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D. A. WALLACE

2,073,130

TILE CONSTRUCTION

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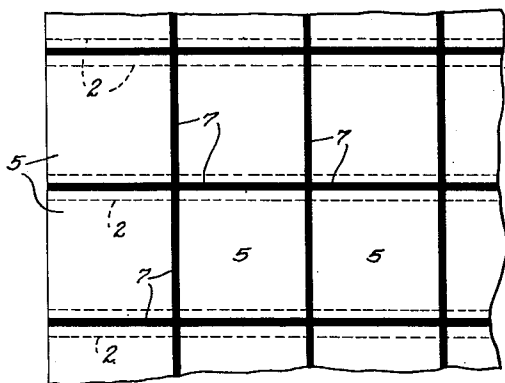


Fig. 1.

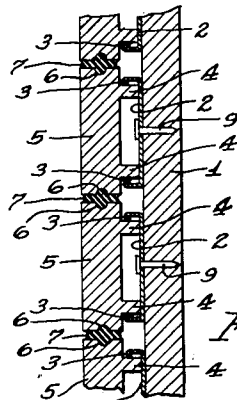


Fig. 2.

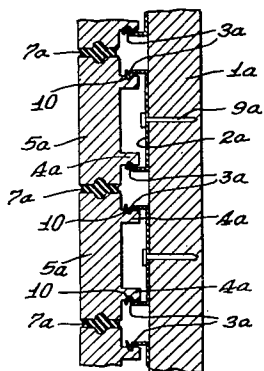


Fig. 3.

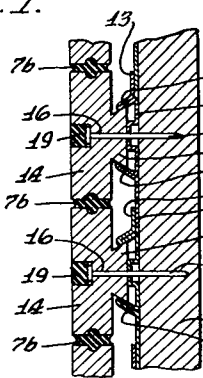


Fig. 4.

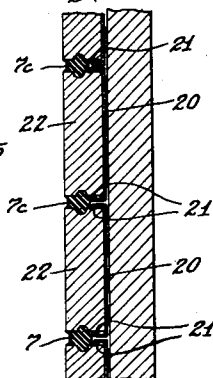


Fig. 5.

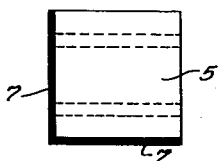


Fig. 6.

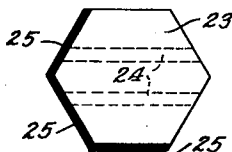


Fig. 7.

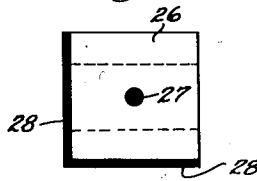


Fig. 8.

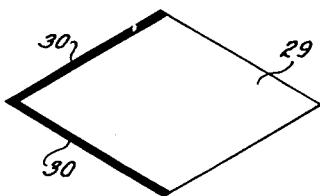


Fig. 9.



Fig. 10.

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2,073,130

TILE CONSTRUCTION

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11 Claims. (Cl. 72—19)

This invention relates to tile and supports therefor and is applicable to either ceramic or imitation tile.

The primary object of the present invention is to provide means for attaching tile or like facing elements to interior walls or partitions and which is applicable also to floors and exteriors, to partly or completely cover the same and which lends itself to the formation of panels, inserts, decorative friezes, etc.

Another object of the invention is to provide a wall construction wherein tile or like facing elements are retained in assembled relationship by frictional holding members which are attached to a previously formed wall or support, so that the tile members may be inserted into said frictional holding members after the latter have been assembled on the wall or support. By way of modification, the invention further discloses the same combination of elements constructed and arranged whereby the tile members may be assembled into the frictional holding means and the latter subsequently secured to a wall or support, so as to make it possible to handle a group of tile members as a unit.

Another object of the invention is to provide a sealing means for the spaces or voids between the tile members which is effective both from the decorative standpoint as well as the utilitarian purpose of closing such spaces or voids to render the assembled wall waterproof. To accomplish this latter object the invention provides each tile member with a layer of resiliently yieldable means extending around approximately one half of the periphery thereof and the means for supporting the tile members are so relatively disposed that the resilient layer is placed in compression when the tile members are assembled in the wall. The resilient means is formed of rubber, or an equivalent material having elastic qualities, and is preferably colored so as to provide a contrasting strip between adjacent tile members for decorative purposes. In addition, by maintaining the resilient layer in compression it effectively seals the spaces or voids between the tile members and renders the wall waterproof. To render the sealing action more positive, the sealing means may be coated with a cement, preferably a rubber cement such as "Latex", so that they will adhere to the facing elements with which they engage.

Still another object of the invention is to embody the above mentioned decorative sealing means in a construction wherein the tile members and frictional holding means therefor are

secured to a support by driving nails or like securing elements through apertures formed in the tile members. After placing the securing elements the apertures are sealed by the insertion of a resiliently yieldable plug, formed of rubber or its equivalent. By symmetrically disposing the apertures, the inserts therein lend an ornamental effect which augments the decorative qualities of the sealing means.

With the above and other ends in view the invention consists in matters hereinafter set forth with reference to the accompanying drawing, in which—

Figure 1 is a fragmental elevation of a wall; Fig. 2 is a transverse vertical section thereof; Figs. 3, 4, and 5 are sections illustrating different forms of retaining means;

Figs. 6 to 9 are elevations of different tile members and illustrating the adaptability of the invention thereto, and

Fig. 10 is a section of a sealing member.

Like characters of reference are employed throughout to designate corresponding parts.

The numeral 1 designates a wall or support having a plurality of channel members 2 secured thereto in parallel spaced apart relation. The outer edges of the side walls of each channel are bent inwardly to provide retainer portions 3. In order to facilitate the insertion of lugs 4 on facing elements 5 between the retainers on respective channels the said retainers are formed with their outer surfaces oblique, thus providing guide surfaces with which the lugs 4 contact and spread the retainers apart so that the lugs may enter the same. The channel members are preferably formed of spring metal and when the lugs 4 are inserted therebetween their natural tendency to spring back to their original position sets up sufficient friction to retain the lugs therein.

Each facing element or tile 5 has a groove 6 in its peripheral edges, and in the case of a square tile member as shown, or a rectangular tile, a rubber strip 7, such as shown in section in Fig. 10, is adhered to two of the edges of the tile prior to its assembly in the wall as above described. The strip 7 thus extends around one half of the periphery of the tile. Each strip 7 has a bead 8 extending lengthwise on each side thereof and when the strip is adhered to a tile the bead 8 on one side thereof will be received in the groove 6 on the edge of the tile to which it is adhered. When the channels 2 are attached to the wall or support 1 they are so spaced apart that the strips 7 are maintained in compression and when the tile wall is finally assem-

bled the strips 7 form a continuous border around each tile which is decorative in appearance and which completely closes the spaces or voids between the tile members. In order to render the sealing action more positive the surfaces of the strips 7 may be coated with an adhesive just prior to assembly of the tile so that such surfaces will adhere to the surfaces of the tile with which they are subsequently placed in engagement.

10 As a convenient means for attaching the channels 2 to the walls the invention discloses securing elements 9 in the form of nails, but it will be understood that in the event that the support 1 is metallic they might be bolted, riveted or

15 welded thereto.
In Fig. 3 there is illustrated the use of a modified form of support comprising a channel 2a secured to a wall 1a by means of nails 9a. The facing elements 5a have projections 4a formed with grooves 10 in their outer surfaces. The side walls of the channels 2a have retainers 3a projecting into the grooves 10 to retain the facing elements with respect to the channels. A rubber or equivalent strip 7a is placed between the facing elements in the manner and for the purpose above described.

Fig. 4 illustrates a form wherein the tile members are held in strip form by a metal member which is subsequently secured to the wall or support, thus making it possible to handle a group of tile as a unit. In this view the numeral 11 designates metallic members formed of sheet metal and bent upon itself to form a lengthwise extending dovetailed groove formation 12 and side flanges 13 disposed so that the lower flange of one member interlocks behind the upper flange of the metallic member next below. Tile members 14 are provided with dovetailed groove formations 13. Each tile member 14 has an aperture 16 through which nails 17 are driven to secure the tile and their respective metallic members 11 to the support 18 and after the nails are driven rubber plugs 19 are inserted in the outer countersunk ends of the apertures 16 to cover the heads of the nails. Sealing strips 7b are inserted between the tile members in the manner and for the purpose described above.

Fig. 5 illustrates the applicability of the invention to tile constructions wherein the projections on the rear faces thereof are dispensed with. In this form channels 20 are provided with lengthwise extending corrugations for reinforcement purposes and their side walls have retainer portions 21 which frictionally engage the edges of the tile members 2. Rubber sealing means 7c is placed between the tile members as above described.

Fig. 7 illustrates a tile element 23 of hexagonal form with means 24 on the rear face thereof adapting it for reception in retaining means such as above described. With this form of tile the rubber strip 25 extends over three of the sides thereof. Fig. 8 illustrates a tile 26 with a centrally disposed aperture receiving a plug 27 of rubber similar to that at 28 extending around two of the sides thereof. Fig. 9 illustrates a diamond shaped tile 29 and the disposition of the rubber strip 30 thereon.

Although specific embodiments of the invention have been illustrated and described it will be understood that various changes may be made within the scope of the appended claims without departing from the spirit of the invention, and such changes are contemplated.

75 What I claim is:—

1. In combination, a support, a plurality of facing elements, each facing element having a layer of resilient material extending around the periphery thereof, and means attaching said facing elements to said support with the facing elements relatively spaced apart a distance less than the normal thickness of said resilient material whereby the latter is maintained in compression.

2. In combination, a support, a plurality of facing elements, metal elements secured to said support and having means for frictionally engaging said facing elements, and resilient material between said metal elements supporting said facing elements, said facing elements spaced apart a distance less than the normal thickness of said resilient material whereby they maintain said resilient material in compression.

3. In combination, a support, a plurality of facing elements, each facing element having a layer of resilient material extending around the periphery thereof, means attaching said facing elements to said support and holding said facing elements spaced apart a distance less than the normal thickness of said resilient material whereby the latter is maintained in compression, and said resilient material being surface bonded to said facing elements.

4. In combination, a support, a plurality of facing elements, metal elements secured to said support and having means for frictionally engaging said facing elements, resilient material between said facing elements, said facing elements being supported in spaced relation by said metal elements with said resilient material filling the spaces therebetween, and said resilient material being surface bonded to said facing elements.

5. In combination, a support, a plurality of facing elements, each facing element having a layer of resilient material extending around approximately one half of the periphery thereof, and means attaching said facing elements to said support with the resilient material on adjacent facing elements co-operating to form a continuous border around each facing element, said means supporting said facing elements spaced apart a distance less than the normal thickness of said resilient material whereby the latter is maintained in compression.

6. In combination, a support, a plurality of facing elements, channel members having retainer portions engaging said facing elements, and means attaching said channel members to said support whereby they support the facing elements in spaced relation, resilient material in the spaces between rows of facing elements supported by said channels, said resilient material having a normal thickness greater than the width of said spaces whereby it is maintained in compression.

7. In combination, a support, a plurality of facing elements, channel members having retainer portions engaging said facing elements, and means attaching said channel members to said support whereby they support the facing elements in spaced relation, resilient material in the spaces between rows of facing elements, said attaching means comprising nails extending through apertures in said facing elements, and resilient material closing the ends of the apertures through which said nails are inserted.

8. In combination, a plurality of facing elements, means supporting said facing elements in uniformly spaced relation in a wall assembly, a layer of compressible material on the periphery of each facing element, said resilient material

having a normal thickness greater than the space between said facing elements whereby said facing elements maintain said material is compressed.

5 9. In combination, a plurality of facing elements, means supporting said facing elements in uniformly spaced relation in a wall assembly, each facing element having a layer of compressible material on the periphery thereof of a normal thickness greater than the space between
10 said facing elements whereby upon insertion of said facing elements in said supporting means said material is compressed, said compressible material being adhesive in character whereby
15 after insertion of said facing elements in said supporting means said material adheres to the edges of the facing elements with which it contacts.

20 10. In combination, a support, frictional elements secured to said support, facing elements having projecting members engaged by said frictional elements and attached to said support thereby, said frictional elements being disposed

with respect to said support whereby they support said facing elements in spaced apart relation, and compressible material having a normal thickness greater than the space between said facing elements, said compressible material being disposed between said facing elements and being maintained in compression thereby. 5

11. In combination, a support, frictional elements secured to said support, facing elements having projecting members engaged by said frictional elements and attached to said support thereby, said frictional elements being of channel form whereby they support said facing elements in strip form and being disposed with respect to said support whereby they support said facing elements in spaced apart relation, and compressible material having a normal thickness greater than the space between said facing elements, said compressible material being disposed between said facing elements and being maintained in compression thereby. 10 15 20

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