

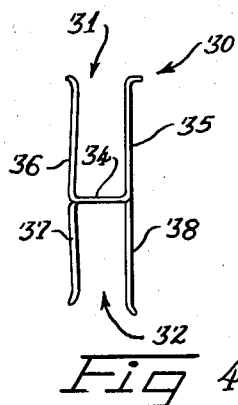
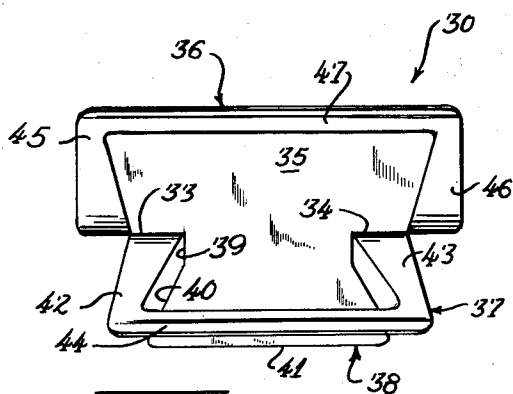
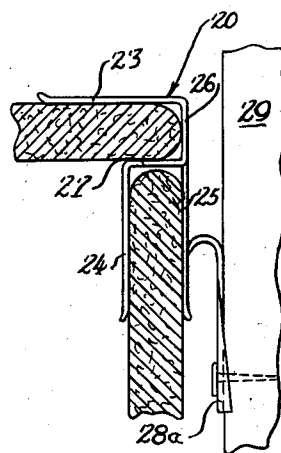
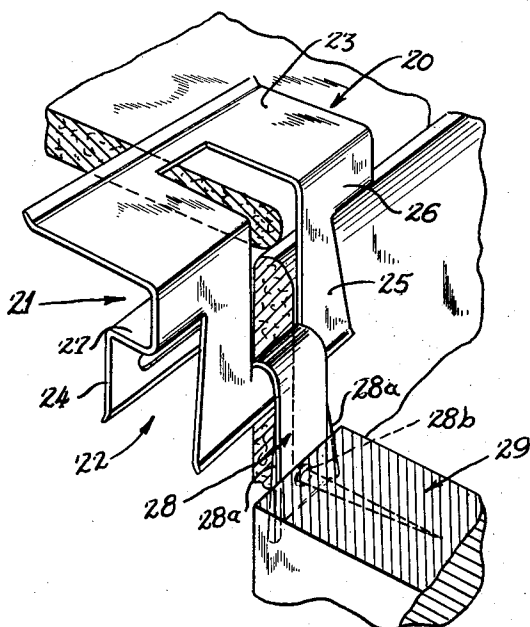
Aug. 18, 1964

H. A. BALINSKI
CLIP CONSTRUCTION

3,144,733

Filed Dec. 26, 1961

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

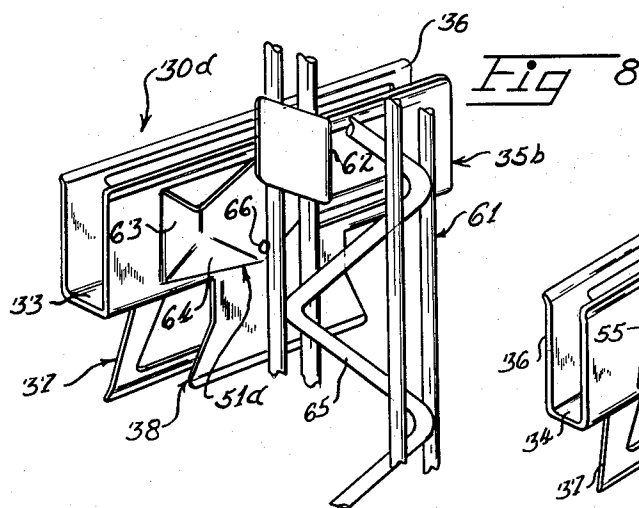


Fig 8

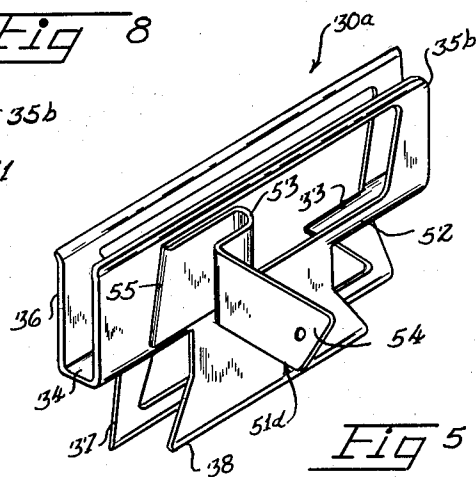


Fig 5

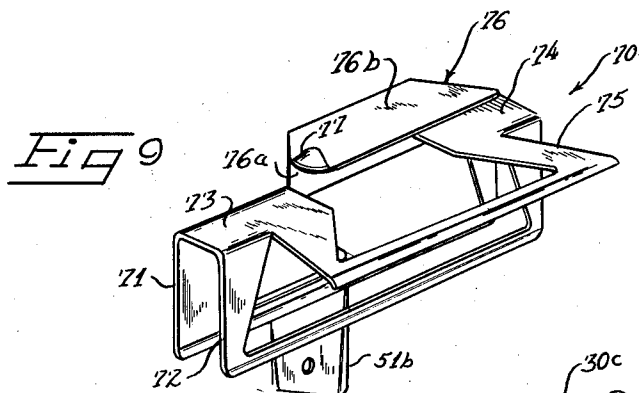


Fig 9

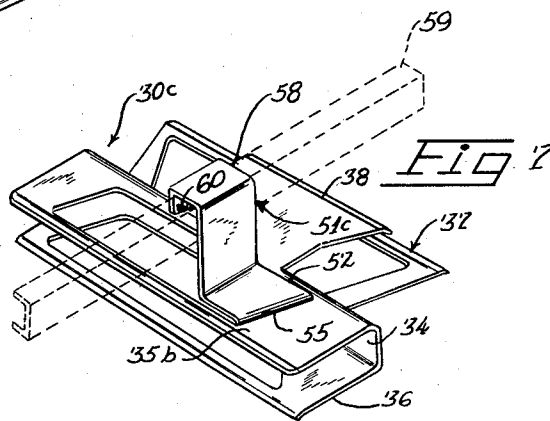


Fig 7

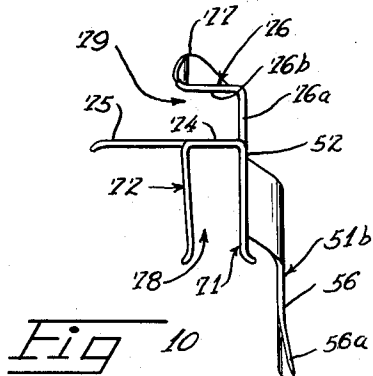


Fig 10

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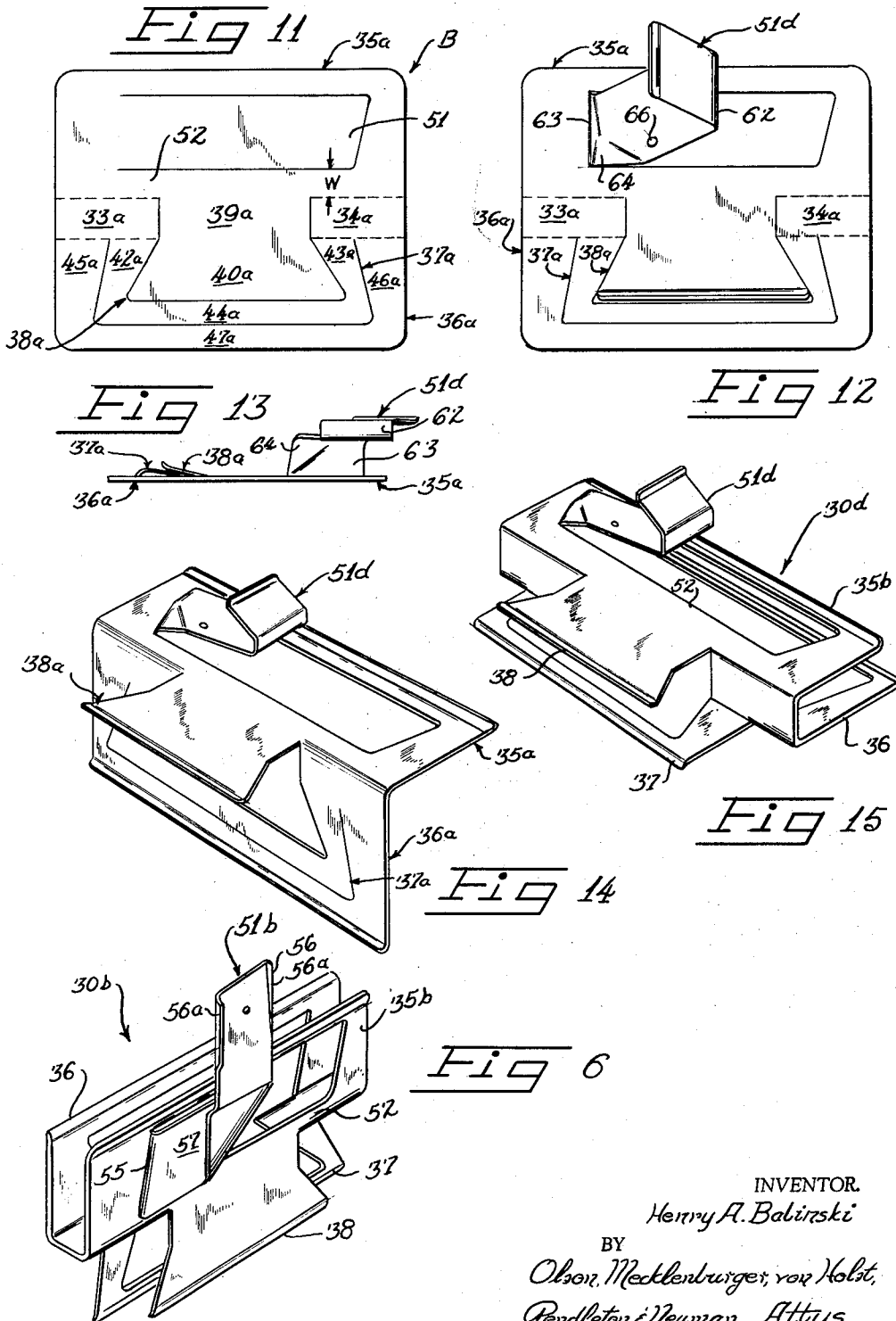
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CLIP CONSTRUCTION

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3 Sheets-Sheet 3



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1

3,144,733

CLIP CONSTRUCTION

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Filed Dec. 26, 1961, Ser. No. 161,963
15 Claims. (Cl. 50—481)

This invention relates to a building construction and more particularly to a sheet metal type of clip adapted for retaining edge portions of adjacent building panels in a predetermined relation. This invention is particularly suited to the formation of such a clip for resiliently mounting building panels.

Various clips of this generally type have heretofore been proposed but, because of their design, are possessed of numerous shortcomings. Among these shortcomings, is a lack of rigidity to retain the adjacent panels in the desired relation with respect to one another and with respect to the support framing, or the related problem of the use of increased gauge sheet metal to provide sufficient rigidity thereby resulting in increased cost of fabrication. Also, many prior clips provided a plurality of sharp edged projections or fingers which oftentimes proved hazardous to the erector and which rendered the clips susceptible to becoming entangled with one another thereby making the task of separating the individual clips from a group thereof a time-consuming and frustrating operation. These shortcomings were largely overcome by a clip construction wherein secondary clip fingers or flanges were struck from within the area of primary flanges in a manner to provide clip legs which each comprised generally parallel leg portions joined by a bar at the distal ends of these leg portions. The advantages of such a construction are retained in clips according to this invention.

In instances where prior clips of the general type referred to above have been used as furring clips suitable for securing to a stud or base wall, such clips were costly to fabricate and normally required a separate tongue, for engaging the supporting stud or wall, to be welded or riveted to the remainder of the clip. Alternatively, a mounting tongue for such clips was formed as a separate projection extending from the body of the clip and formed from material external to and/or projecting from those portions of the blank from which the various portions of the clip body were formed. In addition to the complications inherent in the fabrication of these latter clips, a considerable amount of material was wasted.

The present invention provides an improved clip construction wherein a strong unitary double channel clip may be economically formed from a single generally rectangular piece of sheet material and wherein a large area portion of the clip is made available for striking out to conveniently and easily form a comparatively large, strong, effective resilient mounting member.

The strength and resilience of a mounting member for clips of the type to which this invention pertains is of great importance in certain wall and/or ceiling constructions for homes, commercial buildings, and other structures. One desirable building practice in forming walls having a base formed of preformed panels, such as gypsum board, is to provide a resilient support connection between the base panels and the supporting or framing members. This resilient connection reduces transmission of forces and relative motion from the support or framing members to the supported wall, thereby providing protection against cracking or separating of the material of the inner finished surface of the wall, such as plaster, and decreasing the sound transmission characteristics of the wall. Because of the loads and forces involved, and considering the requirements of forming various shapes of resilient

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mounting members to engage various types of support or framing members, it is desirable to provide a long and large cross-sectional area support member on mounting clips for effecting desirable support of such walls. However, it is also desirable for a clip having such a mounting member to meet other requirements such as ease of fabrication, economy and lack of projections and sharp edges as outlined in the preceding paragraphs. Further, such a clip should minimize twisting and turning of the clips when installed, and guard against passage of plaster between the supported panels to a point where it could key the otherwise resiliently supported panels to adjacent supports.

Thus, it is an object of this invention to provide an improved clip meeting the criteria outlined above.

It is another object of this invention to provide an improved clip which is economical to produce, which is convenient and safe to use, and which is adapted for the formation of a relatively large resilient mounting member.

It is another object of this invention to provide an improved resilient clip which is convenient and economical to manufacture and which provides effective engagement with and firm resilient support for accommodated panels.

It is another object of this invention to make efficient use of the material of a clip blank to form an improved clip with a long mounting member of large effective cross section.

It is another object of this invention to provide an improved method of forming a double channel resilient panel mounting clip.

Further and additional objects and advantages will appear to those skilled in this art from the description and accompanying drawings which describe and illustrate certain embodiments of the invention, as well as from the appended claims.

In accordance with one embodiment of this invention a clip is provided which is adapted for accommodating the edge portions of abutting panels in a building construction and maintaining the panels in a predetermined relation. The clip includes a pair of angularly disposed, substantially channel-shaped pockets in which the edge portions of the panels are received. The pockets each include a base portion for contacting the edge of a panel and a pair of opposed elongated leg portions adapted to engage opposite planar surfaces of the accommodated panel. The clip is formed from a single generally rectangular sheet-metal blank. One leg portion of one of the pockets is formed from one end portion of the blank and is continuous and unbroken except for the area of a resilient mounting member struck therefrom. The remaining leg portions are formed from interesting parts of the remainder of the blank, and together with the base portions form complementary parts of the remainder of the blank.

For a more complete understanding of this invention, reference should be made to the illustrative forms of the drawings, wherein:

FIG. 1 is a fragmentary perspective view of a building construction partially cut away to expose an improved clip embodying teachings of this invention;

FIG. 2 is an end elevation view of the construction of FIG. 1;

FIG. 3 is a side elevation view of another improved clip embodying teachings of this invention;

FIG. 4 is an end elevation view of the clip of FIG. 1;

FIG. 5 is a perspective view of a modification of the clip of FIG. 3, including one form of a resilient mounting member;

FIGS. 6, 7 and 8 are perspective views of other modifications of the clip of FIG. 3, illustrating various other forms of mounting members for securing to different types of supports or framing members;

FIG. 9 is a perspective view of a clip similar to that shown in FIG. 6 but as modified to accommodate right-angularly disposed panels, and including a ceiling spacer tab;

FIG. 10 is an end elevation view of the clip of FIG. 9;

FIG. 11 is a plan view of a sheet metal blank cut to form a clip as in any one of FIGS. 5-10; and

FIGS. 12-15 illustrate the steps of an improved method of forming a clip from the blank in FIG. 11.

Referring first to FIGS. 1 and 2, clip 20 includes a pair of angularly disposed pockets 21 and 22 for accommodating a pair of right-angularly arranged panels as indicated. This clip includes a pair of channel-like pockets 21 and 22 defined by leg portions 23, 24 and 25, a base portion 26, and a dual purpose base and leg portion 27. Primary flange or leg portion 23 is continuous and unbroken except for such material as may be removed therefrom for forming a mounting clip, for instance as shown in FIGS. 3 and 4, and may be formed from one end portion of a rectangular blank. The remaining base and leg portions of clip 20 may be formed from the remaining portion of such a blank.

Base portion 26 extends normal to primary flange 23, and secondary flange 25 extends from and is coplanar with base portion 26. Leg-base portion 27 and primary flange 24 are positioned by bending portion 27 at right angles to base portion 26 and bending flange 24 at right angles to leg-base portion 27, parallel to secondary flange 25, as illustrated. Flange 25 is of generally truncated triangular shape with its base oriented away from base portion 26, and is struck from and corresponds to the opening in leg-base portion 27 and leg portion 24. As flange 24 is of generally rectangular outline, it includes a pair of tapering side elements and a bridging element joining the outer ends of the side elements (similar to flange 36 of clip 30 described below).

Clip 20 includes a mounting element 28 struck from leg portion 23, base portion 26, and leg portion 25. The base end of this mounting element is joined to flange 25 and it is looped or bent into a U-shape as illustrated to provide resilient support and furring of the accommodated panels away from a support member such as a stud 29. The mounting element 28 has the outer elongated edges thereof bent slightly in a direction toward the adjacent surface of the stud 29, so as to form stiffening flanges 28a which also grip the stud to prevent rotation of the clip about its point of securement to the support. An opening 28b is formed in the outer portion of the mounting element to facilitate anchoring of the element to the support by a nail or screw as indicated.

Referring now to FIGS. 3 and 4, improved clip 30 is a field clip of the type designed for use in joining two adjacent panels without also specifically providing for securement of the clip to supporting structures. This clip however is particularly designed to provide for the formation of a resilient mounting member, as will be later described. Clip 30 includes a pair of angularly disposed pockets 31 and 32 for receiving adjacent edge portions of a pair of generally coplanar panels in a building construction. Each of the pockets 31 and 32 is substantially channel-shaped in cross section, as best seen in FIG. 4, and includes a base portion for contacting the edge of the respective accommodated panel and a pair of generally parallel elongated leg portions projecting from the base for engaging opposite planar surfaces of the accommodated panels. In this modification common base portions 33 and 34 serve as the base portions of both of channels 31 and 32. One leg portion 35 of pocket 31 comprises a continuous unbroken generally planar primary flange which may comprise one entire end portion of a blank from which clip 30 is formed, as will be described more fully below regarding FIG. 11. Base portions 33 and 34 are joined to the lower edge of flange 35 and are bent to a position generally normal to flange 35 as illustrated. Leg portions 36 and 37 are joined

to the distal edge of base portions 33 and 34 and are bent in opposite directions generally normal to the base portions as illustrated. Leg portion 36, base portions 33 and 34, and leg portion 35 define pocket 21. A fourth leg portion 38 is disposed in coplanar relation with leg 35 and extends from the edge of leg 35 corresponding to base portions 33 and 34. Leg portions 33, base portions 33 and 34 and leg portion 37 define pocket 32.

In the illustrated embodiment, leg 38 includes a neck portion 39 and an outer end portion 40 which is tapered outwardly to a distal edge 41 and is of the general form of a truncated triangle having its base oriented away from base portions 43 and 44. Referring now also to FIG. 11 which illustrates a generally rectangular blank B cut to form a clip as in FIGS. 3 and 4, but with a mounting member struck out as will be later described, neck 39 is formed from corresponding portion 39a of blank B struck from between portions 33a and 34a which form base portions 33 and 34. Leg portion 37 is formed from the part 37a of the blank immediately surrounding and interlocking with portion 40a which forms distal end 40 of leg portion 38. Correspondingly, leg portion 36 is formed from the part 36a of blank B immediately surrounding and interlocking with part 37a. Leg portion 35 is formed by the remaining end portion indicated at 35a, but without striking out strip 51.

Leg portion 37 includes a pair of spaced generally coplanar elongated side elements 42 and 43 joined at their inner ends to base portions 33 and 34 and joined at their distal ends by a bridging element 44. As end portion 40 is struck from within the limits of the part 37a which includes portions 42a, 43a and 44a corresponding to elements 42, 43 and 44, and which forms leg 37, side elements 42 and 43 and bridging element 44 delimit a truncated triangular opening of the same shape and size as end portion 40. The outer edges of side elements 42 and 43 extend from the base portions 33 and 34 in outwardly diverging relation whereby the outer edges of leg 37 also define a truncated triangular shape with its base oriented away from base portions 33 and 34. However, the outer edges of side elements 42 and 43 define a greater acute angle with the base portions 33 and 34 than do the inner edges of these elements whereby the side elements taper to progressively narrower widths toward their distal ends.

Leg portion 36 includes a pair of side elements 45 and 46 extending outward from base portions 33 and 34 and joined at their distal ends by a bridging element 47 in the same general manner as the aforescribed parts of leg portion 37. As leg portion 36 is formed from portion 36a, including corresponding portions 45a, 46a and 47a, and portion 37a is struck therefrom, side elements 45 and 46 and bridging element 47 delimit an opening corresponding to the external outline of leg portion 37. Side elements 45a and 46a are defined between the rectangular outer limits of blank B and the diverging edges of portions 42a and 43a, whereby side elements 45 and 46 are of greatest width at their point of securement to base portions 33 and 34 and taper to progressively narrower widths towards their distal ends.

It will thus be observed that the three leg portions 36, 37 and 38 are formed from similar interlocking segments of one portion of blank B whereby at least the outer ends of these leg portions may be termed to be of similar interlocking shapes. Further, the base portions 33 and 34 and the three leg portions 36, 37 and 38 are all formed from one portion of blank B, namely that portion below the upper limit of base forming portions 33a and 34a as seen in FIG. 11, and comprise complementary portions of this part of the blank.

The outwardly tapering or truncated triangular configuration of the various inner and outer edges of the leg portions, and the related tapered form of the side elements accomplishes two significant purposes. First, an extensive area of juncture is obtained between each leg portion and the remaining parts of the clip to effectively

resist bending of these leg portions from their clip-forming position, while, secondly, providing distal panel abutting edges of maximum length. It will be noted that the various side elements are very narrow at their distal ends, as compared to the width of the clip, and that the distal edge of each of the leg portions extends substantially the full width of the clip to provide an extensive bearing surface.

The various leg portions of the resulting clip 30 may be characterized in another manner as follows: Legs 35 and 36 both are of an external configuration corresponding to the respective outer limits of the blank from which the clip is formed and may be termed primary flanges. Leg portions 37 and 38 are both struck from the internal area of another flange and may appropriately be termed secondary flanges, or a secondary and a tertiary flange, respectively. Three of the four legs of the double-channel clip, and the base portions, are thus formed from one portion of blank B leaving the remaining portion for use solely in forming a primary clip and a struck-out resilient mounting member.

Due to the mode of formation and the resultant shape of the various flanges, it will be appreciated that portions 36a and 37a and 38a are of progressively less length as measured from a common base line, such as either of the bend lines delimiting base portions 33a and 34a. To make the clip as nearly symmetrical as possible, with pockets of substantially equal depth, and to place the distal edges of the various flanges in generally opposed relation, primary flange 36 is placed in opposition to primary flange 35 to form pocket 31 while secondary flanges 37 and 38 are utilized to form pocket 32. This arrangement also is advantageous in that neck portion 39a, taken from the base or bight portion, is included in flange 38 to effectively lengthen what would otherwise be the shortest of the interesting flanges, thereby providing pockets of adequate depth from a relatively small blank. Maximum pocket depth is often important as the channels usually receive abutting panel edges which may be slightly irregular, or which may have been broken and crushed at the edges or corners. Long and deep channels of the type provided by this construction insure that sound portions of the panels will be engaged despite such edge deformities. As these clips are normally applied with legs 36 and 37 exposed, another advantage of forming leg 38 in part from the bight portion is that this better exposes the abutting portions of accommodated boards to facilitate keying of latter applied plaster coats.

As a specific illustration of one clip structure in accordance with this invention, a 3" wide strip of electro-galvanized 23 gauge steel U.S. Standard (Revised) (.031"), of Rockwell hardness 65 to 80 B scale, was subjected to a multiple die operation wherein it was cut, punched and formed into clips according to this invention. The resultant clip was about 3" wide and was of a height of about 2" overall. A web width of about .385" was provided for a standard size plaster base panel of about $\frac{3}{8}$ " in thickness. In this regard, one leg portion or flange of each channel was inclined slightly inward toward the opposite flange whereby a clearance of about .320" was provided between the distal ends of the flanges of each channel. This convergence of the leg portions of each channel insures snug engagement and gripping of accommodated panels. To facilitate entry of the panels into these pockets, as well as to strengthen the distal ends of the leg portions, particularly the bridging elements, the distal edges of the flanges were bent or flared outwardly as shown. The base dimension of each of side portions 42, 43, 45 and 46 was $\frac{7}{16}$ " and the minimum lateral dimension of each of these elements was about $\frac{3}{16}$ ". Each of the bridging elements was about $\frac{3}{16}$ " wide. The resulting distal edge portions of legs 36, 37 and 38 were approximately 3", 2 $\frac{1}{2}$ " and 2" long, respectively, depending of course upon the radius of curvature utilized for forming the extreme edge corners of

these legs. The overall depth of each of the flanges 35, 36, 37 and 38 was about $\frac{7}{8}$ " $\frac{15}{16}$ ", $\frac{3}{4}$ " and $\frac{7}{8}$ " respectively.

FIGS. 5, 6, 7 and 8 illustrate various modifications 30a, 30b, 30c and 30d, respectively, of the clip of FIG. 3 for use as resilient mounting clips in building constructions. Each of these clips includes the basic structure illustrated and described with regard to FIGS. 3 and 4, but also includes a mounting member (51a, 51b, 51c and 51d, respectively) struck from the central area of the otherwise continuous unbroken area of a primary flange 35b corresponding to flange 35 of clip 30. The area available for forming such mounting members, and the manner of forming them from a primary flange 35b, is indicated by the mounting element strip 51 outlined in FIG. 11. The size of strip 51 is limited only by the requisites of adequate strength of the remaining portions of leg 35b, which may be of dimensions corresponding to parts 45, 46, 47 of flange 36, and the requirement of a base edge strip portion 52 of a width W. Portion 52 provides resilient support for flange 38 and, in addition, together with neck portion 39a, prevents later applied plaster from seeping through the board joint and the clip and keying the clip to the adjacent support structure.

In one model of a clip otherwise of the dimensions set forth in the previous specific example, the width W of portion 52 was about $\frac{3}{16}$ ", and strip 51 was about 2 $\frac{3}{8}$ " x $\frac{5}{8}$ ".

Mounting strip 51 may include a hole or perforation therethrough similar to that described above regarding mounting member 28 for passage of a screw, nail or other securing device.

Strip 51 may be formed into mounting members of various configurations as illustrated in FIGS. 5-8. Referring first to FIG. 5, one such mounting member 51a, particularly suitable for securing to the side portions of adjacent studs, joists or other similar support members, includes a generally U-shaped base portion 53 joined to primary flange 35b, and a distal end portion 54 extending generally transversely away from flange 35b. The reverse bend of the U-shaped portion provides resilient mounting and furnishes a gauging element for spacing the clip and hence the accommodated panels away from the adjacent surface of a support member to which this clip may be secured. The base end of the mounting member extends outward from flange 35b at 55 to space the entire mounting member from an engaged board and thus permits relative movement of both portions of the U-shaped portion.

FIG. 6 illustrates another form of mounting element wherein strip 51 is twisted and formed into an L-shaped resilient mounting member 51b spaced from primary flange 35b. The distal end portion 56 is spaced from the base portion 57 and extends generally longitudinally of the clip as illustrated. This mounting element is well adapted for engagement with a masonry wall, such as concrete block, gypsum block, or other like constructions, and includes outwardly bent edge portions 56a similar to edge portions 28a of the mounting element illustrated in FIG. 1.

FIG. 7 illustrates another resilient mounting element 51c. This mounting member is also spaced from the primary flange 35b but extends transversely away therefrom and includes a reverse bent end portion 58 particularly adapted for engaging a metal furring channel 59 of a type often used in ceiling constructions. Element 51c may include a tab 60 extending inwardly of reversed bent portion 58 to engage one flange of channel 59.

FIGS. 8 and 15 illustrate another improved clip 30d provided with a mounting element 51d particularly adapted for engaging an open truss design metal stud such as is illustrated at 61 in FIG. 8. Element 51d includes a reversed bent end section 62 which extends away from the base portions at an angle to the longitudinal and transverse axis of the clip and which is spaced from

primary flange 35b by a transversely extending base portion 63. The relative angular positioning of end section 62 may be obtained by forming a gusset-like portion 64. The resulting offset of the bight portion of this element is an important feature of this particular clip as it permits varying the point of engagement of the mounting member with the adjacent truss stud, by reversing the clip, thereby permitting avoidance of transverse members 65 of the truss. In an illustrative structure found satisfactory in use, the mounting tab was formed at an angle of about 20° to the plane of the base portions 33 and 34. With a dimension W of about $\frac{3}{16}$ " and a $1\frac{1}{8}$ " length of element 51d between base portion 63 and the bight, the lower edge of the bight was offset about $\frac{1}{2}$ " from the plane of the base portions. A small protrusion 66 and the resilient end 67 of element 51d cooperate to provide snap-action engagement of the truss.

FIGS. 9 and 10 illustrate a clip 70 formed from a blank B as illustrated in FIG. 11 and adapted to accommodate a pair of right-angularly disposed panels in somewhat the same manner as the clip illustrated in FIGS. 1 and 2. Clip 70 however includes two base portions and four separate leg portions or flanges. One of the channel-like pockets 78 of this clip is formed from a first primary flange 71, a second primary flange 72 and base portions 73 and 74, corresponding to primary flanges 35b and 36 and base portions 33 and 34 of the clips of FIGS. 5-8. Secondary flanges 75 and 76 are struck from and comprise interesting portions of flange 72 in the same general manner as the secondary flanges of clip 30 except that flanges 75 and 76 are positioned somewhat differently to form the second channel-like pocket 79. Flange 75 extends generally normal to flange 72, coplanar with base portions 73 and 74, and flange 76 is formed with the neck portion 76a coplanar with primary flange 71 and with the end portion 76b extending at right angles to the neck portion 76a generally parallel to flange 75. Flanges 75 and 76, together with base portions 73 and 74, which may here be deemed a part of flange 75, thus define the pocket 79, with neck portion 76a as the base. One corner of end portion 76b may be bent upwardly as indicated at 77 to provide a gauging member for spacing the clip and hence the panel accommodated in pocket 79 from the adjacent support structure. Spacer 77 provides the same spacing of the accommodated panel edge from the adjacent support structure as the mounting elements of other clips, such as illustrated in FIGS. 5-8. A mounting element 51b has been illustrated on clip 70, though other forms may be utilized as required.

The line of juncture between the mounting members and flanges 35b may be disposed at an angle as illustrated in FIGS. 5 and 7 to provide a stronger joint and to direct the load toward the center of clip and thus to the point of greatest strength and resistance to stress. Also, the mounting strip available in these clips is of sufficient length and is so formed that the point of attachment to the support structure is disposed approximately along the vertical centerline of the clip thereby enhancing symmetrical application of the load and minimizing torsional or twisting forces on the clip mounting.

FIGS. 11-15 illustrate one series of steps which may be employed to fabricate the clip shown in FIGS. 8 and 15. First a unitary planar blank of sheet material is perforated, punched and sheared to form interesting leg portions and base portions out of one end part of the blank and to form an elongated mounting strip 51 from the central area of the other end part as aforescribed and as illustrated by blank B in FIG. 11. Next, the various portions of the blank are formed and bent to shape the mounting strip 51 into a resilient mounting member protruding to one side of the blank and to provide the bent reinforcing edges at the distal edges of the various leg portions as illustrated in FIGS. 12 and 13. The two leg portions 36a and 37a and the base

portions 33a and 34a are then bent downwardly, away from the side on which the mounting member protrudes, to a position generally perpendicular to the plane of flange 35a as shown in FIG. 14. Portion 38a is maintained generally coplanar with portion 35a. Subsequently portions 36a and 37a are bent in opposite directions into channel-forming positions generally parallel to portions 35a and 38a, respectively, to complete a clip as illustrated at 30d in FIG. 15.

It is thus apparent that formation of the basic double channel clip is quite simple and convenient when following the teachings of this invention. In addition, providing a structure and method whereby three leg portions are formed from one end part of the blank, by bending them only in directions toward and parallel to the side of the blank opposite the side of extension of the mounting member, permits formation of a resilient mounting member while the remainder of the blank is flat. This insures convenient access to strip 51 with suitable forming equipment for shaping the mounting member. The remaining three flanges and the base portions may subsequently be conveniently and easily bent into their respective channel positions without interference by the mounting member.

It will be appreciated that the steps for shaping the mounting member per se, may be appropriately selected for the type of member to be shaped. The steps in forming the clip may be further separated, as by forming each cut, each crease or bend and each perforation in independent steps or in various combinations as may prove convenient for the instrumentalities utilized in the forming operation. The forming may be carried out with various available forming and stamping machines or by hand. A series of blanks may be connected in strip form, as for some multi-operation machines, or separate individual blanks of appropriate size may be utilized.

It will thus be seen that an improved clip has been disclosed which can be expeditiously, conveniently, and economically formed from a comparatively small inexpensive blank piece of relatively thin gauge sheet material. By making functional use of the entire area of the blank, the resultant structure is strong, safe and convenient to use, economical to produce, and provides for the formation of a long, effective, relatively large cross-sectional area mounting member. Clips according to this invention also have wide deep channels with extensive bearing areas to effectively engage accommodated panels while providing firm resilient support for the panels. Further an improved method of forming such clips is provided which is simple and economical.

While particular embodiments of this invention have been shown, it will be understood of course that the invention is not to be limited thereto since many modifications may be made by those skilled in the art in light of the disclosure and teachings herein. It is contemplated therefore by the appended claims to cover any such modifications as fall within the true spirit and scope of this invention.

I claim:

1. A clip formed from a blank of sheet metal including two portions and adapted for accommodating adjacent panels, said clip comprising a pair of angularly disposed pockets for receiving adjacent edge portions of such panels; each pocket being substantially channel-shaped in cross section and including a base portion for contacting the edge surface of an accommodated panel, and a pair of substantially parallel elongated leg portions projecting from said base portion for engaging opposite planar surfaces of such panels; a first leg portion of one pocket being formed from one portion of said blank and being generally coplanar with one portion of the other pocket; the remaining leg portions and the base portions of said pair of pockets being struck from the other portion of said blank; said remaining leg portions including second, third and fourth leg portions; said second and third leg portions each including a pair of spaced generally coplanar elon-

gated side elements joined to said base portions, and a bridging element joining the distal of said side elements; said fourth leg portion being struck at least in part from the opening delimited by said side elements and bridging element of said third leg portion; said third leg portion being struck at least in part from the opening delimited by said side elements and bridging element of said second leg portion; and each leg portion including a distal edge extending at least a major portion of the width of said clip.

2. A clip as in claim 1 and wherein said second leg portion constitutes the second leg portion of said one pocket and said third and fourth leg portions constitute the leg portions of the other pocket.

3. A clip as in claim 1 and including a mounting member struck from an extending outward from said first leg portion of said one pocket, wherein said mounting member includes a base portion extending generally parallel to and spaced from said one leg portion, and an attachment portion extending outwardly from said base portion of said mounting member.

4. A clip as in claim 1 and including a mounting member struck from and extending outward from said first leg portion of said one pocket, wherein said mounting member includes a U-shaped portion adjacent said one leg portion and a distal end portion extending transversely away from said one leg portion.

5. A clip as in claim 1 and including a mounting member struck from and extending outward from said first leg portion of said one pocket, wherein said mounting member includes a first portion extending transversely away from said one leg portion and a reversely bent end portion including a distal end extending toward said one leg portion.

6. A clip as in claim 1 and including a mounting member struck from and extending outward from said first leg portion of said one pocket, wherein said mounting member is generally L-shaped and includes a first portion spaced from and generally parallel to the plane of said one leg portion, and a second portion spaced from and generally parallel to the plane of said first portion thereof and extending generally parallel to the longitudinal axis of said clip, said second portion including narrow outwardly bent longitudinal side edges.

7. A clip as in claim 1 and including a mounting member struck from and extending outward from said first leg portion of said one pocket, wherein said mounting member extends angularly away from the base portion of said one pocket and includes a reverse-bent portion offset longitudinally of the clip from the plane of said base portion.

8. A clip as in claim 1 and including a mounting member struck from and extending outward from said first leg portion of said one pocket, wherein said mounting member includes a first segment extending outwardly from said one leg portion, a second segment integral with said first segment at its outward end and extending generally parallel to the plane of said one leg portion and away from the base portion of said one pocket at an angle to the longitudinal and transverse axes of said clip, and a reverse bent portion of the distal end of said second segment.

9. A clip as in claim 1 and wherein a mounting member is struck out at least in major part from said first leg portion, said mounting member extending outwardly from said first leg portion and adapted to engage a support for resiliently mounting said clip.

10. A clip as in claim 1 and wherein a resilient mounting member is struck from and extends outwardly from said first leg portion of said one pocket.

11. A clip as in claim 1 and including one base portion comprising a pair of spaced segments joined to said first leg portion, said one portion of said other pocket being struck from the opening delimited by said segments and comprising the base portion of said other pocket.

12. A clip as in claim 1 and including one pair of spaced segments comprising said base portion of each of said pockets, a part of said fourth leg portion corresponding to and being struck from the opening delimited by said segments.

13. A clip formed from a blank of sheet metal including two portions and adapted for accommodating adjacent panels, said clip comprising a pair of angularly disposed pockets for receiving adjacent edge portions of such panels; each pocket being substantially channel-shaped in cross section and including a base portion for contacting the edge surface of an accommodated panel, and a pair of substantially parallel elongated leg portions projecting from said base portion for engaging opposite planar surfaces of such panels; a first leg portion of one pocket being formed from one portion of said blank and being generally coplanar with one portion of the other pocket; the remaining leg portions and the base portions of said pair of pockets being struck from the other portion of said blank and including a first base portion joined to said first leg portion and extending generally normal thereto; said remaining leg portions including second, third and fourth leg portions; said second and third leg portions each including a pair of spaced generally coplanar elongated side elements integral with said first base portion, and a bridging element joining the distal ends of said side elements; said fourth leg portion being struck at least in part from the opening delimited by said side elements and bridging element of said third leg portion; said third leg portion being struck from the opening delimited by said side elements and bridging element of said second leg portion; and each leg portion including a distal edge extending at least a major portion of the width of said clip.

14. A clip formed from a blank of sheet metal including two portions and adapted for accommodating adjacent generally coplanar panels, said clip comprising a pair of angularly disposed pockets for receiving adjacent edge portions of such panels; each pocket being substantially channel-shaped in cross section, said pockets being disposed in back to back relation and including a common base portion for contacting edge surfaces of accommodated panels, each pocket including a pair of substantially parallel elongated leg portions projecting from said base portion in a direction generally opposite to said leg portions of the other pocket for engaging opposite planar surfaces of such panels; a first leg portion of one pocket being formed from one portion of said blank, the remaining leg portions of said pair of pockets and said base portion being struck from the other portion of said blank; said base portion comprising spaced segments joined along one edge to said first leg portion and extending generally normal thereto; said remaining leg portions including second, third and fourth leg portions; said second and third leg portions each including a pair of spaced generally coplanar elongated side elements integral with the distal edge of said base portion, and a bridging element joining the distal ends of said side elements; a fourth leg portion corresponding to and being struck from the opening delimited by said segments and said side and bridging elements of said third leg portion; said third leg portion corresponding to and being struck from the opening delimited by said side elements and bridging element of said second leg portion; said fourth leg portion extending generally coplanar with said first leg portion; said second leg portion extending generally parallel to said first leg portion and comprising the other leg portion of said one pocket; said third leg portion extending generally parallel to said fourth leg portion and comprising therewith said leg portions of said other of said pockets; and each leg portion including a distal edge extending at least a major portion of the width of said clip.

15. A clip formed from a blank of sheet metal including two portions and adapted for accommodating adjacent panels, said clip comprising a pair of right-angu-

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larly disposed pockets for receiving adjacent edge portions of such panels; each pocket being substantially channel-shaped in cross section and including a base portion for contacting the edge surface of an accommodated panel, and a pair of substantially parallel elongated leg portions projecting from said base portion for engaging opposite planar surfaces of such panels; a first leg portion of one pocket being formed from one portion of said blank and being generally coplanar and integral with the base portion of the other pocket; the remaining leg portions and the base portions of said pair of pockets being struck from the other portion of said blank and including a base portion of said one pocket comprising spaced segments joined along one edge to said first leg portion and extending generally normal thereto; said remaining leg portions including second, third and fourth leg portions; said second and third leg portions each including a pair of spaced generally coplanar elongated side elements integral with the distal edge of said base portion of said one pocket, and a bridging element joining the distal ends of said side elements; said base portion of said other pocket corresponding to and being struck from the opening between said segments; said fourth leg portion corresponding to and being struck from the opening delimited by said side elements and bridging element of said third leg portion and being integral with said base portion of said other pocket; said third leg portion corresponding to

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and being struck from the opening delimited by said side elements and bridging element of said second leg portion; said second leg portion extending generally parallel to said first leg portion and comprising the other leg portion of said one pocket; said third and fourth leg portions being generally parallel to one another and extending generally normal to said first leg portion to comprise said leg portions of said other of said pockets; and each leg portion including a distal edge extending at least a major portion of the width of said clip.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,144,733

August 18, 1964

Henry A. Balinski

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 1, line 15, for "generaly" read -- general --;
line 26, for "entagled" read -- entangled --; column 9,
line 60, for "of", first occurrence, read -- at --; column
10, line 21, for "geenrally" read -- generally --; line 44,
strike out "said".

Signed and sealed this 1st day of December 1964.

(SEAL)

Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents