

March 24, 1970

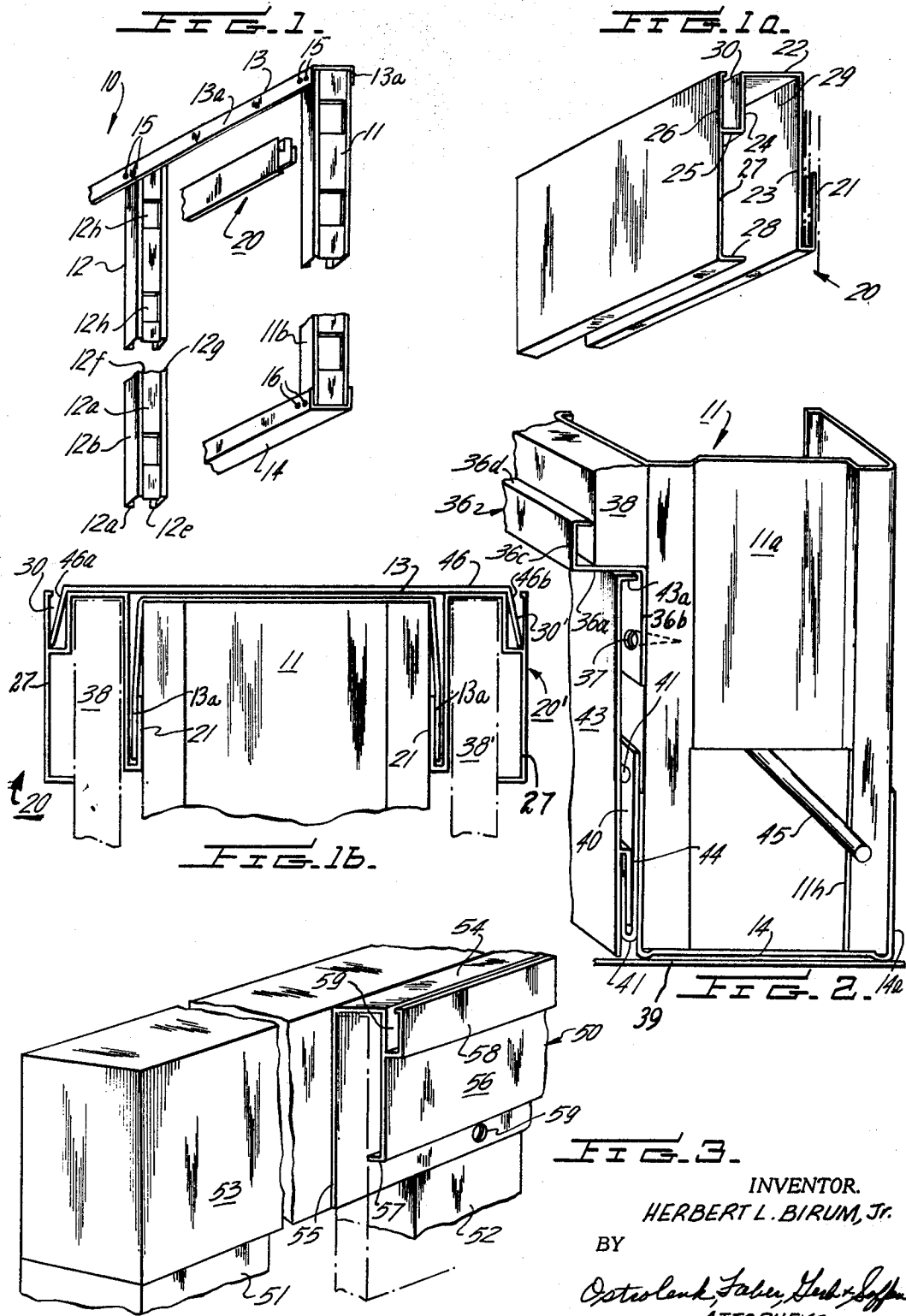
H. L. BIRUM, JR

3,501,883

METHOD AND APPARATUS FOR MOUNTING WALLBOARD

Filed June 29, 1967

2 Sheets-Sheet 1



INVENTOR.  
HERBERT L. BIRUM, Jr.

BY  
*Osterlund, Fisher, Goshorn & Saffin*  
ATTORNEYS

March 24, 1970

H. L. BIRUM, JR

3,501,883

METHOD AND APPARATUS FOR MOUNTING WALLBOARD

Filed June 29, 1967

2 Sheets-Sheet 2

FIG. 4.

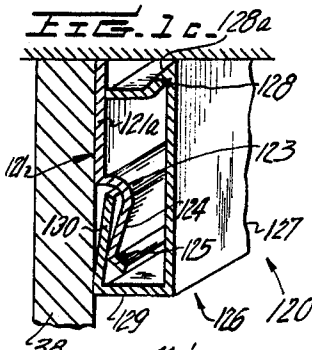
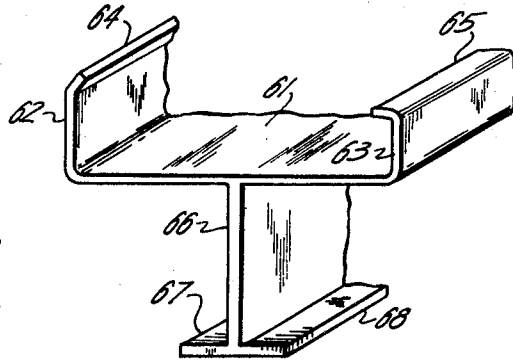


FIG. 4 a.

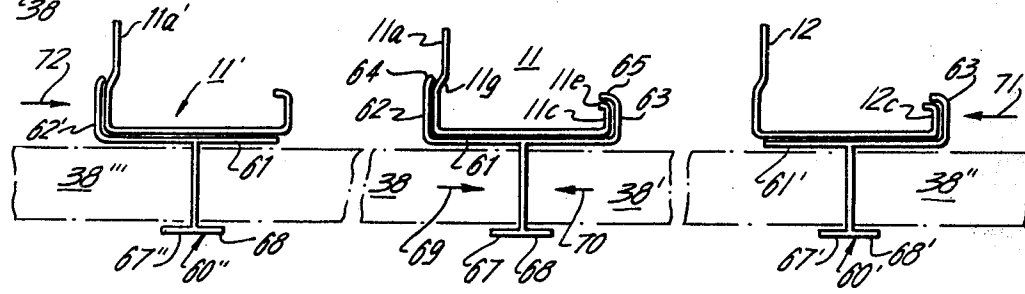


FIG. 4 b.

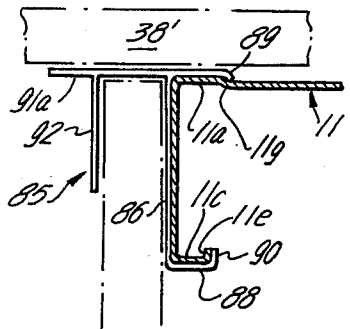


FIG. 4 c.

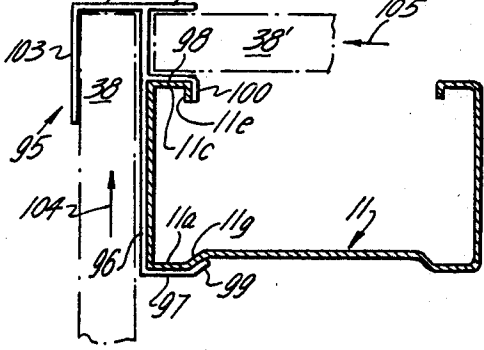
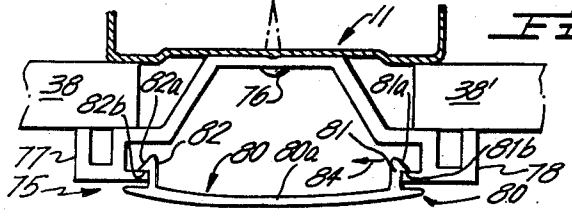


FIG. 4 d.



INVENTOR.  
HERBERT L. BIRUM, JR.

BY  
*Osterlank, Fisher, Huber, Soffen*  
ATTORNEYS

1

3,501,883

## METHOD AND APPARATUS FOR MOUNTING WALLBOARD

Herbert L. Birum, Jr., Pleasant Valley, Titusville, N.J. 08560

Filed June 29, 1967, Ser. No. 650,072

Int. Cl. E04b 5/52; E04c 3/00

U.S. Cl. 52-241

4 Claims

### ABSTRACT OF THE DISCLOSURE

This invention teaches a method and apparatus for mounting wallboard. Many offices, factories, apartments, and the like, employ metal studs which constitute the framework of the rooms or other enclosed areas to be formed within the building. Metal studs are typically comprised of vertical sections, normally spaced 16 inches on center from one another, and which are held together to form a unitary structure by floor and ceiling channels secured thereto by suitable fastening means. This framework is set between the floor and ceiling, and plasterboard panels are then secured to the vertical studs by sheet metal screws. Finished panels such as wood, vinyl, or any other panel having an esthetic finish, are then mounted upon the plasterboard by means of an elongated ceiling runner which is provided with a flange along its rearward surface which is force-fitted beneath a downwardly depending arm of the framework ceiling channel. After the panelboards are suitably cut to size, their upward edges are then fitted into a channel formed in the panelboard ceiling runner. The panelboards remain substantially in position without the need for any fastening means so that the workmen are free to insert additional panelboards.

The base assembly is comprised of an elongated base runner secured to the studs by suitable fastening means a spaced distance above the floor of the room. The panelboards, which are first inserted into the channel provided in the ceiling runner, are then supported by the base runner which is provided with a rearwardly facing flange fastening to the studs and a U-shaped flange arranged on the front base thereof for concealing a lower marginal edge of the panelboards. An elongated folded metal sheet is secured to the studs a spaced distance below the base runner, and is adapted to receive a flange provided along the interior surface of an elongated base cover which spans the exposed region of the studs between the floor and the base runner. The base cover member is easily removable for inspection or repair of electrical wiring or other conduits passing through the studs. The panelboards are further secured along their vertical sides by elongated module dividers which are provided with rearwardly directed flanges which are snap-fitted to the vertical studs. A flange is provided along the front face of the module dividers for embracing the marginal vertical edges of adjacent panelboards. The module dividers may take a variety of forms to secure the vertical edges of panelboards along a straight wall run at inside corners or at outside corners. The ceiling runners, base covers and module dividers all snap into place, reducing fastening operations and the need for fastening means to a minimum.

The instant invention relates to partition systems, and more particularly to novel elongated fastening strips for use in partition systems and the like to mount panelboards wherein the need for fastening means and fastening operations are reduced to a minimum.

#### Background of invention

Rooms and buildings, factories, apartments, homes, and the like, are normally finished off by mounting plaster-

2

board to the vertical studs which form the room by fastening means such as nails, screws and the like. In the case where plasterboard is to be painted, marginal edges of the plasterboard which receive the nails or other fastening means are provided with a smooth finish through the use of a suitable filler, tape, or other dimensional means, and the plasterboard is then painted or, alternatively, wallpaper may be applied thereto. In some installations, panelboard is mounted on the plasterboard to provide the room or other enclosure with a wood, plastic, or other type wall finish.

Like the plasterboard, the panelboard is moved into position one panel at a time and held in place by suitable fastening means such as nails or other metal screws, and the like. The completed wall is finished off by providing ceiling and floor cover strips to provide a neat esthetic finish along the upper and lower marginal edges of the panelboards. The vertical edges of the panels are held in position and finished off by suitable vertical battens secured to studs by fastening means.

#### Invention

The instant invention is characterized by providing novel ceiling and floor strips and module divider strips most of which are designed to snap into place without the need for any fastening means whatsoever so as to greatly simplify assembly of partition systems.

The instant invention is characterized by providing novel ceiling runners which are comprised of elongated members which may be force-fitted beneath a cornice cap provided in metallic framework comprised of metallic studs. The runner is provided with a rear mounted flange for force-fitting beneath the cornice cap. The ceiling runner is formed to provide a channel for receiving panelboard and holding the panelboard in position without the need for any fastening members. In the case where panels are to be mounted to framework comprised of wooden studs, the rear mounted flange of the ceiling runner is omitted and the base portion extends well below the channel formed therein for securing the ceiling runner to a wooden cornice strip. The panelboards are then inserted into the channel provided in the ceiling runner and held in position without the need for any fastening means. In installations where wiring or other conduits are provided along the base of the partition, base assembly having a removable base plate may be provided. The first base support member is secured to the studs and each panel is first inserted into the channel provided in the ceiling runner and then supported by the base runner. A folded metal sheet is secured to the studs a spaced distance below the base runner so as to receive the inwardly directed flange of a base cover member which conceals the region between the base runner and the floor and is removable to permit future inspection, repair or replacement of the conduits running through the partition system.

Adjacent vertical edges of the panelboards are secured to the studs of the partition system by means of module dividers which are elongated members having rearwardly directed flanges adapted to be snap-fitted to metallic studs. A forwardly directed, substantially T-shaped flange is designed to embrace the marginal vertical edges of adjacent panelboards to secure the panelboards to the studs. The module dividers may assume a variety of configurations for securing the panelboards along straight runs of a partition system or at inside or outside corners of such systems. The ceiling and base runner in the module dividers are made of light-weight and yet sturdy materials which enable them to be easily cut to size at a job site and to be easily and readily mounted to the partition system framework. Field assembly is greatly simplified by re-

ducing need for conventional fastening means to an absolute minimum.

It is, therefore, one object of the instant invention to provide novel runners for use in simply and readily mounting panelboards to the interior framework of a building.

Another object of the instant invention is to provide novel runners for use in mounting panelboards to the interior framework of a building wherein the need for conventional fastening means in the field assembly of a partition system are kept to an absolute minimum.

Another object of the instant invention is to provide a novel ceiling runner for use in mounting panelboards to the interior framework of a building wherein the ceiling runner may be secured to the interior framework without the need for any fastening means.

Still another object of the instant invention is to provide novel module dividers for use in mounting panelboards to the interior framework of a building wherein the module dividers are adapted to be snap-fitted to metallic studs forming the interior framework and to embrace the marginal edges of adjacent panelboards so as to rigidly position and support such panelboards without the need for any conventional fastening means.

These and other objects of the instant invention will become apparent when reading the accompanying description and drawings in which:

FIGURE 1 is a perspective view showing a portion of an interior framework of a building and a ceiling runner designed in accordance with the principles of the instant invention.

FIGURE 1a is a perspective view showing the ceiling runner of FIGURE 1 in greater detail.

FIG. 1b shows one typical field application of the ceiling runners of the type shown in FIGURES 1 and 1a.

FIGURE 1c is a perspective view showing a novel ceiling trim assembly for panelboards which may be put up in a building in the conventional manner, or through the use of the module dividers hereinafter described.

FIGURE 2 is a perspective view showing a base assembly designed in accordance with the principles of the instant invention.

FIGURE 3 is a perspective view showing an alternative embodiment of the ceiling runner of FIGURES 1 through 1b.

FIGURE 4 is a perspective view showing a module divider designed in accordance with the principles of the instant invention.

FIGURE 4a is a cross-sectional view showing two preferred embodiments of the module divider employed for securing panelboards to the interior framework of a building.

FIGURES 4b and 4c are end views showing additional preferred embodiments of the module dividers of FIGURES 4 and 4a.

FIGURE 4d is an end view showing a vertical batten which may be employed in the assembly of partition systems of the instant invention.

Referring to FIGURES 1 through 1b and more particularly to FIGURE 1, there is shown therein a partition system 10 comprised of vertical studs 11 and 12. These studs are metallic substantially C-shaped members. Considering stud 12, for example, this stud is comprised of a central portion 12a having two depending arms 12b and 12c, each turned inwardly toward one another at their marginal edges 12d and 12e, respectively. The central portion 12a is bent at 12f and 12g, respectively, to form a substantially wide and fairly shallow cavity along the entire length of the stud. Cut-outs 12h are provided at spaced distances along the stud to allow for the threading of wiring or other conduits there-through.

The partition system 10 is further comprised of a cornice cap 13 and a floor track 14, each of which are secured by suitable fastening means 15 and 16, respectively, to the upper and lower ends of the studs 11

and 12 to form a strong, rigid unitary framework. Obviously, the framework may be of any suitable height and length depending upon the particular application. For example, in standard rooms, normal heights encountered are 8 feet, but the framework may be made of any other suitable height. The lengths of the framework obviously depend upon the particular room or region to be enclosed.

In prior art installations, it is conventional to take sheets of plasterboard, commonly referred to as dry-wall, and secure panels to the studs by means of suitable fastening means. In the case where the dry-wall is to be painted or wallpapered, the regions in which the fastening members are driven are finished, such as, for example, with a suitable filler or tape, and the walls are then painted. In other conventional applications, if a wood, vinyl or other suitable finish is to be applied, the panelboards are then nailed, screwed, or otherwise fastened to the studs after being appropriately cut to size and positioned upon the plasterboard. It is also possible to employ coated wallboard which is comprised of a plasterboard base having a vinyl, wood or painted finish which greatly simplifies installations through the combination of the wall finish and plasterboard into one composite panel.

After any of the above type boards are secured to the studs, suitable vertical batten strips and floor and ceiling strips are then nailed or otherwise fastened thereto to provide a finished wall surface having a desirable esthetic appearance.

The instant invention is characterized by providing a novel ceiling runner 20 which may be mounted to the building interior framework without the need for any fastening means and which, in turn, positions and supports panelboards of any of the above types without the need for any fastening means. Considering the ceiling runner shown in FIGURES 1 and 1a, the runner can be seen to be comprised of the vertically aligned flange 21 positioned along the rear surface of runner 20. The central portion 22 of runner 20 has two downwardly depending arms 23 and 24 which form a channel for receiving panelboard in a manner to be more fully described. Arm 24, which is directed outwardly to 25 at its lower marginal edge, has integrally formed therewith, upwardly and downwardly depending flanges 26 and 27. The lower marginal edge of flange 27 is directed inwardly at 28 in order to bear against the front surface of a panelboard inserted into channel 29 in a manner to be more fully described. Arm 24 and flange 26 form a narrow opening 30 for receiving one arm of a heavy gauge channel (not shown in FIGURE 1 or 1a) which may be employed in certain applications in a manner to be more fully described.

Before considering the assembly steps of the instant invention, description of one base assembly which may be employed in the instant invention will now be given. FIGURE 2 shows a base assembly 35 in which only one stud 11 is shown therein for purposes of simplicity. The bottom of the stud 11 is supported by and fastened to a floor channel 14. Stud 11, which is shown in only fragmentary fashion in FIGURE 2 for purposes of simplicity, is shown to have one opening 11h along its central portion 11a.

A base runner 36 is comprised of a central portion 36a having a downwardly depending flange 36b secured to stud 11 by fastening means 37. Base runner 36 is secured to the other studs (not shown) in a similar fashion. The forward end of central portion 36a is bent upwardly at 36c and inwardly at 36d so as to bear against the surface of a panelboard 37 near its bottom edge.

As can clearly be seen from FIGURE 2, base member 36 is positioned well above the floor 39 so as to expose a section of each of the studs near floor 39. This region is partially concealed by means of a folded light gauge metallic sheet 40 secured to the stud 11 by fastening means 41. Metallic sheet 40 is folded upwardly at 41 to form an upwardly directed flange 42, in order to receive a downwardly directed flange 44 formed along the rear

surface of base cover member 43. Base cover member 43 is an elongated member which is further provided with a flange 45 along its upper edge which bears against the underside of the central portion 36a of base runner 36.

The manner in which the panelboards are assembled is as follows:

The ceiling runner 20 is positioned in the manner shown in FIGURE 1 so that its rearwardly directed flange 21 bears against the surface of studs 11 and 12. Ceiling runner 20 is then urged upwardly so as to force-fit flange 21 between the engaging surfaces of downwardly depending arm 13a of cornice cap 13 and the outer surface of flanges 12b and 11b of studs 12 and 11, respectively. Ceiling runner 20 is urged upwardly until its central portion 22 makes contact with the ceiling of the room. In cases where the panelboards are mounted to partitions which do not extend completely to the ceiling of a room, the central portion 22 of the ceiling runner 20 is aligned so as to be substantially at the same height as the cornice cap 13. The base runner 36 is then fastened to the studs in the same manner as was previously described and is positioned a spaced distance above the floor so as to accommodate the base cover member 43. Obviously, the base runner 36 may be mounted to the studs either before or after the ceiling runner 20 is mounted to the framework.

Each panelboard such as, for example, the panelboard 38 shown in FIGURES 1b and 2, is then cut to size and the upper marginal edge of the panelboard is slid into the channel 29 in ceiling runner 20 formed between arms 23 and 24. Channel 29 is provided with sufficient depth to permit the panelboard to be lifted above flange 36d of base runner 36. So that the lower edge may clear flange 36d, the panelboard may be pressed against the outer surface of arms 12b and 11b of the studs and then moved downwardly so that its lower edge rests upon the upper surface of central portion 36a of the base runner 36. Each panelboard may be positioned in a like manner and will be rigidly positioned and supported between the ceiling and base runners 20 and 36 without the need for applying any conventional fastening means.

The light gauge metal sheet 40 is secured to the studs by suitable fastening means in order to releasably mount the removable base cover plate 43. Base plate 43 is mounted by force-fitting flange 44 provided thereon within the narrow opening formed by the main portion 40 of the light gauge metal plate and its flange 42. Cover member 43 is then urged in the downward vertical direction until its lower edge rests upon the floor 39 and its upper flange 43a snaps into position immediately beneath the central portion 37a of base runner 36.

It should further be noted that the base runner 36 may be used as the support means without the application of fastening means 37. This may be done simply by first mounting the metal sheet 40 to the building studs and then inserting the flange 44 of the removable base cover plate 43 into the narrow opening formed in sheet 40 by its flange 42. The base runners 36 may then be positioned behind the inwardly directed flange 45 of the cover plate so as to be positioned substantially in the manner shown in FIGURE 2. The upper marginal edge of panelboard 38 may then be inserted into the narrow, elongated channel 29 of ceiling trim assembly 20 and may be lifted to a height sufficient to cause its lower edge to clear the upper inwardly turned flange 36d of base runner 36. The panel may then simply be pressed inwardly against the stud so that its lower marginal edge rests upon the central portion 36a of base runner 36. The flanges 42 and 44 of members 40 and 43, respectively, have their distal ends bent inwardly toward the main body portions of the members 40 and 43, respectively, so as to cause the upper end of removable cover plate 43 to be biased inwardly against the studs. This biasing force is sufficient to hold base runner 36 against the studs as a result of the inwardly directed flange 45

bearing against the lower depending portion 36b of the base runner. The flange 45 has a substantially flat upper surface acting as a good platform or support for supporting the central portion 36a of base runner 36 so as to provide adequate strength for supporting base runner 36 as well as for supporting a panelboard. To facilitate removal of the cover plate to gain access to the conduits 45 which may pass through the internal stud-work, the cover plates may be sectionalized, enabling a section of the cover plate to be removed while the remainder remains in position to provide adequate support for a panelboard.

As best shown in FIGURE 2, the opening 11h in stud 11 is provided to permit the passage of a conduit therethrough such as conduit 45 which may contain electrical wiring, telephone lines, or any combination thereof. In cases where it is desired to gain access to such conduits or wiring for inspection, repair, replacement, or any other purpose, such operation is greatly facilitated through the use of the removable base cover member 43. Removal may be simply performed by moving the upper end of cover plate 43 outwardly until flange 45 clears base runner 36. Cover plate member 43 may then be lifted so as to remove flange 44 from the narrow region formed between portions 42 and 40 of the thin gauge metal sheet. After appropriate action has been taken, cover plate member 43 may be replaced in the same manner as was previously described with respect to initial installation thereof. As an alternative arrangement to the thin gauge metal sheet 40 shown therein, the track 14 may be provided with upwardly extending arms such as, for example, the arm 14a so as to receive the downwardly depending flange 44 provided on the cover plate member 43. This would avoid the need for using the thin gauge metal sheet 40.

The arrangement of FIGURE 1b is employed when a partition does not extend fully to the ceiling of a room. As shown therein, a first ceiling runner 20 has its rearwardly facing flange 21 force-fitted between the right-hand arm 13a of the cornice cap 13 and stud 11. A similar ceiling runner 20' positioned on the opposite side thereof has its flange 21' force-fitted between the left-hand arm 13a of cornice cap 13 and stud 11 in a similar fashion. The panelboards 38 and 38' are mounted in a fashion similar to that previously described. In order to provide a partition which does not run fully to the ceiling with suitable rigidity and strength so as not to bow over a long run, a second channel 46 is provided. This channel is preferably formed of a metal sheet of sufficient thickness such as, for example, 16-gauge steel. The downwardly depending arms 46a and 46b of the channel 46 are inserted into the narrow channels 30 and 30' of runners 20 and 20'. Channels 30 and 30' are preferably made narrow enough so that the arms 46a and 46b are force-fitted therein. The channel 46 provides the partition with sufficient strength and rigidity so as to prevent bowing even over long runs. There is no need whatsoever for fastening channel 46 to the partition assembly with the use of conventional fastening means, since the narrow channels 30 and 30' provide adequate positioning and supporting strength for the channel 46.

In the case where panelboards are to be installed in building interior or in the partition framework comprised of wooden members, the embodiment 50 of FIGURE 3 may be employed. As is shown therein, the vertical battens 51 and 52 are secured at their upper ends to horizontally aligned piece of lumber 53. Obviously, more studs than two may be employed in the forming of a wall, and only two have been shown in FIGURE 3 for purposes of simplicity. The spacing between studs, be they metallic or wooden members, may be any suitable distance. For example, in house constructions, studs are normally spaced a distance of 16 inches on center. Spacing may be as great as 24 inches on center, if desired.

7

The ceiling runner 50 of FIGURE 3 is comprised of a central portion 54 having a downwardly depending arm 55 forming the rear portion of the runner and a downwardly depending arm 56 forming the front portion of the runner. The lower end of arm 56 is bent inwardly at 57. A flange 58 formed integrally with arm 56 extends in the upward direction to form opening or channel 59 which is substantially identical in design and function to the openings 30 and 30' of the ceiling runners 20 and 20' of FIGURE 1b. The downwardly depending arm 55 extends well below the lower edge of arm 56 to facilitate the mounting of conventional fastening means 59 to secure the ceiling runner to the building interior framework. Panelboards are inserted into the ceiling runner 50 in substantially the same manner as was previously described with respect to the ceiling runners 20 and 20'.

The base assembly 35 of FIGURE 2 may likewise be employed in wooden frameworks of the type shown in FIGURE 3.

In addition to securing panelboards along their upper and lower horizontal edges, it is also important to secure the vertically aligned edges of the panelboards to the interior framework of the building. In the case where the interior framework is comprised of metallic studs of the type described with respect to FIGURE 1, the module dividers of FIGURES 4 through 4c may be employed.

FIGURE 4 shows one preferred embodiment 60 of a module divider comprised of a central portion 61 having two rearwardly directed arms 62 and 63, each bent inwardly at 64 and 65, respectively. An outwardly directed rib 66 integrally formed with the central portion 61 is provided with two oppositely directed flanges 67 and 68, respectively. The manner of securing the vertical edges of panelboards will now be described with respect to FIGURE 4a:

Let it first be assumed that ceiling and floor runners of the type shown in FIGURES 1 and 2 are mounted to vertical battens in the manner previously described. The module divider 60 is then snapped to one stud such as, for example, the stud 11 of FIGURE 4a so that arm 63 and its bent portion 65 embrace arm 11c and its bent portion 11e, respectively, of the stud and so that arm 62 and its bent portion 64 embrace a portion of the central portion 11a of stud 11 and bend 11g in the stud. The module divider 60 is preferably of a length so as to snugly fit between ceiling and base runners 20 and 35, respectively. The module divider 60, as well as the ceiling and base runners 20 and 35, may be formed of a suitable lightweight and yet strong plastic, or may be formed of aluminum, steel, or any other light gauge metallic material. The upper edge of the module divider is slipped beneath the downwardly depending arm 27 of ceiling runner 20, and the lower edge thereof is slipped behind the flange 36d of base runner 36.

After a panelboard is positioned between ceiling and base runners 20 and 35, the panelboard 38, for example, may then be moved toward the right, as shown by arrow 69, so that its right-hand edge is embraced between central portion 61 and flange 67 of module divider 60. A second panelboard 38' may then be mounted in a like fashion and moved toward the left, as shown by arrow 70, so that its left-hand marginal edge is embraced by central portion 61 and flange 68. Before mounting the next panelboard 38'' positioned to the right of panelboard 38', another preferred embodiment of runner 60, namely, the embodiment 60', is employed. This embodiment is substantially identical to module divider 60, except that the left-hand flange 62 is removed. Module divider 60' is mounted by sliding the module toward the left, as shown by arrow 71, until its flange 73' bears against the arm 12c of stud 12. Sliding the module divider 60' into position in this fashion causes the right-hand edge of panel 38' to be embraced between central portion 61' and

8

flange 67'. Panelboard 38' may then be mounted between the ceiling and base runners in the same manner as previously described and slid into position by moving the panelboard in the direction shown by arrow 71 so that its left-hand marginal edge is embraced by central portion 61' and flange 68'. Additional panelboards may be mounted to the right of panelboard 38' in a similar fashion.

In order to mount the panelboard 38'' to the left of panelboard 38, module divider 60'' is employed. This module divider is substantially the mirror image of module divider 60' and is positioned by sliding the module divider in the direction shown by arrow 72 so that its flange 62'' bears against central portion 11a' of metal stud 11'. This causes the left-hand marginal edge of panelboard 38 to be embraced by central portion 61'' and flange 68''. Panelboard 38'' is then mounted between the ceiling and base runners 20 and 35 in the same manner as previously described, and slid in the direction shown by arrow 72 until its right-hand marginal edge is embraced by central portion 61'' and flange 67''.

If panelboards forming one wall are mounted so that the panelboards are placed upon the internal framework from the ends of the wall toward the center, the two panelboards 38 and 38' toward the center of the room, as shown in FIGURE 4d, may have their marginal edges secured to a stud by a vertical batten 75 of the type described in copending application Ser. No. 535,489, filed Mar. 18, 1966, now Patent No. 3,423,897 issued Jan. 28, 1969 and assigned to the assignee of the instant invention. Vertical batten 75 is secured to stud 11 by conventional fastening means 76 so that its arms 77 and 78 embrace the right-hand and left-hand marginal edges of panelboards 38 and 38', respectively. The exposed cavity 79 of vertical batten 75 may be concealed by means of the flexible plastic filler strip 80 comprised of a substantially arcuate-shaped central portion 80a having a pair of elongated projections 81 and 82 arranged in spaced parallel fashion along one surface thereof. Each of the projections is provided with a tapered surface 81a and 82a, respectively, which abruptly terminates in a shoulder 81b and 82b, respectively. The filler strip 80 is inserted simply by positioning the strip so that one of the projections 82 has its shoulder 82b captured in the narrow opening 81 of the batten member. The opposite edge of the filler strip is then pressed inwardly in the direction shown by arrow 83, causing the projection 81 to flex inwardly in the direction shown by arrow 84 until its tapered surface 81a passes the opening 82 provided in batten member 75, at which time the projection 81 which flexes slightly, is caused to snap into the narrow opening 82 and thereby securely hold the filler strip in position.

FIGURE 4b shows another preferred embodiment of the module divider. Module divider 85 of FIGURE 4b is provided with a central portion 86 and rearwardly facing arms 87 and 88 bent inwardly at 89 and 90, respectively. Extending forwardly from the front face of central portion 86 is a flange 91 having an integrally formed flange 92 extending at right angles to flange 91. The module divider 85 of FIGURE 4b is employed for finishing the inside corners of a room and is mounted so that its arms 87 and 88 embrace portions 11a and 11c of metal stud 11 with the bent portions 89 and 90 thereof being snapped around the portions 11e and 11g of stud 11. Flange 91 bears against the panelboard 38' of the joining wall, while central portion 86 and flange 92 act to embrace the marginal edge of a panelboard 38. The marginal portion 91a of flange 91 is provided for improving the esthetic appearance in the finished room and may be omitted, if desired. The opposite inside corner of a room may be finished in a like manner, by providing a module divider which is substantially a mirror image of the module divider 85 shown in FIGURE 4b. When it is desired to finish outside corners of a room, the module divider 95 of FIGURE 4c may be employed. This divider is comprised of a central portion 96 having rearwardly

extending arm 97 and 98 and inwardly at their outer ends 99 and 100, respectively. Central portion 96 extends beyond arm 97 and has integrally formed therewith first and second flanges 101 and 102, respectively. Flange 102 is bent to form an inwardly directed portion 103. The module divider 95 is secured to a metal stud 11 so that its arms 97 and 98 embrace portions 11a and 11c of metal stud 11 such that the inwardly bent portions 99 and 100 are snap-fitted about portions 11e and 11g of the stud 11. Panels 38 and 38' are then mounted between suitable ceiling and base runners in the same manner as previously described and are then slid into position in the direction shown by arrows 104 and 105, respectively, so that their marginal edges will be embraced by central portion 96 and flange 103 and arm 97 and flange 101, respectively.

When panelboards are mounted into a building, either in conventional fashion or through the use of the module dividers of FIGURES 4 through 4c, the module dividers or the conventional fastening means provide adequate support for the panelboards so as to avoid the need for the ceiling assembly of FIGURES 1 through 1b and FIGURE 3, for example. Since the ceiling trim is no longer required for providing positioning and supporting strength, the ceiling trim assembly 90 of FIGURE 1c may be employed.

As shown in FIGURE 1c, the panel 38, which may be secured within the building by either conventional means or by the module dividers of FIGURES 4-4c, has secured thereto an elongated ceiling strip 121 of assembly 120 which has a flat upper portion 121a for receiving fastening members 122 at spaced intervals along its length to secure strip 121 to the panelboard. The lower integral portion of member 121 is bent outwardly at 123 and is bent inwardly at 124 to form a curved lower portion whose lowermost end is bent outwardly again to form an outwardly and downwardly extending flange 125. The exterior trim member 126 is comprised of a substantially flat central portion 127 having an upper flange 128 which tapers in a generally downward direction and then finally in a direction substantially perpendicular to the central portion 127. A lower flange 129 is provided which extends substantially at right angles to central portion 127 and has its distal end bent upwardly and inwardly toward the central portion 127 to form the flanged portion 130. Assembly of the trim member 126 is performed by forcing the flange 130 between the flange 124 and the surface of panel 38. Small flange 125 serves as a means for facilitating entry of flange 130 therebetween. The outer trim member 126 is then lifted upwardly until its upper edge bears against the ceiling 131.

The trim members 121 and 126 may be formed of any suitable plastic or metal having properties of resiliency. The flange 124 must be of sufficient resiliency to yield upon the insertion of flange 130 and to clamp flange 130 into position and hold it in that position indefinitely. The element should further be of sufficient resiliency to enable a portion of the flanges 67 and 68, for example, shown in FIGURE 4, to be inserted between the outer surface of flange 130 and the outer surface of panelboard 38 so as to conceal its upper edge and provide a finished assembly having a neat and aesthetic appearance. The outer trim member 126 may be of a polished or satin-finish metal having either a natural metallic color or any other color to blend in which the decor of the room. If the outer trim member 126 is formed of plastic, obviously, the plastic may be made of any color to likewise blend in with room decor.

It can be seen from the foregoing that the instant invention provides novel light-weight and yet durable elements for mounting panelboards to the interior framework of buildings, and the like, wherein the ease and speed of installation is greatly increased where the need for conventional fastening members are reduced to an absolute minimum. The characteristics of the light weight of the elements facilitate manufacturing costs, handling and

shipping costs, and, in handling during installation, the number of components required on a job site is substantially diminished and the actual installation time is significantly reduced.

Although this invention has been described with respect to its preferred embodiments, it should be understood that many variations and modifications will now be obvious to those skilled in the art, and it is preferred, therefore, that the scope of the invention be limited not by the specific disclosure herein, but only by the appended claims.

What is claimed is:

1. In a partition, a ceiling runner mounting panels to the interior framework on at least one side thereof, said framework having a downwardly projecting flange, said runner being formed of a strong, resilient material comprising:

a central portion having first and second downwardly depending arms intergral with said central portion; an upwardly directed flange positioned a space distance from the exterior surface of said first arm and being integrally joined to said first arm along the bottom edge thereof; said framework flange being force fitted between said upwardly directed flange and said first arm;

said first and second arms forming a channel receiving and positioning the upper marginal edge of a panel adjacent said framework; the distance between said first and second arms being greater than the thickness of the panel embraced therebetween to facilitate initial insertion of the panel;

at least one of said arms having a panel engaging flange directed toward and engaging one surface of said panel to maintain said panel in position.

2. The partition of claim 1 wherein said second arm is comprised of a first rib portion depending downwardly and outwardly from said central portion;

first and second flanges extending respectively upwardly and downwardly from said rib portion;

said first flange and said second arm forming a narrow U-shaped channel region;

said second flange being angled inwardly toward said channel forming said panel engaging flange for bearing against a panel positioned within said channel.

3. The partition of claim 2 and further including a second ceiling runner mounted on the opposite side of said framework near the upper end thereof, said framework having a second downwardly depending flange along its opposite side; a metal channel having a central portion positioned on the top edge of said framework and having first and second downwardly depending arms inserted into the narrow U-shaped channel region openings in said first and second ceiling runners formed between the second arm and first flange of an associated ceiling runner to prevent said framework from bowing.

4. A partition system comprising an interior framework for buildings and the like, and means for mounting panels to said framework; said framework comprising:

a plurality of metal studs each having a C-shaped configuration being vertically disposed and arranged in spaced parallel fashion;

a cornice cap comprised of a first elongated C-shaped channel secured to and receiving the upper edges of said studs;

a floor track comprised of a second C-shaped channel receiving and supporting the lower edges of said studs;

said mounting means including an elongated ceiling runner comprising;

a central portion having first and second downwardly depending arms integral with said central portion; an upwardly directed flange integrally mounted on said first arm for mounting said ceiling runner to said framework;

said upwardly directed flange being force fitted between said cornice cap and said studs;

11

said first and second arms forming a channel for receiving and positioning the upper marginal edge of a panel adjacent said framework, the distance between said first and second arms being greater than the thickness of the panel embraced therebetween to facilitate insertion of the panel;  
 said second arm having a panel engaging flange directed toward and engaging one surface of said panel to maintain said panel once positioned.

References Cited

UNITED STATES PATENTS

2,078,491	4/1937	Graham	52—241
2,313,839	3/1943	Olsen	52—242 X

12

2,994,413	8/1961	Levy et al.	52—36
3,101,817	8/1963	Radek	52—36 X
3,160,247	12/1964	Masters	52—241
3,217,452	11/1965	Steele	52—242
2,663,390	12/1953	Dordel	52—627
3,378,977	4/1968	Vervloet	52—238

FOREIGN PATENTS

369,882	7/1963	Switzerland.
---------	--------	--------------

10 HENRY C. SUTHERLAND, Primary Examiner

U.S. Cl. X.R.

52—498