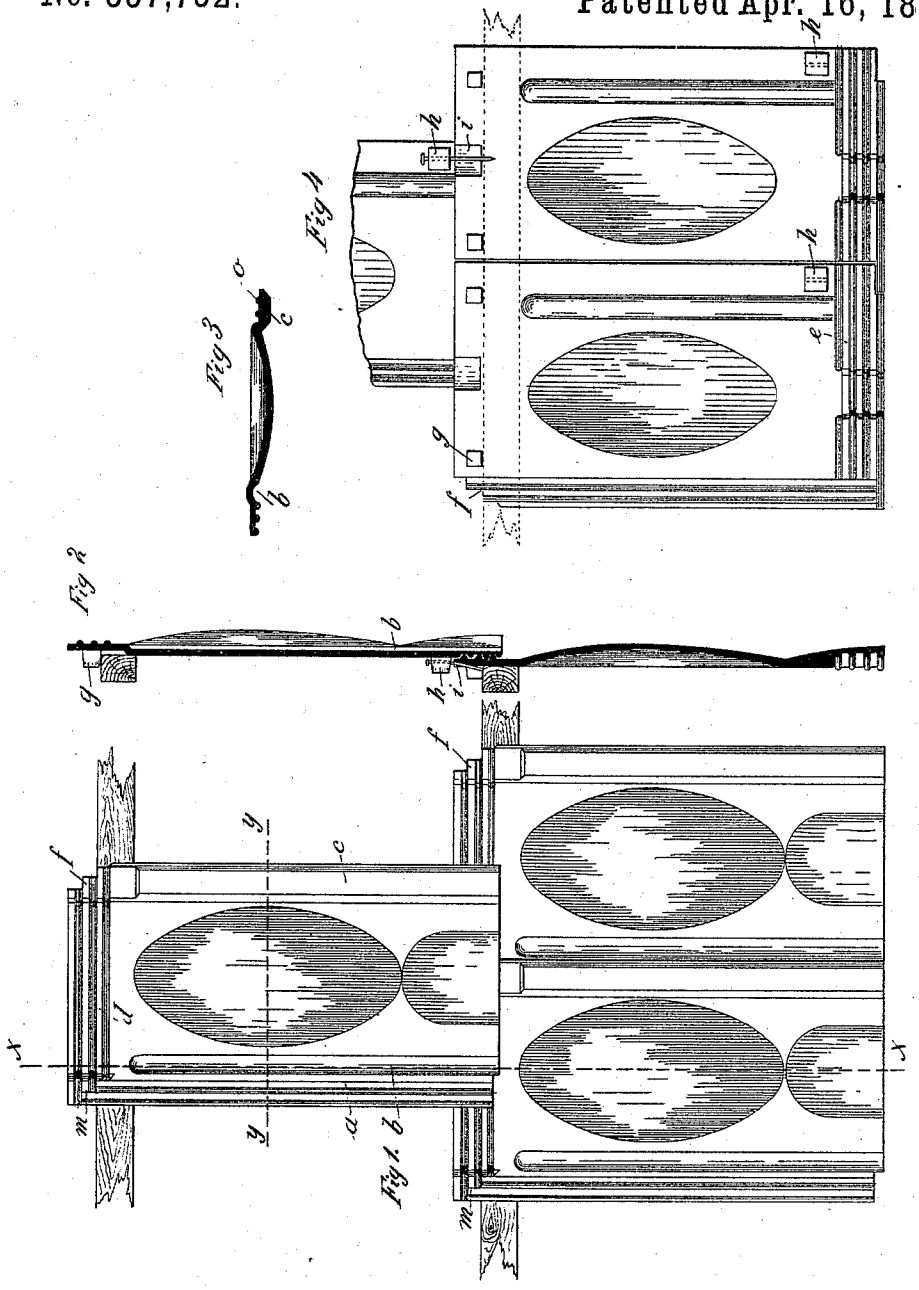
(No Model.)

K. THOMANN.

ROOFING TILE AND METHOD OF SECURING SAME.

No. 537,732. Patented Apr. 16, 1895.



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UNITED STATES PATENT OFFICE.

KARL THOMANN, OF HALLE-ON-THE-SAALE, ASSIGNOR TO A. SCHMIDT, OF BERLIN, GERMANY.

ROOFING-TILE AND METHOD OF SECURING SAME.

SPECIFICATION forming part of Letters Patent No. 537,732, dated April 16, 1895.

Application filed May 7, 1894. Serial No. 510,253. (No model.)

To all whom it may concern:

Be it known that I, KARL THOMANN, a subject of the Emperor of Germany, residing at Halle-on-the-Saale, in the Kingdom of Saxony, German Empire, have invented an Improved Roofing-Tile and Method of Securing the Same, of which the following is a true specification.

This invention has for its object an improved roofing tile, which, on the one hand, affords a thoroughly dust- and water-tight roof, and, on the other hand, renders possible a certain and reliable fastening of the separate tiles to the roof framing.

This improved tile is shown on the accompanying drawings, Figure 1 being a front view showing the connection of three roof-tiles; Fig. 2, a section on the line *x x* of Fig. 1; Fig. 3, a section on *y y* of Fig. 1; and Fig. 4, a view seen from below of the connection of tiles shown in Fig. 1.

The novelty of this safety tile consists in the overlapping parts of the tiles being provided with rounded grooves and projections, and in the arrangement of overlapping strips arranged stepwise, and side angle pieces both at the head and at the inner overlapping surfaces of the tile, whereby an absolutely certain dust- and water-proof roofing is obtained even in the worst weather.

By the further arrangement of projections or lugs at the bottom of the tile with corresponding curved recesses on the inner top side of the tile, a reliable and certain fastening or connection with the roof timber is made, so much so that the heaviest storm cannot cause a lifting of the roof.

The construction of these safety tiles is as follows: The tiles are made of the usual sizes, and have at their upper and side edges (in the drawings shown on the left hand side of Fig. 1) grooves *a*, which may be closed by means of round projections *d*, which fulfilled the object of catching any rainwater which may penetrate therein and carrying it off below. On the other side of the tile (on the right hand side in the drawings) is a raised covering strip *c* on the under side of which there are round projections which engage in the grooves *a* of the next tile. There are further, on the bottom edge on the under side, four projections or strips *e* which are arranged so far apart that the two center bars may engage in the grooves of the tile placed beneath them, while the two outer bars rest against those of the last named tile and thus form a fourfold joint. The grooves of the left and upper edges of the tile are shut off from one another by means of beveled projections *m*, while on the right hand side the tile is provided with an overlapping covering strip *c* having rounded grooves and projections on its under side adapted to engage the rounded projections and grooves on the upper edge of the next adjacent tile. The round projections, by means of which the joints are formed, become gradually shorter stepwise, as at *b* so that, by overlapping the projections *m* of the next tile, they fit tightly together, and thus in, and by, themselves form a good fitting joint. By the arrangement of the gutter or groove *b*, the rain water is also as far as possible carried off from the overlapping part, which is of great advantage for roofing tiles.

Raised portions are formed on the upper surface of the tiles, which serve both ornamental and practical purposes. On the one hand, a roof covered with such tiles has a fine architectural effect. On the other hand, the forms of these elevations, as shown in the drawings, enable the rain water to flow easily downward without penetrating too much into the grooves in the tiles.

The attachment of these safety grooved tiles to the timber is, as usual, by means of the lugs *g*. The fastening of these improved tiles to one another, however, and to the laths of the roof, is new, and forms an important part of this invention.

On the under side of the tile, at the bottom right hand side as shown in Fig. 4, there is a safety projection *h* through which a hole is bored for receiving a wire pin or spike.

When fastening the tiles on a roof, a pin of suitable length is passed through the safety lug *h* and firmly driven into the roof timbers beneath it. For this purpose, a wedge groove or slot *i* is formed on the upper edge of the next lower tile, and the rounded surface of this groove is curved in order to better guide

the wire spike or pin. (See Fig. 4.) By this method of fastening, the edges of the tiles are firmly pressed together and also a sure and convenient attachment of each separate tile with the laths of the roof is provided.

The mode of placing these improved safety grooved tiles and their effect are as follows: The tiling of the roof takes place from the bottom upward, and each successive tile is laid on the preceding one in such a way that the overlapping strip *c* rests with the bar shaped strips on its under side, in the grooves or gutters *a* of the next tile. These gutters or grooves are first filled with suitable material for making a tight joint, such as cement, clay or the like. A tile of the next row above is laid exactly over the point where the two tiles of the first row meet, in such a way that the bar shaped strips engage in front of and in the grooves, and thus produce a fourfold tight joint. By this arrangement, the nail-lug *h* of the upper row of tiles comes opposite the recess *i* of the lower row, and the connection of the tile with the roof lath takes place, as already indicated, by driving a nail through the securing lug *h* into the roof lath. By this multiple tight-fitting joint, which is further improved by the pressing of the tiles one on the other by means of the nails, it is possible to entirely prevent rain water driven by the wind from penetrating into the interior of the roof, and also the latter cannot be carried off even by the strongest winds.

A further advantage of these improved tiles is that the troublesome and unpleasant rattling and clattering of the tiles, which are inseparable from other kinds of roof covers, cannot take place.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim, and desire to secure by Letters Patent of the United States, is—

1. An improved roofing tile provided upon its face at the top and one side with rounded projections *a*, *d*, forming intermediate grooves, and having beveled projections *m* arranged in said grooves at their juncture, the opposite side of said tile being provided with an overlapping covering strip *c* provided with corresponding rounded projections and grooves, the outer edge of the tile above said covering strip gradually receding step by step to fit the beveled projections of the adjacent tile, substantially as shown and described.

2. An improved roofing tile provided upon its under side near one edge of the bottom with a perforated lug and upon its under side near the center of the top with a wedge-shaped recess, substantially as described and for the purpose specified.

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

KARL THOMANN.

Witnesses:
PAUL SCHULZ,
ADOLF HERZOG.