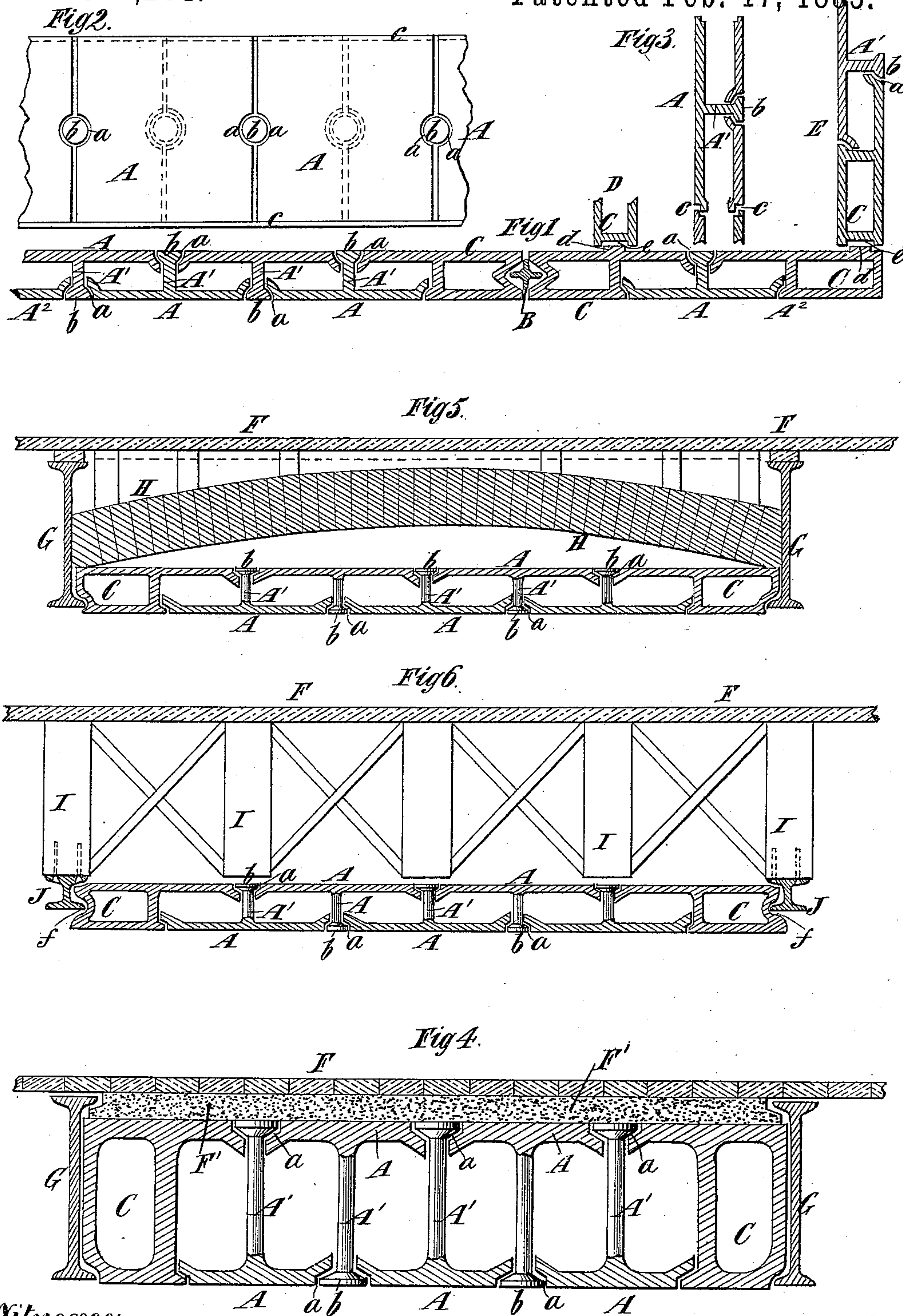


(No Model.)

C. METTAM.
FIRE PROOF PARTITION AND CEILING.

No. 312,284.

Patented Feb. 17, 1885.



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UNITED STATES PATENT OFFICE.

CHARLES METTAM, OF BAYONNE, NEW JERSEY,

FIRE-PROOF PARTITION AND CEILING.

SPECIFICATION forming part of Letters Patent No. 312,284, dated February 17, 1885.

Application filed May 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES METTAM, of Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Fire-Proof Partitions and Ceilings, of which the following is a specification.

The object of my invention is to provide an effective substitute for lath-and-plaster partitions and ceilings which shall also possess the advantage of being absolutely fire-proof.

The invention consists in a hollow partition or ceiling composed of tiles, each having a rearwardly-projecting post or tie greater in length than the thickness of the tile, and having notches in its opposite edges, the notches in adjacent tiles on each face of the hollow partition or ceiling forming sockets or holes to receive the ends of the posts or ties projecting from the tiles which form the opposite face of the hollow partition or ceiling.

The invention also consists in a tile having a rearwardly-projecting post or tie greater in length than the thickness of the tile, and also having notches in its opposite edges.

The ends of the ties may be provided with heads or flanges at their ends, and in such case the holes or sockets in the adjacent tiles are countersunk or recessed, so as to receive the said heads or flanges, and thereby prevent the tiles forming the opposite sides of the wall or ceiling from spreading.

The invention also consists in a hollow tile of novel construction, one side of which is extended so that it may engage or interlock with ties of the kind above described, as hereinafter more fully explained.

The invention also consists in the combination, in a partition-wall composed of tiles, of adjacent hollow tiles having their vertical meeting edges recessed, and an upright post or rod contained in the cavity formed between said tiles.

In the accompanying drawings, Figure 1 represents a horizontal section of two partition-walls forming a corner and constructed according to my invention. Fig. 2 represents an elevation of a portion of a partition-wall similarly constructed. Fig. 3 represents a vertical section of a portion of the wall. Fig. 4 represents a section of a portion of a fire-proof ceiling constructed according to my in-

vention. Fig. 5 represents a similar view of a ceiling of modified construction; and Fig. 6 represents a similar section of a ceiling, illustrating how my invention may be applied to ordinary wooden floor-beams.

Similar letters of reference designate corresponding parts in all the figures.

I will first describe my invention as embodied in partition-walls, as illustrated in Figs 1, 2, and 3.

A designate the tiles of which the walls are principally composed. These tiles are made in the form of flat plates or slats laid or placed so as to give the wall the desired thickness, and facing in opposite directions to form the opposite sides of the wall. The tiles A are of rectangular form, and each tile has a post or tie, A', projecting inward from its back across the wall, as clearly shown in Figs. 1 and 2. The tiles on each side of the wall are placed intermediately between those on the opposite side, and hence the ties A', if they are in the center of the tiles horizontally, will come opposite the joints between the tiles on the opposite side of the wall, and are received in sockets or holes a, formed by notches in the adjacent edges of the opposite tiles. Each tie has at its end a head or flange, b, and as the holes or sockets are countersunk or recessed on the outer side to receive the said heads or flanges, it will be observed that the tiles on opposite sides of the wall are securely bound or tied together and cannot spread or bulge outward.

It will be observed that the post or tie A' is of considerably greater length than the thickness of the tile, and that when the tiles are laid to form a partition-wall the tiles forming opposite faces thereof are not laid in contact back to back, but are separated by a considerable space, which will vary as the length of tie is increased or diminished.

The fire-proof qualities and stability of the wall are both increased by making it hollow. The tiles A are laid or set in horizontal rows, and at the horizontal joints c the ties are tongued and rabbeted together, as seen most clearly in Fig. 3. If the partition-wall is very long or high, it may be necessary to steady it by anchoring it to the floors between which it is built, and to provide for this I may place upright rods or posts B in the wall and make

the tiles C on each side thereof of different construction, as shown in Fig. 1. The tiles C are hollow, and are recessed on the ends, so as to form between them a cavity or space in which the post or rod B is received. The said post or rod may be fastened securely to the floors between which the partition-wall is built in any suitable manner. One side of each tile C is extended so as to interlock or engage with the tiles A. Where it is desirable to project a partition-wall D from the side of the wall A², I may form one of the tiles A with a tongue, *d*, on its outer side, and the first tile C of the wall D is made hollow and provided in the end with a recess or groove, *e*, which receives said tongue, and thereby secure the two walls firmly together. Where it is desired to project a wall, E, at right angles to the wall A³ at the end thereof, thus forming a corner, the tiles C at the corner are made hollow, and one is formed with a tongue, *d*, on the side and the other with a corresponding recess or groove, *e*, in the end engaging therewith.

The tiles which I employ may be made of common brick-clay, of terra-cotta, or of other suitable material. If the wall is to be plastered, they may be made of brick-clay and the joints left open; but if the tiles are to show they may be glazed and decorated in any desired manner, and laid with cement or mortar.

Partition-walls made as above described are comparatively cheap, they may be easily put up, and they possess the further advantage of being absolutely fire-proof.

I will now describe my invention as applied to ceilings, reference being made to Figs. 4, 5, and 6.

In the form of ceiling shown in Fig. 4, the floor F is laid upon beams G, and the space between the beams is filled in with tiles A, which are intermatched the same way as in a wall, the upper and lower tiles being each provided with a tie, A', having a flange or head, *b*, which fits in a socket or hole, *a*, formed in the meeting edges of the opposite tiles.

Adjacent to each beam G is a hollow tile, C, which engages with and is supported by the lower flange of the beam, and one side of which is extended to interlock or engage with the tiles A.

The tiles may be covered with a layer or bed, F', of plaster or cement, on which the floor F rests, and which serves to deaden sounds.

In the form of ceiling shown in Fig. 5 the floor F rests upon I-beams G, and the space between the beams is spanned by brick arches H. Below the arch H is the ceiling proper,

composed of tiles A, provided with ties A', and the tiles C, both intermatched or interlocked, as previously described.

In Fig. 6 I have represented an ordinary floor, F, which is supported by wood floor-beams, I, and to the under side of certain of the floor-beams are attached longitudinal hangers J.

Adjacent to each hanger J are hollow tiles C, which have recesses or grooves *f*, engaging with the flanges of the hangers J, and the ceiling between the tiles C is composed of tiles A, provided with ties A', and intermatched or interlocked, as previously described.

The ceiling thus formed may be plastered or left bare, and in the latter case the tiles may be glazed or decorated in any desired fashion. In Figs. 4, 5, and 6, also, the posts or ties A' are much greater in length than the tiles are in thickness, and the ceiling produced with them is in each case hollow.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The hollow partition or ceiling herein described, composed of tiles each having a rearwardly-projecting post or tie greater in length than the thickness of the tile, and having notches in its opposite edges, the notches in adjacent tiles on each face of the hollow partition or ceiling forming holes or sockets to receive the ends of the posts or ties projecting from the tiles which form the opposite face of the hollow partition or ceiling, substantially as and for the purpose herein described.

2. A tile, A, having a rearwardly-projecting post or tie, A', greater in length than the thickness of the tile, and also having notches in its opposite edges, substantially as and for the purpose herein described.

3. The tile having countersunk or recessed notches *a* in opposite edges, and provided with the rearwardly-projecting post or tie A', greater in length than the thickness of the tile, and having the head or flange *b*, substantially as and for the purpose herein described.

4. The hollow tile C, one side of which is extended, substantially as and for the purpose specified.

5. In a wall composed of tiles, the combination of adjacent hollow tiles C, having recesses in their vertical meeting edges, and an upright post or rod in the cavity or space formed between said tiles, substantially as herein described.

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Witnesses:

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