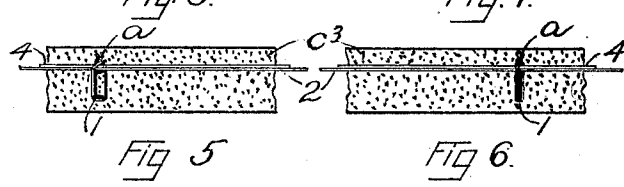
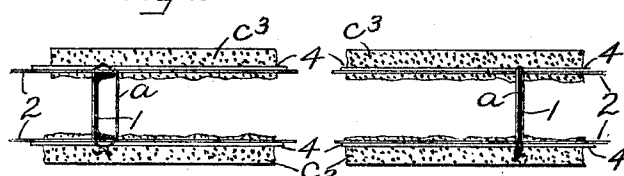
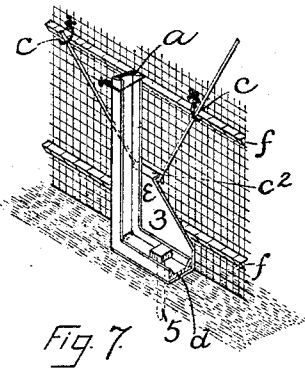
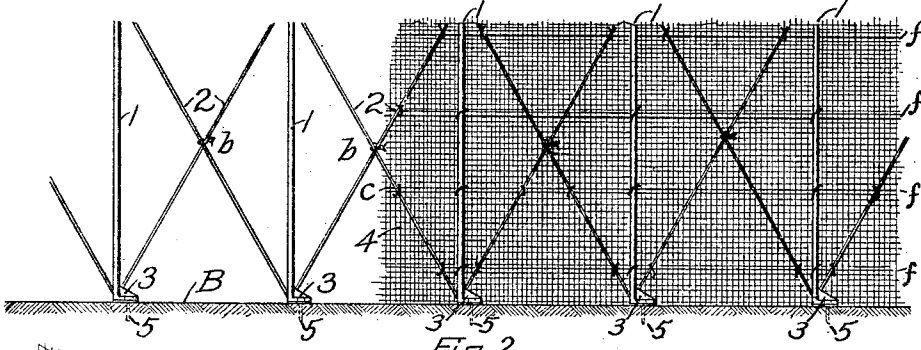
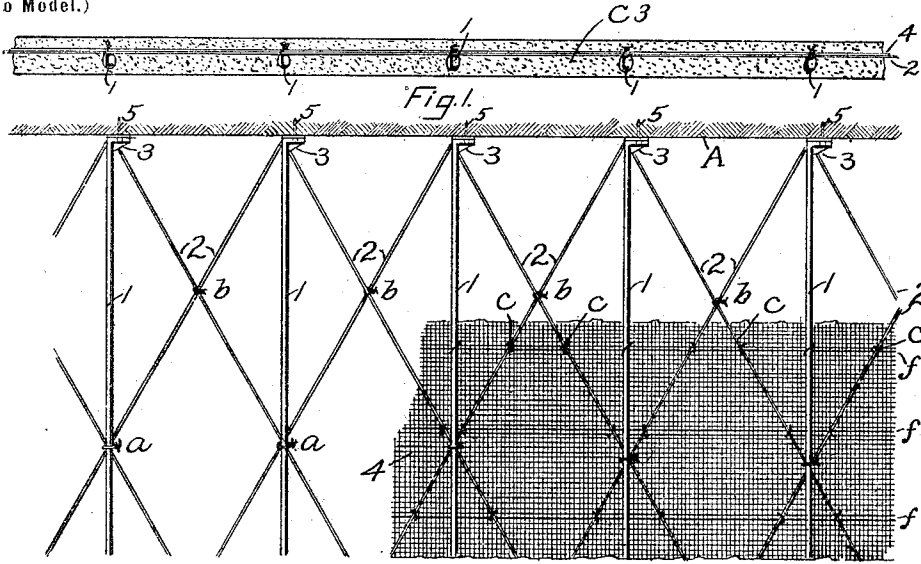


J. T. SIMPSON & M. N. SHOEMAKER.

FIREPROOF PARTITION STRUCTURE.

(Application filed Mar. 25, 1902.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN T. SIMPSON AND MARSHALL N. SHOEMAKER, OF JERSEY CITY, NEW JERSEY, ASSIGNORS TO AMERICAN CONCRETE-STEEL COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

FIREPROOF PARTITION STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 706,348, dated August 5, 1902.

Application filed March 25, 1902. Serial No. 99,850. (No model.)

To all whom it may concern:

Be it known that we, JOHN T. SIMPSON and MARSHALL N. SHOEMAKER, citizens of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Fireproof Partition Structures, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to an improved fireproof partition construction of the class having a metal frame embedded in plaster or concrete and all parts of which are thoroughly protected from the action of fire.

The object of this invention is to provide a partition that is strictly fireproof and which will withstand a heavy water-pressure while subjected to a great heat, the materials composing the metal frame being so distributed throughout that the action of heat will not cause an expansion of the metal sufficient to buckle or distort the frame and being so arranged as to give a perfect binding to the plaster or concrete body composing the covering; also, to provide a partition that will serve the double purpose of a fire-resisting wall and a substantial wind-brace and yet be of such a simple character as to be easily and economically constructed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of our invention are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a cross-section taken at right angles to the upright bars of the partition and looking down in top of same; Fig. 2, an elevation of the construction, showing the metal frame as it would appear in the course of construction placed between the floor and ceiling of a building; Figs. 3, 4, 5, and 6, enlarged details of a portion of Fig. 1, showing the parts more fully; and Fig. 7, a perspective view of the construction between a floor or ceiling bar, diagonals, clips, and metal covering.

Referring now to the drawings, A represents the finished ceiling-line of the building before the plastering has been placed on the same.

B represents the top of the finished floor before the sleepers or wood flooring are laid.

Between the ceiling A and the floor B are placed at certain intervals upright bars 1, having their top and bottom ends bent at right angles for a certain distance and punched with one or more holes to receive spikes 5. Clips 3 are inserted between the bent sides of these bars at both ceiling and floor line, as shown, and provided with holes punched in the horizontal leg *d* and corresponding to the holes in the bent end of the bar 1. Through these holes one or more spikes 5 are driven into the ceiling and floor materials, thus securing the same firmly in position. In case the bar rests upon a metal beam the end is attached to the same by means of some suitable clip. The vertical leg *c* of the clip 3 is bent into the form of a hook *c*², as shown, and through these hooks in the preferred form is passed diagonally between ceiling and floor heavy wires 2, similar to lacing a shoe, and having the extreme ends securely twisted about the hook *c*² in some suitable manner. Where these diagonal wires 2 cross the upright bars 1 they are firmly secured to the same by passing a small wire *a* around both members and twisting the ends securely together, thus forming a stiff lateral bracing for the bars 1. Upon the framework thus formed is secured wire or metal lathing, expanded metal, or some suitable metal fabric 4 (which in the preferred form is reinforced in same manner with a bar or rod *f*) by passing small wires *c* around the metallic-fabric bars 1 or diagonal wires 2, as the case may be, having the ends securely twisted together. While in the preferred form this metallic fabric is used, it is the object of this invention to form partitions either with or without the same. In the latter case a wooden centering of some suitable form would be substituted for the same, being placed, however, on both sides of the metal frame in such a manner that the plaster or plastic materials *c*³ could be poured

into the space thus formed, so as to completely surround the metal frame.

In the preferred form the plaster of the ordinary type is applied first against one side, then against the other of the metal frame in the usual way and forming a solid partition, as shown in Figs. 1, 5, and 6, and a hollow partition, as shown in Figs. 3 and 4, for the accommodation of pipes, &c.

In the preferred form the bars 1 would be of a channel or flat bar form, as shown; but it is the purpose of this invention to use a bar of any other suitable form.

In the preferred form the diagonals 2 will be of heavy wire, though a rod or flat bar of some suitable form may be substituted as the strength may require, having their ends secured in some suitable manner.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a partition construction, the combination with upright main supporting-bars, and diagonal bracing and binding members, passing across and attached to the same, of metal clips secured between the bars, and ceiling or floor materials to secure and change the direction of the diagonal members, and a metallic fabric or body secured thereto and against which the plaster is applied so as to embed and protect all parts of the metal frame against fire and securely hold the plas-

ter or plastic material, substantially as shown and described.

2. In a fireproof partition construction, the combination with upright main supporting-bars and diagonal bracing and binding members passing across and attached to said bars, of clips secured between the bars and ceiling or floor materials to secure and change the direction of the diagonal wires so as to form a rigid framework, and a metallic body or fabric secured to said bars and diagonal members and connected as a centering against which plaster or other material is applied, substantially as shown and described.

3. A fireproof structure comprising upright supports provided at their upper and lower ends with clips having hooks, diagonally-arranged bracing and binding members connected with said hooks and with said supports so as to form in connection therewith a network and centering material connected with said network, substantially as shown and described.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of the subscribing witnesses, this 24th day of March, 1902.

JNO. T. SIMPSON.
MARSHALL N. SHOEMAKER.

Witnesses:
F. A. STEWART,
F. F. TELLER.