No. 683,800. Patented Oct. 1, 1901.

A. S. REAVIS.

FIREPROOF CONSTRUCTION.

(Application filed Apr. 22, 1901.)

(No Model.)

Fig. 1.

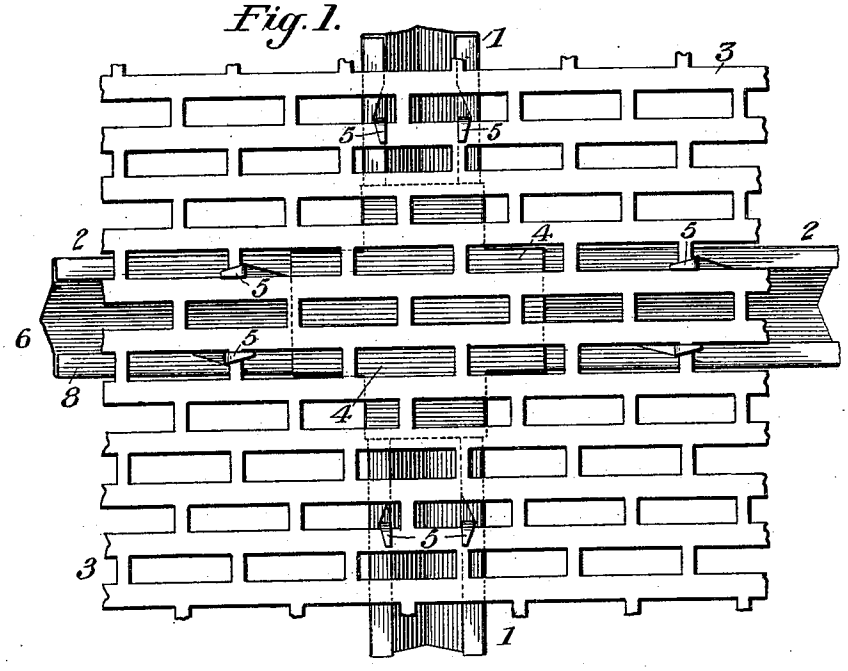


Fig. 2.

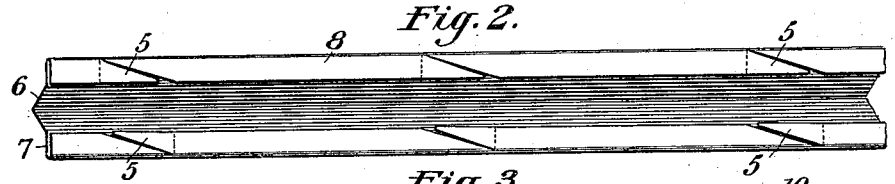


Fig. 3.

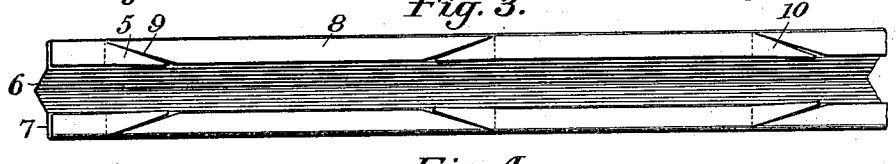


Fig. 4.

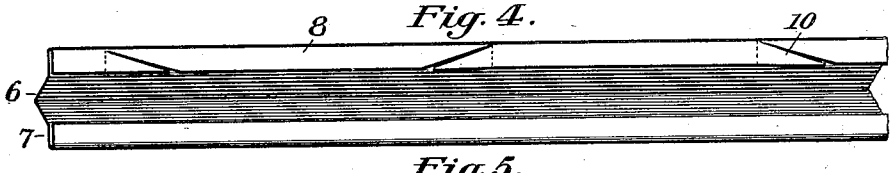
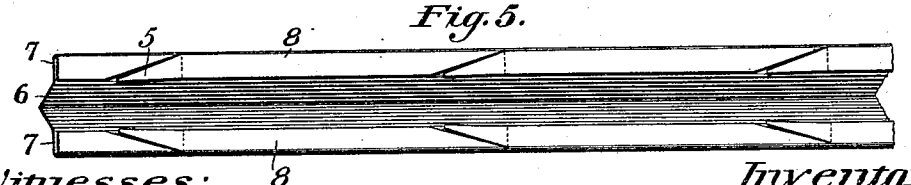


Fig. 5.



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UNITED STATES PATENT OFFICE.

ALBERT S. REAVIS, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO REAVIS FIRE-PROOFING AND PARTITION COMPANY, OF SAME PLACE.

FIREPROOF CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 683,800, dated October 1, 1901.

Application filed April 22, 1901. Serial No. 56,984. (No model.)

To all whom it may concern:

Be it known that I, ALBERT S. REAVIS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented a certain new and useful Fireproof Construction, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to fireproof construction, and particularly to the building of partition-walls in which metallic lathing is employed as an element of the structure for receiving and supporting the usual plastering.

The main object of the present invention is to provide a frame-bar, which may consist either of a stud or purlin and the like, formed of sheet metal and having a portion or portions thereof cut in such manner as to establish integral and flexible lath-holding fingers which are adapted to be bent into engagement with metallic lathing of any kind for the purpose of supporting the lathing on the frame-bars of the partition-wall and preventing subsequent moving or settling of the lathing and the plaster carried thereby.

With the above and other objects in view, which will appear more fully as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a fragmentary elevation of a portion of a fireproof partition constructed in accordance with the present invention. Figs. 2, 3, 4, and 5 are detailed perspective views of portions of a frame-bar, showing the construction thereof and illustrating different methods of incising the edges to form the lath-holding fingers.

Similar numerals of reference designate corresponding parts in all the figures.

In order to illustrate the preferred embodiment of this invention and the manner of carrying the same out, I have shown in Fig. 1 a portion of a fireproof partition with metallic lathing applied to the frame-bars. In said figure, 1 designates a stud, 2 a purlin, and 3 metallic lathing, which may be of any preferred or usual form. The purlin-sections 2 are shown as connected with the stud 1 by means of a cruciform coupling 4, while the metallic lathing 3 is shown as connected to and supported upon the frame-bars, consisting of the stud and purlins, by means of flexible fingers 5, constituting integral parts of the stud and purlins. The studs and purlins of the partition-wall will hereinafter be referred to as "frame-bars," as said parts constitute the frame of the partition-wall, upon which the remaining elements are mounted and supported. Each of the frame-bars is constructed of sheet metal, which is bent along longitudinal lines to form a V-shaped body portion 6. Extending in opposite direction from the body portion are flanges 7, the same being located substantially in the same plane and having their outer edge portions recurved or folded upon themselves, as clearly illustrated in the drawings, whereby the flanges are reinforced and strengthened. The folded portions 8 of the flanges are provided with cuts or incisions 9, extending from the edges of the metal toward the folds of the flanges, thus leaving tapering or triangular-shaped fingers 10, which are integral portions of the frame-bar and which are flexible, so that they may be bent back, as indicated by dotted lines in Figs. 2 to 5, inclusive, and by full lines in Fig. 1, to engage the metallic lathing 3 and form an efficient support therefor and the plaster subsequently applied to the lathing. In the preferred embodiment of this invention a plurality of such lath-holding fingers are provided for each frame-bar, and the incisions which form the fingers are so made that said fingers when folded or bent back will extend in opposite or reverse directions, as illustrated in connection with the purlin-sections of Fig. 1 and as shown in Fig. 2, in which the oppositely-located folded portions 8 of the flanges are cut on substantially parallel lines, so as to form integral and flexible fingers, located opposite each other or nearly so and extending in reverse directions. I do not desire, however, to be limited to this specific arrangement of fingers, as it will be apparent that the oppositely-lying fingers may extend in the same direction, as illustrated in Fig. 3, in which the alternate pairs of fingers are shown as extending in opposite directions. It is also within the scope of this

invention to extend all of the fingers of both flanges in the same direction, as shown in Fig. 5, and also to omit the fingers from one of the flanges, forming all of the lath-holding fingers at one side of the frame member and in connection with the folded portion of one of the flanges, as shown in Fig. 4. All of these obvious variations fall within the scope of the present invention, as well as others which may suggest themselves from time to time. It will therefore be understood that one or both of the flanges may be provided with one or more flexible and integral fingers and that where more than one finger is employed the fingers may be formed so as to extend in the same direction or in reverse directions. It is, however, preferred to form the fingers in such manner that some will project in one direction while others project in the opposite direction, the advantage of this arrangement being that by bending the fingers around the metallic lathing in opposite directions they serve not only to securely hold the lathing against the frame-bars, but form an absolute lock for the lathing and prevent any possibility of the lathing moving or sliding in any direction upon the frame-bars, to which the metallic lathing is connected in the manner described. It will also be understood that each of the frame-bars is constructed of sheet metal, which is sufficiently soft and malleable to readily admit of the folding of the frame-bar in the manner set forth and illustrated, and consequently the fingers when formed in the manner described are also flexible and malleable, so that they may be readily and safely bent at any point, so as to embrace portions of the metallic lathing and bind said lathing firmly against the frame-bars and the couplings which unite the frame-bars.

By providing the lath-holding fingers and making them integral parts of the frame-bars the application of the lathing to such frame-bars is greatly facilitated and expedited, thus effecting a material saving in time in setting up the structure. Further than this, the formation of the fingers as integral parts of the frame-bars effects a material saving in the cost of construction, does away with the necessity of providing separate lath-holding clips, saving the extra material which would thus be necessary, and also saving the time of the workman in applying such clips to the frame-bars and fastening the same thereon. By cutting the folded portion of the flange obliquely and arranging the integral fingers to extend inward obliquely toward the center of the frame-bar the flanges are not weakened, so as to render the frame-bar as a whole liable to buckle, and in addition to this there are no outwardly-projecting points to injure the hands of the mechanic, and the points of the fingers are also protected, so as to avoid the liability of the same being accidentally bent outward and broken in the handling and transportation of the frame-bars.

Having described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In fireproof construction, a sheet-metal frame-bar having its edge portion cut obliquely to form integral and flexible lath-holding fingers the points of which extend obliquely inward toward the center of the frame-bar.

2. In fireproof construction, a frame-bar composed of sheet metal the opposite edges of which are folded upon themselves and provided with oblique incisions forming integral and flexible lath-holding fingers.

3. In fireproof construction, a frame-bar composed of sheet metal the central portion of which is bent to form a V-shaped body and the opposite edges of which are extended in opposite directions to form flanges lying in substantially the same plane, the flanges being folded upon themselves and the folded portions incised to form integral and flexible lath-holding fingers.

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

ALBERT S. REAVIS.

Witnesses:
GEORGE L. GORMAN,
JNO. W. SEYBOLT.