Oct. 14, 1952 J. S. RAYNOR, JR 2,613,416

PLASTERBOARD CLIP

Filed Feb. 3, 1950 2 SHEETS—SHEET 1

Fig. 1.

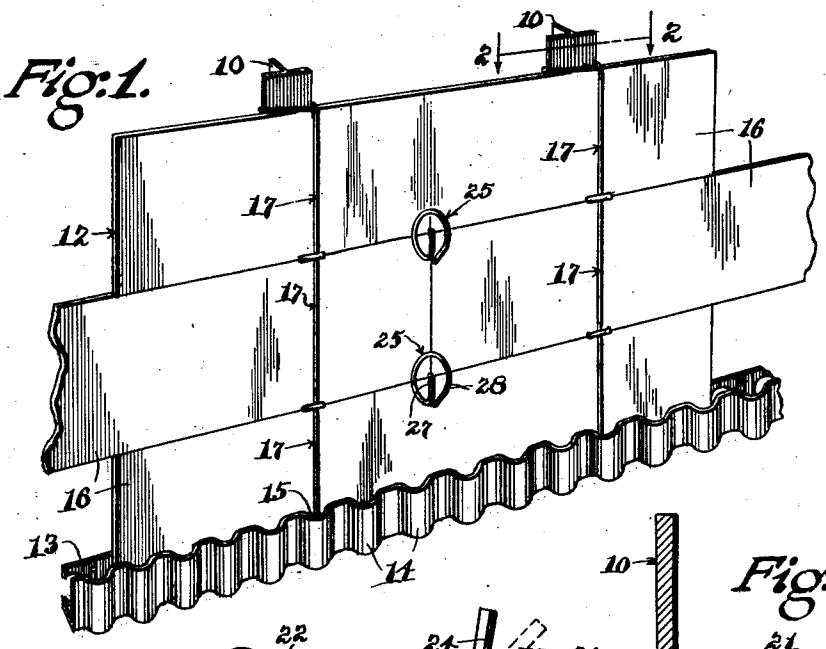


Fig. 2.

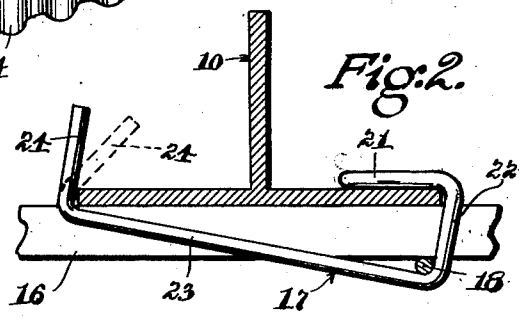


Fig. 3.

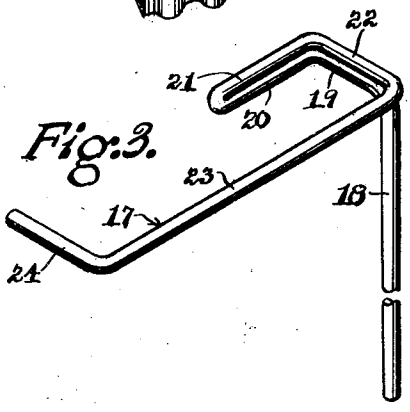


Fig. 4.

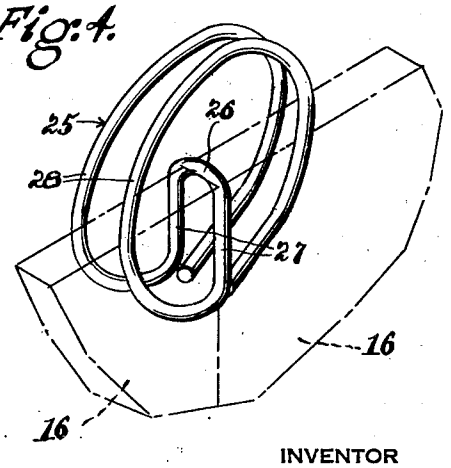
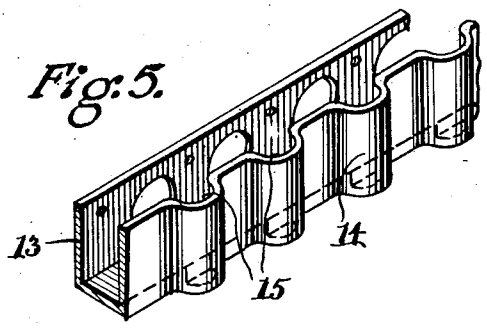


Fig. 5.



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Fig. 6.

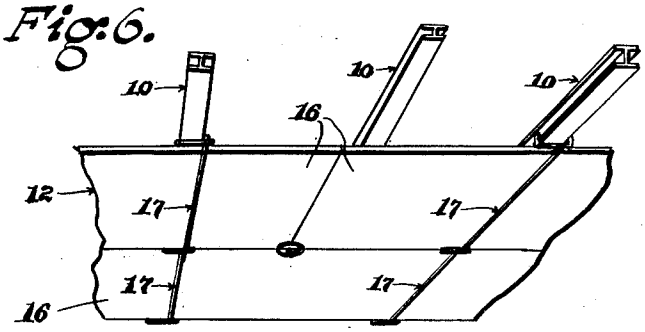


Fig. 7.

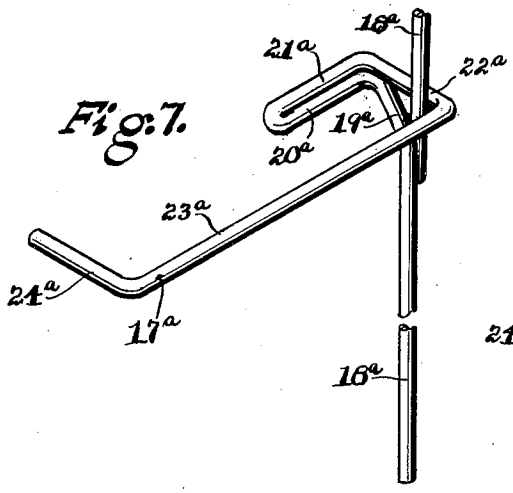


Fig. 8.

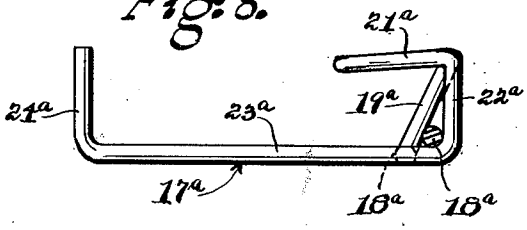
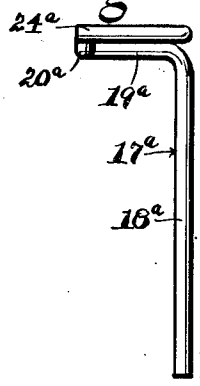


Fig. 9.



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PLASTERBOARD CLIP

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Application February 3, 1950, Serial No. 142,098

2 Claims. (Cl. 24—73)

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My invention relates to a new and useful plaster board clip and has for one of its objects to produce a simple and inexpensive article of this character for firmly securing sheets of relatively stiff material, such as metal lath, plaster board and insulating sheets, to metal beams, joists, studs and similar supporting means.

Another object of the invention is to produce a clip of the kind mentioned from a piece of wire fashioned to provide a leg, a reach bar, a finger at one end of said reach bar, a shank and a beak, the latter projecting towards and terminating short of said finger.

Another object of this invention is to produce a clip consisting of a leg with a head at the upper end thereof, said head being substantially rectangular in shape and consisting of a reach bar at right angles to the leg, a finger at right angles to said reach bar at the outer end thereof, a shank also at right angles to the reach bar at the inner end thereof and parallel with the finger, and an inturned beak projecting towards and spaced from said finger and converging slightly towards the reach bar.

Another object of the present invention is to produce a clip of the character mentioned comprising the leg and head which latter includes the shank having a main portion at right angles to the reach bar and a secondary portion at an angle to said reach bar and diverging from the joint between the main portion of the shank towards said reach bar whereby an opening is formed to receive the leg of an adjacent clip.

In erecting buildings, especially commercial structures of the fireproof type, steel channels are usually wired, tied or otherwise secured to the metal beams, joists or studs and thereafter sheets of material, such as metal lath, plaster board and insulating sheets, are fastened to the steel channels. By the use of the present clip the steel channels and the operations necessary to erect them are eliminated. Therefore a further object of my invention is to construct a wall core or provide a building construction employing supports in the form of beams, joists, studs or equivalent elements, a base rail of appropriate formation, sheets of material disposed at random across the supports, means to attach contiguous material sheets together at their joints, and clips of unique formation to engage the supports in secure fashion and extend in endwise alignment, in groups or series, across the faces of the material sheets with the adjacent clips of each series in interlocking engagement.

A still further object of this invention is to

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produce a clip structure in which a plurality of clips are to be assembled in coacting interlocking relation, each clip comprising a substantially rectangular skeleton head and a pendant leg, said head defined by a reach bar with a finger at the outer end and a shank at the inner end terminating in a beak, said head being attached to the edges of flat elements, such as flanges of T or I-beams, flat bars and the like, by engaging the beak behind one edge of a support and rotating said head, with the leg as the axis, until the finger engages the opposite edge of the support.

With the above and other objects in view this invention consists of the details of construction and combination of elements hereinafter set forth and then designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same I will describe its construction in detail referring by numerals to the accompanying drawing forming a part hereof, in which:

Fig. 1 is a fragmentary perspective view of a building wall core, partition or the like.

Fig. 2 is an enlarged fragmentary section on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view of one of the clips with a portion of the leg broken out.

Fig. 4 is a perspective view of one of the fastening members for holding material sheets at their joints.

Fig. 5 is a fragmentary sectional perspective of a base rail.

Fig. 6 is an isometric view, on a reduced scale, of a ceiling showing an application of the invention in overhead work.

Fig. 7 is an enlarged perspective view of a modified form of clip with a portion of the leg broken out and showing the manner of interlocking another clip therewith.

Fig. 8 is a top plan view of Fig. 7, the leg of the companion clip being shown in section.

Fig. 9 is an edge view thereof looking at the finger end.

In carrying out my invention as herein embodied 10 represents suitable supporting means, such as studs, joists or beams of any suitable cross sectional configuration, for example, I-beams, T-irons or flat strips to provide relatively thin flanges or edges to which the clips, hereinafter described may be attached. The supporting means may be suitably spaced apart as long as their combined strength will support the applied load.

Stiff material sheets 16, such as plaster board,

insulating sheets, metal lath and equivalent substances, are disposed at random across the supporting means, preferably so that the joints between sheets in any course will not fall at the supporting means and also whereby the joints in contiguous courses will be in staggered relation. Since the sheets may be disposed at random, the supporting means may be likewise located at random or varying distances apart.

In erecting a wall core 12, either upright as shown in Fig. 1 or substantially horizontal as depicted in Fig. 6, a boundary, starting or base rail 13 is, preferably, first installed and attached to the supporting means. The starting rail may be any appropriate structure which will receive and retain the ends of the clip legs and, for purposes of illustration only, said starting rail is shown as a channel having one flange formed into corrugations 14 to produce sockets 15, Fig. 5.

After the starting rail has been installed the first course of material sheets 16, which are narrow, say one foot wide, and any desirable length are disposed across the supporting means 10 with a longitudinal edge of each inverted or placed in engagement with said starting rail. As each sheet is positioned it is secured to the supporting means by clips 17, Figs. 1, 2, 3 and 6, or a modified form 17*a* thereof, Figs. 7, 8 and 9. After the first course of sheets has been erected the second course is installed and so on until the wall core is completed. It is to be understood that each succeeding course of sheets abuts the preceding one.

Each clip 17 is preferably produced from a section of wire fashioned into form to provide a leg 18 from which extends a secondary shank strand 19 projecting rearwardly at right angles to said leg. From the secondary shank element 19 extends a laterally projecting lower beak strand 20 and at the desired location the wire is bent back upon itself to provide the upper beak strand 21, the wire then following the lower shank strand 19 to form the upper shank strand 22. Thus the shank and beak are both of two-strand formation. From the shank, particularly the upper strand thereof, extends the laterally projecting reach rod 23 at right angles to said shank. The reach rod extends in the same general direction as the beak, although the latter converges slightly towards said reach rod, which is longer than said beak and from the outer end of which extends the rearwardly projecting finger 24 at right angles to the reach rod. The finger 24 is approximately parallel with the shank and spaced from the terminal end of the beak. The shank, beak, reach rod and finger combined form the head of the clip from which the leg 18 extends as a pendant, being located at the corner of the shank and reach rod.

The modified form of clip 17*a*, illustrated in Figs. 7, 8 and 9, also includes the leg 18*a*, the lower shank and beak elements 19*a* and 20*a*, respectively, the upper beak and shank elements 21*a* and 22*a*, respectively, the reach rod 23*a* and the finger 24*a*, but instead of shank elements being in the same vertical plane the lower shank element 19*a* is canted inwardly from its point of connection with the lower beak element 20*a* towards the reach rod 23*a* to provide an opening or space between the upper and lower shank elements of sufficient size to receive the leg of a succeeding clip, as plainly shown in Fig. 8.

As above stated a material sheet 16 of the first course is engaged with the starting rail 13 and the desired number of clips are applied thereto. In the application of each clip on the first course of material sheets, the clip head is passed over the edge of a material sheet farthest removed from the starting rail and the beak engaged behind the flange or flat edge of a supporting means with the leg extending outward at an angle to the front face of the material sheet. Next the clip is rotated about the axis of the leg until the finger passes over the opposite edge of the supporting means. Thereafter the clip leg is moved into contact with the outer face of the material sheet which will draw the beak snugly against the back of the supporting means and throw the reach rod into an angular position relative to the faces of the material sheet as shown in Fig. 2. Finally the whole clip structure is slid longitudinally of its leg or the supporting means until the free terminal of the clip leg engages a holding element, represented by a socket in the starting rail illustrated.

Upon erecting succeeding courses, the clips are assembled in the same manner on the supporting means and across each material sheet but the terminal of the leg of each succeeding clip is inserted in back of the reach rod of the preceding clip, or between said reach rod and the material sheet, adjacent the leg of said preceding clip. This will lock together all of the clips in each row.

Where the material sheets are rather soft, fragile or deformable, the heads of the clips may be driven into the edges of said material sheets so that the edges of contiguous sheets will meet throughout their entire lengths.

Particular attention is called to the fact that the weight or "pull" of the sheets on the legs of the clips causes a pivoting action which actually tends to force the finger inwardly resulting in a firm gripping effect. Should the person using the clips feel that further securement is desirable the finger can be bent inwardly, as shown in dotted lines in Fig. 2, by a blow from a hammer or other instrument, and this, generally, is only done in overhead work.

In order to hold the meeting edges of contiguous sheets together between the locations of the supporting means, fastening members 25 may be utilized. As herein illustrated, each fastening member is produced from a section of wire fashioned to produce an axle 26, Fig. 4, from each end of which projects a spoke 27, preferably parallel, and with each spoke is formed a ring 28, the ends of which terminate adjacent their respective spokes.

A fastening member may be used between the joints of two or three material sheets, especially at the corners of two of them, and is merely slipped over the appropriate edge or edges of the sheet or sheets in the preceding course and the edge or edges of the sheet or sheets in a succeeding course slipped in between the rings whereby said rings will be disposed on opposite sides of the sheets.

From the foregoing it will be apparent that I have produced a highly efficient clip which may be applied to the front or rear side of a flat or flanged supporting means by merely engaging portions of the head with the edges thereof rather than by encircling the extreme rear portion of the supporting means.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the scope of the appended claims without departing from the spirit of my invention.

Having described my invention what I claim as new and useful is:

1. A clip produced from wire fashioned to provide a rectangular head comprising a reach rod of appreciable length, a relatively short finger extending from one end of said reach rod at right angles thereto, a primary shank strand of approximately the same length as said finger projecting from the opposite end of said reach rod and parallel to the finger, a primary beak strand projecting laterally from said primary shank strand at substantially right angles thereto and towards the finger but terminating short of the latter to provide an opening between said beak and finger, said reach rod, finger and primary shank and beak strands being in the same plane, a secondary beak strand parallel to the primary beak strand, a secondary shank strand parallel to the primary shank strand and substantially the same length therewith, said secondary strands being in the same plane which is parallel to the first mentioned plane, and a leg of considerable length extending from the secondary shank strand in the region of the junction of the reach rod and primary shank strand at right angles to both the reach rod and said primary shank strand.

2. A clip produced from wire fashioned to provide a rectangular head comprising a reach rod of appreciable length, a relatively short finger extending from one of said reach rod at right angles thereto, a primary shank strand of approximately the same length as said finger projecting from the opposite end of said reach rod and parallel to the finger, a primary beak strand projecting laterally from said primary shank strand at substantially right angles thereto and towards the finger but terminating short of the latter to provide an opening between said beak and finger, said reach rod, finger and primary shank and beak strands being in the same plane, a secondary beak strand parallel to the primary beak strand, a secondary shank strand extending towards the positions of the reach rod and finger and forming an acute angle with the beak strands to provide a space between the two shank strands adjacent the reach rod, said secondary strands being in the same plane which is parallel to the first mentioned plane, and a leg of considerable length extending from the secondary shank strand at right angles to both the reach rod and said primary shank strand.

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