M. H. JESTER.

METALLIC STUDDING METAL CLIP PLASTER BOARD PARTITION WALL CONSTRUCTION.

APPLICATION FILED DEC. 21, 1912.

1,082,336.

Patented Dec. 23, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

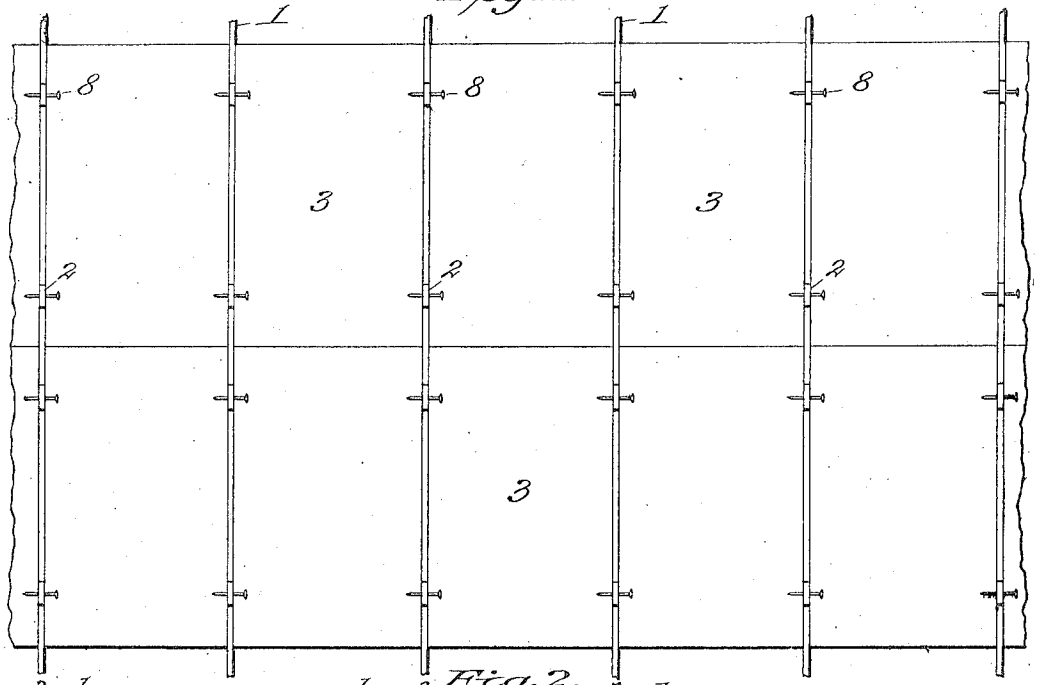
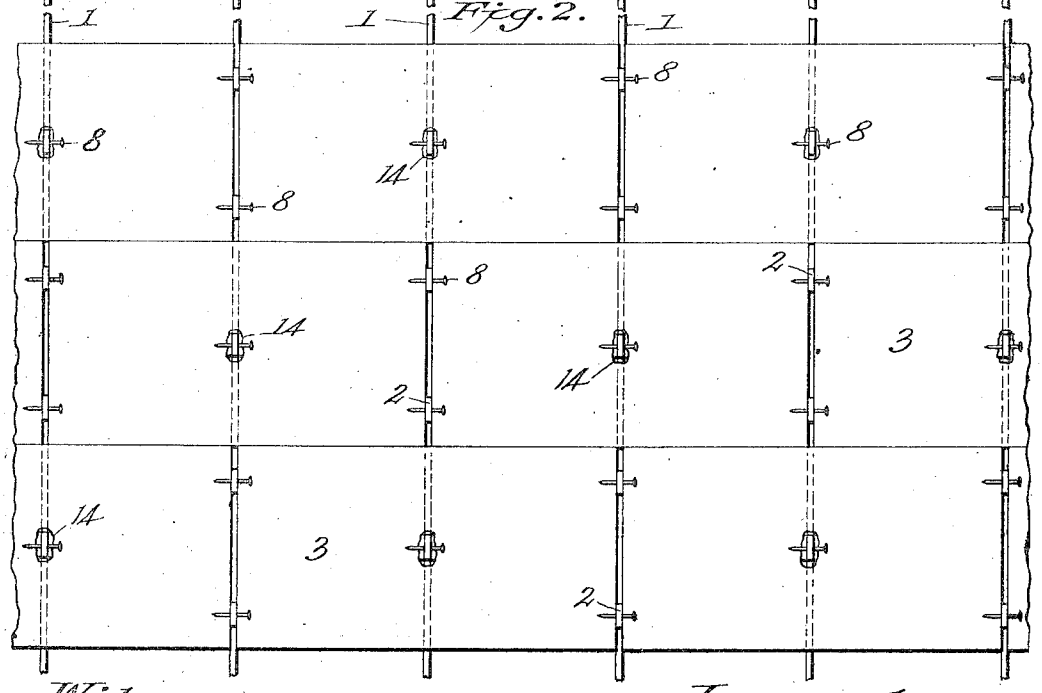


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 9.

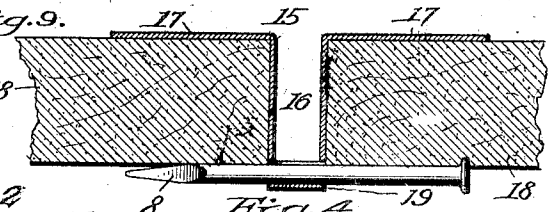


Fig. 3.

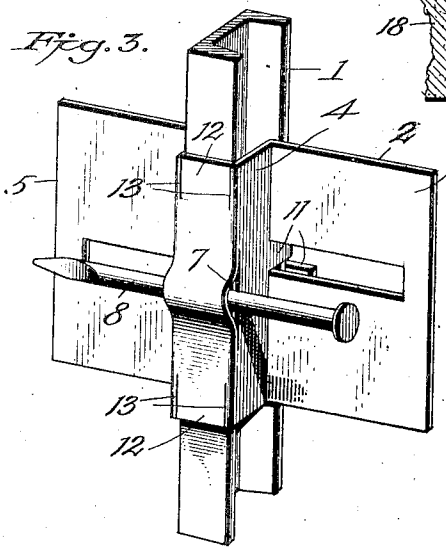


Fig. 4.

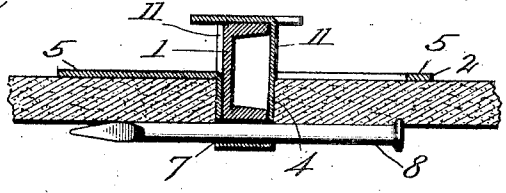


Fig. 5.

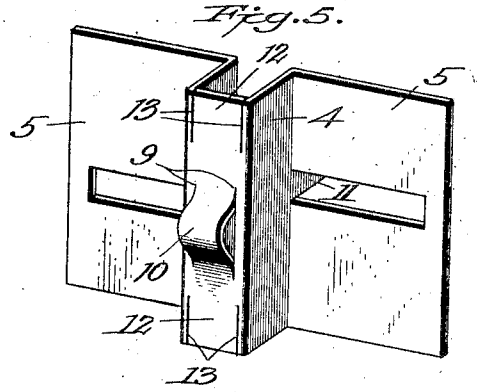


Fig. 6.

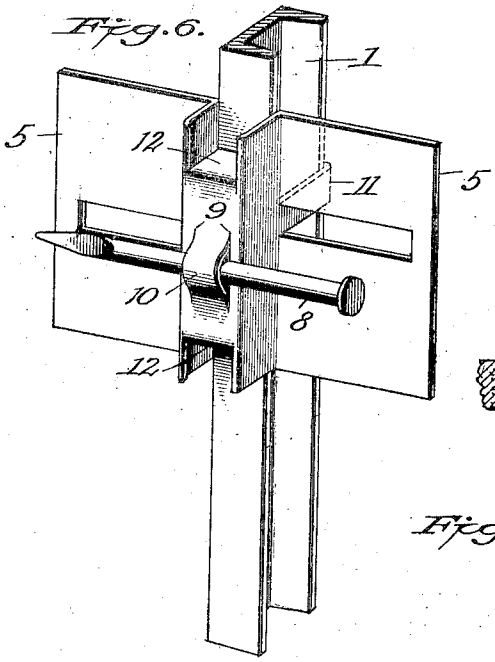


Fig. 7.

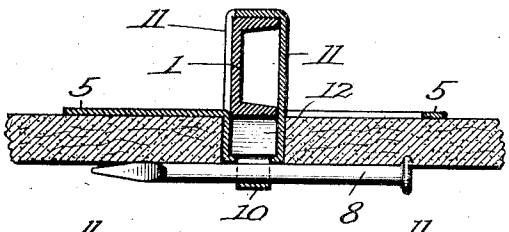
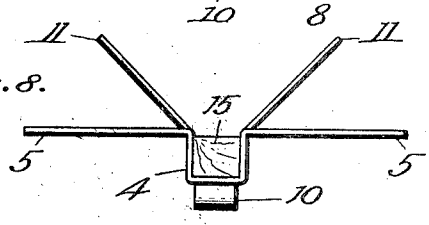


Fig. 8.



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UNITED STATES PATENT OFFICE.

MARVIN H. JESTER, OF DENVER, COLORADO, ASSIGNOR TO THE M. H. JESTER INVESTMENT COMPANY, A CORPORATION OF COLORADO.

METALLIC-STUDDING METAL-CLIP PLASTER-BOARD PARTITION-WALL CONSTRUCTION.

1,082,336. Specification of Letters Patent. Patented Dec. 23, 1913.

Application filed December 21, 1912. Serial No. 738,019.

To all whom it may concern:

Be it known that I, MARVIN H. JESTER, a citizen of the United States of America, residing at the city and county of Denver and State of Colorado, have invented a new and useful Metallic-Studding Metal-Clip Plaster-Board Partition-Wall Construction, of which the following is a specification.

My invention relates to improvements in metallic studding metal clip plaster board partition wall constructions that are used as the skeleton core partitions for receiving the plastering materials that form plastered partition walls in buildings, and the objects of my invention are: First: to provide a stud clasping metal clip. Second: to provide a stud and clip nail construction that permits the stud and clip and nail to be assembled together in place in partition alinement before the plaster boards are placed between them. And third: to provide a stud and clip construction that permits the plaster boards to be connected to the studs after the studs and clips have been assembled together, that will be rigid when put together and compact in arrangement.

I attain these objects by the mechanism illustrated in the accompanying drawings in which:

Figure 1 is a front view, showing plaster boards connected to studding by means of the improved clip, so as to form straight joints. Fig. 2 is a similar view, showing boards connected so as to form staggered joints. Fig. 3 is a perspective view, showing a portion of a stud, and the form of clip secured thereon, which is used in connecting the plaster boards in straight joint form. Fig. 4 is a horizontal sectional view of the same, showing portions of two plaster boards clamped between the nail and the clip. Fig. 5 is a perspective view, showing a slightly modified clip. Fig. 6 is a perspective view similar to Fig. 3, illustrating the same clip, but showing the same arranged to connect the plaster boards in stagger joint form. Fig. 7 is a horizontal sectional view of Fig. 6 showing the end portions of two plaster boards in clamped engagement with the clip. Fig. 8 is a perspective view showing a slight modification of the clip. And Fig. 9 is a horizontal sectional view illustrating a portion of a partition in which a relatively thick plaster board is used, and the studding dispensed with.

Similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings: The numeral 1 designates a stud. This stud may be a flat bar form of stud as shown in my No. 1,001,146 patent issued to me August 22, 1911, or it may be of any other form of cross-section that can be used with the metal clip hereinafter to be described. I preferably use, however, a channel form of stud in cross-section, inasmuch as this form provides a better shape for the plastering to cling to, as the plaster fills the channel space, as well as completely embedding the channel stud. This channel form of stud also provides a stiffer and lighter form of stud than many other forms that might be used, such as a T or V or Z shaped bar.

The numeral 2 designates the form of clip shown in Figs. 3 and 4, and 3 designates the plaster boards. This clip comprises a metal plate formed with a central U-shaped channel 4, from which projects wide side flanges or wings 5, that are arranged to stand in the same plane, but that extend in opposite directions from the opposite sides of the U-shaped member of the clip.

The U-shaped portion of the clip comprises the sides and the closed end portion which is arranged to fit over the channel bar snugly, being preferably formed to slightly spring over the channel bar, while the closed end is flat to fit flat against the outer edge of the channel bar. The boards rest against the wings of the clip, and the ends of the said boards abut, against the sides of the U-shaped portion of the clip, which is of slightly less depth than the thickness of the plaster board used.

It is necessary that the ends of the plaster boards be secured against the flanges or wings of the clips, and while there are many ways of doing this, I preferably carry out this feature of my invention in the following manner: Through the edges of the U-shaped portion of the clip just below its closed end I form a nail receiving aperture 7 and bulge up the metal of the closed end of the clip between these nail receiving apertures enough to receive a nail 8, in such a manner as to cause it to bear against the plaster

board at its head and point end portions, while its central portion bears against the bulge in the closed end portion of the clip. Or, if desired, this nail aperture may be formed by making two slits 9, in the top flat closed end portion of the clip, parallel to each other, so as to release a central middle portion 10, that can be bulged up enough to make an aperture for the metal to pass through underneath the bulged-up portion and between the adjacent side portions of the closed top end of the clip, as shown in Fig. 5.

In order to secure the clip to the channel bar stud, one or more pairs of tongues 11, are cut from its wings, and they are bent up around the opposite end of the channel bar stud. I preferably, however, cut but one tongue from each of the wings, one tongue being cut out above the horizontal center of one wing, while the other tongue is cut out below the horizontal center of the other wing so that they will not overlap when folded upon the stud, and they can be drawn tightly over and bent down against the further edge of the channel bar by a pair of pliers, as the clips are applied to the studs after the studs are secured in place.

A tongue 12, is formed at each end of the U-shaped portion of the clip by cutting parallel slits 13 in its end wall as shown. These tongues perform no function when the clip is used in the straight or unbroken joint construction, but they are bent in at right angles to the wall of the said U-shaped portion, as shown in Fig. 6, when the clip is used in staggered joint construction, as will be hereinafter explained.

My improved metal stud and clip and plaster board partition is adapted to be used as a supporting core for the plastering mortars and finishes used in stucco and other plastering material partition walls for dividing buildings into rooms, halls and closets, and it enables me to build fire proof and vermin proof partitions of from one and a half to two inches thick, that are exceptionally strong and rigid and that are considerably more sound proof than the wooden stud and lath partitions so commonly used.

In Fig. 2 of the drawings, I have shown the plaster boards secured to the studding in staggered form, and in Figs. 6 and 7 is illustrated the arrangement of the clip when the plaster boards are so secured. The same form of clip is employed for both the straight and staggered arrangement of plaster boards, but in the staggered arrangement the tongues 12 are bent in at right angles to the end wall of the channel portion of the clip, to provide abutments which rest against the studs. These tongues are of such length that when bent over their extremities are on a line with the front faces of the wings 5, against which the plaster boards rest, thus leaving a space of the thickness of the plates, or about one-sixteenth of an inch, between their ends and the back faces of the wings, as will be understood by reference to Fig. 7. This allows the stud to extend one-sixteenth of an inch into the U-shaped portion of the clip, by which the clip is centered and held against lateral movement, and it also makes the front faces of the wings 5, flush with the front edge of the stud.

By reference to Fig. 2, it will be seen that the adjoining ends of two boards in each row of boards are connected the same as in Fig. 1, which shows the straight joint arrangement, but in the staggered arrangement shown in Fig. 2, the adjoining ends of only each alternate row of boards are in the same line, thus breaking the joints. In Fig. 1, such an arrangement is impossible, as the stud lies between the adjoining ends of the boards, while in the arrangement shown in Figs. 2, 6, and 7, the front face of the stud is flush with the back faces of the plaster boards, which permits of the staggered arrangement, as shown and described.

When boards are used which are of a length corresponding to the space between three studs, it is necessary to connect them at their central portions to the intermediate stud, and to accomplish this, holes 14 are punched in the centers of the boards large enough to receive the U-shaped portions of the clips, and clips are secured to the intermediate studs in position to permit their U-shaped portions to extend through the said holes, after which the nails 8 are applied to clamp the boards, in the manner before described.

The operation of assembling the studs and clips and plaster board into a partition ready to receive plastering materials, is as follows: The channel bar studs are provided with a short, right-angled turned foot portion, not shown, at their opposite ends and these channel studs are cut long enough from merchantable bars to extend from the floor to the ceiling beams or joists of buildings, to which their feet portions are secured, preferably by being bolted to channel bar floor and ceiling plates of the same size as the studs, which channel bar floor and ceiling plates are secured to the floor and ceiling joists or beams of the building by nails or screws. These channel bar studs are spaced from eighteen inches to three feet apart, depending on the width of the plaster board used. I preferably use plaster boards that are about three feet square. These channel bars are placed along the center of the line laid out by architects on the floor plans of the building where the plaster partitions are to be erected. The metal clips are then placed with studs at the desired distance apart, along the height of the stud, which is preferably about from nine to

twelve inches apart, and they are clenched tightly to the studding by bending their tongues 11, around the stud to clamp the clips tight enough thereto to hold them on the channel bar wherever placed. The plaster boards are then placed against the wings of the clips and are secured there by pressing a nail through the nail receiving aperture of each clip by hand. The head of the nail will then bear against the ends of the plaster boards that are on one side of the clip, and the point will bear against the ends of the plaster boards that are on the opposite side of the clip. The services of two men, however, are required to erect the plaster boards between the studs and secure them to the clips in this manner, and I preferably erect them in the following manner, which enables one man to do all of the work: After the clips are clenched in position to the channel bar, I drive the nail permanently into and through its nail receiving aperture; then one man can push and crowd the edges of the plaster board between the wing and the nail, thus saving the labor of one man. After the plaster boards have been erected in the studs, this partition core is ready for the plastering material which is applied directly to the plaster board, a brown coat being first applied, which completely covers the metal stud and clip and nail construction, and then the finishing coat or coats are applied at the proper time.

My invention makes an extremely simple metallic stud and metal clip plaster board construction that is free from the expense of forming apertures through the channel stud for the nail or other wedging member to pass through, and also forms a fire proof construction that can be easily and quickly erected.

The construction above illustrated and described forms a partition with all of the ends of the plaster boards arranged in vertical alinement along the channel bar studs, and this is the character of construction I preferably use and that is most generally acceptable to architects. Occasionally, however, an architect might prefer to have the plaster boards arranged in break or staggered joint arrangement, and this feature can be effected in my present construction in the manner above described.

While I preferably cut the tongue portions 12 from the opposite ends of the clips to adapt the same for the staggered arrangement of the plaster boards, the same result can be secured by placing strips of wood 15, or other suitable material, of the same thickness as the plaster board, in the U-shaped portion of the clip, as shown in Fig. 8.

In Fig. 9 is illustrated a portion of a form of partition in which the studding is eliminated. In constructing this partition, I employ a clip 15, similar to the clips shown in the other views, but having a central channel portion 16, of about twice the depth of that of the other clips, from opposite sides of which extend wings 17, which rest against the plaster boards 18, which in this construction are about an inch thick. A portion of the end wall of the channel 16, is severed and outwardly bowed, as in Figs. 3 and 4, and the clamping nail 8 is driven between this bowed strip 19 and the ends of the plaster boards, as shown. The tongues 11 are omitted in this clip, and while the boards may be arranged to form either straight or staggered joints, they are preferably arranged in staggered form. When the plaster is applied to the opposite sides of the boards, a rigid partition is formed, capable of withstanding all practical stresses.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A combined metallic stud, metal clip, and plaster board partition, comprising a metal stud, a winged clip surrounding an edge of said stud, tongue portions struck from the wings of said clip for securing said clip to said stud, and a key extending through said clip in spaced relation to said wings for securing said plaster-boards to the wing portions of said clip.

2. A combined metallic stud metal clip and plaster board partition, comprising a metal stud, a U-shaped winged clip arranged to surround one edge and a part of the sides of said metal stud, and wings of said clip forming an abutment against which said plaster boards are placed, said clip being provided with a nail aperture extending through its end portion, a nail in said aperture for securing said plaster boards against said wings, and tongue portions cut out from said wings and folded over said stud for clamping said clip to said stud.

3. A metallic stud metal clip plaster board construction for partitions, comprising a metallic channel bar stud, a metal U-shaped clip surrounding said stud for a portion of its depth, said clip being provided with a closed end at one end portion and with an open end, said closed end being provided with a nail receiving aperture, a pair of lateral wings projecting from opposite sides adjacent to the open end of said clip, plaster boards arranged to rest against said wings, a key arranged to extend through said nail receiving aperture and clampingly secure said plaster boards against said wings, and a tongue member cut from each wing and arranged to be folded around and clamped to said channel bar stud, whereby said clip is secured to said stud.

4. In a metallic stud metal clip plaster

board construction, the combination of a channel bar stud with a U-shaped clip, consisting of parallel sides and a closed end portion at one end and an open end at its opposite end surrounding a portion of the width of said stud, oppositely projecting wings extending from the sides of said clip, said closed end arranged to fit against one of the edges of said channel bar and provided with a nail receiving aperture extending transversely therethrough, a nail extending through said nail receiving aperture for securing the plaster boards against said wings, and tongue members extending from said wings and arranged to be bent around the adjacent edge of said channel bar stud for securing the clip to said stud.

5. In a device as specified, the combination of the channel bar and a U-shaped clip provided with oppositely extending wing members and with a closed end portion, said closed end being provided with a transversely raised bulging portion provided with a transversely arranged aperture adapted to receive a nail or other wedging member that is adapted to secure plaster boards against the wings of said clip, said wings having a tongue portion cut loose from the outer end portion of each wing and extending in a transverse direction across each wing to the U-shaped portion of said clip, said tongues being bent around said stud for securing the clips to said stud, and being arranged at a sufficient offset relation to each other to enable them to be folded around said channel bar stud without folding on top of each other.

6. In a clip for plaster boards as specified, a plate comprising a central channel from which project lateral wings, a bowed strip cut from the bottom of said channel portion, a nail passed between said strip and the channel portion, and tongues cut from the wings, whereby said clip may be secured to a stud.

7. In a clip for plaster boards as specified, a plate comprising a central channel and lateral wings, tongues cut from said wings and joined at their inner ends to the sides of the channel, said tongues being out of line with each other, a bulged member extending from the end wall of said channel, and a nail extending between said bulged member and the channel.

8. In a clip for plaster boards as specified, the combination with a stud, of a plate comprising a stud-receiving channel from which project lateral wings, tongues cut from said wings and bent around said channel, a bowed portion partially severed from the end wall of said channel providing a nail-receiving aperture thereunder, and a nail which is passed under said bowed portion for securing the plaster boards against said wings.

9. In a clip for plaster boards as specified, a plate comprising a channel portion, and lateral wings extending therefrom, tongues cut from said wings so as to be integrally connected to the sides of the channel portion, tongues cut from the opposite extremities of the end wall of the channel portion and adapted to be bent inward at right angles to said end wall, a strip integral at each end with the end wall of the channel, but severed therefrom along its sides and outwardly bowed, and a nail inserted beneath said bowed strip.

In testimony whereof I affix my signature in presence of two witnesses.

MARVIN H. JESTER.

Witnesses:
G. SARGENT ELLIOTT,
ELIZABETH SMITH.