

(No Model.)

W. H. DOLMAN.
FIRE PROOF BUILDING.

No. 300,581.

Patented June 17, 1884.

Fig. 1.

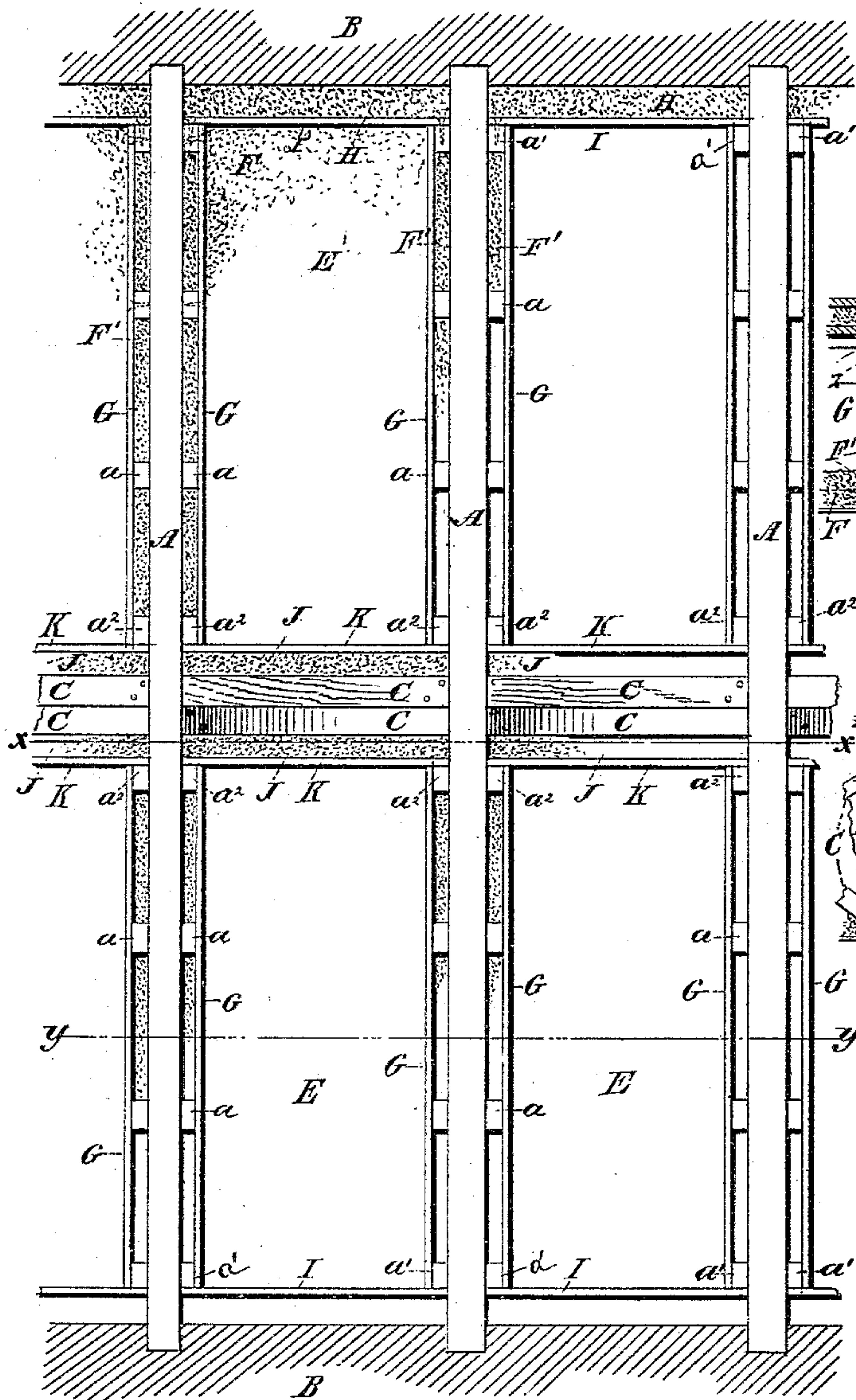


Fig. 2.

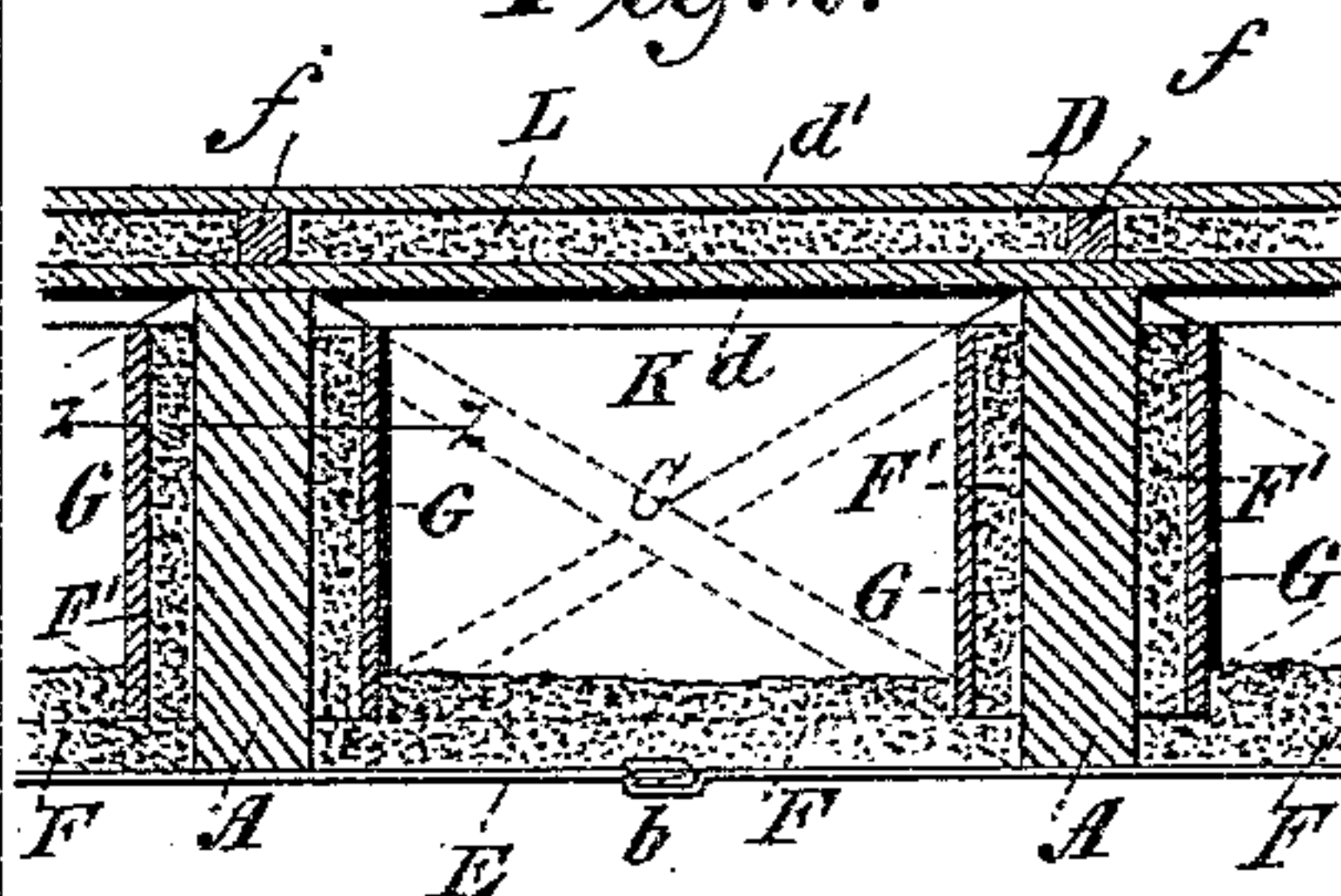


Fig. 3.

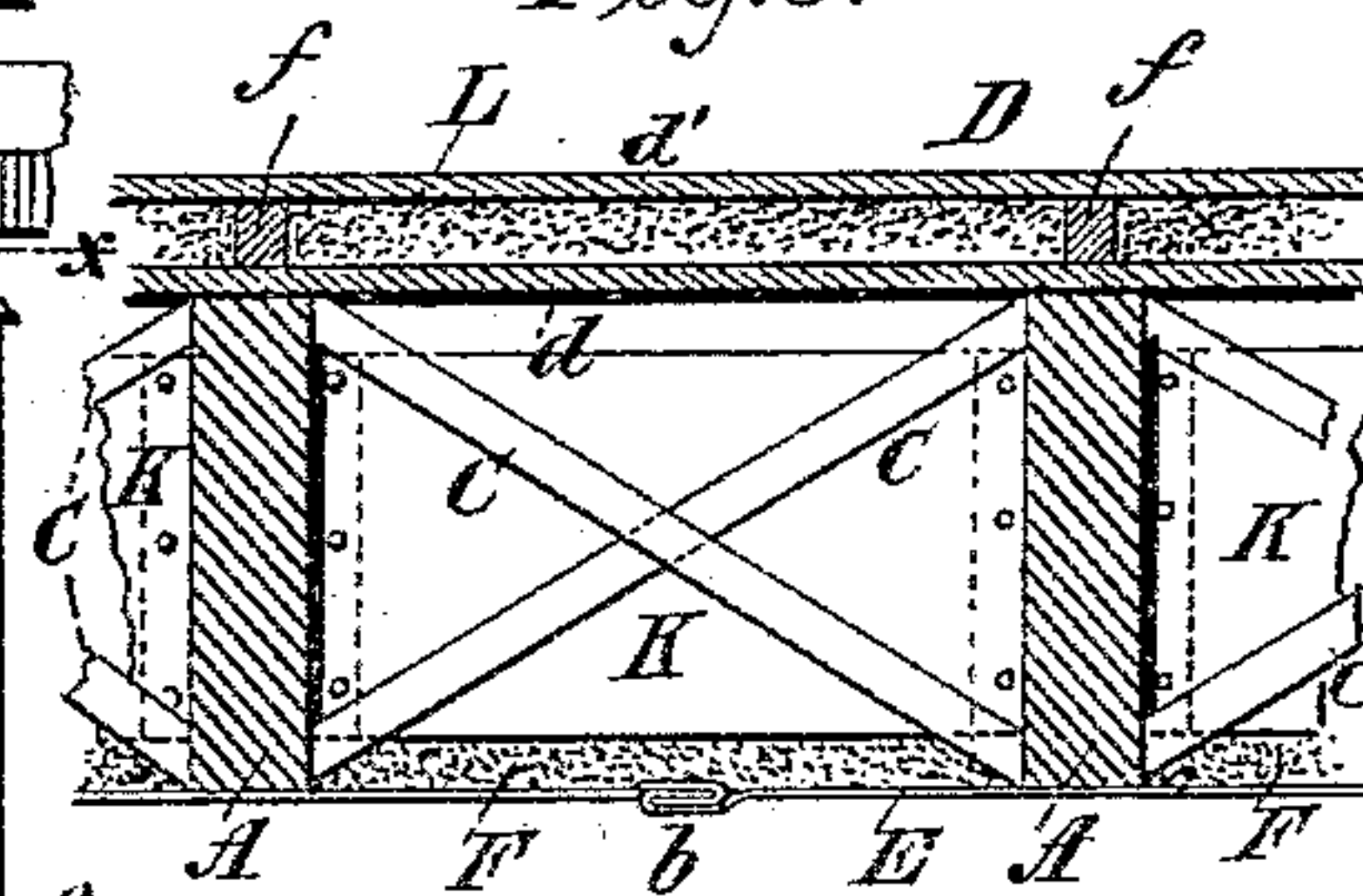


Fig. 4.

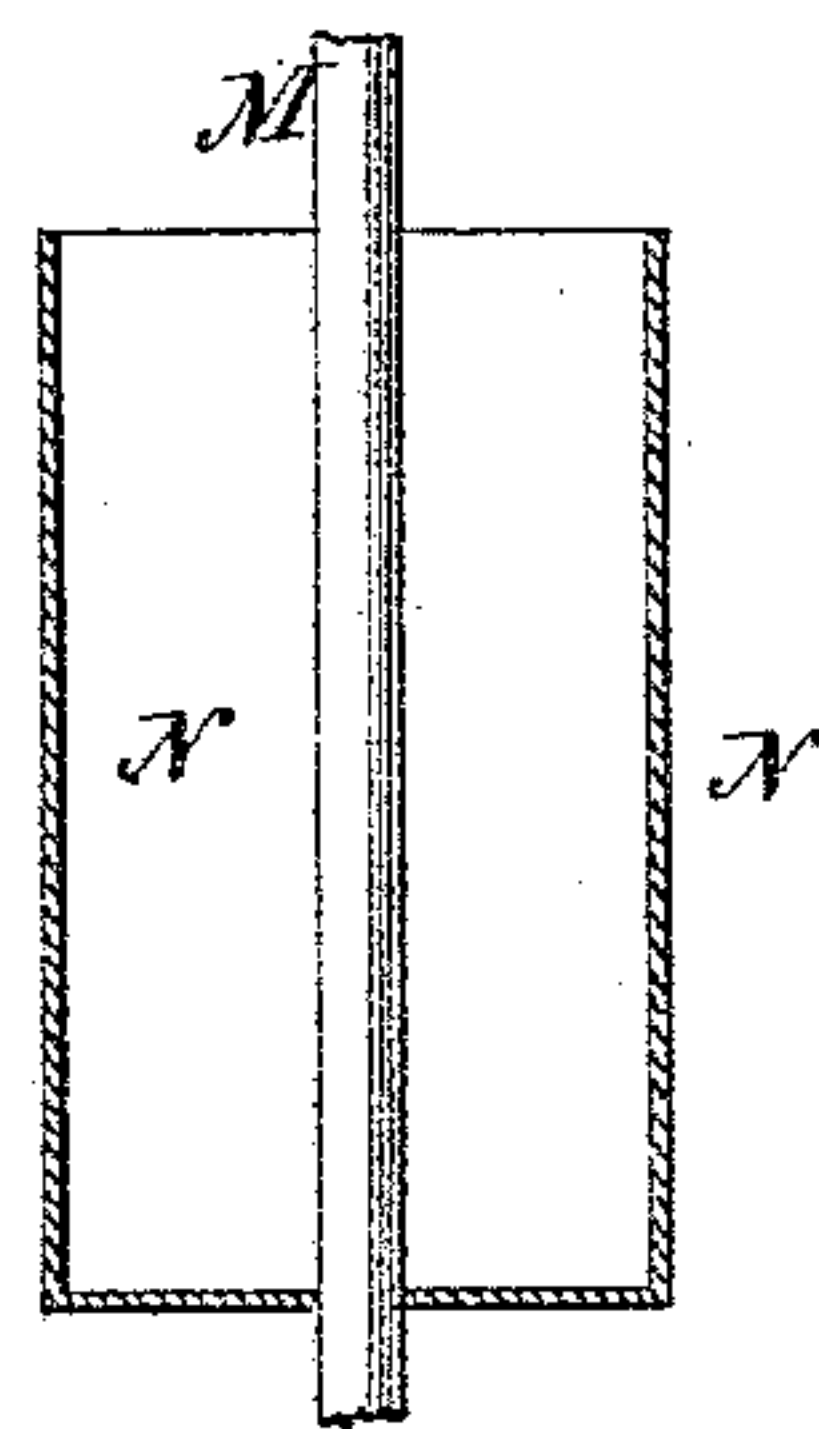
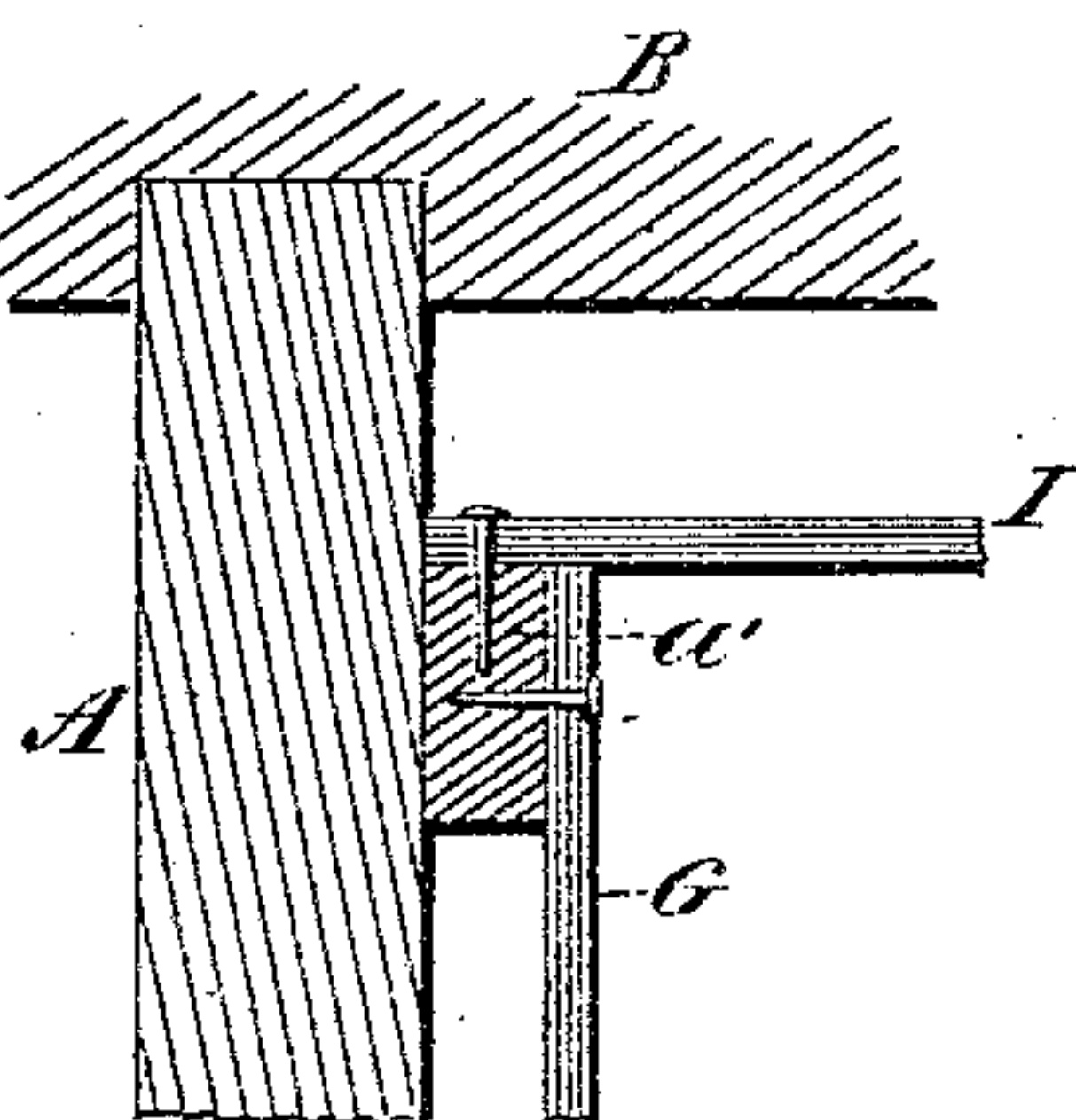


Fig. 5.



WITNESSES:

WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM H. DOLMAN, OF BRUNSWICK, MISSOURI.

FIRE-PROOF BUILDING.

SPECIFICATION forming part of Letters Patent No. 300,581, dated June 17, 1884.

Application filed February 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DOLMAN, of Brunswick, in the county of Chariton and State of Missouri, have invented a new and Improved Fire-Proof Building, of which the following is a full, clear, and exact description.

This invention relates to certain improvements on Letters Patent No. 286,401, which were granted to me October 9, 1883; and it consists of the application of ashes, dry earth, or other non-inflammable material for protecting the joists and other wood-work of buildings from fire, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the upper edges of three wooden joists of a brick building, showing my improved method of banking them and their braces or bridging with ashes, dry earth, or similar non-inflammable material. Fig. 2 is a sectional elevation of two of the joists banked according to my invention, and showing my improved double floor and the sheet-metal ceiling, the section being taken on the line yy of Fig. 1. Fig. 3 is a similar view taken on taken on the line xx of Fig. 1. Fig. 4 shows the method of boxing the water-pipes to prevent any leakage or condensation that may occur from wetting the ashes or dry earth used in banking the joists and sheet-metal ceiling, and Fig. 5 is a detailed sectional plan view of a portion of one of the joists and walls taken on the line zz of Fig. 2.

A A represent the wooden joists; B B, the brick walls in which the ends of the joists are held. C C represent the bridging or braces of the joists. D represents the floor, and E represents the sheet-metal ceiling secured to the lower edges of the joists A by nails or otherwise. The sheet-metal ceiling E is covered with a thin layer, F, of ashes or other non-inflammable material or dry earth, substantially the same as in my above-mentioned patent, and the sides of the joists A are banked upon both sides with the thin bodies F' of ashes or dry earth held in place in contact with the sides of the joists by the narrow vertical boards G G, nailed to the cleats $a' a''$, tacked to the sides of the joists, as shown in Fig. 1 of the drawings. The walls B B between the joists A A are

banked with the bodies H of dry non-inflammable material, held in place by the vertical boards I, which are nailed to the corner-cleats a' , so as to form spaces to receive the non-inflammable material, and the bridging or braces C C are surrounded by the bodies J, of non-inflammable material, held in place by the narrow boards K K, nailed to the cleats a'' . The lower edges of the boards G I K do not reach down to the sheet-metal ceiling E, but reach slightly into the layer F of ashes placed upon said ceiling, so that the vertical bodies F' H J of ashes will join the horizontal layer F of ashes, as shown in Fig. 2, thus making the banking of the joists and braces or bridging C with non-inflammable material complete; and it is designed in some instances to incline the boards G I K, making them to stand farther away from the joists, walls, and braces at their lower edges than at their upper edges, so that the ashes or non-inflammable material confined by them will be given free opportunity to settle in case of any shifting of the layer F of ashes, thus avoiding all danger of any break or opening being formed between the vertical and horizontal borders of non-inflammable material to expose the wood-work. The floor D is made double of the inner false floor, d , and the outer main floor, d' , supported upon the cleats f , and the space between the outer and inner floors, $d d'$, formed by the interposed cleats f , is filled with the layer L of ashes, dry earth, or other non-inflammable material, so that the false floor d and the joists, bridging, and other work beneath the floor d are perfectly protected from any fire that may occur upon the main outer floor, d' . The plates of sheet metal composing the sheet-metal ceiling E are lap-jointed at their edges, as shown at b , Figs. 2 and 3, so that no water can penetrate to the layer F of dry non-inflammable material in case the stream of water from a fireman's hose should be turned toward the ceiling E, and the water-pipes M, when they pass through the ceiling and floor, will have the metallic casing N placed around them, as shown in Fig. 4, which will prevent any water resulting from leakage or condensation from coming in contact with the dry non-inflammable material. In this manner it will be seen that the joists at their ends where they enter the wall and throughout

their entire length, and then the bridging of the joists, are thoroughly banked in non-inflammable material, so that they are perfectly protected against any fire that may occur in the rooms above or below, and that the non-inflammable material is so arranged that no openings can occur to expose the wood-work to heat, and that there is no danger of water coming in contact with the non-inflammable material to leak through and soil the walls or shift the non-inflammable material.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 1. The joists A, banked upon either side with the non-inflammable material F', held in place by the boards G, substantially as described.

20 2. The joists A, banked at their ends by the non-inflammable material H, held against the walls B by the boards I, substantially as and for the purposes set forth.

3. The bridging or braces C of the joists banked with non-inflammable material J, held in place by the boards K, substantially as and 25 for the purposes set forth.

4. The horizontal body of non-inflammable material placed upon the metallic ceiling E, in combination with vertical bodies, of non-inflammable material banking the joists, bridging, &c., and held in place by boards held slightly above the ceiling E, whereby the vertical and horizontal bodies of non-inflammable material are made to join, substantially as described. 30

5. The water-pipe M, having the boxing N placed around it where it passes through the ceiling E and floor D to prevent water from coming in contact with the non-inflammable material, substantially as described. 35

WM. H. DOLMAN.

Witnesses:

H. A. WEST,
C. SEDGWICK.