

JOHNSON & HALL.
Fire-Proof Buildings.

No. 133,448.

Patented Nov. 26, 1872.

Fig. 1

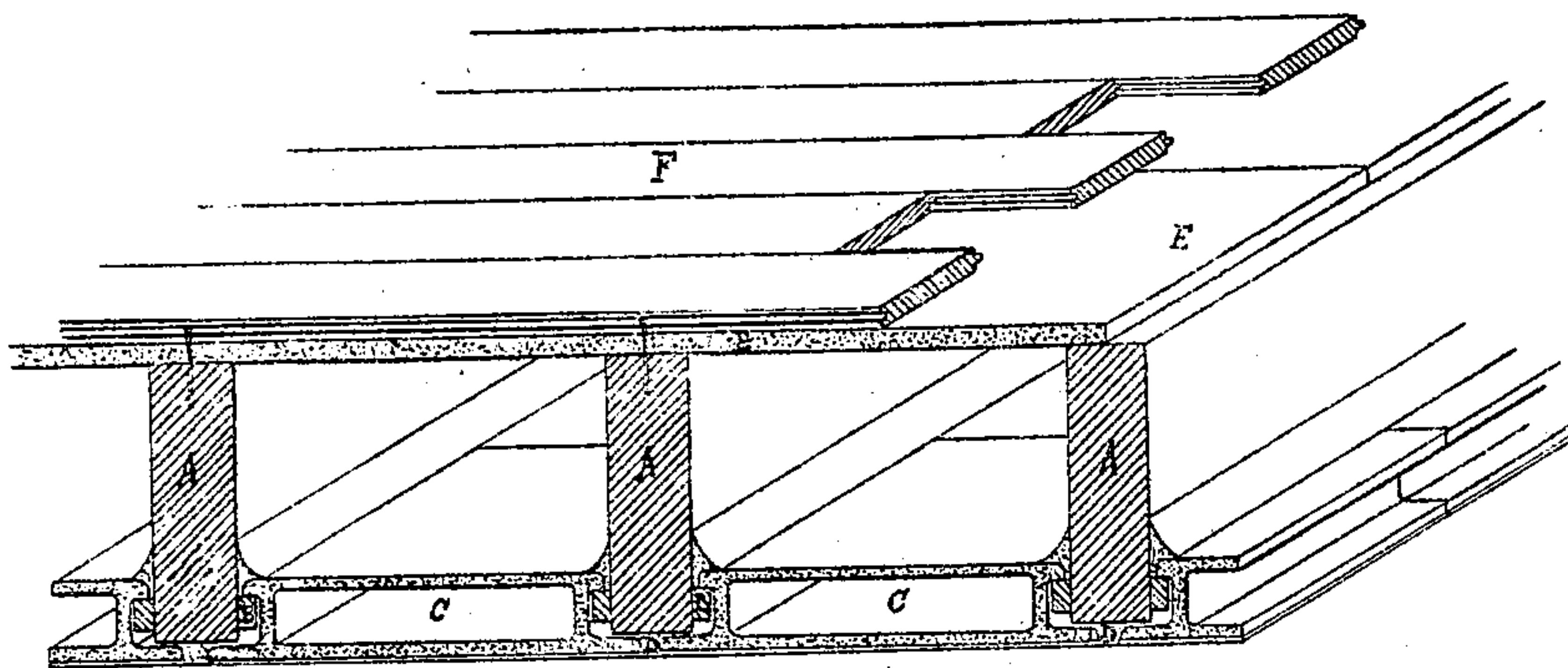
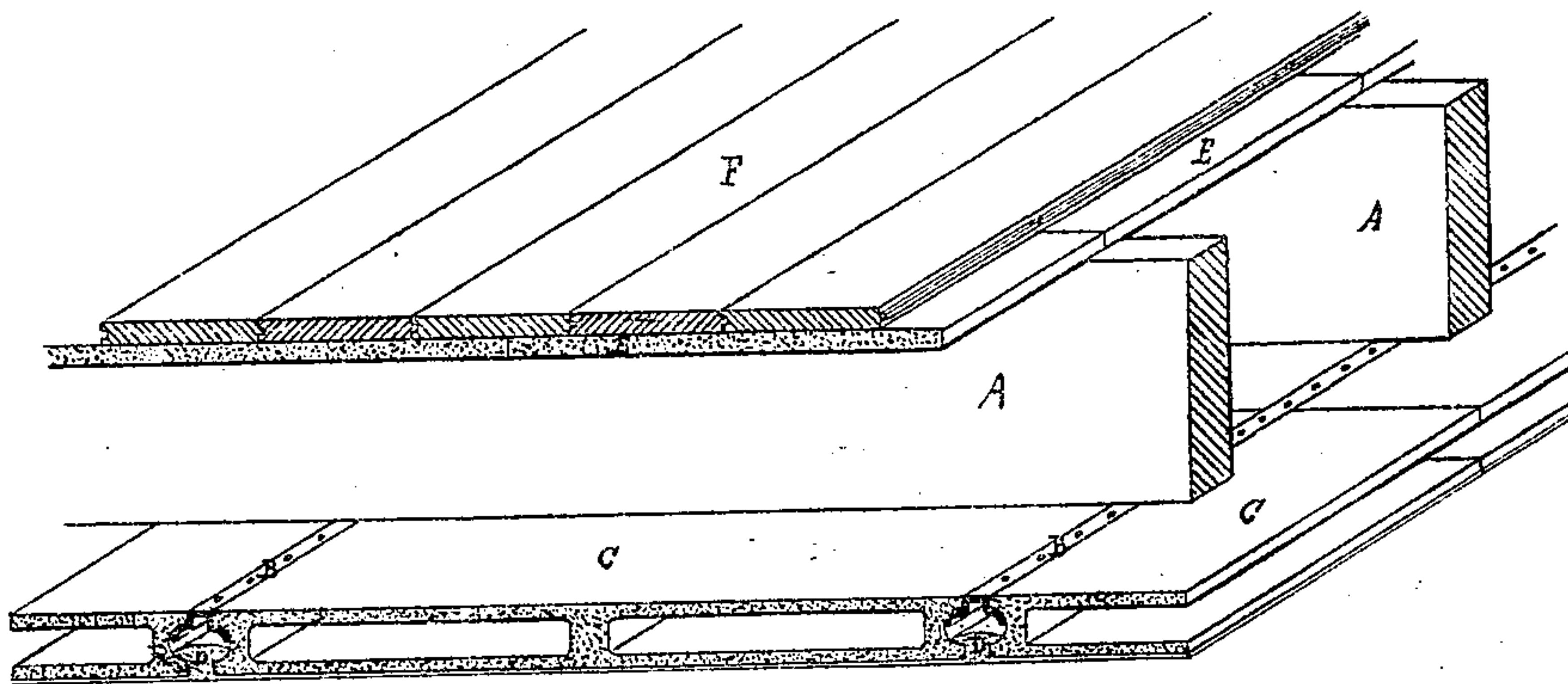


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE H. JOHNSON AND EDWIN R. HALL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN FIRE-PROOF BUILDINGS.

Specification forming part of Letters Patent No. 133,448, dated November 26, 1872.

To all whom it may concern:

Be it known that we, GEORGE H. JOHNSON and EDWIN R. HALL, both of 163 East Washington street, in the city of Chicago and State of Illinois, have invented an Improvement in the Construction of Fire-Proof Floors and Ceilings, of which the following is a specification:

Our invention relates to a mode of forming a fire-proof floor and ceiling, by slabs and hollow tiles of burnt clay, plaster of Paris, or other incombustible material applied to the upper and under side, respectively, of timber joists; the slabs being of rectangular form and secured by the same devices as the floor-boards which are laid thereon, and the tiles being of prismoidal form and provided with flanges to adapt them to cover, and also be supported by strips attached to the sides of the joists, as will be hereinafter more particularly set forth.

In the accompanying drawing, Figure 1 is an isometrical view of our invention, and Fig. 2 represents a slight modification of the same.

A A are the timber floor-joists; B, the strips; C, the hollow tiles; E, the slabs; and F, the wooden floor-boards. The wooden strips are secured to the sides of the joists so as to be nearly flush with the bottom of same, as seen in Fig. 1; but when made of sheet metal they are preferably secured transversely to the bottom of the joists, as in Fig. 2. In either case the hollow tiles are grooved along their sides, thus forming parallel flanges, of which the upper ones rest on the strips B, and the lower ones cover the lower edge of the strips; whatever space is left between the lower flanges is filled with cement, D. The slabs E are secured to the joists by the nails which pass through the floor-boards F.

The merits of this invention consist in the construction of a fire-proof floor and ceiling,

as above described, at a little more than the cost of an ordinary timber and lath and plaster construction, possessing the additional advantage of a perfect deafening or obstruction of sound without the spaces between the beams being filled, or a second floor laid to produce this effect. It will be seen, also, that by means of the tiles below and the slabs above the joists are kept rigidly in place, and the joints between the tiles being pointed a smooth surface is obtained, and a very thin coating of plaster only is required to finish the ceiling. For marble or tile floors the slabs E present an excellent surface for the cement, in which the marble is bedded, and are sufficiently strong to allow of a very thin material being used, thereby effecting a considerable reduction in the cost of the marble and lessening the aggregate weight to be supported by the joists.

Our plan enables us to apply the hollow tiles in new wooden buildings, or in remodeling all such as have wooden joists, the strips B being nailed to the joists and the tiles slid on them as the work progresses. The slabs E co-operate with the tiles in forming a fire-proof floor and ceiling, with wooden joists forming the framing support thereof.

We claim—

1. The combination of the hollow flanged tiles C, strips B, and slabs E with the timber or wood floor-joists A, all as shown and described, for the purpose specified.

2. In combination with the wooden joists or beams A, the separately applied or detachable strips B for supporting the hollow flanged tiles C, as set forth.

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