

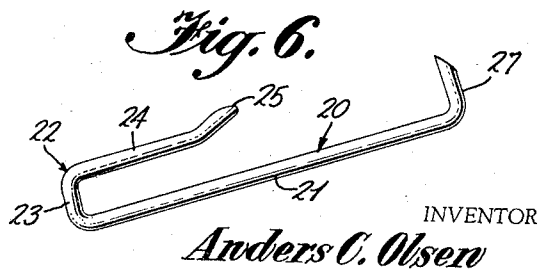
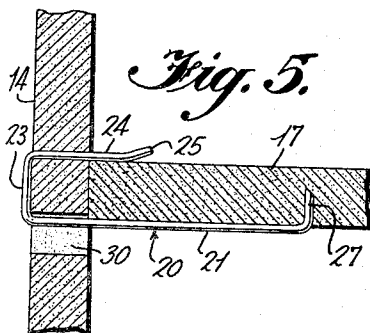
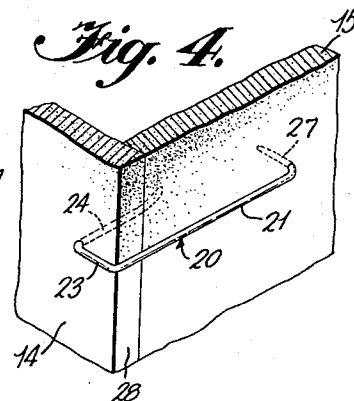
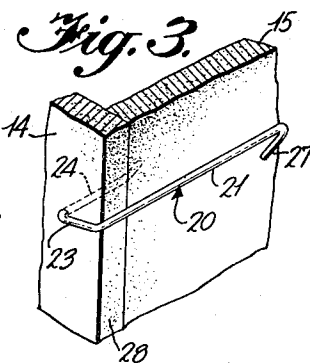
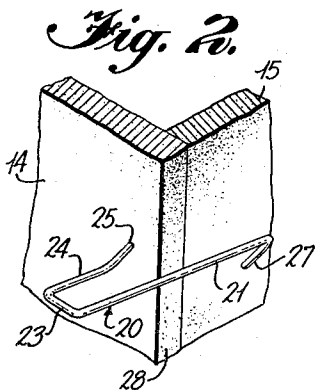
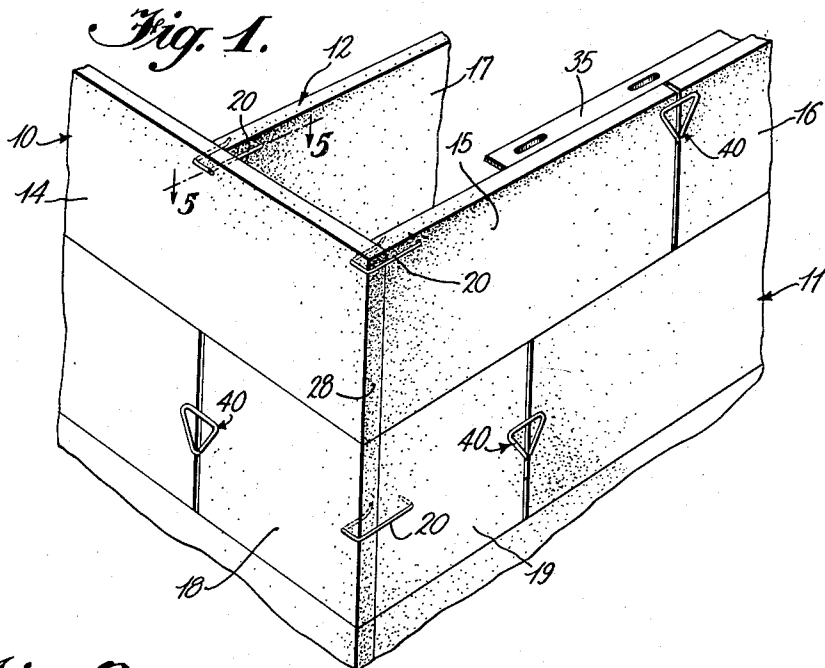
Dec. 21, 1954

A. C. OLSEN
PANEL CLIP

2,697,262

Filed Oct. 10, 1950

2 Sheets-Sheet 1



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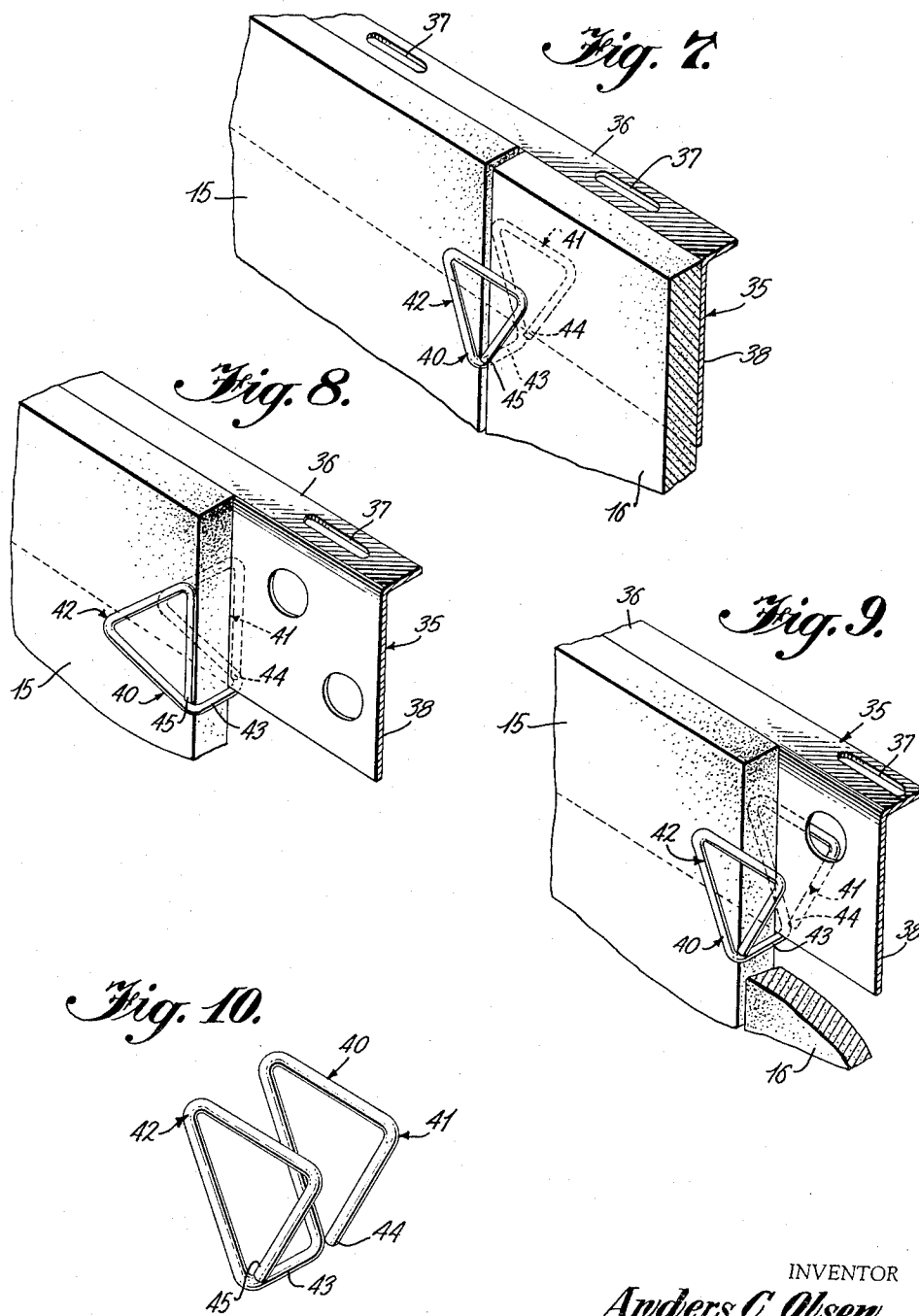
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PANEL CLIP

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Application October 10, 1950, Serial No. 189,368

2 Claims. (Cl. 24—261)

This invention relates to building constructions and more particularly to interior wall, partition, or sheathing structures of the built-up panel type, and has for its general object the provision of a novel and improved structure or installation of this type.

The sheathing or partition structures to which the principles of the present invention are applicable may vary widely in arrangement and composition, but in the embodiment of the invention illustrated and described herein, the paneled partition is shown as a basic installation of nail-penetrable wall-board or sheet lathing material such as, for example, what is known as gypsum lath.

This paneled lathing may be supported by means of studding and floor and ceiling runners, by furring strips applied to an old wall, or by any type of basic interior framework. When this lathing is used, plaster or other exterior coating material may be applied to the outer surface thereof as desired.

The invention in its preferred embodiment contemplates the provision of a wall or partition structure in which the panels composing the structure are not only aligned in co-planar relation in the straight away portions, but in which corners or angles are provided in the partitions or walls, in the form of either L-joints or T-joints; and for the effectuating of such joints between the abutting panel edges, novel connecting elements or clips are provided. Means is afforded also by certain of the clips for attaching the panels to floor or ceiling strips or runners for the sturdy and efficient installation of the lathing.

The means of connecting the panels by the use of these novel clips admits of the possibility of dismantling and removing an installation without such damage thereto as would prevent its reuse elsewhere; and when installed either as a finished sheathing or partition structure, or as basic lathing for covering with plaster or the like, the arrangement results in an installation which is fire-resistant, light in weight, structurally strong, and which will not readily permit the transmission of sound.

Novel clips to be employed in assembling the panels are of types which will effectively interlock the abutting edges of aligned panels and also secure the angularly abutting edges of corner panels.

Other objects and features of novelty will be apparent from the following specification when read in connection with the accompanying drawings in which certain embodiments of the invention are illustrated by way of example.

In the drawings:

Figure 1 is a fragmentary view in perspective of a purely illustrative installation comprising two corner structures in a wall or partition illustrating L-joints and T-joints embodying the principles of the invention;

Figures 2, 3 and 4 are fragmentary perspective views illustrating three steps in applying one of the novel clamping clips which are employed in the joint constructions;

Figure 5 is a view in horizontal section as taken on line 5—5 of Figure 1, of the T-joint construction;

Figure 6 is a view in perspective of one of the novel connecting clips;

Figure 7 is a fragmentary perspective view of an aligned panel and ceiling runner connection;

Figures 8 and 9 are similar views showing successive steps in applying the clip used in this connection; and

Figure 10 is a perspective view of said clip.

In Figure 1 of the drawings, there is illustrated a somewhat fanciful installation of wall or partition panels

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to provide exemplary showings of joints and connections embodying the principles of the present invention. It is understood that the invention is applicable to sheathing and finished walls and partitions and also to lathing structure to which subsequent covering panels or plastering are to be applied, and that the invention is not to be limited to the illustrated embodiments but interpreted rather as having the scope measured by the subjoined claims.

In the illustrated embodiment, one wall assembly is indicated generally by the reference numeral 10 and a second wall assembly extending at right angles to the assembly 10 and abutting at the respective ends of the assemblies, is indicated at 11. In order to indicate a T-joint between wall assemblies a third wall abutting the assembly 10 at an intermediate point, is introduced at 12. Each of the walls is comprised of a plurality of panels of any commonly used or desirable material and these panels are variously indicated at 14, 15, 16, 17, 18 and 19, no limitation as to shape and size or materials of construction being implied by the illustrations.

The invention contemplates the provision of a wall or sheathing construction which combines novel means for connecting angularly joined panels and also connecting aligned abutting panels in the straightaway portions of the walls. Thus, where the wall 11 abuts the wall 10 at an L-joint, the panels 14 and 15, and 18 and 19, are secured together by means of the novel clips 20. As more clearly shown in Figures 2-6 inclusive this clip is preferably made of stiff resilient material such as, for example, metal wire, and includes an elongated arm portion 21 having a flat squared loop portion 22 at one end comprised of a bight 23 and a shorter arm 24 which extends parallel with the arm 21 and is provided with a sharpened or pointed prong 25 at its end. The prong 25 may be slightly angular with respect to the arm 24 or it may be aligned therewith but must be sharpened for the purpose of penetrating one of the panels. The outer end of the elongated arm 21 is provided with a divergent prong 27 which is also sharpened to a point which will readily penetrate the wall-board or gypsum lath employed in such constructions as illustrated herein. In the most preferred form, the prong 27 is substantially at right angles to the remainder of the arm 21 and also bent very slightly upwardly out of the plane of the loop 22.

The application of the clip to an L-joint is clearly shown in Figures 2, 3 and 4 of the drawings. In Figure 2, the prong 25 of the shorter arm 24 of the clip is applied to a point on the panel 14 spaced slightly from its outer edge 28, this spacing being approximately the length of the bight portion 23 of the clip, so that in the final installation the long arm 21 will lie against this edge 28 of panel 14 and against the outer side surface of the panel 15. As shown in Figure 3 the clip has been driven forwardly so that the prong 25 and the short arm 24 have passed through the panel 14 and extended so as to lie against the inner face of the panel 15. The long arm 21, due to the position of the angular prong 27 at the end thereof must be spraddled or sprung slightly during this initial driving of the clip, but after the clip has been driven home so that the bight portion 23 rests against the outer face of the panel 14, the prong 27 is appropriately applied to the surface of the panel 15 and driven therein, and the clip assumes its ultimate position clearly shown in Figures 1 and 4 of the drawings, wherein the two arms 21 and 24 embrace respectively the surfaces of the panel 15 while the outer arm 21 also encloses the edge portion 28 of the panel 14.

In Figure 5 of the drawings and the left-hand portion of Figure 1, there is illustrated a T-joint which forms a part of the present conception and in which the same clip 20 is employed. In this case the prong 25 will pass through the panel 14 in the same way as described in connection with the L-joint, but an opening 30 must be punched through the panel 14 so that the arm 21 with its angular prong 27 may be passed through the panel. This opening may be punched with any sort of awl-like instrument such as an ice-pick or any simple tool convenient for the installer. Ultimately the long arm 21 will embrace one face of the panel 17 while the shorter

arm 24 lies alongside of the opposite face, and the prong 27 is driven into the panel 17.

At points along each of the wall sections, the panels comprising the separate sections are disposed in alignment with their edges abutting and in order to secure these panel edges in such alignment, and also where necessary to connect the panels to supporting structures such as the flanged ceiling runner 35, another novel clip is provided which cooperates with the previously described installation in permitting the convenient entire assembly of angularly abutting groups of wall or sheathing panels. The straightaway connections are best illustrated in Figures 7-10 inclusive of the drawings where the junction of panels 15 and 16 is shown. Although the ceiling runner 35 enters the combination at this particular point, it will be readily understood that this will not affect the proper understanding of the connection of two aligned panels only such as shown elsewhere in Figure 1 of the drawings.

The ceiling runner is shown as being of a common type having an upper flange 36 provided with slots 37 for the reception of fastening elements for securing the runner to the ceiling superstructure and a downwardly extending flange 38 which is adapted to lie snugly alongside the edges of the panels.

For the purpose of effecting this straightaway joint and connection, a novel clip is employed which is shown detached and in perspective in Figure 10. The clip generally designated by the reference numeral 40 comprises two flat triangular portions 41 which lie in parallel planes, these triangular planar portions being connected at one corner by means of the intermediate transverse portion 43. Although not strictly limited thereto, this element may best be made of a piece of stiff continuous wire, the two ends 44 and 45 of which are shown brought into close proximity to the opposite ends of the intermediate portion 43. The general effect of the bending of the wire in this fashion, is the provision of the two extended triangular areas 41 and 42 disposed in parallel relationship and adapted to clamp portions of the panels and other structure between them, these extended portions being connected at one edge (in this case at one of the corners of the triangle) so that the clip may be rotated about the intermediate connecting portions 43 as an axis.

In applying the clip to the two panels, the intermediate portion 43 is disposed adjacent the edge of a panel such as the one indicated at 15 and the two triangular areas or extended portions 41 and 42 of the clip are placed in embracing relationship with the edge of the panel, all portions of the triangular areas being within the confines of that panel as clearly shown in Figure 8 of the drawings. In this embodiment, where the ceiling runner 35 occurs, the area 41 of the clip also embraces the flange 38 of the ceiling strip and effectively secures the panel 15 thereto. Next, the adjacent panel 16 is installed, this panel occupying the relative position shown in Figure 7 of the drawings, but broken away in Figure 9. After the panel 16 is placed in position, the clip 40 is rotated about the axis of the connecting portion 43 until it assumes the position shown in Figure 9 where the two opposed extended areas of the clip designated 41 and 42 cover portions of the margins of both of the panels 15 and 16.

The provision of the specific triangular loops in the clips 40 is an ideal configuration for securing the panels by the eccentric swinging movement just described, but it is obvious from the implications of such description, that the ease and facility of installation will be at least partially satisfied by making the clip, as broadly set forth in certain of the claims, with polygonal loop portions, provided only that the connecting intermediate portion 43 of the clip is disposed at a corresponding corner of each of such polygons. In this way the adjacent angular portions of the loops will diverge from the axis of rotation provided by the wire portion 43, at angles consid-

erably less than 180° as would be the case if the connecting portion 43 were disposed along one of the sides of the polygonal loop. The virtue of this arrangement is obvious from the description of the installation set forth above where the clip is first disposed with the two loop portions completely overlying one of the panels, and the only part of the clip lying outside of the confines of such first panel is the connecting wire 43 itself. In this way no serious obstruction to the placement of the second or adjoining panel is offered by the clip, but when the panels are aligned the clip may then be swung about the axis of the connecting portion 43 to overlie both panels.

It will be noted that the interposition of the intermediate portion 43 of the clip between the panels, spaces them slightly apart, but this is of no disadvantage in the erection of gypsum lathing since the plaster covering will fill this crack. The intermediate portion of the clip 43 is quite narrow, but if desired the panels can be abutted one against the other with sufficient force to cause the portion 43 to embed itself in the margins of the panels and reduce the clearance between the edges to a negligible amount or eliminate it entirely.

It will be seen that by means of the present invention a novel wall structure including various types of aligned and angular joints has been provided, as well as novel connections for affording such joints.

Various changes and modifications may be made in the embodiment illustrated and described herein without departing from the scope of the invention as defined by the following claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. For use as a retaining and clamping element in paneled building constructions, as in gripping the aligned margins of adjacent panels, an article of manufacture comprising a rotatable eccentric clamping clip which consists of a relatively stiff wire member bent to provide a pair of spaced polygonal closed conterminous loop portions disposed in parallel planes and connected only at corresponding corner points by a single transverse intermediate length of wire, which provides an eccentric pivotal axis for the clip, the adjacent margins of each of the spaced loop portions diverging from said axis at angles of considerably less than 180°.
2. For use as a retaining and clamping element in paneled building constructions, as in gripping the aligned margins of adjacent panels, an article of manufacture comprising a rotatable eccentric clamping clip which consists of a relatively stiff but resilient wire member bent to provide a pair of spaced substantially triangular closed conterminous loop portions disposed in parallel planes and connected only at corresponding corner points by a single transverse intermediate length of wire, which provides an eccentric pivotal axis for the clip, the adjacent margins of each of the spaced loop portions diverging from said axis at an angle of about 60°.

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