(No Model.)

P. B. WIGHT.

FIRE PROOF ARCH AND CEILING.

No. 273,419. Patented Mar. 6, 1883.

FIG. I.

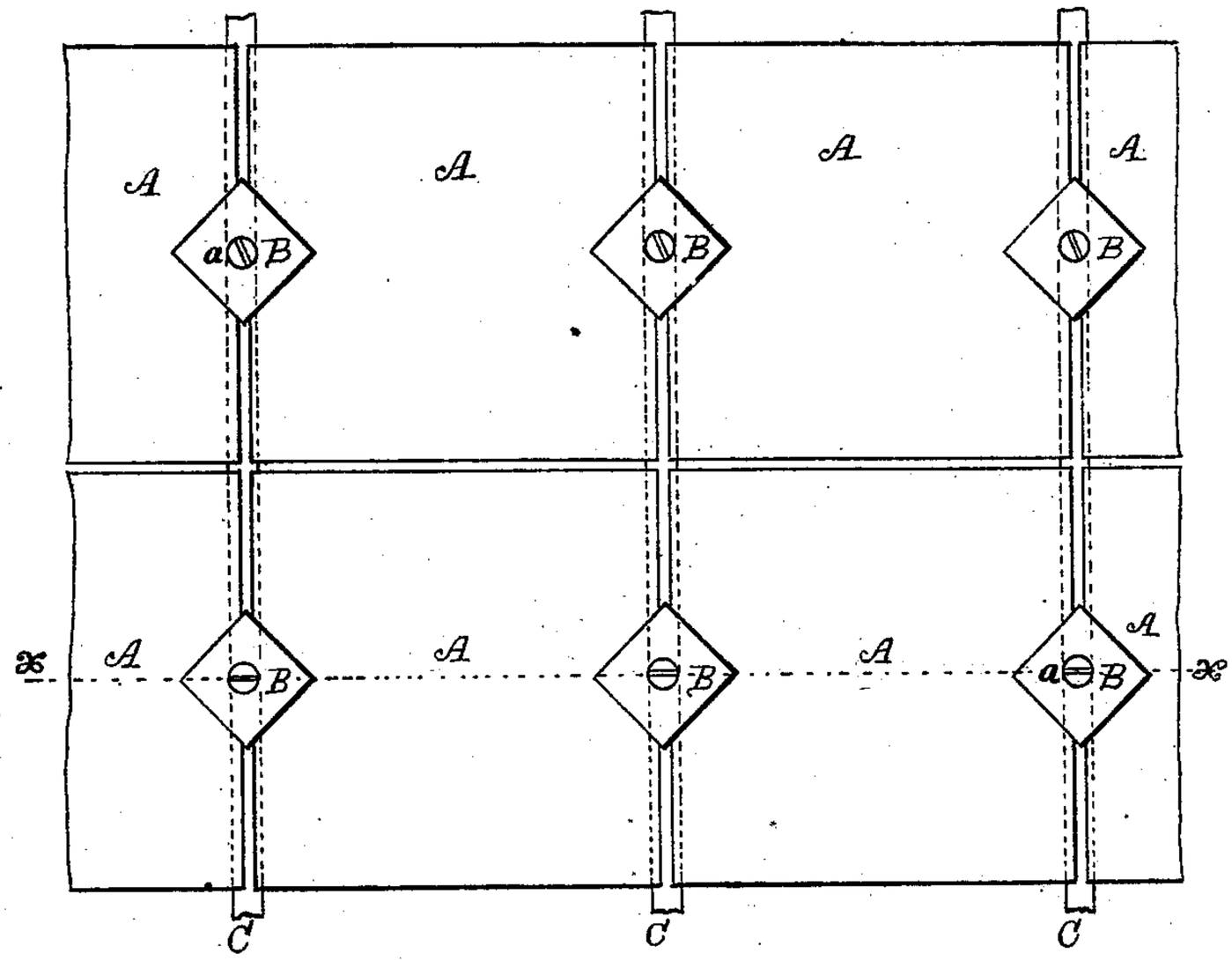


FIG. II.

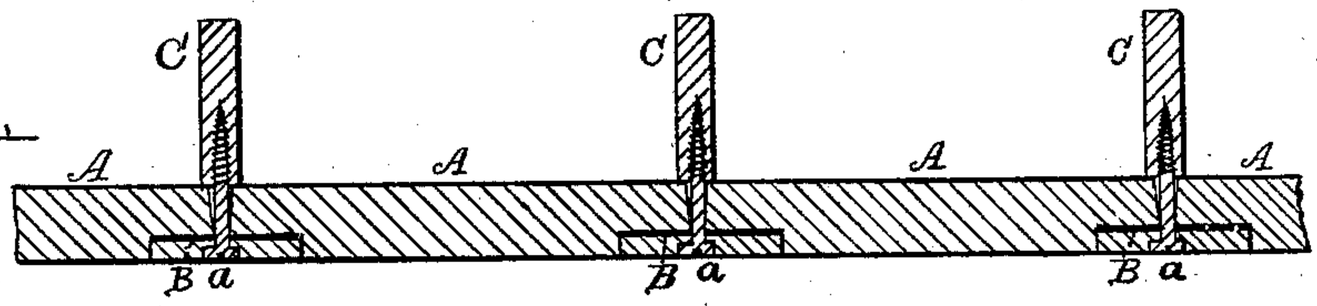


FIG. III.

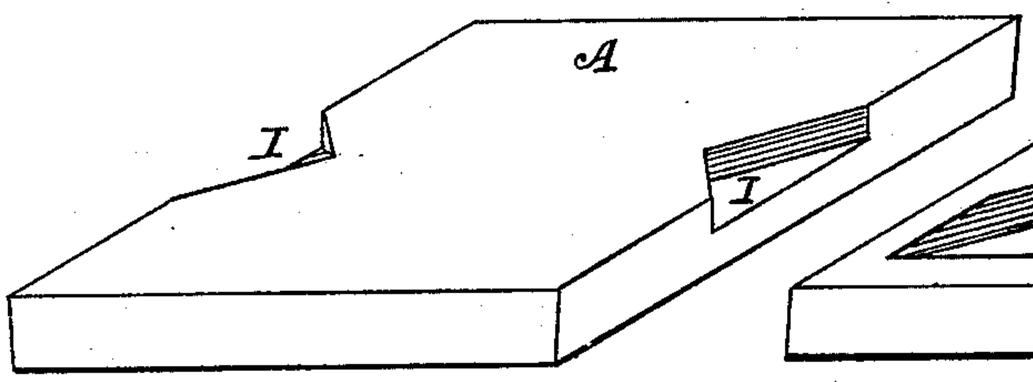
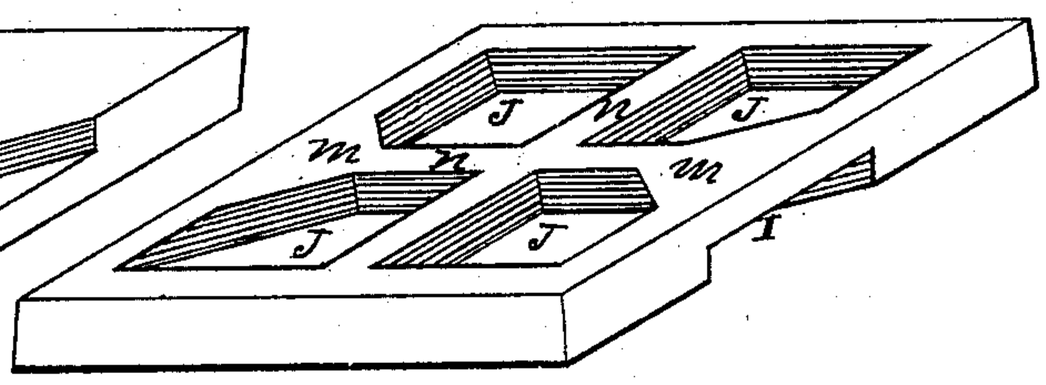


FIG. IV.



WITNESSES

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By G. L. Chapin. Atty.

UNITED STATES PATENT OFFICE.

PETER B. WIGHT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WIGHT FIRE PROOFING COMPANY, OF ILLINOIS.

FIRE-PROOF ARCH AND CEILING.

SPECIFICATION forming part of Letters Patent No. 273,419, dated March 6, 1883.

Application filed August 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, PETER B. WIGHT, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fire-Proof Tiles for Ceilings, of which the following is a specification, reference being had to the accompanying drawings, illustrating the improvement, in which—

Figure I represents a broken portion of ceiling as seen from below; Fig. II, a section of Fig. I on line *x*; Fig. III, an isometrical view of the under portion of one of the tiles or blocks of which the ceiling is composed; Fig. IV, an isometrical view of the upper portion of the block which is shown at Fig. III.

The object of the present invention is to improve on the fire-proof arches and ceilings patented April 16, 1878, and now owned by the Wight Fire Proofing Company, of Illinois. The distinctive feature of these last improved blocks is that the recesses to receive the plates or washers are at or near the centers of the opposite sides of the blocks, and not at the corners, as specified and shown in the patent referred to. They are placed on opposite sides to attain but two bearings instead of four, thus diminishing the danger of breaking a block while securing it in place by the screws, especially if the block be slightly warped, as is often the case. At the same time the two fastenings are found in practice to hold the blocks from vibrating or getting out of place during the introduction of the pointing to the joints between them, and that when the pointing becomes set the entire ceiling is held firmly in place. Another advantage is that, inasmuch as the plates or washers bear respectively only on two blocks, all the pressure on the blocks will be equal, the plates or washers on the screw being loosely fitted, that they may automatically adjust themselves to the recesses in both blocks. This result, of course, cannot be attained by means of the countersinks or recesses for the washers or heads of the bolts and the recessed back. A block is produced which in appearance is two inches in thickness, when in fact the block is only one inch in thickness, except where the central or inner ribs have their position.

It is proper to state that my fire-proof ceiling is not adapted, nor is it in any wise applicable, to roofing or flooring buildings, as will be seen from the mode of fastening and the spaces for mortar-joints between the blocks, and from the fact that the blocks are balanced on the two side or edge bolts till the whole ceiling-surface is brought into a parallelogram, or so much of its surface or so much of it brought level at a time as is found necessary to facilitate the setting and pointing the blocks. The ceiling as described has been introduced largely into public use, there being more than five thousand feet put into buildings in the city of Chicago and in other parts of the country, where it has proved to be of great value to the public. In contradistinction to roofing and other tiles, my blocks have no parts intersecting or overlapping each other, but are placed separate from each other, to enable the mortar to form the connection and complete the ceiling-surface, where the plates or washers bear on more than two blocks, respectively, inasmuch as the blocks, in molding or baking, will be more or less uneven in thickness at the washer-seats, so that no more than three blocks, and not often more than two, would be in contact with the plates, where the latter are employed to secure one corner each of four blocks, as shown in the patent. Again, the recesses in the blocks to receive the plates are rectangular in form to attain a better form for molding, and to give to a rectangular screw-plate the greater bearing-surface on the joint-line and at right angles to it.

A modification of the form of plate and recess in carrying out my improvement is to use circular plates or washers, in which case semicircular recesses in the blocks would be formed in lieu of the triangular ones. In this modification some advantage may be had in the manufacture of the blocks. Another feature is that the blocks are hollowed or recessed out on their backs to insure evenness in thickness, whereby the block throughout may be subjected to the same uniform heat when being dried or burned and the lightest block attained.

By special reference to the figures, A represents the blocks, B the plates, and *a* the screws which hold the blocks to the joists C.

I represents the triangular recesses or seats for the plates, and J J J J represent four hollowed or recessed places on the top or back of the block, divided by ribs *n n*, the ends of one

rib *n* over the recesses I I being wider to maintain as even a thickness to the block as possible.

The ribs *n n* may be omitted, so as to form one recess, or more ribs may be employed to form additional recesses; but I prefer to construct the block in the form shown. The material used in the manufacture of the blocks is that which is non-combustible and non-conducting—such as porous terra-cotta, concrete, or burned clay.

I claim as new and desire to secure by Letters Patent of the United States—

1. A block for fire-proof ceilings recessed or countersunk on its lower opposite edges to receive the heads of the bolts which hold the blocks to the ceiling-timbers, and recessed on its back or upper side, so that the real thickness of the block shall be uniform, as specified and shown.

2. Blocks for fireproofing ceilings recessed on their opposite lower edges to receive the bolt-heads which hold them to the timbers, and recessed on their backs to attain evenness of thickness, and set apart to form mortar-joints between them, and balanced on the bolts at opposite sides or edges to facilitate the bringing the face of the blocks to a parallelogram, as specified and shown.

PETER B. WIGHT.

Witnesses:
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M. MASON.