(No Model.)

P. B. WIGHT.

FIRE PROOF CEILING.

No. 322,873. Patented July 21, 1885.

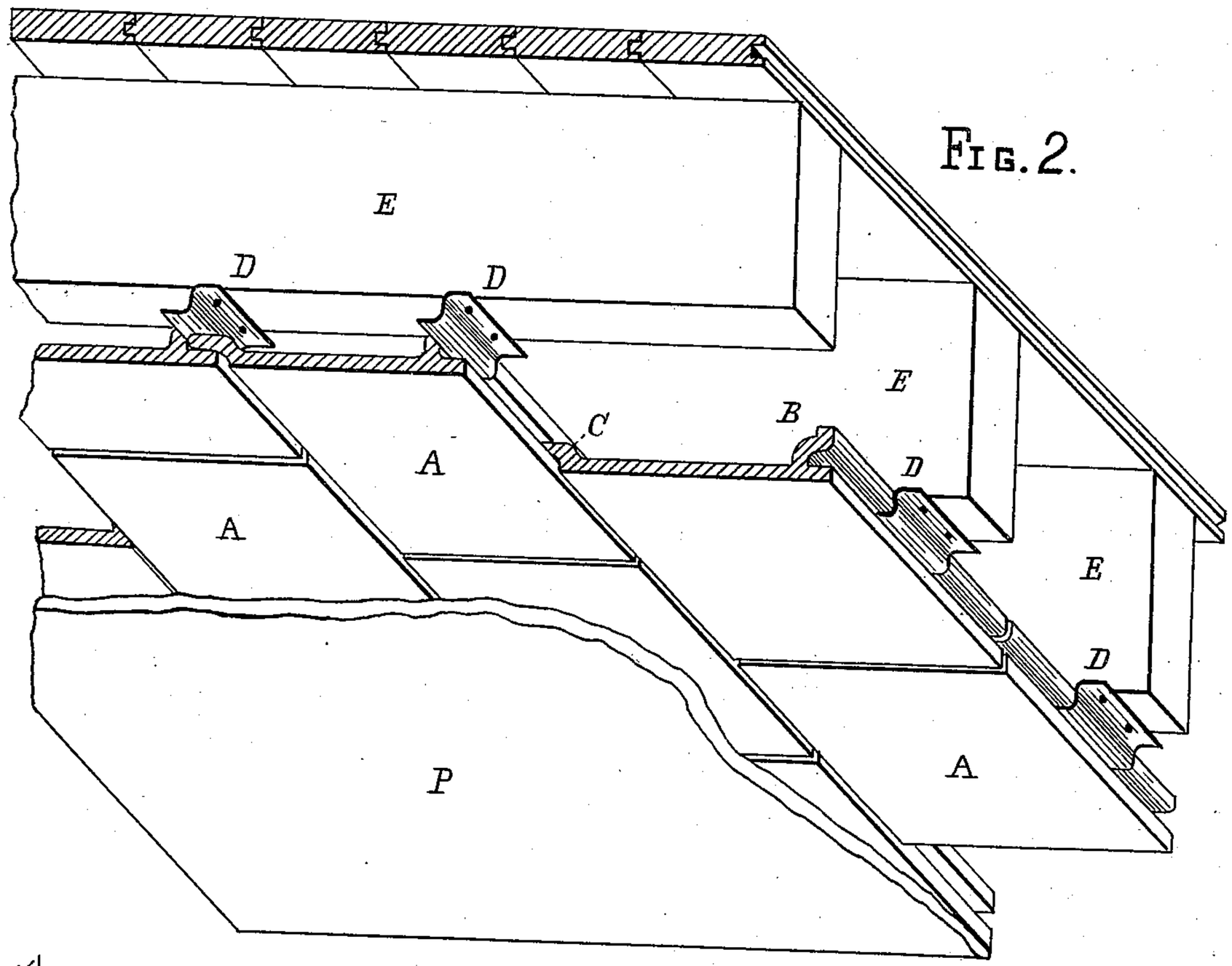

FIG. 2.

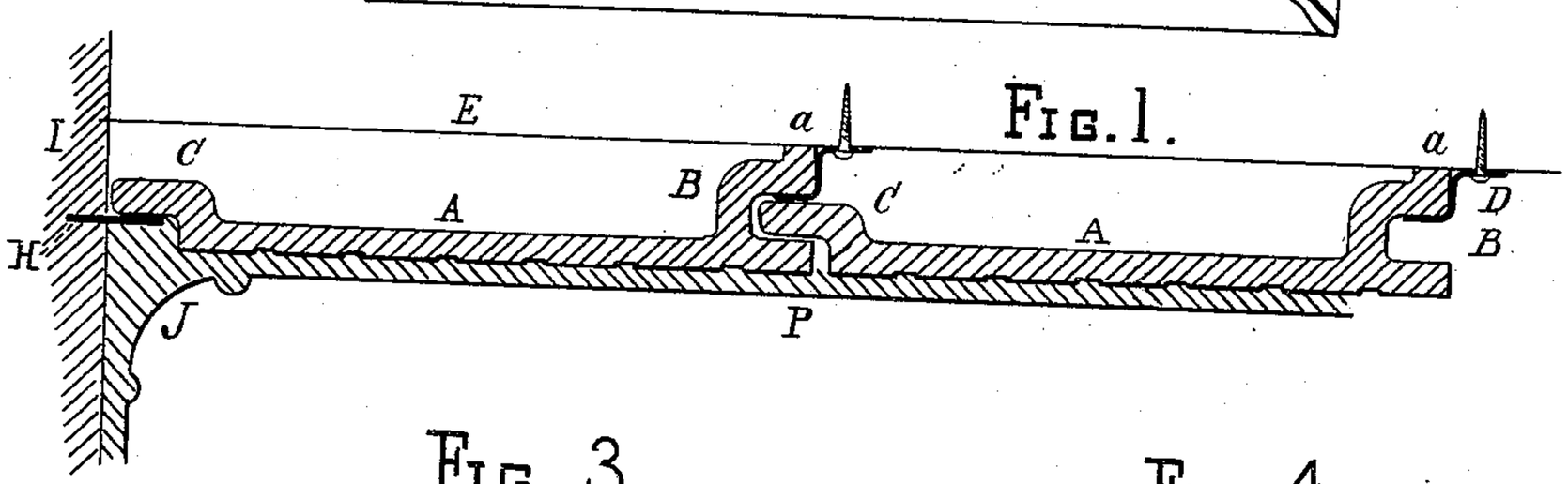

FIG. 1.

FIG. 3.

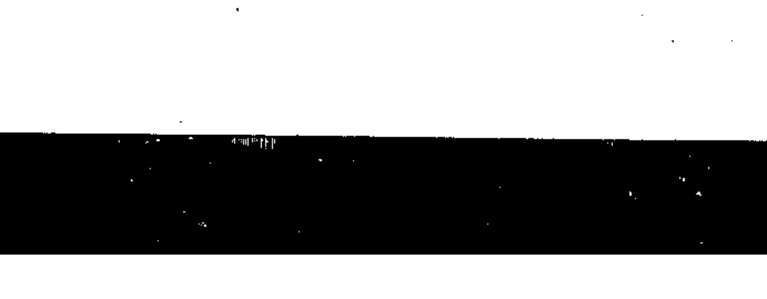

FIG. 4.

WITNESSES

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FIRE-PROOF CEILING.

SPECIFICATION forming part of Letters Patent No. 322,873, dated July 21, 1885.

Application filed April 20, 1885. (No model.)

To all whom it may concern:

Be it known that I, PETER B. WIGHT, (assignor to the Wight Fireproofing Company, a corporate body under the laws of Illinois,) a citizen of the United States, and a resident of Hyde Park, county of Cook and State of Illinois, have invented new and useful Improvement in Fire-Proof Ceilings in Buildings, of which the following is a specification, reference being had to the accompanying drawings, illustrating the improvement, in which like letters in the several figures indicate the same part of the construction.

My fire-proof ceiling is applicable mainly to buildings which are to be plastered, and is more especially intended to be employed for the ceilings of buildings where the floors are supported on wooden joists variably spaced, as the usual custom; but it may be employed directly under the floor-planks, in the spaces between the beams or girders, in cotton-mills or other buildings in which the beams are at a considerable distance apart.

The nature of my invention consists in suitable plates or tiles of burnt clay or other fire-resisting material covered on the under side with a coat of plaster, the plates or tiles being fire-proof substitutes for lathing of any kind heretofore employed for sustaining the plastering. Each of these tiles is provided with a groove on one edge and a tongue on the other edge, whereby when the tiles are laid one tier of tiles is tongued into the grooves of the adjoining tier throughout the entire ceiling. The upper lips of the grooved edges, in practice, are brought substantially to the under side of the floor or floor-supports and secured there by bent metal strips, termed "cleats," the lower parts of which catch under said upper lips to the grooved edges, and the upper parts are fastened to the floor or floor-timbers by nails or screws. The advantage of this construction is the nearly uniform thickness of the tiles or plates and the readiness with which the ceiling can be set. The prior art shows that protecting tiles have been hung to ceiling-joists by U-shaped straps put through slots formed in them and secured to the sides of the joists or beams which support the floors, and that intermediate tile-plates have been placed between them and supported by flanges or ledges projecting out from the lower portions of the tiles hung to said U straps. My improvement over this last-mentioned construction consists in the single one pattern of tile-plates which I employ as against the two patterns employed with the U-shaped hangers; and in the adaptation of my ceiling to be hung to a floor composed of timbers or planks having no joists or beam-supports for the attachment of the U straps; and, further, in the hangers to my ceiling being protected against fire by two thicknesses of tile, and in the general simplicity of construction, so that where the tongue of one tile is placed in the groove of another tile the under surface of the ceiling in all parts comes flush, and the material of the tile is nearly of uniform thickness throughout. The first course of the ceiling-plates is set along the wall or girder and secured at the wall by any practicable means, preferably by a ledge formed by spikes driven into the wall. The grooved edges of the tiles are set outward from the wall and secured by metal cleats or hangers fastened to the wooden joists and bearing against the under edges of the upper lips to the grooves, or secured to whatever material is to support the ceiling. The first course of cleats catches the corners of two adjacent tiles. The second course is set by placing the tongues thereof into the grooves of the first course laid, and is so set as to break joints therewith, the cleats in this course usually coming in the middle of the tiles, each tile thus being secured the whole length of one edge in the groove of the last course set, and at the other edge with cleats or hangers, so that the course will not drop or tilt.

Figure 1 is a vertical section of that part of my fire-proof ceiling which is contiguous to a wall. Fig. 2 is a section and isometrical perspective, as set in a building having wooden floor-joists, and shown as being partly plastered. Fig. 3 is a section of the material used in the tile-work, showing two tiles run out at one time through the die of a clay-press for that purpose. Fig. 4 is an isometrical perspective of one of the metal cleats or hangers used to suspend the tile-ceiling plates from joists or floor-planks.

A represents the plates or tiles. B are the

grooved edges, and C the tongued edges thereof.

D represents the metal cleats or hangers by which the ceiling is suspended.

a, &c., are the projecting lips above the grooved edges of the tile, and extend substantially to the floor-joists E.

P represents a section of plastering on the ceiling.

H represents the ledge supporting the tiles at the wall I of the building.

J shows how the cornice may be run on this form of ceiling, if desired.

I claim as my invention—

1. In a fire-proof ceiling which is to be plastered, the tiles A, grooved on one edge and tongued on the other and put together so as to form a continuous tongued and grooved construction, in combination with cleats D, which catch under the upper lips of the grooved edges and are attached to the under sides of the floor-timbers or floor-planks, as and for the purpose specified.

2. For the support of fire-proof tile-ceilings, the sheet-metal cleats D, bent so as to have two horizontal portions and one vertical portion, the upper horizontal portion being fastened to the under side of the floor-planks or floor-timbers, and the lower horizontal parts catching under the upper lips of the grooved edges of the tiles, as specified and shown.

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Witnesses:
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