United States Patent [19]

Nelsson

[11] **3,732,657**

[45] **May 15, 1973**

[54] **DEMOUNTABLE PARTITION ASSEMBLY AND STUDS THEREFOR**

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[73] Assignee: **United States Gypsum Company,** Chicago, Ill.

[22] Filed: **Oct. 5, 1970**

[21] Appl. No.: **77,997**

[52] **U.S. Cl.** **52/241,** 52/481, 52/496

[51] **Int. Cl.** **E04b 2/78**

[58] **Field of Search**.....52/481, 238, 241, 52/492, 493, 494, 495, 496, 242, 359, 347, 243

[56] **References Cited**

UNITED STATES PATENTS

2,154,520	4/1939	Mackin	52/481
2,412,404	12/1946	Jackson	52/493
3,027,605	4/1962	Nelsson	52/204 X
3,217,460	11/1965	Downing	52/495
3,548,557	12/1970	Downing	52/493
3,553,915	1/1971	Passovoy	52/241

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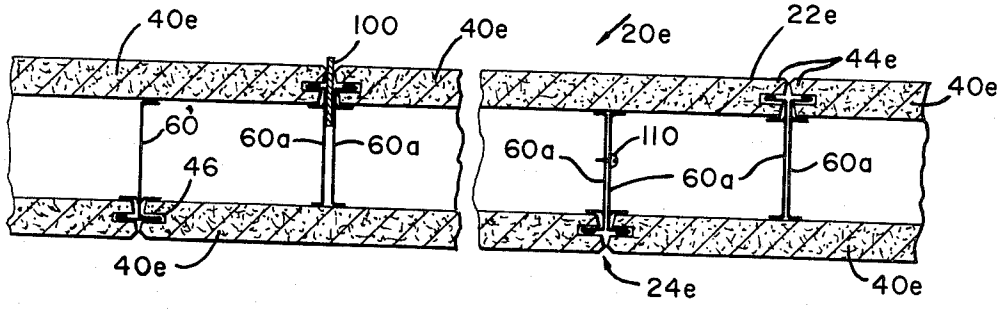
[57] **ABSTRACT**

A demountable partition assembly featuring two rows of partition members, such as wallboard panels, and floating studs, each stud of which interchanges only one row and abuts against, without interengaging, the other row. One form of the stud interengages by a single flange a kerf in only one of the partition members, permitting selective accessibility to that partition member. A reinforcing tab or flange is formed in the stud for abutting the back surface of the interengaged partition member.

13 Claims, 11 Drawing Figures



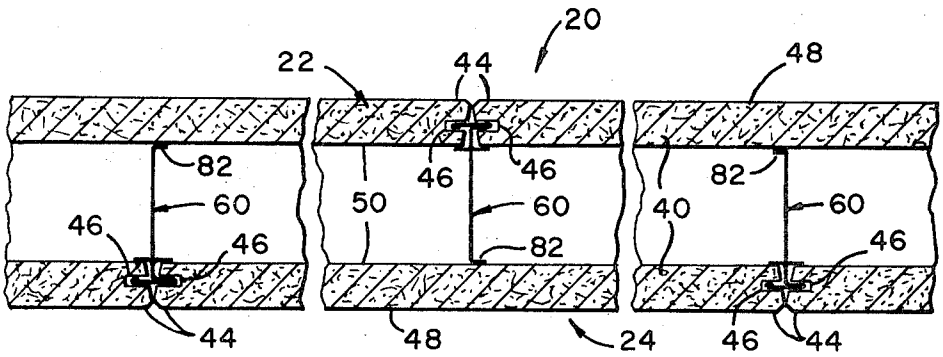


Fig. 2

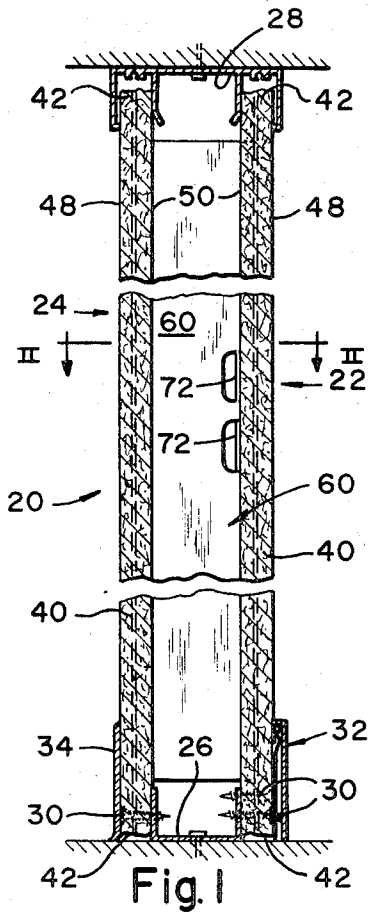


Fig. 1

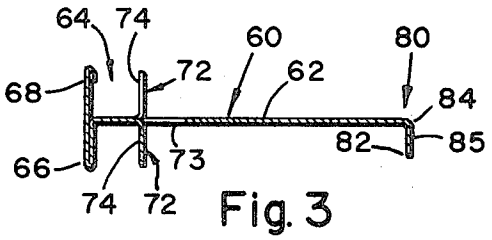


Fig. 3

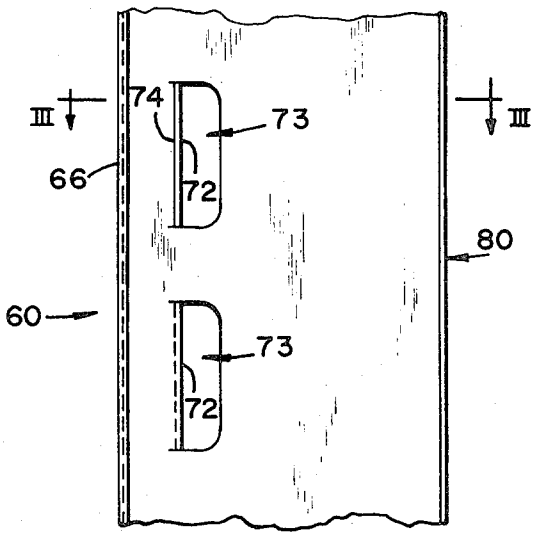


Fig. 4

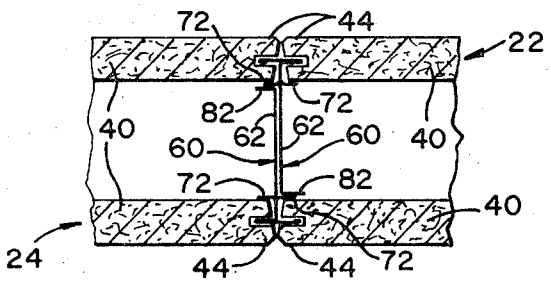


Fig. 5

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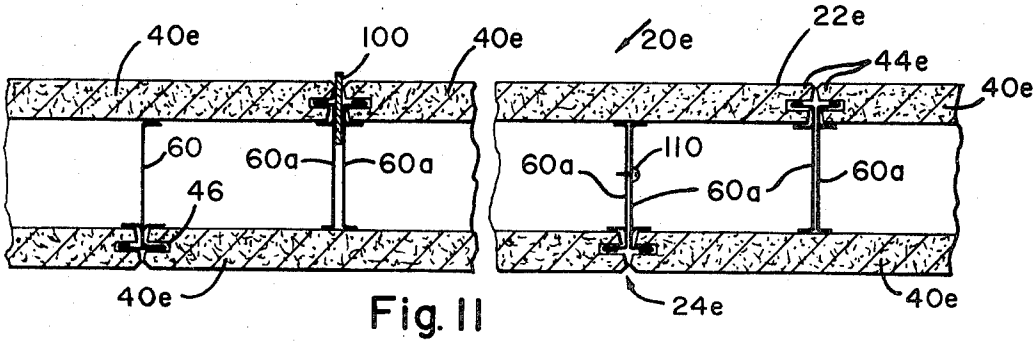

Fig. 11

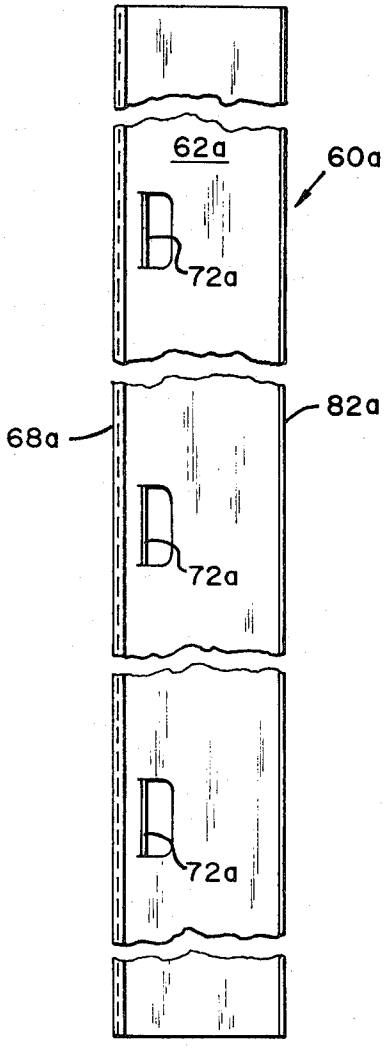

Fig. 7

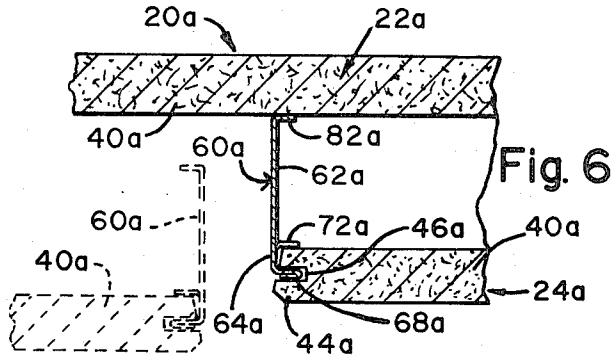

Fig. 6

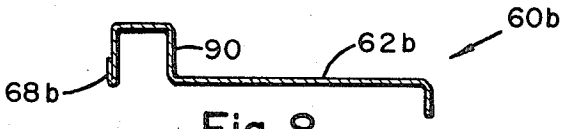

Fig. 8

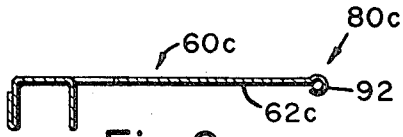

Fig. 9

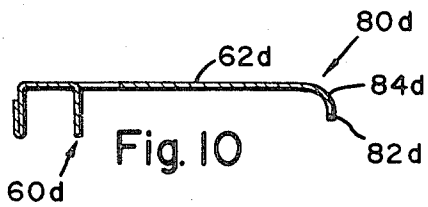

Fig. 10

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DEMOUNTABLE PARTITION ASSEMBLY AND STUDS THEREFOR

BACKGROUND OF THE INVENTION

Demountable partition assemblies have become of primary importance in large building projects, wherein hollow walls of less than permanent construction are required which are easily assembled and later disassembled. Disassembly is necessary if wall locations are to be altered, such as in the redesign of office layouts. Such assembly and disassembly generally requires, for practicality, a minimum of relatively uncomplicated components. The hollow wall thus ideally constructed is generally characterized by partition members, primarily made from gypsum wallboard or panels, which are positioned adjacent to each other in two parallel spaced-apart opposing rows defining the sides of the wall. The spaced-apart opposing relationship of the sides is accomplished by studs of metal or wood to form the interior of the wall or divider wherein plumbing and electrical conduits are positioned.

There is disclosed in my U.S. Pat. No. 3,027,605 a demountable partition system having the above features, wherein in addition the studs are "floating"; that is, not permanently attached to the floor or ceiling. Conveniently, such studs are shorter in length than the floor-to-ceiling height. The tongue and groove interengagement of the studs with kerfs provided in the partition members further permits mounting of the partition members without the use of fasteners. The support of the partition members by the studs against horizontally directed forces normal to the partition is limited to the engagement of those members with the studs at the kerfs, and with the floor and ceiling runners. The particular floating stud therein disclosed in H-shaped, requiring both sides of the wall to be assembled simultaneously and progressively from a central point such as a wall intersection. Disassembly also proceeds from such a central point, as each partition member is interengaged at the two vertical edges thereof with the studs, and each stud is also similarly interengaged with the next adjacent and opposite partition members.

Such a floating stud construction has certain distinct advantages. One of the most important is the ease and quickness of assembly due to the elimination of fasteners. Another is that both the studs and the panels can be precut without exact dimensions of careful tolerances. Yet another is the ability and room for the stud to expand when heated (such as by fire) without affecting the interengagement of the stud with the partition members.

Attempts have been made to provide for a demountable partition assembly one or both sides of which can be assembled or disassembled non-progressively. Such an improvement would permit selective access to a portion of a wall, such as for installation or repair of wiring or plumbing therein, or for the alteration, repair or replacement of that particular partition member, without tearing down the entire sides starting from an intersection. Furthermore, it would be desirable to also permit the independent erection of each side defining the hollow wall. Such independent erection would prevent delay of erection caused by plumbing and wiring requirements. It is further desirable in those constructions wherein an individual room or space is to be furnished later apart from the immediate decoration scheme, as is often the case with tenant walls. Thus, a

portion of the building may be unoccupied temporarily, not requiring or permitting completion of the unoccupied side of the wall at the time the first side is assembled.

One attempt at providing such selective or non-progressive partition assembly features studs which are metal U-shaped channels the side flanges of which are provided with slots facing outwardly on both sides of the channel. The studs extend from the floor to the ceiling in a non-floating manner. The panels are individually provided with metal teeth or hooks laminated thereto which must be bent at the time of installation so as to project out from the board towards the side flanges of the studs. Each panel then can be assembled and disassembled from two studs by lifting the hooks of the panel into the appropriate slots on the studs. The studs each support both sides formed by these panels, as well as adjacent pairs in each side.

The disadvantages of such a system are numerous. One is that it requires relatively complicated components, such as adjustment shims and the integral hooks laminated to the panels, which components are ready for installation only after special preparation, i.e., the bending of the hooks away from the surface of the panels. Another is that fire-rating requires the lamination of yet another panel to each hung panel. A further disadvantage is that the studs themselves are not readily removable along with the panels to provide complete access to the interior of the wall.

Other disadvantages stem from the use of each stud to support both a pair of adjacent panels and the opposite pair of panels forming the other side of the wall. Because of this structure, sound attenuation is not improved over conventional structures, and more importantly, each panel must be made with exact tolerances to avoid unattractive gaps forming at the joints. These gaps can be covered, if at all, only by battens which themselves are decoratively unappealing. Further, to support two adjacent panels on each side, the studs must have considerable lateral extent in the channel walls. This lateral extent weakens the channel causing permanent inward deflection in some cases during installation, which in turn causes "lipping" of the panels. To avoid this, extra shoring clips are necessary for the studs.

Still another problem created by the attempted solution described above is that security is lacking by the very nature of the accessibility of the panels on both sides of the wall. That is, if both sides of the wall are constructed by such a partition assembly, a person can move from room to room merely by dismounting the panels on both sides of the hollow wall. This problem can be overcome by providing for a separate construction of one side of the hollow wall, but to provide entirely different components such as different types of panels for such a wall normally results in yet a further complicated assembly and the added cost of extra tooling. Thus, it would be advantageous to have components which would permit non-progressive or selective assembly and disassembly of a partition construction on one side of the wall, such as for access purposes, and only progressive construction on the other side of the wall to insure security, at the same time using as many as possible of the same components for both sides of the wall.

SUMMARY OF THE INVENTION

This application concerns an improvement of my aforesaid patent wherein each side of the wall is mountable and demountable independently from the other side and wherein both the partition members and the studs therefor are removable or installable separately or selectively on at least one side of the wall without disturbing or requiring the installation of adjacent or opposite partition members. The selective accessibility of the one side of the wall is made possible by a construction which removably engages each of the floating studs with a portion of only one of the partition members, and preferably at only one side of the stud, the members each having two of such portions which are spaced substantially the full width of said each partition member. The co-acting means which permits this interengagement of the studs with the portions of the individual members features a tongue and groove relationship between the studs and the individual member. The studs preferably extend into contact with partition members on the opposite side of the wall only in a non-interengaging manner so as to support the opposite partition member only against forces exerted normally to the member and horizontally towards the stud. Reinforcing means are provided in the stud for supporting the back surface of the member interengaged by the stud.

Accordingly, it is an object of the invention to provide a partition assembly and the components therefor which will permit each partition member and the floating studs supporting it to be installed or removed from a wall constructed with other of the partition members adjacent and opposite thereto, without disturbing those adjacent or opposite partition members.

Another object of the invention is to provide such a partition assembly and components which will permit each side of the wall constructed therefrom to be assembled separately from the other side.

It is a further object of the invention to provide such a partition assembly and components which will reinforce the partition members against horizontally acting forces without requiring additional, separate components.

It is yet another object of the invention to provide such a partition assembly and components which will permit one side of the wall constructed therewith to have ready accessibility at at least some of the individual partition members while permitting the other side of the wall to be assembled and disassembled progressively only.

It is still another object of the invention to provide such partition assemblies and components which will have improved sound attenuation.

It is a related object of the invention to provide such partition assemblies utilizing a minimum number of separate components which are easy to assemble.

Yet another object of the invention is to provide such partition assemblies and the components therefor which permit the construction of non-opposing wall joints which do not require battens thereover.

It is yet a further object of the invention to provide such partition assemblies and components thereof which will permit adaptations and variations in the partition members which are peculiar to only one side of the wall.

Other objects and advantages will become apparent upon reference to the following drawings and detailed discussion.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a fragmentary, sectioned elevational view of a partition assembly constructed in accordance with the invention to form a hollow wall;

FIG. **2** is a fragmentary sectional view taken along the line II—II of FIG. **1**, the floor runner having been omitted for clarity;

FIG. **3** is a sectional view taken along the line III—III of FIG. **4** of a floating stud constructed in accordance with the invention;

FIG. **4** is a fragmentary elevational view of the stud shown in FIGS. **2** and **3**, being enlarged as compared to FIG. **2**;

FIG. **5** is a fragmentary, sectioned plan view similar to FIG. **2**;

FIG. **6** is a fragmentary, partially exploded, sectioned plan view similar to FIG. **2**, but illustrating a different embodiment of the floating stud;

FIG. **7** is a fragmentary elevational view of the stud shown in FIG. **6**;

FIGS. **8**, **9** and **10** are sectional views of alternate forms of the floating stud shown in FIGS. **6** and **7**; and

FIG. **11** is a fragmentary, sectioned plan view similar to FIG. **2** but illustrating a wall constructed with several of the different studs of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The meaning of certain terms as used throughout the application will now be set forth. "Partition member" or "panel" refers to a one-piece part of one side of a hollow wall or divider which separates a space such as a room from the interior of the wall or divider formed when the member is assembled with other like members. Thus, a partition member can be a single wall panel having the necessary structure for interengagement with the studs, or it can be two panels adhered or laminated together in a conventional fashion, such as is taught in my aforesaid U.S. Pat. No. 3,027,605. "Interengagement" and the corresponding verb forms refer to a connecting relationship between two parts, both of those parts being especially made for the relationship. "Opposing rows" or "sides" of such partition members refers to the two rows of such members spaced apart back-to-back which form the completed hollow wall. An "opposite member" is that partition member in the opposite row from the row being discussed which is generally opposite the partition member in question. The "back surface" of such a partition member is the surface facing away from the exposed, generally decorated, front surface. "Vertical" and "horizontal" edges of a partition member refer to edges having such orientation when assembled, and which are constructed for that purpose.

Thus, referring to FIGS. **1** and **2**, the components and the assembly of the invention can be utilized to construct a hollow wall or partition **20** comprising two spaced apart, back-to-back parallel sides or rows **22** and **24** of partition members or panels **40**. These partition members, when assembled, abut against or are confined within, in a conventional manner, floor and ceiling runners **26** and **28**, respectively. For example, screws **30** can be utilized to fix the bottom horizontal

edges 42 of the partition members in place, a base and attachment clip 32 or a single "top set" base 34 being used to cover the screws. The spacing of the two rows 22 and 24 is accomplished by studs as hereinafter described.

The individual partition members 40 can be conventional gypsum wallboard panels of any convenient width or height, having horizontal edges 42 and adjacent, opposed vertical edges 44. The later edges 44 are conventionally formed with groove-like kerfs 46 extending approximately centrally thereinto, generally parallel to the plane of the member 40 as defined by its surfaces 48 and 50. The front surface 48 of a member 40 may be decorated in any desired fashion, such as with a vinyl covering. The back surface 50 is generally left undecorated and is of slightly lesser lateral extent or width than the front surface 48, so as to taper the edges 44 inwardly from front to back (FIG. 2). Because of the nature of the interengagement of the members 40 with the studs at the kerfs 46, the partition members preferably are formed from monolithic hard-edged glass fiber-reinforced gypsum wall-board. However, as noted above, laminated panels can also comprise the members 40.

In accordance with one aspect of the invention, many of the advantages obtained herewith stem from the use of studs 60 especially constructed to permit either side 22 or 24 to be assembled or disassembled without affecting and without regard to the studs or members forming the other of the two sides 24 or 22. The studs 60 interengaged in either row 22 or 24 are spaced without regard to the spacing of the studs interengaged with the other side, and are spaced only with respect to the next adjacent stud in that row as determined by the width of the partition member therebetween. Such a construction is rendered easier by making the studs 60 preferably floating studs, i.e., of length less than the height of the members 40 so that the upper and lower ends of the studs may be spaced distant from the floor and ceiling runners. Because the positioning of each stud depends only on the width of the preceding partition member without regard for the width or spacing of opposite partition members, each of the partition members 40 forms an edge 44-to-edge 44 joint with its adjacent neighbors. The joints of the two sides or rows can be nonopposing, as they are formed independently of each other.

Referring now particularly to FIGS. 2–4, the stud 60 is a metallic strip preferably formed so as to have a central web portion 62, one edge portion 64 of which has integrally formed therewith a partition member interengaging portion. Specifically, edge portion 64 preferably is bent to form two tongue-like flanges 66 and 68 extending in opposite directions from the web portion 62 and generally perpendicular thereto, preferably along the entire edge 64. Flanges 66 and 68 are dimensioned in thickness to snugly fit within the groove-like kerfs 46. This tongue-and-groove fit is such that friction retains the studs 60 in a floating position with the partition members 40, even when the latter are disassembled for repair, alteration, or other purposes.

In accordance with another aspect of the invention, to reinforce the partition members interengaged with the portion 64, each stud 60 is provided with at least one pair of knock-out tabs 72, the tabs in each pair projecting in opposite directions and generally parallel to the flanges 66 and 68, from the web portion 62. The formation of the tabs thus results in openings 73 in the web portion 62. The surfaces 74 of the tabs 72 fit flush against the back surface 50 of the interengaged member 40, which surface 50 faces the web portion 62 of the stud (FIG. 2). The effect is to cause the stud to act to support horizontally the entire thickness of the partition member so interengaged, rather than just half of it as would be the case if the tabs 72 were not used. That is, the entire edge portion 64 from the bend of the tabs 72 outwardly to the flanges 66 and 68 engage and support the partition member. The vertical location of the pair of tabs 72 in the web portion 62 is such as to reinforce the back surface 50 at the height which is most susceptible to horizontal forces directed against the front surface 48, e.g., by objects such as a desk chair or other furniture. One such height is approximately 4 feet, 4 inches from the floor, two other possible heights being each spaced 8 inches and 16 inches, respectively, below that. Thus, preferably there are included at least two other such pairs (not shown) of reinforcing tabs 72 spaced vertically along the web portion 62.

In accordance with still another aspect of the invention, the edge portion 80 (of the web portion 62) opposite to the edge portion 64 is integrally provided with a vertically extending, horizontally-acting, force-resisting flange 82 having a back surface 85 specially adapted to contact but not interengage the back surface 50 of an opposite partition member (FIG. 2 and FIG. 3). For this reason, this surface 85 is located a distance from the flanges 66 and 68 which will position the surface adjacent to an opposite partition member. Specifically, the edge portion 80 is formed, preferably by roll-forming, with a flange 82 extending the full length of the stud generally parallel to the flanges 66 and 68, the rear or back surface 85 of which only abuts the opposite partition member. The distance from flange 66 to surface 85 is about 2 3/16 of an inch, as a representative measurement. It is this construction which permits each row 22 and 24 to be constructed independently of, and yet in horizontal or lateral support of, the other row. Thus, the flanges 82 of the studs in row 22 abut without interengaging the back surfaces 50 of the members 40 in row 24, and vice versa. A row such as row 22 can be progressively assembled at one date, leaving the interior of the wall 20 exposed from side 24. At a later date and preferably after all interior wall installations have been made, the row 24 can then be progressively assembled, using decorative surfaces 48 which may be entirely different from those used in row 22.

The bending of the stud material to form flange 82 results in a bend line 84. This line functions in conjunction with the bending of flange 66 as a facile standard in maintaining the web portion 62 a constant width from stud to stud, if desired. That is, the total width of the strip which is to form the stud may vary from piece to piece, but the roll forming of the flanges 66, 68 and 82 insures that the nonuniformity falls in the width of the flange 82 and the doubled over portion of flange 68. Thus, uniformity in stud width can be assured in an inexpensive manner by this construction.

The cross-sectional shape of the stud 60, absent knockout tabs 72, is thus that of a "J" seen as shown in FIG. 3. It will be readily recognized, however, that the side of projection of the flange 82 from the web portion 62 is immaterial, as seen from the position of

that flange in the two studs **60** interengaged with row **22**, FIG. **2**.

It will be readily appreciated that conventional doorways and cornices can be readily incorporated in the partition assembled from the studs **60** and the partition members **40** interengaged therewith. Also, it will be appreciated that processes other than roll-forming can be used to make the stud **60**.

In accordance with yet another aspect of the invention, the aforedescribed structure permits assembly of a wall to proceed in the following fashion. A corner (not shown) is first established by temporarily positioning partition members for both rows at a corner, and mounting a conventional floating corner stud interengaging these members in both rows of the wall. This provides the necessary rigidity to the corner to permit further assembly. Then, preferably one side or row only of the wall is further assembled, starting with one new assembled partition member in the corner. A stud **60** is inserted in the exposed kerf of this member, and the next adjacent member **40** of that row is then slipped over the exposed flange of this first stud **60**. The process is repeated for the remainder of the row. The opposite row can be assembled, such as at a later time, by proceeding from the corner stud in an identical fashion. In each row, the stud **60** is interengaged with the previously assembled partition member of that row, and the flange **82** is positioned adjacent, but not interengaged with, the back surface of the opposing partition member of the opposite row to support it against opposing forces.

The stud **60** thus described above can be seen to have certain pronounced advantages in addition to those already mentioned. For example, the narrow width of the flanges **66, 68** and **82** means that no bending weakness exists in the flange of the type which would, by permanent deformation, cause permanent "lipping" of the partition members. Specific dimensions, which are only representative, are 0.313 inches for the width of each of the flanges **66, 68** and **72**, and three-sixteenths of an inch for flange **82**. For the same reason, it is not necessary to incorporate shoring clips to laterally support the studs, thus insuring a minimum of component parts and simplicity of assembly. Another advantage is that the simplified interengagement of the studs **60** with the partition members **40**, and the use of the reinforcing tabs **72**, permit the partition members to have the necessary thickness for a 1-hour fire rating without the need for laminating a separate panel thereto. Yet another advantage concerns sound transmission. The noninterengagement of the flange **82** with the opposite partition members, which permits separate and independent row assembly and disassembly, also provides for the added property of improved sound attenuation. Thus, a wall constructed as the wall **20** (FIG. **2**) has been found to have a sound transmission level of 40 STC. This compares with a level of 37 STC measured for demountable walls assembled in accordance with other techniques, such as that described above using hooks which are laminated to the wall panels.

FIG. **5** illustrates a different assembly of the wall **20** based upon the above described components. Because flange **82** is a single flange, it is possible to assemble the rows **22** and **24** so that the joints formed by adjacent members **40** are, if desired, opposing. That is, the two rows can be positioned back-to-back, because each flange **82** can be positioned to rest upon one of the tabs **72** of the other stud, as well as upon the edge **44** of the opposite member **40**. This in combination with the flexibility of the web portion **62** makes virtual alignment of the opposed joints possible, as shown in FIG. **5**.

ALTERNATE EMBODIMENTS

FIGS. **6** and **7** illustrate another embodiment of the invention wherein the studs each interengage a portion of only one of the partition members **40**, rather than two. This permits selective access to the partition member so mounted without affecting either adjacent members or opposite members. Parts similar to those previously described bear the same reference numeral to which the distinguishing suffix *a* has been added.

Thus, the construction which makes possible the other main aspect of the invention, namely selective removal or installation of any one of the partition members and its studs, features a floating stud **60***a* which is formed so as to interengage with the edge portion **44***a* of only one partition member **40***a* of the row **24***a* (FIG. **6**). Specifically, the stud **60***a* has a central web portion **62***a* and an edge portion which is especially adapted to interengage the edge portion **44***a* of the partition member. As in the preceding embodiment, each member **40***a* has two such edge portions spaced apart the full width of the member. The edge portion **64***a* of the stud is characterized by a single flange **68***a* which is bent generally perpendicularly to the web portion, having a thickness which is adapted to interengage the kerf **46***a* as in the previous embodiment. The remainder of the stud **60***a* is essentially identical in construction as in the previous embodiment, at least one knockout tab **72***a* and a noninterengaging flange **82***a* performing the identical functions as set forth for the previous embodiment. FIG. **7** illustrates the preferred use of three tabs **72***a*. Absent the knock-out tabs, the stud thus is shaped as a channel the cross-section of which appears as a "C". As before, the row **24***a* can be assembled and disassembled without affecting the row **22***a*.

Because each stud **60**a of the row **24***a* interengages with only a portion of one partition member **40***a*, it is necessary to assemble the wall **20***a* with the studs **60***a* paired in adjacent, generally back-to-back positions. The adjacent stud and its partition member which continues the row **24***a* are shown in dashed lines in FIG. **6** in position prior to assembly. This assembly proceeds identically as described for wall **20**, except that the studs are interengaged with the kerfs in all cases prior to the assembly of the partition member to the wall.

The unique interengagement of each stud **60***a* with a member **40***a* results in the interengaged partition member being readily and selectively removed from the row **22***a* or **24***a* simply by removing the base **32** or **34** (as the case may be — FIG. **1**) and the screws **30**, if any, attaching that member to the floor runner, and lifting and pulling the partition member away from the wall. The friction fit of the stud **60***a* at each edge **44***a* of the member causes it to demount and assemble along with the partition member. Such accessibility permits repair of the partition member **40***a* or the installation or repair of utilities within the wall **20***a* while still retaining the stated advantages of the construction set forth in the previous embodiment. An entire wall **20***a* can be so constructed with the studs **60***a*.

Another result of the construction of stud **60***a* is that the row assembled using such studs can have a majority of each of the partition members **40***a* defining that par-

ticular row in edge-to-edge contact with the adjacent members on each side thereof. More exactly, an assembly of row **24***a* so as to duplicate throughout the row the assembly shown in FIG. **6** will result in all the partition members being in edge-to-edge contact with their adjacent neighboring members. Such contact results in a joint which conceals the studs and the interior of the wall, thus eliminating any need for joint-concealing battens.

Turning now to FIGS, **8, 9** and **10,** the C-shaped single-flanged stud **60***a* can take several different forms as shown in these embodiments. Parts similar to those previously described bear the same reference numeral to which the distinguishing suffixes *b, c* and *d* have been added, respectively. Thus, FIG. **8** illustrates a stud **60***b* having a flange **68***b* wherein the back surface reinforcing means is a bend **90** joining the web portion **62***b* and extending the entire length thereof. Such a stud has the advantage of quicker manufacturing, as only a rolling operation is needed to make it. FIG. **9** illustrates a stud **60***c* identical to stud **60***a* except that the non-interengaging edge portion **80***c* is a bead **92** rather than a flange. The rounded surface of the bead prevents the back surface of the opposite partition member from being cut by the web portion **62***c*. Stud **60***d* of FIG. **10** also differs from stud **60***a* in the shape of its edge portion **80***d*. The bend **84***d* is gradual, having a substantial radius, so that the flange **82***d* is resiliently connected to the web portion **62***d*. This resilient connection permits the stud width to adjust to variations in the interior wall cavity and still insure substantial, generally spring-loaded contact of the flange **82***d* with the back surface of the opposite partition member.

FIG. **11** illustrates a composite wall **20***e* having two rows **22***e* and **24***e*, wherein various of the previously described studs are incorporated. Row **22***e* is characterized by studs of the C-shape, so that each partition member **40***e* thereof can be selectively removed or installed without affecting adjacent members. One of the joints shown in row **20***e* has incorporated between two adjacent "C" studs **60***a* a decorative trim strip **100,** which is an optional component rather than a necessary element to the assembly. Such a trim is generally metallic and is adhered by conventional adhesive to only one of the paired studs **60***a* between which it is positioned. However, where such trim **100** is not inserted between the studs, the adjacent members **40***e* of row **22***e* are in edge **443**-to-edge **44***e* contact of the type mentioned before, eliminating battens.

In contrast, row **24***e* is characterized by studs which permit only progressive assembly and disassembly of the row. By making one of the rows (here row **24***e*) of this construction, security is insured as it is not possible for someone to completely penetrate the wall by merely removing a member **40***e* from both of the rows. Such penetration otherwise would be particularly easy if, as is occasionally the case, the bases **32** and **34** are omitted from the finished wall. The studs in row **24***e* may be either the J-shaped stud **60,** or they may be two C-shaped studs **60**a (or other illustrated alternate forms thereof) which are fixed to each other back-to-back either at the factory or by the applicator by means such as screws **110.** Such fastening screws **110** can be also used temporarily on the studs of row **22***e* if that row is to be assembled progressively prior to the assembly of row **24***e*. In that case, when row **24***e* is to be assembled, the screws **110** must be removed from the studs **60***a* in row **22***e* to regain the selective accessibility which is intended for that row.

Still another modification which is possible with the invention is the alternating use of studs **60** and **60***a* in the row **22***e*, the studs **60***a* being interengaged with those partition members which may require selective demounting for one reason or another. Even in such a construction, the row **24***e* may utilize studs such as studs **60** capable of only progressive assembly and disassembly, to insure security.

In any event, it will be appreciated that regardless of which of the many described studs is used, the same partition member is used in all cases, without the need for separate fasteners. Thus the member of components in the system is minimized. Nevertheless, it is because of the same interengagement of each type of the described studs with the respective partition members that the various studs can be intermixed as desired.

Although the invention has been described in connection with certain preferred embodiments, it is not intended that it be limited thereto. For example, the J-shaped stud could be modified, as described and claimed in copending patent application Ser. No. 136,106 filed in the name of Palmer B. Thompson on Apr. 21, 1971 so that the web portion **62** is wider and so that the flange **82** is longer and wider to interengage with only one of the opposite members. Such a construction would still permit the independent erection of at least a portion of the opposite row, namely the opposite partition member which is to be adjacent the opposite member interengaged by the modified flange **82.** Conveniently, the adjacent opposite member then would be mounted using the C-shaped stud.

Therefore, it is intended that the invention cover all alternatives, alternate arrangements, and embodiments as may be included within the scope of the following claims.

I claim:

1. A demountable partition assembly having studs and two spaced, opposed and parallel rows of demountable partition panels whose adjacent, opposed vertical edges have therein, kerfs engaged by the studs, the studs each comprising a web portion bridging the space between the two opposite panel rows and at least one flange integrally connected to one edge only of said web portion and removably interengaging said stud with the kerf in at least one of the partition panels and in only one of said rows, the other edge of the web portion extending into contact with the back surface of a panel of the opposite row against which it abuts without interengaging the opposite row panel.

2. An assembly as claimed in claim **1,** wherein the studs interengaged in one of said rows are positioned with respect to each other independently of the studs interengaged in the other of said rows.

3. An assembly as claimed in claim **2,** wherein said one edge is characterized by only a single flange and wherein the studs of the panels in said one row are each removably connected to only one panel of a pair of adjacent panels in that row, permitting installation and removal of said panels and studs independently of the adjacent panel of the pair.

4. An assembly as claimed in claim **3,** wherein a pair of studs each engaging the kerf of two adjacent panels are mounted back-to-back.

5. An assembly as claimed in claim 4, and further including a decorative strip positioned between said back-to-back studs.

6. An assembly as claimed in claim 3, wherein some of the studs in the other of the two rows have flanges in engagement with both of two adjacent panels, thereby preventing selective removal of the panels in that other row.

7. An assembly as claimed in claim 3, wherein two of said studs are mounted back-to-back and are secured to each other by means of a fastener, the flanges of the two secured studs each interengaging the respective kerfs of one of two adjacent panels.

8. An assembly as claimed in claim 2, wherein the flanges of the studs extend along the entire length of the stud.

9. An assembly as claimed in claim 2, wherein said outer edge of the stud web portion is shaped like a flange substantially parallel to the other flange of the stud.

10. An assembly as claimed in claim 2, wherein the web portion of each stud includes reinforcing means projecting from said web portion for the purpose of supporting the back side of an adjacent panel.

11. An assembly as claimed in claim 10, wherein said reinforcing means includes at least one tab formed by punching and bending out a portion of said web portion.

12. An assembly as claimed in claim 2, and further including floor and ceiling runners for fixation of the two panel rows.

13. An assembly as claimed in claim 1, wherein the junction of the other edge flange with the web portion is gradually curved and resilient, permitting the other flange to accommodate panels in the opposite row regardless of minor variations in the length of the web portion.

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