

No. 675,403.

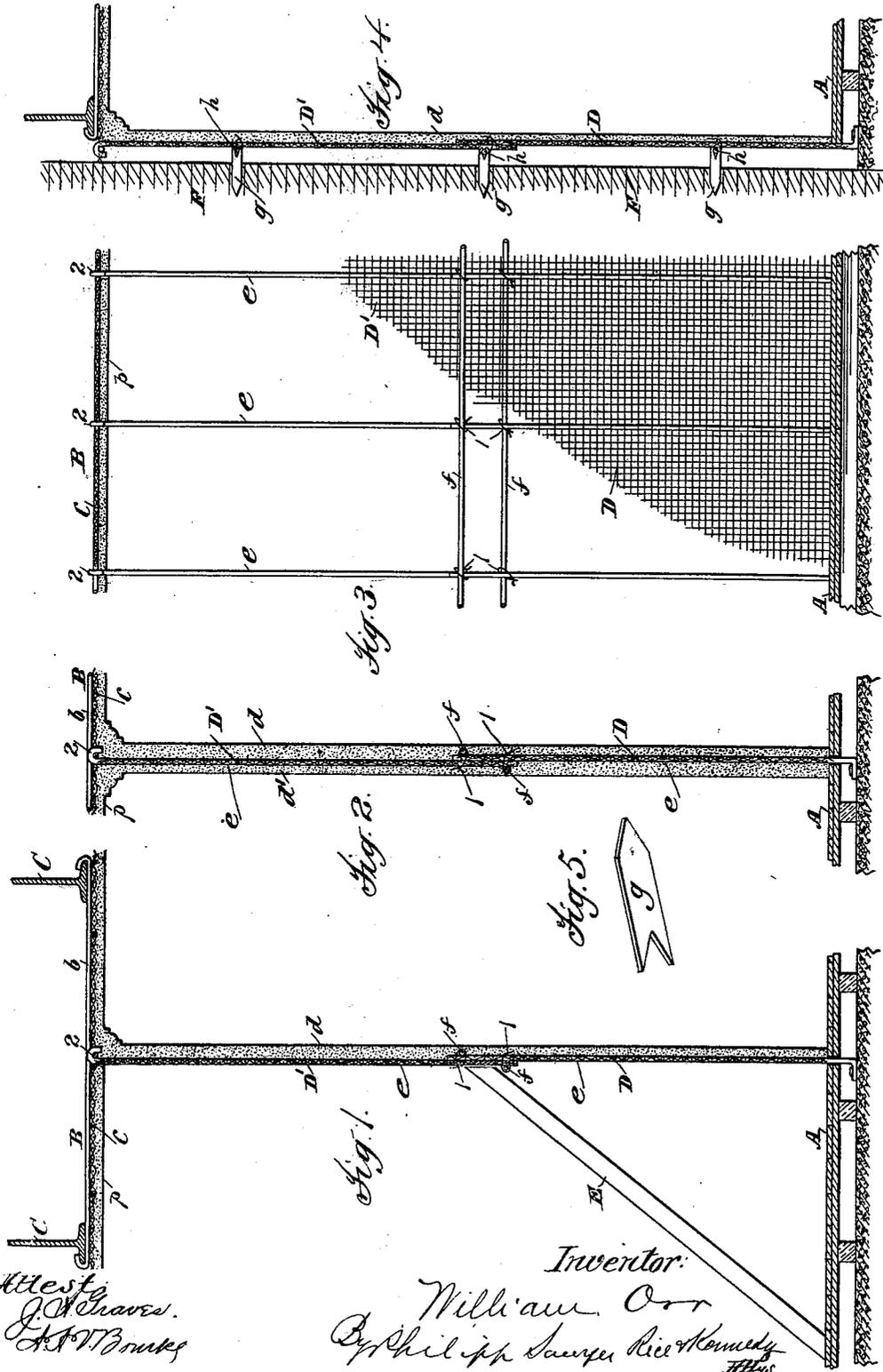
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W. ORR.

FIREPROOF CONSTRUCTION.

(Application filed Aug. 23, 1900.)

(No Model.)



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## FIREPROOF CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 675,403, dated June 4, 1901.

Application filed August 23, 1900. Serial No. 27,777. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ORR, a citizen of the United States, residing at Trenton, county of Mercer, and State of New Jersey, have invented certain new and useful Improvements in Fireproof Constructions, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is to provide a cheap and simple fireproof partition or wall formed of reticulated metal and plastic material, which shall have the required fireproof qualities and strength while employing but a single layer of reticulated metal and capable of rapid and efficient construction without labor of special skill.

As a full understanding of the invention can best be given by an illustration and detailed description of constructions embodying the same, such a description will now be given in connection with the accompanying drawings, forming a part of this specification, and showing a partition embodying the invention in its preferred form and a wall construction embodying certain features of the invention, and the features forming the invention will then be particularly pointed out in the claims.

In the drawings, Figure 1 is a vertical section of a partition in process of construction. Fig. 2 is a vertical cross-section of the completed construction. Fig. 3 is a side elevation of the metal framework with the reticulated metal partly broken away for the purpose of illustration. Fig. 4 is a view similar to Fig. 2, showing the wall construction. Fig. 5 is a detail perspective view of the furring-rod holder.

Referring now particularly to Figs. 1 to 3, A is the floor and B the ceiling between which the partition is to be built. The ceiling B is shown as of a common fireproof construction with ceiling-supporting rods *b* extending from beam to beam and carried by the flanges of the I-beams C, reticulated metal *c*, which is shown as common woven-wire lathing supported by and below the rods *b*, and the plastic material *p* applied on the lower side of the reticulated metal *c*. It will be understood, however, that the ceiling or floor construc-

tion at the top of the partition as well as at the base of the partition may be of any suitable construction.

Referring now to the partition construction, the reticulated metal employed consists of a plurality of sheets, two sheets D D' being shown, the width of which is such that when the sheets are placed vertically one above the other they extend from ceiling to floor and overlap at the center, as shown, the overlapping being sufficient so that these sheets may be used in constructing partitions of different heights, thus avoiding the necessity of making reticulated metal of special widths for different partitions. Each of these sheets of reticulated metal has secured thereto or woven therein supporting-rods *e*, which rods extend the full width of the sheets and project therefrom, so as to be used in securing the reticulated metal to the ceiling and floor. As the successive sheets of reticulated metal overlap, these rods *e* also overlap upon each other between the ceiling and floor, and the overlapping portions of these rods are secured together, so as to make a continuous sheet of reticulated metal extending vertically between the ceiling and floor.

As shown in Figs. 1 to 3, the overlapping portions of the sheets of reticulated metal and of the rods *e* are secured together by horizontal rods *f*, extending along the opposite sides of the overlapping portions and secured by wire ties *l* to the rods *e* at suitable intervals. The rods *e* are shown as bent at right angles and flattened at their lower ends for nailing to the floor and at their upper ends are shown as formed with hooks *2*, which are hooked through the lathing and around the stiffening-rods of the lathing. It will be understood, however, that the ends of the rods *e*, projecting beyond the reticulated metal, may be formed and secured to the ceiling and floor in any other suitable manner. The reticulated metal D D' is shown as woven-wire lathing; but it will be understood that this may be of any other suitable form, either of woven or netted wire, or metal rods or strips, or perforated or expanded metal, with the mesh such that the plastic material will be properly held when applied as described hereinafter.

The plastic material is to be applied upon the reticulated metal by a trowel in the usual manner, and for the purpose of stiffening the reticulated metal against the trowel-pressure a backing for the reticulated metal is preferably used. This may consist simply of struts E, supporting the reticulated metal from the floor, as shown, or any other suitable means may be used for this purpose.

The metal frame formed by the overlapping sheets of reticulated metal  $D D'$  and the supporting-rods  $e$  having been erected and backed by the struts E or otherwise, the plastic material  $d$  is applied to one face of the reticulated metal, as shown in Fig. 1. This plastic material having been allowed to set, the struts E or other backing is removed and plastic material  $d'$  is then applied on the other face of the reticulated metal to form a complete construction, as shown in Fig. 2. A partition construction is thus secured consisting of two bodies of plastic material united and strengthened by a single center of reticulated metal. This construction of metal center is also admirably adapted, not only for partition work, but also for forming wall furring or protection on the face of a wall. Such a construction is shown in Fig. 4, in which the overlapping sheets  $D D'$  of reticulated metal, with the supporting-rods  $e$ , are used, as in Figs. 1 to 3. In this construction, however, the reticulated metal is supported against the trowel-pressure and offset from the wall F by holders  $g$ , driven into the wall and receiving at their outer ends the furring-rods  $h$ , which may be woven into or secured to the lathing in any suitable manner. These holders for the furring-rods in the form shown are novel and in themselves form a specific feature of the invention. They consist of pieces of metal, preferably flat, so as to be readily and cheaply formed from pieces of scrap metal, and are cut at their outer ends with a V-shaped notch to receive the furring-rods, as shown clearly in the detail view, Fig. 5. In use they are driven into the wall, preferably by means of a three-cornered driving-piece fitting into the notch, and the furring-rods are then placed in position in the notches of the series of holders, and the ends of the holders on the opposite sides of the V-notches are then bent in over the furring-rods, as shown in Fig. 4, by a blow of the hammer or otherwise, so as to hold the furring-rods securely.

In the construction shown in Fig. 4 it will be apparent that the metal framework is first erected complete, as shown, and the plastic material is then applied to the outer face of the reticulated metal.

It will be seen that my invention provides partition and wall constructions that may be produced very rapidly and cheaply with unskilled labor. The overlapping adjustable sheets of lathing and the supporting-rods projecting beyond the edge of the lathing may be used in constructions other than partitions

and walls, including horizontal constructions, and are thus claimed.

What I claim is—

1. A fireproof construction consisting of a vertical center of reticulated metal formed of a plurality of sheets overlapping and secured together at their horizontal edges, and plastic material applied on one or both sides of the metal, substantially as described.
2. A fireproof construction consisting of a vertical center of reticulated metal formed of a plurality of sheets with vertical supporting-rods, the horizontal edges of the adjacent sheets and ends of the rods overlapping and being secured together, and plastic material applied on one or both sides of the metal, substantially as described.
3. A fireproof construction consisting of a vertical center of reticulated metal formed of a plurality of sheets with vertical supporting-rods, the horizontal edges of the adjacent sheets and ends of the rods overlapping, horizontal rods extending along the overlapping sheets and supporting-rods and secured to the latter, and plastic material applied on one or both sides of the metal, substantially as described.
4. A fireproof construction consisting of a vertical center of reticulated metal formed of a plurality of sheets with vertical supporting-rods having ends projecting from one edge of the sheets for securing them in place, the horizontal edges of the adjacent sheets and ends of the rods overlapping and being secured together, and plastic material applied on one or both sides of the metal, substantially as described.
5. A partition consisting of a center of reticulated metal formed of a plurality of sheets with vertical supporting-rods projecting above and below the center and secured to the ceiling and floor, the horizontal edges of the adjacent sheets and ends of the rods overlapping and being secured together, and plastic material on the opposite sides of said center, substantially as described.
6. The combination of a plurality of sheets of wire lathing or other reticulated metal, and supporting-rods woven therein or secured thereto, the adjacent edges of the sheets and ends of the rods overlapping and being secured together, substantially as described.
7. The combination of a plurality of sheets of wire lathing or other reticulated metal, supporting-rods woven therein or secured thereto, the adjacent edges of the sheets and ends of the rods overlapping, and rods extending along the overlapping portions of the sheets and supporting-rods and secured to the latter, substantially as described.
8. The combination of a plurality of sheets of wire lathing or other reticulated metal, supporting-rods woven therein or secured thereto, the adjacent edges of the sheets and ends of the rods overlapping and being secured together, and the outer ends of the supporting-rods projecting beyond the sheets and being

secured to hold the lathing in place, substantially as described.

9. An article of manufacture consisting of building material formed of a sheet of woven-wire lathing or other reticulated metal having supporting-rods woven therein or secured thereto and projecting beyond only one edge of the sheet for securing the latter in place, substantially as described.

10. The combination with overlapping lathing-sheets *D*, *D'*, and supporting-rods *e*, of rods *f* extending along the overlapping portions and tied to rods *e*, substantially as described.

11. A holder for furring-rods consisting of

a piece of metal adapted to be driven into a wall or similar support and having a **V**-notch at the outer end adapted to receive a driving member or tool and to receive the furring-rod and the outer terminals of the **V**-notch adapted to be bent around the furring-rod, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM ORR.

Witnesses:

EDWIN W. ARNOLD,  
GEO. W. FELTY.