

(No Model.)

2 Sheets—Sheet 1.

J. H. BRIGHT.

TILE FOR CEILINGS AND FLOORS OF BUILDINGS.

No. 365,295.

Patented June 21, 1887.

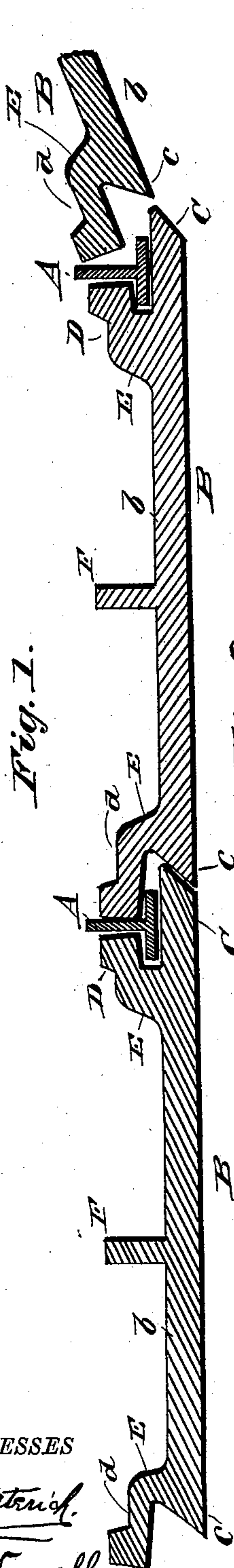


Fig. 1.

Fig. 2.

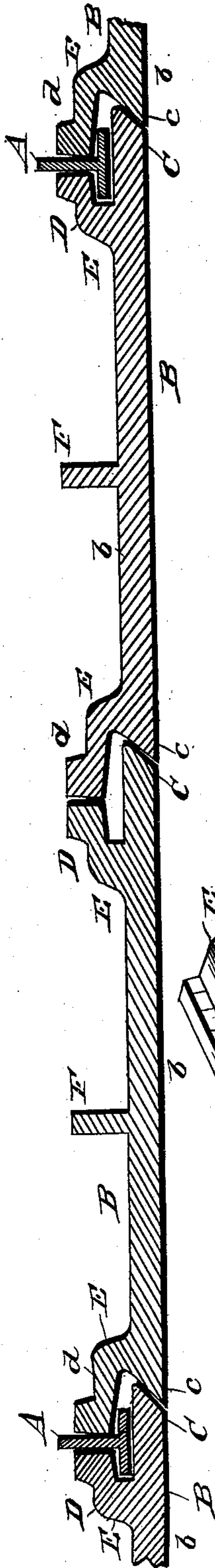


Fig. 3.

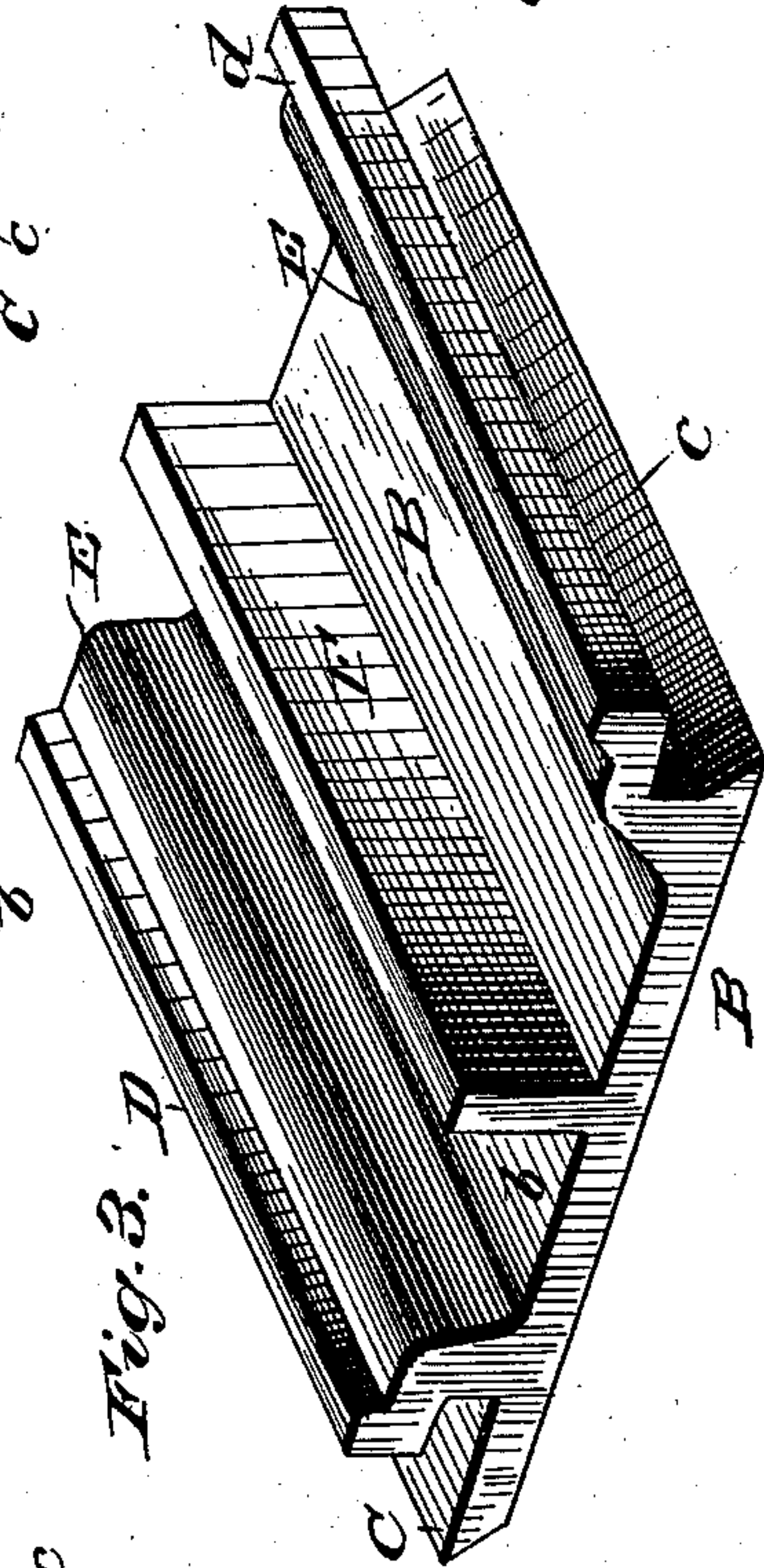
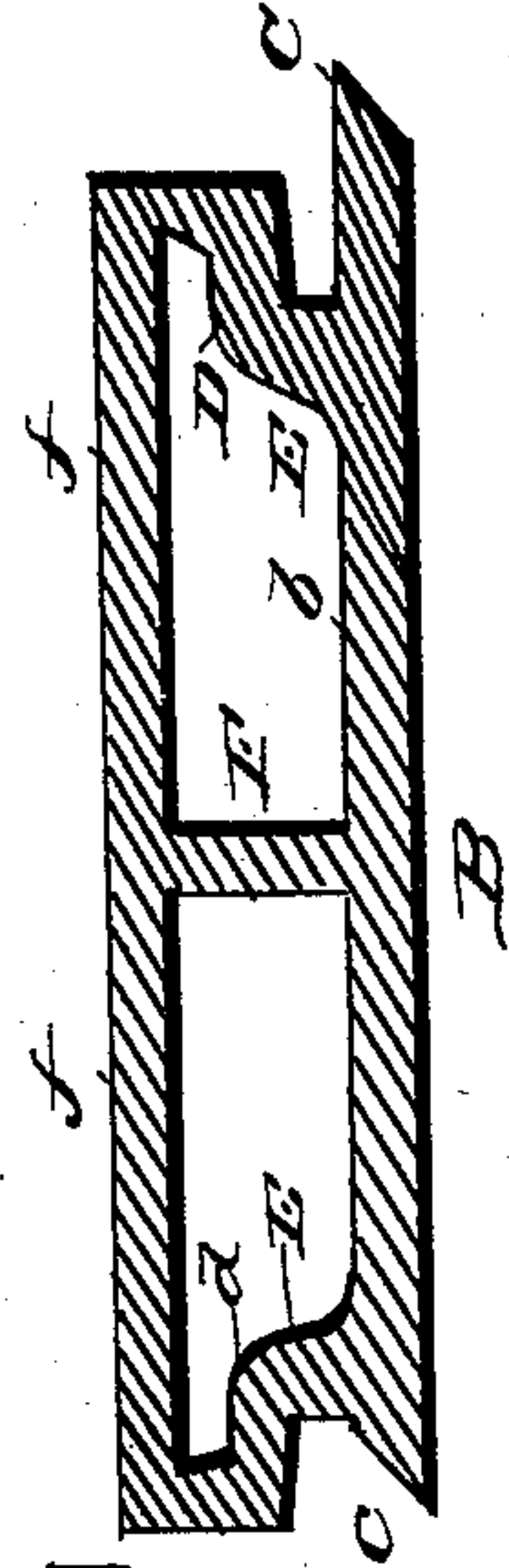


Fig. 4.



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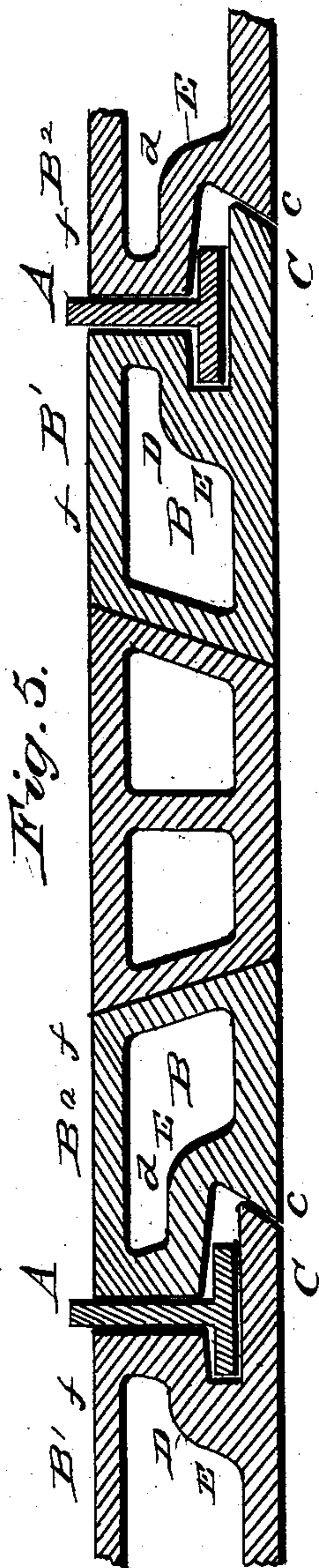
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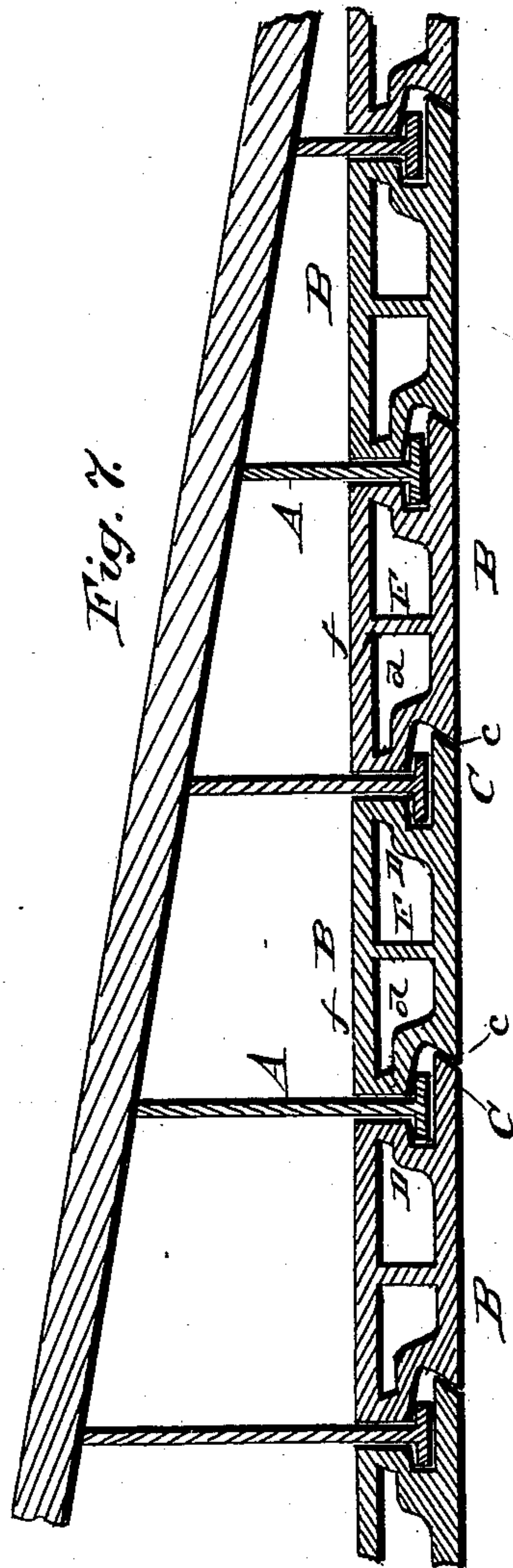
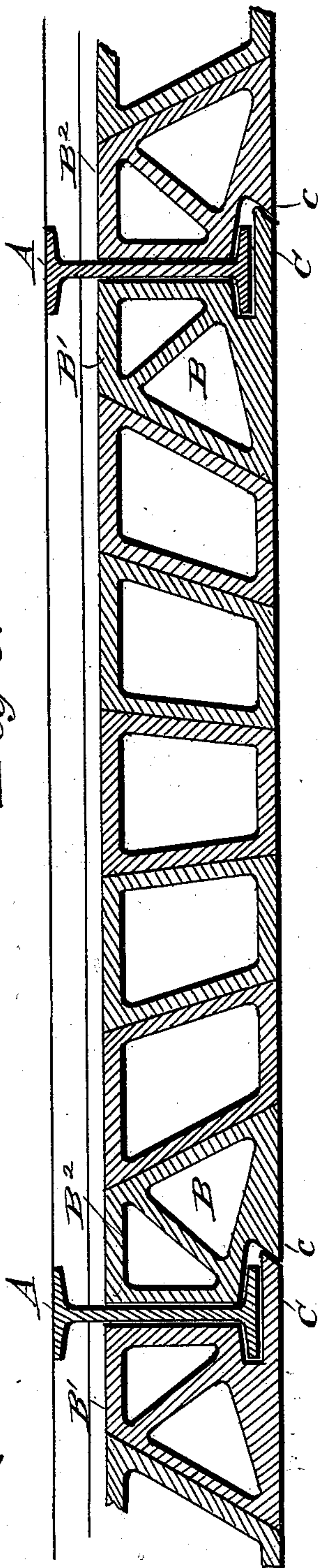
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TILE FOR CEILINGS AND FLOORS OF BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 365,295, dated June 21, 1887.

Application filed April 16, 1887. Serial No. 235,034. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BRIGHT, of the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Tiles for Ceilings and Floors of Buildings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a transverse section through the girders of a roof or floor of a building, showing my improved tiles applied thereto, forming the ceiling of the apartment. Fig. 2 is a similar view with the alternate girders removed and the tiles engaging and supporting themselves at their meeting edges. Fig. 3 is a perspective view of a tile detached. Fig. 4 is a cross-sectional view of the tile as used for flooring. Fig. 5 shows a cross-sectional view of a three-part tile-forming a floor and arch. Fig. 6 shows a floor-arch embodying the invention. Fig. 7 is a sectional view of the tiles as employed in constructing roofs and ceilings.

This invention relates to improvements in buildings, and has especial reference to the ceilings and floors of the same, its object being to provide a tile which can be supported upon ordinary flanged or inverted T-rails at one or both sides, and which will engage with the adjoining tiles on each side thereof, so that if the hold of one tile on the flange of the rail or girder should break or loosen, the adjoining tile will support it and prevent its falling and consequent damage.

The invention consists in the novel construction of the tile-sections to adapt them to engage with the flanged rails or girders, or with adjoining rows of tiles, as will be fully understood from the following description, when taken in connection with the accompanying drawings, and particularly specified in the claims.

A A designate the cross-beams or girders of a building for supporting the floors, roofs, or ceilings thereof. These girders are preferably ordinary iron T-rails with the flanged portion lowermost, or suitable flanged wooden girders may be employed, if desired. The girders A are placed at equal distances apart,

corresponding to the width of one or more tiles, B, as shown. Each tile B is similar in all respects, and therefore the description of one only is necessary for a clear understanding of them all. Each tile B consists of a base or flat portion, *b*, of proper length, and equal in width to the distance from center to center between two adjoining rails A in Fig. 1. The side edges, C *c*, of base *b* are respectively beveled upward and downward, as shown, so that when two tiles B B are placed side by side their adjoining edges C *c* will overlap. From the edge *c* of base *b* rises a bayonet-shaped or angular flanged portion, *d*, which extends beyond the edge *c* and is adapted to support that side of tile B upon the adjoining flange of a rail A. When so supported, the edge *c* lies below and to one side of girder A, as shown.

D designates a flange similar, but standing in opposite direction, to flange *d*, above the edge C, but to the inside thereof, so that when it is placed upon the flange of a rail A the edge C extends entirely across the lower surface of the rail and is adapted to engage, as described, with the edge *c* of a tile B on the other side of the rail, as shown in Fig. 1.

E E designate thickening-ribs formed on the upper outer edges of flanges D *d* for the purpose of thickening and strengthening the same, and for more effectually protecting the iron or girders A A, by which the tile-sections are supported. The ends of the tiles B B are squared, so that a line of such sections can be hung between adjoining rails A A and have their ends in close contact.

F designates a rib rising from base *b* parallel with and centrally between flanges D *d*, the upper edge of said rib being flush with the upper edge of ribs E E. The rib F serves to strengthen the tile B by re-enforcing it at center, and also permits a flooring or roofing to be laid above said tiles, such floor being supported by the ribs E E and F, ordinarily, or by the upper edge of the vertical portion of girders A A, or as shown.

In Fig. 4 the ribs E E and F are connected by a top, *f*, which is integral with the body of the tile, and which forms the support for the flooring when the tile is in place.

When it is not desired to have a floor above the ceiling, the arrangement shown in Fig. 2

may be used. In this every other rail A is withdrawn and the adjoining edges, C c, of the tiles B B fitted into each other, the flanges D d also abutting by their vertical faces, so that when the outer edges of the sections are supported upon the rails A their inner edges will be locked and kept from falling or dropping.

In Figs. 5 and 6 I have represented the tiles made in sections for use in wide floor-arches. The opposite end pieces or sides, B' B², are formed, respectively, with the edges c and C of the solid tile B, so that when placed on the rails A sections B' B² are set on adjoining sides of the rail, so that their completing edges C c will engage. The space between these sections B' B² is filled by the usual plain and key tiles, as shown in Figs. 5 and 6.

It will be observed that by my arrangement of the edges C c of adjoining tiles I entirely cover the lower surface of the girders with a solid fire-proof material, so that fire cannot reach the girders, except through the end joints of the sections, which are practically so closed as to obviate danger from this source. When the sections are properly arranged, a coating of plaster may be applied, which will effectually close all seams or joints between the same. Furthermore, the arrangement of the edges C c is such that the base b cannot be pushed upward and displaced by any upward pressure, such as would be applied by a plasterer in putting on a coat of plaster.

It will also be observed that by means of the flange D and projecting edge C, I can hang the tile-sections on the flange of a girder independently of any support to edge c, so that should the flange d break its section D would be supported by its remaining flange D and edge C, as described, without falling. Should the flange D break, the edge C would engage the edge c of the adjoining tile and be supported thereby. It will therefore be observed that I have a series of tiles which, when properly arranged, will be self-supporting, and should either supporting-flange of a tile break it will be caught and upheld by its remaining flange, or by the edge of an adjoining tile.

Having described my invention, I claim—
1. The combination of two tiles having oppositely-standing similar flanges, one of said

tiles having an extended lower edge projecting beyond its flange and the other tile having its lower edge recessed for engaging the projecting edge of the opposite tile, all substantially as and for the purpose described.

2. The combination, with a suitably-flanged rail or girder, of the tiles placed on opposite sides of said rail and engaging the flanges of the rail by suitable flanges on their opposite edges, the tile on one side of the rail having a projecting base portion extending beneath the rail to protect its lower edge and the other tile being suitably recessed on its lower edge to engage the extended base of the opposite tile, all constructed and arranged substantially in the manner and for the purpose described.

3. The combination, with suitably-flanged girders, substantially as described, of the tile-sections, each having oppositely-standing flanges on its upper surface at opposite sides, one flange standing beyond the beveled edge of the tile and the other flange placed in rear of its corresponding beveled edge, so that said edge will extend beneath and protect the under surface of the girder on its side of the tile, substantially in the manner and for the purpose specified.

4. The tile sections B B, each composed of a base portion having beveled edges C c, and flanges D d rising from the edges C c, the edge c terminating at the base of its flange and the edge C extending beyond its flange and adapted to engage with the edge c of a corresponding adjoining tile, all substantially as and for the purpose specified.

5. The combination, with the flanged girders A A, of the tile sections B, each section being composed of a base portion, b, having beveled edges C c, flange d, extending beyond edge c, and flange D, in rear of edge C, and central rib, F, all constructed and arranged substantially in the manner and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES H. BRIGHT.

Witnesses:

JAMES L. BLAIR,
F. E. G. CARR.