973,946.

W. E. LINDAU.

CEMENT ROOFING TILE.

APPLICATION FILED FEB. 2, 1910.

Patented Oct. 25, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

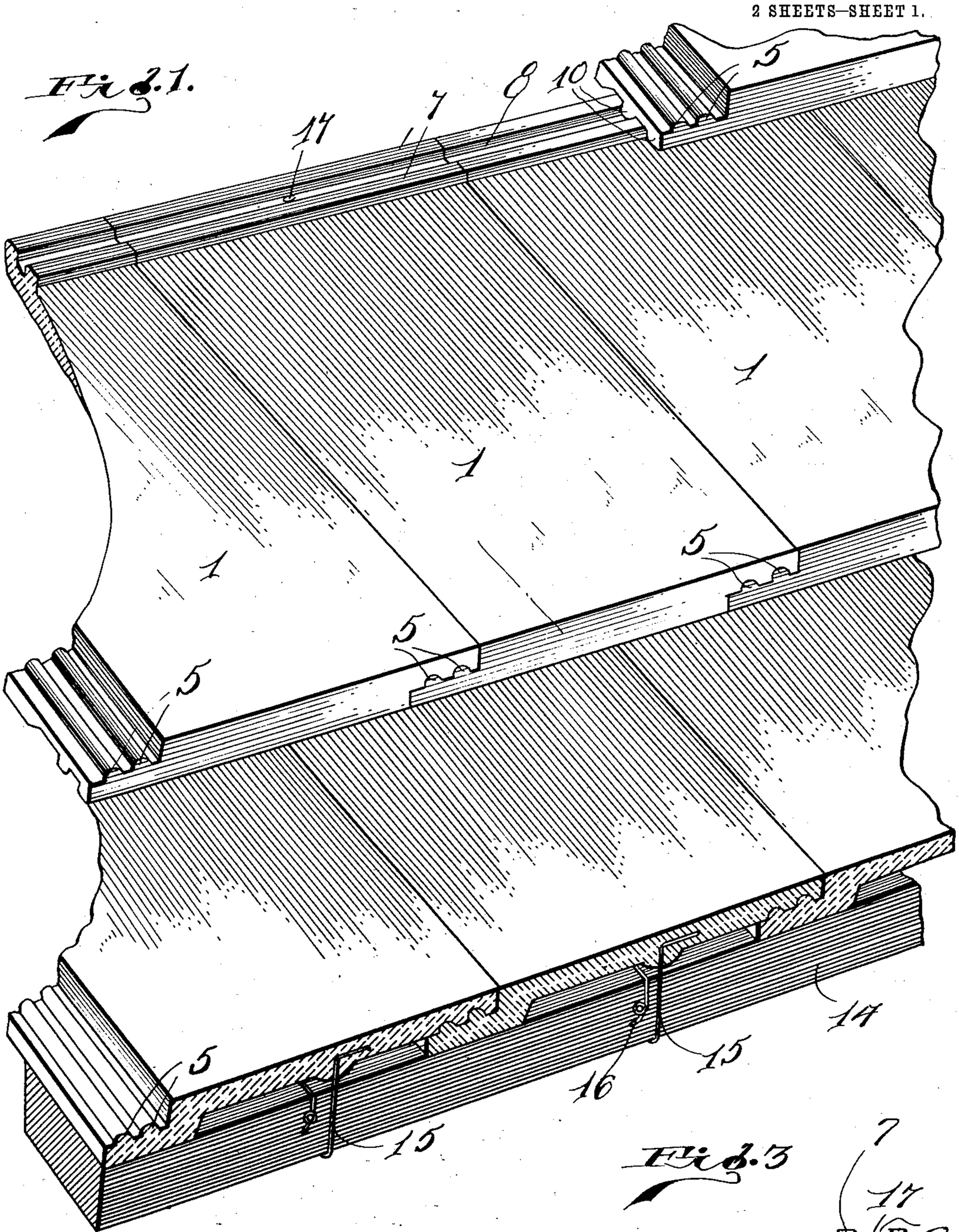

Fig. 3.

Witnesses

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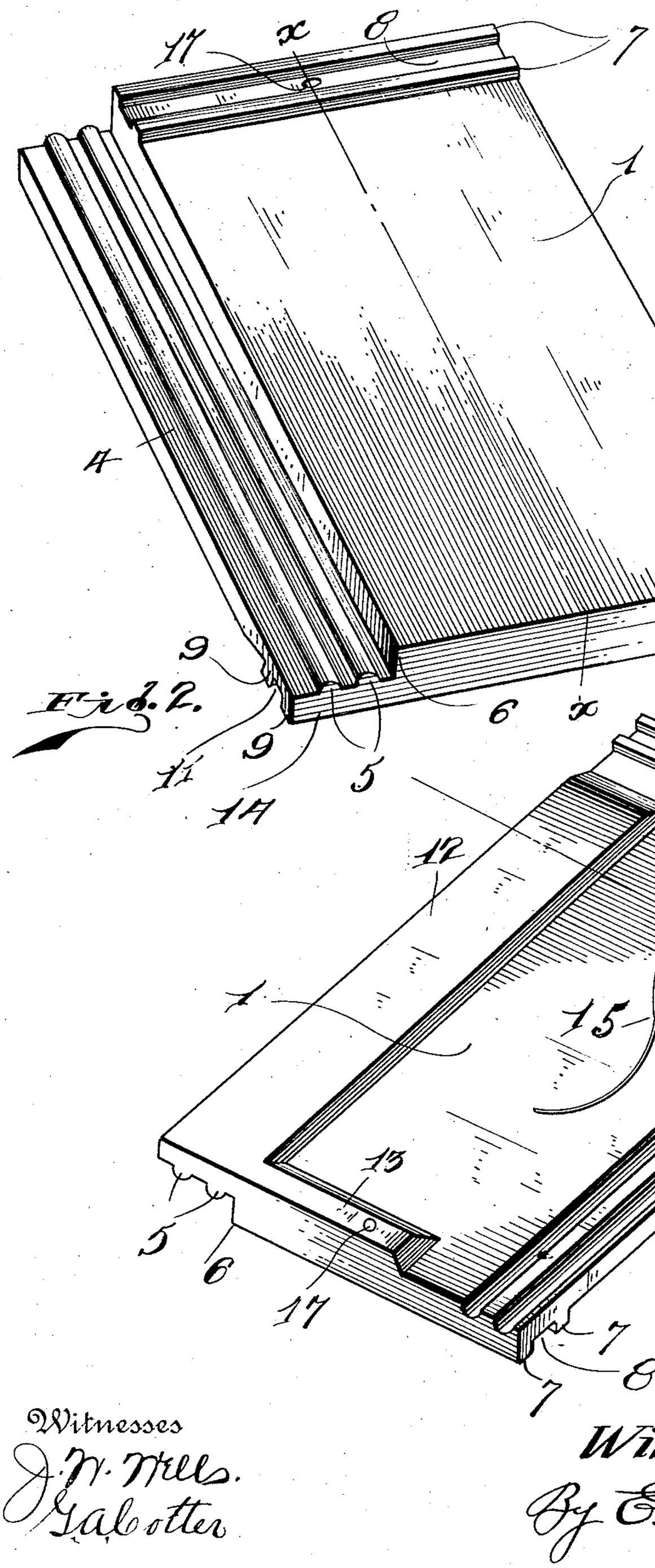

Fig. 2.

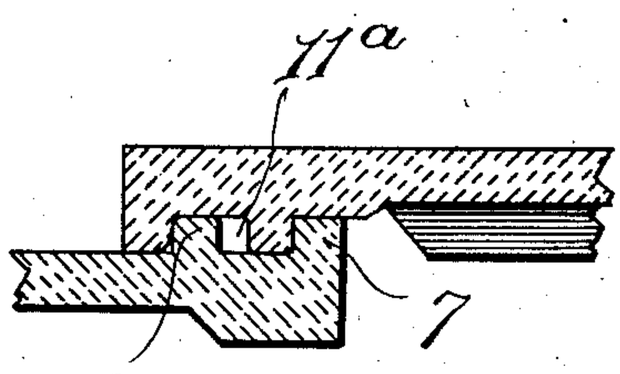

Fig. 4.

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

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CEMENT ROOFING-TILE.

973,946. Specification of Letters Patent. Patented Oct. 25, 1910.

Application filed February 2, 1910. Serial No. 541,476.

To all whom it may concern:

Be it known that I, WILLIAM E. LINDAU, a citizen of the United States, residing at Napoleon, in the county of Henry and State of Ohio, have invented certain new and useful Improvements in Cement Roofing-Tiles, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to roofing tiles and has special reference to that class of roofing tiles which are made of plastic material and are formed with interlocking joints whereby the tiles may be secured together for forming tight locking joints.

The object of this invention is to provide a roofing tile of cement or other similar material so constructed and arranged with overlapping locking joints as to form a durable tile which can be compactly laid in layers upon a roof and present a smooth surface with locked joints.

With these and other objects in view the invention consists of certain novel combinations, constructions and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings:—Figure 1 is an enlarged view in perspective showing partly broken away and in section a number of roofing tiles connected together and secured to a roof formed in accordance with this invention. Fig. 2 is a detail perspective view of a roofing tile constructed in accordance with this invention. Fig. 3 is a longitudinal section of the roofing tile taken on line *x*—*x* of Fig. 2. Fig. 4 is a detail view in longitudinal section on line *y*—*y* of Fig. 1, showing the locking joint connecting the upper and lower ends of the pair of tiles. Fig. 5 is a detail view in perspective of the reverse or under side of the tile shown in Fig. 2.

In carrying out the invention a tile 1 of cement concrete or other suitable material is formed of a rectangular shape, with a longitudinal flange 2 at one side having on its under side the longitudinal grooves 3 which extend from end to end of the inner or under side of the tile. The opposite side of the tile is formed with a flange 4 having longitudinal ribs 5, and a shoulder 6 extending lengthwise of the tile adjacent to the rib 5. The upper end of the tile 1 on its outer face is formed with transverse ribs 7 which in turn form a transverse groove 8. The lower end of the tile, on its under side, is formed with a transverse raised strip 9, extending from one edge of the tile and terminating at its other end adjacent to the grooves 3 in the flange 2. The strip 9 is also formed with ribs 10 which in turn form a groove 11. The under side of the flange 4 is formed with a raised strip 12 extending from one end of the strip 9 to the upper end of the tile and also with a raised strip 13 extending from the end of the strip 12 on the upper end at the side of the tile and terminating at a short distance from the grooves 3. The tiles constructed as hereinbefore set forth are arranged in overlapping layers on a roof as shown in Fig. 1. The ribs 7 at the upper end of the outer side of the tile interlocking with the ribs 10 at the lower end of the under side of the tile whose lower under side overlaps the upper end of the lower tile. The flange 2 on one side of the tile, overlaps the flange 4 of the adjacent tile, the ribs 5 being located in the grooves 3 and the adjacent edge of the flange 4 abutting against the end of the strip 9, while the edge of the flange 2 abuts against the shoulder 6.

It will be seen that by means of this construction the adjacent edges of the tiles are closely interlocked together thereby holding the tiles firmly together and forming a tight joint, thereby preventing rain from penetrating through to the roof. As shown in Fig. 1 the tiles are preferably so arranged as to have the longitudinal joints of one layer of tiles break joints with the longitudinal joints of the adjacent or next layer of tiles. As shown in Fig. 4, the groove 11 formed by the ribs 10 is of such a width that one of the ribs 7 extending through the groove affords a passageway 11′ which serves as means for allowing the passage of air. It will be noticed also that the raised strips 12 and 13 also serve to form an air space on the under side of the tile. The tiles so constructed and arranged may be secured to a roof in any suitable manner and as here shown are secured to cross strips 14, which are placed upon a roof, by means of wires 15 one end of which is embedded in the tile on its under side, the wire being bent around the strip 14 secured thereto in any suitable manner as for instance by being twisted about a pin or nail 16 in the strip 14. The tiles further may be secured to the roof by means of nails which may be

driven through the holes 17 shown in the tile in Figs. 1, 2, 3, and 5.

It will be seen that by means of the particular form of locking joints the tiles will present a smooth surface and each series of tiles overlapping the adjacent series rests closely against the same.

Having described the invention, what I claim is:—

A tile of the class described comprising a body of substantially rectangular outline and provided with top, bottom and side edges and upper and under surfaces, said body having its upper surface rabbeted along one side edge and its under surface grooved along the other side edge, ribs extending throughout the length of the rabbeted portion, a rib extending across the upper surface at the top edge thereof, a second rib parallel to the last mentioned rib and spaced therefrom, a strip extending across the under face at the bottom edge, said strip extending from the edge of the rabbeted side toward the opposite edge and terminating a distance from the grooves equal to the width of the rabbet, a pair of spaced ribs extending the full length of said strip, one of said ribs being at the bottom edge of the strip and the other intermediate its width, a second strip extending along the under surface of the body beneath said rabbet from the upper edge of the body to the first mentioned strip, and a third strip extending along the lower edge of the body from the last mentioned strip, the under surfaces of the ribs on the first strip and of the remaining strips all lying in substantially the same plane.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

WILLIAM E. LINDAU.

Witnesses:

CHAS. M. MAGILL,

JOHN C. RAGAN.