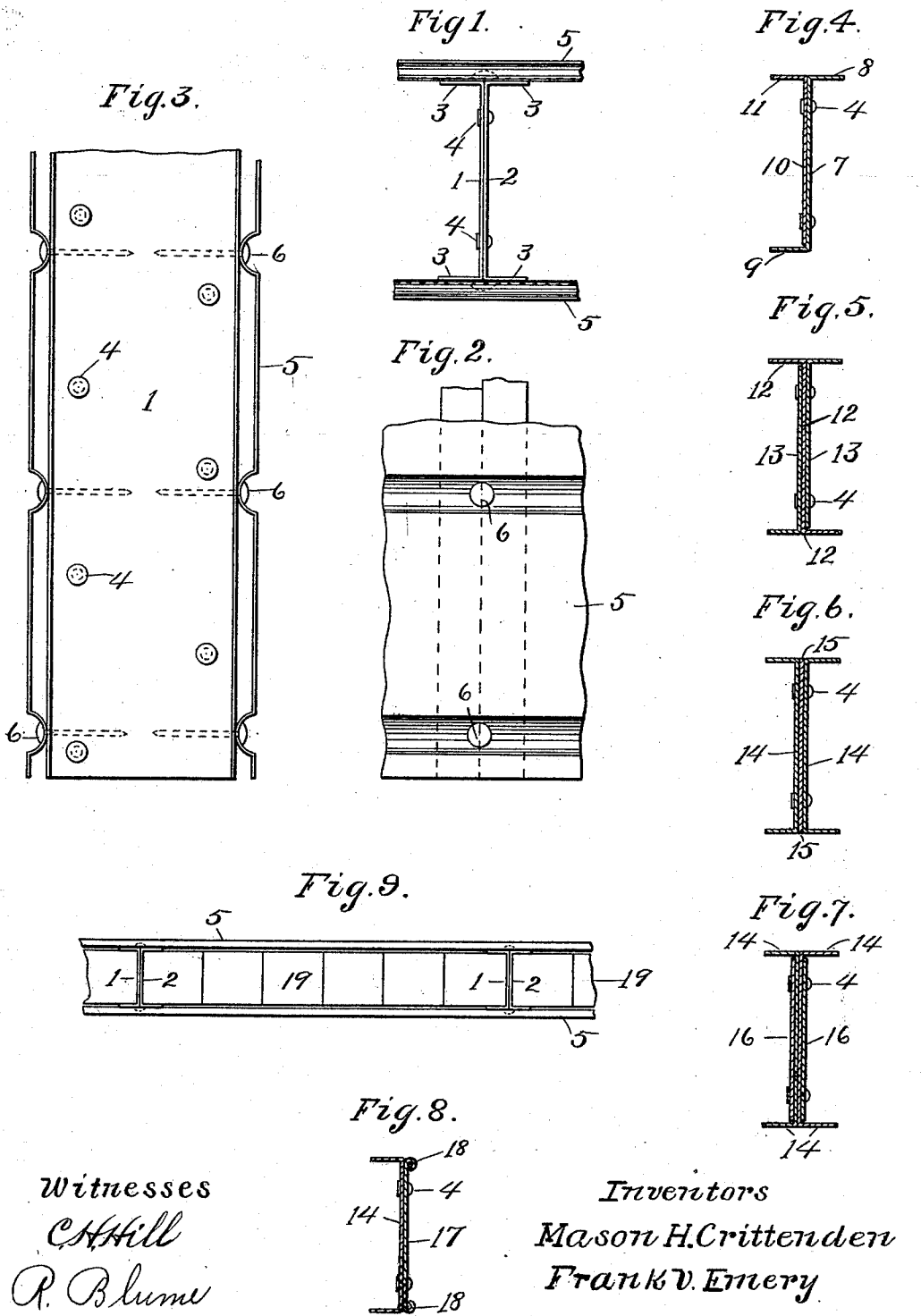


(No Model.)

M. H. CRITTENDEN & F. V. EMERY.
SHEET METAL STUD.

No. 518,645.

Patented Apr. 24, 1894.



Witnesses
C. Hill
R. Blume

Inventors
Mason H. Crittenden
Frank V. Emery

By their Attorney
P. H. Gunkel

UNITED STATES PATENT OFFICE.

MASON H. CRITTENDEN AND FRANK V. EMERY, OF MINNEAPOLIS,
MINNESOTA.

SHEET-METAL STUD.

SPECIFICATION forming part of Letters Patent No. 518,645, dated April 24, 1894.

Application filed April 3, 1893. Serial No. 468,833. (No model.)

To all whom it may concern:

Be it known that we, MASON H. CRITTENDEN and FRANK V. EMERY, citizens of the United States, residing at the city of Minneapolis, in the county of Hennepin and State of Minnesota, have jointly invented a certain new and useful Improvement in Sheet-Metal Studs, of which the following is a specification.

Our invention relates to studs, beams, rafters, joists, and like members for use in building; and its object is, principally, to produce light, cheap, easily constructed and convenient supports for sustaining metallic lathing adapted to receive plaster and to enable such lathing to be readily and conveniently secured to the supports; but obviously similar bodies may be put to many other uses. The supports referred to consist of two or more pieces of sheet-metal preferably bent to channel-shape, or otherwise bent to produce flanges at one or both of opposite edges and secured together to form bodies, preferably of I-shape.

Our improvements are illustrated in the accompanying drawings, in which—

Figure 1, is a top view of a stud or support of the construction suggested, and shows metallic lathing sheets attached to it. Figs. 2 and 3 are elevations of the same. Figs. 4 to 8 show modifications; and Fig. 9 shows the use of tiling in connection with the studs for forming partitions.

In the fire-proofing of the interiors of buildings much difficulty has been experienced in devising convenient and suitable means for attaching and supporting fire-proof plastering surfaces, such, for illustration, as metallic lathing sheets. If metal studs, joists, &c., of ordinary construction are used, it is expensive and difficult to secure the lathing to them in a firm and desirable manner, and if wood is used the result of fire-proofing is but partially accomplished. This difficulty we have overcome by constructing the studs, joists and other supporting members of the interior of buildings, of sheet-metal parts secured together and adapted to support plastering surfaces, fire-proofing material, &c.

In the drawings the preferred construction is that illustrated in Figs. 1, 2 and 3, the two portions of the stud, or similar support, be-

ing designated by 1 and 2 respectively. Each of these parts consists of a strip of sheet-iron or other metal, having its edges bent to form two flanges 3 at one side, thus forming a channel-shaped stud member, and two of these are then placed back to back and fastened by rivets 4, or otherwise firmly secured together, to form an I-shaped stud or body. If metallic lathing, as 5, is to be attached to such studs or bodies it can be done easily and conveniently by driving nails, 6, through the lathing sheets into the joint between the two parts of the stud or body. The elasticity of the sheet-metal permits this to be easily done without injury to the stud, and the nails will be sufficiently clamped by the sides of the stud members to hold them firmly and thus properly support the lathing.

While the stud or body described has been referred to chiefly in connection with metallic lathing it is not designed to restrict our protection to its use for that purpose alone, for obviously bodies similarly formed may be put to a variety of uses in building construction. The construction of such building members may be modified in many respects according to the specific uses to which the parts are to be put. Some suggestive forms of modifications are shown in the drawings.

In Fig. 4, a single sheet-metal strip 7, has flanges 8 and 9, respectively, at opposite sides, and to this piece is riveted a piece 10 having a flange 11.

In Fig. 5 a Z-shaped piece 12 has riveted to each of its sides a flanged piece 13, thus forming an I-shaped body similar to that in Fig. 1, but having a three-part web.

In Fig. 6 channel-shaped pieces 14, similar to those in Fig. 1, are used, and an intermediate strip 15, is used to add strength to the web. In Fig. 7, similar channel-shaped pieces 14 are reinforced by flat pieces 16 at both sides of the web.

In Fig. 8 but a single channel-shaped strip 14 is used and at the back of this is fastened a flat strip 17, which may have its edges bent as shown at 18. Two pieces like the strip 18 may be united to form a strong web adapted to receive nails between the members, as in the other forms.

In Fig. 9 is shown a top view of a partition in which the I-shaped sheet-metal studs serve both to sustain metallic lathing and the partition body, 19, which may be tiling built in between the studs in the manner shown, whereby the tiling is held in place by the flanges of the studs.

What we claim, and desire to secure by Letters Patent, is—

10 A stud, joist or like building member, formed of flanged sheet-metal sections having

plain surface backs, such sections being fastened together back to back and being sufficiently elastic to receive and hold nails driven in the joints between them, substantially as set forth.

MASON H. CRITTENDEN.
FRANK V. EMERY.

Witnesses:

P. H. GUNCKEL,
R. BLUME.