July 14, 1931. W. A. SUTHERLAND 1,814,532

ROOFING TILE

Filed July 31, 1928

Fig. 1.

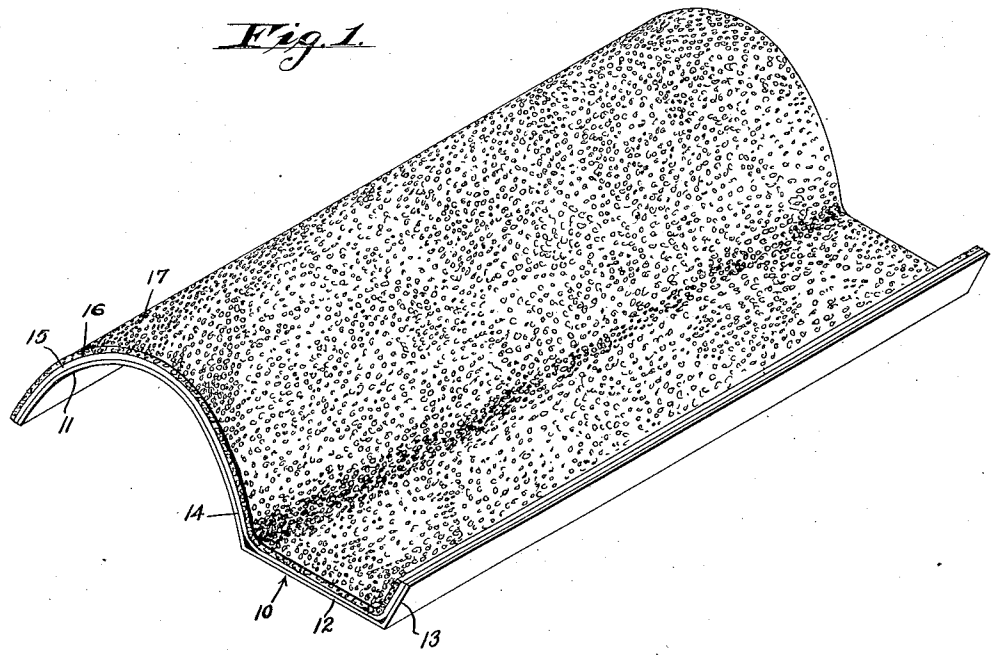


Fig. 2.

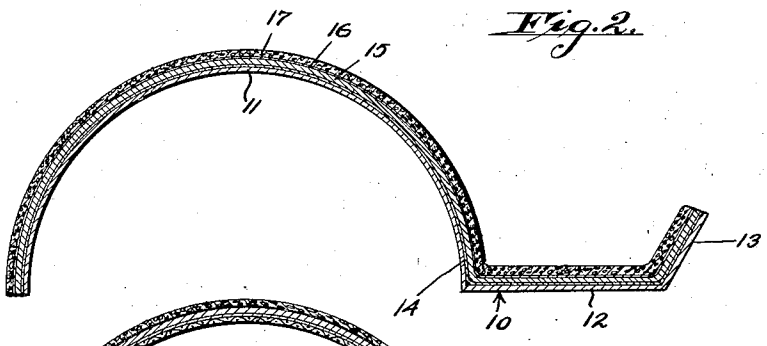
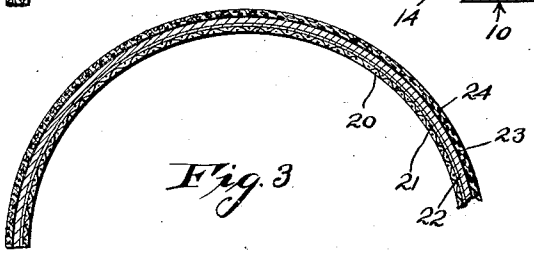


Fig. 3



Inventor
W. A. Sutherland
by Hazard and Miller
Attorneys

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UNITED STATES PATENT OFFICE

WILLIAM A. SUTHERLAND, OF LOS ANGELES, CALIFORNIA

ROOFING TILE

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This invention relates to improvements in roofing tiles and the like.

An object of the invention is to provide an improved roofing tile consisting of a back formed of relatively stiff sheet material which back is bent into the form that the finished tile is to take and which has applied thereto one or more layers of a weather resisting adhesive which adhesive has applied thereto a layer of crushed refractory material.

Another object of the invention is to provide a roofing tile and a method of making the same which enables the tile to be easily, quickly, and cheaply constructed, but at the same time provides a roofing tile which is extremely durable and which is attractive in appearance.

A further object of the invention is to provide a roofing tile which is so constructed that materials now available upon the market or which are now in general use, may be employed in its construction.

With the foregoing and other objects in view which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention wherein:

Fig. 1 is a perspective view of the improved roofing tile.

Fig. 2 is a transverse vertical section through the improved roofing tile.

Fig. 3 is a partial vertical section through a slightly modified form of construction.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout the improved roofing tile in its preferred form, consists of a sheet metal back 10. This is preferably formed of galvanized sheet iron or a non-corrodible steel so that the back of the tile will be weather resisting and will not rust. The particular form given to the back 10 depends upon the form that is to be given to the finished tile, and in the drawings it is shown as being bent to form a semi-cylindrical portion 11 having a laterally extending horizontal portion 12 along one edge. The free edge of the laterally extending portion 12 is bent upwardly as indicated at 13. A layer of weather resisting adhesive indicated at 14 is applied to the upper surface of the back 10. This adhesive consists of asphaltum, tar, or equivalent substance which will not quickly deteriorate under the influence of weather.

I then take advantage of a material now in general use and which is capable of being purchased on the market to complete the tile. This material consists of a flexible paper backing 15 which has applied to its upper surface a layer of weather resisting adhesive such as tar, asphaltum, or the like, indicated at 16, and which has a layer of crushed refractory material 17 applied thereto. The refractory material varies in different kinds of this completed material, and in the preferred form of construction of the improved roofing tile, it is formed of crushed brick which will give the top surface of the tile its color and at the same time affords a protective layer of relatively inert material which will not easily deteriorate under the influence of the weather. The layer of paper 15 with its adhesive 16 and crushed brick 17 is applied to the adhesive 14 and pressed smoothly there-over so that the adhesive 14 will fasten it uniformly over the upper surface of the back 10. If desired, the tile may then be placed in a mold to press the layers and cause them to be even although this is not essential.

While the above described construction embodies the preferred form of the invention, inferior products can be made by employing other sheet materials for the back 10 which may or may not have non-corrodible qualities. If desired, wire, preferably in the form of wire mesh, may be substituted for the sheet material forming the back 10. Such a construction is illustrated in Fig. 3 wherein there is a wire mesh back indicated at 20 to which is applied a layer of adhesive 21 serving to fasten the layer of paper 22, carrying its adhesive layer 23 and refractory material 24 to the wire mesh 21.

Also substitutes for the adhesives 14 and 16 may be embodied which may have weather resisting qualities which are much poorer

than those of asphaltum or tar. The refractory material 17 may be changed to produce different appearances and to give the tile different colors such as, for example, crushed slate, crushed rock, or sand might be employed.

From the above described construction it will be appreciated that a novel roofing tile is produced which is laminated and which has a metal back to which layers of material forming the exterior surface of the tile are applied. The layer of paper, crushed refractory material, and adhesive tend to stiffen the back 10 enabling a very thin sheet metal to be employed, but at the same time producing a finished tile which is stiff, strong, and durable. The improved tile has the advantage of being extremely light in weight so that the load placed on the roof will be a minimum; furthermore, the tile is absolutely water-proof so that no water can seep through it to rot the wooden roof construction. Various changes may be made in the details of construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. The method of making roofing tiles and the like comprising preparing flexible material consisting of a layer of paper, adhesive applied to the paper, and comminuted material applied to the adhesive, forming a layer of sheet material into the form it is desired to give to the finished tile, applying a layer of weather resisting adhesive thereto, and then applying the paper with its adhesive and comminuted material to the layer of adhesive on the sheet material.

2. The method of making roofing tiles and the like comprising preparing flexible material consisting of a layer of paper, adhesive applied to the paper and comminuted material applied to the adhesive, cutting a section of sheet metal to the desired size and outline of the tile, applying a layer of weather resisting adhesive thereto, and then applying the paper with its adhesive and comminuted material to the layer of adhesive on the sheet metal.

In testimony whereof I have signed my name to this specification.

W. A. SUTHERLAND.