United States Patent [19]

Pritchard et al.

[11] **3,745,732**

[45] **July 17, 1973**

[54] **DEMOUNTABLE PARTITION SYSTEM**

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[73] Assignee: **Superior Industries Inc.,** Youngstown, Ohio

[22] Filed: **Aug. 5, 1971**

[21] Appl. No.: **169,409**

[52] **U.S. Cl.** **52/239,** 52/241, 52/481

[51] **Int. Cl.** **E04b 2/74**

[58] **Field of Search** 52/238, 239, 243, 52/241, 481, 495, 122

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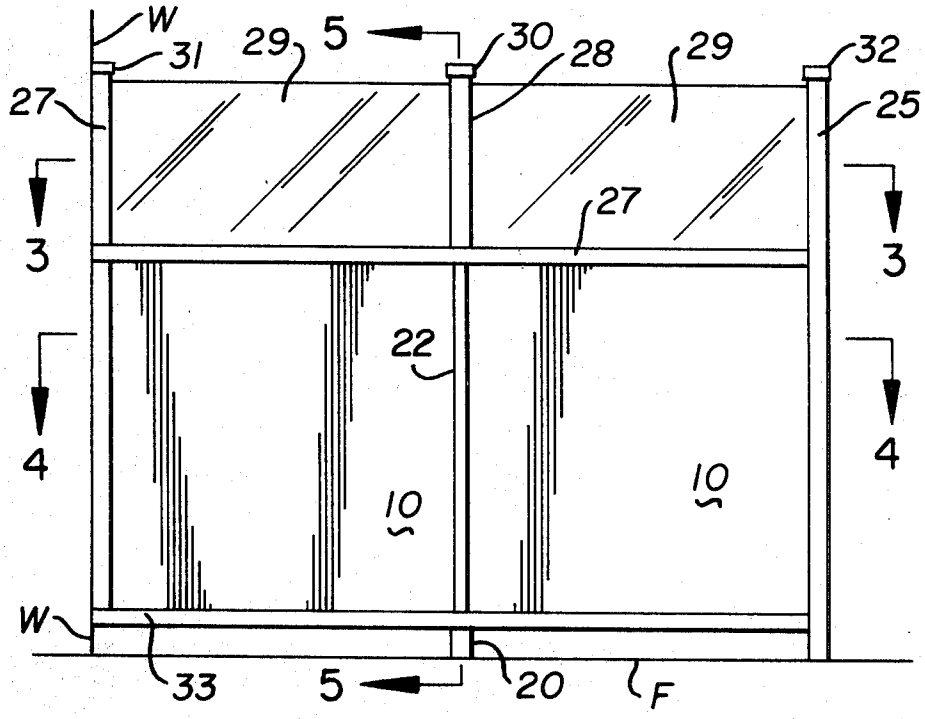
Primary Examiner—Price C. Faw, Jr.

Attorney—Webster B. Harpman

[57] **ABSTRACT**

A demountable partition system consists of metal shapes such as aluminum extrusions and wall board panels forming closed and open base rail height and cornice height and ceiling height partitions wherein the wall board panels are supported and retained by the metal shapes so as to be held in spaced relation with their edges enclosed in attractively configured trim. Certain of the metal shapes employed as trim incorporate glazing grooves simplifying glass installation and others include door stops forming door frames and the like.

5 Claims, 15 Drawing Figures



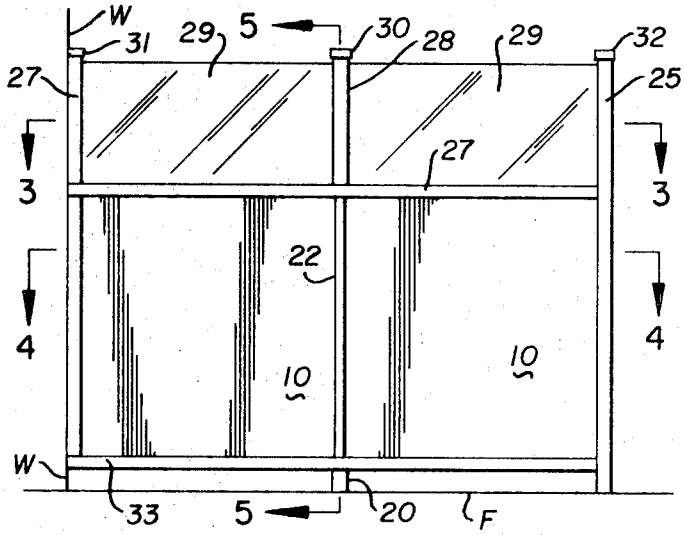


FIG. 1

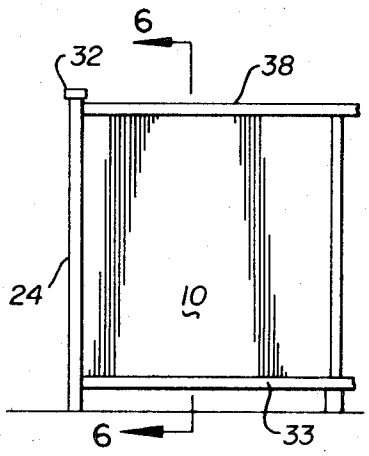


FIG. 2

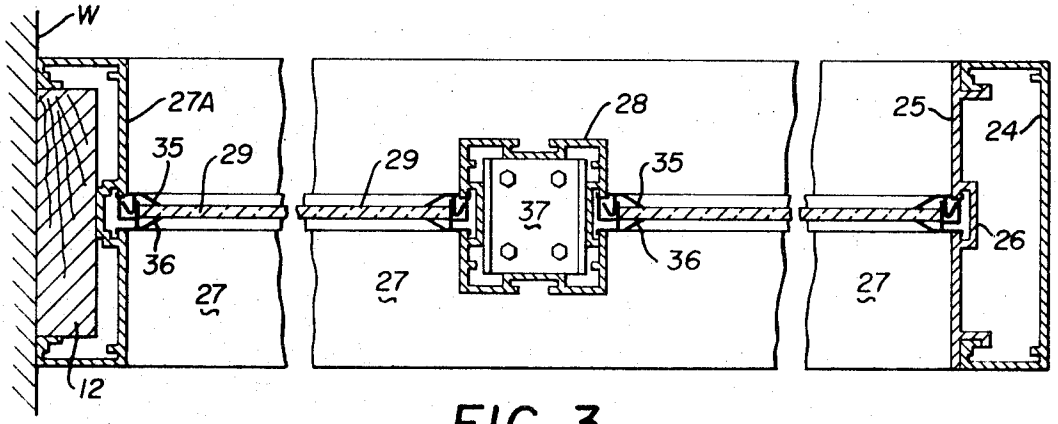


FIG. 3

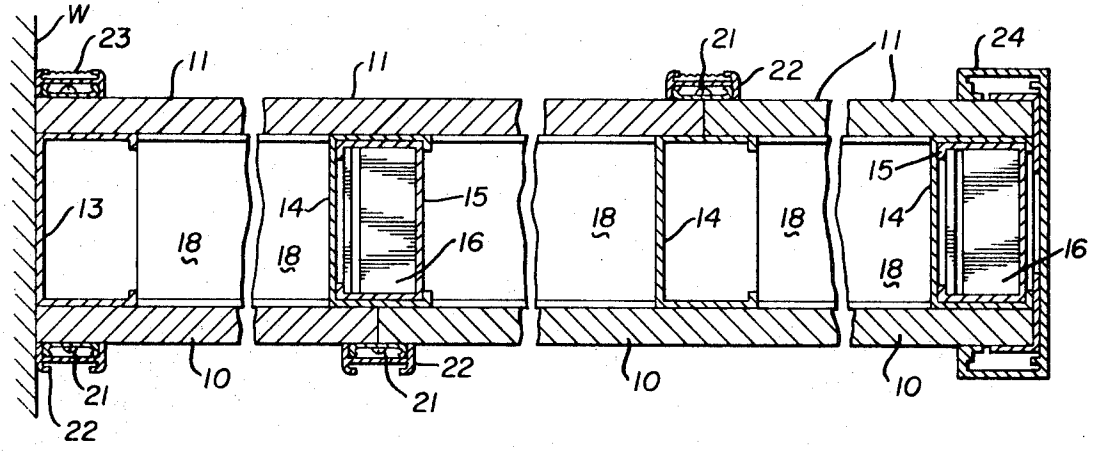


FIG. 4

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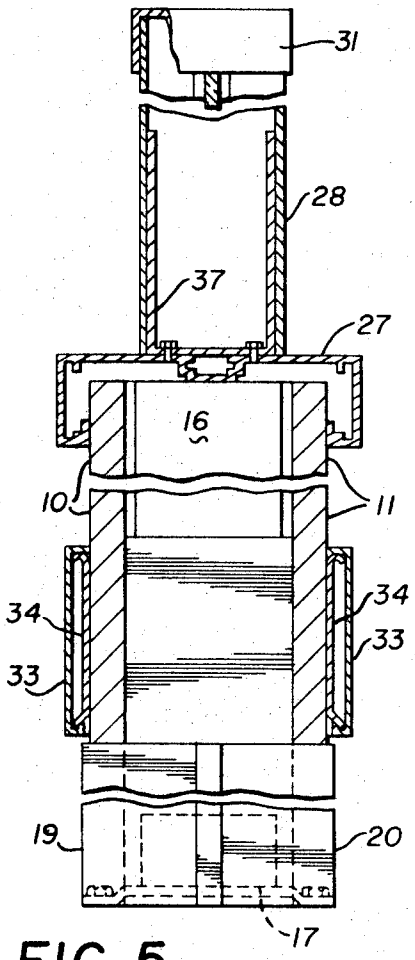


FIG. 5

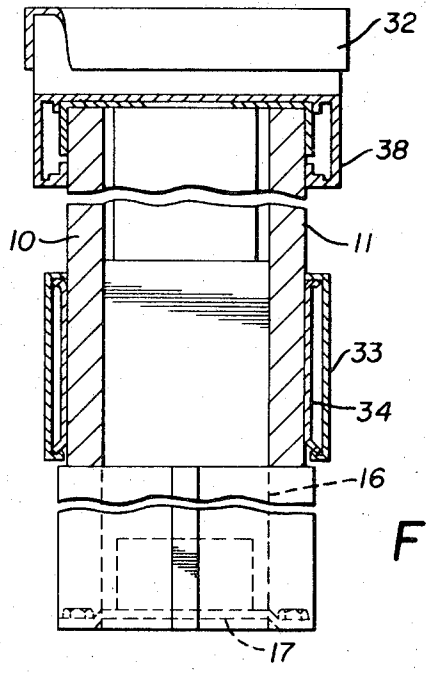


FIG. 6

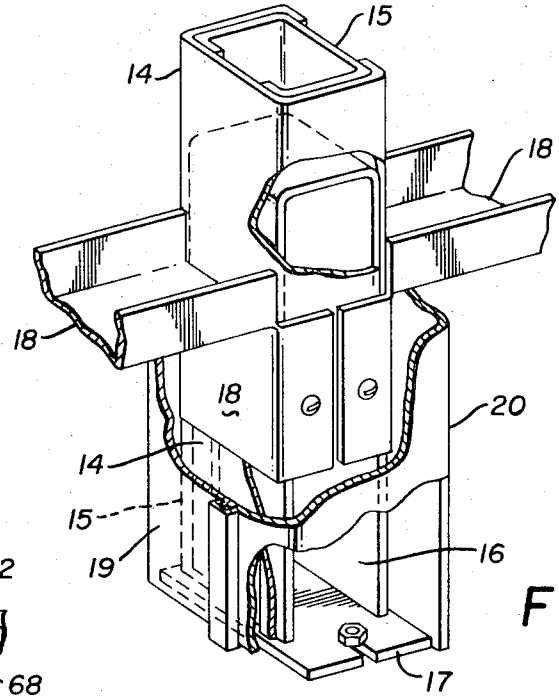


FIG. 7

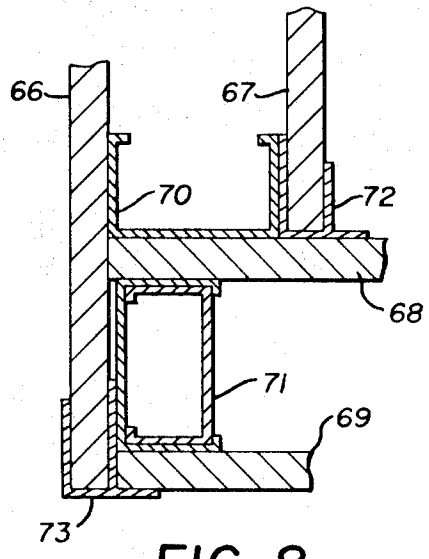


FIG. 8

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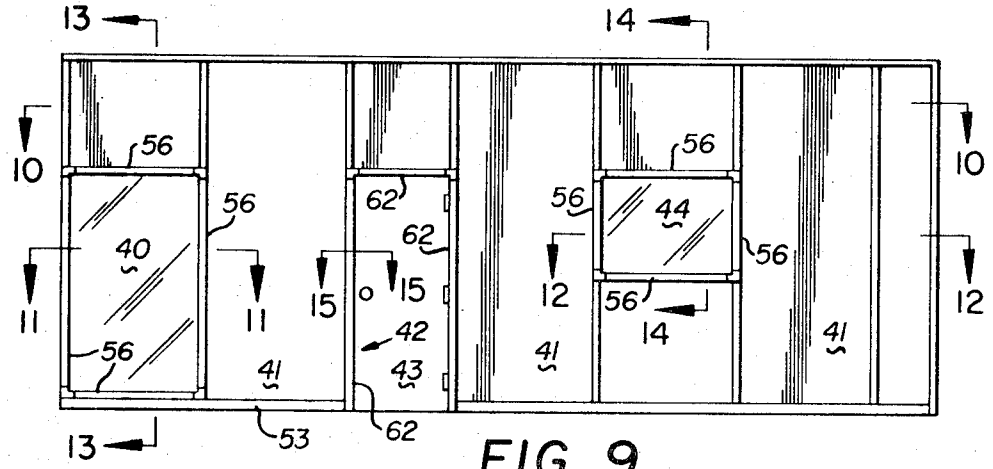


FIG. 9

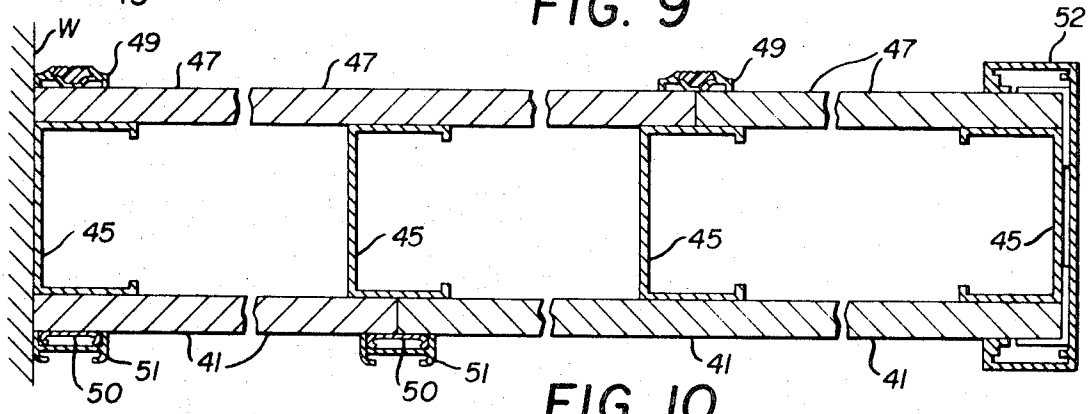


FIG. 10

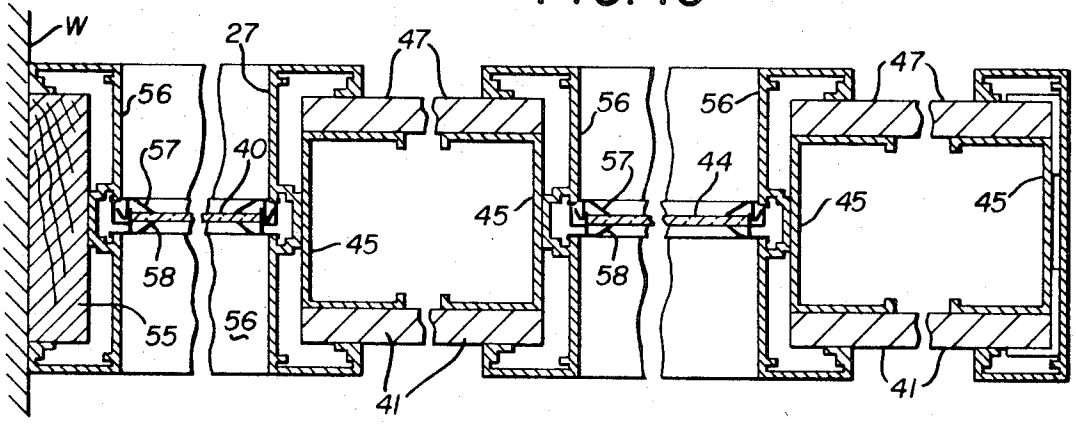


FIG. 11

FIG. 12

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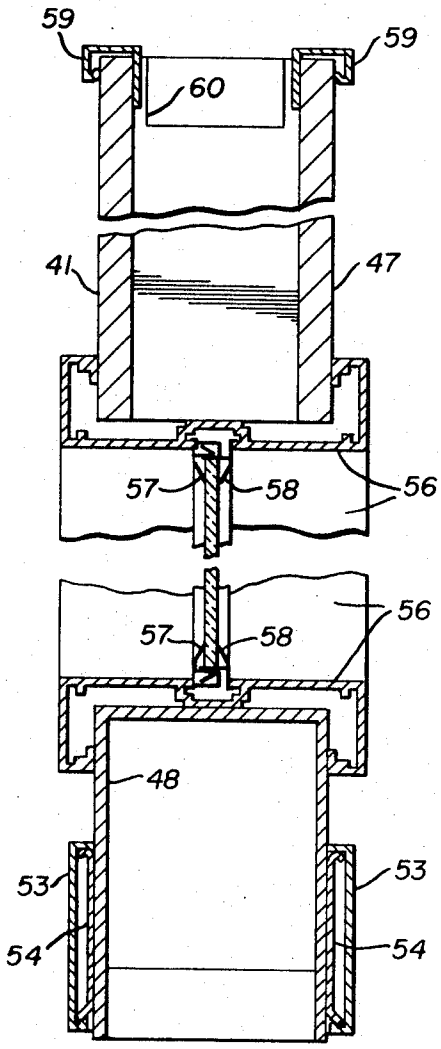


FIG. 13

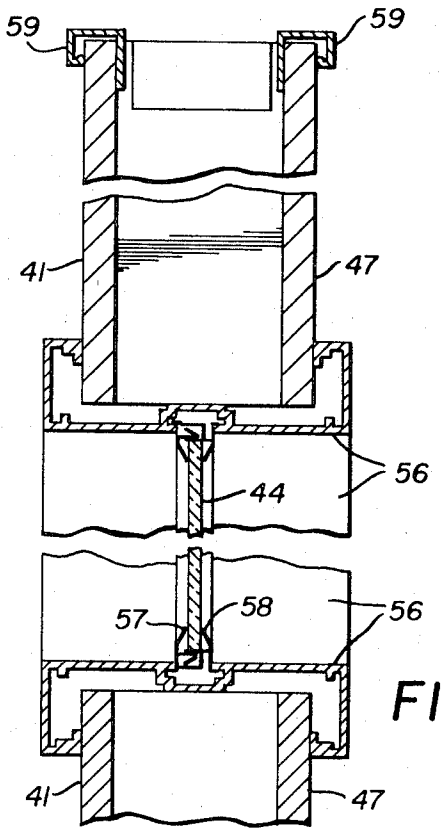


FIG. 14

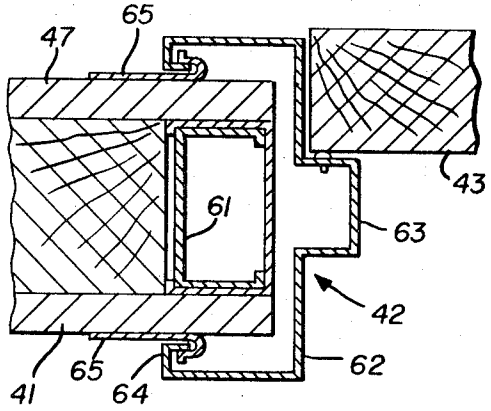


FIG. 15

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DEMOUNTABLE PARTITION SYSTEM

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to partitions of the type normally employed to sub-divide rooms and other areas into partially enclosed or wholly enclosed areas.

2. Description of the Prior Art

Prior structures of this type usually employ permanent steel stud partitions with more or less conventional window frames and glazing units and door frames and door units. This invention eliminates the specific window frame and framing devices and utilizes interchangeable demountable metal shapes and inexpensive wall board panels.

SUMMARY OF THE INVENTION

A demountable partition system includes a plurality of interchangeable metal shapes such as aluminum extrusions and wall board panels to which glazing sections may be added. The metal shapes position and support the wall board panels in on the floor relation or off the floor relation together with a plurality of posts which are hidden between the wall board panels. Channels in some of the metal shapes provide for the reception of snap-in trim and/or glass holding splines when glazing units are added to the partition or windows formed therein. The plurality of metal shapes may be reused with the wall board panels in forming partitions of different heights and different lengths and the wall rigidity of the assembled partition system compares favorably with that of a permanent steel stud partition.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation of a rail height open base partition with a glazing screen.

FIG. 2 is a front elevation of a rail height open base partition.

FIG. 3 is a horizontal cross section on line 3—3 of FIG. 1 with parts broken away.

FIG. 4 is a horizontal cross section on line 4—4 of FIG. 1 with parts broken away.

FIG. 5 is a vertical section on line 5-5 of FIG. 1 with parts broken away.

FIG. 6 is a vertical cross-section on line 6—6 of FIG. 2 with parts broken away.

FIG. 7 is a perspective elevation detailing the center floor post as seen in FIG. 1 of the drawings and with parts broken away.

FIG. 8 is a horizontal section of a corner construction of the partition system.

FIG. 9 is a front elevation of a ceiling height partition.

FIG. 10 is a horizontal cross-section on line 10—10 of FIG. 9 with parts broken away.

FIG. 11 is a horizontal section on line 11—11 of FIG. 9 with parts broken away.

FIG. 12 is a horizontal section on line 12—12 of FIG. 9 with parts broken away.

FIG. 13 is a vertical section on line 13—13 of FIG. 9 with parts broken away.

FIG. 14 is a vertical section on line 14—14 of FIG. 9 with parts broken away and

FIG. 15 is a horizontal section on line 15—15 of FIG. 9 with parts broken away and in enlarged detail.

DESCRIPTION OF THE PREFERRED EMBODIMENT

By referring to the drawings and FIGS. 1, 3, 4, 5 and 7 it will be seen that a demountable partition system comprises outer and inner wall board panels 10 and 11 which as seen in FIG. 1 are supported and positioned above a floor F with the left end of the partition of FIG. 1 supported on a wall W.

By referring to the left end of the partition of FIG. 1 as illustrated in FIG. 3, it will be seen that wooden strip 12 has been applied to the wall W above the outer and inner wall board panels 10 and 11 and that a channel shaped post 13 has been applied to the wall W in the area therebelow and corresponding with the end portions of the wall board panels 10 and 11. Similar channel shaped posts 14 are positioned at intervals between the wall board panels 10 and 11 and some of these are reinforced by the application of a telescopically positioned secondary channel shaped posts 15 between the wall board panels where post floor anchors 16 are necessary.

In FIG. 7 a detail of the post floor anchor 16 may be seen to include a base 17 which is fastened to the floor and it will be observed that the upper end of the post floor anchor 16 is of inverted U shape and of an overall size fitting snugly within the lower end of the telescopic channel shaped post formed of the channels 14 and 15. Horizontally disposed carrier channels 18 are fastened at their ends to the channel shaped post members 14 and 15 and space the wall board panels 10 and 11 which are fastened thereto. Two part post covers 19 and 20 respectively snap together and attractively enclose the floor anchor 16 and the lower portions of the channel shaped posts formed of the members 14 and 15. The post covers terminate below the carrier channels 18 and the wall board panels 10 and 11.

By referring now to FIG. 4 of the drawings it will be seen that the spaced wall board panels 10 and 11 abut the flanges of the carrier channel 18 and the opposite sides of the channel shaped posts 13 and/or 14 and 15 respectively and they are fastened thereto by conventional fasteners as will be understood by those skilled in the art.

Still referring to FIG. 4, it will be seen that batten retainers 21 are applied to the outer surfaces of the wall board panels 10 and 11 as for example adjacent the wall W and in covering relation to joints between adjacent wall board panels. Battens 22 are snapped over the batten retainers 21 and may include vinyl inserts 23 if desired and act as attractive trim for the wall board panels 10 and 11. Still referring to FIG. 4 of the drawings and to the right end thereof, it will be seen that a flush rail shape 24 is applied to the end of the partition so as to form an attractive casing with respect thereto. The flush rail shape 24 is of channel shape and the flanges thereof overly the ends of the wall board panels 10 and 11 and form an attractive casing therefor.

By referring to FIG. 3 of the drawings and the right end thereof, it will be observed that where the flush rail shape 24 extends above the wall board panels 10 and 11, a flush rail cover 25 is applied thereto and that the flush rail cover includes a glazing groove 26.

Still referring to FIGS. 1, 3 and 5, it will be seen that a glazing rail 27 is positioned horizontally on the upper edges of the wall board panels 10 and 11 and between the glazing rail cover 25 and a vertical section of the

glazing rail 27 A which is positioned over the wood strip 12 and against the wall W so as to form an attractive casing at the wall end of the partition.

It will be observed that the exterior configuration of the flush rail shape 24 and the glazing rail 27 are similar so that the appearance of the upper longitudinal edge of the wall board panels and the vertical extensions thereabove which carry the glass parts of the partition are of uniformly attractiv appearance.

As illustrated in FIGS. 1, 3 and 5 of the drawings, a glazing post 28 is positioned on a glazing rail 27 and extends vertically thereabove a distance slightly greater than that of the glass portions of the partition which are indicated in FIG. 1 and FIG. 2 of the drawings by the numeral 29. The upper end of the glazing post 28 is provided with a cap 30 and similar caps 31 and 32 are applied to the upper ends of the vertical section of the glazing rail 27 and the flush rail shape 24 heretofore referred to.

In FIG. 1 and FIG. 5 of the drawings a base trim strip 33 is applied along the lower edges of the outer and inner wall board panels 10 and 11 and in FIG. 5 it will be seen that the base trim strip 33 is mounted in snap on engagement with a trim mounting strip 34.

By referring again to FIGS. 1 and 3 of the drawings, it will be observed that the glass sections 29 are secured in position on the glazing rail 27 and between the glazing post 28 and the glazing rail cover 25 by interengaging vinyl splines 35 and 36 respectively which, engage the longitudinal channels in the glazing rail 27, both the vertical channels in the glazing post 28 as well as the vertical channel in the glazing rail cover 25 and the vertical channel in the glazing rail 27A. Thus, the glass sections of the partition are securely positioned in and attached to the remainder of the partition and in FIGS. 3 and 5 of the drawings it will be seen that the glazing post 28 is secured to the glazing rail 27 by a glazing post anchor 37 which is fastened to the glazing rail 27 and which extends upwardly into the glazing post 28 to frictionally engage the same.

It will thus be seen that an attractive, sturdy and easily assembled rail height open base glass topped partition has been disclosed which may be easily and quickly assembled and equaly, easily and quickly disassembled for use in another location.

In FIGS. 2 and 6 of the drawings a modification of the partition just described may be seen and which partition is the same as that just described with the exception that it does not include the glass extension on the upper edge thereof. In FIGS. 2 and 6 the inner and outer wall board panels 10 and 11 are employed the free standing left end of the partition comprises the same assembly as seen in the right end of FIG. 4 of the drawings heretofore described, namely: the floor anchor 16, the post formed of the parts 14 and 15, the flush rail shape 24 and a flush rail 38 which is similar to the glazing rail 27 except for the longitudinal channel thereof and which is positioned on the upper horizontal edges of the outer and inner wall board panels 10 and 11 as best seen in the cross-section of FIG. 6 of the drawings.

It will thus seen that the same components with one exception are used to form the rail height open base partition of FIG. 2 of the drawings wherein the vertical glass extension portion is omitted.

Those skilled in the art will observe that the demountable partition system disclosed herein may be used to form demountable partitions of other heights and configurations than those heretofore described in connection with FIGS. 1 and 2 of the drawings etc.

By referring to FIG. 9 of the drawings a ceiling height partition may be seen and it is hereinafter described. In FIG. 9 of the drawings the ceiling height partition illustrated includes a floor length window 40, several unbroken wall board panels 41, a door opening and door 42 and 43 respectively and a conventional height window 44 in addition to several wall board panels above and below the door and window openings.

It will be understood that the ceiling height partition illustrated in FIG. 9 may alternately be formed as cornice height and that when so formed the space between such a partition and a ceiling may be filled with glass panels if desired.

In FIG. 10 of the drawings a horizontal section through the partition of FIG. 9 may be seen and it will observed that the partition includes a plurality of channel shaped posts 45 which may be roll formed steel shapes, one of which, the one at the left of FIG. 10 is secured to a wall W. Outer and inner wall board panels 41 and 47 are positioned vertically against the exterior surfaces of the posts 45 and secured thereto with their lower edges resting on an elongated member positioned on the floor and which member may comprise an inverted channel 48 (See FIG. 13) or a wooden member as desired. Batten strips 49 may be applied by fasteners to the wall board panels 41 and 47 and the same secured to the post 45 thereby or alternately batten strip retainers 50 may be applied to also serve as fasteners and which retainers 50 receive and retain snap on battens 51. Both are illustrated in FIG. 10 of the drawings.

The right end of the partition seen in FIG. 9 and FIG. 10 is free standing and is finished by the application of a flush rail shape 52 and by again referring to FIGS. 9 and 13 of the drawings, it will be seen that a base trim 53 is secured to the lower edge of the partition as for example by snap on engagement with trim engaging strips 54 which are attached to either the lower ends of the wall board panels and/or the inverted channel 48 or wooden member positioned therein.

By referring now to FIG. 11 of the drawings a section through the flooor window 40 of the partition seen in FIG. 9 of the drawings may be seen and it will be observed that wood strip 55 has been attached to the wall W in the area of the window 40 and that a vertical section of glazing rail 56 (like 27A in FIG. 3) has been positioned thereover and interlocking resilient splines 57 and 58 positioned in channels therein so as to receive the window 40. The right hand side of the window 40 is engaged in a similar construction including the splines 57, 58 and the glazing rail 27 which, in this instance, is positioned over the ends of the outer and inner wall board panels 41 and 47 respectively.

By referring to FIGS. 9, 11 and 13 it will be observed that the upper and lower edges of the window 40 are engaged in sections of the splines 57 and 58 which are in turn positioned in horizontally disposed sections of glazing rail 56.

In FIGS. 9, 12 and 14 of the drawings a similar arrangement mounting the window 44 may be seen and it will be observed that vertical and horizontal sections of the glazing rail 56, the glass receiving splines 57 and 58 are arranged to hold the window 44 while at the same time forming frames with respect to the lower and upper edges of the wall board panels above and below

the window 44 and the vertical edges of the window 44 at the sides thereof seen in horizontal cross-section of FIG. 12 and the vertical cross-section of FIG. 14. The uppermost edge of the partition seen in front elevation in FIG. 9 and in vertical section in FIGS. 13 and 14 is finished with longitudinal sections of a ceiling trim channel 59. An inverted channel 60 or wood strip may be applied to the ceiling between the outer and inner wall board panels 41 and 47 if desired.

In FIGS. 9 and 15 of the drawings a doorway 42 and a door 43 are illustrated and in FIG. 15 an enlarged cross-sectional detail of a portion of the door casing is illustrated and it will be observed that the ends of the wall board panels 41 and 47 are spaced by a two part post 61 and secured thereto and the ends thereof and the post 61 enclosed in a casing 62 which includes a door stop 63 against which the door 43 is engaged. The casing 62 has inturned flanges on its ends as at 64 and the same are engaged in trim strips 65 which abut the surfaces of the wall board panels 41 and 47.

Those skilled in the art will recognize that it is sometimes desirable to form right angle corners in partitions and by referring to FIG. 8 such a corner construction may be seen wherein the ends of wall board panels 66 and 67 respectively are joined to the ends of right angularly disposed wall board panels 68 and 69 respectively. A channel shaped post 70 is positioned between the ends of the panels 66 and 67 and a composite two part post 71 is positioned between the panels 68 and 69 so as to space the respective panels with respect to one another. Modified U shaped clips 72 and 73 are positioned on the ends of the wall board panels 66 and 67 respectively and extend longitudinally thereof with the clip 72 engaging the side of the wall board panel 68 and the clip 73 forming the outer corner.

From the foregoing it will be seen that with the various parts in assembled position the demountable partition system creates a simple efficient highly practical partition which may be varied with respect to floor engagement or off the floor arrangement and which may be varied as to various heights and which may include glass extensions on the upper surfaces if desired. It will be noted that relatively few metal shapes such as aluminum extrusions are utilized for the various members holding the wall boards in spaced position and that the use of inexpensive conventional wall board makes the overall cost of the demountable partition system quite reasonable.

Fasteners are referred to in the foregoing specification and may comprise blind rivets, metal screws or similar metal fasteners positioned through the parts being joined to insure retention of the assembled shape of the partition. It will be noted in this connection that each of the metal shapes are so designed as to engage the opposite sides of the wall boards and thus hold them in position against the channel shaped posts which space them and thus a minimum of actual fasteners are necessary.

While only three variations of the demountable partition system are shown in the drawings and described it will be obvious to those skilled in the art that many variations in style with respect to height, floor clearance and corporation of windows, doors, solid panels, etc. may be readily formed from the standard component parts.

The above described structure provides relatively easy and fast assembly of the partitions from the system parts and equally easy disassembly in demounting the partition as in removing the same so that it can be erected elsewhere. The structure is versatile in that it can be used in any situation wherein partitions are desired.

Although but three embodiments of the present invention have been illustrated and described it will be apparent to those skilled in the art that various changes and modifications may be made therein without departing from the spirit of the invention.

We claim:

1. A demountable wall partition comprising a base means, means securing the base means to a floor, an upright, substantially U-shaped post floor anchor secured to said base means and extending vertically upwardly therefrom, a vertical, elongated, hollow, tubular post means telescopically engaged at one end thereof on said upright post floor anchor, horizontally disposed partition carrier channels extending between spaced apart, adjacent, hollow tubular post means and secured at their ends to said hollow, tubular post means above said base means, a pair of vertical, parallel, spaced apart, facing wall board panels having opposed facing surfaces, said wall board panels positioned on opposite sides of said post means and engaged therewith at their opposed facing surfaces and maintained in said spaced apart relationship by said post means, lower edges of said wall board panels positioned and supported on said carrier channels, and an inverted channel-shaped rail engaged over the upper edges of said spaced wall board panels holding the same against said post means.

2. A demountable partition as set forth in claim 1 and wherein said hollow, tubular post means includes a pair of channel shaped elongated members nested with one another and each elongate member having a web and oppositely disposed inturned flanges thereon longitudinally of the edges thereof engaged with one another and with said post floor anchor, the webs of said nested elongate members in spaced, confronting relationship.

3. A demountable partition as set forth in claim 1 and wherein said channel shaped rail has an elongated groove therein, a glazing section and elongated splines therefor, said elongated splines and an edge of said glazing section received and retained in said groove.

4. A demountable partition set forth in claim 1 and wherein the ends of said carrier channels are detachably secured to said post means.

5. A demountable partition as set forth in claim 1 and wherein upright, U-shaped glazing post anchors are attached to said channel shaped rail in spaced relation to one another, and a hollow tubular glazing post is telescopically engaged on each said glazing post anchor, glazing sections and splines on said glazing post, said glazing post having longitudinally extending grooves therein receiving and holding said splines and glazing sections.

* * * * *