

May 11, 1943.

J. G. HAMILTON

2,319,129

FASTENER FOR WALL BOARD UNITS

Filed July 18, 1939

3 Sheets-Sheet 1

Fig. 1.

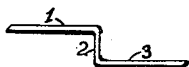


Fig. 2.

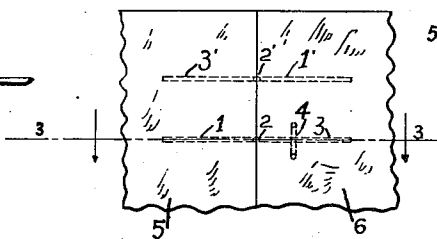


Fig. 3.

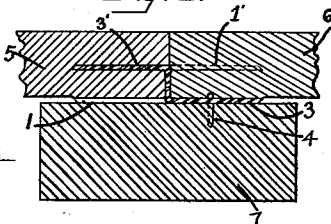


Fig. 4.

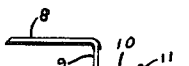


Fig. 5.

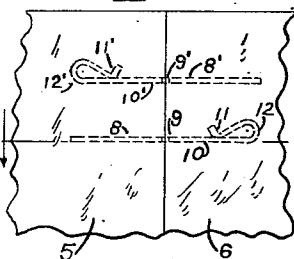


Fig. 6.

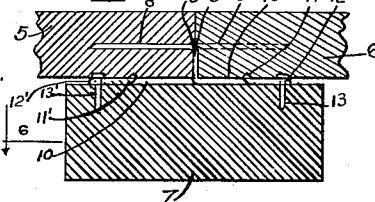


Fig. 7.

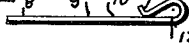


Fig. 8.

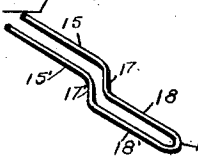


Fig. 9.

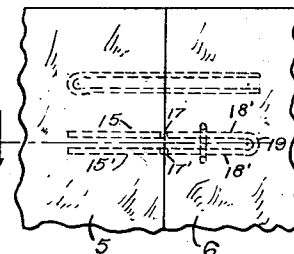


Fig. 10.

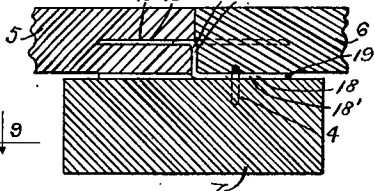


Fig. 11.

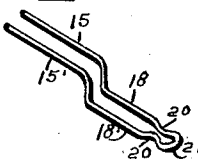
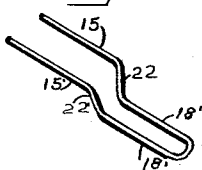


Fig. 12.



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Fig. 13.

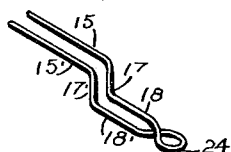


Fig. 14.

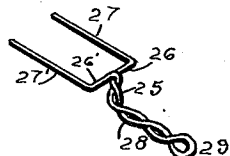


Fig. 15.

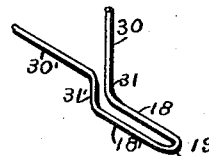


Fig. 16.

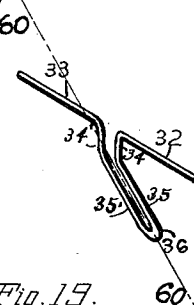


Fig. 17.

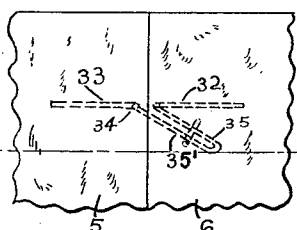


Fig. 18.

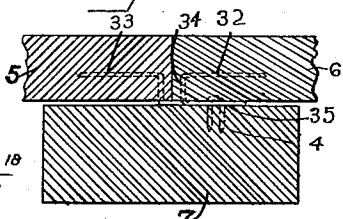


Fig. 19.

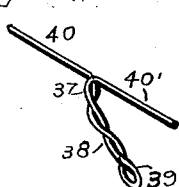


Fig. 21.

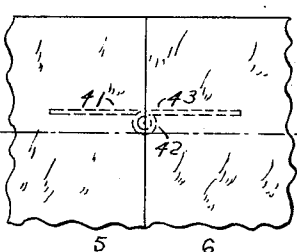


Fig. 22.

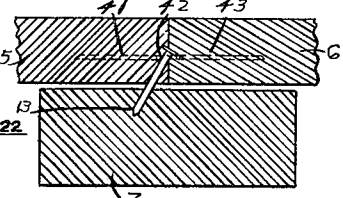
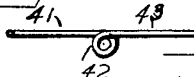


Fig. 20.



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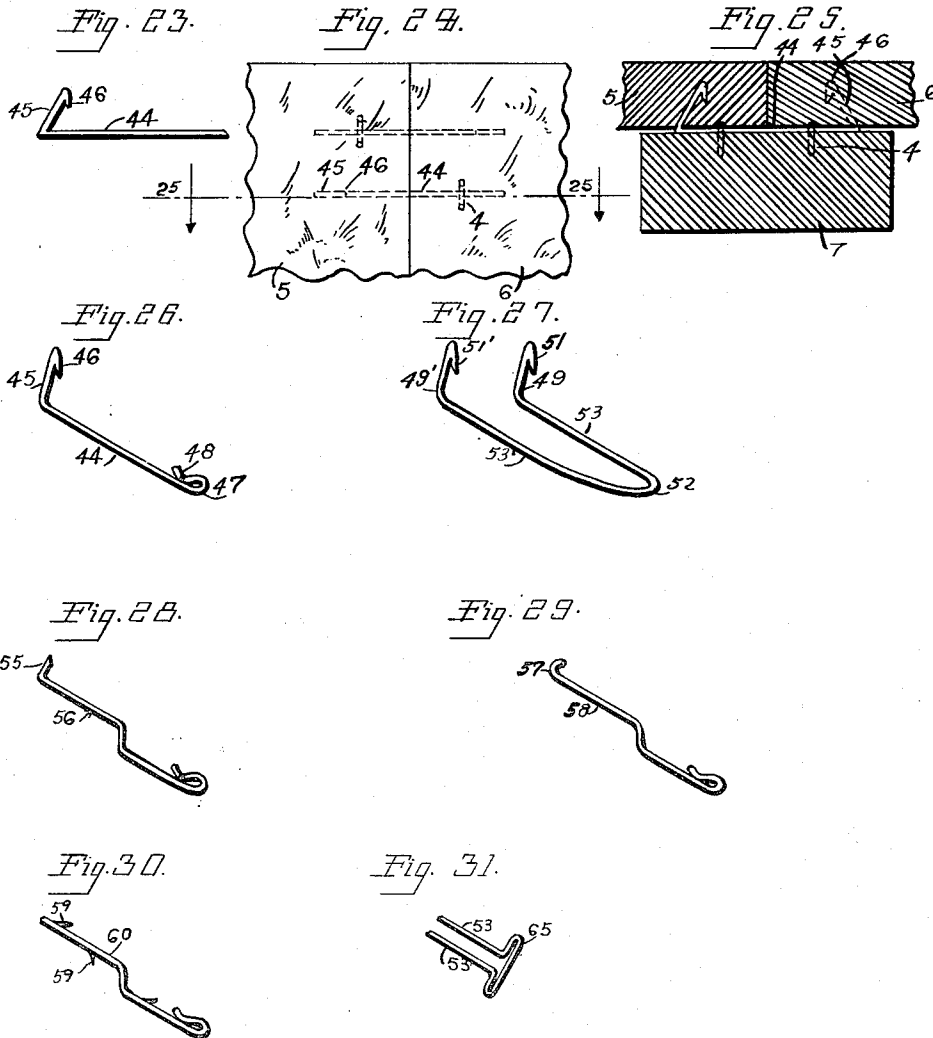
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FASTENER FOR WALL BOARD UNITS

Filed July 18, 1939

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,319,129

FASTENER FOR WALLBOARD UNITS

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Application July 18, 1939, Serial No. 285,220

10 Claims. (Cl. 72-118)

This invention is used in relation to wall board, insulating board, composition board and the like substances used in walls of buildings.

The broad objects of the invention are as follows:

1. To provide a concealed fastening means for securing the abutting ends of wall units to each other and to underlying elements to which these units are attached.

2. To utilize a suitable gauge wire of proper temper and type in the process of manufacture of the concealed clips, instead of the heavier, more expensive, harder to insert, and harder to manufacture sheet-metal clips.

3. The utilization of Celluloid, Bakelite and similar composition materials to be used for the manufacture of clips for wall units.

4. Method for applying wall board at corners and the like with a concealed fastening means.

5. Method of securing clips to underlying supports so as to take care of expansion and contraction of the boards.

More specifically, the invention relates to the provision of wire clips used singly or in pairs at any given place on the abutting surfaces, or at wall corners, and the like, of two units so that a portion of the clip will enter the unit from the abutting surface, and offset will lie flush against this surface and an extending portion will be adapted to be secured to the underlying support, and/or which can cooperate with an adjacent unit, lying between its back surface and an underlying supporting joist or element.

Another object of the invention is the provision of a concealed fastening means for building units of fiber boards whose abutting edges are tongued and grooved, or the like. One portion of this fastening means penetrates the unit diagonally from the edge surface and may enter the underlying support after passing through the back surface of the board; the other portion of the fastening means preferably passes just distal to the edge surface of the unit and enters the underlying support securing the unit at the edge of the unit to the underlying support. The tongue or groove edge surface of the board next applied is driven against the abutting edge of the end where it has been secured by means of the fasteners. The second unit applied is held in place at the abutting edges by the tongue and groove interfitting, and is held to the supporting member as a result of the attachments by the clips in the first units abutting edge.

Another object of the invention is the provision of a concealed fastening means for building units which enter the board from what will be its back surface near its abutting ends, and has a portion extending out beyond the abutting edge of unit which can be stapled or nailed to an underlying support, or cooperate with an adjacent secured

and stapled or nailed unit by having its extending portion between the back of the secured unit and an underlying support thus securing two abutting units in any given place where the clips are used at the abutting ends of units. The first abutting edge is secured by a nail being driven into the underlying support and the second units abutting edge where the extending portion of the clip was shoved between the back surface of the unit and the underlying supporting element or joist of the first secured and nailed board.

Another important object of the invention is the use of wire instead of sheet-metal members in the process of manufacturing clips to be used on composition and other units. This will bring about a very practical and astoundingly marked advance in the utilization of my clips by the building trade.

Heretofore, the manufacture of clips from sheet metal made them so hard to insert that a workman's fingers prohibited the use of them due to the fact that they become torn and blistered after a very short time when applying sheet-metal clips. They are also more expensive to make and distribute due to the initial cost of the sheet-metal as well as the difference in bulk and the fact that bigger and more expensive machines are necessary in their manufacture.

Wire clips, on the other hand, such as those exemplified later in this invention can often be made from roll wire in the very applicator which will be used to apply these clips. This will take place right on the job where application of the units will be made. Thus application and manufacture can take place simultaneously. If, in some instances, a more complicated clip is deemed advisable for use on some specific job of applying the units of wallboard, the clip may be manufactured in the smallest and most inexpensive type of wire bending machines at proper locations of manufacture. The manufacture anywhere will be at a very minute fraction of what it costs to make clips from sheet metal.

The use of Celluloid or composition material clips such as Bakelite made similar to the wire ones for use in chemical concerns where the metal ones will corrode.

From the above descriptions it is evident that these clips do away with face or front nailing on wall board units. Face nailing consists of nailing the units of wall board through the exposed or front side. The use of the clips does away with nail heads showing up on the exposed surface of the boards, unsightly nail holds on the front surface of boards, hammer mars and the like. It also does away with shadows which result from nail-holds, hammer mars and sagging which result from the use of nails. The use of clips also prevents these soft boards from pulling away completely from the supporting member as is the

case with finishing nails and nails with small heads which are generally used in application of the units.

The clips in this invention also do away with the use of sheet-metal in forming concealed fasteners because they are about twenty times easier to insert, cost only a very small fraction of what the sheet-metal ones do, and they can be applied at a much faster rate with no inconvenient after-effects to the workman's fingers, and if an applicator is used the clips may be made and applied in a more speedy simultaneous process.

Certain other specific objects peculiar to each clip will be brought out in connection with these clips as their description and use is, in each case, made clear.

All of the fasteners shown in the following figures are concealed relative to the front surface of a wall unit.

Figure 1 is a side view of one type of concealed fastener.

Figure 2 is a plane view of wall units held together and to underlying supports by means of fastener shown in Figure 1.

Figure 3 is a long view along line 50—50 of Figure 2.

Figure 4 is a side view of another type of fastener.

Figure 5 is a view looking down on fastener shown in Figure 4.

Figure 6 is a plane view of units assembled with fastener shown in Figures 4 and 5.

Figure 7 is long view along line 50—50 of Figure 6.

Figure 8 is a perspective of another type of fastener.

Figure 9 is a plane view of units assembled with fasteners as shown in Figure 8.

Figure 10 is a long view taken along line 50—50 of Figure 9.

Figures 11 through 14 are perspectives of clips used similar to those shown in Figures 8 through 10.

Figure 15 is perspective of a clip which is a transition between Figure 8 and forms shown in Figures 16 through 19.

Figure 16 is a perspective of a clip with end parts pointing in different directions, and on a higher horizontal plane than out-jut which is adapted to take a nail.

Figure 17 is plane view of units applied with clip shown in Figure 16.

Figure 18 is long view of line 50—50 in Figure 17.

Figure 19 is a perspective of a clip used similar to that shown in Figures 16 through 18.

Figure 20 is a top view of another type of fastener.

Figure 21 is plane view of units applied with clip shown in Figure 20.

Figure 22 is long view along line 50—50 of Figure 21.

Figure 23 is side view of another type of fastener whose application differs from any of the above.

Figure 24 is plane view of units applied with clips shown in Figure 23.

Figure 25 is long view taken along line 50—50 of Figure 24.

Figure 26 view from above and to the side of another clip.

Figure 27 is perspective of a U type fastener.

Figures 28 through 30 show different types of barbs on inserts. The barbs may be incorporated in any of the clips.

Figures 1 through 3.—In Figure 1, a single wire of a suitable gage is bent so that there is an insert 1, an offset 2, and an out-jut 3. Numerals indicating parts 1 and 3 are arbitrarily called an insert and out-jut in view of their relative uses in the application of wall board units. In the case of this clip they are identical and interchangeable. The wire offset 2, places parts 1 and 3 angularly projecting in opposite directions with insert on a higher horizontal plane than out-jut. Units 5 and 6 represent wall board units secured to supporting member 7 by means of clip in unit 5 having out-jut 3 stapled or nailed to supporting member 7, and out-jut 3 of clip in unit 6 lying between the back surface of the secured and nailed unit 5 and supporting member 7. This is accomplished by thrusting insert 1 of a clip into the edge surface of unit 5 at any given place where units 5 and 6 are to have their abutting edges secured. Clip in unit 5 now lies inserted into the unit up to offset 2, with out-jut 3 extending away from the edge surface of unit 5 and in the same horizontal plane as the back of unit five. Out-jut is secured to supporting member by means of a nail or staple, and then unit 6 has a clip inserted into its edge surface at any given place, and unit 6 has its edge surface shoved into abutting relationship with unit 5. As this is done the clip in unit 6 has its out-jut 3 pass behind the back surface of the secured unit 5 and the supporting member 7 at the abutting edges of units 5 and 6. The side of unit 6 opposite the abutting units 5 and 6 has clips inserted into its edge surface and the out-jut is secured to the supporting member by means of a nail or staple. The next unit to be applied follows the same procedure as unit 6 did when its abutting edge was brought into close contact with unit 5's abutting end surface. Continued application of units is a repetition of this method. The clips are spaced in pairs, one for the abutting surface of one board or unit and one for the abutting surface of the other unit. To best secure the boards or units these pairs should be spaced at 4 to 6 inch intervals along abutting edges of any two boards or units.

Figures 4 through 7 shows a clip with insert 8, offset 9, and outjut 10, with terminal loop 12 to accommodate a nail, and anchoring part 11.

The principle involved in the application of this clip on units and to supporting members is the same as that described under Figures 1 through 3. The notable exceptions lie in the construction of the clip rather than in its application.

The chief differences lie in the fact that the clip is provided with a loop 12 for holding a nail, and that the terminal end of out-jut 10 is continued to form anchor 11 after forming the loop 12. Anchor 11 catches in the back surfaces of units and prevents any tendency of outjut to work free in any unnailed units, or anchor 11 may be directed downward so that it can enter into underlying support of first applied unit acting in place of a nail or staple in securing unit, in which fastener has been inserted, to the underlying support. If this is done the terminal loop 12 may be omitted should this be desirable. Then distil end of outjut 10 is continued directly, without terminal loop 12, to form anchor 11.

Figures 8 through 10.—The clip in Figure 8 is formed by bending a straight piece of wire into a U and then providing a more or less centrally placed offset 17 and 17', so that inserts 15 and 15' which are the inserts of the open part of the U, and the out-juts 18 and 18' will extend angu-

larly from offsets 17 and 17' in opposite directions, with inserts lying in a higher horizontal plane than out-juts. Number 19 shows space enclosed by the U the closed end of which, at the out-jut, may accommodate a nail, this for securing the clip to any underlying support.

In application, the same general procedure is followed as that outlined under Figures 1 through 3. The notable exceptions lie in the constructing of the clip itself, and are as followed below: Each single clip is provided with dual inserts 15 and 15', dual out-juts 18 and 18' and dual offsets 17 and 17'. The enclosed end of the U in the out-juts are formed by 18 and 18' becoming continuous with each other at distal end of out-jut. The out-jut formed by the dual members of wire can accommodate a nail at the far end of space 19.

Figure 11.—The clip shown here is used the same as those shown above, as already described. The notable differences in construction are that the out-juts of 18 and 18' lie closer together, and that the offsets 22 and 22' flare out somewhat in the form of a V which is open below as well as above. This causes inserts 15 and 15' to be placed far enough from each other so that they will enter the edge surface of the unit with greater ease than if there was a tendency for them to be closer together. The constricted U, in this case, makes possible the utilization of nails with very small heads, this for securing the clip to an underlying support where indicated.

Figure 12.—The clip shown herein is used similarly to those described in Figures 1 through 3. The notable differences lie in the construction of the clip. Out-juts 18 and 18' are constricted at 20 and 20' so that space 21 will be able to accommodate a nail of small size.

Figure 13.—The clip shown in this drawing has involved the same procedure in application as that described and shown under Figures 1 through 3. The difference is in the construction of the clip. The out-juts 18 and 18' are twisted one half round or more times so that one comes to overlie the other at 23, providing a loop 24 to accommodate a nail for securing it to an underlying support.

Figure 14.—Clip here is applied similar to the ones already described in Figures 1 through 3. The notable differences lie in the construction of the clip. The out-jut 28 is formed by a series of twists given to the closed end of a U shaped piece of wire, and providing at its most distal end an open portion 29 which can accommodate a nail or the like. Proximally the twisting is continued to include the offset 25. From the upper part of the offset 25 are two extending portions, 26 and 26'. These extend angularly from the offset 25, in opposite directions, and lying flush against the edge surface of a board in which they are used. Extending at right angles, or angularly, from the extending parts, the extending parts are continued as inserts 27 and 27' which enter the unit from its edge surface thereof.

Figure 15.—The clip shown here is very much similar to the one shown in Figure 8. As shown, the offset 31 is continuous with insert 30. If insert 30 is bent in a direction similar to insert 30', the clip will be exactly like that shown in Figure 8. However, if it is bent in opposite directions and overlies out-jut 18' or closed portion of U, application is different from other type clips described. To secure abutting edges of boards with this clip, only one clip is used to secure the

abutting edges of two boards or units at a given place. Insert 30' is thrust into the end surface of the unit first to be applied, up to offset 31. Then out-juts 18 and 18' are secured by nails to joists or supporting member through slot 19. Then insert 30 is bent in such a way that it overlies out-jut 18 which has already been secured to an underlying support by a nail or the like. Now, the next unit to be applied is thrust against pointed end of insert 30 until abutting surfaces of the two units come into contact, 18 and 18' coming to lie between the back of the second applied unit and the joists or supporting member.

Figures 16 through 18 show clip with out-jut 35 and 35', 35 being slightly longer than 35'. This sets offsets 34 and 34' to form a plane slightly off right angular position in regards to out-juts formed by 35 and 35'. Insert 32 extends at approximately a right angle from midline plane 60—60. Insert 33 extends at greater than a right angle from plane along line 60—60. When insert 33 is pressed into the edge surface of the first applied unit up to 34, out-jut 35 and 35' extends at an acute angle from unit 35, and is nailed through 36. The unit 6 which is next applied is thrust on insert 32 until abutting surfaces of 5 and 6 are in close contact.

Figure 19 shows another type clip which is identical to that described in Figures 15 through 18 in as far as application is concerned. The notable difference is in construction of the clip. It has an offset 37, an out-jut 38, and nailing portion 39, all corresponding to offset 25, out-jut 28, and nailing portion 29 in Figure 14. The inserts 40 and 40' correspond to those shown in Figures 15 through 18.

Figures 20 through 22 show clips with an insert 41, a centrally placed loop 42, for accommodating a nail, and an insert 43 extending in an opposite direction, but in practically the same horizontal plane as insert 41.

To apply: Clip has insert 41 thrust into the distal or abutting surface of unit 5 at almost the midthickness of the abutting surface of the unit 5 up to loop 42. Then a nail is driven diagonally through loop 42, and penetrating the unit 5 from its edge surface, it passes through unit 5 into underlying joist. Unit 6 has its end or abutting surface thrust against insert 43 until edges of units 5 and 6 come into close relationship. In this manner one clip will hold two boards at any given place where it is used. Therefore it is not necessary to use the clips in pairs. They should be spaced 4 to 6 inches apart, and used singly. Application at any abutting ends of units as described.

Figures 23 through 25 show clips which secure units from the back surface thereof about $\frac{3}{4}$ of an inch from the edge of the back surface of any given place on a unit. Flange 45 is bent from a straight piece of wire having an extending portion 44. Most distal end of flange 45 is bent to form barb 46. In application: Flange 45 is driven into back surface of board to be applied up to extending portion 44, the distal part of which extends out beyond the edge surface of the board. As flange 45 penetrates the board from its back surface, about $\frac{3}{4}$ of an inch from its edges, it is made short enough, and is bent at an acute enough angle, so that it will not penetrate through the board to the front surface thereby damaging it. The bar 46 prevents flange 45 from pulling out. When clip has been driven in back surface of unit 5 at a given place in 4 to

6 inch intervals, the unit 5 is stapled or nailed to supports. Then the edge of unit 6 which is to abut secured part of unit 5 has clips secured in it in the same manner as the edges of unit 5's back surface were handled. Then unit 6 is shoved together with unit 5 in such a manner that the abutting edge of unit 6 will come into contact with unit 5 which has been secured with clips and nailed to an underlying support. The extending portions of unit 6 will pass between the back surface of secured unit 5 and the supporting member or joist. Thereby unit 6 is secured at the abutting edges of units 5 and 6. Other abutting edges are secured in a like manner.

Another use for this clip is shown in Figure 23 and bent into the form of a U, L, or V is as follows: The preferably shorter prong 45 enters the substance of the unit at the edge of the unit and passes diagonally into the unit, or lies flush against the outer part of a tongue on the unit and has prong 46 penetrate the tongue in a direction towards its inner surface, or surface nearer the back of the unit, while prong 44 penetrates the supporting member or joist, thus securing the unit to the underlying support. Prong 44 preferably enters the supporting member at the edge surface of the unit and does not enter the substance of the unit at all.

The preferred application should be such that the tongued edge surface of one of these units has the barbed end of a prong entering into it so that it enters into the substance of the boards tongued edge or lies flush with the surface of the tongue nearer the outer surface of the unit. Prong designated 44, or the one without the barb and which is the longer of the two, enters the underlying support without entering the substance of the panel or unit at all. This secures the edge of the unit to the underlying supporting element. The next unit applied has its grooved edge surface pressed onto the tongued portion of the first applied unit, and the second unit is held firmly in place at this abutting relationship. Opposite this the tongued portion of the second unit is secured by the clips, and the grooved portion of another unit is pressed onto the tongue of the second unit, and by a repetition of this process application may continue.

Figure 26 shows a clip whose application is similar to that shown in Figures 23 through 25. The clip is different in construction, however, in that the terminal end of extending portion 44 is looped at 47 to accommodate a nail and form an anchor 48.

Figure 27 shows a clip whose application incorporates the same principle as that shown and described in Figures 23 through 25. It differs in construction though. The clip is made from a piece of wire bent in the form of a U having flanges 49 and 49' bent in the same manner and at right angles, or more acutely, to the extending portions of 53 and 53' so that they may slightly overlie 53 and 53'. Flanges 49 and 49' are made to enter the boards from the back surface, but do not penetrate through to the front of the board, and are provided with barbs 51 and 51' for holding flanges 49 and 49' securely in the board. The space 52 takes a nail for securing the board to the underlying support.

Figures 28 through 30 show different types of barbs produced by bending distal end of inserts or flanges, or by slightly flattening them or cutting them to form a barb at any given place on insert. If it is necessary to have a barb on the

out-juts or extending portions this can be produced by a flattening or cutting process in any proper location which will best secure out-jut to back of unit.

Now it can be pointed out that a method for applying all these boards and units at corner sections, places where wall and ceiling meet, and the like, is needed as well as a method for application at abutting edges on a plane surface, as already described.

In the case where ceiling and wall, and the like, meet, the out-juts or extending portions of clips in the ceiling units overlie the upper edge surface of the units used in the side wall.

A, B, C, and D represent the 4 corners of a room at ceiling level. A is diagonally across from D, and B is diagonally across from C. Application is started along a line of ceiling whose corners are A—B and worked towards place where side wall meets ceiling on a line between the hypothetical C—D, and continued until only one section of pieces or units remain to be applied to complete the ceiling. This one section of units lies between the applied units on ceiling surface, and side wall between C—D. Application of the first unit of this last section of units proceeds to top edges of wall section A—C, just adjacent to corner C, and has extending portions of clips thrust over the top edge surface of this wall section, and application is then continued towards corner D until last section is put up.

In the case of side wall corners, and the like, in a room, the extending parts or out-juts of clips in one section of wall units making up wall of one side of a room, at a given corner or the like, are nailed to an underlying support. The extending portions or out-juts of clips applied in units, making up the wall adjacent to this at the same corner, are thrust behind the edge surface of the already secured adjacent units from ceiling to floor at a given corner or the like.

At any given place where adjacent sections of units meet as at corners of walls from ceiling to floor, or the like, one section of units has one of its edge surfaces pressed close into the given corner or angular place, or the like, without clips in edge surface of board first directed into the corner. Now, the adjacent side wall units have clips inserted into edge surfaces, and the out-juts or extending portions are pressed behind the edge surface of the units forming the adjacent wall at this given corner. This secures both sections of units in adjacent walls at corners or the like.

Three factors are now to be considered:

Wall board and the like are composition substances which expand and contract a great deal due to atmospheric changes in temperature and humidity. The extent of this expansion and contraction necessitates its serious consideration.

Often removal of units of wall boards take place as a result of remodeling and the like.

A means of the most speedy application of out-juts or extending portions of clip to supporting member.

Because of these and other factors, a method for applying the out-juts and extending parts of clips in units to the securing member in such an ingenious manner so as to overcome these difficulties, and, yet, further enhance the use of the clip types with application similar to what has already been described, is necessary. This is accomplished as follows: A stapling means in an automatic applicator is driven from over out-jut of clip to be secured to underlying support,

this to a depth which will loosely bind out-jut between the staple and supporting joist. Because of this, extending portion or out-jut may move in the slot formed by the staple in any plane direction in which expansion or contraction of the unit may direct it.

In the case of out-juts of sheet-metal clips, these are provided with longitudinal or transverse slots through which the prongs of the staple are directed into the underlying support. Or, the stapling means may have its prongs directed on each side of the out-jut or the like of a sheet metal clip and into the underlying support. This provision prevents the portion of the clips inserted into the boards from absorbing all the brunt of expanding and contracting factors inherent in the board.

In the case of remodeling:

To take units of wall board down extending part or out-jut slips from beneath stapling means when board is pulled in the proper direction.

In the case of providing for the most rapid type of application:

An automatic stapling means driving the staples to the proper depth is used.

The breadth of this patent is to be limited to the broadest possible interpretation of the specifications above and the claims to follow.

In the claims the word "wire" is intended to include not only metal substance, but the other materials named herein. The straight portion to pierce a wall board edge is adapted to permit these other materials than wire to withstand the necessary stresses while the offset portion to underlie an adjacent wall board clearly will withstand the necessary stresses even though the underlying portion is not of metal.

What I claim is:

1. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening, comprising a wire staple having a near end and a far end and an intermediate portion angularly disposed placing the ends in different parallel planes, one of said ends being flat and looped to be fastened and retained by a nail and the other being straight for insertion into the edge of a section of wall board.

2. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening means, comprising a wire staple having a near end and a far end and an intermediate portion angularly disposed placing the ends in different parallel planes, and comprising a plurality of prongs adapted to be inserted into the edge of one section of wall board and the other end in a different plane being looped to receive a nail.

3. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening means, comprising a wire staple having a near end and a far end and an intermediate portion angularly disposed placing the ends in different parallel planes, one of said ends being shaped as a prong adapted to be inserted into the edge of one section of wall board and the other end in a different plane having a circular opening to receive a nail, said fastener being bifurcated from the prong end to said opening to slidably embrace a pre-driven nail.

4. A blind fastening to secure sections of wall board and the like to a supporting base and to

each other without exposure of the fastening means, comprising prongs disposed generally in opposite directions to each other, one being straight to penetrate an edge of a wall board, and an intermediate portion generally of a U-shape connected to the opposed ends by an intermediate offset placing the ends in different parallel planes, the intermediate U portion being in an angular vertical plane with respect to the prongs.

5. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening, comprising a wire staple having a near end that is straight to extend into an edge of a wall board, and a far end, and an intermediate portion angularly disposed placing the ends in different parallel planes, and barbs at intermediate positions.

6. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening, comprising a wire staple having a near end that is straight to extend into an edge of a wall board, and a far end, and an intermediate portion angularly disposed placing the ends in different parallel planes, the far end being extended to underlie an adjacent wall board, and being twisted to form a loop to receive a nail.

7. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening, comprising a wire staple having a near end that is straight to extend into an edge of a wall board, and a far end, and an intermediate portion angularly disposed placing the ends in different parallel planes, the far end being adapted to be forced up into the bottom of an adjacent wall board, the two ends being connected by a loop extending away from the first end and flat to underlie the adjacent wall board.

8. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening, comprising a wire staple having a near end that is straight to extend into an edge of a wall board, and a far end, and an intermediate portion angularly disposed placing the ends in different parallel planes, the intermediate portions being looped and flat to underlie one of the wall boards and being in an angular vertical plane with respect to the ends.

9. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening, comprising a wire staple having a near end that is straight to extend into an edge of a wall board, and a far end, and an intermediate portion angularly disposed placing the ends in different parallel planes, the end to penetrate the edge being barbed and the other end being looped to receive a nail.

10. A blind fastening to secure sections of wall board and the like to a supporting base and to each other without exposure of the fastening, comprising a wire staple having a near end that is straight to extend into an edge of a wall board, and a far end, and an intermediate portion angularly disposed placing the ends in different parallel planes, the end to penetrate the edge being barbed and the other end being looped to receive a nail, there being intermediate barbs along the staple to penetrate adjacent wall boards at different points.

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