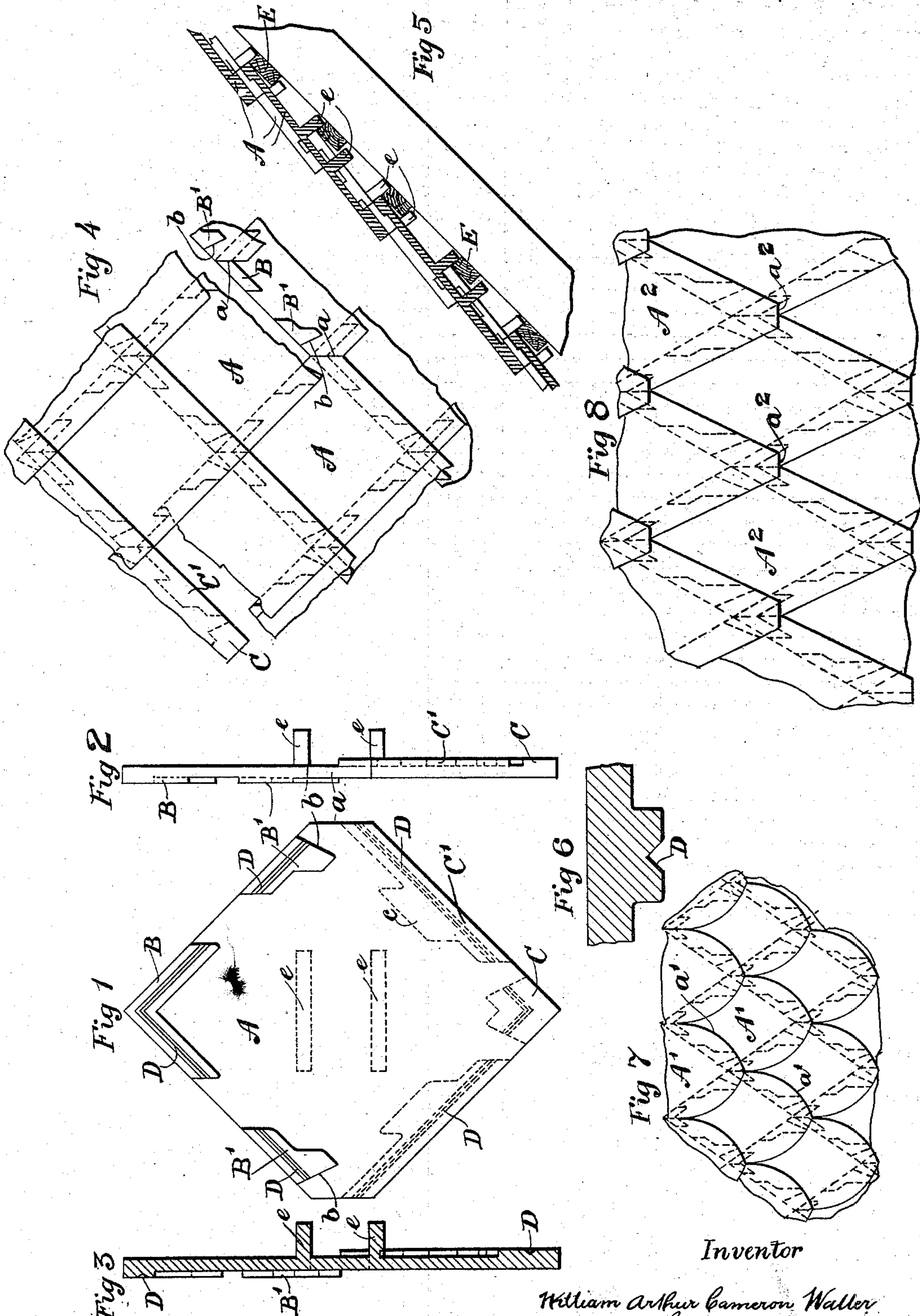


(No Model.)

W. A. C. WALLER.  
TILE.

No. 573,939.

Patented Dec. 29, 1896.



Witnesses  
Edmund James Wood  
Albert Edward Allen

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# UNITED STATES PATENT OFFICE.

WILLIAM ARTHUR CAMERON WALLER, OF LONDON, ENGLAND.

## TILE.

SPECIFICATION forming part of Letters Patent No. 573,939, dated December 29, 1896.

Application filed January 4, 1896. Serial No. 574,376. (No model.)

*To all, whom it may concern:*

Be it known that I, WILLIAM ARTHUR CAMERON WALLER, gentleman, a subject of the Queen of Great Britain and Ireland, residing at 6 Kyverdale Road, Stoke Newington, London, England, have invented certain new and useful Improvements in the Construction of Tiles, of which the following is a specification.

This invention relates to an improved construction of tiles for roofing purposes, and has for its object to provide tiles which will lock themselves in position in a simple and efficient manner.

In carrying out my invention I form the tile with a number of projecting surfaces on both faces, the surfaces being of special shape and adapted when the tiles are fixed in position to engage with the projections on the adjacent tile.

The tiles may be of any suitable shape, and according to one arrangement are of diamond shape with opposite corners cut off. The lower sides of the tile may also be rounded to give a more ornamental appearance. On the top surface and at the upper portion of the tile three projecting surfaces are formed, consisting of a rib at the edge extending from the upper corner for an equal distance at each side and two projections close to the side corners. Three projections are formed on the under surface, adapted to fit between the projections on the upper side of the adjacent tile, so that the two will interlock.

In order that the water may be prevented from penetrating between the tiles, a drip arrangement is employed, consisting of a small V-shaped or other suitably-formed channel in the projecting surfaces. These channels or gutters lead from the upper ends of the projecting faces to the lower extremities, and any water which may gather will run down these gutters, which will also prevent capillary attraction.

In order that the invention may be more clearly understood, reference is had to the accompanying sheet of drawings, in which—

Figure 1 is a plan of a tile according to my invention. Fig. 2 is a side view, and Fig. 3 a section, of the same. Fig. 4 is a plan showing the tiles connected together. Fig. 5 is a section of the same. Fig. 6 is a detail view

of the gutter or drip, and Figs. 7 and 8 show slight modifications.

Referring to Figs. 1 to 6, A is the tile, shown of diamond shape, with the corners *a* cut off. The arrangement is such that when the tiles are placed in position these corners *a* abut against each other in each of the parallel rows, as shown in Fig. 4, portions of the tiles being broken away in that figure to illustrate the arrangement more clearly. On the upper surface of the tile, at the top, the V-shaped ledge or projection B is formed, extending along the edge for a short distance. Below this ledge the projections B' are formed, a gap being left between the surfaces. The extremities of B and B' are preferably made parallel. The edge *b* is formed at an angle to the cut-off end *a*, so that when the tiles are placed together, as shown in Fig. 4, a wedge-shaped gap will be formed by the adjacent edges *b*. On the under surface three ledges are also employed, the bottom one, C, engaging between the projections B' on the two tiles immediately below.

The tiles are placed alternately, so that the lower points of each row project over the ends *a* of the row immediately below, forming a diamond pattern. The ledges C' extend along the bottom of the tile to the ends *a*, gaps being left between C and C', which receive the projections B' on the adjacent tiles. The central portions *c* of the ledges C' exactly fill the gaps between B and B'. The ledges thus engage with B and B', the tiles overlapping sufficiently far to allow of this.

D is the gutter or drip-groove formed in all the ledges and illustrated in detail in Fig. 6. As shown, it extends parallel with the edges of the tile and guides any water that may collect to a suitable point, from which it can escape without penetrating below the surface of the tiles.

In order to secure the tiles to the battens E, (shown in Fig. 5,) ribs or projections *e* are employed extending from the under surface at the center. These ribs are sufficiently deep to clear the tile immediately below the one on which they are formed, as the tile overlaps the one below for a short distance above its center, and allowance must therefore be made for the thickness of a tile. The battens E



thus lie between the two ribs *e*, which are placed horizontally.

Fig. 7 shows an arrangement in which the tiles A have their lower edges *a'* curved, so as to give a more attractive or ornamental appearance to the tile, the arrangement otherwise remaining the same. The lower portions of the tiles may be made semicircular or of any other curve found suitable. According to Fig. 8 the tiles A<sup>2</sup> are of somewhat elongated form and the lower corners *a*<sup>2</sup> are cut off.

With a locking-tile constructed according to my invention there is no danger of water penetrating, owing to the drip device, and the tiles being made of sand and cement they are non-conducting as regards heat. Any capillary action which would tend to draw the water up beyond the tiles is effectually stopped by the drip-groove.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an improved tile the combination of a V-shaped ledge B at the upper end, and ridges

B' extending along the upper sides, and separated from ledge B, of an angle-ledge C on the other side and at the bottom, and two side ridges C' adapted to engage with and between the ledges B B' of adjacent tiles substantially as described and shown in the accompanying drawings and for the purposes specified.

2. In an improved tile the combination with the V-shaped ledge B at the upper end, the side ridges B' separated from the projection B the angle-ledge C on the lower side of the tile and the side ledges C', of the drip-groove D formed in the said ledge, and extending parallel to the sides of the tile substantially as described and shown in the accompanying drawings, and for the purposes specified.

In witness whereof I have sworn to and set my hand in the presence of two witnesses.

WILLIAM ARTHUR CAMERON WALLER.

In presence of—

ALBERT EDWARD ELLEN,  
HENRY ALFRED WOODBRIDGE.