

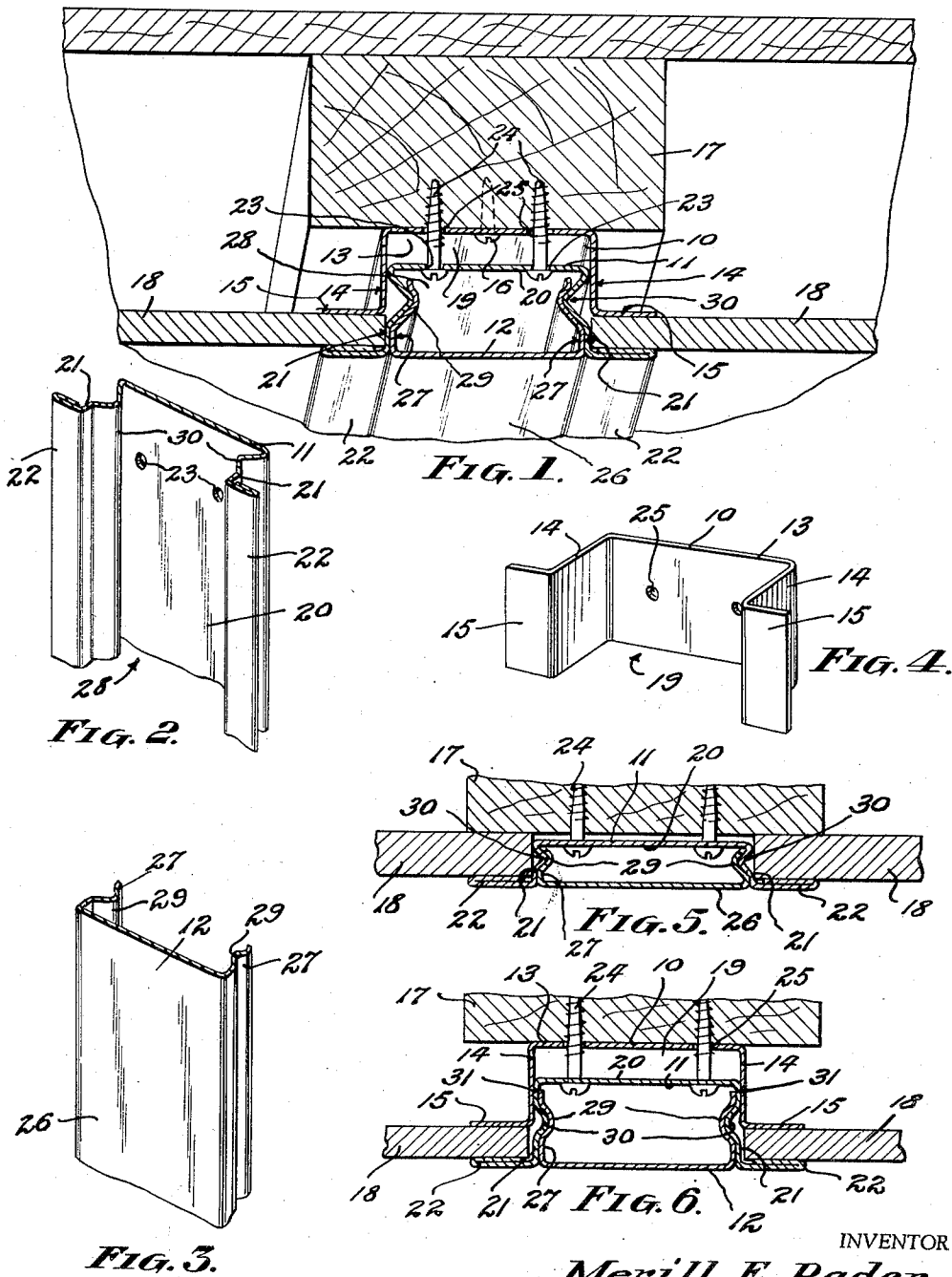
Aug. 27, 1957

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2,803,858

FASTENING MEANS FOR WALL PANELS

Filed June 13, 1955



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2,803,858

FASTENING MEANS FOR WALL PANELS

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Application July 13, 1955, Serial No. 521,802

2 Claims. (Cl. 20—74)

This invention relates to the mounting and securing of relatively rigid preformed wall panels in operative positions of application upon, or in connection with, associated building wall frame members.

It is an object of the invention to provide a novel assembly composed of interconnected, sheet-metal mounting and fastening strips formed for ready connection with associated frame members of a building wall and with each other, whereby to secure in a firmly held and concealed manner adjoining marginal portions of a plurality of related wall panels.

Another object is to provide sheet metal fastening strips formed for secure clamping engagement with adjacent margins of a plurality of rigid wall panels, and wherein the exposed surfaces of the strips are so formed as to present an attractive appearance and one in which their mechanical panel-holding characteristics are largely concealed.

A further object is to provide improved wall panel mounting and securing means composed of channel-shaped, interfitting, base and clamping strips between which adjoining portions of the marginal edges of associated wall panels are received and held, the strips including spaced webs through which fastening devices are passed in securing the strips to an underlying wall-frame member, the spaced webs providing for relative movement between the base and clamping strips in enabling the latter in applying clamping forces to panels arranged between the same.

An additional object is to provide the channel-shaped clamping strip of such a wall-panel-mounting assembly with a removable cover strip, which, when in its position of operative association with the clamping strip, provides smooth, flush, exposed surfaces of inviting appearance between adjacent panels, at the same time concealing the internal structure of the clamping strip.

Certain practical embodiments of the invention are illustrated in the accompanying drawing, and wherein:

Fig. 1 is a horizontal, transverse cross-sectional view, extended into a perspective showing, of a preferred form of my improved wall-panel-mounting and retaining means;

Fig. 2 is a similar view disclosing the clamping strip of said means by itself;

Fig. 3 is a corresponding view of the cover strip;

Fig. 4 is a detail perspective view of a base strip or member utilized in the means of the present invention;

Fig. 5 is a detail horizontal sectional view of a modified form of the invention disclosing its construction when a base strip or member is not utilized;

Fig. 6 is a similar view disclosing a still further modified form.

Referring to the disclosure of the structural details of the wall-panel-mounting and retaining means of the present invention as disclosed in the specific form thereof illustrated in Figs. 1 through 4 of the drawing, the numeral 10 designates the base strip or member of said means, the numeral 11 the clamping or panel-retaining strip thereof, and the numeral 12 the removable cover strip or plate

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for the retaining strip. The base strip or member 10 may comprise an elongated, strip-like body coextensive in length with the clamping strip or the cover plate, or, as shown in Fig. 4, it may possess the form of a relatively short bracket, requiring the use of a plurality of the same in aligned spaced order for cooperation with each associated clamping strip, as will be readily understood.

Each of the strips 10, 11 and 12 is composed of a suitably rigid sheet material such as mild or stainless steel or various other ferrous compositions well known in the building industry, such sheet materials being rolled or otherwise shaped to desired configuration, and included therewith is the use of aluminum-containing or other lightweight metallic extrusions, or one or more of the so-called plastics.

As here shown, however, each base member or strip includes a flat web 13 which terminates in spaced, outwardly directed, parallel side arms 14 arranged in perpendicular order to said web and which at the outer extremities thereof terminate in outwardly and laterally directed panel-seating extensions 15. Preferably, through the use of screws, or other equivalent fastening devices indicated at 16, the webs 13 of the base members are stationarily secured in direct engagement with adjoining faces of wall-frame-forming members 17, such as conventional frame studding, hereinafter referred to as a "stud."

Adapted to be seated on and in direct contact with the extensions 15 of the base members are the inner marginal portions of a pair of substantially rigid wall panels 18. To hold these panels in securely seated relationship with the base members or strips 10, each clamping strip is formed to possess a cross-sectional configuration corresponding generally to that of the associated base member or strip, thus enabling the body of the clamping strip to enter and be telescopingly received in the open channel 19 formed by each base member.

To this end, each clamping strip is shaped to provide a web 20 which terminates in outwardly directed, relatively spaced, parallel, side flanges 21, the latter, in turn, terminating in outturned panel-engaging extensions 22. These latter extensions are preferably each composed of a double thickness of the sheet material from which the clamping strip is formed, so that the extensions possess rigidity and body, enabling the same to be drawn into and maintained in close-fitting, non-undulating, flat contact with the outer surfaces of the marginal regions of the panels 18, whereby the latter may be securely clamped between the extensions 15 and 22 of the base and panel-retaining strips 10 and 11, respectively.

In attaining such clamping of the wall panels, the webs 20 of the strips 11 are formed with openings 23 through which pass the shanks of headed screws 24, or other equivalent fastening means. Preferably, the screws 24 are arranged in pairs, as shown in Fig. 1, in order to be disposed on opposite sides of the centrally disposed base member screws 16. The shanks of the screws 24 may, also, pass through aligned openings 25 formed in the base member or strip 10. By tightening the screws 24, the flanges or extensions 22 are drawn into firm holding contact with the wall panels. It will be noted that the webs 13 and 20 of the strips 10 and 11, respectively, are maintained in spaced relation, so that the clamping action of the strips 11 will not be in any way hampered or curtailed.

To impart a finished and attractive appearance to these mounting strips when viewed from within a room containing the same on its walls, use is made of the cover strips or plates 12. Each of the latter includes a flat web 26 which terminates at its ends in spaced, parallel, in-turned, resilient, locking flanges 27. These flanges are received within the outwardly opening channel 28 of the clamping strip 11, the flanges 27 being provided with

longitudinally extending rib formations 29, the latter receiving corresponding formations 30 integrally formed with the side flanges 21 of the clamping strips.

It will be evident that when the clamping strips 11 are mounted by the screws 24 on the studs 17 in association with the base strips 10 and wall panels 18, the cover plates or strips 12 may be readily fastened in position by forcing the resilient side flanges 27 into the channels 28 so that the rib formations 29 will flex over and snap behind the complementary rib formations 30 of the clamping strips, causing the nesting of these formations as disclosed in Fig. 1. When so positioned the webs 26 of the cover plates will be arranged in the general vertical plane of the panel-engaging extensions 22 of the strips 11, presenting a flush-fitting, stripe-producing appearance of visually pleasing form.

Due to the provision of the base member 10 the panels 18 are spaced outwardly from the stud members 17 to provide air space separation of an effective character between the panels and the wall-forming framework of a building. If such separation should not be deemed necessary in particular assemblies, the base strip or member, as shown in Fig. 5, may be omitted and the panels 18 allowed to seat directly on the stud member or members. Otherwise, the construction is identical with that previously described.

In the arrangement shown in Fig. 6, virtually the same construction shown in Fig. 1 is employed, the only difference residing in extending the bearing or surface area 31 present on the outer surfaces of the flanges 21 of the clamping strip 11 and which are disposed between the rib formations 30 of the flanges and the webs 20 thereof. This increased surface area is desirable in certain instances in that it precludes any tendency on the part of the clamping strip to rock or assume a cocked position in the channel 28 when the screws 24 are being inserted and tightened.

Various other modifications may be made in the construction of the devices of the present invention beyond those here illustrated, and I therefore reserve the right to employ all such variations which may be said to fall fairly within the scope of the claims.

I claim:

1. A strip assembly for mounting and securing rigid finish panels in united order on a wall base, comprising: a channel-shaped base member having a web which terminates in outwardly and perpendicularly extending, parallel side flanges, the latter having outer portions terminated in laterally directed panel-seating extensions disposed in a plane parallel with and spaced outwardly from that of said web; a retaining strip of channel form receivable in the channel of said base member, said strip including a web having outturned side flanges and laterally directed outer, panel-engaging extensions complementary to those of the base members, the webs of said member and strip when in telescoping relation being relatively spaced in an unobstructed manner and the side flanges thereof in free sliding contact, the outer extensions of said member and strip receiving between them for clamping engagement adjacent edge portions of a pair of associated wall panels; headed fastening devices having shanks of such length as to pass through aligned openings formed in the spaced webs of said member and strip to secure the same to the associated inwardly

disposed wall base on which the web of the base member seats, the unobstructed spacing of the webs of said member and strip enabling the strip to be adjusted by the tightening of said devices relative to the base member to compensate for variation in panel thickness and to cause the outer extensions of the retaining strip to produce clamping pressure on said panels, whereby to maintain the same in positively held and firm seating engagement with the extensions of said base member; a cover plate occupying the outer part of the channel of the retaining strip and disposed in flush relationship with the outer flanges of said retaining strip; and inter-engaging fastening formations provided on the adjoining side flanges of said strips for retaining the same in assembled order.

2. Wall panel securing means, comprising: a base member of sheet material embodying a web which terminates at the sides thereof in relatively spaced and perpendicularly disposed, parallel side flanges, the latter defining an open channel and having their outer portions terminated in outturned panel-seating extensions arranged in a plane substantially parallel to that of said web, the latter being formed to be directly seated upon and secured to an associated wall frame; a panel-retaining strip of sheet material possessing substantially the same cross-sectional configuration of said base member and disposed to be partially received in the channel thereof, said retaining strip including a web spaced from the web of the base member and terminating in spaced, outwardly directed side flanges having outturned panel-engaging extensions, the engagement of the extensions of said retaining strip and base member with the outer and inner surfaces respectively of a pair of associated wall panels serving to clamp and retain said panels in connection with the base member and strip, and in outwardly spaced relationship from said wall frame, fastening devices having shanks of such length as to pass through aligned openings formed in the webs of said base member and retaining strip and to penetrate the wall frame to which the base member is fastened, whereby to unite the retaining strip with said wall frame in a manner enabling the same to be moved adjustably inwardly within the receiving channel of the base member and to cause the extensions of the retaining strip to securely grip and retain the wall panels in their mounted positions in compensating for thickness variations of said panels; and a narrow elongated cover plate of sheet material received in the open channel of said retaining strip to conceal the interior structure thereof, said cover plate including a flat web which, when the finishing element is operatively positioned, is disposed in substantially the same plane as the panel-engaging extensions of the retaining strip, the web of said cover plate terminating in inwardly directed, parallel side flanges having detachable fastening engagement with the flanges of said retaining strip.

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