July 11, 1933. A. W. NELSON 1,917,388

METAL WALL TILE FASTENING

Filed Oct. 8, 1931

Fig. 1

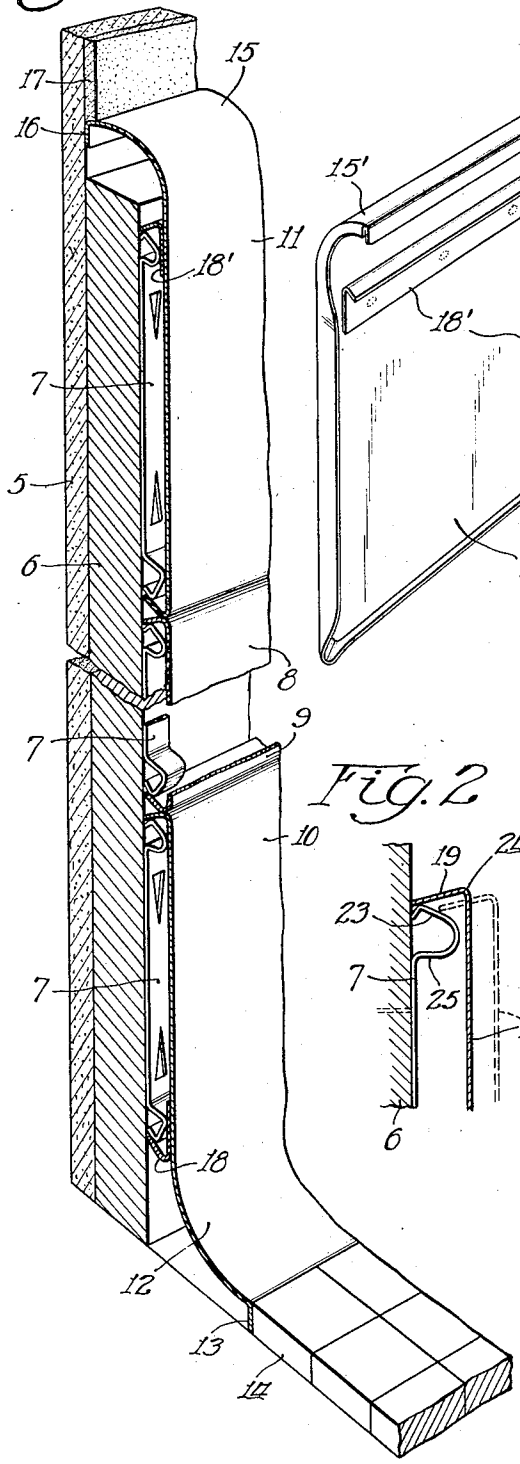


Fig. 3

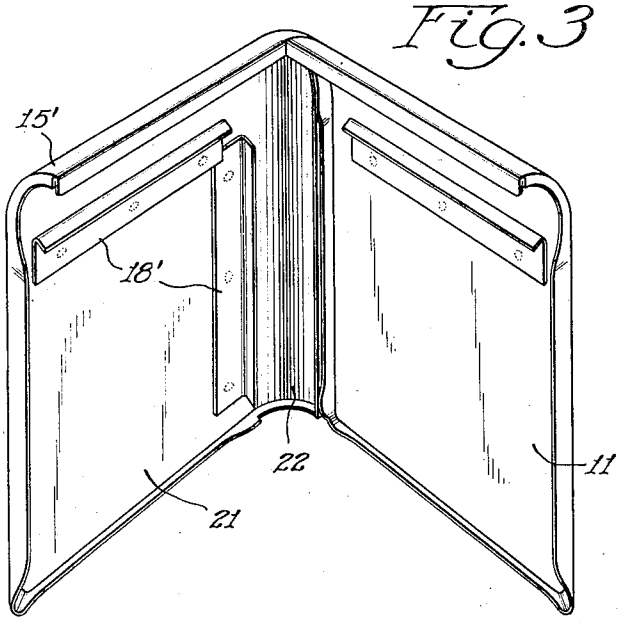
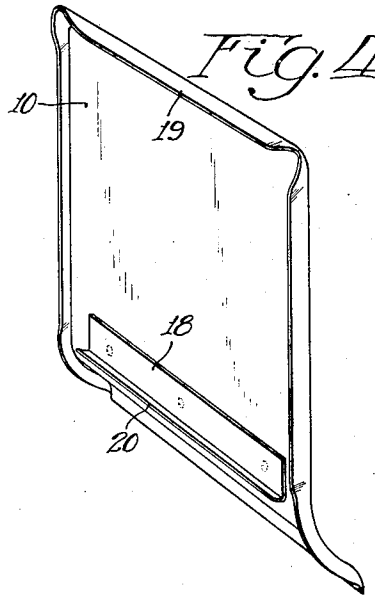


Fig. 2

Fig. 4



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UNITED STATES PATENT OFFICE

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METAL WALL TILE FASTENING

Application filed October 8, 1931. Serial No. 567,652.

My invention relates to metal wall tile and its principal object is to provide a novel means for mounting the odd shaped tiles such as the base and cap pieces.

It is also an object of this invention to provide a novel, fastening means operating in conjunction with said tile.

Other and more specific objects of the invention will appear as the description proceeds in connection with the accompanying drawing wherein the preferred form of the invention is shown. It is to be understood, however, that the disclosure is illustrative only and is not to be taken as limiting the invention except in so far as it is limited by the claims.

In the drawing—

Fig. 1 is a sectional view taken in perspective through the wall showing my invention as applied thereto;

Fig. 2 is an enlarged fragmentary section illustrating the fastening means;

Fig. 3 is a perspective view showing the interior of two cap tile that are used to cover a protruding or exterior corner; and

Fig. 4 is a perspective view of the base tile.

Referring now in detail to the drawing, the roof wall is indicated at 5, and the mounting board 6 is secured thereto in any suitable fashion as for example by nailing. The mounting board 6 is preferably made up of sheets which sheets are in the usual wall 44 inches high and 28 inches wide. These sheets are used as a base on which to secure the fastening clips 7 that are arranged in rows to receive the tile and lock them in place. The ordinary wall tile used between the top and base is illustrated at 8 and 9 and usually consists of a rectangular sheet having all four edges turned toward one side to form the mounting flange, these edges being bent toward each other so as to form an angle of somewhat less than 90° with the general plane of the tile.

The base tile 10 and the cap tile 11 have three side edges turned in in this fashion as indicated for example in Figs. 3 and 4. The base and cap tile, however, must necessarily have a portion thereof along one edge turned out of line with the main body portion if a smooth joint is to be made with the wall and floor. The turned out portion is indicated at 12 on the base tile, and this turned out portion has the flange 13 which forms an abutting wall for the tile 14. Similarly the cap tile is curved as indicated at 15 and has the downturned flange 16 contacting with the plaster wall so that the finishing coat of plaster 17 can be placed directly on top of the cap tile in finishing the joint.

Now in order that these tile may readily fit the same securing clips 7 that hold the standard tile it is necessary to provide some means for engaging one end of the clip.

I provide as a means of accomplishing this the piece 18 which as shown most clearly in Fig. 4 extends transversely across the tile substantially parallel with the edge 19 that is directly opposite the out-turned portion of a base or cap tile. This strip 18 has the flange 20 thereof bent toward the edge 19 so as to form an angle with the plane of the tile of somewhat less than 90°. The strip is secured to the tile body before enameling in any suitable manner such as by spot welding.

By this means I am able to provide adequate securing means for the base and cap tile in a simple economical manner. Furthermore the strip 18 by reason of its position adjacent the out-turned portion of the tile serves to reenforce the tile at the point where it is most liable to be subjected to heavy stresses and thus acts as a protector against the tile being bent out of shape. The provision of this mounting means does not in any way prevent the formation on all four edges of the tile of the abutting flanges which gives smooth rounded shoulders where the tile meet and thus avoids sharp corners from which the tile normally might readily become chipped.

Now in Fig. 3, the cap tile 21 being a corner cap has a special form which necessitates the provision of two strips 18′ in order that the same may be readily mounted upon any exterior corner. It is to be noted that this cap tile is curved along the edge 15′ and also along the edge 22 and is still provided with the peripheral flange to provide the

smooth abutting surface for adjacent tile or for the wall.

The strips 18′ arranged at right angles to each other enable the tile to be applied to vertically running clips whether the corner portion 22 is laid in vertical position or horizontal position.

I find also that in order to secure proper attachment of the tile that certain essential features must be provided in the clips 7. If the portion 23 of the clip 7 is not made of the right relative shape with respect to the flange 19 of a tile, serious difficulty is encountered in obtaining a fastening of the tile without chipping of the enamel thereon at the corner 24.

I find, therefore, that in order to obtain a good fastener, a relatively long shank at 25 should be provided and this should extend substantially at right angles to the wall through which the clip is secured. The portion 23 of the clip should be long and substantially straight so as to provide a long sloping surface for the edge of the flange 19 to contact. Also, preferably the angle of this sloping portion with respect to the flange 19 should be a fairly acute angle such for example as less than 30°. It is necessary, however, that the slope of the portion 23 with respect to the board wall be sufficient to permit it to flex slightly under the pressure of the edge of the flange 19 in order that a secure fastening may be obtained. The angle of the portion 23, therefore, with respect to the wall 6 should be substantially the same as the angle of the flange 19. The free end of the clip is bent inwardly toward the straight portion 7 thereof as shown in Fig. 2. This end serves as a stop against the wall board for the clip.

From the above description, it is believed that the construction and advantages of this device will be clear to those skilled in this art.

Having thus described one specific form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A metal wall tile having one side edge portion thereof turned out of the general plane of the tile, said tile having an inturned edge flange for engaging a fastening means, said flange being opposite said turned out portion, and a securing flange fastened to the wall facing surface of said tile adjacent to said turned out portion, and between said portion and said edge flange for engaging a similar fastening means to secure said tile to a wall.

2. A metal wall tile having one side edge portion thereof turned out of the general plane of the tile, said tile having an inturned edge flange for engaging a fastening means, said flange being opposite said turned out portion, and a securing flange fastened to the wall facing surface of said tile adjacent to said turned out portion and between said portion and said edge flange for engaging a similar fastening means to secure said tile to a wall, said securing flange being substantially parallel to said edge flange.

3. A metal wall tile having one side edge portion thereof turned out of the general plane of the tile, said tile having an inturned edge flange for engaging a fastening means, said flange being opposite said turned out portion, and a securing flange fastened to the wall facing surface of said tile adjacent to said turned out portion and between said portion and said edge flange for engaging a similar fastening means to secure said tile to a wall, said securing flange being substantially parallel to said edge flange, and inclined toward said edge flange.

4. A wall tile for corners and the like where a joint is to be made between two walls in different planes, said tile comprising a rectangular sheet having one side edge thereof turned out of the general plane to meet the joining wall, said sheet having a peripheral flange projecting from one side whereby to provide a smooth abutting shoulder thereabout, and said sheet having adjacent said turned out portion a mounting strip extending substantially parallel to the turned out side edge of said sheet and projecting from the same side as said flange, said strip and the flange opposite it being inclined toward each other.

5. A wall tile for corners and the like where a joint is to be made between two walls in different planes, said tile comprising a rectangular sheet having one side edge thereof turned out of the general plane to meet the joining wall, said sheet having a peripheral flange projecting from one side whereby to provide a smooth abutting shoulder therearound, and said sheet having adjacent said turned out portion a mounting strip extending substantially parallel to the turned out side edge of said sheet and projecting from the same side as said flange, said strip and the flange opposite it being inclined toward each other, and a securing clip adapted to be secured to a wall, said clip having upstanding spring portions at its opposite ends spaced to engage the strip and flange edges and inclined oppositely to the strip and flange whereby these portions may be sprung inwardly and the said edges snapped over the clip ends and said portions terminating in short ends inclined like said strip and flange.

6. In combination, a metal tile having opposed securing flanges projecting from one side thereof and fastening strip means for said tile having provision intermediate said flanges for securing said means to a wall and having adjacent said flanges bent portions engaging said flanges and compressed there-

between to secure the tile, said portions providing sloping substantially straight portions extending outwardly from each other and away from the tile and then turning toward each other adjacent their extremities, said flanges being bent to approach each other as they recede from the tile, the flanges and said straight portions making an acute angle with each other.

7. In combination, a metal tile having opposed securing flanges projecting from one side thereof and fastening strip means for said tile having provision intermediate said flanges for securing said means to a wall and having adjacent said flanges bent portions engaging said flanges and compressed therebetween to secure the tile, said portions providing sloping substantially straight portions extending outwardly from each other and away from the tile and then turning toward each other adjacent their extremities, said flanges being bent to approach each other as they recede from the tile, the flanges and said straight portions making an angle of less than forty degrees with each other.

8. In combination, a metal tile having opposed securing flanges projecting from one side thereof and converging toward their free edges, and mounting means for said tile including spaced spring members secured to a wall, said members having substantially straight flange engaging portions having free ends diverging as they approach the wall and making an acute angle with said flanges and adapted to yield under pressure of the flanges as the tile is pressed toward the wall to snap the flange edges over said portions and thereby secure the tile in place.

9. Wall tiling embodying a plurality of sheet metal tiles having on one side thereof spaced opposed converging flanges, one of the flanges of each tile being a continuation of a side edge of the tile, and the opposite flange being spaced inwardly of the side edge of the tile opposite said first named flange, and a spring clip for attachment to a wall structure engageable with a side flange of each tile, said spring clip including substantially straight portions sloping away from each other and toward the wall and then turning toward each other at their outer extremities.

In witness whereof I hereunto subscribe my name this 22nd day of Sept., A. D., 1931.

ANDREW W. NELSON.