

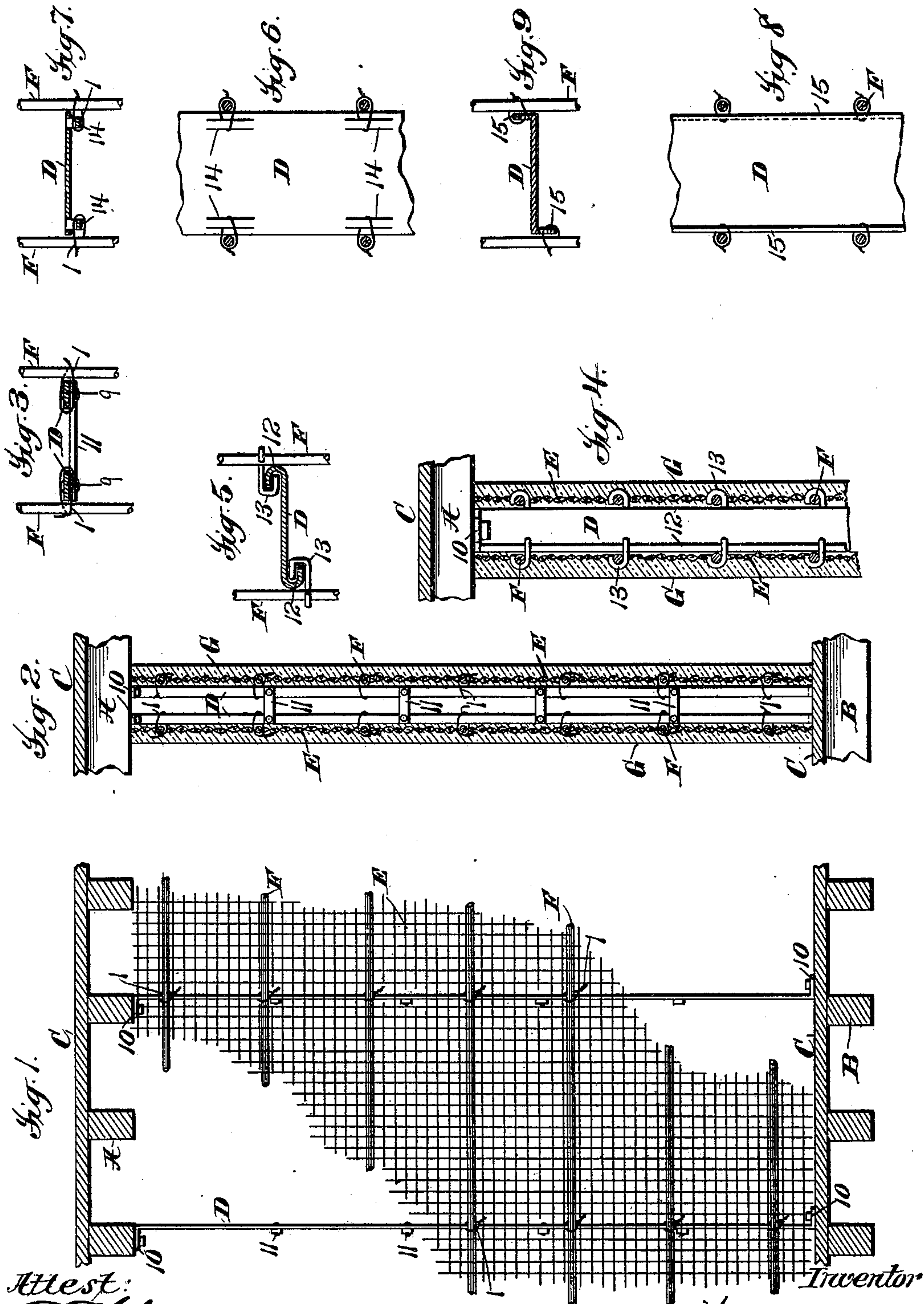
No. 675,402.

Patented June 4, 1901.

W. ORR.
FIREPROOF CONSTRUCTION.

(Application filed Dec. 17, 1897.)

(No Model.)



Attest:
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Inventor
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By Philip Phelps

UNITED STATES PATENT OFFICE.

WILLIAM ORR, OF TRENTON, NEW JERSEY, ASSIGNOR TO THE NEW JERSEY
WIRE CLOTH COMPANY, OF SAME PLACE.

FIREPROOF CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 675,402, dated June 4, 1901.

Application filed December 17, 1897. Serial No. 662,261. (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.

10 The object of the present invention is to provide an improved fireproof construction especially applicable to that class of constructions known as "hollow" partitions or walls, consisting of a frame supporting plastic material on opposite sides, so as to form a wall on each side of a central space, the especial object of the invention being to provide a strong and light construction of this class which shall be simple and convenient of construction.

20 As the invention can best be understood from the illustration and detailed description of a construction embodying the same, such a description will now be given in connection with the accompanying drawings, forming a part of this specification, and in which are shown some of the preferred forms of embodiment of the invention, and the features forming the invention will then be specifically pointed out in the claims.

30 In the drawings, Figure 1 is a side elevation of a portion of a partition or wall of one of the preferred forms before the application of the plastic material. Fig. 2 is a vertical cross-section of the complete construction. Fig. 3 is a detail horizontal cross-section of Fig. 2 with the lathing and plastic material omitted. Figs. 4 and 5 are detail views similar to Figs. 2 and 3, showing a modified construction. Figs. 6 and 7 and 8 and 9 are detail views similar to Figs. 2 and 3 with the lathing and plastic material omitted, showing other modifications.

45 In said drawings, A B are respectively the floor and ceiling beams, and C the floors between which the partition or wall is to extend, the beams being shown as of the common rectangular form, although it will be understood that this is immaterial. Between the two floors extend vertical bars D, each of which in the form shown in Figs. 1 and 2 consists

of two narrow metal strips 9, placed side by side in pairs and secured together at suitable intervals by ties 11, so as to form practically a single bar. These bars D are shown as bent at their opposite ends to form flanges 10, by which they are secured to the beams or floor, being shown in these drawings as secured to the beams of the upper floor and directly to the lower floor; but they may be secured in place in any other suitable manner. These bars D are of such width as to secure the desired thickness and interior space of the partition or wall when lathing and plastic material are supported at opposite sides of the bars, and the strips 9, which with the ties 11 form these bars in the construction now being described, are of such width that lacings or clips may readily be passed about them for securing the lathing in place, thus avoiding the waste of material and labor involved in passing the lacings or clips about the entire width of the bars. The separate strips 9 thus provide supports at the opposite edges of the bars D for securing the lathing, and thus enable the bars D to be of any desired width and form a partition or wall of any desired thickness without increasing the difficulty and expense of attaching the lathing for the support of the plastic material. Upon these bars D is supported the metallic lathing, which may be of any suitable form, either wire or perforated metal. I have shown woven-wire lathing E, having the stiffening-bars F, which may be woven into or secured to the lathing and the lathing being secured in place on the bars D by lacings 1, passing about the rods F and the strips 9 at opposite edges of the bars D. Upon the lathing E and stiffening-rods F is supported the plastic material G, which completes the partition or wall.

95 In Figs. 4 and 5 is shown a modified construction, in which a single continuous plate forms the bar D in place of the two strips tied together, as in Figs. 1 to 3, although it will be understood that in this construction also the bars D may be thus made in two parts. The bars D in this construction, whether formed in one or two parts, are provided with inwardly-bent or hooked flanges 12, which form supports for the lathing, the

rods F being secured to these edges by means of hooked clips 13, which are hooked about the flanges 12, and their outer ends then turned about the rods F, all as shown clearly in Fig. 5, so as to support the latter. It will be seen that the turning of the outer ends of the clips 13 about the rods F draws the rods up tight against the bars D, so as to assure a firm support of the rods and lathing thereon and a strong rigid framework for the plastic material. In this construction it will probably be found most convenient to first secure the rods F in place by the clips 13 and then lace or otherwise attach the lathing E to the rods; but the rods F may be woven into or secured to the lathing E before they are applied to the bars D. It will be seen that the flanges 12 not only act as supports for the lathing, but stiffen the plates forming the bars D, so that thin plates may be used and the construction thus cheapened.

In Figs. 6 and 7 is shown another construction, in which the supports at the edges of the bars D are formed by loops 14, struck up at suitable intervals from the bars D, preferably at or near the opposite side edges, and through which the lacings 1, securing the rods F and lathing E to the bars, are passed. If the bars D be narrow, however, a single central row of loops 14 may be used instead of two rows at opposite sides of the center, as shown.

In Figs. 8 and 9 is shown a construction in which the bars D have their opposite edges bent outward to form longitudinal flanges 15, extending, preferably, in opposite directions, as shown, these flanges being perforated at suitable intervals to receive the lacings 1 and form supports for the lathing.

It will be understood by those skilled in the art that various modifications may be made in the details of the construction shown without departing from my invention.

What is claimed is—

1. The combination with metal bars of such width as to form a wall or partition of the desired thickness and provided with supports,

of rods on opposite sides of the bars secured to and supported by said supports, metallic lathing on opposite sides of the bars, the metallic lathing on each side of the bars being secured to and supported by the rods on its side of the bars only, and bodies of plastic material on opposite sides of the bars supported by said lathing, substantially as described.

2. The combination with bars formed of single plates of such width as to form a wall or partition of the desired thickness placed edge-wise of the wall or partition, and provided at or near their opposite edges with supports, of metallic lathing on opposite sides of the bars, the metallic lathing on each side of the bars being secured to the supports on one side of the bars only and supported thereby, and bodies of plastic material on opposite sides of the bars supported by said lathing, substantially as described.

3. The combination with bars placed edge-wise of the wall or partition and having longitudinal stiffening hooked flanges at the opposite edges forming supports, of metallic lathing on opposite sides of the bars secured by clips hooked about said flanges and the lathing, and bodies of plastic material on opposite sides of the bars supported by said lathing, substantially as described.

4. The combination with bars D having the hooked flanges 12 at their opposite edges, of metallic lathing secured to said bars by clips 13 hooked about the flanges 12 and lathing, substantially as described.

5. The combination with bar D having the longitudinal hooked flange 12, of metallic lathing secured to said bar by clip 13 hooked about said lathing and flange, substantially as described.

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

WM. ORR.

Witnesses:

EDWIN W. ARNOLD,
W. K. POFF.