

(No Model.)

2 Sheets—Sheet 1.

E. C. LINDEMANN.  
ROOFING TILE.

No. 438,321.

Patented Oct. 14, 1890.

Fig 1.

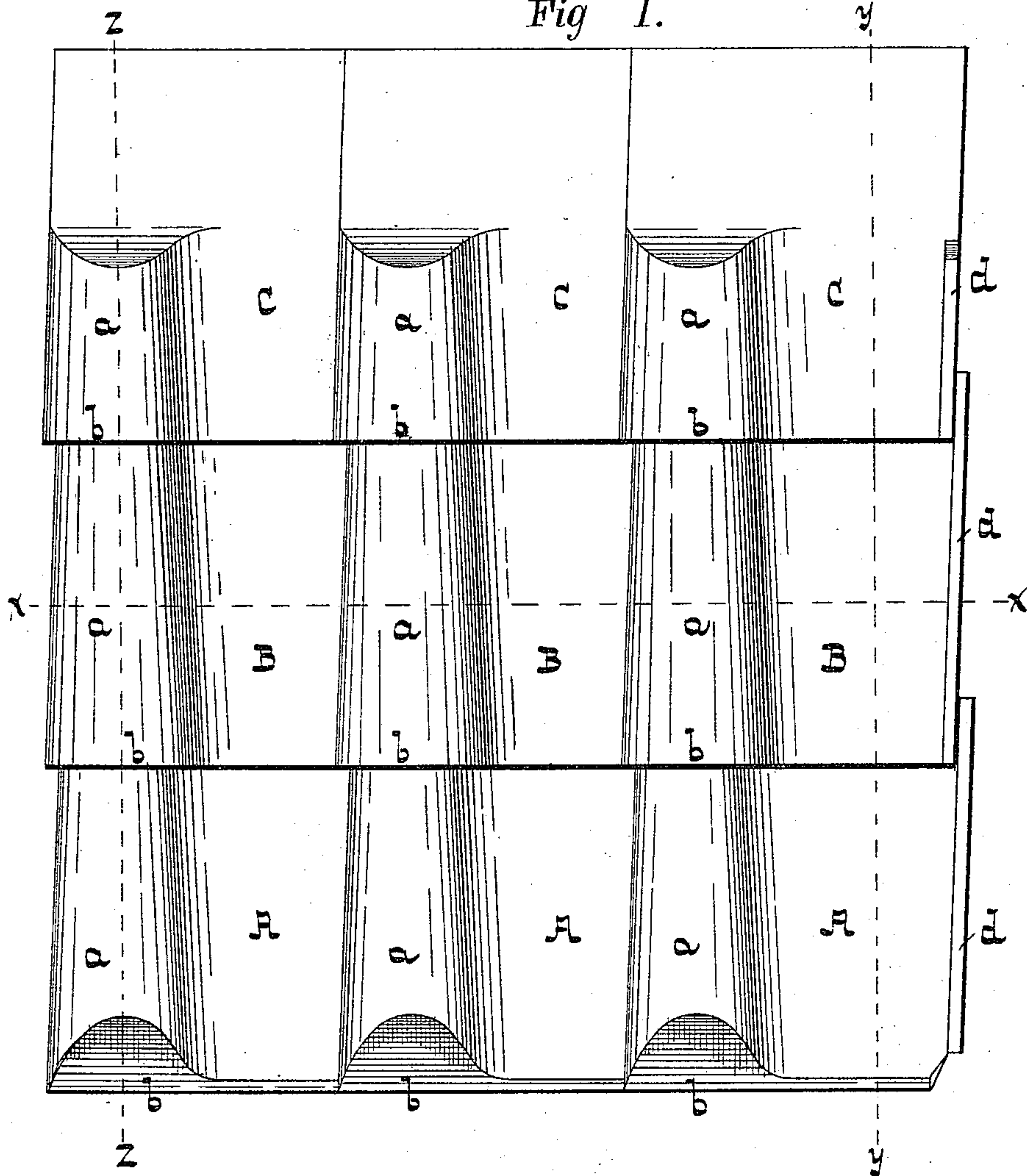
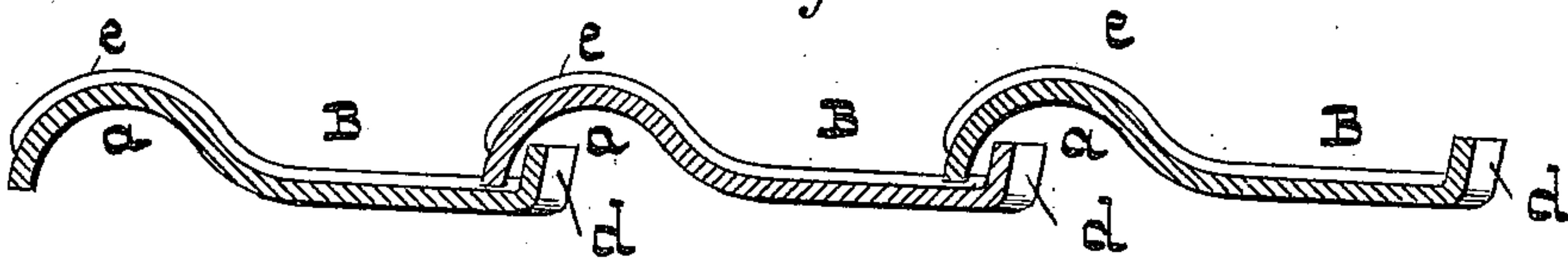


Fig 2.



-WITNESSES-

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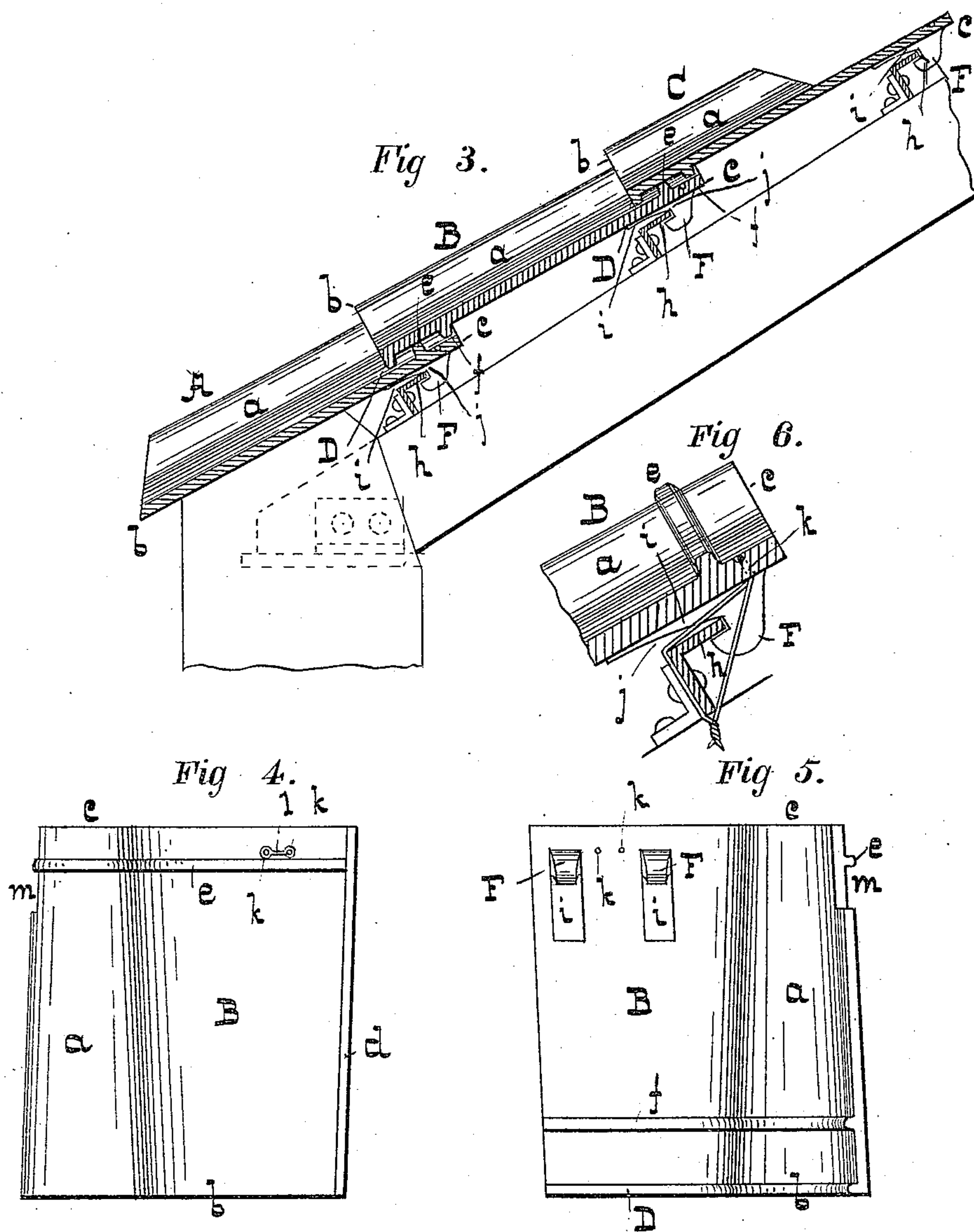
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-WITNESSES-

*Dan'l Fisher,*  
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# UNITED STATES PATENT OFFICE.

ERNST CHARLESÉ LINDEMANN, OF BALTIMORE, MARYLAND.

## ROOFING-TILE.

SPECIFICATION forming part of Letters Patent No. 438,321, dated October 14, 1890.

Application filed April 28, 1890. Serial No. 349,806. (No model.)

*To all whom it may concern:*

Be it known that I, ERNST CHARLESÉ LINDEMANN, of the city of Baltimore and State of Maryland, have invented certain Improvements in Roofing-Tiles, of which the following is a specification.

In the description of the said invention, which follows, reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a plan view of nine tiles constructed in accordance with the present invention, and showing three tiles adapted for situation at the eaves of the roof, three for the center, and three fitted to finish at the highest point of the roof. Fig. 2 is a cross-section of Fig. 1, taken on the dotted line  $xx$ . Fig. 3 is a longitudinal section of Fig. 1, taken on the dotted line  $yy$ , showing also the construction of the roof or that portion thereof upon which the tiles are laid. Fig. 4 is a top view of one of the central tiles, and Fig. 5 an under side view of the same. Fig. 6 is a detail of one of the tiles on an enlarged scale to illustrate the manner of securing it to the iron-work of the roof.

In the said drawings, A, B, and C represent, respectively, an eaves, a central, and a top or finishing tile. The sides of all the tiles are parallel, as are also the tops and bottoms; but the top and bottom are not at a right angle with the sides. Consequently the general form of the tiles is that of a rhomboid when seen from either the upper or lower side. Looking at the upper surface of one of the central tiles one lateral edge thereof has an upward hollow projection  $a$ , which is tapered from the lower edge  $b$  toward the upper edge  $c$ . The other lateral edge of the tile has a lip  $d$ , which extends upward, and near its upper end or edge is a bead  $e$ , which extends from the lip  $d$  across the rounded hollow projection  $a$  to the other edge. (See particularly Figs. 2 and 4.) The vertical center line of the hollow projection  $a$  is represented by the dotted line  $Z Z$ , and it is at a right angle with the top and bottom edges. The distance which each side of the tile recedes from the vertical is sufficient to admit of the lapping of the tiles without destroying the general vertical outline of the series. In this tile the channel formed by the hollow projection  $a$  is open at both ends; but in the case

of the eaves-tile A the channel is closed at the bottom, while the upper or finishing tile has its channel closed at the top, as shown in Fig. 1.

D is a bead at the lower under side edge of the tile, and  $f$  a similar bead situated also on the under side and a short distance above the one D. The bead  $e$  of one tile rests centrally between the ones D and  $f$  of another above it, and entrance of snow or water between the tiles is therefore prevented.

When the tiles are used in connection with a roof of iron construction, as shown in the drawings, the under side of each tile is provided with a pair of hooks F, which engage with bars  $h$ , forming a part of the roof, and to admit of a clear air-space under the tiles and between them and the bars  $h$  there are wedge-shaped projections  $i$  on the under surface of the tiles and immediately below the hooks, which rest on the bars  $h$ , and thereby elevate the tiles above them. (See Fig. 3, in which the air-space is shown and denoted by  $j$ .)

In cases where the tiles are laid on boards instead of iron bars, the hooks F are omitted; but the wedge-shaped projections  $i$  are retained.

In order that the tiles may be secured to the bars  $h$ , the flat part thereof is provided with two holes  $k$ , connected by means of a channel or groove  $l$ . A copper wire (shown only in Fig. 6) is inserted through the holes  $k$ , and the ends carried around the bar  $h$  and twisted together. The loop portion of the wire rests in the groove  $l$  and is below the upper surface of the tile. Consequently it constitutes no obstruction.

A portion of the edge of the hollow projection  $a$  is cut away, as shown at  $m$  in Figs. 4 and 5, so as to allow the tile to overlap the lower part of the flat body of the tile next above it.

I claim as my invention—

A tile of the general form of a rhomboid, having the hollow tapering projection  $a$ , which has a part of its edge cut away, as shown, the under side beads D and  $f$ , and the upper bead  $e$ , substantially as specified.

ERNST CHARLESÉ LINDEMANN,

Witnesses:

WM. T. HOWARD,  
DANL. FISHER.