

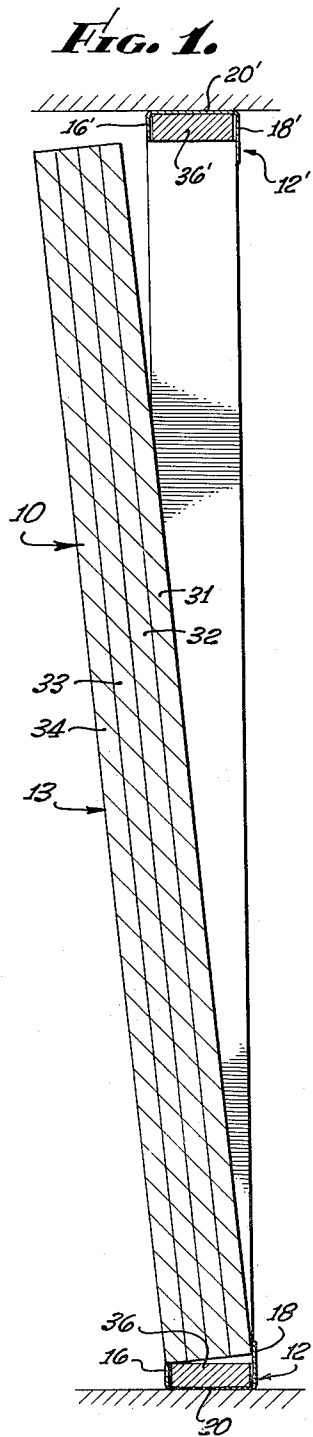
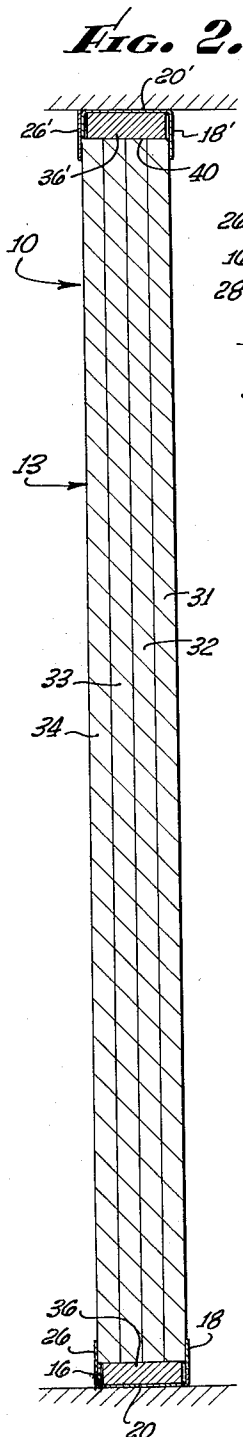
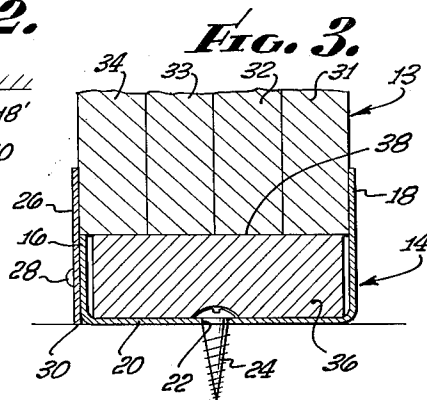
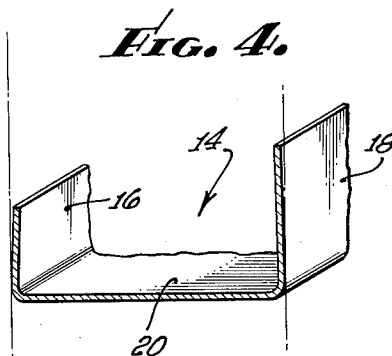
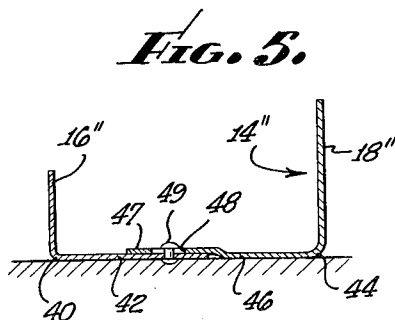
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NON-LOAD BEARING DRY WALL PARTITION CONSTRUCTION

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NON-LOAD BEARING DRY WALL PARTITION CONSTRUCTION

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2 Claims. (Cl. 20-4)

This invention relates to a non-load bearing dry wall partition construction which is readily assembled and disassembled, and more particularly to a partition wall having a minimum of component structural parts affording rapid installation and removal of the wall.

Generally speaking, prior proposed non-load bearing partition walls for use in offices, industrial buildings, schools, homes and the like having utilized construction materials such as gypsum blocks or stud, lathe, and plaster construction. Such prior partition walls provided a certain minimum resistance to the passage of heat or fire. Such prior partition walls were relatively expensive to erect and to remove and such operations were always accompanied with the production of great quantities of dirt, dust and mess. Installation and removal of such prior proposed partition walls was very time consuming and resulted in much disturbance to the occupants of the building except when the building was under initial construction.

The present invention contemplates a non-load bearing partition construction and method of erection and removal thereof which obviates the disadvantages of prior proposed partition constructions as mentioned above. The present invention contemplates a non-load bearing partition wall construction comprising a laminated partition panel means of great rigidity, strength, fire-proof characteristics and sound-proof characteristics, such panel means being readily anchored and held in place by an effective novel arrangement of floor and ceiling anchor or runner means having a width virtually the same as the thickness as the panel means and so constructed and arranged that material of the partition panel means extends as a virtually solid uniform mass from the ceiling surface to the floor surface. The partition wall construction of the present invention is so constructed and arranged that the entire partition wall may be effectively and conveniently erected or removed by performing all erection or removal operations from only one side of the wall zone which is to be occupied by the partition wall construction.

The primary object of this invention relates to a novel construction and method for erecting and removing a non-load bearing dry wall partition wall.

An object of this invention is to disclose and provide a simple inexpensive effective dry wall construction which is adapted to meet requirements of various building codes with respect to fire proofing.

Another object of this invention is to disclose and provide a dry wall partition construction wherein the requirements of building codes, as above mentioned, are not only met, but the partition wall may be relatively thin so as to provide greater utilization of area within a building.

A still further object of this invention is to disclose and provide a novel method of erecting such a dry wall partition wherein the core panel or assembly may be installed from only one side of a wall zone and similarly, may be disassembled from only one side thereof.

More specific objects of this invention include the provision of ceiling and floor runner means of generally identical construction and which have a width approximately the width or thickness of the partition wall. In one example of this invention, such runner means are provided with lateral adjustability.

Many other advantages of this invention will be readily

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apparent from the following description of the drawings in which an exemplary embodiment of this invention is shown:

In the drawings:

FIG. 1 is a sectional view of a partition wall embodying this invention and taken in a vertical plane illustrating one of the steps in the erection of such a partition wall.

FIG. 2 is a sectional view taken in a vertical plane of a partition wall completely assembled and erected.

FIG. 3 is an enlarged fragmentary sectional view of a floor runner means and an associated bottom portion of the partition wall.

FIG. 4 is a perspective view of a runner member shown in FIG. 3.

FIG. 5 is a sectional view of a runner member embodying a different modification of this invention.

In the drawings is shown an exemplary partition wall 10 embodying this invention and comprising generally top and bottom anchor or runner means 12', 12 and a panel means 13 extending between and secured in position by said runner means. The top and bottom runner means in this example are identical in construction, and for brevity and clarity, only the bottom floor runner means 12 will be described in detail, the like parts of the top ceiling runner means identified with the same reference numerals with a prime sign.

Runner means 12 comprises a generally U-section, elongated channel-like member 14 which may be made of any suitable metal or material such as an extruded aluminum metal section. Each member 14 includes a low side wall 16 and a parallel, co-extensive in length high side wall 18, said walls 16 and 18 being joined by an interconnecting transverse wall 20. Side walls 16 and 18 may be spaced apart a distance which is approximately the thickness of a panel means 13 to be secured thereby. As shown in FIG. 4, side walls 16 and 18 slightly converge towards each other, the angle of convergence of each wall being approximately 1 degree, such convergence being for a purpose hereinafter described. It will be noted that the side walls 16 and 18 and the transverse wall 20 may be of uniform section and of sufficient thickness to provide desired rigidity of side walls 16 and 18.

Each runner means 12 may be readily secured to an associated surface, such as a floor or ceiling surface, by the provision therein of a plurality of longitudinally spaced holes 22 (only one being shown) provided in the transverse wall 20 for reception of securing screws 24 or other suitable securement means such as bolts. It will be apparent from FIGS. 1 and 2 that opposed top and bottom runner means 12 and 12' lie in a vertical planar wall defining zone and that side walls 18, 18' and 16, 16' respectively are in vertical alignment.

Each runner means 12 may also include an elongated flat closure plate or member 26 having a uniform width or height throughout its length which may be the same height as high wall 18. Closure plate 26 is removably secured to low wall 16 by suitable longitudinally spaced securement means such as screws 28 which may engage threads provided in low wall 16 or which may engage suitable threaded nut means secured on the inner surface of low wall 16. It will be readily apparent that other securement means may be employed such as expansion type clip means adapted to be readily inserted through aligned openings in the closure plate 26 and low wall 16. It will be noted in FIG. 3 that closure plate 26 is attached to low wall 16 in such a manner that the bottom edge 30 of plate 26 seats on the associated surface and completely overlies and covers low wall 16. Thus, runner means 12 will appear the same on both sides of partition wall 10.

The panel means 13 may comprise a pre-cut, prefabricated, gypsum boards or panels 31, 32, 33 and 34 of selected width and thickness and of a height approxi-

mately equal to the distance between opposed free edges of low walls 16, 16'. The panels 31, 32, 33 and 34 may be adhesively secured together in face to face relation so as to form a rigid, strong, readily handled, self-sustaining laminated panel unit or assembly of virtually uniform density throughout the panel. The securement of the panels together in face to face relation may include the use of suitable resins, glue, cement, rubber or silicone base cements, or any other desirable adhesive or bonding means. The panels 31, 32, 33 and 34 may each be of the same width, but at their vertical edges, each panel may be offset longitudinally of the adjacent panel so as to provide grooves and complementary tongues of selected depth to interlock adjacent panel units together in well known manner. Each panel 31, 32, 33 and 34 may be made of any suitable material which will provide desired fire proofing or fire resistant, and for sound proofing characteristics, such material being for example, gypsum compositions, bagasse fibre, treated wood fibres, laminated woods and the like. The outer surfaces of panels 31 and 34 may be decoratively treated in any well known manner as by painting, papering or bonding thereto wood means to produce a desired decorative effect. The panel means 13 may be pre-fabricated and cut to selected size at the factory or if desired, may be cut to size assembled and bonded together at the job site.

Positioned or deposited in each channel-like member 14 may be a filler member 36, said filler member having a width slightly less than the spacing between side walls 16 and 18 to permit ready insertion therebetween and having a depth or thickness approximately the height of low wall 16. The filler member 36 preferably may consist of the same material as that employed in the panels 31, 32, 33 and 34 and may be provided from cut-off or waste strip portions of such panels. Filler members 36, 36' provide respectively a bottom seating surface 38 for panel means 13 and top seating surface 38' for the top edge of the panel means. The top filler member 36' may be secured within the channel member 14' as by wedging with surplus panel material, adhesive, or other suitable securement means.

Installation of a partition wall of this invention may be conveniently and readily accomplished, as will be apparent to those skilled in the art. Runner means 12 and 12' are first installed by securing members 14, 14' at the desired wall zone or location for the partition wall driving securement screws 24 into the floor and into the ceiling. In such initial installation of the runner means 12, 12', the side walls 18, 18' are vertically aligned and likewise, the side walls 16, 16'. Filler members 36, 36' are then positioned in the channel members 14, 14'. A pre-glued, pre-cut panel means 13 is then seated, as shown in FIG. 1, with a bottom edge resting on a top edge portion of top seating surface 38 of filler member 36 or the top edge of side wall 16. The panel means 13 is then tilted about said bottom edge into vertical position with opposite bottom and top side surface margins of panel 31 in snug abutment with the exposed portions of high side walls 18, 18'. In such vertical position of the panel means 13, the partition wall will be self-sustaining, will not tend to tilt outwardly therefrom and may be slidably moved, slightly longitudinally into interlocking engagement with an adjacent previously installed panel. Closure plates 26, 26' may then be conveniently installed by placing against low side walls 16, 16' and securing the same by screws or the like, to complete the installation of the runner means 12, 12'. When installed, the top and bottom longitudinal edge portions of the laminated panel means 13 are securely retained between and grasped by side walls 18, 18' and the closure plates 26, 26'. It will be noted that in such installation, a workman may erect the partition wall by performing all of the work on one side of the wall zone. As a result, installation is quickly, efficiently accomplished.

Removal of partition wall 10 is conveniently and read-

ily accomplished by disassembling the runner means and panel means in the reverse order from assembly thereof as described above. Thus the closure plates 26, 26' are first removed, the panels 13 may then be tilted about the floor runner means 12 after being slightly moved longitudinally to disengage the vertical extending interlock between adjacent panel means 13. The filler members 31, 36' are readily removed for loosening the securement screws holding the runner means 12, 12' against their respective surfaces. When completely disassembled the only remaining indication that a partition wall had previously been located at that place is the presence of small screw holes in the floor and ceiling and upon redecoration such holes are filled in usual well known manner. In disassembly of the partition wall, it will be readily apparent that a workman may accomplish the same by staying on one side of the partition wall zone.

In the modification of a floor runner means shown in FIG. 5 of the drawings, it will be readily apparent that the channel-like member generally indicated at 14'' may comprise an elongated extruded angle-section portion 40 having an upstanding, low side wall 16'' and a wall 42 extending transversely thereof. A companion, elongated, generally angle-section portion 44 is provided with an upstanding, high side wall 18'' which is integral with a co-extensive, transverse wall 46, said wall 46 including an upwardly offset, longitudinal, marginal section 47 which may overlie the wall 42. The section 47 may be provided with a plurality of longitudinally spaced, but transversely elongated, slots 48 which may receive pins 49 carried by wall 42 so that relative lateral or transverse movement may be provided between the companion angle-section portions 40 and 44 to adjust the lateral width of the runner member 14''. In this example, side walls 16'', 18'' may also converge slightly inwardly as described for the runner member 14 in wall 42. It will be noted that the runner member 14'' may thus be conveniently and readily adjusted to any variation in thickness of a panel means 13 so as to facilitate installation of the partition wall construction. It will be understood that a closure plate such as 26 may be removably secured to low side wall 16'' as described above in the prior embodiment of this invention.

The advantages of the above-described construction are readily apparent to those skilled in the art. The erection or disassembly of the partition wall requires no special tools and a workman does not have to move from one side of the partition wall zone to the other. The partition wall 10 provides fire resistant material and construction extending completely between the ceiling and the floor so that a partition wall of this invention readily meets fire resistant wall requirements of building codes. No open spaces need be provided in the partition wall of this construction. Since the side walls 16 and 18 are slightly converged inwardly, the meeting or joint line between the top edge of wall 18 and the top edge of closure plate 26 is tight and uniform throughout the length of the runner means 12, 12', because such convergence compensates for slight variation in thickness of the panels 31-34.

It will be further noted that the number of component parts of the partition wall are relatively few, easily made or fabricated, and when assembled, provide a novel attractive partition wall with clean structural lines. While four panel members are shown, one or more panel members of selected thickness may be used to provide desired characteristics of fire proofing and sound insulation.

Various modifications and changes may be made in the above-described partition wall construction which come within the spirit of this invention, and all such modifications and changes coming within the scope of the appended claims are embraced thereby.

I claim:

1. In a non-load bearing, readily assembled and disassembled dry wall partition construction, the combina-

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tion of: a pair of vertically spaced partition wall runners, each runner including a low wall, a high wall in spaced relation to said low wall, and an interconnecting wall, the low and high walls of the spaced runners lying respectively in the same vertical planes; a filler member retained between the low and high walls of each runner, said filler member having a depth approximately that of the height of the low wall and providing longitudinally extending seating surfaces; a precut, prefabricated panel seated on the seating surfaces of one of said filler members and in approximate seating relation with the seating surfaces on the other of said filler members, said filler members and said panel being of fire resistant material and serving to provide fire resistant material throughout the height of the dry wall partition construction; a closure plate secured to each low wall, coextensive in length therewith, and having a height approximately the same as said high wall, the longitudinal portions of said closure plates and said high walls extending beyond said seating surfaces serving to grasp and retain longitudinal edge portions of said panel; and means securing the closure plates to said low walls, said interconnecting wall including means for adjustably varying the spacing of said low and high walls on said runners.

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2. A runner construction for a readily removable dry wall partition comprising: a U-section channel member provided with a longitudinally extending first wall and a parallel longitudinally extending second wall of greater height than said first wall, said first and second walls being in slightly converging relation; a closure member overlying said first wall and having a height corresponding to the height of said second wall whereby a panel member may be assembled or disassembled in sidewise relation with respect to said channel member and secured by said closure member; a wall means interconnecting said first and second walls; and lateral adjustment means on said wall means for varying the spacing between said first and second walls.

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