S. A. WILLIAMS.

TILE.

APPLICATION FILED JUNE 9, 1921.

1,433,863. Patented Oct. 31, 1922.

Fig. 1.

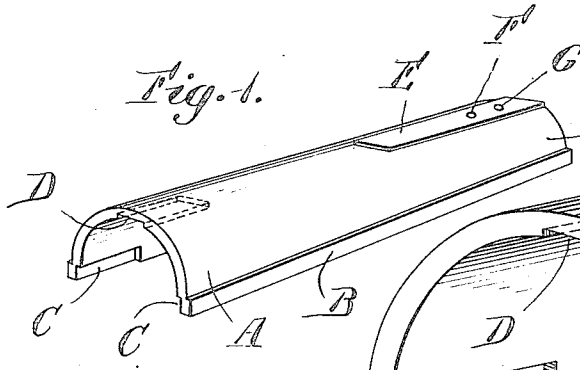


Fig. 2.

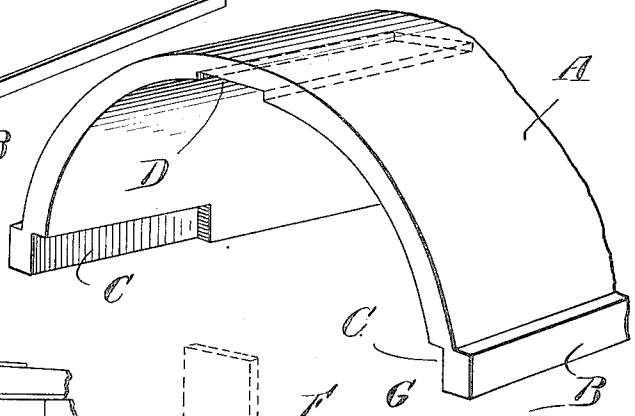
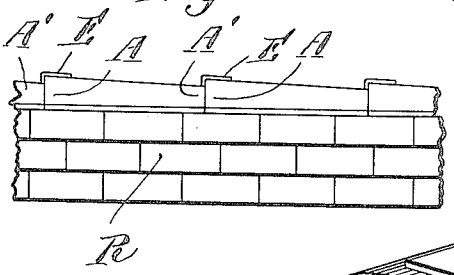


Fig. 5.



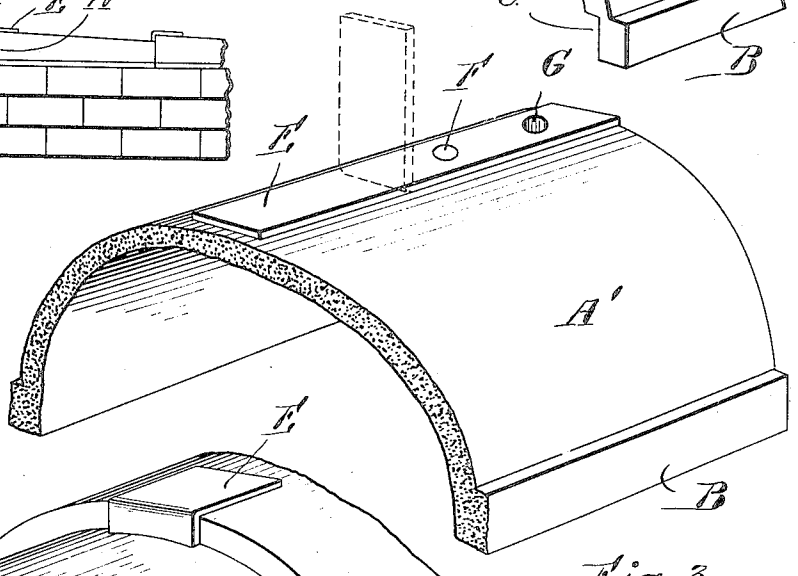


Fig. 3.

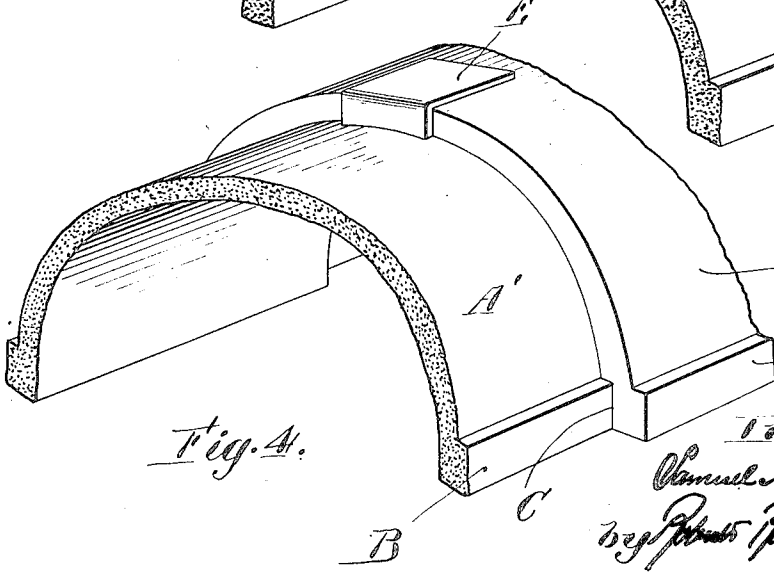


Fig. 4.

Inventor:
Samuel A. Williams
by Roberts Roberts & Cushman
attys.

Patented Oct. 31, 1922. 1,433,863

UNITED STATES PATENT OFFICE.

SAMUEL A. WILLIAMS, OF LOCKPORT, NEW YORK.

TILE.

Application filed June 9, 1921. Serial No. 476,203.

To all whom it may concern:

Be it known that I, SAMUEL A. WILLIAMS, a subject of the King of Great Britain, and resident of Lockport, in the county of Niagara and State of New York, have invented new and useful Improvements in Tiles, of which the following is a specification.

My invention relates to the construction of tiles and modes and devices for attachment of tiles to roof structures and the like, and has particular reference to tiles of channel form tapered longitudinally and manufactured of fibre-concrete or cement, preferably by the method described in an application for patent filed by me concurrently herewith in the United States Patent Office, serially numbered 476,201.

As a typical example of the situation in which my herein described improvements are intended to function, I take for the purposes of description channel-formed tiles which are used as ridge caps and are attached over the ridge pole of a pitch roof, or over junctions or groins between two sections of roof for the purpose of finishing the shingle, slate or flat tile, covering and shedding water from the upper and otherwise unprotected joints between the roof covering and the roof itself. The object of this invention is further to furnish channel-formed tiles or ridge caps which are themselves equipped with simple and effective accessories by which to be attached to a ridge plank or the like and also to each other when in their longitudinally lapped relation upon the ridge. Channel-formed tapered ridge caps have been made and quite extensively used heretofore, but their attachment to a roof structure has been effected by such ordinary means as are available to the workman on the spot and has required more care and skill than can always be relied on.

In the drawings hereto annexed which illustrate my invention, exemplified by channel-formed ridge cap members:

Fig. 1 is a view in perspective of one of the channel-formed ridge cap tiles;

Fig. 2 is an enlarged perspective view of the larger end of one of said tiles;

Fig. 3 is a view in perspective of the smaller end;

Fig. 4 is a view in perspective showing the smaller end of one of such tiles inserted in and lapped with the larger end of similar tiles; and

Fig. 5 is a view in side elevation of the ridge portion of the roof with several of said ridge cap tiles in place.

The channel-formed tile or ridge cap molded or shaped as shown in Fig. 1 is in general conformation a slightly tapered hollow half-cone, the smaller end A′ of which is of such dimension that it will fit closely and concentrically inside the larger end A of a similar tile. The tile is provided at its edges on the outside with a ledge or flange B, and on the inside at the larger end with edge recesses C which are of such proportions as to receive the outer flanges B on the smaller end of a similar tile when two such tiles are placed in lapping relation. The ends of the said flanges B, when two tiles are lapped and their ends consequently fitted together, abut against the inner ends of the recesses C which thus serve as stops to limit and automatically determine the extent of lap of the two tiles. This feature of construction enables a series of such tiles to be placed repeatedly in proper lapping relation without requiring anything but a minimum amount of care and attention on the part of the workman. It is obvious that with a supply of such tiles, each as nearly as possible identical with the others in shape and dimensions, a proper weather-tight joint can only be secured when each tile is lapped with another to exactly that extent which is required to bring about a close fit between the exterior surface of one tile and interior surface of the other.

For fastening such tiles to the roof structure and to each other, each tile is provided at its smaller end with a nail hole at such a point as G. This provides means for driving a nail through the tile and into the ridge plank or other portion of the structure to which the tile is to be attached. For attaching the tiles to each other in their lapped relation, a recess is provided in the lapping portion of the tile, preferably wholly on the inside of the larger end of the tile at the crown thereof. This recess is shown at D, Fig. 2, and is provided so that a stout but flexible metal tongue E may be secured to one of the tiles at the lap between it and the next tile in such manner that the close fit between the surfaces of adjacent tiles shall not be impaired and so that a

projecting end of the said tongue may be bent over the end of the tile to which it is not otherwise attached and thus securely hook two such tiles together. The metal tongue E is secured to one of the tiles, preferably to the outside of the crown of the smaller end A′ as by a stout rivet shown at F in Fig. 3.

The flanges B, and recesses C and D, are formed when the tile is molded; the attaching tongues E are then riveted, one to each tile. In laying the tiles, first one of them is laid in place and a nail driven through the hole G, prepared for the purpose, into the ridge plank or to the portion of the structure to which the tile is to be attached. If the metal tongue is of such dimensions as to overlie the hole made in the tile at G, the tongue also should be perforated at the same spot so that perforations in the tongue and tile will register as shown in Fig. 3. The next step is to take a similar tile and shove its larger end A over the smaller end A′ of the tile already attached to the roof. This leaves the outer end of the tongue E projecting from the lap and the workman bends the tongue over and presses it down upon the end of the other tile. The relationship of two lapped tiles hooked together is indicated in Fig. 4. Next the workman nails down the smaller end of the tile last attached, by means of a tongue E, and proceeds as before. The appearance of a row of such tiles or ridge caps laid in the manner described is indicated in Fig. 5.

While it is believed to be preferable to provide channel-form tiles with the attaching tongues lying flat against the tile-surface, and with lap-stops molded in the tiles themselves, nevertheless the improvement herein described may be in substantial part realized by providing such tiles with upturned or bent tongues, as indicated by dotted lines in Fig. 3, utilizing the projecting bent end of the tongue as a stop to limit and determine the lap of one tile over the next in succession.

Another mode of applying the tiles and their attaching tongues, which may be found convenient in practice, is to provide the tongues E separate from the tiles, and preferably preformed by bending at an angle, which may be less than a right angle, on the line which will register with the larger end of an overlapping tile, and to drive two holding nails at F and G, through the holes provided for the purpose in both tongue and tile, and into the ridge-plank beneath. Then, when the next tile is lapped over the tile thus fastened, the tongue E is bent over its end as above described.

What I claim and desire to secure by Letters Patent is:

1. Channel-form tile, longitudinally tapered, externally flanged at the edges, recessed internally at the edges of the large end to receive the external flange on the small end of a similarly formed tile, and to provide an abutment limiting the lap of one tile on another, the tile recessed on one end at the crown, a tongue adapted to fit such a recess, secured to the tile at one end and of such length as to project from the lap of two such tiles when lapped, and to bend over the lapping end of one of said tiles.

2. Channel-form tile, longitudinally tapered, externally flanged at the edges, recessed internally at the edges of the large end to receive the external flange on the small end of a similarly formed tile, and to provide an abutment limiting the lap of one tile on another, the tile recessed on the inside of its crown at the larger end, a tongue adapted to fit within a similar recess in a similar tile, secured to the outside of the crown of the tile at its smaller end, said tongue adapted to project from the lap of two lapped tiles and to bend over the larger lapping end of one of said tiles.

3. Channel-form tile, having one end adapted to enter an end of a similar tile, and a tongue secured to it at one end, adapted to project beyond the lap formed by said tile with another, and to be bent over the end of said other tile.

4. Channel-form tile, at one end adapted to fit within an end of a similar tile where two such tiles are lapped, and provided with a flexible tongue, secured to one end, and adapted to hook over an end of a similar tile.

5. Channel-form tile, at one end adapted to fit within an end of a similar tile where two such tiles are lapped, and provided with a flexible tongue, secured to one end, and adapted to serve as a lap-stop and to hook over an end of a similar tile.

Signed by me at Boston, Massachusetts, this fourth day of June, 1921.

SAMUEL A. WILLIAMS.