

Feb. 6, 1951

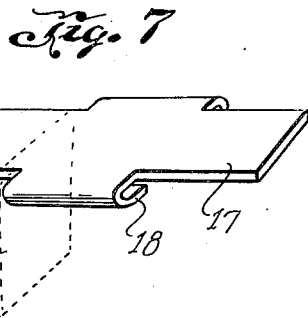
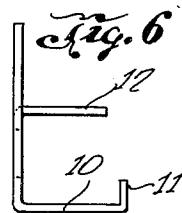
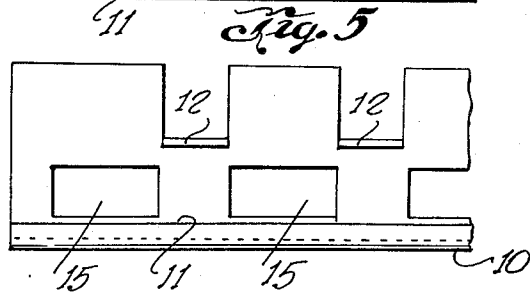
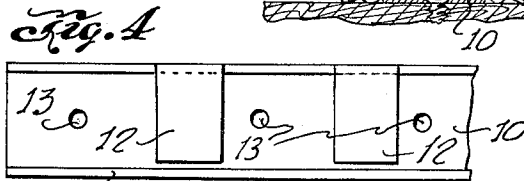
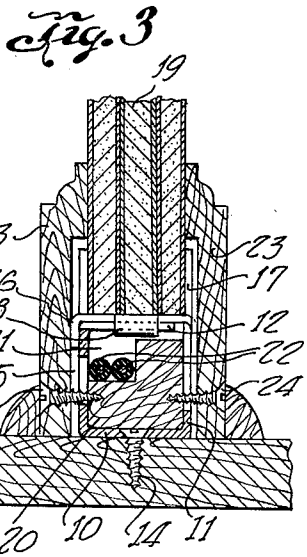
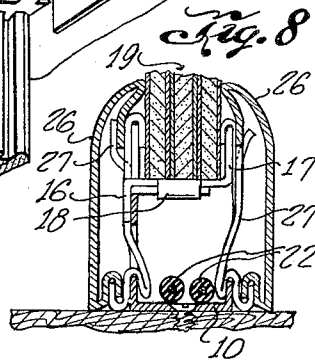
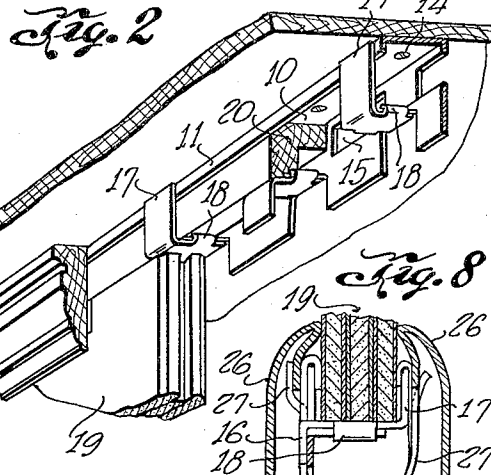
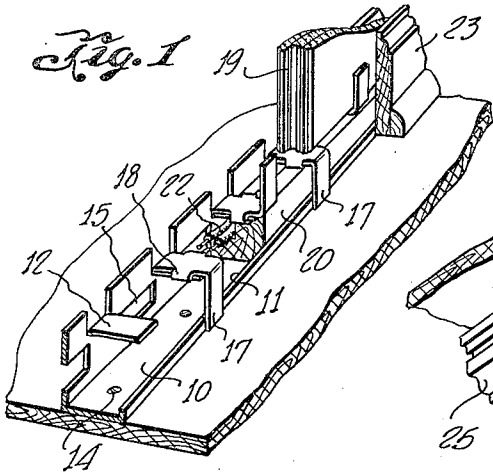
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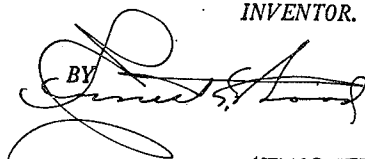
WALL AND PARTITION CONSTRUCTION

Filed Dec. 11, 1947

2 Sheets-Sheet 1



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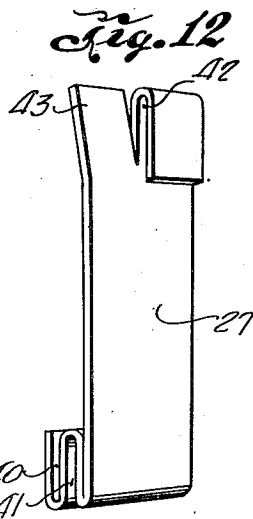
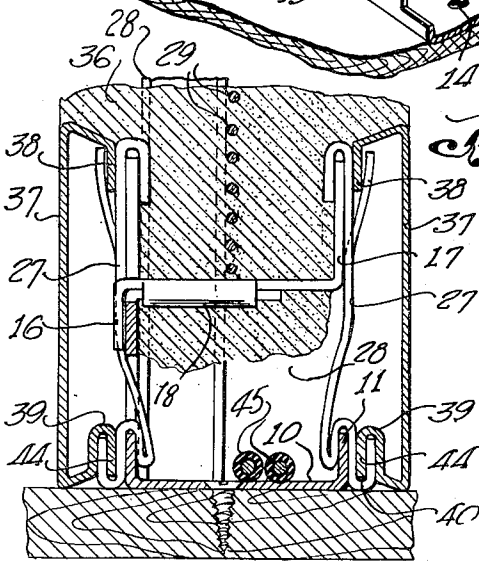
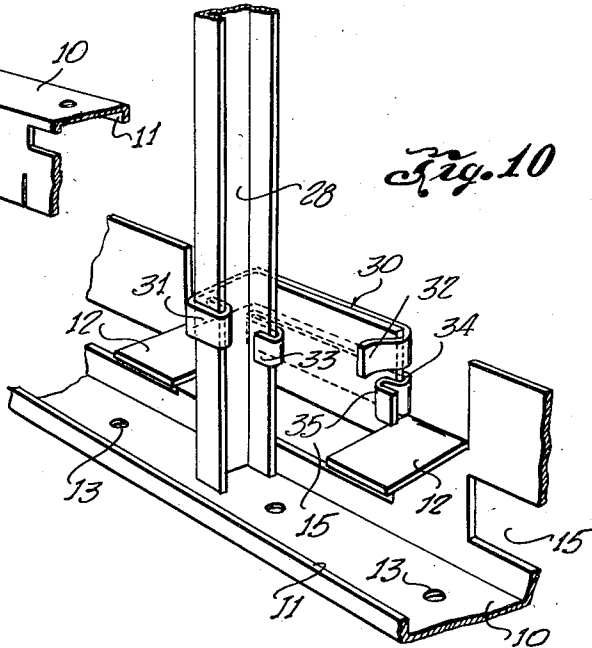
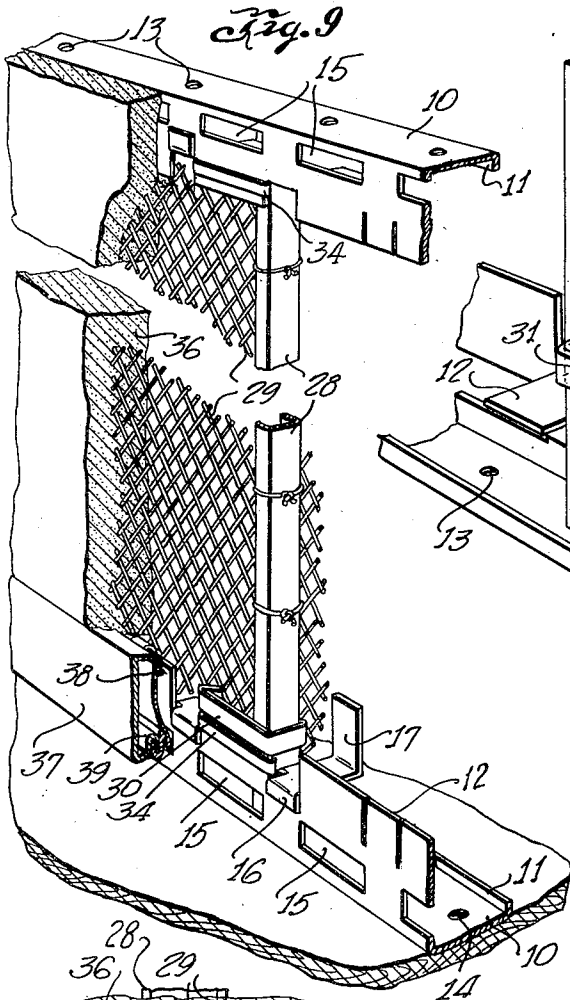
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WALL AND PARTITION CONSTRUCTION

Filed Dec. 11, 1947

2 Sheets-Sheet 2



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# UNITED STATES PATENT OFFICE

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## WALL AND PARTITION CONSTRUCTION

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Application December 11, 1947, Serial No. 790,999

4 Claims. (Cl. 72-46)

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This invention relates to walls and partitions and it has particular reference to certain new and useful improvements in metal runners for the floor and ceiling to which the bottom and top respectively of the wall or partition are secured.

The principal object of the invention is to provide identical elements interchangeable serving as the floor and ceiling runners, each consisting of nestable channel members fabricated from sheet metal and provided with one longitudinal flange of greater width than the other, along which are spaced slits perpendicular to the web of the channel to define prongs which are bent on the job to lie transversely of the web, serving as a support for wall board or plaster, as the case may be. Moreover, these prongs are adapted to receive wall retaining clips, the ends of alternate clips being bent to a position perpendicular to the channel web to lie against and resist lateral displacement of the wall in one direction while the opposing channel flange resists displacement of the wall in the opposite direction. The ends of the remaining slips are turned downwardly on both sides of the wall to support the prongs on one side and to afford a mounting on the opposite side of the wall for wood nailer.

Another object of the invention is to provide an interchangeable floor and ceiling runner for partitions which is adaptable for both wall board and plaster and in the latter case, the invention affords a novel form of metal stud retaining means whose construction is such that temporary securing of the upper ends of the studs to the ceiling runner may be effected without mounting a ladder for the purpose.

Still another object of the invention is to provide a securing means for partitions as set forth, supplemented by a novel form of clip for retaining either a wood or metal base board or, in the case of a plaster partition, the clip will provide a securing means for a screed by which to determine the thickness of plaster.

Broadly, the invention seek to provide an economical and flexible securing means for walls and partitions which will enable the wall to be speedily erected and removed, yet will possess the strength, appearance and durability of a more complex permanent wall of conventional construction.

With the foregoing objects in view, the invention has further reference to certain features of accomplishment which will become apparent as

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the description proceeds, taken in connection with the accompanying drawings wherein:

Figure 1 is a fragmentary perspective view of a floor runner construction according to the present invention, showing the manner of supporting tongue and groove wall board.

Figure 2 is a similar view showing a ceiling runner.

Figure 3 is a view of the floor runner in transverse section showing the relative positions of the wall board, base trim and nailing strip.

Figure 4 is a fragmentary plan view of the floor or ceiling runner.

Figure 5 is a fragmentary side elevational view thereof.

Figure 6 is an end elevational view of the runner.

Figure 7 is a perspective view of one of the wall retaining clips.

Figure 8 is a view in transverse section showing the base clips as holding metal base boards.

Figure 9 is a fragmentary perspective view of the runners supporting a plaster wall construction.

Figure 10 is a fragmentary perspective view of the floor runner showing the manner in which a metal stud is temporarily retained.

Figure 11 is a transverse sectional view of a floor runner showing the manner of retaining a plaster screed, and

Figure 12 is a detail perspective view of one of the base retaining clips.

Continuing with a more detailed description of the drawing, reference is primarily made to Figures 1 to 7 inclusive in which numeral 10 denotes a runner either for the floor or ceiling since these runners are interchangeable. The runner consists of a channel member having a narrow flange 11 along one side and a comparatively wide flange on the opposite side. The wide flange is slitted perpendicularly to the web of the channel at spaced points to define a series of prongs 12 which are bent to lie in transverse relationship with the web of the channel. This operation is accomplished on the job since it is preferred, for convenience in storing and handling that the prongs 12 remain upright so that the runners may be nested.

The channel members 10 are provided with longitudinally spaced apertures 13 to receive screws 14 by which they are secured to the floor or ceiling. Spaced openings 15 are provided in the widest flange of the channel to which further reference will be made presently.

When the prongs 12 are bent in the manner shown, they are adapted to receive clips such as illustrated per se in Figure 7. These clips each consist of a metal stamping having end members or legs 16 and 17 and lateral wings 18 which latter are bent to underlie the body of the clip and to slidably receive a prong 12 of the runner as exemplified in Figure 1 and other figures. The legs 17 of selected ones of the clips are bent upwardly as shown while the legs 17 of the remaining clips are bent downwardly. The clips are held against longitudinal displacement by virtue of the fact that their opposite legs 16 are bent downwardly against the opposite flange of the channel member 10.

Wall board 19, preferably of the laminated tongue and groove design shown in Figures 1, 2, 3 and 8 is set down between the upstanding portions of the wider flange of the runner 10 and the upturned legs 17 of the clips and is thus held against lateral movement. The longitudinal space defined by the web and flanges of the runner and the transverse prongs 12 is occupied by a nailing strip 20, having a longitudinal recess 21 therein to accommodate electric service cables 22.

Wood base boards 23 are secured to the nailing strip 20 by screws 24 which are passed through the openings 15 on one side and between the downwardly turned legs of the clips on the opposite side of the runner. The wall board 19 may be surfaced on each side in any desired manner to complete the wall, it being understood that the ceiling anchorage for the wall board is identical to that of the floor anchorage just described, except for the trim 25 which may be of any suitable design of ceiling mold, fastened in the same manner as the base boards 23.

In Figure 8 is shown a modification of the base trim. In this form, the base consists of metal members 26 which are attached by means of special clips 27 which will be specifically described presently.

Referring now to Figures 9 to 12 inclusive, a fire proof wall is shown in which the runners 10 are identical to those just described and illustrated in Figures 1 to 8. However, to adapt the invention to plaster wall construction it is desirable that provision be made for temporarily retaining the upper and lower ends of the conventional steel studs 28 to which is secured the expanded metal lath 29. In the present case, the stud retaining means consists of a pair of clips, one of which 30 is of substantially L-shaped, as shown in Figure 10 and has a hook 31 on one end while the opposite end 32 is curved to snap into engagement with one of the upstanding projections of the wide flange of the runner 10. The hook 31 engages the inner flange of a stud 28 while the opposite flange thereof is engaged by the hook 33 on one end of a complementary clip 34 whose opposite end has a hook 35 which is adapted to be snapped into engagement with the upstanding portion of the runner flange immediately below the clip 30.

The clips 30 and 34 will hold the studs in alignment and in perpendicularity with the runners until the metal lath 29 has been tied thereto in the usual manner after which, and before the plaster 36 is applied, the studs are secured conventionally by wire ties, not shown.

The clips 30 and 34 are advantageous in supporting the studs 28 in cases where there is a

diversity in ceiling height at different points along the length of the wall of an inch and fractions thereof since the depth of the runner at the ceiling will permit of a slight clearance between the runner web and the upper end of the studs and yet will provide adequate bearing surface for securing the stud in the manner set forth.

After the studs have been erected as explained, the base or screed 37 is secured to the floor runner by means of the base clip 27, previously mentioned and shown in Figures 8 and 12. The screed 37 is of metal and is shaped to define a depending lip 38 along its top inner edge and vertical return flange 39 at the bottom thereof. The retaining clip 27 has a plurality of folds at its lower end to define parallel channels 40 and 41. The clip is so disposed in relation to the runner 10 that the inner channel 41 thereof will receive the narrow flange 11 of the runner when mounted on one side of the latter. In mounting a clip on the opposite side of the runner, the channel 41 will receive a portion of the flange at the lower edge of an opening 15, as shown in Figure 11. The upper end of the clip is bifurcated, one fork being of greater length than the other and is folded on itself to define a channel 42. This channel receives the upturned leg 17 of a wall supporting clip while on the opposite side, the channel 42 receives the upper edge of an upstanding portion of the runner flange.

When the clips are mounted in the manner described in spaced apart relationship the upper lip 38 of the screed 37 is set down between the opposite fork 43 of the clip 27 and the companion fork 42 thereof while a tongue 44 on the lower inner edge of the screed 37, formed by the return flange 39, is received in the outer channel 40 at the lower end of clip 27. Thus the screed is held in position as shown in Figures 9 and 11 preparatory to the application of the plaster which latter will find support on the inclined upper portion of the screed and by which is gauged the thickness of the plaster.

The clips 27 take the place of the wood nailing strip in fire proof construction and the armored electrical service cables 45 (Fig. 11) are arranged in the space alongside the stud assembly.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed to fall within the scope and meaning of the appended claims is also considered to be within the spirit and intent of the invention.

What is claimed is:

1. A wall and partition construction including a floor runner, comprising a channel member, one flange thereof being of greater width than the other and divided into sections, certain of which sections are bent into transverse relationship with and disposed above the web of said channel member to define horizontal wall supporting prongs, clips attached to said prongs, the extremities of alternate clips being turned upwardly at one end to lie against the lower portion of the wall to hold the same against lateral displacement, the extremities of the remaining clips being turned downwardly to support said prongs from the floor, said wall being held against lateral displacement in the opposite direction by the upstanding portions of said channel member flange.

2. A floor runner for supporting a partition,

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including a channel member having a flange of greater width than the other and divided into sections aligned longitudinally on said channel member, certain of which sections are turned into transverse relationship with the web of said channel member to support a partition, the other sections of said flange remaining upright to bear against the lower portion of said partition, clips attached to the transverse sections of said flange, the legs of certain of said clips being turned upwardly to bear on said partition opposite said upright sections to hold said partition against lateral displacement, the legs of the other of said clips being turned downwardly to support said transverse sections from the floor.

3. A runner for supporting a partition including a channel member, one flange of which is of greater width than the companion flange and provided with longitudinally spaced openings, said flange being divided into longitudinally spaced sections, certain of which sections are disposed in transverse relation to the web of said channel to support a partition member, the other of said sections being upright, clips attached to each of said transverse sections, each comprising a member having lateral wings turned to embrace a transverse section, one end of each of the clip members being turned downwardly against the outer face of the first mentioned flange intermediate the upright sections of the latter, the opposite ends of the clips being turned alternately upwardly and downwardly to define respectively a holding means for a partition supported on said transverse sections and to sustain the latter.

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4. A runner for sustaining the elements of a wall or partition including a channel member having opposed, longitudinal flanges, one of which flanges is divided into longitudinally spaced sections, certain of which sections are upstanding, the other of said sections being turned at right angles to the flange to overlie the web of said channel member to space the elements of a wall from said channel web, a plurality of clips secured to said right angular flange sections, the extremities of certain of said clips being disposed to bear against a portion of a wall supported in juxtaposition to said right angular section, the extremities of the others of said clips being disposed to support said right angular flange sections.

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