No. 816,982. PATENTED APR. 3, 1906.

P. H. JACKSON.

ILLUMINATING TILE CONSTRUCTION.

APPLICATION FILED JAN. 17, 1905.

2 SHEETS—SHEET 1.

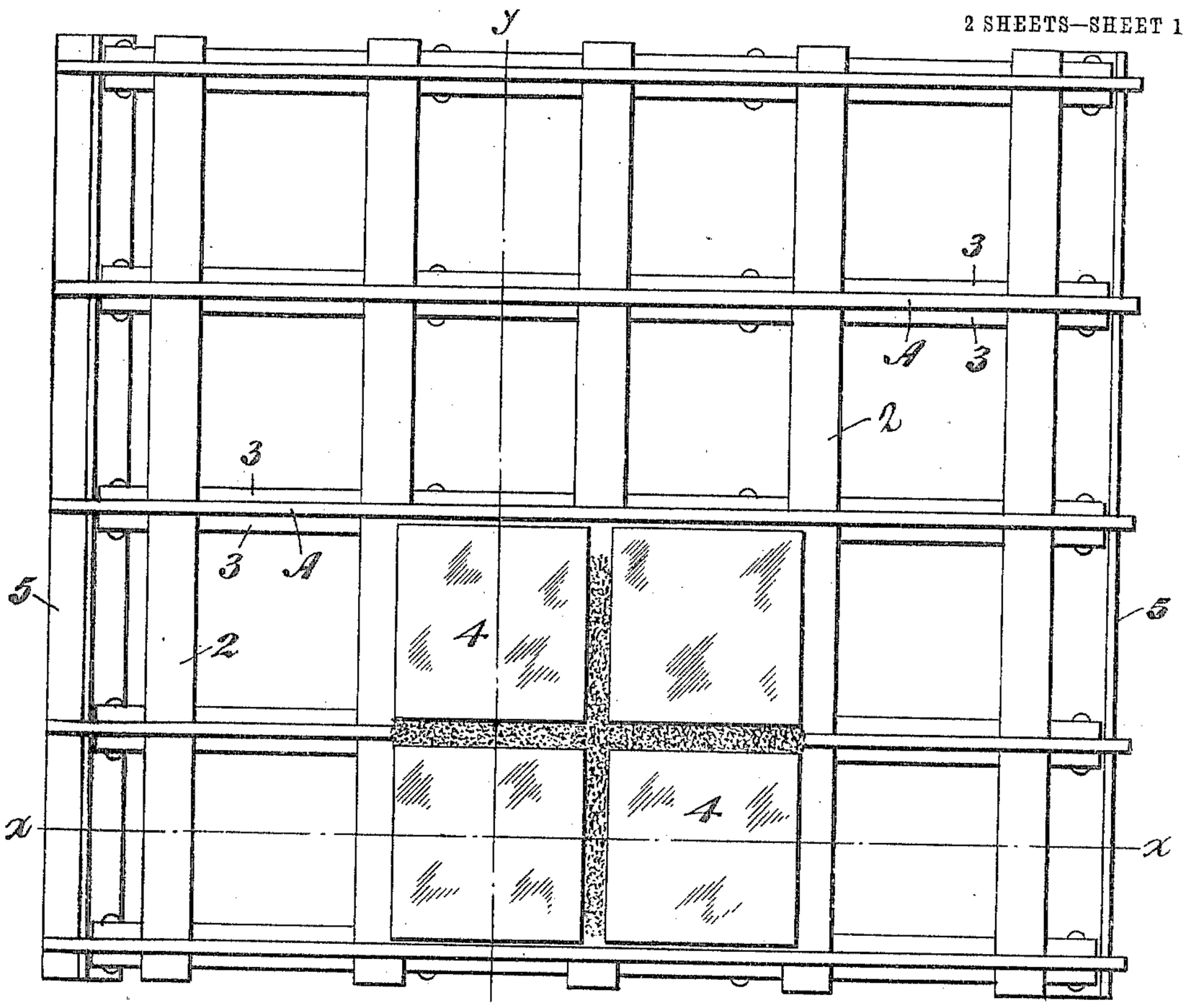


FIG. 1.

FIG. 2.

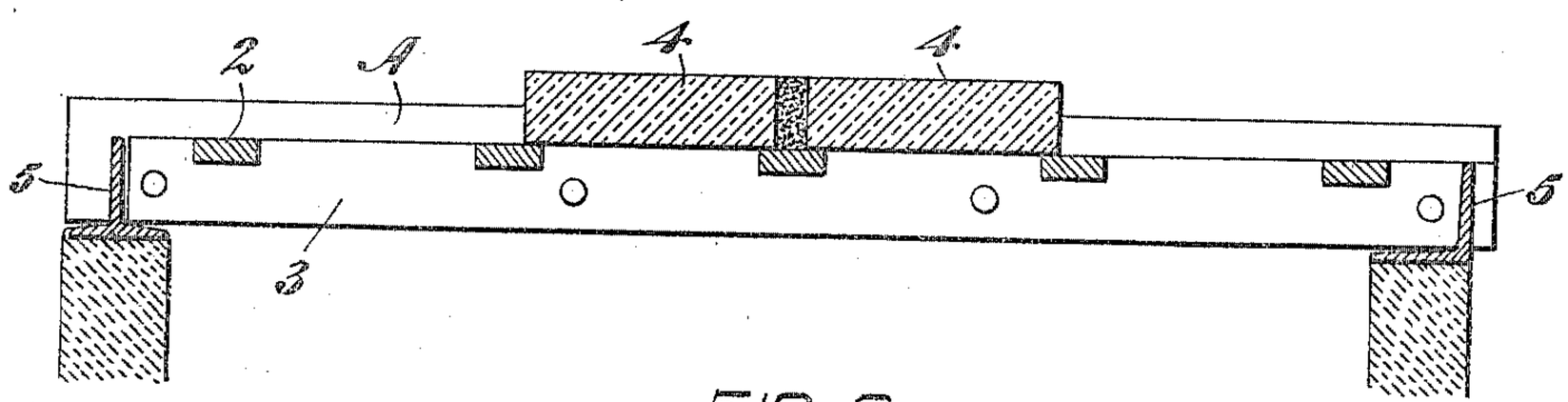
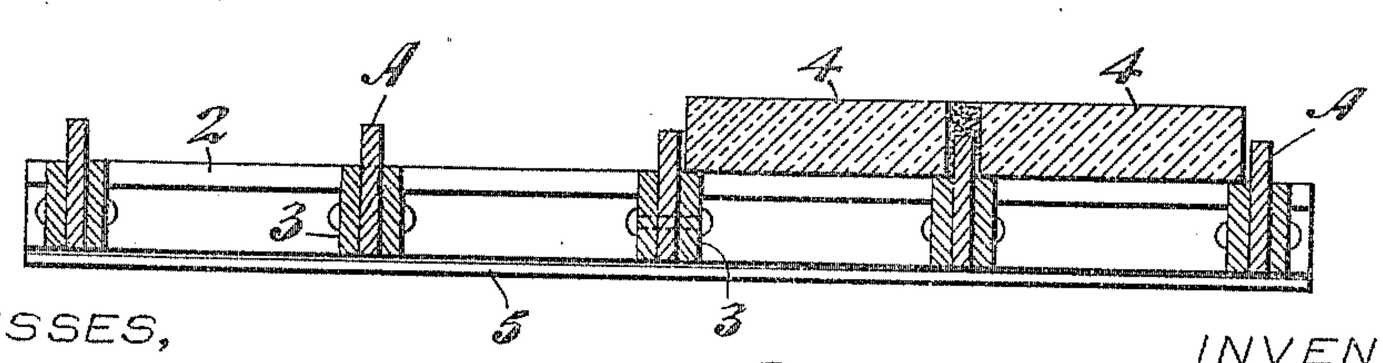


FIG. 3.



WITNESSES,

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J. L. Innes

INVENTOR,

Peter H. Jackson

By Geo. H. Strong Atty

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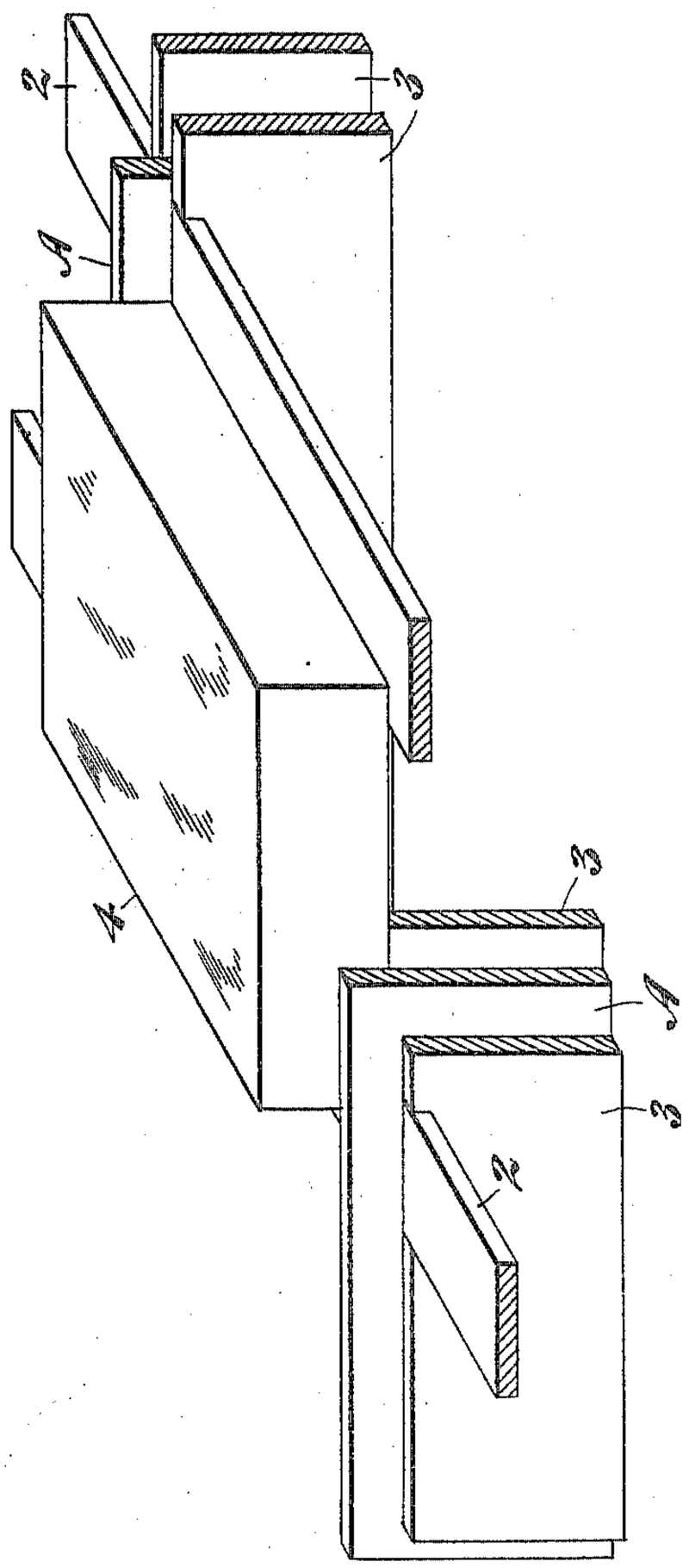
2 SHEETS—SHEET 2.

FIG. 4.



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UNITED STATES PATENT OFFICE.

PETER H. JACKSON, OF SAN FRANCISCO, CALIFORNIA.

ILLUMINATING-TILE CONSTRUCTION.

No. 816,982. Specification of Letters Patent. Patented April 3, 1906.

Application filed January 17, 1905. Serial No. 241,476.

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 Illuminating-Tile Constructions, of which the following is a specification.

My invention relates to an improvement in the construction of the metal framework of illuminating-tiles for sidewalks, floors, roofs, and similar constructions.

It consists in certain combinations of parts and details of construction, which will be more fully explained in the following drawings.

Figure 1 is a plan view of my invention. Fig. 2 is a section taken on line *x x* of Fig. 1. Fig. 3 is a section taken on line *y y* of Fig. 1. Fig. 4 is a perspective view of frame.

In Patent No. 775,626, issued to me November 22, 1904, I have shown a supporting structure for illuminating-tiles consisting of parallel flat bars which are suitably supported, so as to stand on edge. These bars have horizontal slots or channels made through them of such size as to receive transverse bars at such a distance apart that a space between the bars that stand on edge in one direction and the other flat horizontal bars will be sufficient to receive the desired illuminating-tiles, and the glass tiles on the two sides that are unsupported at the bottom have the edges contiguous to the bars that stand on their edges formed with horizontal grooves or channels. These channels are either curved, serrated, or of any suitable or desired form which will serve to engage a holding or filling of cement which is afterward applied, filling the pockets or receptacles. This body of cement engaging the sides of two adjacent glasses extends over the top of the vertical bars and forms a saddle for the support of the two sides of the glasses. By this method each glass has two opposite edges supported on the transverse bars, and on the other two sides the glass is supported by the cement filling the channeled sides of the glass and resting on the intermediate vertical supporting-bar. This serves the purpose well in supporting each glass on all four of its edges; but this form requires special molds, which are expensive, and is not adapted to thick rough-rolled plate-glass that is cut to sizes required.

The object of the present improvement is to make a similar inexpensive frame of steel or wrought-iron bars punched and fitted together that will not require glass with grooves or channels in the sides, and at the same time the glass tile will be supported on all edges.

One-inch-thick rough plate rolled glass cut in squares to desired sizes is largely used in sidewalk-lights, floor-lights, and the like, also pressed glass in variety of sizes that have no channeled sides are to be had in stock in glass-factories, and to meet this requirement is the object of this invention, and the bottom flanges upon which the glass is supported when T-iron is used need not extend so far under the edges of the glass as to cut off considerable portion of the light.

In my present invention I employ flat bars A, which are suitably supported, so as to stand on edge. These bars have horizontal slots or channels made through them of such size as to receive transverse flat bars 2. On each side of the bar A, that stands on edge, I place thin flat bars 3 3, also on edge, having channels or recesses cut out of the top portion fitting nicely around on bottom and sides of each transverse horizontal bar 2 2, so that their upper edges will be on same level with the top portion of the horizontal cross-bars 2 2. By this means level bearing-supports are formed to receive all the bottom edges of the glass 4. These bars 3 extend so as to rest on the same end bearings as the bar A. Therefore all three bars A and 3 3, forming a single sash-bar, take their support upon end bearings. To keep the side bars 3 3 against bar A, I use as few rivets as possible to keep down the cost of workmanship. In an ordinary length two or three rivets will suffice, and in extended length 4 or 5 may be used. These side bars 3 3 are kept against the middle bar at the ends by the cement filling at those points. This construction is adapted more particularly for the large glasses that require strong supporting-bars. The side flat bars 3 3 add strength to the combination.

If the supporting-bar A is increased in thickness as required to support large glass plates, the punch that forms the slot or channel-holes and the rivet-holes must be as large as the thickness of the bar which they punch at increased expense.

In order to space the vertical bars A to suit the size of the glass plates and also to keep the frame stiff against twisting, I use angle or T iron to support the ends of the bars, as shown at 5. These supports are slotted or punched in the vertical portion, so as to let

the ends of the middle bar A extend through them, and the ends of side bars 3 3, together with the center bar, rest on the horizontal portion of the bars 5, thereby leveling the frame.

In some cases I make the slots in the end angle of T iron or steel, with slots large enough to take the combined vertical bar A, and side bars 3–3. This dispenses with end riveting when ends of these bars inserted in the slots of the angle or T irons are surrounded with cement and hardened. They are held rigidly in position against racking or twisting, dispensing with expensive punching and riveting in large numbers.

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

1. In a sidewalk, floor and roof construction, metal bars set vertically on edge and having horizontal slots in line, flat bars passing transversely through said slots, other bars parallel and contiguous and upon each side of the first-named bars, and rivets by which they are secured thereto, said bars having channels in their upper edges to fit the transverse bars and provide a substantially level support for the edges of illuminating-tiles.

2. In a sidewalk, floor, and roof construction, main supports consisting of flat metal bars set vertically on edge, having slots made therethrough and flat horizontal bars extending transversely through the slots, other flat bars riveted to the first-named bars and standing on edge on each side of the main bars, said last-named bars having slots fitting the flat transverse bars and forming therewith continuous level supports, and flat illuminating-tiles having all their edges resting upon said supports.

3. Metal frames for illuminating-tiles, said frames comprising flat bars set vertically on edge, other bars of less width and length riveted to the first-named bars, angle or T bar supports having their webs slotted to receive the ends of the first-named bars, and against which the shorter bars abut, slots in the main bars and in the upper edges of the bars fixed thereto, and flat bars extending through the slots to form supports for illuminating-tiles.

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

PETER H. JACKSON.

Witnesses:
HENRY P. TRICOU,
S. H. NOURSE.