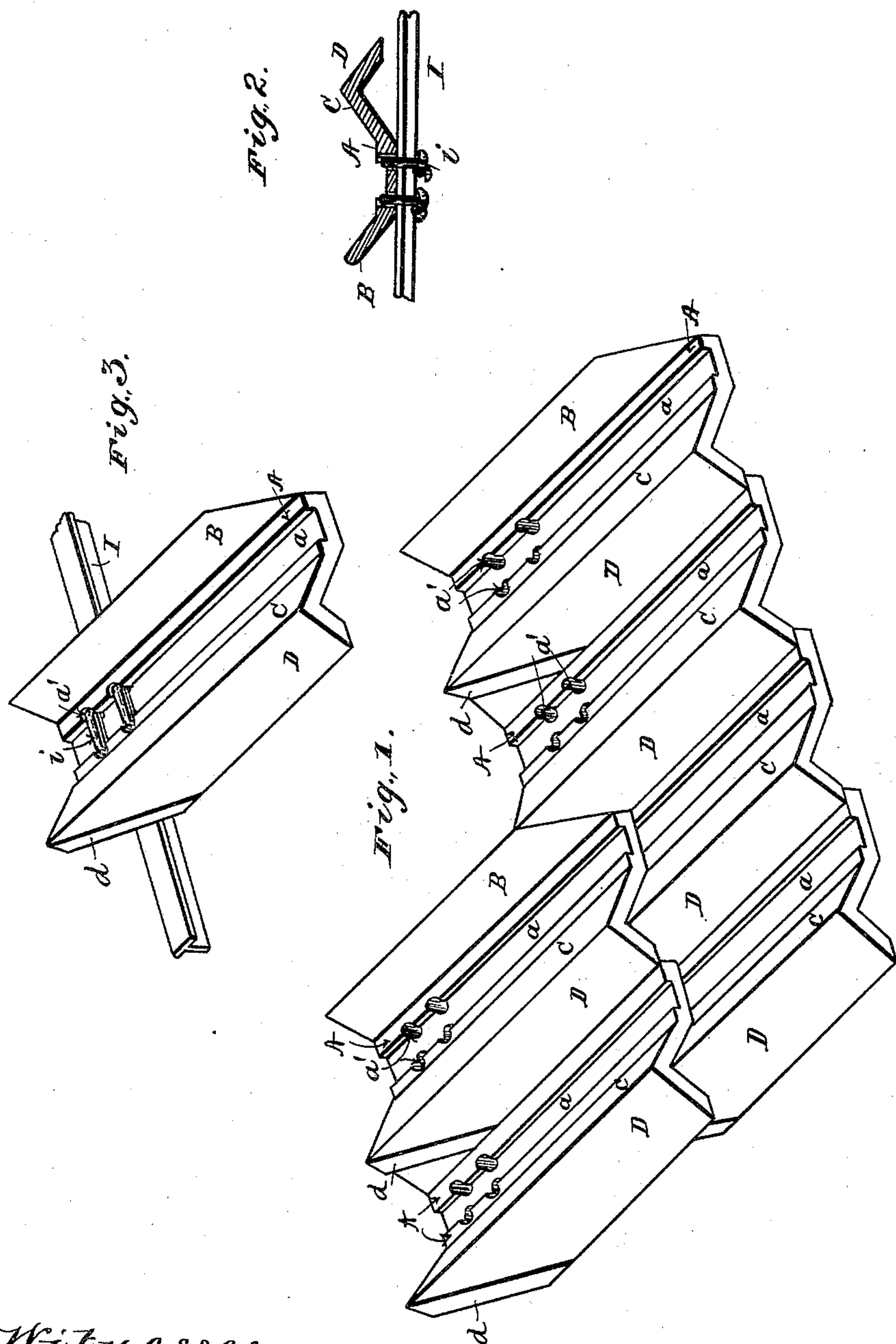


(No Model.)

J. RAPP.
ROOFING TILE.

No. 411,299.

Patented Sept. 17, 1889.



Witnesses
W. R. Edelin.
G. S. Lowrie.

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UNITED STATES PATENT OFFICE.

JOSEPH RAPP, OF AKRON, OHIO.

ROOFING-TILE.

SPECIFICATION forming part of Letters Patent No. 411,299, dated September 17, 1889.

Application filed May 10, 1889. Serial No. 310,233. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH RAPP, of Akron, in the county of Summit and State of Ohio, have invented certain new and useful
5 Improvements in Roofing-Tiles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

10 My invention relates to improvements in roofing-tiles; and it consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

15 In the accompanying drawings, Figure 1 is a view in perspective. Fig. 2 is a transverse section showing one way of securing the tiles in position, and Fig. 3 is a view in perspective showing a tile fastened to a beam.

20 The central portion or bottom of the tile is flat, as shown at A, and from thence the two sides B and C slope upward and outward, substantially as shown—say at an angle of forty-five degrees, more or less. Member D,
25 having a reverse slope, is integral with side C, and from the upper edge of the latter slopes downward and outward, as shown, the two members C and D constituting an inverted-V-shaped trough adapted to fit over
30 side B of the next adjacent tile located at the left hand in the same lateral tier. The upper outer corner of member D is beveled off, as shown at *d*, and the lower outer corner of side B is correspondingly beveled, as shown
35 at *b*.

As will be seen in the drawings, the tiles are laid in lateral tiers, the tier next above overlapping the tier below the necessary distance, and the beveled corner *d* of a tile abuts
40 the beveled corner *b* of the next right-hand tile of the tier below, such joint at the beveled corners by the next tile of the upper tier, and so on throughout the roof. Member A on the top surface thereof has a recess *a* extending the length of tile, with holes *a'* made
45 in the bottom wall of such recess and located preferably as shown. In case the tiles are laid upon wooden supports the securing-nails are driven through holes *a'*, and by reason of
50 the recess the heads of the securing-nail in such case are depressed out of the way of the overlapping tile. In case the tiles are laid, for instance, on metal bars, a preferable means of securing the tile is by wires *i*, pass-
55 ing through holes *a'*, such wires being twisted

together underneath the supporting-bars, for instance, as shown in Fig. 2, a supporting-bar being shown at I. When the tiles are laid on a roof having but little pitch, if the overlapping tiles fit close together along the bottoms
60 thereof the water, by means of capillary attraction, is likely to find its way up between the overlapping sections of the tile and leak through holes *a'*; but by means of recess *a*, admitting air between the tiles, such leakage
65 is prevented; also, by reason of recess *a*, these tiles can be laid flatwise, the one above the other, indrying and burning, such recesses admitting heat and air between the tiles sufficient for the purpose, and in such position
70 the tiles are not likely to warp.

In shipping, the tiles can be packed flatwise, the one above the other, in small compass and without danger of breaking.

It is evident that the tiles could be constructed the other handed—that is to say, with side B on the left hand and sides C and D on the right hand, with diagonally-opposite corners beveled for mutual engagement—
75 without departing from the spirit and purpose of my invention.

What I claim is—

1. A roofing-tile consisting, essentially, of flat-bottom trough with sloping sides and inverted trough, the troughs having a side in
85 common, the inverted trough being adapted to fit over the opposing side of the next adjacent tile, the diagonally-opposite corners of the tile being beveled, substantially as and for the purpose set forth.

2. A roofing-tile consisting, essentially, of a flat-bottom trough and inverted-V-shaped trough having a side in common, substantially as indicated, the flat-bottom trough having recess *a* and holes through the bot-
95 tom wall of such recess for the purpose of securing the tile, substantially as set forth.

3. The combination of a roofing-tile, shaped substantially as indicated, having recess *a* and holes *a'*, and securing-wires for fasten-
100 ing the tiles, substantially as and for the purpose set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 18th day of March, 1889.

JOSEPH RAPP.

Witnesses:

CHAS. H. DORER,

ALBERT E. LYNCH.