June 29, 1926. 1,590,744

A. G. HATCH

CONCRETE TILE

Filed July 3, 1922

Fig. 1

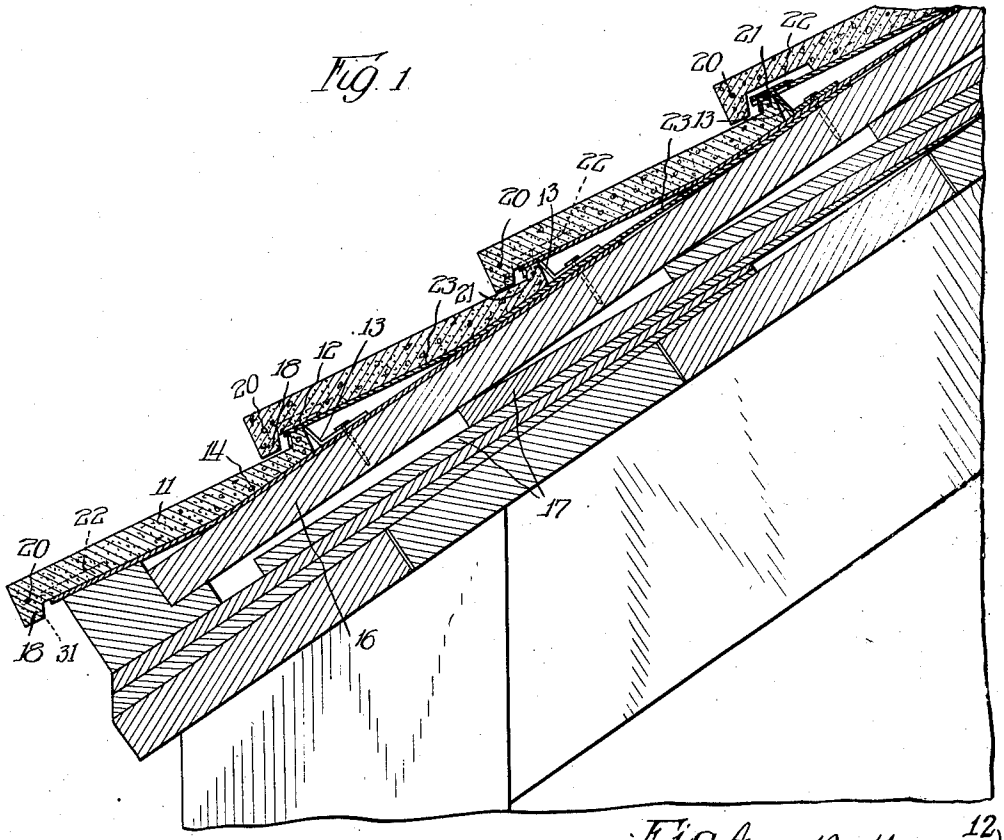


Fig. 4.

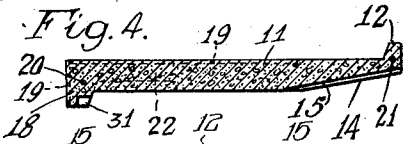


Fig. 2

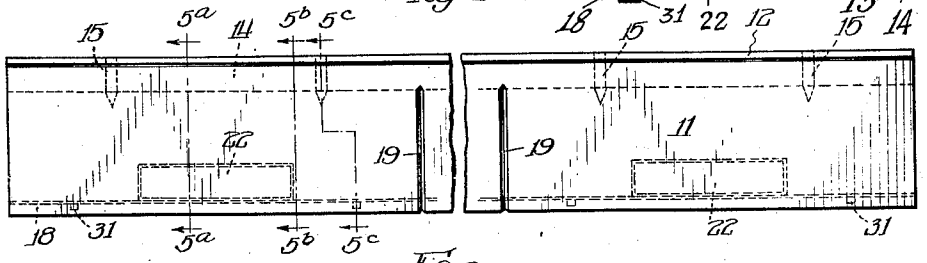
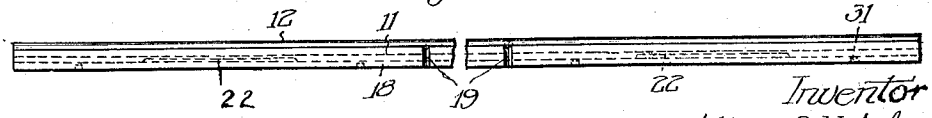


Fig. 3.



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UNITED STATES PATENT OFFICE.

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CONCRETE TILE.

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This invention relates to a new and improved concrete tile, and more particularly to a tile which may be made in large quantities with a small expenditure of labor and with relatively small space requirements for the manufacture.

In the making of concrete tile as heretofore practiced, it has generally been considered necessary to have a relatively large lay-out in order to provide large space for pouring the tile and permitting them to sufficiently set before removal from the forms. The tile have normally required to remain in the forms such a length of time as to require an excessive number of forms in order to produce tiles on a commercial scale.

Concrete tile, as now generally constructed, are susceptible of breakage unless carefully handled and placed and are, moreover, difficult to secure and mantain in place. Also such tile do not in themselves afford a water-tight roof but require the laying of a water-tight roofing as a separate preliminary step before the laying of the tile.

It is an object in this invention to provide a new and improved design of tile which may be readily manufactured in quantities at small cost.

It is a further object to provide a tile which may be easily placed and positively secured in place and in which the relation of juxtaposed tile is such as to render a construction adapted to adequately carry the necessary loads.

It is another object to provide a tile roof construction whereby roofing paper may be placed and secured simultaneously with the tile, the combination providing a water-tight and wind-tight roof.

Other and further objects will appear as the description proceeds.

Broadly, my tile comprises a body portion, a portion of which is specially formed for proper bearing contact upon the roof upon which it is to be placed. It is further provided with adequate bearing surfaces for contact with adjacent tile both above and below. In the method of construction, the tile are made in gang molds comprising a plurality of molds placed together, the mold members also preferably serving as pallets for handling the tile. In the preferred method of construction, heat is applied externally to the molds to expedite the set of the concrete.

I have illustrated certain preferred embodiments of my invention in the accompanying drawings, in which—

Figure 1 is a fragmentary section showing tile in place upon a roof;

Figure 2 is a plan view, partly broken away, of a tile;

Figure 3 is an edge view partly broken away, of a tile; and

Figure 4 is an end view of a tile.

As best shown in Figure 1, the tile comprises a body portion 11 having at one edge an upwardly extending portion 12. This portion 12 is adapted to receive clips 13 which clips are secured to the roof and serve to hold the tile in place. That part of the body portion located below and adjacent the upwardly extending portion 12 is chamfered to provide a bearing surface 14 adapted to rest upon the roof 16. The chamfered portion 14 is provided with grooves 15 adapted to permit the passage of moisture along the roof surface. As shown, the roof 16 is placed over the wood shingle roof 17 which it here serves to replace.

The lower end of the tile is provided with the downwardly extending portion 18 adapted to overhang the upwardly extending bearing portion of the juxtaposed tile. The under face of the tile is provided with spaced recesses 22 adapted to receive that portion of the clip 13 which extends over the portion 12 of the adjacent tile. The recess is considerably wider than the clip so that the successive rows of tile need not be in exact registration.

Each tile 11 is of such length as to correspond to a number of tile or shingle of normal width. The tile is marked with a plurality of equally spaced transverse grooves 19 upon its upper surface and lower edge, these grooves serving to render the single tile similar in general appearance to a plurality of tiles. The tiles are preferably re-inforced by wires 20 and 21 which add materially to their strength. The tile may become cracked at the grooves 19 or may be intentionally cracked to allow for inequalities in the supporting roof. In such cases, the wires 20 and 21 hold the sections together.

While any usual sheathing or paper may be used below my tile, I preferably use strips of roofing paper in the manner shown in Figure 1. The strips of paper 23 are slightly wider than two rows of tile. The

upper edge of a strip is secured under the clips 13 at the upper edge of a row of tile. The strip lies flat on the roof for the width of this row of tile and extends under the clips 13 of the next lower row of tiles. It then extends against the lower face of this latter row of tiles and its lower edge rests on the upturned portion 12 of a third row of tile. The lower edge of the strip thus serves as a cushioned bearing between adjacent rows of tile.

No additional securing means are needed for these strips which are held in place by the tile clips. Should any water blow up in under the edge of a strip, it will fall upon the next lower strip and run down through grooves 15 below the next lower shingle and out on to the roof again.

I have shown one preferred form of my invention by way of example, but it is to be understood that I contemplate such changes and modifications as come within the spirit and scope of the appended claims.

I claim:

1. A tile or the like having a body portion, the body portion adjacent one edge thereof being chamfered to fit upon a supporting surface with the body of the tile in angular relation to the surface, and grooves for the passage of moisture extending through said chamfered bearing portion.

2. A tile or the like having a body portion, the body at one end being provided with an upwardly extending portion adapted to act as a bearing for a superposed tile, and a recess in the lower face of the tile adjacent the opposite end adapted to provide clearance for tile securing means engaging the bearing portion of a lower tile.

Signed at Duluth, Minnesota, this 22nd day of June, 1922.

ARTHUR G. HATCH.