Nov. 17, 1959 L. M. HOULDING 2,912,850

STUD SHOE

Filed Aug. 27, 1957

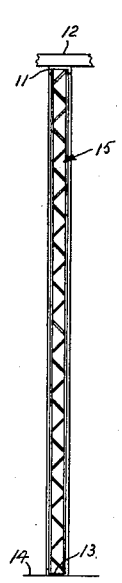


FIG. 2.

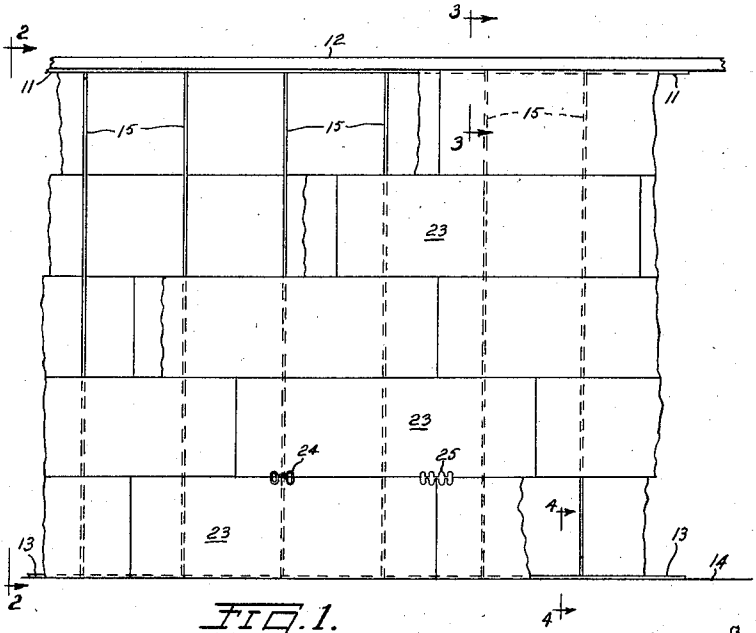


FIG. 1.

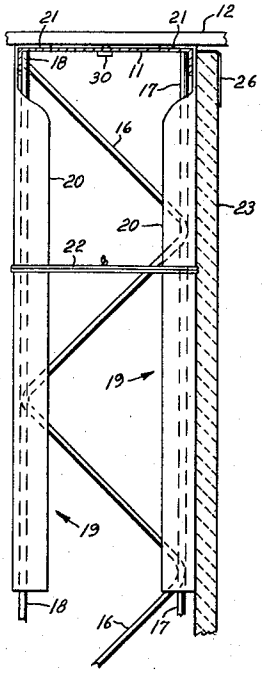


FIG. 3.

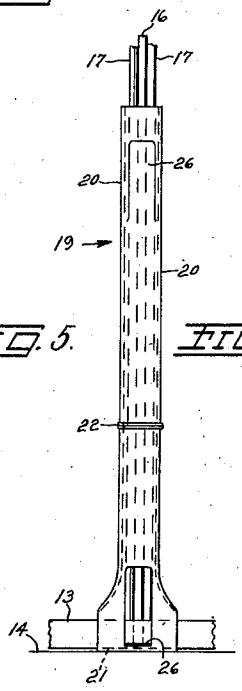


FIG. 5.

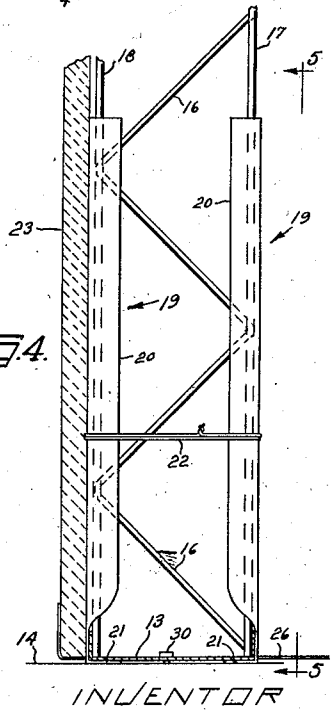


FIG. 4.

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STUD SHOE

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1 Claim. (Cl. 72—115)

This invention relates generally to fireproof interior partitions for buildings and more particularly to metal supporting structures on which to support the gypsum lath boards forming the base for the finished plaster wall of such a partition.

Specifically this invention provides an improved stud shoe which now not only provides means for attaching the metal wall studs to the top and bottom wall channels of the partition but also provides means for securing the top and bottom edges of the lath board plaster base to the wall studs.

It is the object of the invention to provide an improved wall for less cost with less work by a structural part for the wall frame which, at substantially no additional cost, includes means for securing the top and bottom edges of the lath board plaster base to the wall studs.

How this object is accomplished is explained in the following description referring to the attached drawing in which:

Fig. 1 is a fragmental side elevation in partial section of a wall in which my invention may be practiced.

Fig. 2 is a view in sectional elevation as seen from the line 2—2 of Fig. 1.

Fig. 3 is an enlarged fragmental transverse sectional elevation viewed from the line 3—3 in Fig. 1.

Fig. 4 is an enlarged fragmental transverse sectional elevation viewed from the line 4—4 in Fig. 1.

Fig. 5 is a fragmental side elevation viewed from the line 5—5 in Fig. 4.

Like reference numbers refer to like parts in the several figures of the drawing.

Referring now to the drawing, it should be noted that Figs. 1 and 2 show fragmentally a typical wall in which the stud shoes of this invention may be used but that these figures are drawn to a scale too small to show the stud shoes in detail as they are shown in the enlarged Figs. 3, 4 and 5.

In the drawing Fig. 3 clearly shows that in an interior wall of the type here described there is at the top of the wall a downwardly open metal channel **11** secured to the underside of the ceiling surface **12** by spaced fasteners **30**. Also Figs. 4 and 5 show at the bottom of the wall an upwardly open metal channel **13** secured to the top side of a floor surface **14** by fasteners **30**.

Confined at their respective ends between the downwardly extending legs of channel **11** and the upwardly extending legs of channel **13** are a plurality of vertical wall studs **15** spaced longitudinally of the channels, as shown. Each of these studs **15** is a lattice type of column made up of a zigzag web rod **16** secured at its angles on each of its respective sides to pairs of flange rods **17** and **18** respectively.

To attach the wall studs **15** securely to top channel **11** positioned along the channel as desired, it is seen in Fig. 3 that a pair of metal shoes **19** are positioned with their side flanges **20** turned inwardly respectively about flange rods **17** and **18** of wall studs **15**. Also the end flanges

21 of shoes **19** are turned inwardly between the base of channel **11** and the ceiling undersurface **12**. A tie wire **22** is then wrapped about stud **15** over shoes **19** and its ends are twisted tightly together to secure stud **15** tightly in position in channel **11**.

In a similar manner as seen in Figs. 4 and 5 the bottom end of a stud **15** is secured in a desired position in channel **13** by a pair of shoes **19** and a tie wire **22**.

With the studding in place the gypsum board lath base for the wall plaster is applied to the studding. These lath boards, shown typically at **23** may be three eighths of an inch thick, sixteen inches wide and four feet long. Usually the boards will be laid with their widths vertically along the wall and their lengths horizontally so that the wall will be faced vertically with boards 16″ high except for the top row which will be cut as required to complete the wall height.

Starting at the bottom of the wall, the lower edge of the row of boards will be perforated by the lather and wire tied to the studding or lower channel **13** and its upper edge will be clipped to each stud which it contacts by a preformed heavy wire clip **24** the center part of which goes around one stud flange and the ends of which are each formed into an upward and downward extending loop which holds the board above and the board below to the stud. The lateral ends of the boards are mismatched and usually will not come on studding so another form of clip **25** is provided to hold the boards securely together at three way seams. Clips **25** are usually formed from a piece of flat metal having a three eighths inch wide center strip and with the sides slit into strips perpendicularly to the center strip. The side strips can be bent upwardly and downwardly on each side of the boards to secure them together.

It is to be noted that this description of the construction of a partition wall and its parts is an exposition of old art in which applicant is a skilled worker and in which everything has been provided to make a satisfactory partition wall except that a great deal of time is lost in starting the lower row of lath boards and fixing their lower edges to the studding in a desired position. Also the same trouble is found in securing the top edge of the top row of lath boards to the studding.

The present invention provides the improved stud shoes **19** which not only are used to secure the studs **15** to top and bottom channels **11** and **13** but also are formed with means for vertically positioning the bottom row of lath boards and for properly securing both the bottom and top edges of the board wall to the studding.

As shown in Figs. 3, 4 and 5 the stud shoes **19** of my improved design are each made with a rectangular tongue **26** formed by slitting the back of shoe **19** along three sides of the tongue **26** as shown but leaving the fourth side of tongue **26** attached to the back of shoe **19**. As indicated in Fig. 5 it will usually be desirable to have each shoe **19** formed with a tongue **26** very near its flanged end. Then, if desired, an additional tongue or tongues **26** can be formed in the back of shoe **19** for use in case the lath board is not to start close to the floor or close to the ceiling as is the case with some baseboard and some ceiling cove constructions. In Fig. 5 two tongues **26** are seen to have been formed in the back of shoe **19**. In Fig. 4 it is seen that one tongue **26** is used to support and secure a lower row lath board to a partition frame work at the start of applying the lath board to the wall. In Fig. 3 it is seen that one tongue **26** is used to secure a top row lath board to a partition framework as the work of applying the lath board to the wall is ending.

Having recited the need for and utility of my improved stud shoe, illustrated in described its construction and

explained its place in the construction of a gypsum board lathed wall, I claim:

A stud shoe formed of a single piece of sheet metal to comprise a longitudinal back section, a pair of parallel flange sections extending respectively from the side edges of said back section in the same direction therefrom, an end flange section extending in the same direction from an end of said back section perpendicularly to said back section and said parallel flange sections and a bendable tongue partially sheared from said back section, said tongue being bendable first to extend parallel to said end flange from the side of said back section opposite said flanges to fix the vertical position of a wall board and then bendable to extend parallel to said back section to secure said wall board to said shoe.

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