May 19, 1942. H. H. BURSON 2,283,167

CLIP ASSEMBLY FOR WALL STRUCTURES

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Fig. 1

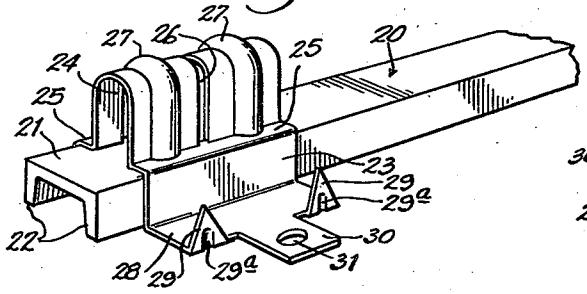


Fig. 2

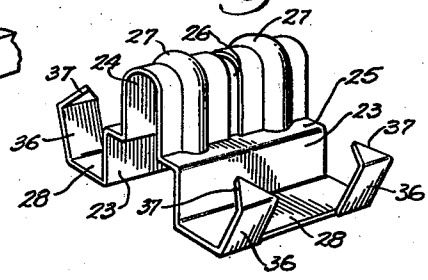


Fig. 3

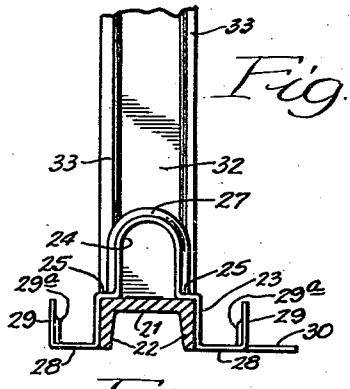


Fig. 4

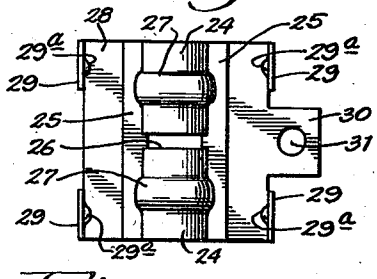


Fig. 5

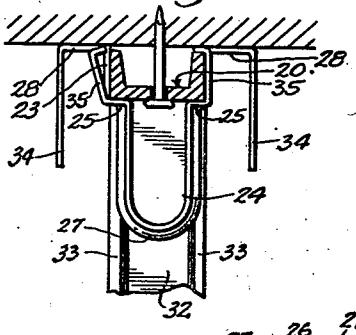


Fig. 6

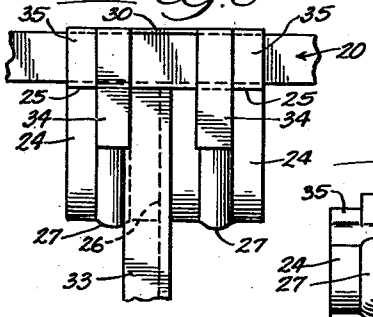


Fig. 7

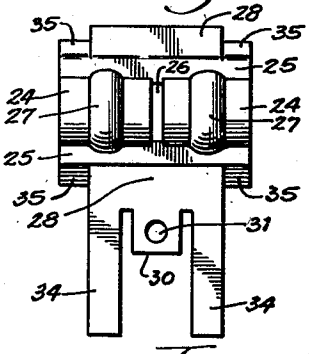
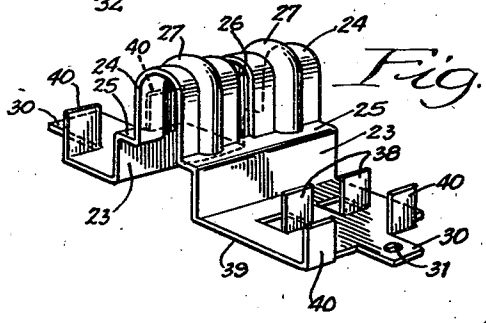


Fig. 8



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Fig. 9

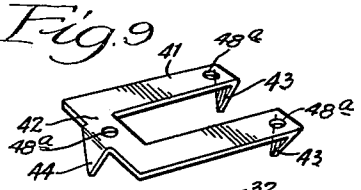


Fig. 10

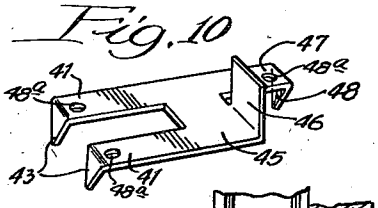


Fig. 11

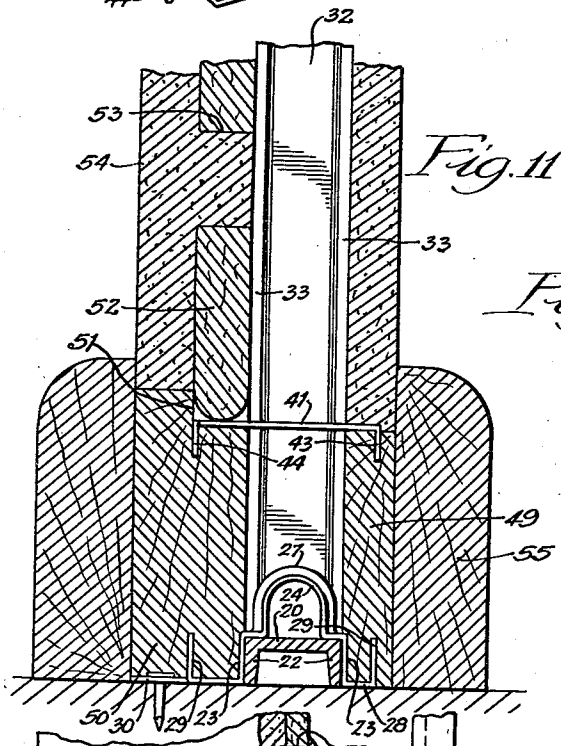


Fig. 15

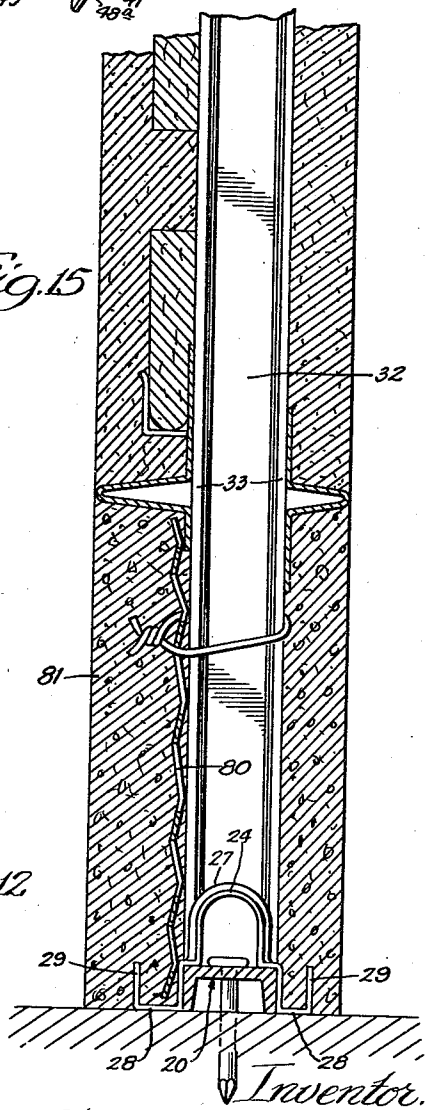
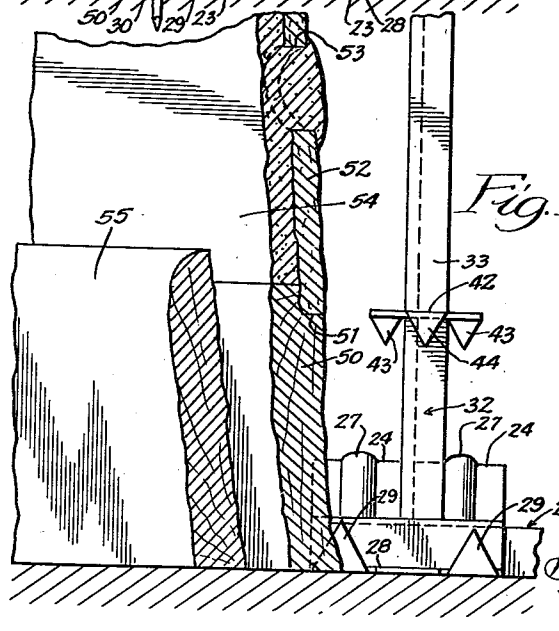


Fig. 12



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Fig. 14

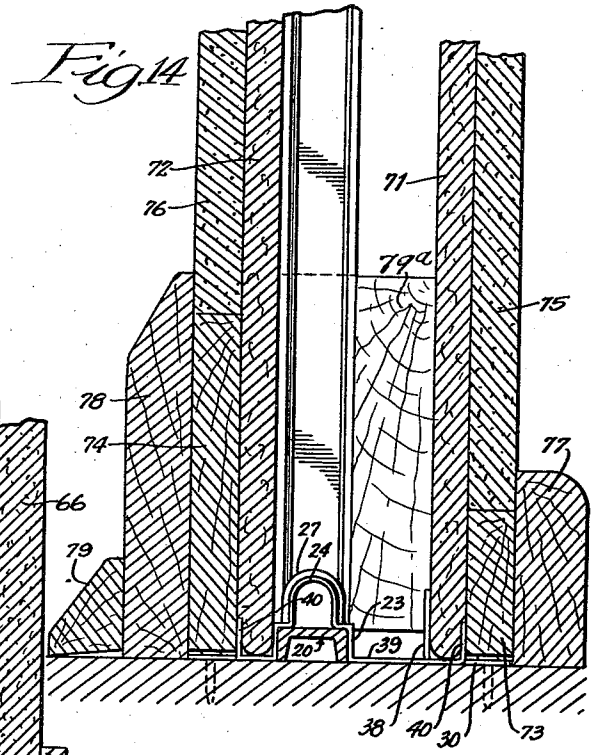


Fig. 13

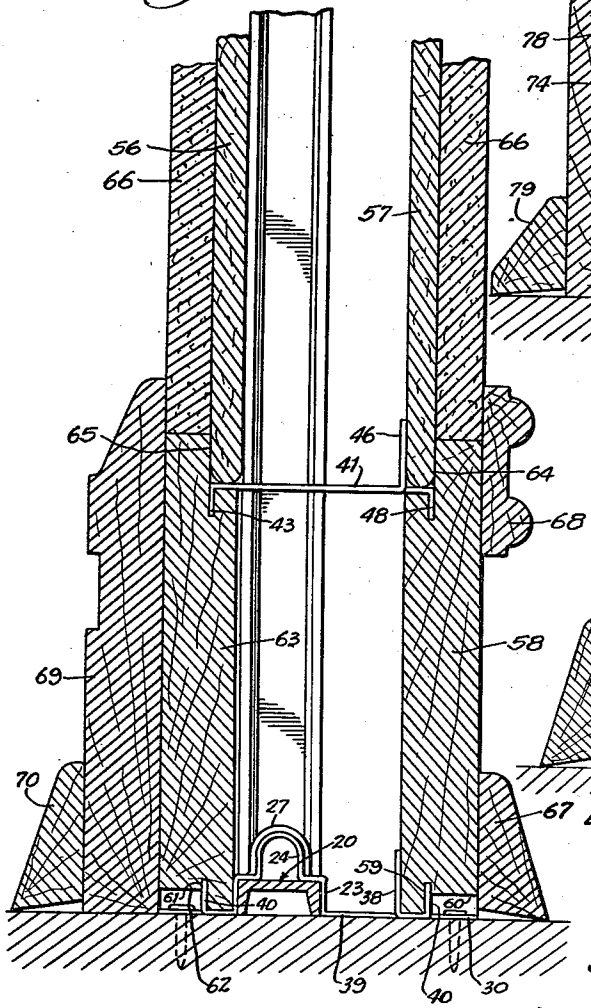
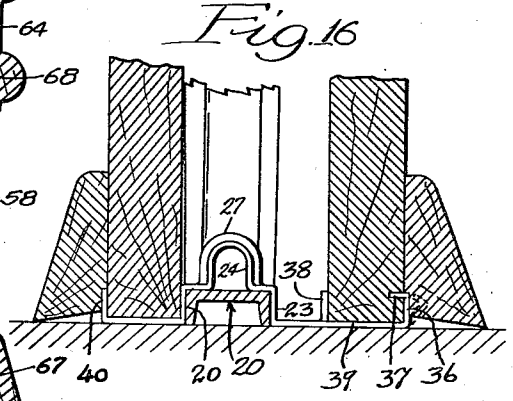


Fig. 16



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UNITED STATES PATENT OFFICE

2,283,167

CLIP ASSEMBLY FOR WALL STRUCTURES

Harry H. Burson, Chicago, Ill., assignor to Norman C. Spong, Chicago, Ill.

Application July 10, 1940, Serial No. 344,658

5 Claims. (Cl. 72—46)

This invention is directed to a clip designed for use in positioning studdings or the like which are employed in building construction, and particularly in the construction of walls employing wall board sections either alone or as a backing for a plaster finish, and in one of the preferred forms the clip is employed as a rider on an elongated runner secured to a floor or ceiling, so that a plurality of the clips might be properly spaced to afford sockets for the ends of the studdings howsoever the latter may be spaced. The clips, however, are designed so that they may be employed individually and secured directly to a wall or ceiling without the interposition of the runner, and various modifications in the form of the clips themselves permit them to be employed under varying conditions and as a means for securing grounds, base boards or the like, and under varying conditions as regards the spacing of the wall board sections with respect to the studdings with which they are associated.

Further objects and details will appear from the description of the invention in conjunction with the accompanying drawings, wherein,

Figure 1 is a perspective view of the clip mounted as a rider upon a runner and showing pointed upstanding prongs for impaling a ground or base board;

Fig. 2 is a similar view showing pointed prongs of a different character adapted to impale the outer face of a ground or base board, but with the runner omitted;

Fig. 3 is a view sectioned through a runner, with the clip of Fig. 1 in position, and serving as a socket for the lower end of a studding;

Fig. 4 is a top view of the clip of Fig. 1;

Fig. 5 is an end view of a modified clip provided with hooked tongues for hooking under the edges of a runner secured to a ceiling;

Fig. 6 is a side elevation of the same;

Fig. 7 is a plan view of the same showing channel forming tongues on one side only of the clip;

Fig. 8 is a perspective view of a further modification showing channel forming tongues on one side of the clip to hold the edges of wall board sections in spaced relation to the clip;

Fig. 9 is a perspective view of a staple used in association with the clip for engaging the stud and impaling the upper edge of a ground or the like;

Fig. 10 is a modified form of staple;

Fig. 11 is a section of wall showing the employment of the clip of Fig. 1 and the staple of Fig. 9 in association with the structural elements composing the wall;

Fig. 12 is a side elevation of a similar but slightly modified wall construction;

Fig. 13 is a sectional elevation of a wall employing the clip of Fig. 8 and the modified form of staple shown in Fig. 10;

Fig. 14 is a sectional elevation of a wall employing the clip of Fig. 8 without the staple and with a modified arrangement of the structural elements composing the wall;

Fig. 15 is a sectional elevation of a wall employing the clip of Fig. 1 in connection with a cement base or the like; and

Fig. 16 is a sectional elevation of a wall employing a clip which is substantially similar to the clips of Figs. 2 and 8.

The clip of the present invention is preferably integrally formed of sheet metal, stamped and bent to proper form to straddle a continuous runner 20 which may be secured to the floor or ceiling in position to accommodate a group of clips properly spaced and in aligned relation to one another. As shown, the runner is in the form of a strip or section of channel iron presenting an angular outer surface afforded by a connecting cross wall 21 having side flanges 22.

The body of the clip in all of the modifications now to be described is of arch shaped formation comprising spaced parallel lower side walls 23 of a depth to embrace the sides of the runner and extend to the floor or ceiling as the case may be, and an upwardly springing longitudinally extending connecting arch 24 which is of lesser span than the distance between the side walls to afford offset longitudinally extending shoulders 25 on each side of the clip. The arch is provided in its center with a transverse slot 26 inwardly extending to the shoulders and dividing the arch into two sections each of which is reinforced by a bead or ridge 27 formed at a suitable distance from the slot to afford an abutment for the edge flanges of a channel stud 32 which is entered within the slot with its end resting upon the shoulders and its flanges embracing the side walls of the arch on one side of the slot so that the end of the stud will be firmly and rigidly socketed within the clip. The body of the clip, constructed in the above manner, is common to all of the forms of construction presently to be described, but modifications in detail of certain portions of the clip extending from the body may be made to meet special requirements.

In the form shown in Fig. 1, the side walls at

their bases terminate in outwardly projecting fins 28 which are provided along their edges with spaced upstanding tongues which as shown may be pointed to constitute impaling prongs 29 stiffened at their bases by indentations 29a. An intervening outwardly projecting attaching tongue 30 may be provided on each side if desired, or omitted on one side as illustrated in Fig. 3, or omitted altogether. Each attaching tongue, or tongues as the case may be, is provided with nailing apertures 31.

The body of the clip as above described is adapted to closely embrace the runner with the body walls of the clip frictionally engaging the sides of the runner and the shoulders 25 overlapping the corners of the runner. It is preferred to so configure the clip that it will be sprung slightly as it is positioned upon the runner, which gives a frictional grip sufficient to hold it in the desired position.

Fig. 5 shows a companion ceiling clip adapted to cooperate with the floor clip of Fig. 1 in engaging the opposite ends of the channel stud 32.

The upper clip of Fig. 5 is similar in form to that of Fig. 1, except that in lieu of the impaling prongs 29, the upper clip is provided with channel forming tongues 34 which project at right angles to the fins 28 and provide channels for the reception of the edges of wall board sections.

In order to allow for variations in the fitting of the channel studs and the wall board sections, it is preferred to make the arch portion of the upper clip and the channel forming tongues of greater depth than the prongs 29 and the arch portion of the lower clip, although for many purposes a clip of the form shown in Fig. 1 will serve equally well for securing the upper end of a channel stud.

However, in order to more firmly secure the special form of clip shown in Fig. 5 to an inverted runner, and prevent the clips from falling therefrom before the studs are fitted in position, the clip is provided with hooked tongues 35 which are cut free from the ends of the side walls of the clip and are initially distended or bent outwardly, as shown at the left of Fig. 5, so that when the clip is slipped into position on the upper runner the hooked tongues may be bent inwardly, as shown at the right of Fig. 5, to bring their hooked ends between the flanged edges of the runner and the ceiling to positively secure the clip in suspended position.

In lieu of pointed prongs 29 which are adapted to impale the lower edge of a ground or base board in a manner presently to be described, impaling prongs 36 of the character shown in Fig. 2 may be employed, which are in the form of tongues secured to the fin 28, and provided with inwardly turned impaling points 37 adapted to be driven into the outer side face of a ground or base board. In Fig. 2 the attaching tongue 30 is omitted, and it will be understood that the use of such a tongue is optional in any of the various forms of construction.

Where it is desired to provide for the engagement of wall board sections at a distance from one or both of the side walls of the clip, the form of construction shown in Fig. 8 may be employed. In this instance, the channel is provided by one or more inner tongues 38 which are struck upwardly from the body of an extended fin 39 in conjunction with one or more edge tongues 40 properly positioned to provide a channel of the desired width. Fig. 8 shows such an arrangement at the right hand side, while at the left hand side the inner tongues 38 are omitted and the edge tongues 40 are properly spaced to cooperate with the contiguous side body wall of the clip in providing a channel.

It will, of course, be understood that the channel forming construction illustrated at the right of Fig. 8 may be duplicated on the left hand side, or that the channel forming construction shown at the left may be duplicated on the right hand side, depending upon the service for which the clip is intended. Furthermore, the attaching tongues may be omitted on one or both edges of the clip.

Figs. 9 and 10 illustrate staples which are employed in conjunction with the clips for engaging the upper edges of grounds, base boards or the like, in a manner presently to be described. The staple of Fig. 9 consists of a flat plate provided with spaced legs 41 connected at one end by a bridge connection 42, the legs at their free ends being provided with downwardly pointed impaling prongs 43 which coact with a similar impaling prong 44 downturned from the edge of the bridge portion of the staple. In the staple of Fig. 10, the bridge portion 45 is provided with an upwardly turned channel forming tongue 46 and an outwardly extending impaling tongue 47 having a downwardly turned prong 48. In lieu of the pointed prongs, the ends of the legs and the bridge portion can be provided with apertures 48a to permit nails to be driven therethrough, and either or both means of attachment may be employed.

As illustrating the manner in which the clips heretofore described may be employed in various forms of wall construction, reference is had to Figs. 11 to 15 inclusive, it being understood, however, that the use of the clip is not restricted to the particular forms here shown by way of exemplification. Fig. 11 illustrates the use of a clip of the type shown in Fig. 1 in conjunction with the staple of Fig. 9.

The channel stud is inserted in position, and a ground strip 49 has its lower edge impaled upon the prongs 29 with its upper edge engaged by the prongs 43 of the staple which straddles the stud. As shown, a thicker ground 50 is employed at the left hand side of the wall, which ground is impaled along its lower edge by prongs 29 and is rabbeted along its upper inner edge 51 to afford a channel for the reception of a wall board section 52 which may be provided with perforations 53 for the keying of a plaster or cement wall filling 54.

The prong 44 of the staple impales the shoulder of the rabbeted edge so that with the grounds thus positioned on opposite sides of the stud and abutting against the side walls of the stud and clip, and impaled along their lower and upper edges, in the manner described, the stud and grounds will be firmly held and anchored in position, while the upper end of the stud will be similarly anchored in position in proximity to the ceiling by clips of the character shown in Fig. 5. The wall will be finished by carrying the plaster or cement filling through to the right hand surface in flush relation with the right hand ground 49, and completed by the employment of base boards 55 which overlap the plastic filling.

As shown to the left in Fig. 11, an attaching tongue 30 is nailed to the floor, but the use of such a tongue is optional in the wall construction illustrated.

Fig. 12 shows a face view of the left hand wall surface of Fig. 11, with the constituents partly broken away to show the overlapping of the parts.

Fig. 13 illustrates a wall in which the wall board sections **56** and **57** are in spaced relation to one another to afford a hollow wall structure and in which the clip of Fig. 8 and the staple of Fig. 11 are employed. In this instance the channel forming tongues **38** serve to hold the right hand ground **58** in spaced relation away from the stud, while the tongues **40** are entered within a groove **59** in the rabbeted lower edge **60** of the ground. Similarly, on the left hand side, the tongues **40** are entered within a similar groove **61** in the rabbeted lower edge **62** of the ground **63**, the tongues on this side, however, being properly spaced to bring the inner face of the ground into contact with the side edge of the stud, and the tongues **38** being omitted.

The upper edges **64** and **65** of the respective grounds are rabbeted to afford shoulders for the reception of the impaling prongs of staples of the character shown in Fig. 10, which at the right hand side of Fig. 13 are provided with channel forming tongues **46** which in conjunction with the rabbeted inner face of the right hand ground afford a channel for the reception of the right hand wall board section **57**. At the left hand side of the wall there is no need for the provision of a tongue **46** since the wall board section abuts directly against the stud. The wall board sections are finished by plastic surface coatings **66** which finish flush with the side faces of the grounds, and the wall construction is finished on the right hand side by a base shoe **67** and a molding **68**, while on the left hand side the wall is finished by a base board **69** and a base shoe **70**.

Although in the wall of Fig. 13 the tongues **40** are shown as entered within grooves **59** and **61** respectively, it is obvious that these tongues might be pointed to afford impaling prongs and impaled directly into the lower edges of the grounds in the manner referred to in the description of the wall of Fig. 11.

In the wall of Fig. 14 the staples are omitted, and wall board sections **71** and **72** are carried directly down to the level of the floor and are there entered into the channels provided by the clip of Fig. 8, the channel at the right being spaced sufficiently away from the body of the clip to afford the desired spacing between the wall sections. In this instance, grounds **73** and **74** are employed which overlap the wall board sections, and plastic coatings **75** and **76** are applied in flush relation with the respective grounds. The wall is finished by base boards or like finishing strips **77**, **78** and **79**. If desired, spacer blocks **79a** may be inserted between the wall board sections resting upon the runner in the spaces between the clips to reinforce the wall from the interior, and into which the grounds **73** and **74** are nailed.

Fig. 15 shows a wall in which a clip of the character shown in Fig. 1 is employed in conjunction with bases formed of cement or similar plastic material which is applied to metal lath **80** secured by tie wires or the like to the stud. In this instance the plastic filling **81** embeds the stud, the metal lath, and the clips, the tongues **29** being anchored within the plastic material.

Fig. 16 shows a wall in which a clip of the general character shown in Figs. 2 and 8 is employed in conjunction with wood grounds or the like, and in which the channels for the reception of the lower edges of the grounds are made sufficiently wide for that purpose. At the left of the figure is shown a tongue **40** without the impaling features, while at the right of the figure is shown a tongue **36** having the impaling point **37**, as illustrated in Fig. 2. The prong is shown impaled in full lines, and in its retracted position in dotted lines.

Although various modifications in the structure of the clips, and the structure of the walls have been described, it will be understood that the details of the clips as shown may be modified in various ways without departing from the spirit of the invention. Thus, in cases where it is desired to employ tongues for impaling purposes, the same should, of course, be pointed so that they may be driven into the edges of the grounds, but where the same tongues are employed merely for the purpose of affording the constituents of a channel for the edge of a wall board or base ground section, they need not be pointed, although the pointing of the tongue will not impair their function as channel forming constituents.

Furthermore, although the clips on their opposite edges may be uniform in character to provide channel forming and/or impaling tongues, it may not be essential in all cases to provide such features on both sides of the clip, so that if desired one side of the clip may be plain and the wing and tongue features applied to the other side only. Also, in cases where the clips are intended merely to anchor the ends of the studs, the wings and tongues or prongs may be entirely omitted from the body of the clip.

Although for most purposes it may be desirable to form the clips and staples from sheet metal, it is not the intention to limit the claims in that regard, since other metals or materials may be employed. Likewise the term arch is intended to cover and include any arch like connection, whether round, square or angular, which affords an upstanding slotted connection for the side walls of the clip, adapted to receive the end of a stud in substantially the manner described; and under the term clip I mean to include a device of the character described regardless of its length, which may if desired assume the form of a continuous runner.

I claim:

1. A clip for the anchoring of a stud or the like formed from sheet material configured to afford spaced substantially parallel side walls adapted to straddle a runner and provided with means for attachment to a floor or the like, and an upwardly springing connecting arch bridging the space between the side walls and provided with a slot cut through the crest and the sides of the arch and adapting the clip to receive and socket the end of a stud or the like.

2. A clip for the anchoring of a stud or the like formed from sheet material configured to afford spaced substantially parallel side walls adapted to straddle a runner, and an upwardly springing connecting arch inwardly offset with relation to the side walls to afford connecting shoulders at the base of the arch and provided with a slot inwardly extending through the crest of the arch and down to the shoulders to afford a socket for the reception of the end of a stud or the like, the side walls being provided with laterally extending means adapted to afford attachment to a floor or the like.

3. A clip for the anchoring of a stud or the

like formed from sheet material configured to afford spaced substantially parallel side walls adapted to straddle a runner and provided with means adapting the clip to be held against displacement thereon, and an upwardly springing connecting arch inwardly offset with relation to the side walls to afford connecting shoulders at the base of the arch and provided with a slot cut through the crest and sides of the arch and down to the shoulders to afford a socket for the reception of the end of a stud or the like.

4. In wall construction, the combination of a clip for the anchoring of a stud or the like having spaced lower side walls and a connecting upwardly springing arch inwardly offset with relation to the side walls to afford on each side a connecting shoulder at the base of the arch, the arch being provided with a slot inwardly extending through the crest of the arch and down to the shoulders to afford a socket for the reception of the end of a stud or the like, the wall of the arch on one side and at a distance from the slot being provided with an outwardly projecting reinforcing bead, and a channel stud socketed within the slot and with its end in abutment against the shoulders and its flanges embracing the wall of the arch adjacent the slot and with the edges of the channel stud standing in abutment with the reinforcing bead.

5. In wall construction, the combination of a clip for the anchoring of a stud or the like having spaced lower side walls and a connecting upwardly springing arch inwardly offset with relation to the side walls to afford on each side a connecting shoulder at the base of the arch, the arch being provided with a slot inwardly extending through the crest of the arch and down to the shoulders to afford a socket for the reception of the end of a stud or the like, the wall of the arch on one side of the slot and at a distance from the slot being provided with a reinforcing bead, a channel stud socketed within the slot with its end in abutment against the shoulders and with its flanges embracing the wall of the arch adjacent the slot and with the edges of the channel stud standing in abutment with the reinforcing bead, at least one of the side walls of the clip being provided with a laterally extending projection adapted to be secured to a floor or the like, and a runner straddled by the clip with the shoulders of the clip abutting the top corners of the runner and with the side walls of the clip closely embracing the side faces of the runner.

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