

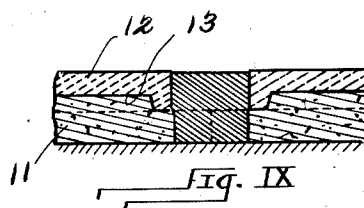
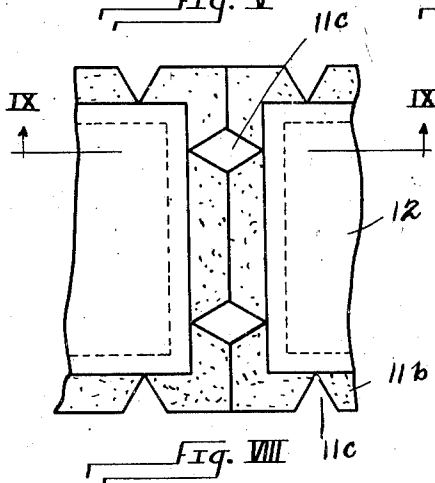
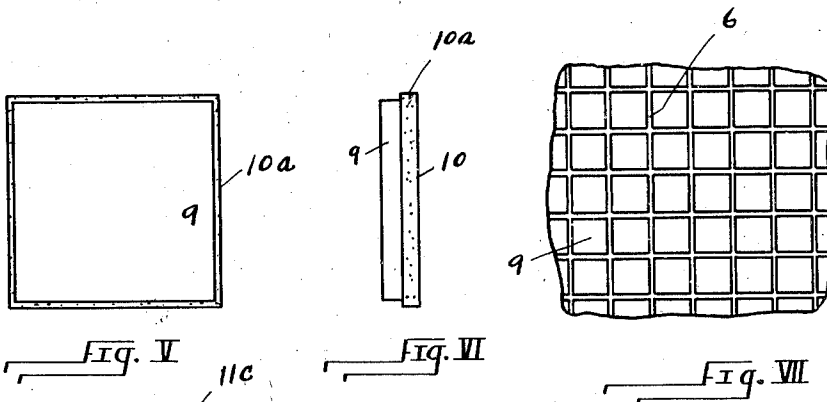
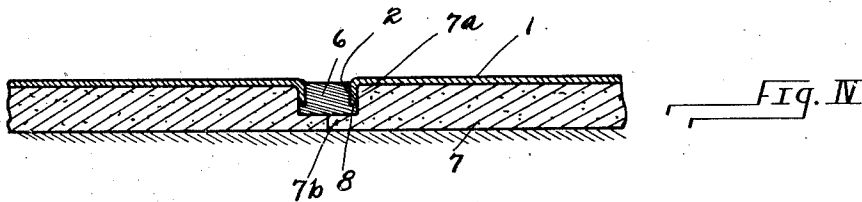
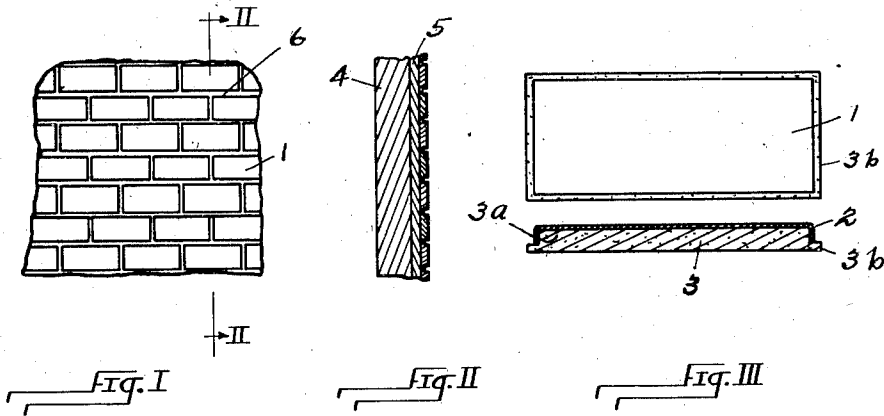
June 6, 1933.

J. KERTES

1,913,031

TILE MOUNTING

Filed March 10, 1932



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UNITED STATES PATENT OFFICE

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TILE MOUNTING

Application filed March 10, 1932. Serial No. 597,875.

This invention relates to a tile, and particularly to a facing tile backed for mounting on a surface and for mutually spacing each tile from others when mounted.

5 With particular reference to tile made of steel and enamel to simulate clay or porcelain tile, it has been the custom to attach such tile to a backing board in such manner that it carries a number of tile in assembled relation. The attachment of individual tile to a common backing board either by means of prongs on the side walls of the tile themselves, or by grooving the backing board to receive the side walls of the tile. The use of a common backing board is customary whether or no these steel tile be provided with backing pads. Similarly, clay, porcelain, and glass facing tile are commonly set into a prepared surface of cement in which the tile are partially embedded. Such tile, as is well known, are set in the cement individually, and the mutual spacing of the tile to provide uniform intervals for pointing is a relatively difficult task.

Whether the steel facing tile be attached in a relatively great number to a continuous backing sheet, or whether such tile, or the clay, porcelain, or glass tile be individually set in cement, they are subject to cracking or crazing of their surface, due to expansion and contraction caused by temperature variation.

35 The object of my invention is to provide a facing tile individually so backed that the tile may be mounted directly to a surface, such as a floor or wall, in accurately spaced relation by merely covering the surface on which they are mounted with a thin skim of glue or other suitable cementitious material.

40 A further object of my invention is to provide each individual tile with backing means of such nature and arrangement that when the tiles are mounted they are attached solely by yielding material capable of absorbing the tendency toward mutual movement of the tile due to expansion and contraction and thereby preventing cracking or crazing of the tile caused by temperature variation.

In the accompanying drawing Figure I is an elevation of a wall with my facing tile applied thereto; Figure II is a cross-sectional view taken on the line II—II of Figure I, showing my backed tile mounted in spaced relation thereon; Figure III is a view showing in plan and in longitudinal section a steel facing tile provided with backing and spacing means in accordance with my invention; Figure IV is a longitudinal sectional view showing the adjacent regions of two backed steel tile of modified form, and illustrating both the mounting of the tile and the pointing of the interval therebetween; Figure V is a plan view of a non-metallic facing tile provided with backing and spacing means in accordance with my invention; Figure VI is an edge view of the tile shown in Figure V; Figure VII is an elevation of a wall faced with non-metallic tiles such as the tile shown in Figures V and VI; Figure VIII is an elevation showing two mounted and mutually spaced tile, illustrating a modification in non-metallic tile facing or bodies and in the backing and spacing means thereof; and Figure IX is a cross-sectional view taken on the line IX—IX of Figure VIII.

With particular reference to Figures II and III of the drawing the tile body therein shown comprises a plate 1 and a relatively shallow depending portion or wall 2 extending around the plate. This tile facing or body is formed of steel, or other suitable metal, and is desirably covered on its outer face by an enameled coating, or other ornamental coating, applied by any suitable process. Into the shallow trough formed by the steel plate 1 is inserted the upper portion 3a of a backing block 3, which is composed of some yielding absorbent material, as for example the fibrous composition known under the trade name of "Celotex."

95 In order that the backing pad 3 may mutually space individual tile as they are mounted on a surface, and provide a yielding backing for the assembly of tile formed by the individual pads, the pad 3 of the tile is provided on all sides with a laterally-extending flange 3b. The flange 3b is formed

on each of the pads before its insertion into the shallow trough provided by the steel tile 1, as by shaving the pad along its edges to remove material and leave the upper portion 3a and the flange 3b.

In assembling the tile shown in Figures II and III, the tile, or the inner face of the trough provided by the steel tile 1, is coated with a suitable adhesive capable of forming a bond with a smooth surface. The upper portion 3a of the pad 3 is then pressed into the tile and held firmly therein until it adheres thereto. As so organized the lower edge of the depending wall 2 around the tile body rests upon the upper surface of the flange 3b, and flange 3b extends on all sides of the tile a material distance outwardly beyond the depending wall 2.

In order that the thickness of all the finished tile so constituted may be uniform, the tile are then passed through a shaver, which removes from the lower face of the pad 3 any material in excess of a predetermined thickness for the tile.

As so prepared tiles are ready for mounting on a smooth surface. With particular reference to Figure II, reference numeral 4 designates the backing members of a wall, and 5 the relatively smooth layer of siding board, plaster, or fiber board, on which the tiles are mounted. In order to mount the tile on the surface 5 an area of this surface is brushed or skimmed with a suitable adhesive, as for example linoleum cement commonly employed for attaching linoleum to floors. The tile are then mounted by simply placing them one by one on the surface, with the flanges 3b of the several tiles in mutual contact, and pressing the tiles firmly into position to effect their adhesion to the surface on which they are mounted. As so mounted, the tile are held in position wholly by the adhesive attachment of the backing pads to the wall surface.

In this mounting operation the positioning of the tiles is greatly simplified by the flanges 3b, which, when brought into contact with each other, space the mutual side and end wall 2 of each tile from the wall or walls of an adjacent tile or tiles. It is, therefore, unnecessary that the intervals between tiles be measured, and the contact between the flanges of the several tiles facilitates the application of pressure while the tiles are becoming cemented in position. After a desired area on the surface 5 has been covered by the tile, the intervals between tile are filled with a suitable pointing 6. The intervals for the reception of this pointing are provided without measurement, or intentional spacing, on the part of the person mounting the tile, by the mutual contact of the flanges 3b on the several tile.

It should be noted that when a wall has been thus faced the backing pad 3, forming

a portion of each complete tile independently, receives and absorbs the effect of expansion or contraction of the tile. Considering the facing as a whole the effect of expansion and contraction is thus transmitted wholly through the mutually contacting flanges on the yielding backing pad of each of the tile. This mounting prevents the facing as a whole from so expanding or contracting as to loosen the tile in position, or to crack or craze their surfaces.

Figure IV of the drawing illustrates a modification in the backing pad designed specifically to provide additional anchorage for the pointing between tile. For this purpose the upper portion 7a of the pad 7, extends into the trough within the steel face 1 at a depth greater than the depth of the side walls 2. When the tile are then brought into abutting position, as shown in Figure IV, an interval 8 is provided between the lower edge of wall 2 and the upper face of flange 7b on the pad. This relatively slight crevice serves to firmly anchor the pointing 6 in position.

In Figures V and VI I show a tile having a solid body, of some suitable material, such as clay, porcelain, or glass, and cemented to the rearward face of this body 9 a pad 10 of yielding fibrous material similar to that described above. The dimensions of this pad 10 are such as to provide a flange 10a extending outwardly beyond all sides of the tile body 9.

The mounting of this tile is identical with that described in connection with the steel tile shown in Figures II and III. Similarly a relatively smooth surface is brushed or skimmed with adhesive, and the tile are individually placed in position on this surface, being mutually spaced solely by contact between the flanges 10a of the several tile. They are similarly pressed in position until the adhesive has set, and the intervals between tile provided by the flanges 10a are similarly filled with pointing material 6.

Figures VIII and IX of the drawing illustrate a further modification in which either form of tile as above described is provided with backing pads 11 having flanges 11b extending outwardly a relatively great distance beyond the body of the tile. When the tiles are mounted on a surface, their bodies 12, shown specifically in these figures as a non-metallic tile, are spaced apart a relatively great distance to provide wide intervals for the insertion of pointing. As the pointing material might otherwise tend to flake loose from the upper surfaces of the flanges 11b these flanges are each provided with notches 11c. The intervals formed by these notches 11c provide adequate anchorage for the pointing material.

Another modification shown in Figures

VIII and IX consists in dishing the rearward face of the tile to provide in it a trough 13, similar to the trough provided by the formation of the metallic tile shown in Figures I to IV inclusive. The advantage of this trough is that it serves to position the backing pad 11, during its application to the body of the tile, so that the flange 11b projects an equal distance beyond all sides of the tile body. This positioning avoids the necessity for special gauging means in assembling the elements of the backed tile.

It should be understood that my invention is not directed primarily to the material of which the facing or body portion of the tile is made, and that the invention applied to tile of any suitable material or composition.

In every modification shown the function of the flange, on the backing pad and extending outwardly beyond the body proper of the tile, should be emphasized. These flanges permit the tile to be mounted with reasonable rapidity upon a hard surface in which the tile is not embedded, leaving a substantial spacing between the bodies of adjacent tiles. The fact that the backed tile, with or without a flange, may be individually mounted by the use of an adhesive is in turn of great importance, since it avoids inconvenience and waste which occurs when sheets of backing material faced with tile are cut to fit any wall or floor area on which they are to be mounted. The use of an individual backing pad by which individual tile have their only connection to the carrying surface provides a structure capable of absorbing wholly, or to such point as to avoid harmful results, stresses set up by expansion and contraction of the surface to which the tile are attached by means of their backing pads. The fact that the tile bodies are not rigidly attached to the surface prevents crazing which occurs by restriction of the expansion and contraction of the tiles themselves. The yielding mounting also protects the wall facing against vibration and other mechanical shocks.

It may be further noted that my individually backed tile possesses a marked advantage for packing and shipment. This is for the reason that the backing pads of yielding material protect the facing or body portion of each tile from chipping by contact with a similarly hard surface of another tile. This effect is increased by the flange of the backing pad, which extends outwardly beyond the side wall of the tile body.

I claim as my invention:

1. A backed tile comprising a metallic sheet facing body of dished form, and a yielding backing pad attached to said facing body, said backing pad comprising a flange extending outwardly beyond the edges of

the facing body a distance sufficient to mutually space the facing bodies of adjacent tiles as mounted on a surface and cause a material interval therebetween.

2. A backed tile comprising a metallic sheet facing body formed rearwardly to provide at least one dished region, and a yielding backing pad attached to said facing body and having a portion lying within the dished region of the facing body and said backing pad comprising a flange extending outwardly beyond the edges of the facing body a distance sufficient to mutually space the facing bodies of adjacent tiles as mounted on a surface and cause a material interval therebetween.

3. In a faced wall the combination of a wall surface, adhesive on said wall surface, and a plurality of tile adhesively mounted on said wall surface, each said tile comprising a metallic sheet facing body of dished form and an absorbent yielding backing pad attached to the facing body and lying between the facing body and the wall surface, the said facing bodies of the several tile spaced by flanges constituting an integral part of the backing pads of the several tile which flanges extend outwardly beyond the facing bodies of the several tile a distance sufficient to cause a material interval between the facing bodies of the several tile.

In testimony whereof I have hereunto set my hand.

JOHN KERTES.