Feb. 10, 1953 J. J. LOPINA 2,627,744

INTERLOCKING PLASTIC TILE

Filed March 1, 1950

Fig. 1

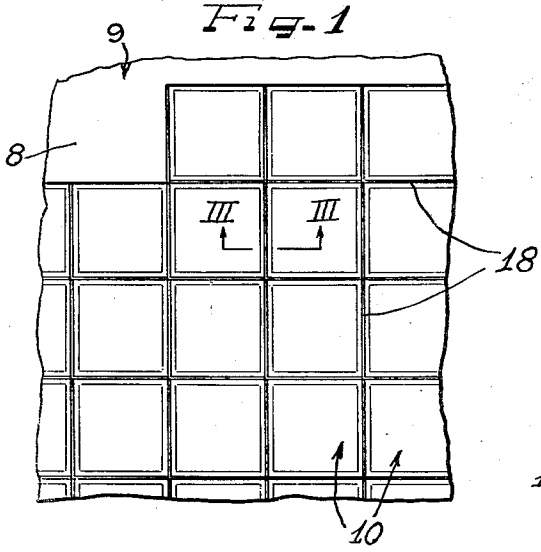


Fig. 2

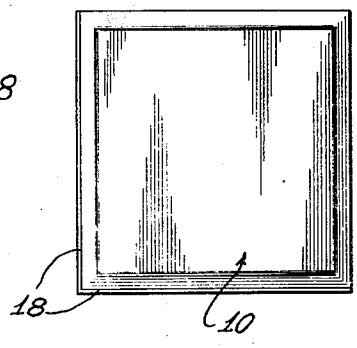


Fig. 3

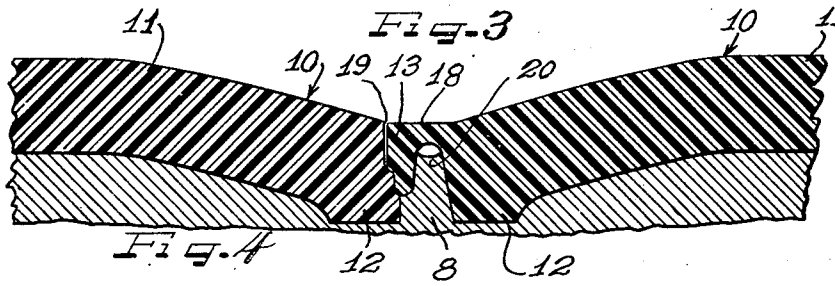


Fig. 4

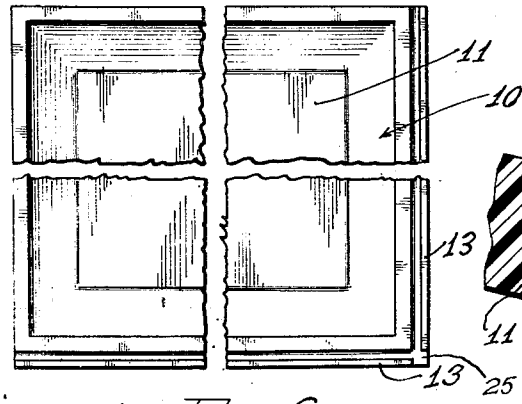


Fig. 5

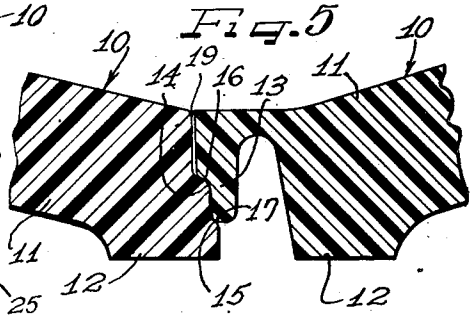
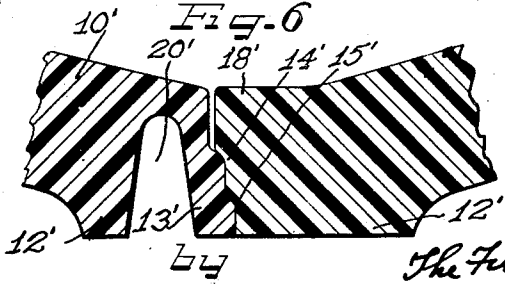


Fig. 6



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UNITED STATES PATENT OFFICE

2,627,744

INTERLOCKING PLASTIC TILE

Joseph J. Lopina, Chicago, Ill.

Application March 1, 1950, Serial No. 146,991

1 Claim. (Cl. 72—25)

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This invention relates to wall tile and more particularly to individual square substantially flat plastic tile adapted to be attached, one-by-one in contiguous relation, by a fastening mastic to a wall.

It should be noted that by the term "wall" it is intended to include all walls such as side walls, ceilings, floors, etc.

At the present time, in mounting plastic tile on a wall the wall is first buttered with a mastic and then the tiles are one-by-one pressed onto the wall in adjoining relation; and the mastic projecting through the spaces between the adjoining tiles is progressively wiped to eliminate excess mastic on the surface of the wall. In reality, the stripe-like mastic appearing at the joints serves as a part of the ornamental appearance of the wall.

Since most people desire a white or colored mastic beading between the tile, it is necessary to use a mastic which is considerably more expensive than cheap brown cementitious material. In addition, the joint wiping operation is a tedious one, consumes considerable valuable time of the tile setter and does not by any means provide for uniformity in the appearance of the joints.

It is an object of this invention to provide tile which dispenses with the need for the mastic defining beads between the adjoining tiles thereby eliminating the expensive wiping operation and enabling the use of cheaper mastics as substantially all of the mastic used in the mounting of my novel tile is concealed by the tile themselves.

Yet another object of this invention is to provide a polygonal or square plastic tile with integral joint beads on at least two edges of each tile which will not only effectively seat on shouldered portions of adjoining tile, but will also provide uniform highly pleasing ornamental striping between the tiles.

Yet another object of this invention is to provide plastic tile with resilient lip-like edges yieldable in the establishment of joints between adjoining tile and which will provide for yielding in a tile wall in use such as occasioned by expansion and contraction, thereby preventing breaking or fracturing of the tile as a consequence of such expansion and contraction.

Yet another object of this invention is to provide a combination tile and ornamental lip-like sealing bead which is economical to manufacture in conventional plastic molding machinery.

In accordance with the general features of this

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invention, there is provided a tile wall made of a plurality of juxtaposed substantially flat square plastic tiles each having a main body with a peripheral flanged edge defining four sides of the tile, the edge on each of two sides having a sealing junction lip spaced from the body of the tile so as to be flexible into the space in the forming of a joint with an adjoining tile and on each of its other two sides being shouldered for engagement by the lip of the adjoining tile.

Another feature of the invention relates to the provision of a tile of the aforementioned type wherein the lip defines on the rear side of the tile a space for receiving cementitious material in the fastening of the tile to a previously prepared wall.

Another and further feature of the invention relates to the provision of a substantially flat synthetic plastic wall tile slightly recessed on its rear side and provided with a marginal joint forming edge comprising a resilient lip extending rearwardly from the outer surface of the tile in spaced relation to the main body of the tile, the lip on the outer side of the tile being finished to give the appearance of a stripe or bead between adjoining tile and serving as a filler in the space between adjoining tile.

Other objects and features of this invention will more fully appear from the following detailed description taken in connection with the accompanying drawing which illustrates several embodiments thereof, and in which:

Figure 1 is a fragmentary side view of a wall having my novel tile applied thereto and looking at the tile from the outer side of the tiled wall;

Figure 2 is a side or front view of one of my novel square synthetic plastic tiles;

Figure 3 is a fragmentary cross-sectional view taken on the line III—III of Figure 1 looking in the direction indicated by the arrows and showing the construction of a joint between adjoining tile of my invention;

Figure 4 is a fragmentary rear view of one of the tiles of my invention showing the lips on two edges thereof;

Figure 5 is an enlarged fragmentary cross-sectional view corresponding to the joint portion of Figure 3; and

Figure 6 is a fragmentary cross-sectional view similar to Figure 5 through a modified form of joint.

As shown on the drawings:

It is believed that my novel method of applying individual plastic tiles to a wall buttered with

fluid mastic will be best understood by the following description of the tiles themselves.

The reference character 10 designates generally a square tile embodying the features of this invention, it being understood that all of the tile shown in Figure 1 are of identical construction. These tiles are adapted to be applied to a previously buttered wall 9 having a suitable mastic or cementitious material 8 spread thereon for cementing the tile in contiguous relation to the wall. The tile 10 includes a substantially flat body portion 11 which is slightly recessed on its rear side to provide the usual peripheral flanged edge 12; this edge being relatively thin in thickness and corresponding actually to the thickness of the synthetic plastic tile.

It is to be understood that the tile of my invention may be made from any suitable synthetic plastic material in any suitable molding apparatus, such as is commonly used at the present time in the manufacture of plastic wall tile. For illustration, I contemplate that the tile can be very satisfactorily made from polystyrene or a vinyl type of resin.

Each tile 10 is generally of a square configuration and includes on each of two sides integral resilient lips 13 and on each of two other sides stepped shoulders 14 and 15 on which the lips of adjoining tiles are adapted to seat in the assembly of the tile on a wall. The shoulders 14 and 15 as best shown in Figure 5 are slightly spaced from each other and the lip 13 has on its outer side corresponding shoulder portions 16 and 17 for seating on the portions 14 and 15 respectively.

In addition, each lip portion 13 includes on the front side of the tile an integral substantially flat bead like portion 18 serving as an ornamental stripe or filler between adjoining tile. The bead 18 may be flat or slightly arched or grooved for ornamental purposes. This filler bead 18 is of such width that after the lip is seated on the shoulders of the adjoining tile there will be a slight space as at 19 (Figure 3) between the adjoining tiles. This space provides clearance for slight flexing of the lip as it is seated on the shoulders 14 and 15 and also enables relative flexing of the tiles, after setting of the mastic due to expansion and contraction occurring in the wall. Obviously, since this clearance provides for give between the tiles, buckling, warping, breakage or cracking between the tile due to contraction and expansion is minimized.

The lip on its rear side defines a space 20 into which the mastic 8 is received as the tiles are one-by-one pressed against the wall and which, upon setting, tends to hold the lip on the shoulders 14 and 15. The space 20 will not necessarily be completely filled due to the pocketing of air therein. However, the joint is sealed against the ingress of moisture or water from the outer side of the tile.

The filler or beaded portion 18 of each lip may on its outer surface be given any desirable colored finish thereby enabling the provision of stripes between adjoining plastic which may be of a contrasting color to that of the tiles proper.

Of course, if it is desired, the entire bead 18 and lip 13 could be made of a different colored or textured plastic from that of the main body of the tile.

In Figure 6 I have shown a modification of the invention wherein the tile 10' has its flange 12' recessed at 20' to provide the resilient lip 13' which is on each of two sides of the square tile. The other two sides of the tile are each formed for cooperation with the lips of the adjoining tile; these latter two sides having the flanges 12' enlarged and provided with undercut shoulders 14' and 15' on which stepped shouldered portions of the lip 13' are adapted to seat. The lip portion 13' includes an outer integral filler or beading strip 18' for filling the gap between the tile and for providing striping as in the case of the portions 18. Otherwise this modification of the invention functions and operates in the same manner as the previously described form.

It should be noted in Figure 4 at 25 that the lip portions 13 have been cut away at the corner so as to allow for expansion and contraction at the corner. However, only the lip portion proper is cut away leaving the outer bead portion 18 intact so that there is a complete filler or beading strip 18 over the cut away portion 25 of the lip, as is clearly shown in Figure 4.

In the modification in Figure 6 the lip portion 13' would likewise be cut away at the corner in a similar manner to that shown at 25 in Figure 4 so as to allow for expansion and contraction at the corner of the tile.

While I have used the term "square" in describing the tile, it will be appreciated that the tile could be of a different polygonal shape such, for example, as a rectangle and still accomplish the results of my invention.

I claim as my invention:

For use in a tile wall made of a plurality of juxtaposed four sided polygonal tiles, a tile having a main substantially flat synthetic plastic body with a peripheral flanged edge defining the four sides of the tile, said edge on each of two sides having an outer flexible sealing junction lip extending rearwardly in the direction of the thickness of the tile and defining a concealed rearwardly opening hollow space between it and the body of the tile and being flexible into said space in the forming of a joint with an adjoining tile, the edge on each of the remaining two sides being outwardly shouldered for engagement with the lip of an adjoining tile, said shoulder comprising a plurality of steps extending outwardly and rearwardly and each lip having steps complementary to the first named steps and for engagement with steps of an adjacent tile.

JOSEPH J. LOPINA.

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