H. I. JEFFERS.

METALLIC PARTITION STUD.

APPLICATION FILED SEPT. 29, 1908.

927,050.

Patented July 6, 1909.

2 SHEETS—SHEET 1.

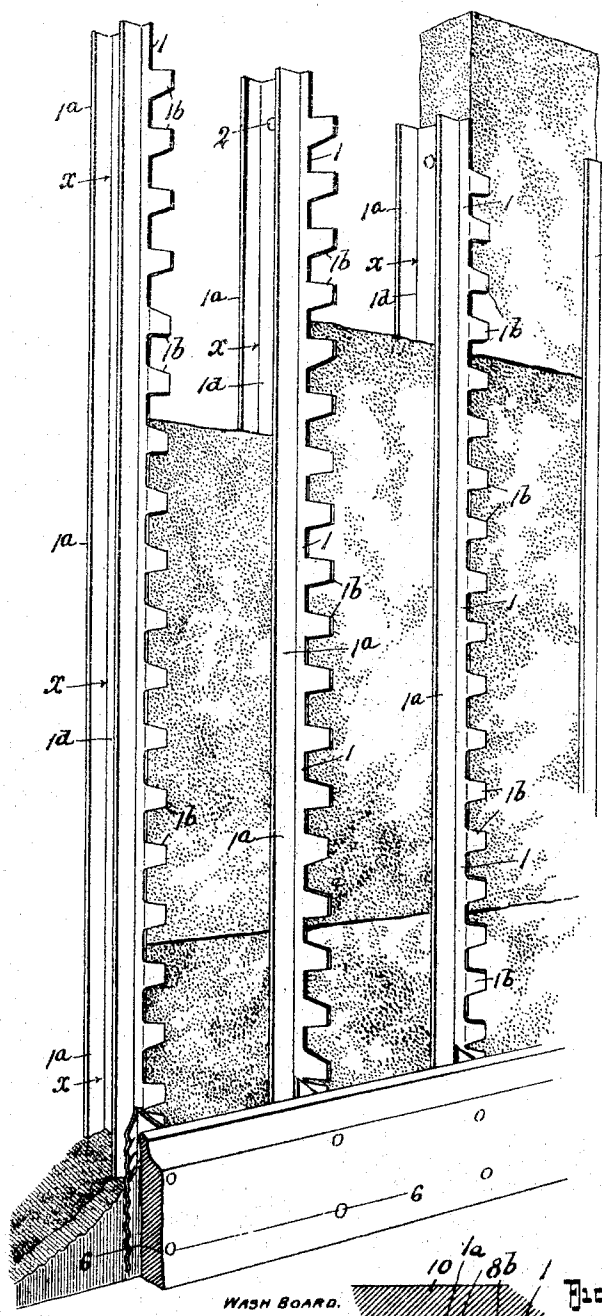


Fig. 1.

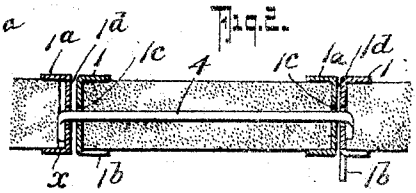


Fig. 2.

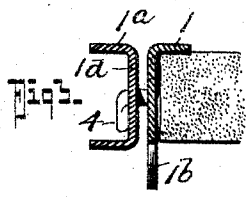


Fig. 3.

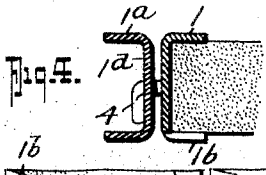


Fig. 4.

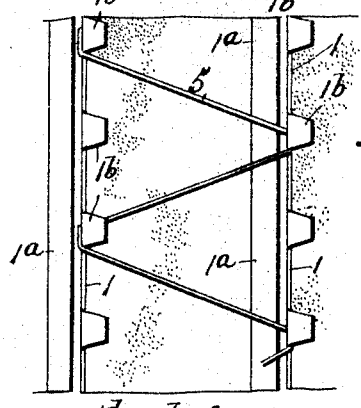


Fig. 5.

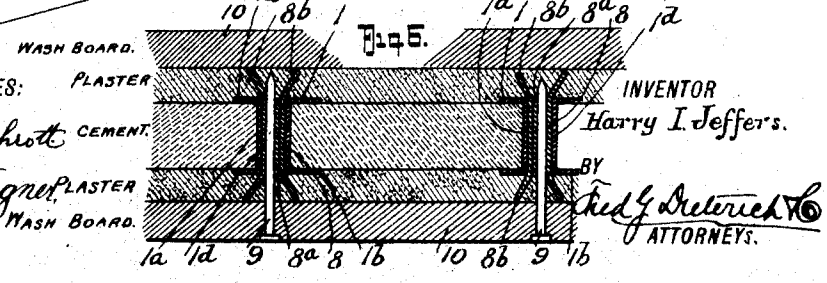


Fig. 6.

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2 SHEETS—SHEET 2.

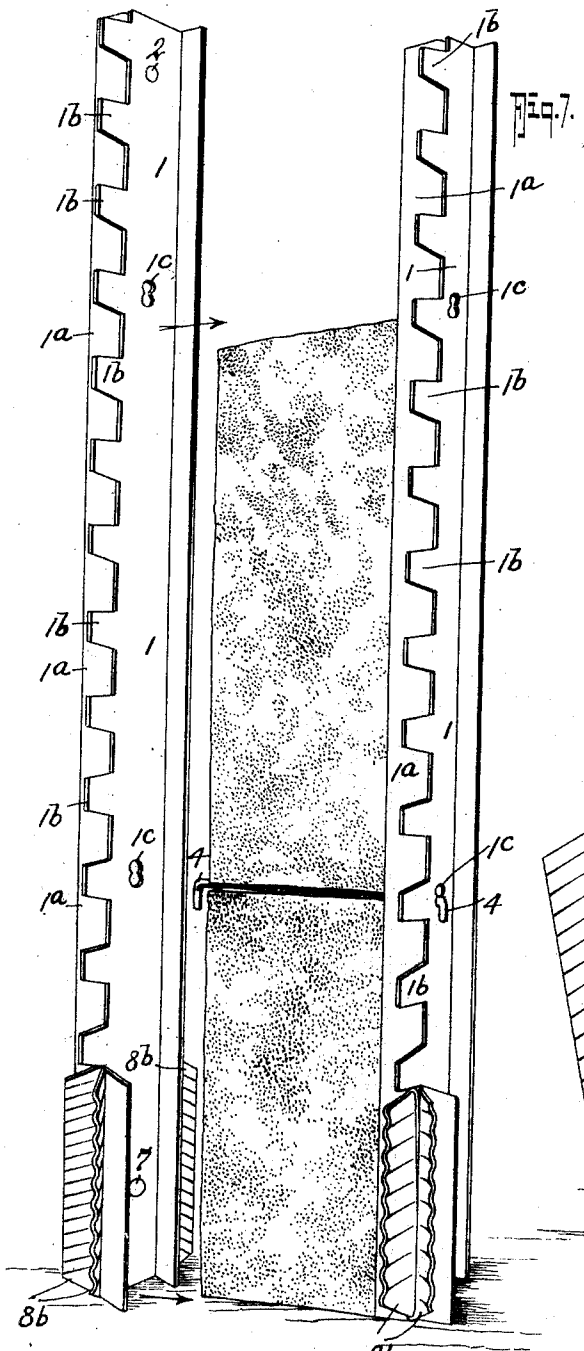


Fig. 7.

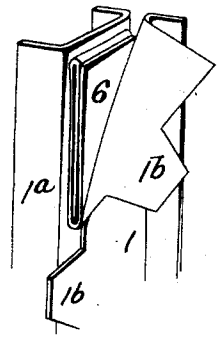


Fig. 8.

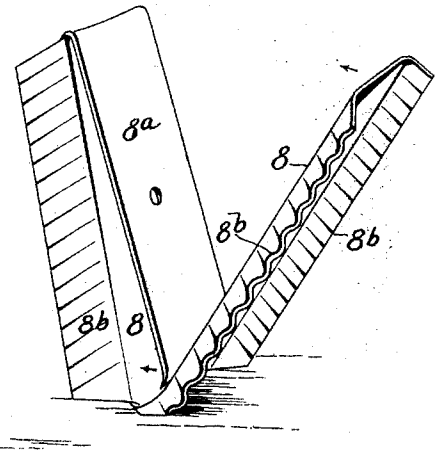


Fig. 9.

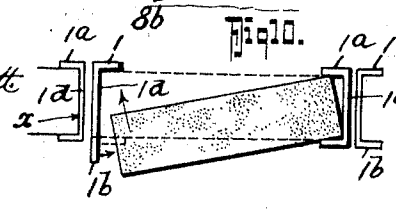


Fig. 10.

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UNITED STATES PATENT OFFICE.

HARRY IRWIN JEFFERS, OF FORT SMITH, ARKANSAS, ASSIGNOR OF ONE-HALF TO WILLIAM FRANKLIN MAY, OF FORT SMITH, ARKANSAS.

METALLIC PARTITION-STUD.

No. 927,050. Specification of Letters Patent. Patented July 6, 1909.

Application filed September 29, 1908. Serial No. 455,251.

To all whom it may concern:

Be it known that I, HARRY I. JEFFERS, residing at Fort Smith, in the county of Sebastian and State of Arkansas, have invented a new and Improved Construction of Metallic Partition-Stud, of which the following is a specification.

This invention relates to improvements in fire proof building construction and more particularly has for its object to provide an improved steel partition stud, especially designed for combining with concrete slabs or filling, of a simple, economical but stable construction, and of such character while primarily adapted for use as partition studs, the same may be as well utilized for framing out door and window openings.

My invention comprises an improved metallic partition stud embodying the peculiar arrangement and combination of parts hereinafter fully explained, specifically pointed out in the appended claims and illustrated in the accompanying drawings, in which:

Figure 1, is a perspective view of a portion of my improved construction of fire proof partition. Fig. 2, is a horizontal section of two studs with the slab filling and the binder combined therewith. Fig. 3, is an enlarged horizontal section of one of the studs showing the clamping prong to its outer position before it is bent over the end of the concrete slab. Fig. 4, is a similar view that shows the prong as bent over the slab. Fig. 5, is a detail view that illustrates a modified construction of binder means hereinafter described. Fig. 6, is a horizontal section of a portion of the complete partition taken substantially on the line 6—6 on Fig. 1. Fig. 7, is a perspective view that illustrates a pair of studs, one of which is shown separated from the concrete slabs to more clearly illustrate the construction thereof. Fig. 8, is a detail view of the upper end of the stud, and illustrates the nail clenching means combined therewith. Fig. 9, is a detail view of the combined ground or base board abutment or wall plug, and Fig. 10, is a horizontal section of a pair of studs and illustrates the manner in which the concrete slabs are put in position therebetween.

In the practical application of my invention the studs are bent up from sheet metal, preferably steel, and each of said studs has a U-shaped channel face at one side and an L-shaped channel face on the opposite side.

In the practical application of my improved studs, the same are used in connection with concrete slabs of a thickness to fill the stud channels, and the said studs have members that are bendable over the slabs to hold them locked in position between the studs.

By referring now more particularly to Figs. 1, 2 and 3 it will be seen that each stud consists of two distinct members 1—1^a, one of which 1^a is U-shaped in cross section to form a channel way x, while the other is L-shaped in cross section and has one flange extended to form a series of prongs 1^b, the purpose of which will be presently explained. The two members 1 and 1^a are placed with the back faces adjacent and are secured at the upper and lower ends by rivets or bolts 2, as shown in Fig. 1.

While I have not so illustrated my invention, I deem it proper to here state that while the studs are primarily used for partition structure, they may also be used for framing out window and door openings.

In the practical setting up of my construction of stud, the L-shaped portion of one stud faces the U-shaped face of the next stud, as best shown in Fig. 10 by reference to which it will be noticed that by reason of forming the studs with the differently shaped channel faces as stated, the concrete slabs can be readily placed between the studs by fitting one end of the slab into the U-shaped channel of one stud and swinging the other end of the slab edgewise into the L-shaped channel or angle iron of the other stud, and after the slab has been thus swung into place the said slab is secured by turning the prongs on the L-shaped face of the stud.

To bind the studs from lateral displacement, they are braced transversely by binder devices, which may be rods 4 that extend through elongated apertures 1^c in the body 1^d of the studs and whose ends are clenched or bent down after the rods have been transversely inserted through the body 1^d, or the said binders may be in the nature of flexible wires 5 laced through the bendable prongs of the stud members as shown in Fig. 5.

At the upper and lower ends and at points intermediate the said ends, grounds are secured to the studs and which for the upper and intermediate parts of the studs are preferably fillers 6 formed of sheet metal bent one or more times upon themselves. The

fillers are inserted at the desired intervals between the opposing back faces of the two members that constitute the stud and are held firmly in place by the bolts or nuts 2 that hold the said two members firmly together. The lower filler members are shaped to serve as wall plugs or grounds and the said lower fillers, the construction of which is best shown in Figs. 1, 6 and 9, each consist of a sheet metal strip bent upon itself to form side members 8—8, and an intermediate member 8^a, the several members being bent closely together so they are insertible between the two members 1 and 1^a that constitute the stud, and the said filler members 8—8, and 8^a are firmly held from displacement by the rivets that secure the lower ends of the stud sections 1, 1^a. The side members 8—8 are of greater depth than the studs and they have their ends projected and flared outwardly as at 8^b—8^b, the said ends being corrugated to guide the nails 9 that secure the base boards 10 between the said sides 8 and the intermediate member 8^a, see Fig. 6. The projected and flared ends 8^b also act as a ground and gage for plastering in addition to forming a plug for fastening the woodwork.

From the foregoing, taken in connection with the accompanying drawings, the complete structure, the manner of the use and the advantages of my invention will be readily apparent to those skilled in the art to which it appertains.

While I have described and shown my improved studs as especially adapted for use in connection with concrete slabs, it is manifest that the same, without materially changing the same or departing from the scope of the appended claims, may be used in connection with raw cement filling, that may be poured between the studs in any approved manner.

Having thus described my invention, what I claim is:

1. A sheet metal partition stud that comprises two vertical members whose webs are secured together, are of the same width and superimposed on each other, one of the said members being U-shaped in cross section and the other L-shaped in cross section, the flanges of the two members being projected in opposite directions, the said L-shaped member having a bendable extension on the edge of the web opposite the flange edge.

2. A metallic stud formed of sheet metal and comprising two vertical members superposed on each other, the said members having web portions secured together, one of the said members being U-shaped in cross section and the other L-shaped in cross section, the flanges of the two members being projected in opposite directions, the L-shaped member having a bendable extension on the edge opposite its flange edge.

3. In combination with a metallic stud having channel ways in its opposite faces to receive the ends of a concrete or similar filling, and longitudinally slotted; of a plug that is held in the slot of the stud, said plug having a nail gripping passage and its ends flared and projected beyond the stud for the purposes specified.

4. As an improvement in fire proof construction, a metallic stud consisting of a channel iron and an angle iron, the two being held spaced apart, the angle iron having bendable prongs; of grounds fixedly held between the stud members, said grounds consisting of a single member bent upon itself to form side portions and an intervening member, the said portions being adapted to be clamped between the stud members and having their opposite edges projected and flared for the purposes specified.

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Witnesses:
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