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P. H. JACKSON.

SIDEWALK, FLOOR, AND ROOF LIGHT CONSTRUCTION.

APPLICATION FILED NOV. 6, 1905.

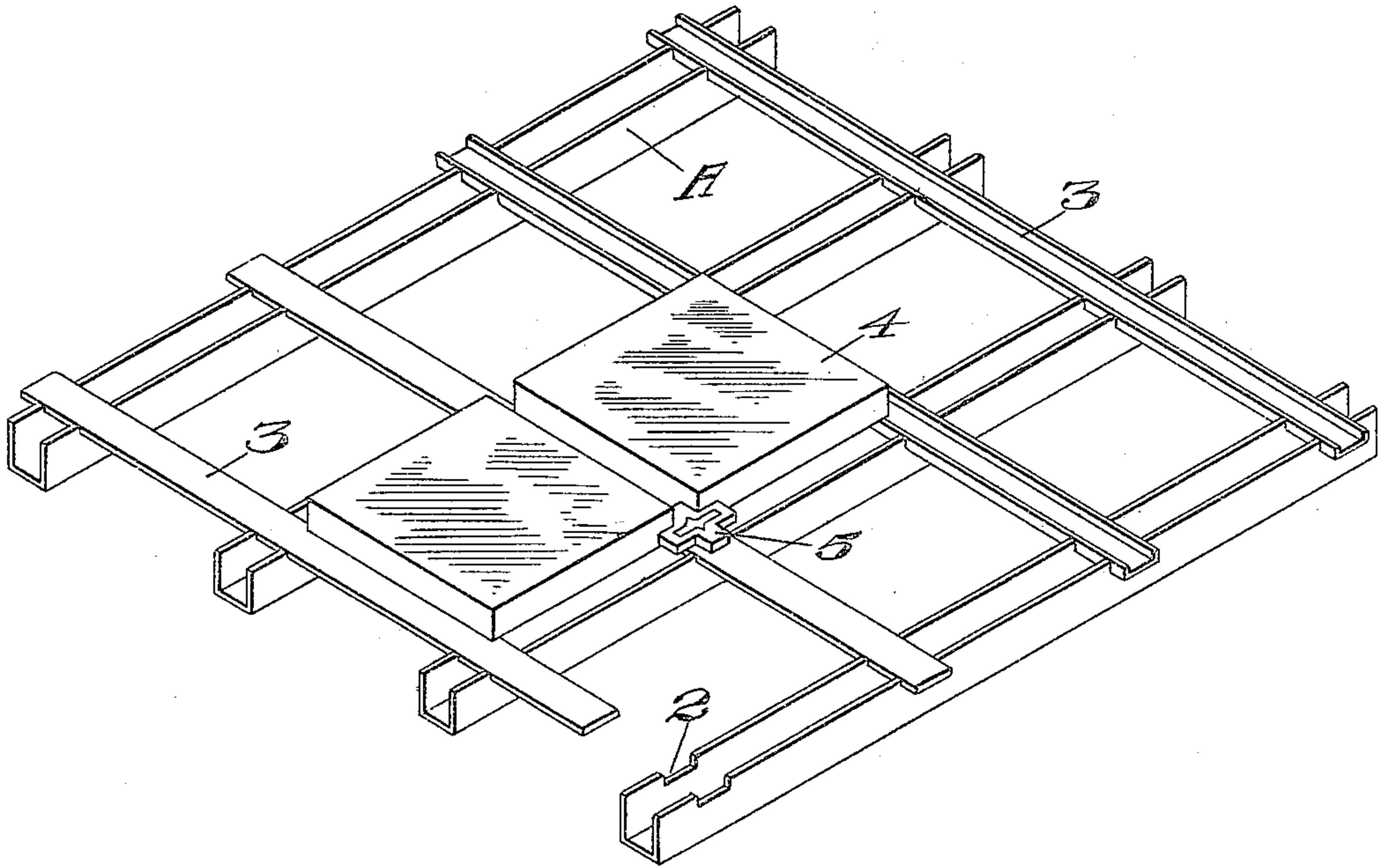


Fig. 1.

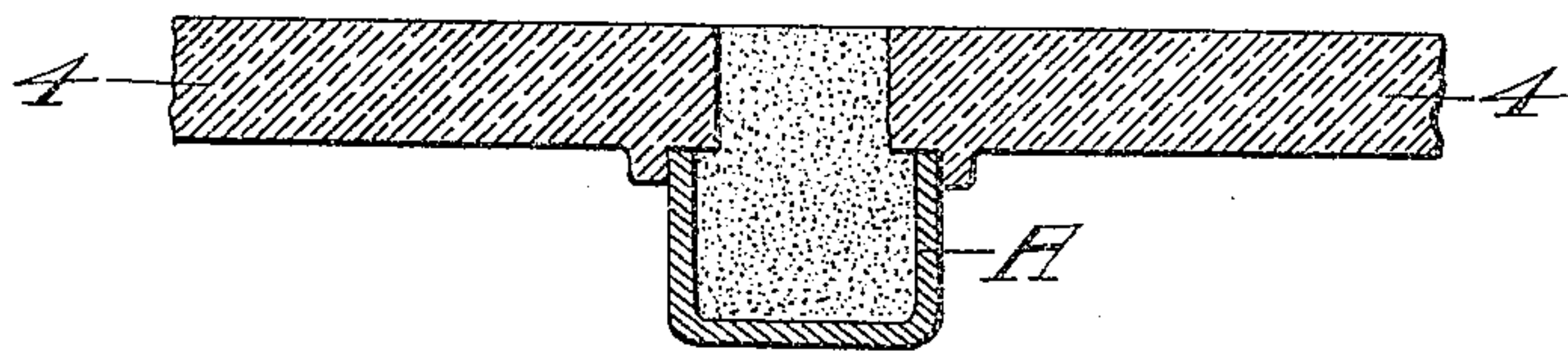


Fig. 2.

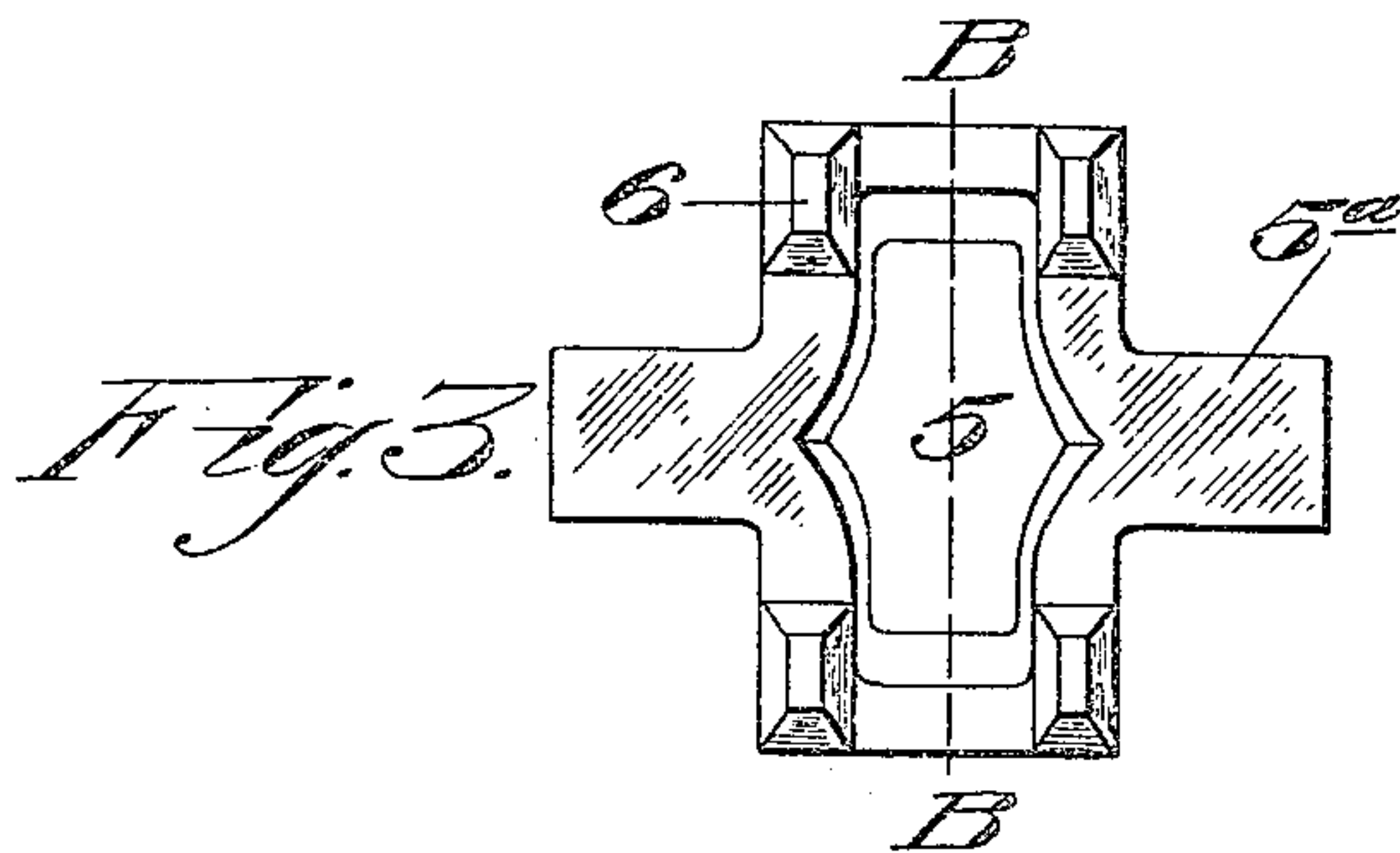


Fig. 3.

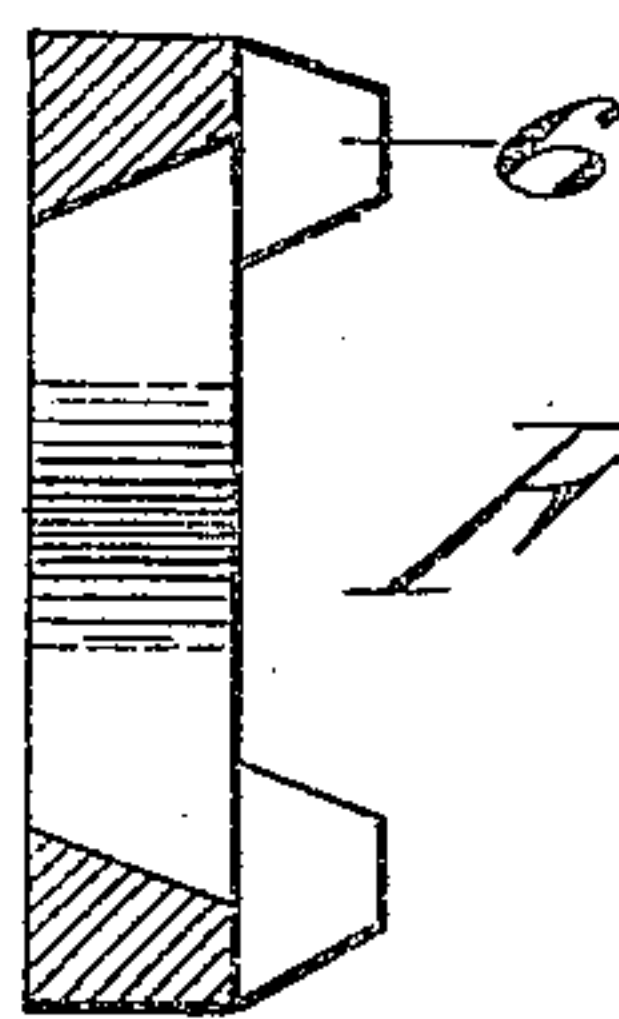


Fig. 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

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SIDEWALK, FLOOR, AND ROOF LIGHT CONSTRUCTION.

No. 816,234.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed November 6, 1905. Serial No. 286,020.

To all whom it may concern:

Be it known that I, PETER H. JACKSON, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Sidewalk, Floor, and Roof Light Construction, of which the following is a specification.

My invention relates to improvements in the construction of illuminating lights or tiles and in supports therefor to be used in conjunction with sidewalk, floor, roof, or like construction.

It consists in the combination of parts and details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my construction. Fig. 2 is a transverse section through the channel-beam and illuminating-tiles. Fig. 3 is a bottom view of the spacing-block. Fig. 4 is a section of same on line B B.

It is the object of my invention to produce a simple strong support for illuminating-tiles, with means for spacing and interlocking the tiles with the supporting-frame and means by which leakages between the tiles is less likely to occur.

My present invention is preferably designed to be used in conjunction with thick sheet or rough plate glass having smooth top and bottom surfaces with no means thereon for preventing transverse sliding.

A represents channeled beams rolled of iron or steel and having the upwardly-turned flanges of such depth as may be required for the length of span and the weight to be supported. Ordinarily smaller sizes of merchantable channel iron or steel may be employed.

The upwardly-projecting webs or flanges are punched or cut, as shown at 2, at such intervals as may be required to receive the transverse supporting flat or shallow channel-bars 3, which being fitted into these slots which are cut out in the channel-bars will form with said bars a series of rectangular spaces of such size as to receive the glass tiles.

In light work or where comparatively small degree of strength is necessary in these transverse bars they may be made of rolled flat bars; but if more strength is needed they may be formed of rolled channel-bars of shallow depth. Thus the longer channel-bars A, extending over the required span, form

the principal support, and the shorter spaces between these channel-bars, requiring less support, may be covered by the flat or channel bars, as stated. As the upper edges of the channel-bars and the upper edges of the transverse bars 3 are substantially flush by reason of the bars 3 resting in the slots of the bars A, they form an even or level support for the lower edges of the glass tiles 4, and with this construction there is no expensive riveting or fitting or supplemental means for supporting a portion of the glass.

In order to retain the glass in its position, I apply small spacing-pieces 5. These are preferably cast in the form of a cross having short arms 5^a, and these crosses rest upon the intersection of the channel-iron bars, and the projections 5^a may extend between the glass tiles, which rest upon the upper surface of the supporting framework or structure. These crosses may be maintained in place either by punching holes through them and through the cross-bars beneath to receive a loose rivet; but I think that they may be preferably formed with downwardly-turned lugs 6, which clasp the transverse bars 3 and extend down into the upper portions of the channel-bars A. They are thus locked from any movement in either direction, and as they lie above the surface of the bars it will be seen that the glass tiles lying between them will be locked and prevented from sliding out of place before the cement filling has been applied.

The spaces between the tiles corresponding with the channel-iron and transverse bars will be filled with Portland cement flush with the top of the glass, thus making a complete level surface in which the tiles are strongly embedded. The cement filling will extend down into the channel-iron supporting-frame, and it is especially proof against leakage, because the hydraulic Portland cement, such as is used for the filling of the interspaces, is a great absorbent of moisture, and any water falling upon the surface and not received upon or flowing off from the impermeable glass tile portion will be absorbed to a certain extent by the cement and received in the channels of the supporting-beams, thus preventing it from escaping into the open space beneath.

The combined steel and cement structure thus formed will be one of great strength and rigidity.

While I have described spacing-pieces to be used in conjunction with smooth-surfaced tiles, it will be understood that when tiles are formed with ledges or projections at the lower edges these projections will engage the edges of the supporting-bars and retain the glass in position until the cement has been introduced and become hardened.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A tile and like support comprising channeled bars laid with the open sides uppermost said bars having recesses cut in the upturned edges, other bars extending transversely across the first bars and fitting the recesses thereof whereby the upper surfaces of the transverse bars are substantially flush with the upper edges of the channeled bars, illuminating-tiles supported upon said bars, and spacing means at the intersection of the supporting-bars engaging the edges of the tiles for holding the tiles in position.

2. In an illuminating-tile support, channeled bars laid with the open sides uppermost having recesses cut in the upturned edges, other bars extending transversely and fitting said recesses with their upper surfaces substantially level with the upper edges of the channeled bars and forming a level support for illuminating-tiles, and interlocking means for holding the tiles in position upon said support.

3. In an illuminating-tile support, channeled bars laid with the open sides uppermost having recesses cut in the upturned edges, other bars extending transversely and fitting said recesses with their upper surfaces substantially level with the upper edges of the channeled bars and forming a level support for illuminating-tiles, and interlocking means for holding the tiles in position upon said support, said means consisting of spacing-pieces secured at the intersection of the supporting-bars.

4. The combination with illuminating-tiles and a supporting-framework therefor said framework comprising two sets of bars one set arranged at right angles to and crossing the other, of spacing-blocks resting upon the intersection of said bars and having portions

parallel with the bars and extending between in contact with the edges of adjacent tiles.

5. In an illuminating-tile structure, transverse supporting-bars forming level surfaces, illuminating-tiles having substantially flat surfaces supported upon the bars, spacing-pieces located at the intersection of said bars and having downwardly-turned lugs clasping the transverse bars, and entering the channels of the main bars, said spacing-pieces having lugs projecting horizontally between the edges of the contiguous tiles and engaging and spacing said edges apart.

6. An illuminating-tile structure consisting of channel-iron bars with the edges upturned and recessed, transverse bars fitting said recesses with the upper edges substantially flush with the upper edges of the main bars, tiles supported upon said bars, substantially cross-shaped spacing-pieces at the intersection of said bars and having portions extending between and engaging the edges of adjacent tiles and a concrete or cement filling within and upon the frame-bars and between the tiles.

7. In an illuminating-tile structure, channel-bars having their edges turned upward and recessed, transverse bars fitting said recesses and forming with the main bars level supports for the edges of illuminating-tiles, spacing-pieces fixed at the junctions of the supporting-bars, and having lugs projecting between the contiguous glass tiles, said lugs engaging the tiles and serving to hold the tiles apart and to prevent them from side movement, and a concrete or cement filling for the channels and the interspaces between the tiles.

8. The combination with illuminating-tiles and a supporting-framework of crossed bars, of spacing-pieces introduced between and engaging the edges of adjacent tiles and spacing said tiles a fixed distance apart.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

PETER H. JACKSON.

Witnesses:

L. H. NOURSE,
D. B. RICHARDS.