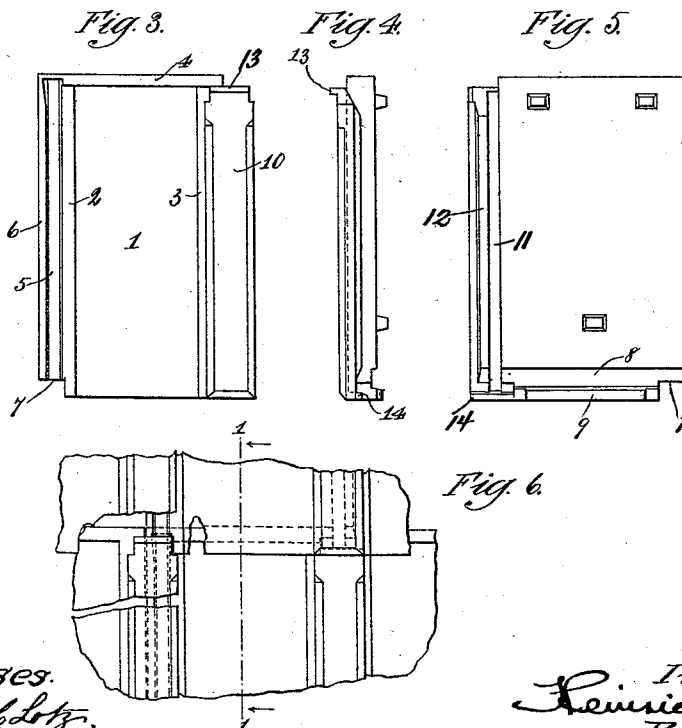
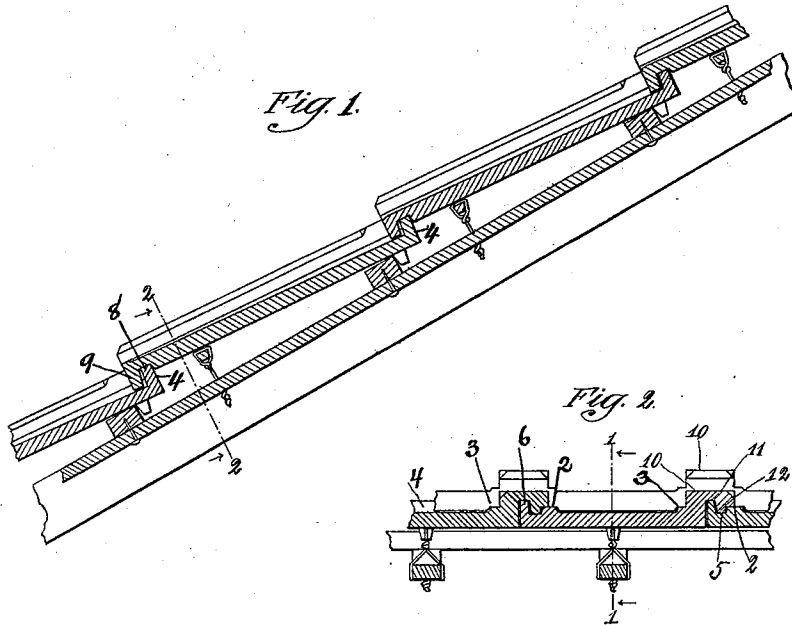


(No Model.)

H. NIEDERLAENDER.
ROOFING TILE.

No. 530,119.

Patented Dec. 4, 1894.



Witnesses.

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UNITED STATES PATENT OFFICE.

HEINRICH NIEDERLAENDER, OF CHICAGO, ILLINOIS.

ROOFING-TILE.

SPECIFICATION forming part of Letters Patent No. 530,119, dated December 4, 1894.

Application filed March 19, 1894. Serial No. 504,341. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH NIEDERLAENDER, a subject of the Emperor of Germany, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful 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 appertains to make and use the same.

This invention relates to a novel construction in a roofing tile, the object being to provide a tile of such construction that when in use in connection with others the water is lead from one tile to another and effectually prevented from working underneath the tiles, and also that will bind and hold each other securely in place.

The invention consists in the features of construction and combinations of parts hereinafter fully described and specifically claimed.

In the accompanying drawings forming a part hereof, Figure 1 is a longitudinal section of several tiles placed together taken on the lines 1—1 of Figs. 2 and 6. Fig. 2 is a cross-section taken on the line 2—2 of Fig. 1. Fig. 3 is a top plan of the tile. Fig. 4 is a side elevation. Fig. 5 is a bottom plan. Fig. 6 is a fragmentary top plan of several tiles placed together and partly broken away for clearness of illustration.

Heretofore, as far as I am informed, in making roofing tiles so that they will be watertight it has been usual to employ a plurality of grooves and ribs along the ends and sides of the tile that interfit when the tiles are placed together in position. This is objectionable, because a large quantity of material is required to make this tile and, therefore, the tile is heavy, and when a large number of them are placed on a roof imposes considerable weight upon the roof. Furthermore, the grooved and ribbed portions of the tiles overlap, and therefore in a large roof the overlapping portions of the tiles are considerable. These and many other objections are sought to be overcome by this present invention which makes a lighter tile and has narrower overlapping portions, so that a smaller number of tiles may be used upon a roof, thereby

reducing the cost of roofing and imposing less weight upon the roof.

As shown in Figs. 3 and 5 the tile is approximately rectangular in shape, and when in use they are put together end to end and side to side, one end and one side of the tile overlapping one end and one side of two adjacent tiles. The main body 1 of the top of the tile is flat and plain and extends to the lower edge thereof, as shown in Figs. 1 and 3. Since the lower end of the tile overlaps the upper end of the tile below it, water falling upon said flat and plain portion 1 will run onto the next tile. On either side of this flat portion 1 are raised portions or ridges 2 and 3. The top faces of the ridges 2 and 3 are considered the top of the tile, and the said body portion 1 is more in the order of a groove for directing the running of the water. At the upper end of the tile is an uprising ridge 4 that extends above the upper face of the tile, as shown in Figs. 1 and 2, and along one side of the tile is a deep groove 5 extending below the upper face of the tile, while the outer wall of this groove 5 is formed by a ridge 6 extending above the upper face of the tile, as shown in Fig. 2, and which is flush with the ridge 4. At the lower corner of the tile on the side of said groove is a notch 7.

On the lower face of the tile, which is flat, and on the opposite sides and ends from the ridges and grooves of the upper side are the other overlapping portions of the tile. At the lower end of the tile and on the bottom face is a transverse groove 8 that extends across the entire face of the tile, and the outer wall of this groove 8 is formed by a ridge 9 that extends considerably below the lower face of the tile, as shown in Figs. 1 and 4. The said groove 8 receives the ridge 4 on the upper end of the next lower tile and the said ridge 9 extends downwardly and meets the upper face of the plain portion 1. As shown in Fig. 2 the said ridge 9 is shaped so as to fit the said end of the tile. On the side of the tile opposite the side upon which the groove 5 is located is an overhanging flange 10 that overlaps the grooved portion of the side of the next tile, and in the under face of this overlapping flange 10 is a deep groove 11 to receive the ridge 6 on the upper side of the adjacent tile.

On the outside of said groove 11 is a depending rib 12 that enters the groove 5 of the overlapping tile, and on the outside of this rib 12 is a shoulder that rests upon the top of the rib 2 of the tile. At the upper end of the overhanging flange 10 and just below the rib 4 of the tile is an uprising lug 13 that catches under a depending lug 14 at the lower end and lower face of the overhanging flange 10 of the next tile above, it being noted that when two tiles are placed together the notch 7 in the lower left-hand corner of the tile comes in alignment with the space just above the lug 14, and the lug 13 enters the recess made thereby.

As before stated, I secured an advantage by having less overlapping portions on each tile, and therefore utilize the maximum of the surface of the tile, and of course am enabled to cover a large surface with fewer tiles than if the tiles were provided with two or more grooves and ribs upon the overlapping portions. To secure the same efficiency when doing away with one or more grooves and ribs, I have found that by making, for instance, the rib or ridge 6 considerably higher than the upper face of the tile, and making the groove 5 below the upper face of the tile and, consequently making the groove and rib on the tile that interfits with this portion correspondingly deep, that the water will be prevented from working its way therethrough, and again, the groove 8 on the lower face of

the tile extends inwardly of said face and making a longer and deeper rib or ridge 9 I am enabled to make the overlapping portions narrower but yet efficient.

I claim as my invention—

A roofing tile having a groove or channel 5 at one side thereof, the bottom of which is below the upper face of the tile, and a rib or ridge 6 on the outer side of said groove or channel 5 rising above the upper face of the tile, a rib or ridge 4 at the upper end of the tile closing said groove or channel 5 and extending above the upper end of the tile, a groove or channel 8 in the lower end of the bottom face of said tile, and a depending rib or ridge 9 below said groove 8 extending below the lower face of the tile, and an overhanging flange at the side of the tile opposite said groove or channel 5 having a deep groove or channel 11 to receive said rib or ridge 6, the top of said groove or channel 11 extending above the upper face of the tile, and the rib or ridge 12 extending below the upper face of the tile, and an uprising lug 13 at the upper end of said overhanging flange, and a depending lug 14 at the lower end thereof, substantially as described.

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

HEINRICH NIEDERLAENDER.

Witnesses:

RUDOLPH W. LOTZ,
HARRY COBB KENNEDY.