

May 15, 1928.

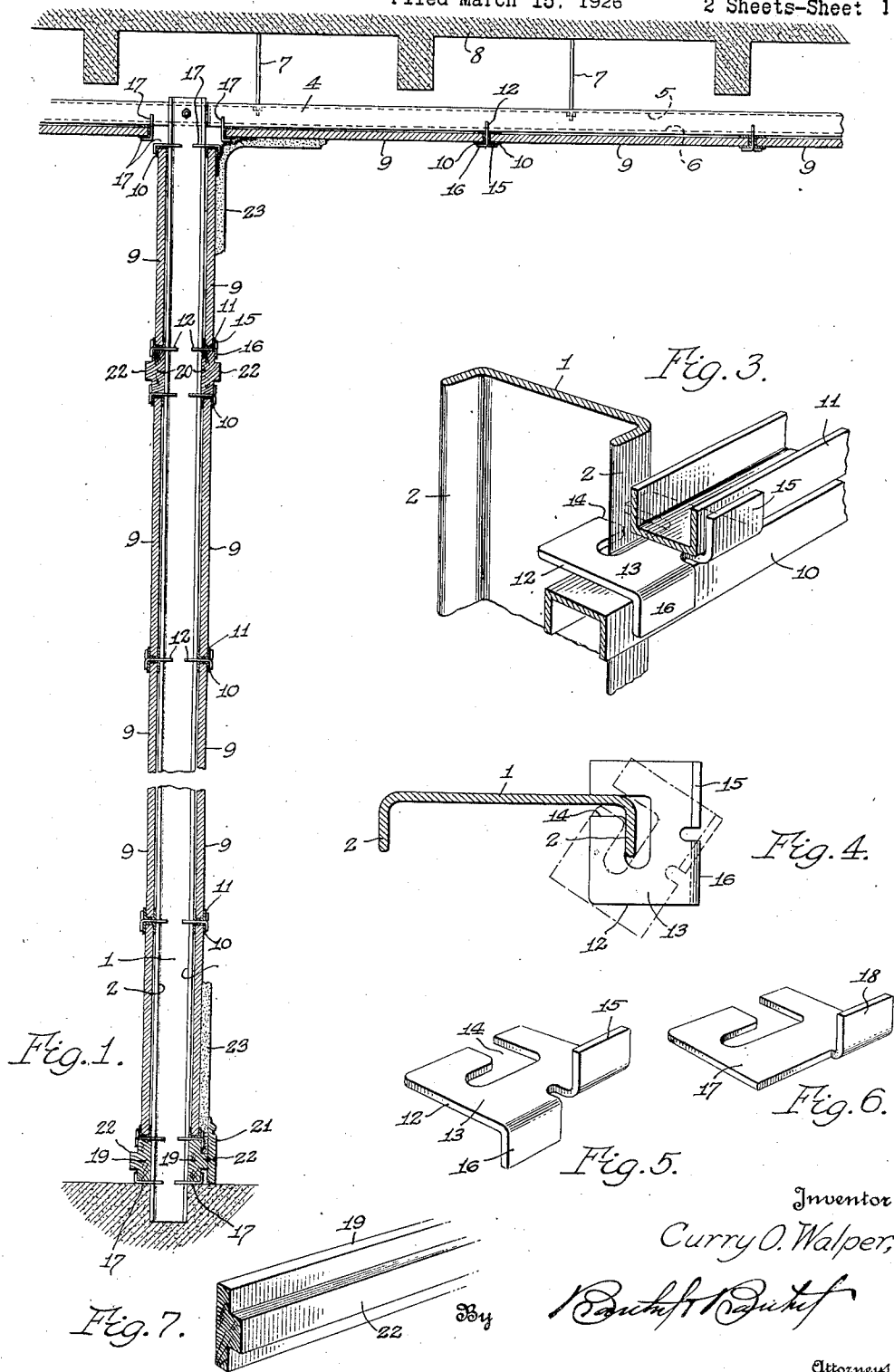
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C. O. WALPER

WALL AND CEILING CONSTRUCTION

Filed March 15, 1926

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

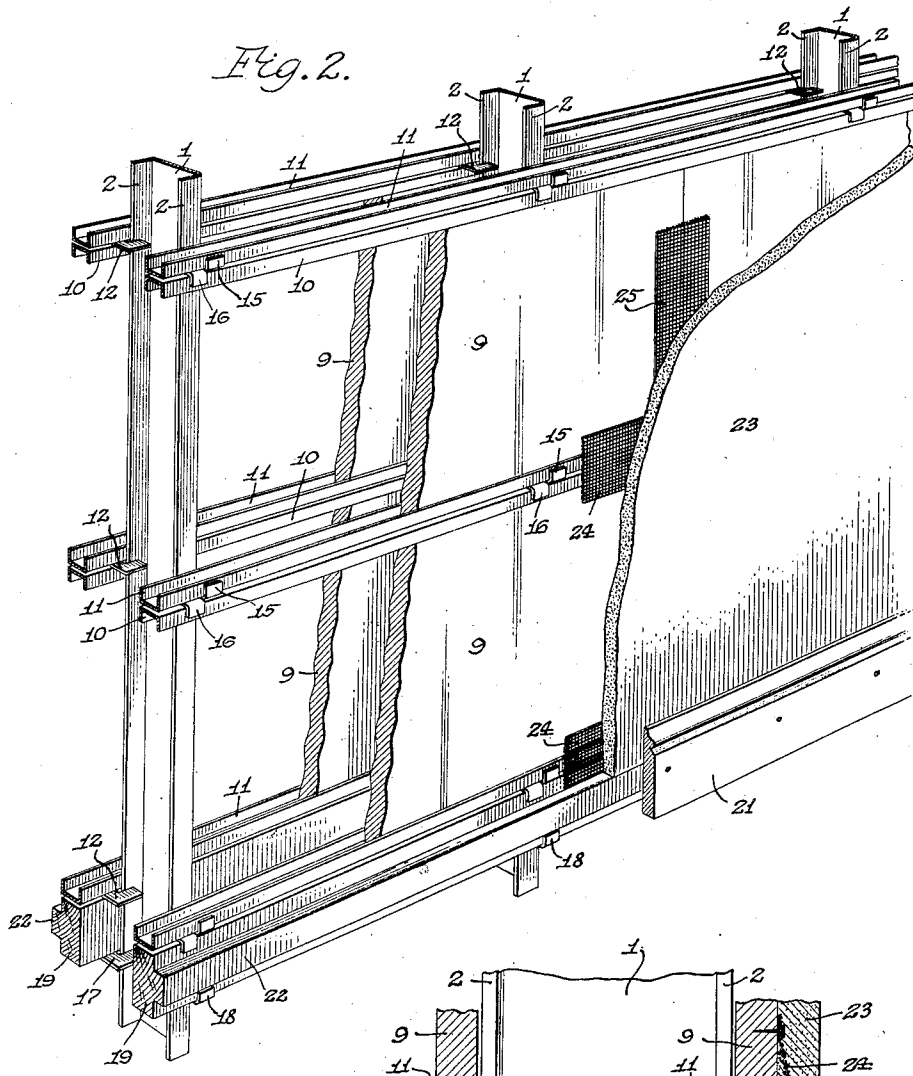
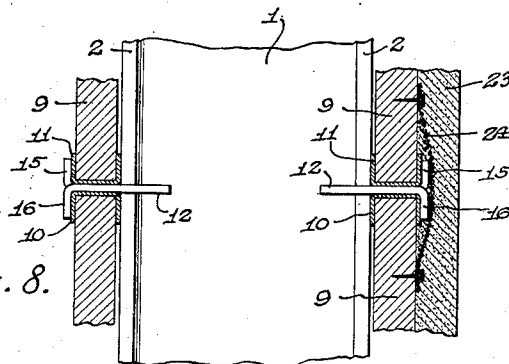


Fig. 8.



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UNITED STATES PATENT OFFICE.

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WALL AND CEILING CONSTRUCTION.

Application filed March 15, 1926. Serial No. 94,793.

This invention relates to wall construction and the means entering therein wherein wall boards are used and wherein such wall boards are usually coated with plaster or similar finishing material to secure a smooth surface. The invention more especially has reference to fireproof or fire resisting constructions wherein metal replaces wood to a substantial extent, and has for its object to facilitate the application of wall boards to metallic structures in a simple and effective manner, so that the use of nails or rivets may be avoided in such wall construction and the ready application, positioning and securing of the wall boards relative to the studding or supports accomplished effectively and quickly.

By my invention I provide for a supporting and protection of the upper and lower edges of wall boards as well as a means of mounting the boards on supports which admits of the use of very simple parts in the wall construction and the assembling of such parts with great facility.

The invention further contemplates the use of channels for the engagement of upper and lower edges of wall boards and the use of clips for the engagement of said channels with metallic studding, said clips being relatively adjustable on such studding to accommodate wall boards of any width, and the invention still further aims to provide for the easy application of the clips to the studding and the effective locking of the clips thereto by the said channels when the wall construction is assembled.

Still further, the said invention provides for the incorporation in the wall construction of wood or similar nailing strips to facilitate the hanging of pictures, the attachment of moldings or the attachment of base-boards, etc. as may be desired.

A further object of the invention is to provide for the incorporation in such wall construction of strips which may be nailing strips projecting beyond the face of the wall boards and forming limits for a plastered surface subsequently applied, whereby such strips assist in the supporting and protecting of the edges of such surface plaster, and it is further proposed to secure such strips in position in the same manner as the wall boards are secured in position by channels and clips.

Still further, the invention aims to pro-

vide a special form of clip lending itself excellently to the carrying out of the purposes of this invention, and still further objects subsidiary to or resulting from the construction or operation of the invention as it may be carried into effect will become apparent as the invention is hereinafter further disclosed.

In carrying the said invention into effect I may provide a studding, channel irons and a range on the flanges of the channel irons, vertically slidable clips having upwardly and downwardly extending outer portions and bayonet slots in their inner portions admitting of their application to the channel irons by an annular movement so that they are locked against removal from such channel irons except by a similar annular movement, and further strips of channel material adapted to fit over the edges of wall boards more or less snugly, the wall being constructed by arranging the wall boards with their horizontal edges engaged by such channel strips over the studding in approximate edge to edge abutment with the said clips therebetween so that the upwardly and downwardly turned outer portions of the said clips engage the lower channel strips of the wall boards thereabove and the upper channel strips of the wall boards therebelow respectively, and whereby the said channel strips lock the said clips against angular movement and prevent their release from the studding. I also propose to secure nailing strips of wood by means of said clips to said studding such as at the foot of the studding to facilitate the nailing of a base board thereto and near the upper ends of the studding to facilitate the nailing of picture molding or wall boards, thereby providing limitations between which a coat of plaster or other surfacing material may be spread.

All of which is more particularly described and ascertained hereinafter, by way of example, having reference to the accompanying drawing, wherein—

Figure 1 is a sectional view of a wall and ceiling embodying the improved construction;

Figure 2 is a fragmentary perspective view of the wall construction;

Figure 3 is a detail fragmentary perspective view illustrating the method of securing the channel strips to the studding;

Figure 4 is a transverse section of one of

the studs illustrating the method of applying one of the clips thereto;

Figure 5 is a detail perspective view of one of said clips;

5 Figure 6 is a similar view illustrating a modified form of the clip suitable for use at points where it is only required to engage a number on one side thereof;

Figure 7 is a fragmentary perspective view of one of the nailing strips, and

Figure 8 is a fragmentary sectional view of part of the wall construction.

Similar characters of reference indicate similar parts in the several figures of the drawings.

The illustrations show studding 1 in the form of channel irons having flanged edges 2 which in the construction of a wall are secured in position in any convenient manner such as by having their lower ends sunk into the floor 3 and their upper ends bolted to beams 4 as shown in Figure 1. The said beams 4 are also indicated as being of channel configuration having flanges 5 and 6 and suspended by rods 7 from a ceiling structure 8.

The studding is enclosed by wall boards 9 which are provided with or are received by upper and lower channel members 10 and 11, these channel members embracing the upper and lower edges of the said wall boards and being engaged by clips 12 carried by the studding 1. The said clips are indicated as being in the form of a flat plate 13 having a bayonet slot 14 therein adapted to receive one of the flanges of a stud and to extend over a portion of the stud adjacent such flange as clearly shown in Figure 4 which also illustrates the method of applying the clip to the stud by an annular movement as shown by the relative positions of the dotted and full line drawings of the clip. The outer end of the said plate 13 of the clip 12 is divided and bent to form an upwardly turned tongue 15 and a downwardly turned tongue 16 being intended when the clip is in use to engage one of the channel members 11 and the tongue 16 one of the channel members 10.

The clips are so proportioned that the channel members are snugly fed between the tongues of the clip and the flange of the stud with which the clip is engaged as clearly illustrated in Figure 3, thereby locking the clip against angular movement and disengagement from the stud and securing the channel members in lateral abutment with the flange of the stud.

The said clips are located on the studding between the adjacent channel members 10 and 11 of wall boards 9 arranged one above the other, the downwardly turned tongues of the clips securing the upper end of the wall board therebeneath in position relative to the studding and the upwardly turned

tongues 15 similarly securing the lower ends of the wall boards thereabove.

For use such as at the top and bottom of the studding I prefer to use a device such as the clip 17 such as that shown in Figure 6 having but one tongue 18 instead of two as in the clip 12, which admits of this clip being used flush with the floor or otherwise where the additional tongue would be an obstruction or unnecessary.

The construction described herein admits of the incorporation in a wall of nailing strips, moldings or wood or other inserts such as the nailing strips 19 and 20, the said strips 19 being well adapted to facilitate the nailing of a base board 21 to the base of the wall and the strips 20 providing for the hanging of pictures, the application of picture molding, or the mounting of plate rails. It is preferred to make these strips with raised portions 22 which extend outwardly of the wall when the strips are in position to an extent approximately in a plane with the surface of a finishing coat of plaster or other material 23 which may be applied to the wall so that the said raised portions of the strips will form boundaries for the edges of the plaster coat and supports therefor and the faces of the said projecting portions 22 will thus be exposed. This plaster coat when applied to the wall conceals the channel members and the clips as will be readily apparent, and I prefer to superimpose layers of wire or other suitable fabric reinforcing strips 24 over the said channel members and clips and also similar layers of fabric 25 over the abutting vertical edges of the wall boards for the purpose of reinforcing the plaster or other coat of material at such points.

The term "nailing strips" is, of course, used merely in a general sense as they may be used for other purposes than nailing and for example as mere ornamentation.

The same system of mounting the wall boards is carried out in the ceiling wherein it will be seen that the clip depends from the lower flange 6 of the channel beam 4 and engages the channel members 10 in the same manner as where the wall boards are arranged vertically except that such channel members engage the said wall boards horizontally instead of vertically.

It will be obvious that a wall may be built in this manner with ease and dispatch, and that the actual securing of the wall boards to the studding does not call for a great amount of skill and the work may in fact be done by quite an inexperienced man once the studding has been placed in position, the application of the final coat of material being of course the work of a plasterer. The distance between the studs may vary without adding difficulties to the application of the wall boards as the ends

of the boards do not necessarily have to overlap the studs as in nailed constructions and a comparatively small number of studs may be used in the wall construction as a result of the strengthening effect of the channel members 10 which, extending throughout the length of the wall, act as horizontal braces.

This invention may be developed within the scope of the following claims without departing from the essential features of the said invention, and it is desired that the specification and drawing be read as merely illustrative and not in a limiting sense, except as necessitated by the prior art.

What I claim is:—

1. In a wall and ceiling construction, studding, wall boards in spaced edge-wise relation, supporting members applied to the meeting edges of adjacent boards transversely of the studding and slightly spaced from one another in back-to-back relation and means engaging said studding and retaining said supporting members.

2. In a wall and ceiling construction, studding, wall boards in spaced edge-wise relation, supporting members applied to the meeting edges of adjacent boards transversely of the studding and slightly spaced from one another in back-to-back relation, and clips anchored on said studding, each clip retaining a pair of said adjacent supporting members.

3. In a wall and ceiling construction, studding, wall boards in spaced edge-wise relation, supporting members applied to the meeting edges of adjacent boards transversely of the studding and slightly spaced from one another in back-to-back relation, and clips slidably mounted on said studding, each clip retaining a pair of said adjacent supporting members.

4. In a wall and ceiling construction, studding, wall boards placed vertically edge to edge adjacent said studding, a clip supported by said studding, said clip resting on the upper edge of a lower board and supporting the lower edge of the next upper board, and oppositely directed tongues formed on said clip and retaining said boards.

5. In a wall and ceiling construction, studding, wall boards placed vertically edge to edge adjacent said studding, supporting members applied to the meeting edges of adjacent boards and slidably spaced from each other, a clip supported by said studding, said clip resting on the upper supporting member of a lower board and supporting the lower supporting member of the next upper board, and oppositely directed tongues formed on said clip and retaining said adjacent supporting members.

In testimony whereof I affix my signature.

CURRY O. WALPER.