18.

FIG. 20 is an end view of the panel shown in FIGS. 18 and 19.

FIG. 21 is a cross-sectional view taken on line 21—21 of FIG. 18.

DETAILED DESCRIPTION OF THE DRAWINGS

Now with more particular reference to the drawings, the partition assembly shown in FIG. 1 is of a type often found supported in a restroom. The assembly is supported on a sidewall A and rear wall B and the room will, of course, have a ceiling to which column 24 may be attached with bracket 25. The panels 11 have a relatively thin wall section supported on the wall B by means of brackets 15 which may be fixed to the wall in a manner familiar to those skilled in the art. The brackets 14 and 15 have a forwardly extending flange which is received in slots 16 and 17 which support the panels as shown in FIGS. 1 and 2. A door 13 is supported by means of pins 35 in holes 32 as shown in FIGS. 4 and 9.

The panels 11 are molded in the form of a relatively thin integral body, as indicated in FIG. 3, and the surface or shell may be in the order of ¼ inch thick. The body has reinforcing webs to add strength. The top has an integral flange 27 formed by a part folded out and back on itself at 19 and 30 as shown in FIG. 9. A similar fold is formed at 22. The intermediate folded part 22 adds additional strength and acts as a shelf. The panel has a flanged portion 18 as shown in FIG. 3 which is molded integrally generally at right angles to the main panel portion and this flange 18 forms a spacer panel between the doors. The door stop is fixed to the jamb 18 also shown in FIG. 3. The upper web 27 forms a privacy shield as well as reinforcing the partition. The upper web 27 has the widened portion 19 at the rear and the widened gusset portion 30 at the front integrally connected to said panel and to said flange 18 and an intermediate narrow portion 28 which forms a graceful curve and adds not only strength but a pleasing appearance to the panel. An intermediate shelf 22 likewise is formed on the partition as an integral web with the body of the panel and the shelf 22 is likewise integral with the vertical webs 31. The shelf 22 may be used upon which to place articles while the booth is being occupied. A hook 21 is supported on the panel 11 for hanging clothing and the like. A suitable filler panel 10 may be in the form of a flat sheet by way of a decoration may be fixed in place between the lug 37 and the door stop 23 as shown in FIG. 3. The door stop 23 is in the form of an angle against which the door 13 may swing and which overlies the front edge of the door 13 so that no crack is exposed, this adds additional privacy.

The upper shelf 30 has an opening in it as does the lower shelf 30' through which the column 24 extends. The column 24 may extend entirely through from bottom to top as indicated in FIG. 2. It may be attached to the panel 11 by suitable adhesive and the panel structure can thus be suspended from the ceiling.

As shown in FIG. 4 the door 13 has the holes 32 therein for receiving hinge pins 35. Vertical ribs 33 and horizontal ribs 34 are formed on the back of the door to reinforce it. The door itself may be in the range of, for example ¾ inch in thickness. The columns 24 may have the ceiling pads 25 and the floor pads 26 on their ends which are of a highly conventional type.
In the embodiment of the invention shown in FIGS. 10 through 17, the panels 110 are made up of two half panels 111 and 112. The door 113 is supported by a suitable hinge pin 127 in the door receiving grooves 128. The door may swing into engagement with the door stop 123. A suitable opening is formed in the web structure of the upper flange 118 of panel 110 and the lower flange 119 of the columns 124 pass. A web 128 is formed above and below the door and web 129 is formed on the opposite side as shown in FIGS. 15 and 16. The door may rest on these webs and hinge pins may extend through them. Suitable ribs 122 are formed on the opposed sides of the panel which engage each other when the panel is in position. The rear end of the panel will be relatively thin, as shown in FIG. 13, and a U-shaped bracket 114 may be attached to the wall and receive the two rear ends of the panel halves.

The end panel 115 may be attached to the outside of the half panel 111 at the end of the row of booths. The flanges 118 may be received in the H-shaped extrusion 156 as shown in FIGS. 12 and 14.

The end partial door jamb may be provided by the member shown in FIG. 11. It is in the cross sectional shape of a lower case letter h having two legs 130 which have a minimum draft as indicated for easy removal from the mold. The legs 130 have a closure member 131 on their end and they are received in a U-shaped extrusion 132 which may be fixed to the side walls of the room. The door 113 will swing against the flange 136, as shown, and the flange 136 overlies the end of the door and provides additional privacy.

In the embodiment of the invention shown in FIG. 18, section 21-21 is similar to section 3-3 in the embodiment of FIG. 2. The panel is made of molded foam high impact polystyrene or the like approximately \( \frac{3}{4} \) inch thick and has the curved section similar to that in FIG. 3 and has upper ribs 231 and lower ribs 232 which form shelves as shown in FIG. 3. In FIGS. 18 and 19, an intermediate shelf 233 is shown which acts as a rib. These ribs reinforce the panel and have the vertical panel portion 211 which has the top flange 227 and the bottom flange 228 disclosed generally at right angles to the intermediate part 211. The flange end portions 219 and 230 and the curved intermediate portions 240 are as shown. Slots 217 are suitable to receive brackets for attaching the panel to a wall and the front flange 219 forms a support for door hinges as in the other two embodiments.

It will be noted from the foregoing that the panels disclosed provide an aesthetic, economical and acoustically desirable structure.

The foregoing specification sets forth the invention in its preferred practical form but the structure shown is capable of modification within a range of equivalents without departing from the invention which is to be understood is broadly novel as is commensurate with the appended claims.

I claim:

1. A partition comprising integral panels, said panels being relatively thin wall sections and having a flange integrally attached at their front edges, said flange extending generally at right angles to said wall sections and forming a door jamb, means for hinging a door to the distal edge of said flange, said flange having a recess receiving the back part of said door, and gusset means integrally attached to said flange and to the upper edge of said wall sections disposed generally perpendicular to said flange and integrally attached to said wall sections and perpendicular thereto and said flange being generally flush with the upper edges of said wall sections, and second gusset means underlying said flange and underlying said wall sections, and underlying said door whereby said door is supported.

2. The partition recited in claim 1 wherein a shelf is molded integrally to said partition along the upper edge thereof and extending generally at right angles thereto, and a shelf is molded to an intermediate part of said wall section between the top and bottom thereof and extending a substantial distance from one side thereof to the other.

3. The partition recited in claim 1 wherein said upper shelf has an opening therein for receiving a column for supporting said partition, and means on the rear edge of said module for supporting said partition on a wall.

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