ABSTRACT OF THE DISCLOSURE

In a demountable partition wall for use between a floor and ceiling, opposed floor and ceiling channels, with longitudinally spaced upright pairs of stud spacing tabs projected from the channels, upright spaced studs extending into said channels, interlocked with said tabs, with L-shaped wall board mounting and retaining trim flanges for said channels; the studs being H-shaped in cross-section with their flanges including reverse turned clip edges, and upright trim moldings enclosing the side edges of the wall boards and frictionally interlocked with said clip edges.

It is an object of the present invention to provide a demountable partition wall for use between floor and ceiling which employs floor and ceiling channels adapted to receive and support and secure a series of longitudinally spaced studs of H-shape in cross section.

It is another object to provide an improved form of floor and ceiling channel which includes opposed right angular wall board supporting and retaining flanges by which the wall board may be easily disassembled from the wall construction for reuse and to aid in assembly.

It is another object to provide an improved stud for said partition wall which includes reverse turned clip edges on the flange portion thereof and the use of channel trim moldings for the upright side edges of the wall boards which enclose the same and are frictionally interlocked with said stud clip edges.

It is another object to provide in said partition wall a novel form of snap-on door jam construction of a channel formation and including channel shaped marginal portions adapted for frictional interlock with the adjacent clip edges of one stud.

These and other objects will be seen from the following specification and claims in conjunction with the appended drawing in which:

FIG. 1 is a fragmentary partially broken away vertical section of the present partition wall.

FIG. 2 is a fragmentary section taken in the direction of arrows 2—2 of FIG. 1.

FIG. 3 is similar to FIG. 2 but illustrating a connection of snap-on door jam.

FIG. 4 is a fragmentary vertical section of a horizontally disposed divider stud with detachable window sill or a half divider wall partition sill.

Referring to the drawing, the present demountable partition wall, FIG. 1, is adapted for use between floor F and ceiling C. Elongated floor channel 12 includes a base 14 secured to the floor by fastener 16. Side edges of the base are covered upwardly and inwardly at 18 merging with upright side walls 20 which terminate at their upper edges in the opposed wall board support trim flanges 22.

A series of pairs of longitudinally spaced tabs 24 are struck from the base of said channel and project upwardly as shown in FIGS. 1 and 2. Ceiling channel 26 overlies floor channel 12 and includes base 28 which bears against said ceiling and is secured thereto by fastener 16.

The ceiling channel includes upright sides 30 which terminate in the downwardly opening right angular wall board top support flanges 32.

The ceiling channels have formed longitudinally therein a series of longitudinally spaced pairs of depending struck out stud spacing and locating and securing tabs 24 which are in opposed vertical registry with the corresponding pairs of stud locating and mounting tabs 24 within the floor channel 12.

A series of longitudinally spaced upright studs 34 of H-shape in cross section, see FIG. 2, are mounted with their respective ends nested and projected into the floor and ceiling channels and within the central webs 36 projected into and between the adjacent pairs of spacing and locating tabs 24 on said channels and suitably interlocked therewith.

The respective studs, FIG. 2, include the opposed elongated flanges 38 whose outer are reverse turned defining clips 40 having some flexibility.

The respective clip edges 40 include the elongated upset bead portions 42.

The raceway 44 is formed through the respective stud webs providing a means for passing utility wires or the like as desired for concealing the same within a partition wall.

A series of conventional wall boards, 46, such as are available on the market, are mounted in an upright position so as to bear against the stud flanges, 38, supported at their lower edges within the bottom channel trim flanges, 22, and retained within the trim flanges, 32, of the ceiling channel, 26, FIG. 1.

A suitable clearance space, 48, is provided above the top edges of the wall boards, 36, FIG. 1, to provide a means by which said wall boards may be elevated initially for disassembly and reuse as desired with respect to the floor channel trim flanges and support flanges, 22. This construction provides for easy assembly and disassembly as desired, and for reuse of the respective parts without damage thereto.

As shown in FIG. 2, elongated snap-on moldings 50, of channel form enclose the outer upright edges of the wall boards 46, and include an inner flange with longitudinal bead 52, as desired for frictional interlock with and snug projection into the adjacent edge clip 40 of the adjacent stud for removable interlock therewith.

The trim moldings, 50 of an adjacent pair of wall boards are uniformly spaced apart and define a utility channel which may be employed as desired for wires and other connections instead of the raceway, 44, FIG. 1. A suitable finish molding 54, spans the utility channel, FIG. 2, and includes a pair of parallel spaced flanges, 56, which are adapted to snap into the said utility channel in snug frictional engagement with the adjacent trim moldings 50.

FIG. 3, fragmentarily illustrates a snap-on removable door jam 58 adapted to receive the door D fragmentarily shown.

The said door jam includes a channel body and a central elongated outer door receiving stop 60 of rectangular shape in cross section. The opposing side edges of said body are flanged at 62 and terminate in the reverse formed channel clips 64. These channel clips frictionally project into the stud clip edges, FIG. 3, for interlock therewith. The construction of the clip 64 is the same as shown and may include the bead 52 for increased frictional lock at the edge clip, such as illustrated in FIG. 2. Such beading however, can be omitted if desired relying...
solely upon a frictional interlock. The assembly is further completed by the use of a spacer block or the backing block 66 which is interposed between the outer pair of stud flanges 38. Jack screw 68 is mounted centrally through the door stop 60 and includes an adjustable nut portion 70, which compressively engages the backing block 66 and which assists and functions for the purpose of securing the snap-on door jam in the assembled relation shown on FIG. 3.

FIG. 4 is a fragmentary vertical section illustrating the removable window sill or half divider wall partition sill at 72 which is removably mounted upon and interlocked with a horizontally disposed stud 34 similar to the first mentioned studs 34 of FIG. 2.

In such construction, the stud 34, FIG. 4, is interposed between a pair of upright studs and intermediate to floor and ceiling with respective ends of said stud interlocked and suitably secured to the corresponding vertical studs.

The sill assembly 72 includes a body of channel form which includes side flanges 74 and reverse turned securing clips 76 which frictionally project up into the corresponding adjacent clip edges of the horizontal stud.

The assembly is similar to the door jam shown in FIG. 3, except in place of the door stop 60 of FIG. 3, central portion of the body of the sill includes an elongated slotted portion 78 of rectangular cross section adapted to receive the glass window 80 or other half divider fragmentarily shown.

The assembly of the sill 72 with respect to the horizontal stud 34 is furthermore completed by the use of a similar jack screw 68 which extends through the base of the slotted portion 78 and adjustably projects the nut assembly 70 against the corresponding backing block 66 which bears against the stud web and is interposed between the respective flanges, FIG. 4.

The above described pairs of tabs 24 projecting from the respective floor and ceiling channels serve to automatically center the vertical studs to provide a means of securing the same in upright position within the said channels.

The ceiling channel 26 is of such construction as to provide a trim line at ceiling elevation without additional trim being required.

The formation on the respective trim and support and retaining flanges 22 and 32 of the respective floor and ceiling channels provides a means by which the wall panels or wall boards 46 may be readily removable and completely recoverable in the present partition construction.

The floor channel, 12, provides a completely finished base wall trim and in view of the cove construction 18, facilitates cleaning and floor maintenance.

The construction of the trim moldings 50, FIG. 2, and the corresponding clip edges 40, permit the said trim moldings to be easily removable and replaceable. The trim moldings 50, define the utility space, FIG. 2, which can be conveniently closed by the additional finish molding, 54, and facilitate the wiring of electrical outlets, phone outlets or heat control and so forth and can be used instead of the raceway, 44, shown in FIGS. 3 and 4 for this purpose and thus provides a means to eliminate the raceway, 44, and possible damage caused to the webboard by cutting into them and also this is a labor saving means by which all the materials and elements of the partition wall are recoverable and reusable.

The present partition wall is designed to be labor saving at initial installation and for its recovery of materials and elements which is one hundred per cent and may be simply demounted and reconstructed with the minimum amount of labor.

The present vertical studs are of such construction as to conveniently accept and be interlocked with snap-on door jam such as shown in FIG. 3 and for use and interlock with a horizontal stud of similar construction for pro-

viding for a window sill or a half divider wall partition sill interlocked therewith.

Having described my invention, reference should now be had to the following claims.

1. In a demountable partition wall, for use between a floor and a ceiling;

a. an up-turned floor channel on and secured to said floor;

b. a down-turned ceiling channel on and secured to said ceiling overlying the floor channel;

c. a series of longitudinally spaced opposed upright pairs of stud spacing tabs struck out and projecting from said channels;

d. a series of longitudinally spaced upright studs of H-shape in cross-section, having a central web and marginal flanges, with their respective stud ends pro-

2. In the demountable partition wall of claim 1, said trim flanges on said ceiling channel defining a clearance space above the wall board whereby the wall board may be elevated for disengaging its lower edge from the floor channel trim flange to facilitate assembly and disassembly of said wall boards.

3. In the demountable partition wall of claim 1, an upright snap-on door jamb mounted upon and interlocked with and parallel to said horizontal stud and including a channel body having an elongated outer door receiving stop of rectangular cross-section with the opposing edges of said body being flanged and terminating in reverse formed channel clips having an inner flange snugly and removably interlocked within an adjacent pair of clip edges respectively.

4. In the demountable partition wall of claim 1, a horizontally disposed stud of the same construction as the upright studs, extending between and secured to a pair of adjacent upright studs intermediate said floor and ceiling;

and a snap-on divider sill mounted over and upon and interlocked with and parallel to said horizontal stud and including a channel body having an elongated upwardly opening divider receiving slot, with its opposite edges being flanged and terminating in reverse turned channel clips having an inner flange snugly and removably interlocked within the adjacent horizontally disposed pair of clip edges of said horizontal stud.

5. In a demountable partition wall, for use between a floor and a ceiling;

a. an up-turned floor channel on and secured to said floor;

b. a down-turned ceiling channel on and secured to said ceiling overlying the floor channel;

c. a series of longitudinally spaced opposed upright pairs of stud spacing tabs struck out and projecting from said channels;

d. a series of longitudinally spaced upright studs of H-shape in cross-section, having a central web and marginal flanges, with their respective stud ends pro-
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jected into said channels and their webs interposed and retained between said pairs of tabs; said tabs automatically centering said studs;
said floor and ceiling channels including elongated opposed right angular wall board supporting and retaining trim flanges spaced from the stud flanges; and upright wall boards bearing against said stud flanges supported and retained along their top and bottom edges within said channel flanges respectively; the marginal flanges of each stud including an elongated reverse turned flexible clip edge; and opposed upright trim moldings of channel form snugly mounted over and enclosing the upright side edges of each wall board; said trim molding including an inner flange projected into and along said clip edges and frictionally and removably interlocked therewith.

6. In the demountable partition wall of claim 5, the trim moldings upon the side edges of an adjacent pair of wall boards being uniformly spaced to define a utility channel; and an elongated trim molding overlying the outer edges of said adjacent trim moldings closing said utility channel and including a pair of parallel spaced mounting flanges snugly projected into said utility channel frictionally along and against said trim moldings respectively.

7. In a demountable partition wall, for use between a floor and a ceiling; an up-turned floor channel on and secured to said floor; a down-turned ceiling channel on and secured to said ceiling overlying the floor channel; a series of longitudinally spaced opposed upright pairs of stud spacing tabs struck out and projecting from said channels; a series of longitudinally spaced upright studs of H-shape in cross-section, having a central web and marginal flanges, with their respective stud ends projected into said channels and their webs interposed and retained between said pairs of tabs; said tabs automatically centering said studs; said floor and ceiling channels including elongated opposed right angular wall board supporting and retaining trim flanges spaced from the stud flanges; and upright wall boards bearing against said stud flanges supported and retained along their top and bottom edges within said channel flanges respectively; an upright snap-on door jamb mounted upon and interlocked with and parallel to a stud, and including a channel body having an elongated outer door receiving stop of rectangular cross-section with the opposing edges of said body being flanged and terminating in reverse formed channel clips having an inner flange snugly and removable interlocked within an adjacent pair of clip edges respectively; a backing block extending between said clip edges and bearing against the stud web; and a jack screw means moveably mounted through said door stop and compressively bearing against said backing block.

8. In a demountable partition wall, for use between a floor and a ceiling; an up-turned floor channel on and secured to said floor; a down-turned ceiling channel on and secured to said ceiling overlying the floor channel; a series of longitudinally spaced opposed upright pairs of stud spacing tabs struck out and projecting from said channels; a series of longitudinally spaced upright studs of H-shape in cross-section, having a central web and marginal flanges, with their respective stud ends projected into said channels and their webs interposed and retained between said pairs of tabs; said tabs automatically centering said studs; said floor and ceiling channels including elongated opposed right angular wall board supporting and retaining trim flanges spaced from the stud flanges; and upright wall boards bearing against said stud flanges supported and retained along their top and bottom edges within said channel flanges respectively; the marginal flanges on each stud including an elongated reverse turned flexible clip edge; a horizontally disposed stud of the same construction as the upright studs, extending between and secured to a pair of adjacent upright studs intermediate said floor and ceiling; a snap-on divider sill mounted over and upon and interlocked with and parallel to said horizontal stud and including a channel body having an elongated upwardly opening divider receiving slot, with its opposite edges being flanged and terminating in reverse turned channel clips having an inner flange snugly and removable interlocked within the adjacent horizontally disposed pair of clip edges of said horizontal stud; a backing block extending between said latter clip edges and bearing against the adjacent stud web; and a jack screw means manually moveably mounted through said channel body at its slot and compressively bearing against said backing block.

References Cited

UNITED STATES PATENTS

696,110 3/1902 Smith 52—217
1,133,138 3/1915 Henderson 52—241
1,217,572 1/1910 Olsen 52—481
2,277,792 3/1942 Small 52—489
2,766,855 10/1956 Johnson et al. 52—242 X
3,290,847 12/1966 Fenwick 52—489
3,339,324 9/1967 Stackhouse 52—241
3,429,090 2/1969 Metz et al. 52—489 X

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52—221, 241, 461, 489