April 19, 1932. E. G. MARTIN 1,854,660

TILE ROOF CONSTRUCTION

Filed April 27, 1929

Fig. 1.

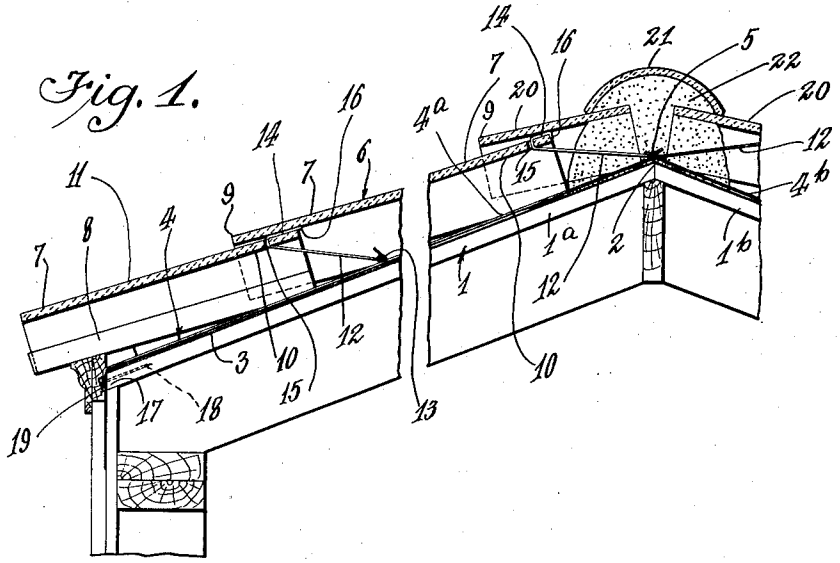
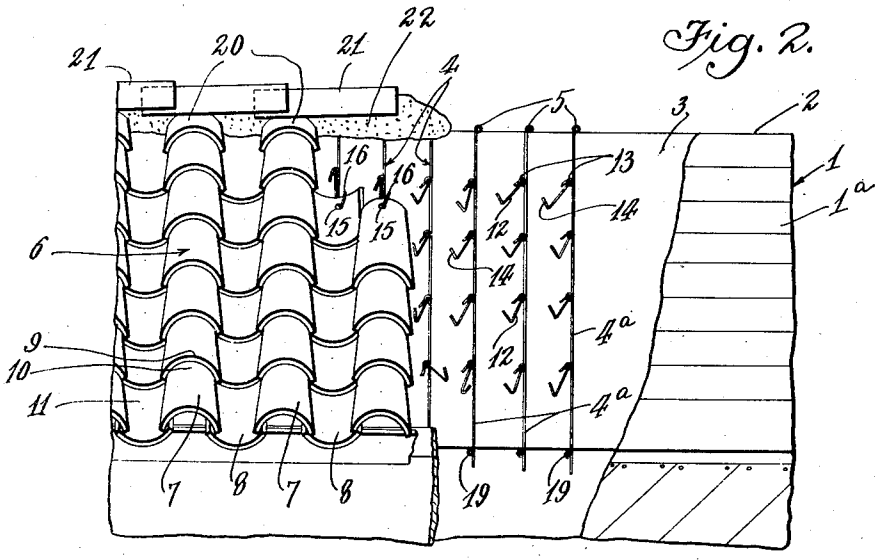


Fig. 2.



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UNITED STATES PATENT OFFICE

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TILE ROOF CONSTRUCTION

Application filed April 27, 1929. Serial No. 358,451.

This invention relates to roof construction and particularly to the construction of tile roofs.

It is the present practice in attaching tiles to wooden roofs to employ nails or hangers that are driven at different points throughout the area of the roof to secure the tiles in position. In driving these nails the tiles are sometimes broken, and furthermore this means of securing the tiles is also objectionable because it frequently causes the roofs to leak at the points where the fasteners are driven into the roofs. The general object of this invention is to provide a tile roof construction having simple means for facilitating the laying of the tiles and securing the same in position without necessitating driving of nails or other fasteners or creating any perforations throughout the area of the roof.

A further object of the invention is to produce as a novel article of manufacture a tile supporting runner which can be readily applied to a roof and to which the tiles can be readily secured.

Further objects of the invention will appear hereinafter.

The invention consists in the novel parts and combination of parts to be described hereinafter, all of which contribute to produce an efficient tile roof construction.

A preferred embodiment of the invention is described in the following specification, while the broad scope of the invention is pointed out in the appended claims.

In the drawings:

Figure 1 is a vertical section taken through a roof of common form, with portions of the roof and supporting wall broken away.

Figure 2 is a side elevation of the roof shown in Figure 1, showing the tiling in process of application, certain parts being broken away.

It should be understood that the invention can be practiced on a roof of any construction. In the present specification, by way of example, I have described the invention as applied to a simple type of roof in which the roof extends down from a ridge or rooftree.

Referring to the parts illustrated in the drawings, 1 represents a gable roof, that is an inclined roof having two parts, 1^a and 1^b, extending down from a ridge 2, the said roof being provided with a continuous water shedding surface which may have a waterproof covering 3. In applying the invention to such a roof, I provide a plurality of tile supporting runners 4, said runners consisting of elongated cables or wires, either flat or round strips, having two sections, 4^a and 4^b, which are attached together at the point 5 over the ridge 2 and extending down roof sections 1^a and 1^b, upon which they rest. In this type of roof the presence of the ridge 2 makes it unnecessary to secure the runners in place because the weight of the tiles on one roof section will balance the tiles on the opposite roof section. If the roof has no ridge, the upper end of the runner should be attached to the roof adjacent the uppermost row of tiles.

The tiles 6 are supported on the water-shedding surface of the roof. The tiles include vertical rows of cover tiles 7 alternating with vertical rows of pan tiles 8, the edges of the cover tiles extending over the edges of the pan tiles in the usual manner. The relatively lower tiles on the roof extend under the relatively higher or upper tiles in the usual manner so that the lower edge 9 of every upper tile overlaps the upper edge 10 of every lower tile.

The tiles are, of course, laid in horizontal rows beginning at the bottom row 11. As each row of tiles is laid, the tiles are secured to the hangers 4. Any suitable means may be provided for this purpose, but I prefer to provide the hangers with a plurality of links 12 in the form of wires attached to eyes 13 formed equidistant on the runners. As illustrated, I employ a runner 4 under each vertical row of pan tiles but, if desired, where the roof is not steep and the weight on the runners 4 is not too great, I may not use runners under the pan tiles, but would support the same by means of two links connected to the eyes of the two adjacent runners that lie under the cover-tiles, said links being connected together and provided with an exten-

sion or hook to secure it to the pan tile. These runners resist the pull caused by gravity of all the tiles attached to them,

However, where the weight of the tiles is great, for example, where the construction is applied to a relatively wide roof, I prefer to provide a runner extending under each vertical row of pan tiles. As illustrated in Figure 2, the runner for the pan tiles lies directly under the center of the tile, but, if desired, the runners for the rows of pan tiles may be displaced slightly from the central position so as to permit the tile to rest properly upon the roof.

The hanger links 12 are preferably of soft wire and are formed at their ends with extensions 14 which, if desired, may be bent at right angles so as to indicate the point at which the tile is secured. The tiles may be provided with any means for engaging the links 12. I prefer, however, to provide the upper end of each tile with a small opening 15 through which the extension 14 is projected in an upward direction, after which the extension can be bent over as indicated at 16 in Figure 1. This secures the tile.

It will be evident that in practicing my invention the runners are unattached to the water-shedding surface of the roof over its effective area—that is, the area between the walls.

If desired, the lower end of each runner 4 may be secured to the eaves 17 of the roof by a fastening device such as a nail 18 driven through the eye 19.

By practicing my invention the labor of laying the tiles on the roof is greatly reduced. I intend that the runners 4 shall be manufactured by machinery in large quantities and delivered in rows or long rods. No special construction of the rods is necessary to adapt them for use on a roof having a ridge as illustrated. It is merely necessary to apply the rods to the ridge so that the rod forms an angle at this point. In other words, a length of rod can be used and then bent "on the job" so that it forms two extensions, 4^a and 4^b, making the proper angle to each other to enable them to rest flat on the roof.

The wires or bands forming the runners are relatively thin, as illustrated, and by reason of the flexibility of the metal, the runners can be delivered in the form of a roll at the place where the runners are to be used.

If desired, the positions of the extensions 14 may vary slightly so as to give slight irregularity in the position of the tiles. Such irregularity is sometimes desired in laying tiles.

At the ridge 2 the uppermost tiles 20 are special tiles without any openings, their upper ends being thrust under ridge tiles 21 which seat on a cement ridge 22 that embeds the upper ends of the special tiles 20.

The invention is also applicable to concrete roofs, and any other type of roof covered with a waterproofing material. It is particularly of advantage in the tiling of roofs made water-tight by laying waterproof tarred paper or similar sheet material because such a roof will leak if nails or fasteners are driven through the sheet material.

It is understood that the embodiment of the invention described herein is only one of the many embodiments this invention may take, and I do not wish to be limited in the practice of the invention, nor in the claims, to the particular embodiment set forth.

What I claim is:

1. In a tile roof construction, the combination of an inclined supporting roof having a continuous water shedding upper surface, a plurality of tile supporting runners supported at an elevated point on the roof and extending downwardly and resting on the roof, tiles disposed in overlapping relation in rows supported on said water-shedding surface overlying the said runners so that the upper ends of lower tiles extend under the lower ends of upper tiles, water-tight means for securing the runners to the roof at an elevated point, said runners resting unattached on the roof at their lower portions, and means for securing the individual tiles to the said runners.

2. In a tile roof construction, the combination of an inclined supporting roof having a continuous water shedding upper surface, a plurality of tile supporting runners resting unattached throughout the area of the roof, tiles disposed in overlapping relation in rows overlying the said runners so that the upper ends of lower tiles extend under the lower ends of upper tiles, a plurality of hangers attached to the runners, said tiles having means at their upper ends for securing the same to the said hangers.

3. In a tile roof construction, the combination of an inclined supporting roof having a continuous water shedding upper surface, a plurality of tile supporting runners resting unattached throughout the area of the roof, tiles disposed in overlapping relation in rows overlying the said runners so that the upper ends of lower tiles extend under the lower ends of upper tiles, a plurality of hangers in the form of links connected to the said runners, the upper ends of the said tiles having openings to engage the ends of the said links to secure the tiles on the roof.

4. In a tile roof construction, the combination of an inclined supporting roof having a continuous water shedding upper surface, a plurality of tile supporting runners in the form of wires extending equidistant

down the inclined roof and resting unattached throughout the area of the roof, tiles disposed in overlapping relation in rows overlying the said runners so that the upper ends of lower tiles extend under the lower ends of upper tiles, said tiles having openings in their upper ends, and hangers in the form of links attached to said wires with their lower ends secured in the said openings, the said openings in lower tiles being disposed under the lower ends of upper tiles.

5. In a tile roof construction, the combination of a supporting roof having a continuous water shedding upper surface, a plurality of tile supporting elongated metallic runners disposed apart extending down and resting unattached throughout the area of the roof, cover tiles disposed in overlapping relation in rows overlying the said runners so that the upper ends of lower tiles extend under the lower ends of upper tiles, means for securing the individual cover tiles to the said runners, pan tile hangers supported on the said runners, and pan tiles laid in rows between the cover tiles in overlapping relation and secured to the pan tile hangers.

6. As a new article of manufacture for supporting tiles on a gable roof, a runner comprising two sections to rest respectively upon the two inclined sides of the roof with a connection connecting said sections at the ridge of the roof, and having means at a plurality of points on the same for securing tiles thereto.

7. In a tile roof construction, the combination of an inclined supporting roof having a continuous water-shedding upper surface, a plurality of tile supporting runners attached to the roof adjacent its ridge extending down the roof substantially equidisant from each other and resting loosely unattached on the said water-shedding surface throughout its effective area, tiles supported on the said water-shedding surface in overlapping relation in rows overlying the said runners so that the upper ends of the lower tiles extend under the lower ends of upper tiles, and hangers in the form of links attached to the said runners and attached to the upper ends of the tiles.

8. In a tile roof construction, the combination of an inclined supporting roof having a continuous water-shedding upper surface, a plurality of tile supporting runners resting loosely upon said water-shedding surface and extending downwardly, tiles disposed in overlapping relation in rows supported on said water-shedding surface overlying the said runners so that the upper ends of the lower tiles extend under the lower ends of the upper tiles, means for securing the individual tiles to the said runners, and means corresponding to each runner and located adjacent the uppermost row of tiles for securing the said runners to the roof, said securing means resisting the pull of all the tiles of each runner exerted by the action of gravity down the roof and forming the sole attachment of the runners to the roof on the effective area of the roof.

Signed at Los Angeles, California, this 22nd day of April, 1929.

EMMET G. MARTIN.