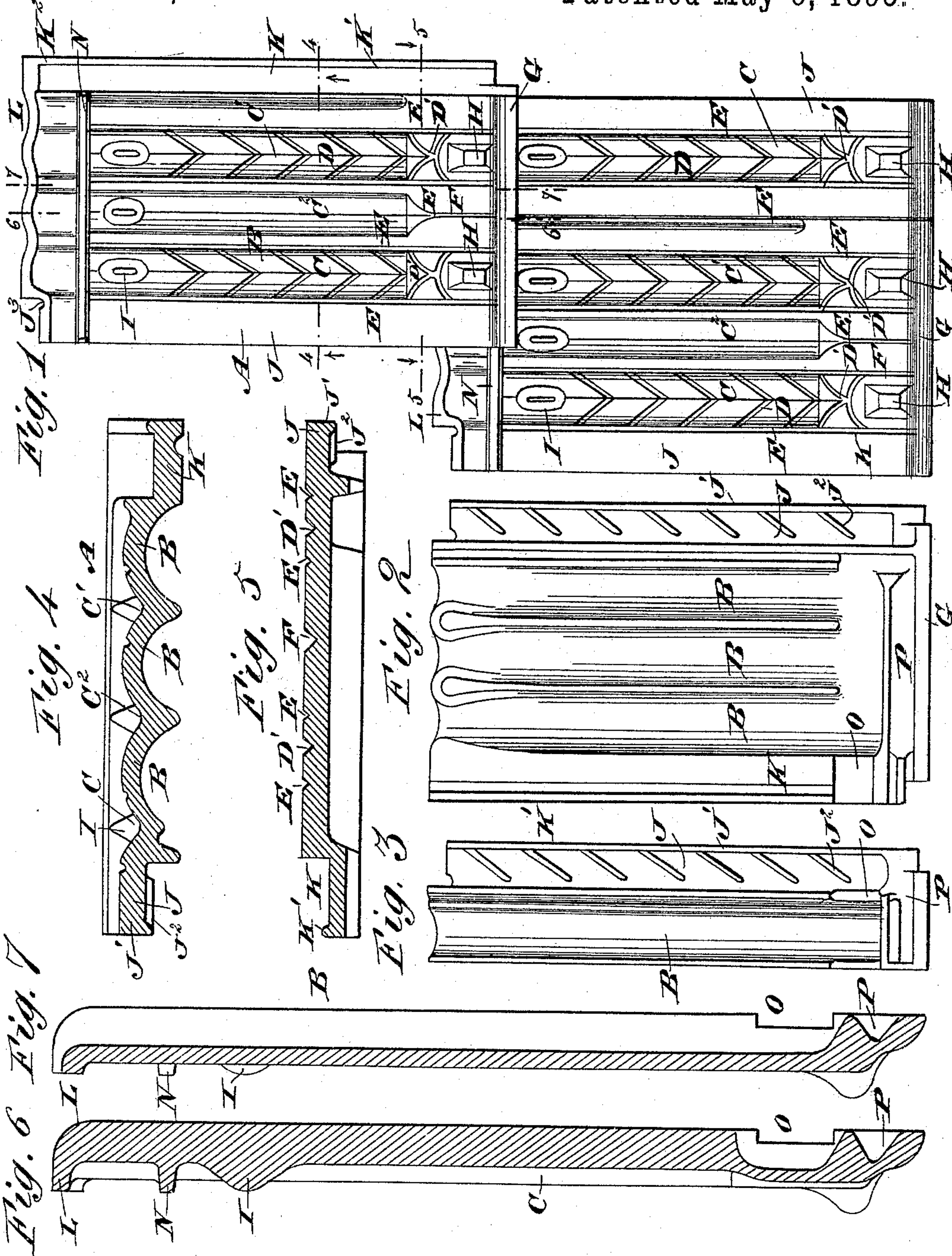


(No Model.)

F. ANDREU.
ROOFING TILE.

No. 497,161.

Patented May 9, 1893.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANCIS ANDREU, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO SIMON MOCHOVE, OF SAME PLACE.

ROOFING-TILE.

SPECIFICATION forming part of Letters Patent No. 497,161, dated May 9, 1893.

Application filed July 6, 1892. Serial No. 439,116. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS ANDREU, of the city, county, and State of New York, have invented a new and Improved Roofing-Tile, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved roofing tile, which is simple and durable in construction, and arranged for effectively draining or carrying off the rain water without danger of leakage.

The invention consists of certain parts and details and combinations of the same, as will be hereinafter described and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement showing the several tiles connected with each other. Fig. 2 is an inverted plan view of one of the tiles. Fig. 3 is an inverted plan view of one of the edge tiles. Fig. 4 is an enlarged transverse section of one of the tiles on the line 4—4 of Fig. 1. Fig. 5 is a similar view of the same on the line 5—5 of Fig. 1. Fig. 6 is a longitudinal section of the same on the line 6—6 of Fig. 1; and Fig. 7 is a similar view of the same on the line 7—7 of Fig. 1.

The improved roofing tile is provided with a body A made of fire clay or other suitable material adapted to be readily pressed by forms into the desired shape. The body A is provided with longitudinally-extending corrugations B reaching from near the lower end of the body to the top end as will be readily understood by reference to Figs. 2 and 7.

The corrugations B form on the top of the body A longitudinally-extending channels C, C', C², of which the side channels C and C' are preferably provided with diagonally-extending grooves D, and longitudinally-extending grooves E arranged near the sides of the channel, as shown in Fig. 1. The lower ends of the channels C and C' are connected by grooves D' with the side grooves E, so that the water passing down the channels C and C' finally passes through the grooves D' into

the side channels E, which latter carry the water over the lower end of the tile onto the next following one, at the upper end thereof. The central channel C² is preferably plain as shown, and has its lower end connected with a groove F, also leading over the lower grooved edge G of the tile.

In order to strengthen each tile, lugs H are formed on the body A near the lower end thereof, in line with the channels C and C', as shown, and similar lugs I are formed near the upper ends of the channels, C, C' and C² for the same purpose.

The sides J and K of the body A are arranged as illustrated in detail in Figs. 4 and 5, so as to readily interlock with the next adjacent tile; that is, the side J fits into the top of the side K of the following tile, so as to form a joint which prevents water from passing through it underneath the tiles. For this purpose the side J is provided on its under side, and near the edge, with a longitudinally extending ridge J', from which extend inwardly diagonal bars J², terminating within a short distance of the inner end of the side close to the edge of the adjacent corrugations B, as will be readily understood by reference to Fig. 4. The other side K is formed on top with a longitudinally-extending ridge K' fitting into the space at the ends of the diagonal bars J² of the adjacent tile, thus forming a secure lock or joint to prevent water from passing between the overlapping sides K, J, of two adjacent tiles, below the tiles on the roof. The upper end of the longitudinally-extending ridge K' is bent upward, as at K², see Fig. 1, to engage a recess J³ shaped similarly to the ridge K² and formed at the upper edge of the side J. Thus, when the two tiles can engage by their sides J and K, lateral as well as longitudinal displacement is impossible, it being understood that the upper end of the side J fits against a ridge L of the other tile, the said ridge extending transversely along the upper end of the tile body. Lateral displacement is prevented by the ridge K' and the end K thereof, engaging the ends of the diagonal bars J² and the groove J³ respectively. A transverse

rib N is also formed on the top of the tile body A a short distance below the ridge L, this rib passing over the top surface of the side J and terminating at the beginning of the side K, see Fig. 1. The lower, curved end G of a tile extends over the rib N, which latter fits into a transversely-extending groove P formed on the under side of the tile body, near the bottom thereof, as shown in Figs. 6 and 7. A similar transversely-extending groove O engages the ridge L, so that longitudinal displacement of two longitudinal tiles is prevented. As shown in Fig. 1, the ridge L is grooved and extends across the top end of the corrugations B. It will be seen that the corrugations form, on the under side of the tile, longitudinal channels for the passage of air, and on top, channels for draining rain water, at the same time giving considerable strength on account of the arch shape of the corrugations.

It will be seen that the tiles completely interlock on the sides, to prevent lateral displacement, and fit one on top of the other longitudinally, in such a manner as to prevent longitudinal displacement. In placing several tiles on the roof they are arranged to break joints, as shown in Fig. 1. In order to form the edge along a building, I preferably employ narrow tiles with a single corrugation and side J, as shown in Fig. 3.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A roofing tile, comprising a body having longitudinally-extending corrugations forming water channels on top, the said channels having grooves, substantially as shown and described.

2. A roofing tile, comprising a body having corrugations extending longitudinally from near the lower end of the tile to the upper edge thereof, the said corrugations forming channels on top of the body, and the channels being provided with diagonal and longitu-

nal grooves for carrying off the water, substantially as shown and described.

3. A roofing tile, comprising a body having corrugations extending longitudinally from near the lower end of the tile to the upper edge thereof, the said corrugations forming channels on top of the body, and the channels being provided with diagonal and longitudinal grooves for carrying off the water, and sides formed on the said body and adapted to overlap on the adjacent tile, one side being provided with a longitudinal ridge and diagonal bars, while the other side is provided with a longitudinal ridge at its outer end, substantially as shown and described.

4. A roofing tile, comprising a body having corrugations extending longitudinally from near the lower end of the tile to the upper edge thereof, the said corrugations forming channels on top of the body, and the channels being provided with diagonal and longitudinal grooves for carrying off the water, sides formed on the said body and adapted to overlap on the adjacent tile, one side being provided with a longitudinal ridge and diagonal bars, while the other side is provided with a longitudinal ridge at its outer end, and a vertical projection formed on the said ridge and adapted to engage a groove in the end of the side on the other tile, substantially as shown and described.

5. A roofing tile, provided with a body having a lower curved end and formed at its upper end on top with a transverse corrugated ridge and a straight rib, the under side of the tile being formed near the lower end with two transversely-extending grooves adapted to engage the ridge and the rib of the next following tile, substantially as shown and described.

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Witnesses:

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