F. W. MELDE.

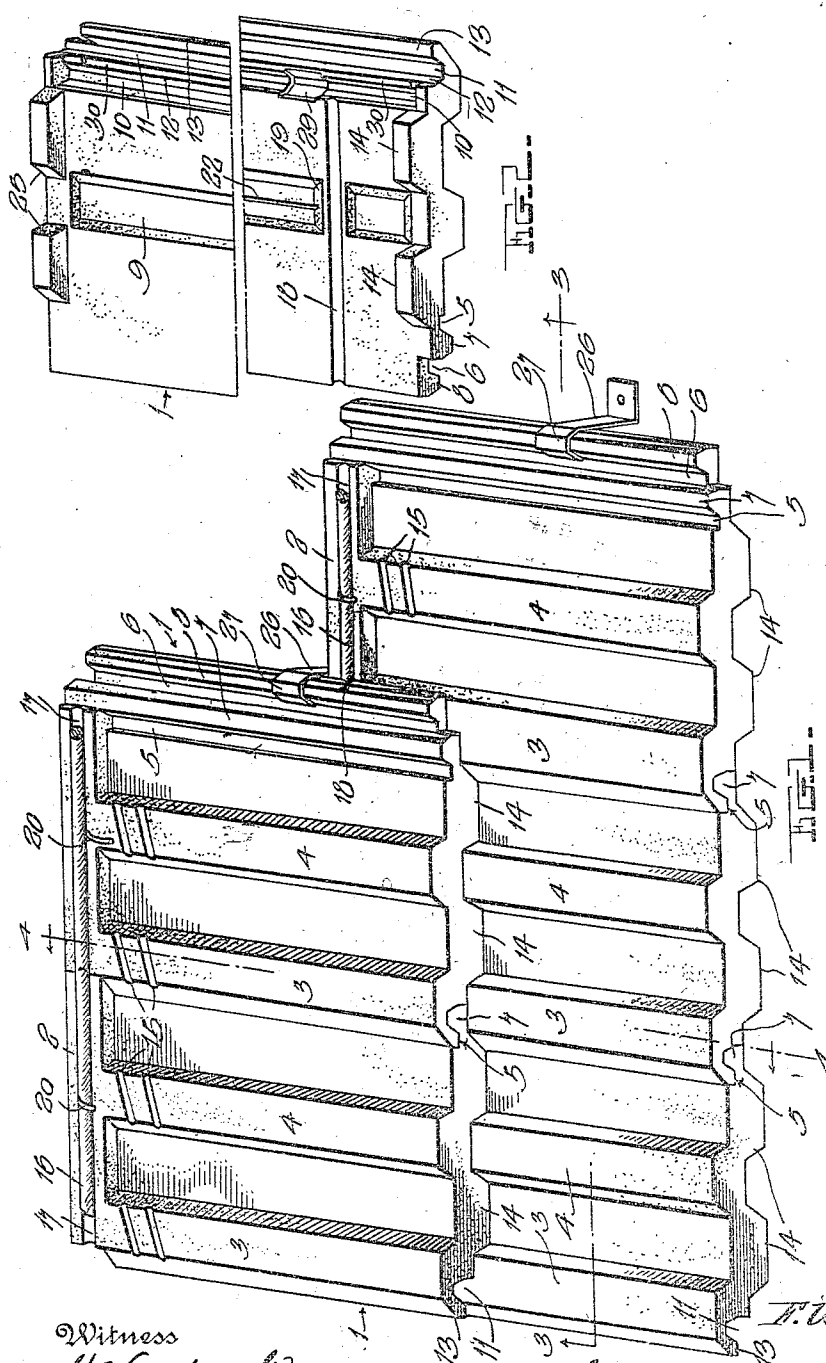
ROOFING TILE.

APPLICATION FILED JUNE 26, 1916.

1,266,137.

Patented May 14, 1918.

2 SHEETS—SHEET 1.



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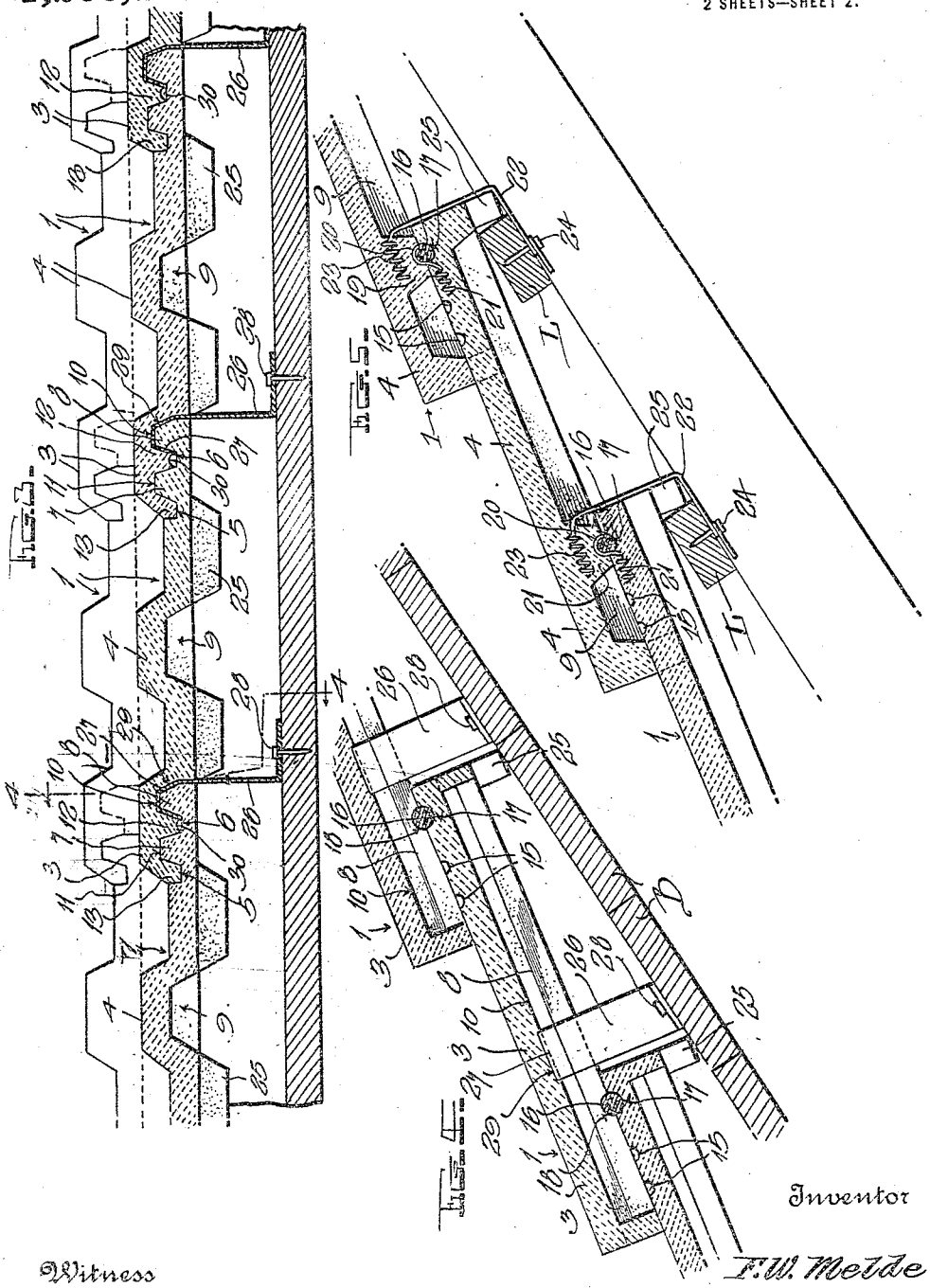
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UNITED STATES PATENT OFFICE.

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ROOFING-TILE.

1,266,137. Specification of Letters Patent. Patented May 14, 1918.

Application filed June 26, 1916. Serial No. 106,029.

To all whom it may concern:

Be it known that I, FRIEDRICH WILLIAM MELDE, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Roofing-Tiles; and I do 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 which relates to improvements in roofing tiles constructed of cement or the like, has for its main object to provide simple and inexpensive construction by the use of which weather-tight connections will be established between the numerous tiles of a roof and with this general object in view, the invention resides in certain novel features of construction and unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which constitute a part of this application and in which:

Figure 1 is a perspective view of a portion of a roof constructed of the improved tiles, showing the upper side thereof;

Fig. 2 is a perspective view illustrating the lower side of one of the tiles;

Fig. 3 is a sectional view taken on the plane indicated by the line 3—3 of Fig. 1;

Fig. 4 is a sectional view on the plane of the line 4—4 of Figs. 1 and 3; and

Fig. 5 is a somewhat similar view showing a different manner of securing the tile to a roof.

In specifically describing the structure shown in the drawings above briefly described, similar characters will be employed to designate corresponding parts throughout the several views and reference will be herein made to the numerous elements by their respective indices. To this end, the numeral 1 designate the improved tiles which are all constructed in the same manner, each being rectangular in general outline.

A rib 2 extends across the upper end of the tile 1 on the upper side thereof while leading from this rib to the lower end of the tile is a pair of comparatively wide ribs 3 and 4, the former being disposed at one edge of said tile while the latter is located on the longitudinal center thereof. At its other edge, the tile 1 is formed with inner and outer grooves 5 and 6 which are parallel with said edge, the groove 5 terminating at one end of the rib 2 while groove 6 extends throughout the length of the tile. The provision of the grooves 5 and 6 forms comparatively narrow inner and outer ribs 7 and 8 in the upper face of the tile.

The lower side of the tile has formed at its longitudinal center a groove 9 for the sake of lightness, this groove extending beneath the rib 4, while beneath the rib 3 inner and outer grooves 10 and 11 are formed, these grooves providing inner and outer ribs 12 and 13. When the tiles are laid as shown in Fig. 1, the grooves 10 and 11 will receive the ribs 8 and 7 respectively of the adjacent tiles while the ribs 12 and 13 will be disposed in the grooves 5 and 6. This establishes an effective weather-proof connection between the edges of the numerous tiles as will be obvious.

The lower end of each tile 1 is provided with a pair of spaced depending lugs 14 which are received between the ribs 3 and 4 of other tiles as shown clearly in Fig. 1, thus serving to a great extent as means for preventing rain and the like from beating or being blown upwardly between the lower and upper tiles. However, in severe weather, some moisture may enter but it will be further checked by the rib 2, Any water which may drive upwardly on the upper side of the ribs 4 will be checked by transverse grooves 15 at the upper ends of said ribs and will be shed therefrom since these grooves incline as depicted clearly in Fig. 1.

Used in conjunction with the weather-proofing means above described are packing cables 16 which are interposed between the overlapping ends of the upper and lower tiles, the ribs 2 having grooves 17 formed longitudinally therein to receive the lower portions of the cables 16 while the projecting upper portions thereof fit snugly within grooves 18 extending transversely of the lower sides of the tiles at the lower end thereof, the grooves 9 having bridges 19 through which the grooves 18 pass as depicted in Fig. 2. For securing the cables 16 in position, anchor members 20 in the form of wires are provided, said wires having one end coiled as indicated at 21 and embedded in the tiles (see Fig. 5). The free ends of the wires project from the tiles to one side of the grooves 17 thereof and are

adapted to be bent over the cables 16 as shown.

In applying the tiles to a roof, a lower row thereof will be laid and secured in place by means to be described. A cable 16 will then be laid in the alined grooves 17 and secured in place by bending the wires 20 thereover. The second row of tiles is now laid with the projecting upper portions of cable 16 received in the grooves 18 thereof, and after this row has been laid the others will be similarly applied.

When the improved tiles are employed on a roof having open sheathing consisting of the usual roofing lath L, (see Fig. 5) they will be secured in place by attaching wires 22 having at one end coils 23 which are embedded in the bridges 19, these wires being bent downwardly around the upper edge of the lath L and twisted around nails 24. When the tiles are employed on this style of roof, lugs 25 which depend from the upper ends thereof will hook over the upper edges of the lath as depicted in Fig. 5 to relieve unnecessary strain from the wires 22.

For securing the tiles in place on a tightly sheathed roof on which the roof boards B are placed in such close relation as to render the use of the wires 22 impractical, metal brackets 26 (see Figs. 1, 3 and 4) will be provided, said brackets having hooks 27 at their upper ends which take over the ribs 8 while their lower ends are extended laterally and secured by nails 28 to the boards B. The walls of the grooves 10 are preferably channeled transversely as indicated at 29 in Figs. 2 and 3 to receive the hooks 27, thus permitting the overlapping edges of the tiles to contact more closely than would be otherwise possible.

In addition to the features above described, the lower sides of the ribs 12 are preferably formed with longitudinal grooves 30 which serve to readily permit any moisture to drain from the grooves 6 in which said ribs are received.

From the foregoing, taken in connection with the accompanying drawings, it will be obvious that although the improved tiles are of simple and inexpensive construction, they will be highly efficient and durable, particular emphasis being laid upon the provision of the packing cables 16 and the coacting features of construction, and upon the attaching wires 22. Another rather important feature of the invention is the provision of the grooves 5 and 6 extending below the upper surfaces of the tile. This forms wide perpendicular walls which effectively break the wind and water and accomplish this result to greater advantage than when grooves are formed by casting ribs on the upper sides of the tile.

In conclusion, I will state that although certain specific details of construction have been shown and described for the attainment of probably the best results, numerous changes may be made within the scope of the invention as claimed without sacrificing the main advantages thereof.

I claim:

1. A roofing tile molded from plastic cement and having a substantially rectangular body formed on its upper face with wide longitudinally extending ribs, one of said ribs being arranged at one side edge of the tile and having formed in its bottom face a pair of spaced longitudinally extending grooves, the latter forming between them a rib having its bottom face formed with a drain groove, said tile having formed in its upper face adjacent its opposite side edge a pair of spaced longitudinal grooves which form a pair of spaced narrow longitudinally extending ribs adapted to enter the grooves in the bottom of the next adjacent tile, both of the last mentioned ribs having their upper faces disposed in a plane above that of the outer face of the tile.

2. In a roof the combination of a pair of molded cement roofing tiles, the lower end of the upper tile overlapping the upper end of the lower one, said tiles being longitudinally corrugated, the lower tile having across its upper end between the corrugations, transversely extending ribs which merge into said corrugations, the upper tile having at its lower end depending transverse lugs arranged opposite said transverse ribs and forming in connection with the ribs of the next adjacent tile comparatively long snow collecting pockets, the longitudinal grooves or channels formed in the bottom face of the tiles by their corrugations having their lower extremities closed and also having formed in them transverse bridges spaced from such closed lower ends to rest on said transverse ribs and to provide snow collecting pockets between themselves and said closed ends.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRIEDRICH WILLIAM MELDE.

Witnesses:

JNO. C. O'CONNOR,

P. E. WILBUR.