May 8, 1923. 1,454,070

F. OPENSHAW

SELF LOCKING WIRELESS MOLDED ROOFING

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Fig. 2.

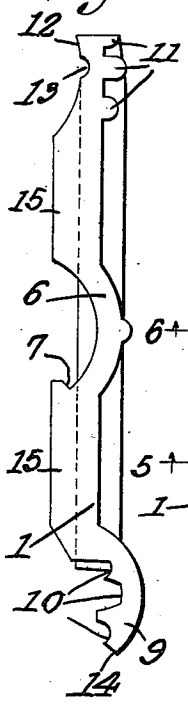


Fig. 1.

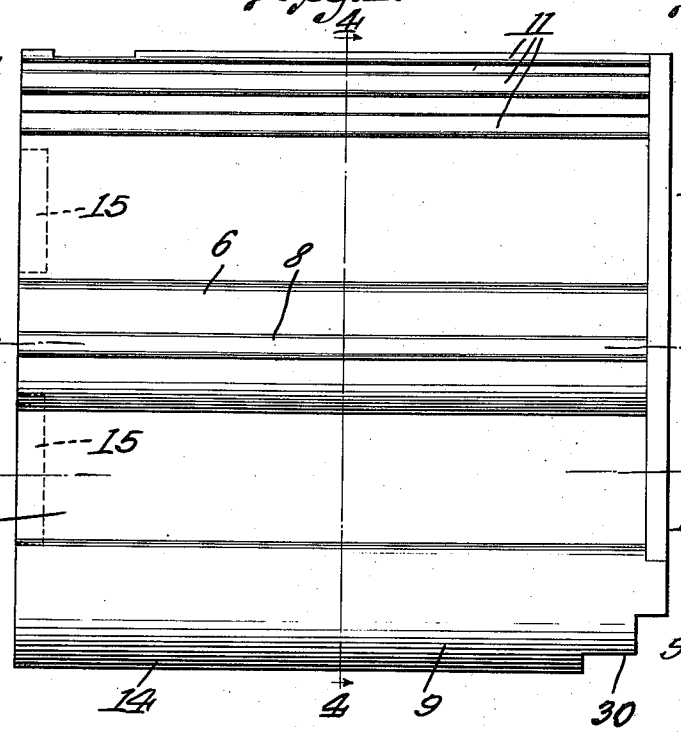


Fig. 3.

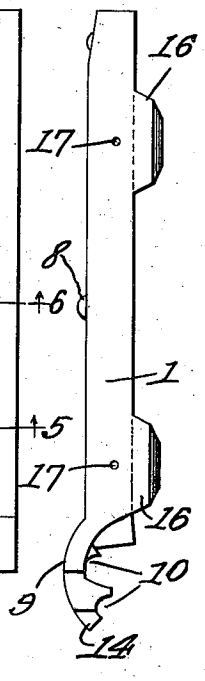


Fig. 4.

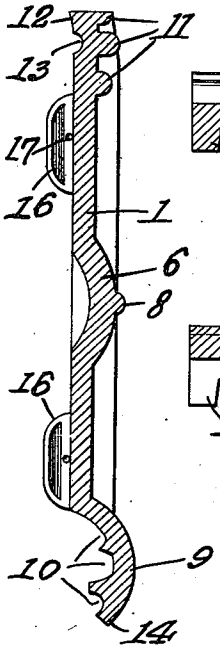


Fig. 5.

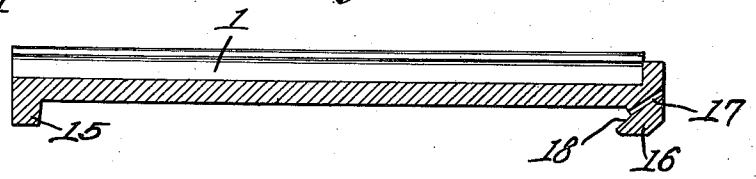
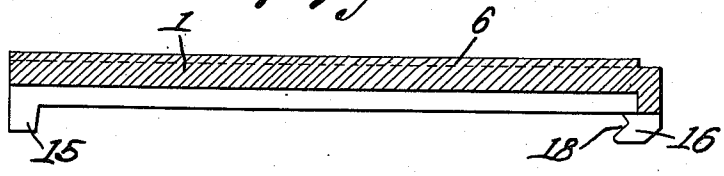


Fig. 6.



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SELF LOCKING WIRELESS MOLDED ROOFING

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Fig. 10.

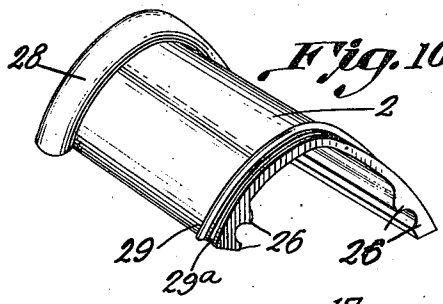


Fig. 11.

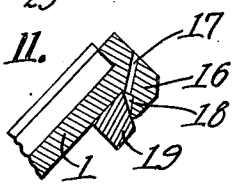


Fig. 12.

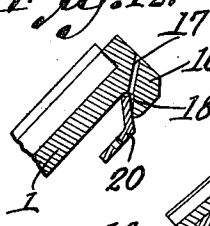


Fig. 7.

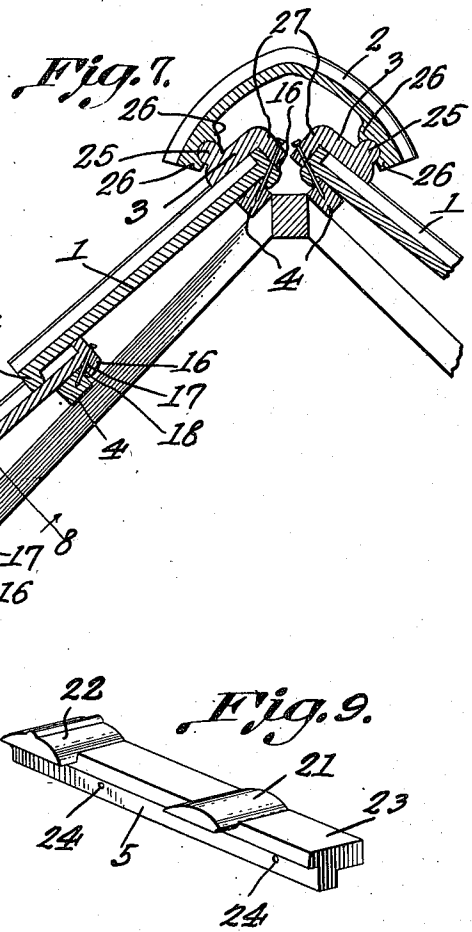


Fig. 9.

Fig. 8.

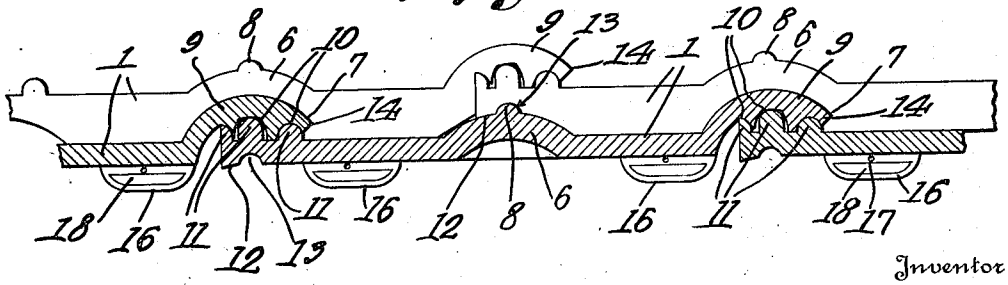
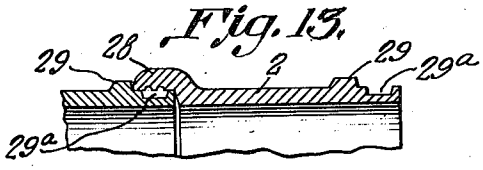


Fig. 13.



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UNITED STATES PATENT OFFICE.

FRED OPENSHAW, OF GONVILLE, WANGANUI, NEW ZEALAND.

SELF-LOCKING WIRELESS MOLDED ROOFING.

Application filed March 31, 1921. Serial No. 457,564.

To all whom it may concern:

Be it known that I, FRED OPENSHAW, a subject of the King of Great Britain, and a resident of Gonville, Wanganui, New Zealand, have invented a new and useful Self-Locking Wireless Molded Roofing, of which the following is a specification.

The object of my invention is to provide an improved interlocking roofing construction which can be readily fitted together on the roof, and which, when in place, will provide a water-proof roof, free from projections that would cause water to collect underneath and drip. It is further an object of my invention to provide a molded roofing having novel means for interlocking the various tiles or slabs and securing same at the ridge of the roof, at the eaves, and to successive battens and to adjacent tiles. It is a further object of my invention to provide a form of roofing adapted for use on roofs of irregular shape, having gables, hips, and eaves locks. It is further my object to provide a novel combination arrangement of parts shown and described; and to provide a roofing which does not require the use of mortar. I attain these and other objects of my invention by the structure illustrated in the accompanying drawings, or modifications thereof.

Figure 1 is a top plan of the main block or tile 1;

Fig. 2 is an end elevation of the left hand end of one of the tiles;

Fig. 3 is an end elevation of the right hand end of one of the tiles;

Fig. 4 is a section on line 4—4 transversely through the tile;

Fig. 5 is a section on line 5—5 of Fig. 1, longitudinally of the tile;

Fig. 6 is a section on line 6—6 of Fig. 1;

Fig. 7 is a vertical section through the roofing with the tiles in position;

Fig. 8 is a section on line 8—8 of Fig. 7, illustrating how the tiles interlock;

Fig. 9 is a detail perspective view of the bottom filler block 5;

Fig. 10 is a detail perspective view of the cap or ridge tile;

Fig. 11 is a detail section of an improved form of beveled batten for locking the tile in place at the top;

Fig. 12 is a similar detail sectional view of an equivalent metal batten and

Fig. 13 is a detail sectional view showing groove 29ª.

Like numerals designate like parts in each of the several views.

Referring to the accompanying drawings I provide a tile or block 1 shaped to interlock with similar successive tiles. At the apex of the roof I provide duplicate reversely disposed scribers or horizontal ridge locking strips 3 mounted on the uppermost tiles 1, and in turn supporting the cap piece or ridge tile 2. Tiles 1 are each provided with an upper hook end 16 which engages over suitable battens 4. Mounted on the bottom batten I provide a suitable horizontal filler strip 5.

Referring to Figs. 1 and 2, tile 1 is provided with a central tile arch 6 having a longitudinal top rib 8, and having a longitudinal socket 7 at one end of the arched portion. Tile 1 is also provided with an end arch 9, said end arch 9 having a cut-out portion 30 where the lower part of socket 7 is slid under the lip 14 and locks the toe or bottom end of the tile to the lip at the top end of the tile under which it laps, and holds just the same even when the tiles are telescoped more than usual, in order to suit the length of rafters, instead of having to cut the top course. End arch 9 is provided on its under side with the longitudinal grooves 10, as shown in Fig. 2, which grooves interlock with the corresponding ribs 11 of the adjacent tile, as shown in Fig. 8. On the other end of the tile from that provided with arch 9, I provide the under curved surface 12 and the longitudinal under groove 13. The longitudinal end or tip 14 of end arch 9 is provided to seat in socket 7 of the tile above, as shown in Fig. 8.

Referring to Fig. 2, I provide edge lugs 15 on the left hand end of the tile 1, which fill the spaces between arch 6 and arch 9 and the space between the succeeding arch 6 and ribs 11, as shown in Fig. 8. I further provide edge lugs 16 on the right hand of tile 1, as shown in Fig. 3 and Fig. 4. Edge lugs 16 may be provided with suitable nail holes 17, as shown in Fig. 5, or said nail holes may be omitted, and the hook shape of said lugs be depended on for locking them in place. As shown in Figs. 5 and 6, I provide the angular notch 18 for hooking the tiles over a beveled batten 19, or over an equivalent metal batten 20, as shown in Figs 11 and 12, respectively.

Referring to Fig. 9, the filler block 5 may

be provided with nail holes 24 and with suitable arched or recessed portions 21 and 22 to seat in the corresponding recesses of the bottom row of tiles 1.

Referring to Figs. 7 and 10, the members 3 are provided with hook ends 27 which engage over the upper lateral edge of the top row of tiles 1; and also with the longitudinal ribs 25 which seat in the corresponding longitudinal recessed bottom portions 26 of the cap pieces or ridge tiles 2. The said members 2 are provided with an end rib 29 and with a corresponding end socket 28 to abut against the rib 29 of the contiguous cap piece or ridge tile 2. The partially cylindrical longitudinal ribs 25 have an important new and useful function in permitting of the ridge-locking strip 3 adjusting itself automatically to varying pitches of roofs without interference with its function as a locking member.

In operation the successive tiles are engaged one over the other in the manner illustrated in the drawings, with the recessed portions of the uppermost tiles engaging over the corresponding ribs and ridged portions of the layer of tile immediately underneath. At the top of the roof the hook portions 27 of the scribers engage over the upper edge of the topmost layer of tiles and the cap and the ridge tiles in turn engage over the longitudinal ribs of the aforesaid scribers. The hooked ends of the successive layers of tiles similarly hook over the respective battens, and may or may not be nailed to said battens, it being within the contemplation of my invention to use either wooden or metal battens of any suitable shape.

It is also within the contemplation of my invention to cut the tiles to any suitable shape for gable roofs and roofs of irregular shape and construction and provide suitable scrivers to fill in the spaces caused in fitting the tiles to the irregular shaped type of roofs.

It is within the contemplation of my invention to provide an eaves trough 31 secured between the horizontal tile strip 5 and the lowermost batten 4 by nails 24, as shown in Fig. 7.

What I claim is:

1. In a self-locking molded roofing, the combination of successive layers of recessed and ribbed interlocking tiles, each layer of said tiles having hooked end strip portions, battens extending longitudinally of the roof and on which the hooked ends of the tiles engage, horizontal ridge locking strips extending longitudinally of the uppermost layer of tiles, said horizontal ridge locking strips having hooked lateral strip portions engaging over the upper lateral edges of the top layer of tiles, said portions also having outwardly projecting longitudinal ribs, and ridge tiles having correspondingly recessed inner edge portions adapted to engage on and interlock with the rib portions of the aforesaid locking strips substantially as set forth.

2. As a new article of manufacture, an interlocking molded tile for roofing, consisting of a main tile body having an end arched portion, said end arch being provided with longitudinal grooves on its under side, the tile also having a central longitudinal arched portion, said portion having a longitudinal external rib, and the tile having longitudinal ribs and a longitudinal recess at the end farthest from the first-named end arch, and lugs on one side of the tile, said lugs being hook shaped.

3. In a molded tile roofing, the combination of a series of rows of interlocking tiles, each of said tiles having a hooked upper edge portion, battens extending horizontally of the roof on which said tiles are hooked and nailed, purlins of hook shape engaging over the lateral edge of the uppermost row of tiles, ridge tiles shaped to interlock on the aforesaid purlins and over-lap the opposite uppermost rows of main tiles, and filler pieces secured to the lowermost battens and over which the lowermost row of tiles are hooked.

4. In a roofing of the class described, the combination of a ridge tile having longitudinal grooves, horizontal locking strips having outwardly projecting curved ribs engaging in the grooves of the aforesaid ridge tiles and roofing tiles on which the horizontal locking strips are hooked, and said horizontal locking strips and said tile members having oppositely projecting ribs engageable one over the other substantially as shown.

5. As a new article of manufacture in a roofing of the class described, a ridge-lock ing strip having a hooked edge portion adapted to engage over the lateral edge of the top row of tiles of the roofing, and a longitudinal rib on the exterior of said ridge-locking strip, said rib being semi-circular in cross section and adapted to adjustably interlock with a correspondingly shaped recessed socket of a ridge tile, whereby the device is adaptable for use with roofs of different or varying pitch.

FRED OPENSHAW.