Oct. 20, 1970 R. A. COOPER 3,534,516

DEMOUNTABLE PARTITION WALL

Filed Dec. 11, 1967 3 Sheets-Sheet 1

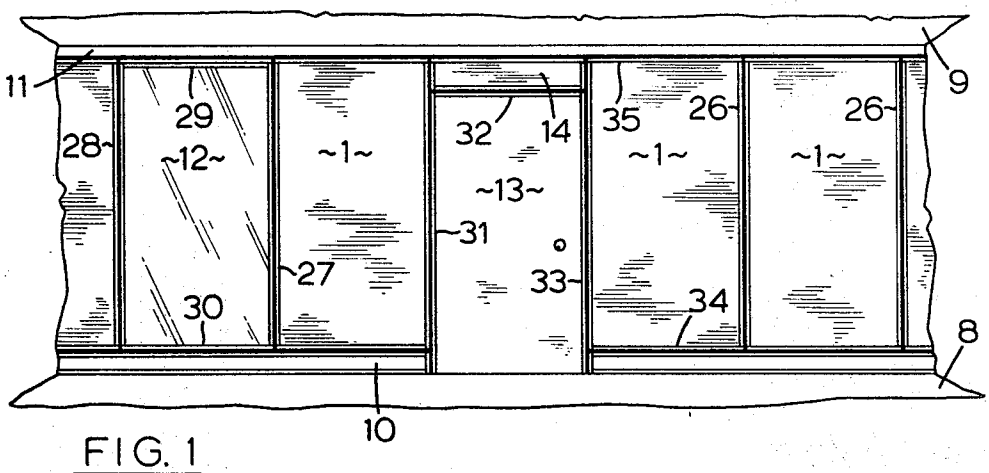
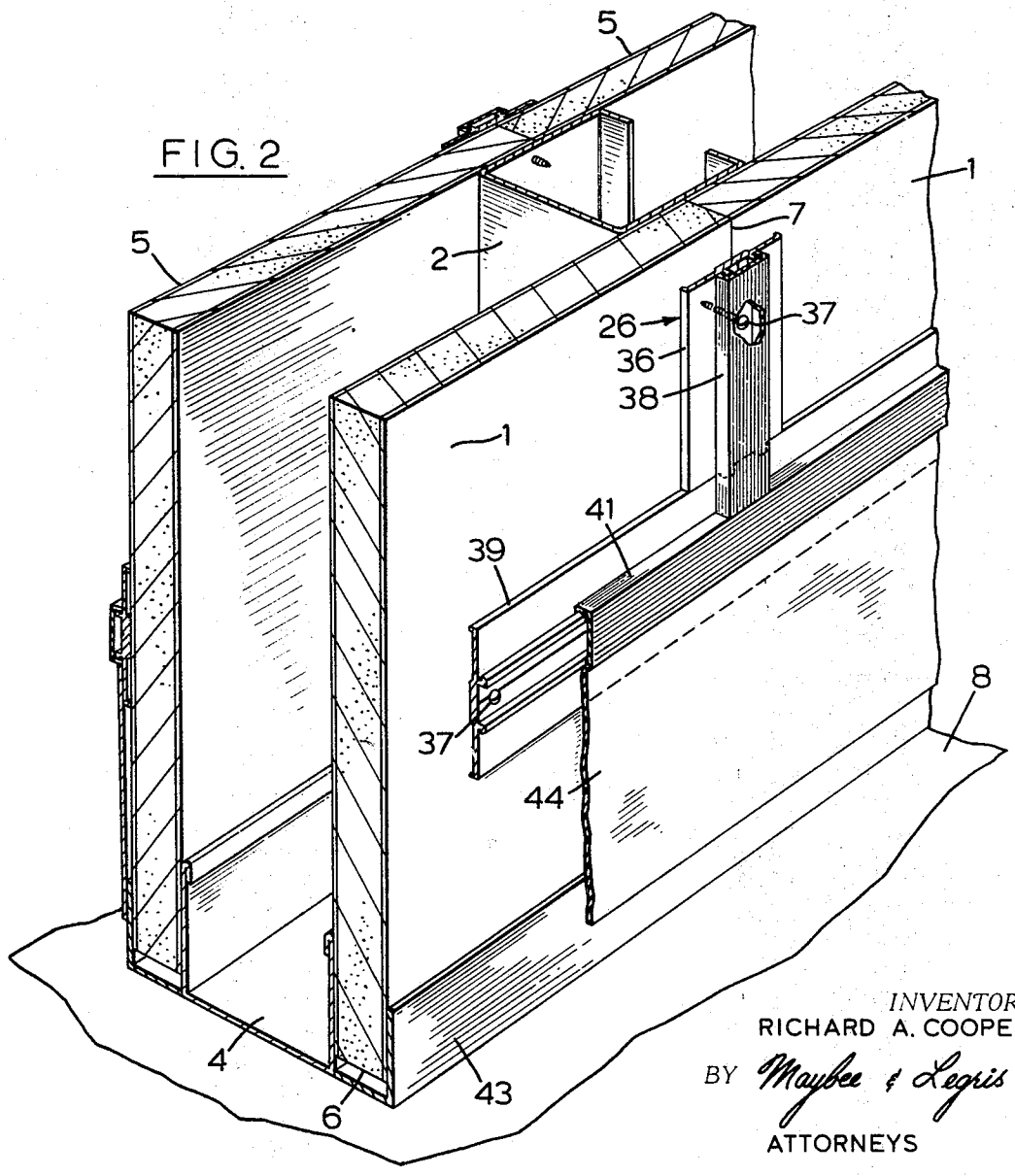


FIG. 1

FIG. 2



INVENTOR.
RICHARD A. COOPER
BY Maybee & Legris
ATTORNEYS

Oct. 20, 1970 R. A. COOPER 3,534,516

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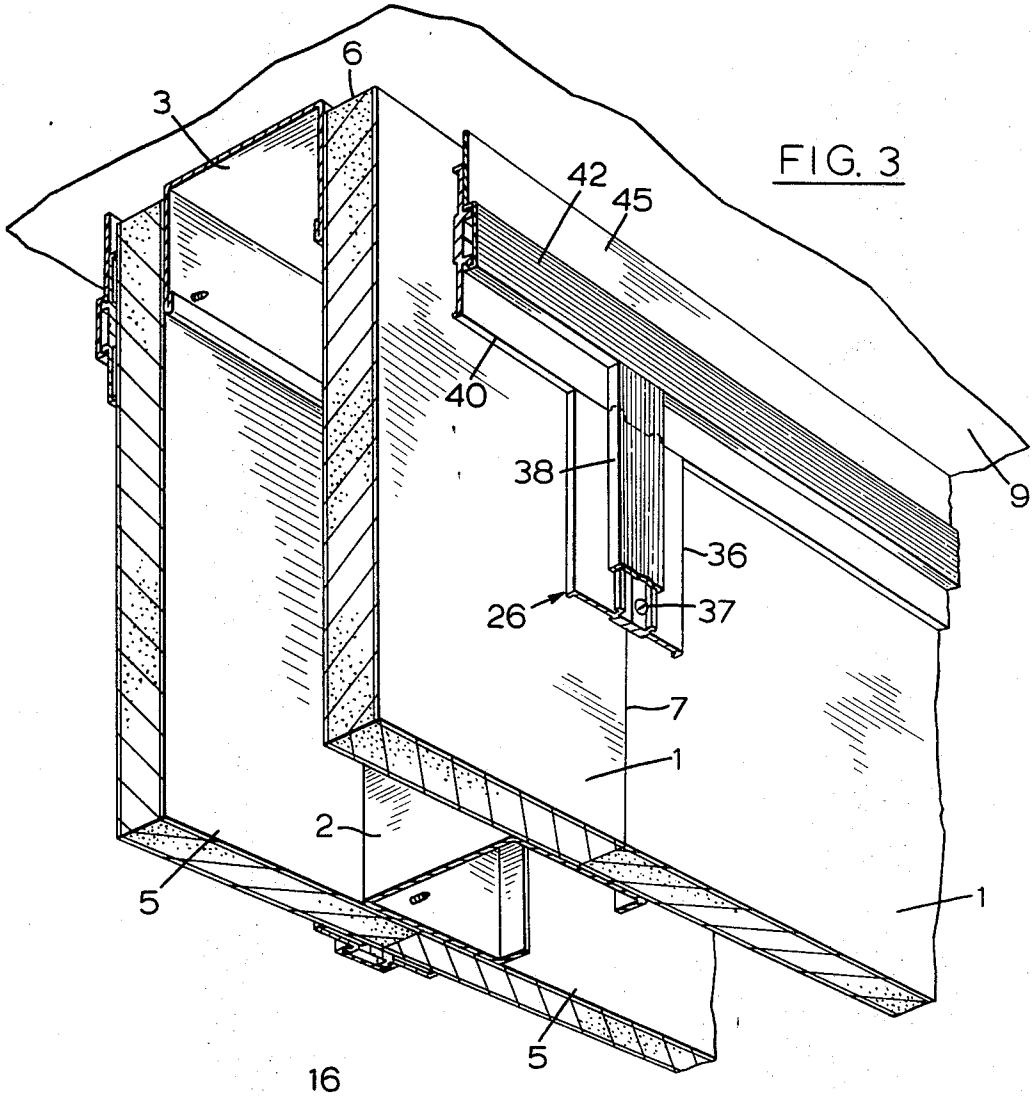


FIG. 3

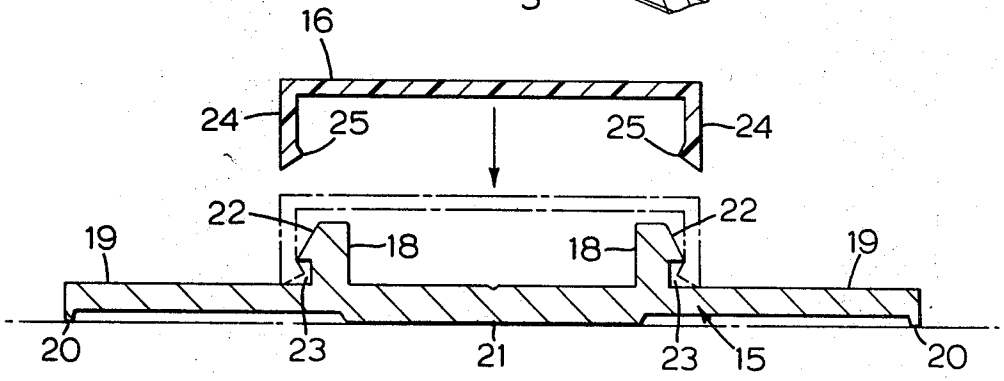


FIG. 4

INVENTOR.
RICHARD A. COOPER
BY Maybee & Legris
ATTORNEYS

Oct. 20, 1970 R. A. COOPER 3,534,516

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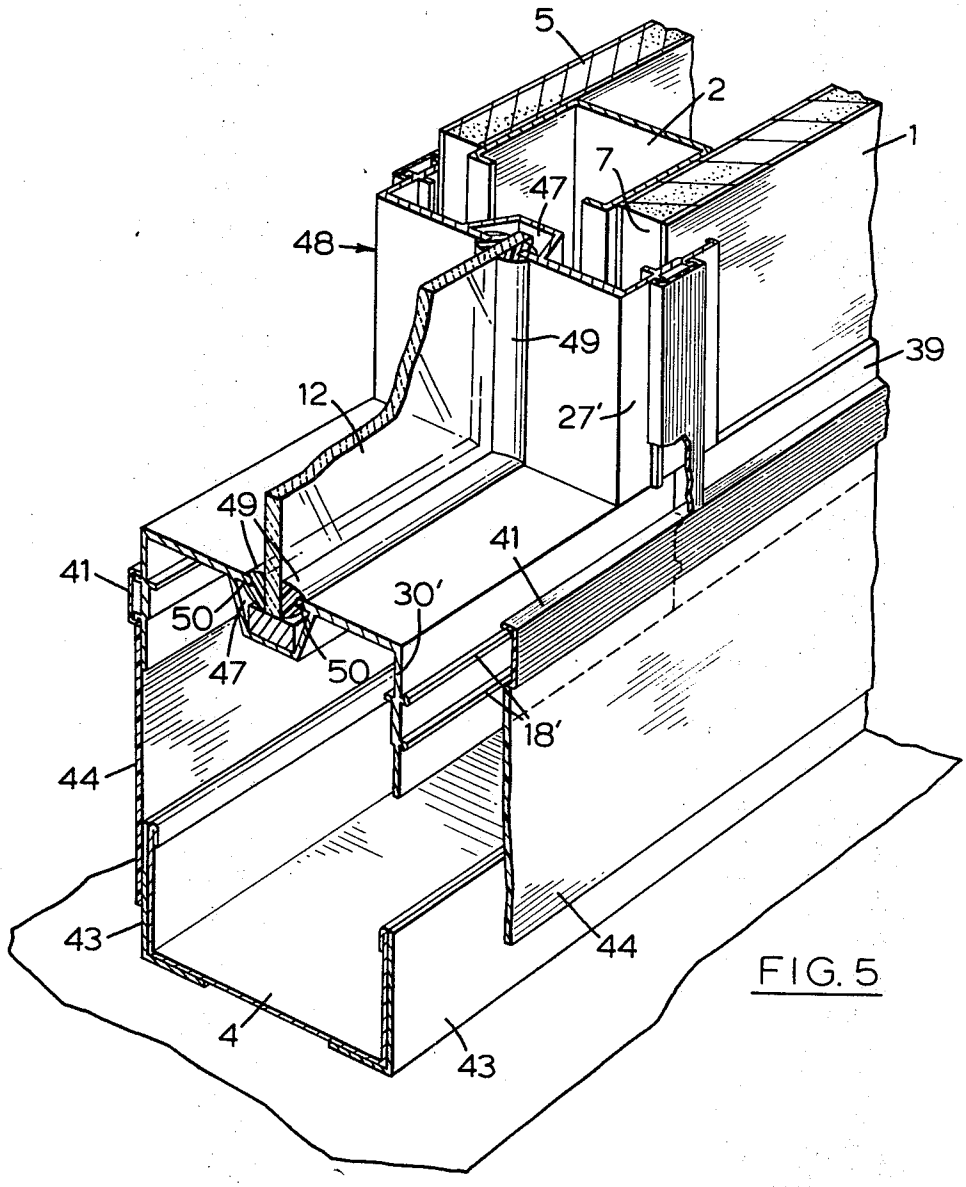


FIG. 5

INVENTOR.
RICHARD A. COOPER
BY Maybee & Legris
ATTORNEYS

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3,534,516

DEMOUNTABLE PARTITION WALL

Richard A. Cooper, 2676 Midland Ave., Agincourt, Ontario, Canada

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Claims priority, application Canada, Dec. 17, 1966, 978,296
Int. Cl. E04b 2/74; E04f 19/04
U.S. Cl. 52—212 9 Claims

ABSTRACT OF THE DISCLOSURE

A demountable partition wall is provided with a trim comprising metal retaining strips and resilient cover strips, the cover strips being snapped over rib formations on the front faces of the retaining strips and frictionally held thereby. The components of the trim are arranged so that discontinuities in the trim where horizontal and vertical trim elements meet can be avoided.

BACKGROUND OF THE INVENTION

This invention relates to partition walls and to trim elements for such walls. The invention is particularly concerned with a demountable partition wall of the kind comprising an assembly of panels supported by a frame structure to which they are secured by metal retaining strips or battens which also conceal the edges of the panels and form a trim; the metal retaining strips are fastened by means of screws, for example, to the frame structure and the fastenings are concealed by cover strips whose appearance may contrast with that of the retaining strips and give the wall a decorative appearance. The frame structure normally comprises upper and lower horizontal frame members and vertical frame members or studs extending between the horizontal members, and panels being mounted on both sides of the structure and the retaining strips being fastened to the studs.

Known wall structures of this kind suffer from certain disadvantages. In the first place owing to small variations in floor level or ceiling level in a building, the studs or vertical frame members need to be cut to slightly different lengths to suit such variations; consequently, if the wall is to be demounted and erected in a different position the studs cannot readily be used again. The skirtings of the walls are frequently of untidy appearance because of variations in floor level. Another disadvantage is that the method of retaining the cover strips in the retaining members, while permitting of a decorative appearance over much of the trim, necessarily gives rise to discontinuities in the trim at all points where vertical and horizontal trim elements meet, and these discontinuities, which are aggravated when inserts such as doors and windows are built into the wall, spoil the general appearance of the wall. Yet another disadvantage is that the cover strips, which are generally retained in longitudinal channels on the front faces of the retaining strips and held in place by inwardly turned lips at the mouths of the channels, are frequently damaged when they are removed from the channels so that they become unsuitable for further use.

SUMMARY OF THE INVENTION

The present invention provides a demountable partition wall construction which is substantially free from the above-mentioned disadvantages.

In accordance with the present invention the trim elements comprise metal retaining strips each formed on its front face with a longitudinally extending rib formation, and resilient cover strips of channel section adapted to be snapped over the rib formations of the retaining strips and frictionally retained thereby. In use in a partition wall according to the invention, the metal retaining strips are arranged vertically and horizontally to conceal the edges of the panels, the upper and lower ends of the vertical retaining strips abutting against the horizontal retaining strips, and the ends of the vertical cover strips extend beyond the ends of the retaining members on which they are mounted into abutting relation with the horizontal cover strips. In this way discontinuities in the trim where the vertical and horizontal trim elements meet, are avoided.

In order to provide a skirting, the lowest of the horizontal retaining strips is disposed adjacent to the bottom edge of the walls, i.e. about four inches from the floor, and the cover strip thereof is formed with an integral flange which extends downwardly into close proximity with the floor. Preferably, the bottom edge of the panel assembly is concealed by an upstanding flange having an appearance matching that of the downwardly extending flange, and the upper edge of the upstanding flange is concealed by the downwardly extending flange, which laps over it.

The retaining strips are preferably of extruded aluminum and the cover strips may be of vinyl plastic or other elastomeric material, but it will be obvious that many other materials may be used for these components. The rib formation on the front face of a retaining strip may simply take the form of a step whose side edges are adapted to engage the inside surfaces of the side walls of a channel shaped cover strip, the retaining strip being provided with screw holes which are countersunk to receive the heads of the screws. In a preferred construction, however, the rib formation is formed by a pair of longitudinal, parallel upstanding lips whose outer surfaces engage the cover strip and whose inner surfaces define a channel in which the heads of the screws are located.

BRIEF DESCRIPTION OF THE DRAWINGS

A specific embodiment of the invention will now be described in detail with reference to the accompanying drawings, which illustrate by way of example features of a particular demountable partition wall construction.

In the drawings:

FIG. 1 is a front elevation of a portion of the wall, the figure illustrating the general pattern of the trim on one side of the wall;

FIG. 2 is an enlarged, fragmentary, perspective view of a detail of the wall, the figure particularly showing a joint between vertical and horizontal trim elements, and the form of the skirting;

FIG. 3 is an enlarged, fragmentary, perspective view of a detail at the top of the wall;

FIG. 4 is a cross sectional view of a retaining strip and cover strip; and

FIG. 5 is an enlarged, fragmentary, perspective view of a detail of the wall adjacent to a window.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to the drawings, the wall basically comprises an assembly of panels 1, for example plaster board panels, which are secured to a frame structure and supported thereby, the frame structure being composed of vertical steel frame members or studs 2 spaced at regular intervals and extending between channel shaped, upper and lower, horizontal, steel frame members 3 and 4. Frame structures of this type are known, and it will be understood that the frame members may be of other forms than the particular ones illustrated. A similar assembly of panels 5 is mounted on the opposite side of the frame structure, the panel assemblies being spaced. The space between the panel assemblies may be filled

with sound absorbing material. Each panel **1** and **5** is rectangular, having horizontal upper and lower edges **6** and vertical side edges **7** (FIGS. 2 and 3). As shown in FIG. 1, the panels **1** (the panels **5** being similarly arranged), extend across the entire height of the wall from the floor **8** to the ceiling **9**, although small gaps will in practice be left beneath the bottom edge and above the top edge of the panels on account of small irregularities in floor and ceiling level; these gaps are concealed by a skirting **10** and border strip **11**, which will be described in greater detail hereinafter. FIG. 1 also shows a metal framed window **12** extending the full height of the wall, and a door **13**, above which is a small panel **14**.

The edges of the panels are concealed by trim elements, the basic form of which is shown in cross section in FIG. 4. Referring to FIG. 4, a trim element comprises a retaining strip or batten **15** and a cooperating resilient cover strip **16**. The retaining strip **15** is an aluminum extrusion of uniform section having a front face formed with a rib formation consisting of a pair of parallel, longitudinal lips **18**, a pair of longitudinal edge flanges **19**, and a rear face formed with slightly raised ridges **20** at its edges and a raised central area **21** which is coplanar with the tips of the ridges **20**. The outer edges of the lips **18** are chamfered as shown at **22**, and are provided with grooves **23**. The cover strip **16** is a channel-sectioned extrusion of vinyl plastic, having a pair of side walls **24** provided with inwardly directed longitudinal ribs **25** which are adapted to engage in the grooves **23** so that the cover strip is frictionally retained by the retaining strip. In assembling, the cover strip is simply snapped over the lips **18** as shown in ghost lines in FIG. 4.

Although the basic forms of the retaining strips and cover strips are shown in FIG. 4, these forms are modified to adapt them to particular parts of the trim assembly. Thus, the trim elements **26** shown in FIG. 1 are exactly as described with reference to FIG. 4. On the other hand, trim elements **27**, **28**, **29** and **30** adjacent to a window **12**, and trim elements **31**, **32** and **33** adjacent to a door **13**, are modified in that the retaining strips are replaced by frame members of the window and the door. This modified construction is illustrated in FIG. 5 and will be described with reference to that figure. Furthermore, the trim elements **34** and **35** adjacent the bottom and top edges of the wall, and the trim elements at the ends of the wall, not shown, are modified to the extent that the cover strip is formed with an integral flange at one side which extends substantially to the peripheral edge of the panel assembly. Such modifications are illustrated in FIGS. 2 and 3.

Referring now particularly to FIGS. 2 and 3, the trim element **26** of FIG. 1 comprises a vertical retaining strip **36** extending along and overlapping the abutting vertical edges **7** of the panels **1** so as to conceal these edges. The strip **36** is provided with screw holes at intervals to receive screws **37** which fasten the retaining strip to the frame member **2** and batten the panels **1** to it. A cover strip **38** is snapped on to the retaining strip. The trim elements **34** and **35** of FIG. 1 also comprise retaining strips **39**, **40** of the form shown in FIG. 4, and are secured to the vertical frame members **2** by screws **37**. The upper and lower ends of the vertical retaining strip abut against the lower and upper edges, respectively, of the retaining strips **40** and **39**. The retaining strips **39** and **40** are provided with snap-on cover strips **41**, **42**, and the cover strip **38** extends beyond the ends of the retaining strip **36** into abutting relation with these cover strips **41** and **42**.

As illustrated in FIG. 2, the bottom edge of the wall is concealed by an upstanding vertical flange **43**. This flange is of the same material as the vinyl cover strips, or may be painted or treated to give it an appearance matching that of the vinyl cover strips. The horizontal

retaining strip **39** is positioned adjacent to the floor **8**, and the cover strip **41** thereon is formed with an integral flange **44** which extends downwardly into close proximity with the floor so as to conceal the upper edge of the flange **43** and form the skirting **10** of FIG. 1.

FIG. 3 shows the upper end of the vertical retaining strip **36**, which butts against the horizontal retaining strip **40**, and the cover strip **38** which butts against the cover strip **42**. The cover strip **42** is formed at its upper edge with an integral, upwardly extending flange **45** which conceals the upper edge of the panel assembly and forms the border strip **11** of FIG. 1. The vertical retaining strips at the ends of the wall face, not shown, are provided with cover strips similar to the strip **42**, having outwardly directed flanges which conceal the peripheral edges of the panel assembly.

It will be noted that each panel is in this way framed by a rectangular arrangement of trim elements, each panel being bordered by a continuous metallic surface with a continuous vinyl plastic surround; there are no free ends or visible discontinuities in the trim.

As previously mentioned, the window **12** and door **13** are each provided with a metallic frame, the frame members of which each have a front face which is identical in profile with that of the retaining strip **15** of FIG. 4. In order to provide continuity in the trim, these retaining strips are aligned with and continue the lines of trim elements such as **34** and **35**, with which they share common cover strips. Details of such construction are shown in FIG. 5.

Referring to FIG. 5, the window **12** is located with its edges in a continuous channel **47** in a flanged aluminum frame **48**, the window being gripped by vinyl strips **49** keyed onto lips **50** of the frame which project across the mouth of the channel **47**. The portions of two front flanges **27'** and **30'** at one corner of the frame **48** are shown. The front faces of the flanges **27'** and **30'** are identical with that of the strip **15** of FIG. 5, and the window frame **48** is positioned at a height such that the flange **30'** meets the end of the retaining strip **39** and forms in effect an extension of it. The other end of the flange **30'** meets and is aligned with another retaining strip similar to **39**. The cover strip **41** extending along the retaining strip **39** is also snapped onto the rib formation **18'** of the flange **30'** and extends continuously from one end of the wall to the other. The downwardly extending flange **44** of the cover strip **41** forms a continuous skirting. The frame member of flange **27'** also has a front face identical with that of a retaining strip, and effectively abuts against the flange **30'** at its end, the cover strip **38'** extending beyond the end of the flange **27'** into abutting relation with the cover strip **41**.

The upper frame member **29** of the window is similarly disposed with respect to the trim element **35**, sharing a common cover strip with it. The other vertical frame member of the window is adapted to provide a trim element **28** in exactly the same manner as the frame member **27'**. The door **13** has a flanged metal frame in three parts, which may be assembled after the partition wall has been built. The upright frame members, which extend to the ground, and the horizontal frame member, of the door, have front flanges formed with the same profile as the retaining strips, and are provided with cover strips to form trim elements which are continuous with the other trim elements in the manner already described.

It will be observed that the general appearance of the wall face is attractive because of the continuity of the trim everywhere. The construction is also well adapted for dismantling and re-erecting, because the cover strips can easily be removed without damage, and because vertical frame members of uniform height may be used notwithstanding variations in floor level and ceiling level. The upper and lower horizontal retaining strips are set at respective nominal distances from the floor, and any

variations of level of the upper and lower edges of the panel assembly are masked by the provision of the flanged cover strips forming the skirting and the border strip.

Referring again to FIG. 2, it will be appreciated that the flanged members **43** will be secured in position by suitable means (not shown). Preferably the horizontal flanges will be extended beneath the channel-sectioned frame member **4** and clamped between the member **4** and the floor, in a manner similar to that illustrated in FIG. 5. The member **4** is secured to the floor by fixing screws (not shown) passing through its base.

What I claim as my invention is:

1. A demountable partition wall comprising a frame structure composed of vertical and horizontal frame members, an assembly of panels, each having vertical and horizontal edges, secured to and supported by the frame members, vertical and horizontal metal retaining strips each having a front face provided with a longitudinally extending rib formation spaced from the longitudinal edges of the strip, the vertical retaining strips extending along and overlapping the vertical edges of the panels to conceal the vertical edges, and the horizontal retaining strips abutting against the upper and lower ends of the vertical retaining strip, fastening means extending through the retaining strips from the front faces thereof and fastening the retaining strips to the vertical frame members so as to batten the panels to the frame structure, and resilient cover strips of channel section extending along the retaining strips to conceal the fastening means, the channel sectioned cover strips being snapped over the rib formations and being frictionally retained thereby, and the vertical cover strips extending beyond the ends of the vertical retaining members into abutting relation with the horizontal cover strips.

2. A demountable partition wall according to claim **1**, wherein one of the horizontal retaining strips lies adjacent to the bottom edge of the wall and the cover strip mounted thereon has an integral flange extending downwardly into close proximity with the bottom edge of the wall to constitute a skirting.

3. A demountable partition wall according to claim **2**, wherein the bottom edge of the panel assembly is concealed by an upstanding vertical flange, the downwardly extending flange of the cover strip extending over and concealing the upper edge of the upstanding flange.

4. A demountable partition wall according to claim **2**, wherein another horizontal retaining strip lies adjacent to the upper edge of the wall and the cover strip mounted thereon has an integral flange extending upwardly to or beyond the upper edge of the wall.

5. A demountable partition wall according to claim **1**, including a door or window having a rectangular metal

frame, the frame consisting of flanged frame members each having a front face whose profile is identical with that of a retaining strip, and each having a cover strip extending along and mounted on the front face, said cover strips and flanges constituting trim elements which are continuous with the other cover strips and retaining strips and provide an integrated appearance therewith.

6. A demountable partition wall comprising a frame structure composed of vertical and horizontal frame members, an assembly of panels, each having vertical and horizontal edges, secured to and supported by the frame members, vertical retaining strips extending along and overlapping the vertical edges of the panels to conceal the vertical edges, and horizontal retaining strips abutting against the lower and upper ends of the vertical retaining strips, fastening means extending through the retaining strips from the front faces thereof and fastening the retaining strips to the vertical frame members so as to batten the panels to the frame structure, and cover strips connected to the retaining strips and extending therealong to conceal the fastening means, the vertical cover strips extending beyond the ends of the vertical retaining members into abutting relation with the horizontal cover strips.

7. A demountable partition wall according to claim **6**, wherein the vertical and horizontal retaining strips are of metal.

8. A demountable partition wall according to claim **6**, wherein each retaining strip has a front face provided with a longitudinally extending rib formation spaced from the longitudinal edges of the strip, the cover strips being resilient strips of channel section which are engaged over the rib formations.

9. A demountable partition wall according to claim **8**, said retaining strips being of extruded aluminum and said cover strips being of vinyl plastic.

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ALFRED C. PERHAM, Primary Examiner

U.S. Cl. X.R.

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