

(No Model.)

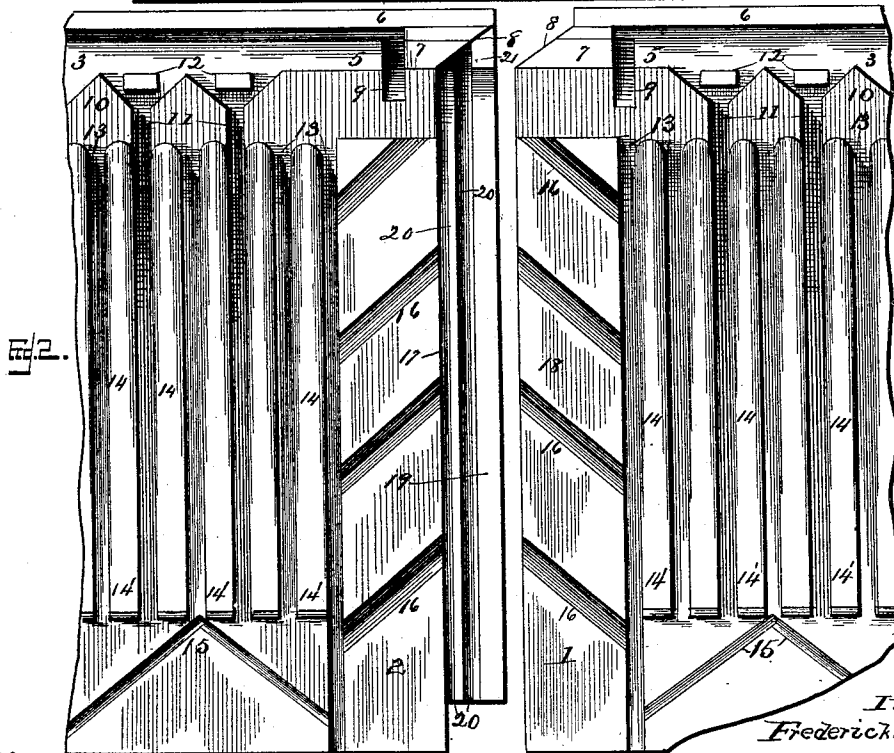
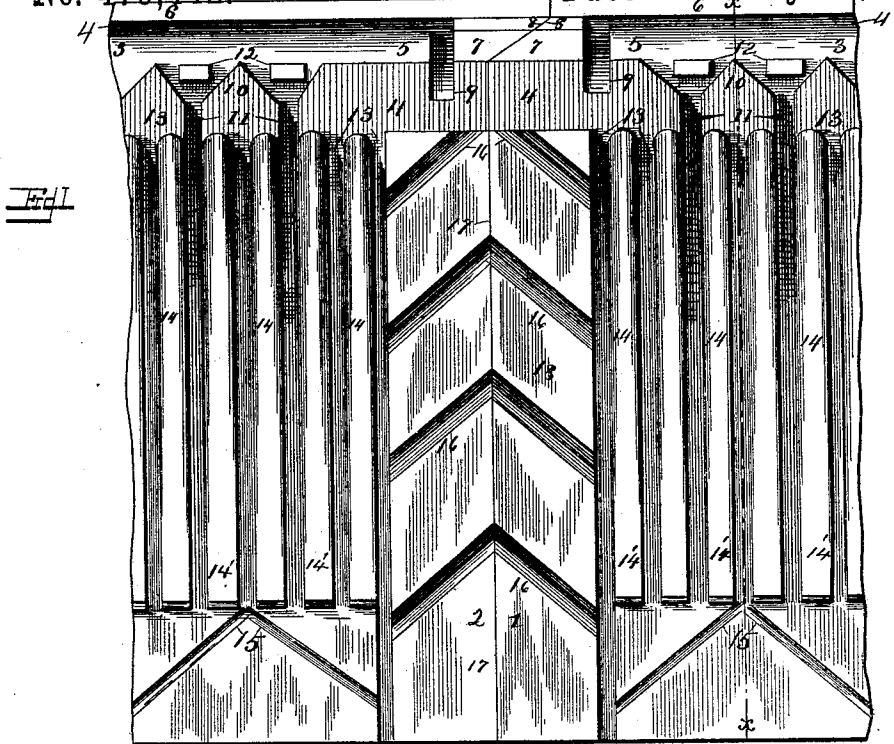
F. N. MARVICK.

3 Sheets—Sheet 1.

TILE.

No. 479,442.

Patented July 26, 1892.



Witnesses—
J. M. Fowler, Jr.
T. R. Stuart.

Inventor—
Frederick N. Marvick.
By
Marble, Mason & Canfield,
Attorneys.

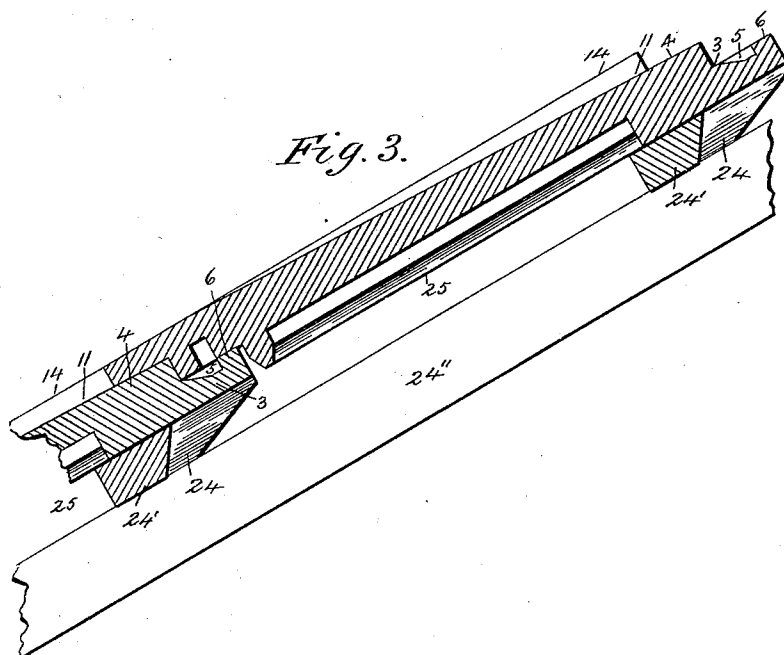
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3 Sheets—Sheet 2.

F. N. MARVICK.
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No. 479,442.

Patented July 26, 1892.



Witnesses:

F. R. Stuart,
L. M. Marble,

Inventor:

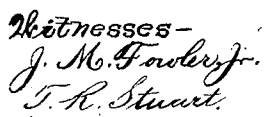
F. N. Marvick.

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3 Sheets—Sheet 3.

Patented July 26, 1892.



By
Marble, Mason & Canfield,
Attorneys.

UNITED STATES PATENT OFFICE.

FREDERICK N. MARVICK, OF SAN MATEO, FLORIDA, ASSIGNOR OF ONE-HALF
TO DAVID S. TINGLEY AND SAMUEL J. WELLS, OF SAME PLACE.

TILE.

SPECIFICATION forming part of Letters Patent No. 479,442, dated July 26, 1892.

Application filed November 3, 1891. Serial No. 410,769. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK N. MARVICK, a citizen of the United States, residing at San Mateo, in the county of Putnam and State of Florida, have invented certain new and useful Improvements in 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.

My invention relates generally to improvements in tiles such as are employed for the ceiling, sides, and roofs of houses, and it is particularly designed for improvements upon the invention for which application for Letters Patent was filed jointly by myself and John Walter June 22, 1891, Serial No. 397,083; and it consists in the peculiarities of construction and arrangement or combination of parts and features hereinafter fully disclosed in the description, drawings, and claims.

The objects of my invention are, first, to provide improved flanges at the upper ends of tiles, whereby water is prevented from passing into the joints at the sides of said tiles and to the upper edges thereof and which will also permit the lower edges of the next tiles above to hang clear of the upper edges of the next lower tiles; second, to provide portions of the upper surfaces of the tiles with deep grooves leading downwardly from the upper flanges for conveying the water to the outer surfaces thereof; third, to provide the upper flanges of the tiles with upwardly-projecting stops which are arranged opposite the upper ends of said deep grooves for the purpose of preventing water and snow from being blown upwardly; fourth, to provide portions of the upper surfaces of the tiles with a series or number of grooves which lead from the lower flanges and are arranged intermediate of and formed more shallow than the deep grooves, whereby such water as may reach said lower flanges will also be conveyed to the outer or upper surfaces of said tiles; fifth, to provide a portion of the front surface of each tile with a series of ribs which are curved or rounded for about one-half their lengths and flattened for the remainder thereof; sixth, to provide the adjacent edges or sides of the tiles with A-shaped or oppositely-

inclined recesses for communicating with the joints between said tiles and conveying the water therefrom toward the centers of said tiles, and, seventh, to provide tiles of this character which shall be simple in construction, easily applied and removed, and comparatively cheap in manufacture. These objects are accomplished by the improved construction and arrangement or combination of parts and features illustrated in the accompanying drawings, forming part of this specification, in which the same reference-numerals indicate the same or corresponding parts, and in which—

Figure 1 represents a front view of two building-tiles constructed and arranged in accordance with my invention; Fig. 2, a similar view with the tiles separated at their edges or sides; Fig. 3, a vertical section of one of the tiles, showing particularly the manner of securing the tiles upon the strips or ribs which are fastened to the roof-beams; Fig. 4, a perspective edge or side view of the tile having the underlapped side flange; and Fig. 5, a rear view of the tiles, the edges or sides thereof being separated, as in Fig. 2.

In the drawings, the numerals 1 and 2 indicate, respectively, right and left tiles, which are so secured and relatively arranged as to form break-joints when in operative position, which have their upper surfaces of smooth and finished appearance, and which are especially adapted to be secured to the roofs of buildings without nails or screws. These tiles are provided near their upper ends with the upper and lower flanges 3 and 4, the lower flanges 4 being arranged in a higher plane than the upper flanges 3, which are formed with rearwardly-inclined recesses 5, which terminate at the bases of the upwardly-projecting and transversely-extending shoulders or ledges 6. These recesses and ledges prevent water and snow from passing up and over the upper edges of the tiles, and also permit the lower edges of the tiles next above to lie clear of the next lower tiles; also, along the inner or adjacent ends of these recesses and ledges are formed the angularly-shaped elevations 7, which are inclined or mitered along their proximate edges 8, so as to form a lap-joint. Adjacent to the vertical edges

or ends of these angular elevations 7 are formed the rearwardly-curved recesses 9, which terminate in the upper edges of the lower flanges 4 of the tiles, their purpose being to prevent the water from passing outwardly and into the joints at the sides of the tiles.

It should be stated that the flanges herein described are called "lower" and "upper," following the line of the roof, while they are described as "higher" from the base of the standard of the tile.

Along the upper edges of the lower flanges 4 of the tiles are formed the Λ -shaped deflectors 10, which direct the water flowing from the upper flange 3 down into the deep grooves 11, which gradually lessen in depth down to their lower ends, where they deliver the water upon the upper surface of the tiles. At the upper ends of these grooves are located the upwardly-projecting stops 12, which are formed upon the upper flanges 3 for the purpose of preventing water and snow from being blown upwardly. Between these deep grooves are formed the shallow grooves 13, which start from lower points than said deep grooves and which also gradually lessen in depth down to their lower ends. Intermediate of these two series of grooves and in the body portions of the tiles are formed the longitudinally-extending ribs 14, which are curved at their upper ends and rounded for about one-half of their lengths and flattened, as at 14', upon their upper surfaces for the remainder thereof. At the lower ends of the shallow grooves 13 the oppositely and downwardly inclined grooves 15 may be employed; also, the oppositely and downwardly inclined grooves 16 are formed in the upper surfaces and near the edges or sides of the tiles for directing or conveying the water which passes upwardly through the joint 17 between said tiles toward the central portions thereof.

Along the edges or sides of the tiles 1 and 2 are formed the overlapping and underlapping flanges 18 and 19, the latter being provided with the inwardly-inclined grooves 20 for conveying the water from the joints 17 down upon the upper ends of the next tiles and into the rearwardly-inclined recesses 5 in the upper flanges 3 thereof. The upper ends of these grooves are curved rearwardly and terminate beneath the inclined or mitered portion 8 of the angularly-shaped elevation 7 at the upper end of the underlapping flange 19. The proximate faces or edges of these inclined or mitered portions of the angularly-shaped elevations form a continuation of the joint 17.

Adjacent to and to the right of the upper ends of the inwardly-inclined grooves 20 is formed the flat shoulder 21, which conforms to the corresponding shoulder 22 on the rear side of the overlapping angularly-shaped elevation 7, whereby a firm or steady connection is secured at these points. On the rear surface of the overlapping flange 18 is formed

a series of longitudinal grooves 23, which assist the inwardly-inclined grooves 20 on the front or upper surface of the underlapping flange 19 in carrying the water downward.

At the upper ends and on the bottom surfaces of the tiles are formed the upwardly and inwardly beveled supports 24, which are adapted to fit over the strips or ribs 24', which are fastened to the beams or rafters of roofs and hold the tiles in place when they are employed as roofing-tiles. However, the beveling of these supports is not necessary, as straight edges therefor will answer just as well for holding the tiles upon the beams of roofs; but for holding siding-tiles in place they are of great advantage, if not absolutely necessary. The vertical and horizontal ribs or strips 25 at the sides and near the lower ends of the tiles are employed for permitting the removal of said beveled supports and leaving the upper flanges 3 intact, which I have increased in thickness to a much greater extent than those in tiles hitherto employed.

Having thus fully disclosed the improved construction and arrangement or combination of the several parts and features of my invention, its advantages, and operation, what I claim as new is—

1. A tile provided with an upper flange having a transverse recess or gutter formed therein, with an upwardly-projecting and transversely-extending shoulder or ledge which forms the outer wall of said recess or gutter, with a lower flange which is arranged in a higher plane than said upper flange, and with rearwardly-curved recesses, as 9, terminating in the upper surface of said lower flange, substantially as described.

2. A tile provided with an upper flange having a transverse recess or gutter formed therein, with an upwardly-projecting and transversely-extending shoulder or ledge which forms the rear wall of said recess or gutter, and with angularly-shaped elevations at one end of said recess or gutter having inclined or mitered edges, substantially as described.

3. A tile provided with an upper flange having a transverse recess or gutter formed therein, with an upwardly-projecting and transversely-extending shoulder or ledge which forms the rear wall of said recess or gutter, with a lower flange which is arranged in a higher plane than said upper flange, with rearwardly-curved recesses, as 9, terminating in the upper surface of said lower flange, and with angularly-shaped elevations at one end of said recess or gutter having inclined or mitered edges, substantially as described.

4. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge, and with deep grooves leading downwardly from said deflectors, substantially as described.

5. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge,

with deep grooves leading downwardly from said deflectors, and means for fastening said tile to strips and ribs, which are fastened to the beams or rafters of roofs, substantially as described.

6. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge, with deep grooves leading downwardly from said deflectors, and means for fastening said tile to strips and ribs, which are fastened to the beams and rafters of roofs, said means consisting of a beveled support, as 24, formed on the bottom surface of the tile, substantially as described.

7. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge, with deep grooves leading downwardly from said deflectors, and with intermediate shallow grooves, substantially as described.

8. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge, with deep grooves leading downwardly from said deflectors, and with intermediate shallow grooves, said grooves gradually lessening in depth down to their lower ends, substantially as described.

9. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge, with deep grooves leading downwardly from and between said deflectors, and with upwardly-projecting stops at the upper ends of said grooves, substantially as described.

10. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge, with deep grooves leading downwardly from said deflectors, with intermediate shallow grooves, and with upwardly-projecting stops at the upper ends of said deep grooves, substantially as described.

11. A tile provided with upper and lower flanges at its upper end, the lower flange having Λ -shaped deflectors along its upper edge, with deep grooves leading downwardly from and between said deflectors, and with upwardly-projecting stops at the upper ends of said grooves, said grooves gradually lessening in depth down to their lower ends, substantially as described.

12. A tile formed with longitudinally-extending and alternating deep and shallow grooves in its upper surface and with intermediate ribs having rounded upper portions and flattened lower portions, substantially as described.

13. A tile formed with longitudinally-extending and alternating deep and shallow grooves in its upper surface and with intermediate ribs having curved upper ends, rounded upper portions, and flattened lower portions, substantially as described.

14. A tile formed with longitudinally-extending and alternating deep and shallow

grooves in its upper surface and with oppositely and downwardly inclined grooves at the lower ends of said shallow grooves, substantially as described.

15. A tile formed with longitudinally-extending and alternating deep and shallow grooves in its upper surface, which gradually lessen in depth down to their lower ends, with intermediate ribs, and with oppositely and downwardly inclined grooves at the lower ends of said shallow grooves, substantially as described.

16. A tile formed with longitudinally-extending and alternating deep and shallow grooves in its upper surface, which gradually lessen in depth down to their lower ends, with intermediate ribs having rounded upper portions and flattened lower portions, and with oppositely and downwardly inclined grooves at the lower ends of said shallow grooves, substantially as described.

17. A tile formed with longitudinally-extending and alternating deep and shallow grooves in its upper surface, which gradually lessen in depth down to their lower ends, with intermediate ribs having rounded upper portions, flattened lower portions, and curved upper ends, with upwardly-projecting stops at the upper ends of said deep grooves, and with oppositely and downwardly inclined grooves at the lower ends of said shallow grooves, substantially as described.

18. The combination of two tiles formed at their adjacent sides with overlapping and underlapping flanges constituting the joint, said underlapping flange having inwardly-inclined grooves upon its upper surface, and with oppositely and downwardly inclined grooves leading inwardly from said joint, substantially as described.

19. The combination of two tiles provided with upper and lower flanges, the former having upwardly and rearwardly inclined recesses, with upwardly and transversely extending shoulders or ledges which form the outer walls of said recesses, and with angularly-shaped elevations at the ends of said recesses, having mitered edges, substantially as described.

20. The combination of two tiles provided with upper and lower flanges, the former having upwardly and rearwardly inclined recesses, with upwardly and transversely extending shoulders or ledges which form the outer walls of said recesses, with overlapping and underlapping grooved flanges along their sides, and with angularly-shaped elevations at the ends of said recesses, having mitered edges, substantially as described.

21. The combination of two tiles provided with upper and lower flanges, the former having upwardly and rearwardly inclined recesses, with upwardly and transversely extending shoulders or ledges which form the outer walls of said recesses, with overlapping and underlapping grooved flanges along their sides, with angularly-shaped elevations at the

ends of said recesses, having mitered edges, and with downwardly and upwardly curved recesses adjacent to said elevations, substantially as described.

- 5 22. The combination of two tiles provided with upper and lower flanges, the former having upwardly and rearwardly inclined recesses, with upwardly and transversely extending shoulders or ledges which form the
10 outer walls of said recesses, with overlapping and underlapping grooved flanges along their sides, the underlapping flange having inwardly-inclined grooves in its upper surface, which are formed with rearwardly-curved upper
15 ends, with angularly-shaped elevations having mitered edges, with opposing flat shoulders adjacent to said elevations at one side thereof, and with downwardly and upwardly curved recesses at the other side thereof, sub-
20 stantially as described.

23. The combination of two tiles provided with upper and lower flanges, the former having upwardly and rearwardly inclined recesses, with upwardly and transversely ex-
25 tending shoulders or ledges which form the outer walls of said recesses, with overlapping and underlapping grooved flanges along their sides, the underlapping flange having inwardly-inclined grooves in its upper surface, which
30 are formed with rearwardly-curved upper ends, with angularly-shaped elevations having mitered edges, with opposing flat shoulders

adjacent to said elevations at one side thereof, with downwardly and upwardly curved recesses at the other side thereof, with deep and shallow grooves, and with ribs intermediate of said grooves, substantially as described. 35

24. The combination of two tiles provided with upper and lower flanges, the former having upwardly and rearwardly inclined recesses, with upwardly and transversely extending shoulders or ledges which form the
40 outer walls of said recesses, with overlapping and underlapping grooved flanges along their sides, the underlapping flange having inwardly-inclined grooves in its upper surface, which are formed with rearwardly-curved upper
45 ends, with angularly-shaped elevations having mitered edges, with opposing flat shoulders adjacent to said elevations at one side thereof, with downwardly and upwardly curved recesses at the other side thereof, with deep and
50 shallow grooves, and with ribs intermediate of said grooves, said grooves having curved upper ends, rounded upper portions, and flattened lower portions, substantially as described. 55

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

FREDERICK N. MARVICK.

Witnesses:

ALFRED BAILEY,
LULU T. BAILEY.