Nov. 28, 1933. H. J. R. BARRETT 1,937,186

WALL CONSTRUCTION

Filed Jan. 16, 1933 3 Sheets-Sheet 1

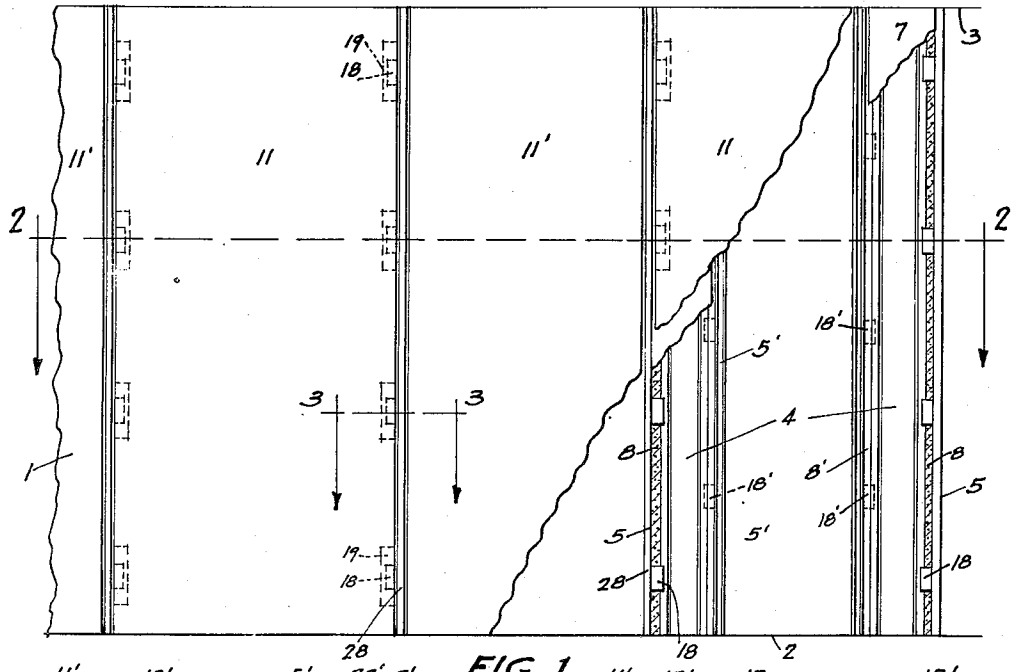


FIG. 1.

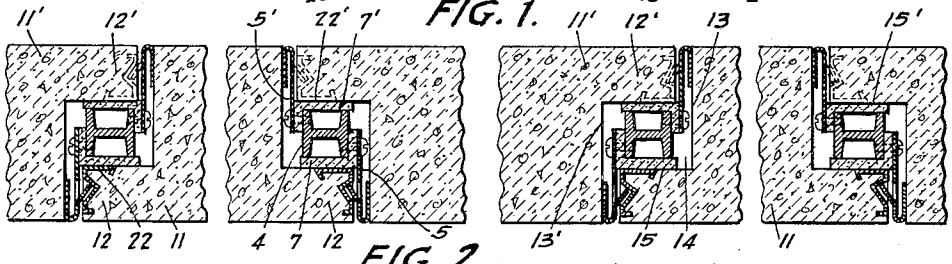


FIG. 2.

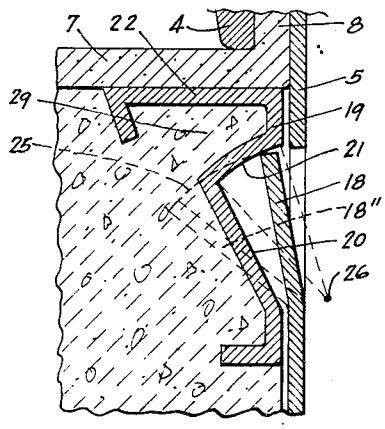


FIG. 4.

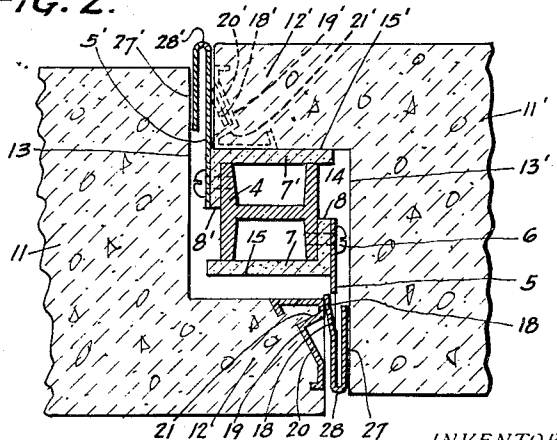


FIG. 3.

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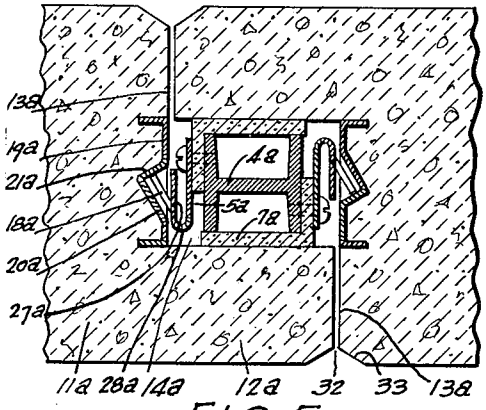


FIG. 5.

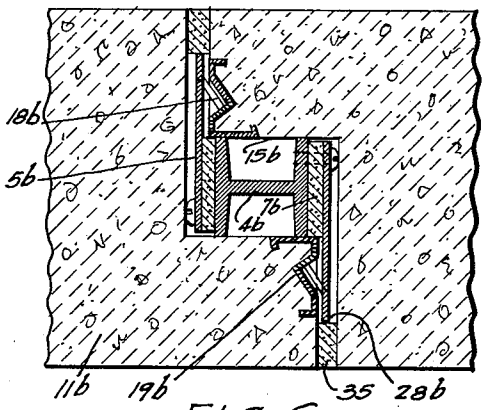


FIG. 6.

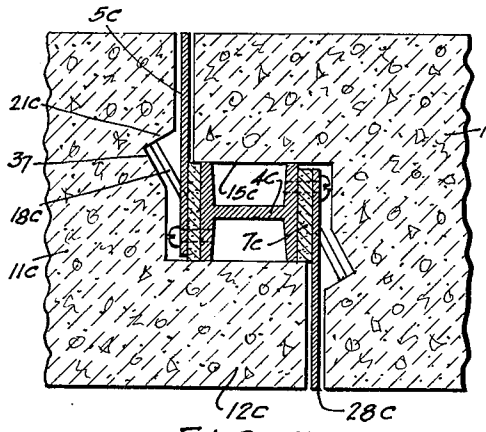


FIG. 7.

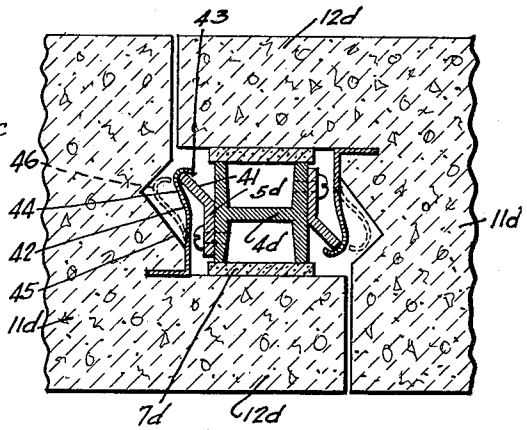


FIG. 8.

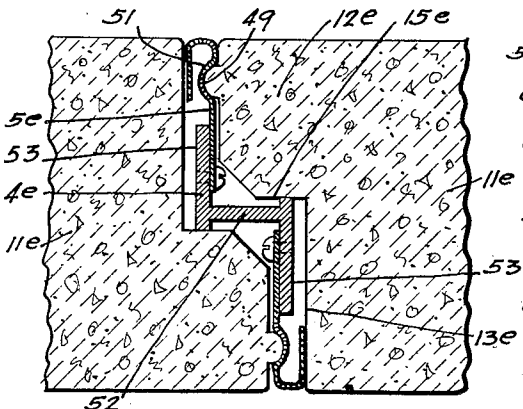


FIG. 9.

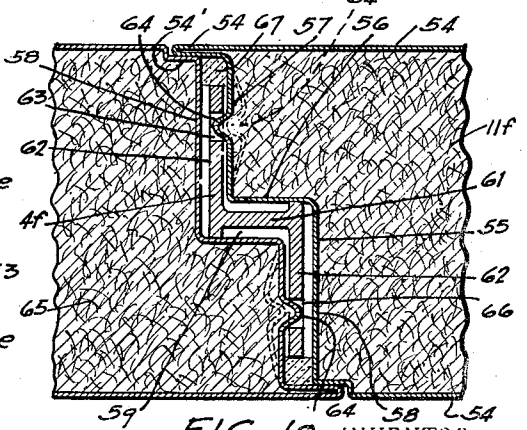


FIG. 10.

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WALL CONSTRUCTION

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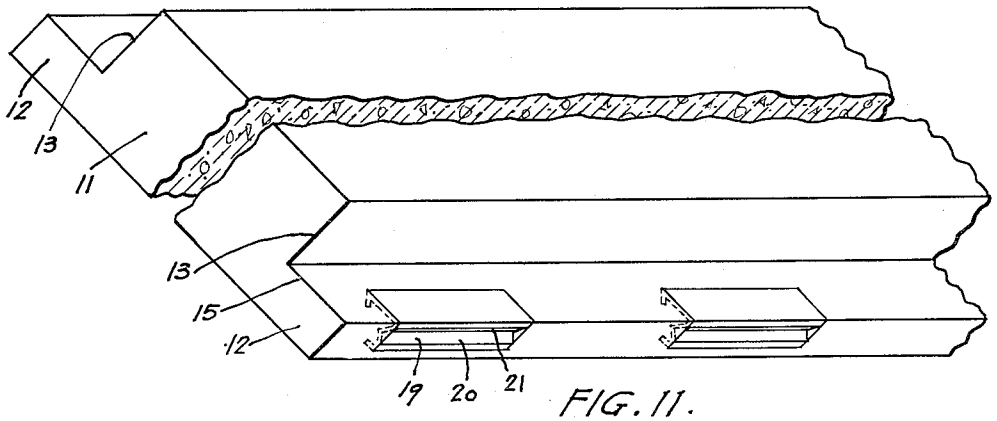


FIG. 11.

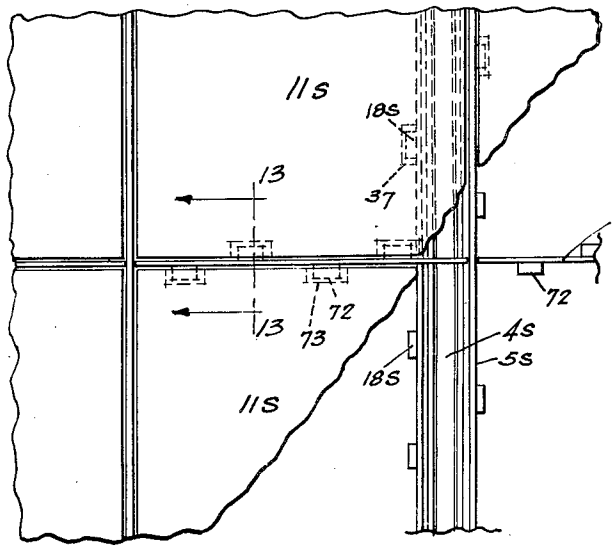


FIG. 12.

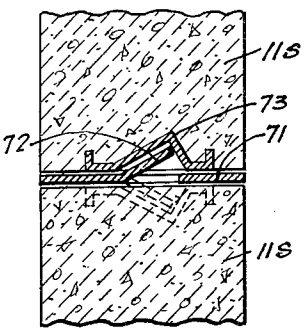


FIG. 13.

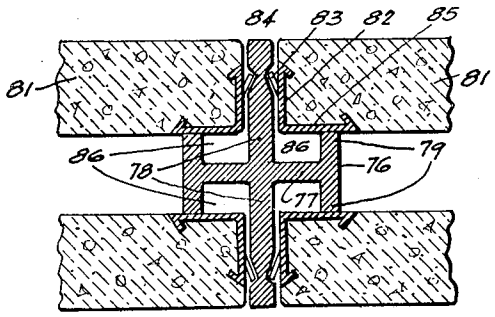


FIG. 14.

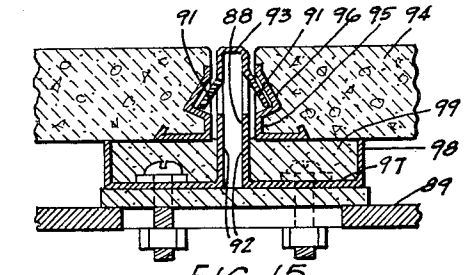


FIG. 15.

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Patented Nov. 28, 1933 1,937,186

UNITED STATES PATENT OFFICE

1,937,186

WALL CONSTRUCTION

Herbert J. R. Barrett, Los Angeles, Calif.

Application January 16, 1933. Serial No. 651,873

23 Claims. (Cl. 72—16)

This invention relates to a wall construction, and particularly to a sectional construction for either interior or exterior walls of buildings. While the invention is particularly intended for use in interior partition walls or other vertical walls, it will be understood that it may also be applied to any wall, whether vertical, horizontal or sloping, the term "wall" being used in a broad sense, to include a floor, ceiling, roof or the like.

The principal object of the invention is to provide certain improvements in sectional wall construction whereby this type of construction may be advantageously employed for certain purposes, and with sectional wall members formed of various kinds of materials.

A further object of the invention is to provide a sectional wall construction which may be quickly and easily assembled and disassembled, and which is of highly satisfactory mechanical strength and rigidity when so assembled.

A further object of the invention is to provide a sectional wall construction formed of a single layer or thickness of sectional wall members, having finished surfaces at both sides, and in which the necessary structural supporting members are substantially covered or concealed at both sides by said wall members, thus eliminating the necessity of providing two separate series of wall surface members at the respective sides of the wall as would be the case if certain types of sectional wall surface construction heretofore devised were to be applied to the construction of a wall provided with structural supporting members.

A further object of the invention is to provide a sectional wall member which may be forcibly inserted into position between structural supporting members at opposite edges thereof, and to provide yieldingly cooperating interlocking or securing means on said wall member and said structural supporting members, adapted to permit such forcible insertion and firmly hold the wall member in position when so inserted and to also permit removal of said wall member upon forcible disengagement of said interlocking means, while at the same time providing for substantial concealment of said supporting members by the edge portions of said wall member when inserted therebetween.

Other objects of the invention will be pointed out hereinafter or will be apparent from the following description.

According to the preferred embodiment of the present invention, I provide a sectional wall construction composed of a single series of sectional wall members disposed in the plane of the wall and having their opposite surfaces exposed at the respective sides of the wall, and also having resilient interlocking engagement with suitable retaining means secured to structural supporting members which extend between adjacent wall members, whereby said wall members may be quickly and easily placed in position and pressed or "snapped" into resilient interlocking engagement with said retaining means.

The sectional wall members are preferably of greater thickness, transverse to the wall, than are the structural supporting members, and are suitably shaped at the edges thereof which are to be disposed in engagement with the structural supporting members, so as to provide projecting edge portions of reduced thickness adapted to overlap and cover the structural supporting members at opposite sides of said members and to also provide recesses between adjacent wall members to receive said structural supporting members. The two opposite surfaces of the sectional wall members are preferably both finished surfaces, so as to give the assembled wall a finished surface appearance on both sides. Each structural supporting member is provided at its opposite sides with retaining means adapted for interlocking engagement with the wall members at the respective sides thereof. The projecting edge portions of the respective wall members engaging each supporting member are disposed at opposite sides of said supporting members, and said wall members are adapted to be pressed inwardly from opposite sides into interlocking engagement with the respective retaining means and thus bring the respective projecting edge portions into substantially abutting relationship with the sides or faces of said supporting members. The interlocking means on the wall members and on the retaining means include resilient members on either the retaining means or the wall members, which resilient members are adapted to yield sufficiently to permit forcible insertion of the wall members, in a direction transverse to the plane of the wall, into position to bring said interlocking means into engagement, and are adapted to hold said wall members in such position.

Another feature of the invention, which is of particular advantage in forming sectional wall constructions with materials of relatively low mechanical strength, such as plaster or composition materials of the type used for acoustic or other purposes, consists in the provision of metal reenforcing and interlocking members inserted,

embedded or otherwise secured in the edges of sectional wall members formed of such a material, said interlocking members being adapted for resilient interlocking engagement with suitable retaining means, as hereinafter described. Such metallic members may also be of advantage in facilitating the insertion of the wall members into interlocking position, by reason of the relatively low frictional resistance between two metallic surfaces.

The accompanying drawings illustrate forms of wall construction according to this invention, and referring thereto:—

Fig. 1 is a front elevation of a wall constructed in accordance with said invention, with the sectional wall members partly broken away to show the supporting and retaining means;

Fig. 2 is an enlarged broken horizontal section on line 2—2 in Fig. 1;

Fig. 3 is an enlarged horizontal section on line 3—3 in Fig. 1, showing one of the sectional wall members in the process of being inserted into position;

Fig. 4 is an enlarged detail view, showing a preferred relationship between the interlocking means on the sectional wall members and on the fixed supporting means;

Figs. 5 to 10 inclusive are views similar to Fig. 3, showing modified forms of construction of the supporting members, wall members, and interlocking means;

Fig. 11 is a partial view, in isometric projection, of one of the sectional wall members shown in Fig. 1;

Fig. 12 is a front elevation of a wall showing retaining members extending both vertically and horizontally;

Fig. 13 is an enlarged vertical section on line 13—13 in Fig. 12;

Fig. 14 is a horizontal sectional view showing a modified form of construction embodying certain features of this invention;

Fig. 15 is a similar view showing another modified embodiment of the invention.

Referring to the form of the invention shown in Figs. 1 to 4 inclusive and 11, a vertical partition wall is indicated at 1, extending for example between a floor level indicated at 2 and a ceiling level indicated at 3. At suitable intervals there are provided a plurality of fixed supporting members 4 extending vertically throughout the height of the wall and suitably secured at their upper and lower ends to any suitable portions of the building or other structure in which the wall is placed. Said supporting members may be structural members formed of wood, metal, or any other suitable material and may be of any suitable cross-sectional shape and size. In this case, each of said supporting members is shown as comprising a metal bar whose cross-sectional shape is substantially that of the letter H. In order to clarify the following description, the two opposite sides of each supporting member which are disposed toward the two sides of the wall structure will be referred to as "faces", and the other two sides, which extend perpendicular or transverse to the plane of the wall, will be referred to as "edges".

Retaining members 5 and 5' are secured to the respective edges of each of said supporting bars, and said retaining members may extend throughout the height of said supporting members as shown, or, if desired, they may be provided only at intervals along the height thereof. Said retaining members are shown as secured to the supporting bar by means of screws 6, although any other suitable means may be used for this purpose. In order to provide a tight engagement with the sectional wall members and minimize the transmission of sound or other vibrations through the wall, and to also assist in the alignment of adjacent wall members, I prefer to provide cushioning members 7 and 7', formed for example of felt, cork or other yielding material, extending over the opposite faces of the supporting member 4 and secured thereto in any suitable manner, for example, by providing the same with portions 8 and 8' which are bent over and secured between the respective retaining members and the edges of said supporting member.

The wall is shown as being made up of a plurality of sectional wall members 11 and 11', each of which is formed as a flat or other suitably shaped slab or block of the desired thickness and height and of sufficient width to fit between the adjacent supporting members. Said sectional wall members may be made of plaster, asbestos composition material, wood, acoustic material, or other materials or compositions such as may be used in wall construction, and may be either solid or hollow. Each of these sectional wall members is preferably of a thickness somewhat greater than the transverse width of the supporting members, and is provided at each edge with a projecting portion such as 12 or 12' of reduced thickness, adapted to overlap and cover one face of an adjacent supporting member 4. The projecting portions 12 and 12' of two adjacent wall members are adapted to extend at opposite sides of the supporting member 4 which is disposed between said two wall members, while the inner faces 15 and 15' of said projecting portions and two recessed edge portions 13 and 13' of said wall members cooperate to form a recess or pocket 14 in which said supporting member extends. Thus alternate wall members are adapted to be inserted into position from opposite sides of the wall, the wall members 11 being inserted from the front of the wall shown in Figs. 1 and 2, and the wall members 11' being inserted from the rear thereof. The inner faces 15 and 15' of the projecting portions 12 and 12' are shown as held inwardly against the outer faces of the respective cushioning members 7 and 7', as hereinafter described.

In order to provide a resilient interlocking engagement between the wall members and the retaining members secured to the supporting members, each of the retaining members 5 and 5' is shown as provided at suitable intervals with lugs or tabs 18 and 18' respectively, which are cut out and bent outwardly toward an adjacent wall member. Said retaining members, and the lugs 18 and 18' are formed of suitable resilient metal, and said lugs are bent out so as to be normally biased, by their own resilience, to some such outward position as indicated in dotted lines at 18'' in Fig. 4, but are free to yield inwardly against their own resilience upon pressure of the wall members against the same. When thus pressed inwardly, said lugs move pivotally about an axis adjacent the juncture thereof with the retaining members on which they are formed. At intervals corresponding to the spacing of the lugs 18 and 18', the edges of the sectional wall members 11 and 11' are provided with metal interlocking members 19 and 19' respectively, which are preferably embedded therein during the manufacture of said wall members or which may be applied thereto after manufacture in any suitable manner, it being understood that these interlocking

members are of particular advantage or necessity when the wall members themselves are of insufficient mechanical strength to themselves provide the necessary resistance to tension or other mechanical stress for firm engagement with the resilient lugs 14. Each of the interlocking members 19 and 19' is provided with a recessed or inwardly inclined portion 20 or 20' and with an inclined shoulder 21 or 21' for engagement with the corresponding resilient lug 18 or 18' on the retaining means. Each of said interlocking members is also preferably provided with a reenforcing flange 22 or 22' extending along the inner face portion 15 or 15' of the projecting portion 12 or 12' of the wall member to which it is secured, in order to strengthen the wall member at this point. If desired, the interlocking members 19 and 19' may be made to extend continuously along the edges of the wall members.

The preferred relation between the pivotal movement of the resilient lugs 18 and the inclination of the shoulders 21 is illustrated in Fig. 4, and it will be understood that the following description of the construction there shown also applies to lugs 18' and shoulders 21'. The arc through which the end of the lug 18 swings, when pressed inwardly from its normal position 18'' toward the plane of the retaining member 5, is shown in dotted lines at 25, and the inclination of shoulder 21, with respect to the plane of the wall, is preferably greater at all points throughout the length of said shoulder, than the angular inclination of the movement of said outer end of the lug 18 when in engagement therewith. Shoulder 21 may be a straight inclined shoulder, but I prefer to form the same as an arc-shaped surface whose center of curvature lies at some such point as indicated at 26, beyond the position of the axis of pivotal movement of the lug 18, so as to bring about the above-described relative inclination. The purpose of this relationship will be described hereinafter.

It will be observed that each retaining member 5 and 5' extends between the projecting edge portion 12 or 12' of one of the adjacent wall members and the recessed edge portion 13' or 13 of the other wall member. In the form of construction shown in Figs. 1 to 3, each of said retaining members extends outwardly to adjacent the plane of the outer faces of the wall members, and is provided with a portion 27 or 27' which is bent back and extends inwardly, providing a rounded edge portion 28 or 28' which is exposed between the adjacent wall members and is preferably approximately flush with the surfaces thereof. The resilience of the retaining member tends to hold the bent-over portion 27 or 27' outwardly in substantially tight engagement with the adjacent wall member, and at the same time permits the two sides of the retaining member to yield slightly so as to accommodate expansion and contraction of the wall members.

In assembling a wall of the above-described construction the alternate sectional wall members are forced inwardly, from opposite sides of the wall, into the positions shown in Figs. 1 and 2. In Fig. 3, one of the wall members 11 is shown in partially inserted position, and it will be seen that as said member is forced inwardly the inner edge of the metal interlocking member 19 thereon engages the resilient lug 18 and forces the same over toward the plane of the retaining member 5, sufficiently to permit the edge of shoulder 21 to pass the free end of the lug 18. Said lug then tends to move outwardly against said shoulder, by its own resilience, and holds the wall member inwardly, thus preventing removal of said wall member except by forcible release of said lug from said shoulder as hereinafter described. It may be pointed out that the movement of the lug 18 from and toward its normal position depends in part upon resilient movement of said lug with respect to the retaining member 5, and in part upon resilient yielding of the retaining member itself; in other words. the resistance of the retaining member as a whole, as well as that of the lug itself, enters into the above-described action.

As the wall members are pressed or forced into this position of resilient interlocking engagement, the outer faces thereof may be brought into position flush with the faces of the adjacent wall members, by forcing the same inwardly against the cushioning members 7 and 7' respectively. Referring particularly to Fig. 4, it will be seen that the resilient lugs on the retaining means serve to hold the wall members inwardly, in whatever position said wall members are thus forced, for the reason that each shoulder 21 is inclined at a greater angle than the path of movement of the free edge of the co-acting lug 18, so that as the shoulder 21 is forced inwardly by progressively greater amounts, compressing the cushioning means 7, the lug 18 will move progressively outwardly along said shoulder and will be held in such position by its own resilience.

Furthermore, any tendency of the portion of the wall member, indicated at 29, between the shoulder 21 and the flange portion 22, to shear or break off under the inward force exerted by lug 18, is prevented not only by the reinforcing action of the metal parts 19, 21 and 22 but also because said portion of the wall member is supported by the cushioning member 7, against such inward movement.

It will be observed that, when the wall members are in assembled position, said members, together with the supporting members 4 and cushioning members 7 and 7', form a continuous barrier against transmission of sound and heat, and also provide a tight seal to prevent leakage of air or water through the wall between adjacent wall members. The damping properties of the cushioning members 7 and 7' also serve to reduce direct transmission of sound or other vibrations through the wall. In some cases, however, the cushioning members 7 and 7' may be provided only at suitable intervals along the length of the supporting members, instead of continuously, said cushioning members serving in such cases principally to provide a yielding support against which the wall members are held.

In case it is desired, at any time, to remove one or more of the sectional wall members, it is only necessary to insert a thin bladed instrument between the projecting edge portion of a wall member and the adjacent retaining member 5 or 5', into engagement with the resilient lug 18 or 18', and then force such instrument inwardly so as to force said lug over, out of engagement with the shoulder 21 or 21', whereupon that edge of the wall member may be forced outwardly from the reverse side. The same operation may then be performed at the opposite edge of said wall member, and the wall member may then be completely removed from its position in the wall.

In Fig. 5 there is shown a modified form of construction, in which the overlapping projecting portions 12*a* of the wall members 11*a* serve to cover and conceal the retaining and interlocking means as well as the structural supporting means. In

this form of construction, the structural supporting member 4a is provided as before with cushioning members 7a, and the retaining members 5a are disposed wholly within the recess 14a provided between said overlapping edge portions 12a. Said retaining members are provided as before with resilient lugs 18a of substantially the same character as above described, while the metal interlocking members 19a are embedded or inserted in the sectional wall members at the recessed edge portions 13a. In this case, it will be observed that the lugs 18a are provided on the bent-over portions 27a of the retaining members instead of on the portions which are secured to the supporting member, so that greater advantage is taken of the resilience of the retaining members themselves, due to yielding at the bend 28a, in the movement of the lugs into and out of engaging position. The interlocking members 19a are recessed or inclined inwardly as shown at 20a and provided with inclined shoulders 21a in substantially the same manner as above described. The projecting portions 12a and the recessed portions 13a of adjacent wall members may be disposed in substantially close engagement with one another or may be spaced apart slightly, as shown at 32, and the space therebetween may, if desired, be pointed or grouted with suitable material, and said material may be of a resilient nature so as to permit expansion and contraction of the wall members. If desired, the edge portions of the wall members may be beveled as shown at 33, so as to provide the appearance of an ashlar wall construction.

The construction shown in Fig. 6 is similar to the form first described, with the exception that the retaining members 5b consist simply of flat strips of metal provided with resilient lugs 18b engaging metal interlocking members 19b on the wall members 11b, and said retaining members are of sufficiently small width so that the outer edges 28b thereof are disposed somewhat inwardly from the faces of the wall members, while the spaces between the edge portions of the adjacent wall members are pointed or grouted with suitable cementing and sealing material, preferably of a waterproof character, as indicated at 35, so as to give the effect of a masonry wall construction. In this case the cushioning members between the inner faces 15b of the projecting edge portions of the wall members and the structural supporting members 4b may be omitted, but I prefer to provide cushioning members 7b between the retaining members 5b and said structural supporting member.

Fig. 7 shows a form of construction in which the sectional wall members 11c are not provided with metallic interlocking members at the edges thereof, but are recessed as shown at 37 so as to provide a shoulder 21c adapted for interlocking engagement with a resilient lug 18c on the retaining member 5c. This form of construction is suitable for use with wall members made of material which, in itself, possesses sufficient mechanical strength to resist the pressure exerted against said shoulder by the resilient lug 18c. Cushioning members 7c are shown as provided between the retaining members 5c and the structural supporting members 4c, while the inner faces 15c of the overlapping projections 12c on the sectional wall members are shown as bearing directly against the opposite faces of said supporting member, but it will be understood that the cushioning members 7c may, if desired, be provided with portions extending between said faces 15c and the supporting member, in substantially the same manner as shown in Figs. 1 to 4. Furthermore, while the retaining members are shown as consisting simply of flat strips whose outer edges 28c are substantially flush, or may be ground flush, with the faces of the sectional wall members, so as to provide what is known as a decorative terrazzo strip, it will be understood that retaining members of other shapes and relative disposition, such as those shown in Figs. 1 to 4 or Fig. 5, may be used equally well with this form of construction.

In Fig. 8 I have shown a construction in which the resilient interlocking members are provided on the sectional wall members instead of on the retaining means. In this form of construction, rigid retaining members 5d are secured to the opposite edges of the supporting member 4d and are provided with projecting flanges 41, while resilient interlocking members 42 are embedded in or secured to the respective sectional wall members 11d and are bent over at their free ends as shown at 43 so as to provide recesses 44 adapted for engagement with said projecting flanges. The sectional wall members are recessed rearwardly of the retaining members 42, as shown at 45, so as to permit said retaining members to move to some such position as indicated in dotted lines at 46 as the sectional wall members are pressed into position. It will be seen that, as the wall members are forced inwardly the edge portion 43 of the interlocking member 42 will engage the projecting flange 41 and cause said interlocking member to move over toward the position shown at 46, until said edge portion 43 passes said flange, whereupon said interlocking member will spring back to the position shown, and the engagement of flange 41 in recess 44 will serve to hold a wall member in position. This form of construction is also shown as provided with cushioning means 7d between the projecting portions 12d of the sectional wall members and the supporting member 4d. It will be understood that this form of construction may also be modified, in any suitable manner, so as to provide a wall of the appearance shown in any of the previously described forms of the invention.

Fig. 9 illustrates another form of construction, in which the interlocking means comprises projecting portions 49 at the edges of the overlapping portions 12e of the sectional wall members 11e, and resilient retaining members 5e secured to the structural supporting member 4e and having recesses 51 adapted to engage said projecting portions 49. The retaining members 5e are sufficiently resilient to permit said members to yield in a direction longitudinally of the wall, when the wall members are forced inwardly, so as to bring said interlocking means into engaging position with one another, as shown. In this form of the invention the supporting members may be of any suitable cross-sectional shape, for example such as above described, but I have shown in this case a supporting member having a shape of a Z bar, comprising a web portion 52 extending substantially in the plane of the wall and between the inner faces 15e of the overlapping projections 12e, and two flange portions 53 projecting transversely in opposite directions from the opposite edges of said web portion and between the projecting portions 12e and recessed portions 13e of adjacent wall members, the retaining members 5e being secured in any suitable manner to the respective flanges 53. It will be understood that structural supporting members of this shape may

also be applied in connection with any of the other forms of construction above described.

The present invention may also be applied to the construction of walls formed of metallic tiles or sectional wall members which are preferably hollow and which may contain suitable sound deadening or other material. A construction of this type is illustrated in Fig. 10, in which each sectional wall member 11*f* comprises two opposite side walls 54 and a wall 55 at each edge, said edge wall being offset as shown at 56 so as to provide a projecting edge portion 57 and a recessed edge portion 58. The edges of two adjacent wall members are so shaped as to provide a space 59 therebetween when in assembled position, and a structural supporting member 4*f* may be disposed within the space so provided. Said supporting member may be of any suitable shape but is shown as a member having the shape of a Z-bar, comprising a web portion 61 extending substantially in the plane of the wall and intermediate the two sides thereof, between the offset edge portions 56, and two flange portions 62 projecting transversely and in opposite directions from the opposite edges of said web portion. Each of said projecting flange portions extends between the projecting and recessed edge portions 57 and 58 respectively of two adjacent wall members.

In order to provide for interlocking engagement of the wall members with the structural supporting member, each of the flanges 62 is shown as provided with an opening or recess 63, and the edge wall 55 of each wall member is provided with a projection 64 adapted for engagement with the opening or recess in one of said flanges. The interior of each of the sectional wall members 11*f* may be hollow, or may, if desired, be filled with asbestos, mineral wall, or other acoustic or sound deadening material, indicated at 65.

When the sectional wall members are forced inwardly into position, the projections 64 are caused to yield inwardly by pressure of the outer corners of the supporting member flanges 62 against the inclined inner faces 66 of said projections, due to the resilience of the metal walls 55, to some such position as indicated in dotted line at 64', until said projections reach the position opposite the corresponding recesses 63, whereupon said projections snap into engagement with said recesses and serve to firmly secure the wall members in position.

If desired, the side walls 54 may be provided with depressed portions 54' adjacent the recessed edge portions 58 thereof, and with projecting bead portions 54'' adjacent the projecting edge portions 57, adapted to overlap said depressed portions so as to provide a substantially continuous wall surface and completely conceal the supporting member 4*f*. Cushioning members formed of resilient or yielding material, indicated at 67, may also be provided between the projecting bead portions 54'' and the faces of the supporting member 4*f*. When the wall members are forced into position, these cushioning members are compressed somewhat and caused to form a tight seal between the opposing edges of adjacent wall members, while at the same time permitting expansion and contraction thereof in the plane of the wall.

It will be understood that, in any of the forms of construction above described, each of the sectional wall members extending vertically between adjacent structural supporting members may consist either of a single unit extending throughout the height of the wall, as shown in Fig. 1, or may be made up of any desired number of units disposed one above another, and said units may be so formed and arranged as to provide the appearance of a wall surface made up of rectangular panels separated from one another along lines extending horizontally as well as vertically. Furthermore, if desired, the wall may be provided with metal strips exposed at the surfaces of the wall along the horizontal lines of separation between these rectangular panels as well as along the vertical lines of separation therebetween.

A construction of the type last-mentioned is illustrated in Figs. 12 and 13, in which the horizontally extending metal strips also serve to provide additional interlocking means for holding the sectional wall members in position. In this form of construction, the vertically extending supporting members 4*s* and the vertically extending retaining members 5*s*, as well as the resilient lugs 18*s* and the interlocking recesses 37 at the vertical edges of the sectional wall members 11*s*, are shown as being of substantially the same construction as shown in Fig. 7, although said supporting and interlocking means may be of any of the other forms of construction shown in Figs. 1 to 10 inclusive. In addition, horizontally extending strips 71 may be provided, secured in any suitable manner to the vertical supporting members and extending across the spaces therebetween at suitable intervals, so as to divide the area of the wall into rectangular panels of any desired number and dimensions. Each of these horizontal strips 71 may, as shown in Fig. 13, be of substantially the same width, transverse to the wall, as the sectional wall members, so that the respective edges of said strips are exposed at the opposite surfaces of the wall, between adjacent wall members. Each of said horizontal strips may be provided with resilient lugs or projections 72 which may extend continuously along the length thereof or may be provided at suitable intervals, and such resilient projections are preferably provided at both the upper and lower sides thereof. Also, the wall members are provided, at their horizontal edges, with metallic interlocking members 73 embedded therein or secured thereto in positions corresponding to the positions of the lugs 72. Said lugs and interlocking members may be of substantially the same type and mode of operation as the corresponding parts at the vertical edges of the wall members, so that when the wall members are forced inwardly into position, from the respective sides of the wall, these lugs and interlocking members are adapted to provide resilient interlocking engagement between the horizontal edges of the wall members and the horizontal strips 71, while the resilient lugs and interlocking members at the vertical edges thereof serve to provide similar interlocking engagement along such vertical edges.

In Fig. 14 I have shown another form of construction in which the wall members are provided with metallic interlocking members secured thereto for resilient interlocking engagement with fixed supporting means. A structural supporting member is shown at 76, which may be a rigid structural member of any suitable cross-section, such as are commonly used for other construction purposes. The particular shape shown, however, comprises a central web portion 77 lying substantially in the plane of a wall and intermediate the opposite sides thereof and two flange por-

tions 78 projecting in opposite directions from the middle of said web portion and transverse to the plane of the wall. Said supporting member is also provided with shorter flange portions 79 projecting in opposite directions, toward the respective sides of the wall, from each edge of the web portion 77. In this case, the wall surface at each side of the wall is formed of a plurality of sectional wall members 81, formed for example of plaster, acoustic material or other suitable material such as may be employed in wall surface construction, and in order to permit the use of wall surface materials of relatively low mechanical strength, the edges of the wall surface members 81 are shown as provided with metallic interlocking or securing members 82 which may be embedded therein or secured thereto in any suitable manner, and which may extend continuously along such edges or may be provided at suitable intervals. Said metallic members are shown as provided with resilient projecting lugs 83 adapted to yield so as to permit forcible insertion of the wall members between flanges 78 of adjacent supporting members, and to spring outwardly into interlocking engagement with suitably shaped recesses 84 in said flanges. The metallic members 82 are also shown as comprising flange portions 85 extending along the rear or inner faces of the wall members to a position beyond the position of the flanges 79, so that said metallic flange portions 85 are caused to bear against the flanges 79 for supporting the rear faces of the sectional wall members. It will be observed that, in this construction, the resilient interlocking means comprises resilient projecting portions on the wall members and recesses on the fixed supporting members, but it will be understood that the relative positions of the projections and recesses may be reversed, and that either the projecting lugs or the recesses may be made resilient, for example, in the manner suggested in the various modifications above described. If desired, cushioning material such as above described may be provided between the metallic flanges 85 and the rear supporting flanges 79. Furthermore, if desired, the space 86 between the rear face of the wall member and the web portion 77 of the structural supporting member and between flanges 78 and 79 may be filled with waterproofing or acoustic material or with any other material adapted to impart to the structure any desired properties of resistance against leakage of air or water or transmission of sound or other vibrations.

Another possible modification is shown in Fig. 15, in which a metallic supporting and retaining member 88, secured for example to a channel or other structural support partially shown at 89, is provided with resilient interlocking lugs 91 projecting at the respective sides thereof. If desired, the supporting and retaining member 88 may consist of a single strip of metal provided with lugs projecting in opposite directions, but I prefer to employ a construction such as shown, in which said member 88 comprises two substantially parallel side portions 92 connected at their outer edges by a rounded edge portion 93. Each of the sectional wall members 94 is provided with metallic interlocking members 95 having recesses 96 adapted for resilient interlocking engagement with the lugs 91. The supporting member 88 is also shown as comprising web portions 97 for attachment to the structural support 89, and with flange portions 98 projecting forwardly from the edges of said web portions into position to support the rear faces of the sectional wall members 94. If desired, suitable bedding material 89, such as mortar, putty, mastic or bituminous material may be provided in the spaces between the rear face of the sectional wall members and the web portions 97, and between the flanges 92 and 98, for the purpose of providing a tight seal to prevent leakage of air or water and to minimize the transmission of sound or other vibration through the wall.

I claim:

1. A wall construction comprising a plurality of spaced supporting members, a plurality of sectional wall members disposed between said supporting members and having their opposite surfaces exposed at the respective sides of the wall so as to provide, when assembled, a finished wall surface at each side of the wall, and interlocking means on said wall members and said supporting members, said interlocking means including resilient members adapted to yield in the plane of the wall and permit forcible insertion of said wall members into position between said supporting members and to hold said members in such position.

2. A wall construction as set forth in claim 1, said sectional wall members being of greater thickness than the transverse thickness of the supporting members and being provided at their edges with projecting edge portions overlapping and covering the supporting members.

3. A wall construction as set forth in claim 1, said sectional wall members being of greater thickness than the transverse thickness of said supporting members and having projecting edge portions of reduced thickness overlapping and covering the supporting members, the projecting edge portions of adjacent wall members being disposed at opposite sides of the supporting member therebetween.

4. A wall construction as set forth in claim 1, the interlocking means on each supporting member and on the wall members being so arranged as to provide for forcible insertion of alternate wall members from opposite sides of the wall, and each of said wall members being provided with projecting portions overlapping the adjacent supporting members at the side from which that wall member is inserted.

5. A wall construction as set forth in claim 1, the interlocking means on said wall members comprising metallic members secured to said wall members at the edges thereof.

6. In a wall construction, a supporting member, two sectional wall members disposed in the plane of the wall at opposite sides of said supporting member and provided respectively with projecting edge portions overlapping the opposite faces of said supporting member, and interlocking means on said wall members and said supporting member including yielding members adapted to permit forcible insertion of the respective wall members from the opposite sides of the wall.

7. A construction as set forth in claim 6, and also comprising cushioning means disposed between the respective faces of said supporting member and the projecting portions of the respective wall members, said interlocking means serving to hold said projecting portions inwardly against said cushioning means.

8. A construction as set forth in claim 6, said resilient members of the interlocking means being so formed as to permit forcible disengage-

ment thereof, whereby said wall members may be removed from position.

9. A construction as set forth in claim 6, the interlocking means on the supporting member comprising retaining members disposed at the respective sides thereof and having interlocking engagement with the interlocking means on the respective wall members.

10. A construction as set forth in claim 6, the interlocking means on the supporting member comprising two retaining members secured to said supporting member and extending longitudinally thereof and respectively provided with means engaging the interlocking means on the respective wall members, said retaining members each extending between the projecting portion of one wall member and the edge portion of the other wall member and having their outer edge exposed between said wall members at the opposite surfaces of the wall.

11. A construction as set forth in claim 6, the interlocking means on the supporting member comprising two retaining members secured to said supporting member and extending longitudinally thereof and respectively provided with means engaging the interlocking means on the respective wall members, said retaining members being formed as resilient strips extending outwardly in opposite directions between the adjacent edges of the wall members, said strips being bent over at their outer edges and having inwardly extending portions, and said strips and inwardly extending portions substantially abutting the respective wall members, the bent-over edge portions of said strips being substantially flush with the respective surfaces of the wall.

12. A construction as set forth in claim 6, the interlocking means on the supporting member comprising two retaining members secured to said supporting member and extending longitudinally thereof and respectively provided with means engaging the interlocking means on the respective wall members, the projecting edge portion of each wall member substantially abutting against the edge of the other wall member, and said projecting edge portions serving to substantially cover and conceal said retaining members and interlocking means.

13. In a wall construction, two spaced supporting members, a wall member disposed between said supporting members and provided at its edges with projecting portions overlapping and concealing the respective supporting member, and interlocking means on said supporting members and on said wall member including resilient members adapted to permit forcible insertion of said wall member between said supporting members and to hold said wall member in position when so inserted.

14. In a wall construction, a supporting member, a wall member having an inner face portion disposed toward said supporting members, yielding cushioning means disposed between said inner face portion of said supporting member and said wall member, retaining means secured to said supporting member, and interlocking means on said retaining means and on said wall member, said interlocking means comprising a resilient member adapted to yield in the plane of the wall and permit forcible insertion of said wall member into position for engagement of said interlocking means, said interlocking means when so engaged serving to hold said wall member inwardly against said cushioning means regardless of the degree of inward insertion of said wall member.

15. In a wall construction, a supporting member, two sectional wall members disposed in the plane of the wall at opposite sides of said supporting member, one of said wall members having an inner face portion disposed toward said supporting member, yielding cushioning means disposed between said inner face portion and said wall member, said one wall member being movable inwardly toward said supporting member so as to compress said cushioning means to an amount dependent upon the amount of such inward movement, and interlocking means on said supporting member and on said one wall member, said interlocking means comprising a resilient member adapted to yield in the plane of the wall and permit forcible inward movement of said wall member into position for engagement of said interlocking means, said interlocking means when so engaged serving to hold said wall member inwardly against said cushioning means in any position of inward movement of said wall member so as to provide for alignment of the exposed faces of said two wall members.

16. In a wall construction, a wall member, a supporting member having an inner face portion disposed toward said supporting member, yielding cushioning means disposed between said inner face portion of the wall member and said supporting member, and interlocking means on said supporting member and on said wall member, said interlocking means on one of said members comprising a recessed shoulder and the interlocking means on the other member comprising a resilient member adapted to yield in the plane of the wall and permit forcible movement of said wall member inwardly into position to bring said resilient member into engagement with said shoulder, said shoulder being so disposed in relation to the movement of said resilient member as to hold said wall member inwardly against said cushioning means in any position of inward movement of said wall member.

17. In a wall construction, a supporting member, a wall member, a metallic reenforcing member secured to the edge portion of said wall member, and interlocking means on said metallic member and said supporting member, said interlocking means including a resilient member adapted to yield in the plane of the wall and permit forcible insertion of said wall member into position to bring said interlocking means on the wall member and on the supporting member into operative engagement.

18. In a wall construction, a supporting member, a wall member movable inwardly with respect to said supporting member, and interlocking means on said supporting member and on said wall member, the interlocking means on said wall member being resilient so as to permit the same to yield in the plane of the wall and permit forcible inward movement of said wall member into position for engagement of said interlocking means.

19. In a wall construction, a supporting member, a wall member movable inwardly with respect to said supporting member, and interlocking means on said wall member and said supporting member, said interlocking means on the supporting member comprising a resilient member provided with a recess and said interlocking means on the wall member comprising a projection adapted for interlocking engagement with said recess, the resilience of said interlocking

means on the supporting member serving to permit forcible insertion of said wall member into position to bring said interlocking means into engagement with one another.

20. In a wall construction, a supporting member, a wall member, and interlocking means on said supporting member and said wall member, said interlocking means on the supporting member comprising a recess and said interlocking means on the wall member comprising a resilient member provided with a projection adapted to engage in said recess, the resilience of said interlocking means on the wall member serving to permit forcible insertion of said wall member into position to bring said two interlocking means into engagement with one another.

21. In a wall construction, a supporting member, two metallic wall members disposed at opposite sides of said supporting member in a plane of the wall and insertable from opposite sides of the wall into position of engagement with the respective faces of said supporting member, each of said wall members being provided with a projecting edge portion overlapping said supporting member at the side from which said wall member is insertable, and interlocking means on said supporting member and on each of said wall members, said interlocking means comprising resilient members adapted to yield in the plane of the wall so as to permit forcible insertion of said wall members into said position and to hold said members in such position.

22. In a wall construction, a plurality of spaced vertically extending supporting members, a plurality of retaining members extending horizontally between said supporting members, a plurality of sectional wall members disposed between said supporting members and between said retaining members and having their oppsite surfaces exposed at the respective sides of the wall so as to provide, when assembled, a finished wall surface at each side of the wall, interlocking means on said supporting members, interlocking means on said retaining members, and interlocking means at the vertical and horizontal edges of said wall members adapted for engagement respectively with the interlocking means on said supporting members and said retaining members, said interlocking means including resilient members adapted to yield in the plane of the wall and permit forcible insertion of said wall members into said position.

23. In a wall construction, a rigid structural supporting member provided with a projecting flange, said flange having recesses at the respective sides thereof, sectional wall members disposed at the respective sides of said flange and provided with resilient projections engaging in said recesses, said resilient projections being adapted to yield in the plane of the wall so as to permit forcible insertion of said wall members into position against said structural supporting member, said resilient projections serving to engage said flange and hold said wall member in such position.

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