Oct. 19, 1943. F. D. PARMENTER 2,332,109

DIVIDER STRIP AND SUPPORTING BRACKET THEREFOR

Filed June 12, 1941

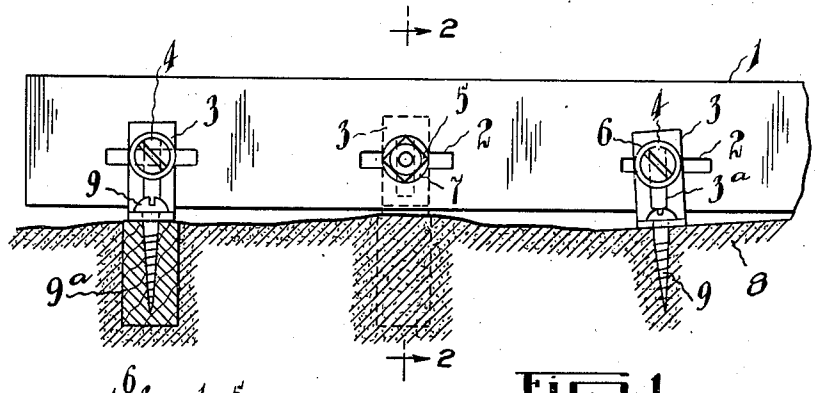


Fig. 1.

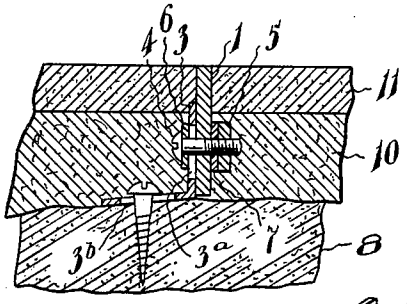


Fig. 2.

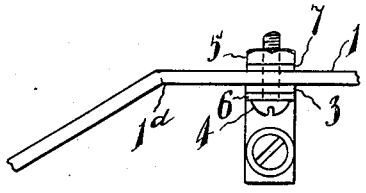


Fig. 3.

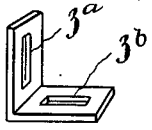


Fig. 4.



Fig. 5.

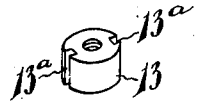


Fig. 7.

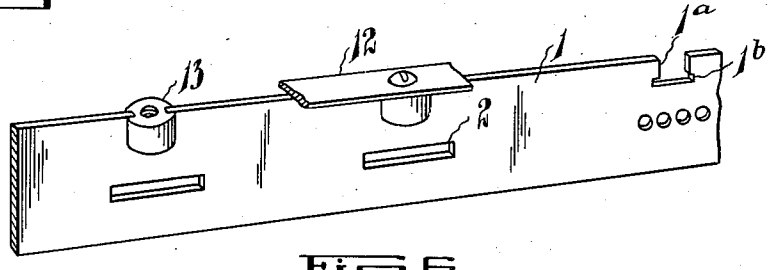


Fig. 6.

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DIVIDER STRIP AND SUPPORTING BRACKET THEREFOR

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Application June 12, 1941, Serial No. 397,784

11 Claims. (Cl. 94—17)

This invention relates to divider strips and supporting brackets therefor, such as are used in the laying of terrazzo or similar floors, walls, ceilings, pillars and other surfaces in one or more plastic coatings providing also for much more extensive adaptation than any used heretofore.

In laying floors of this kind a foundation surface of some kind is first constructed over which in one or more coatings (when plastic materials are used, the surface is built up to the finish coat. Under some conditions it is desirable to have these coatings "bond" or adhere to the foundation surface. In other circumstances it is distinctly undesirable that any "bond" or adherence should occur. The construction adopted in these cases depends upon the nature of the foundation and temperature conditions causing expansion and contraction as well as other conditions such as are found in industrial plants where, for instance, the use of steam cooking, water cooling or washing with hot or cold water occurs. Other conditions where a "no bond" coating is desirable and is practised, as in the case of terrazzo floors, is to overcome cracking of the surface coating resulting from structural cracks occurring in the foundation structure. To prevent a "bond" under these conditions, sand or other material of suitable thickness is first covered over the surface to prevent adhesion of the finish coating. By this method panels are permitted to expand, contract or remain independent of movement of the foundation.

It is my purpose to provide for all of these conditions and for the entire range of materials which may be employed effectively for these purposes.

The material generally used in what is known as terrazzo is composed of marble chips mixed with sand and cement (generally known as Portland cement). Other products are composed of wood particles, sand and special cement products, also pulpwood, asphalt, rubber, cork, etc.

As an example, the general practice in terrazzo floor laying is to use metal strips for the purpose of separating such finish coatings into blocks, panels, borders and various ornamental shapes and designs with the finished surface ground smooth, thereby exposing the face of the metal strips. The terrazzo divider strip is attached to the base to which the terrazzo or other material coatings are to be applied. Considerable difficulty is found in obtaining sufficient rigidness, proper alignment and accurate jointing. Greater difficulty is encountered when the base or foundation is uneven or graded and when the design involves curved lines.

The objects of my invention are briefly to provide for a wide variety of ornamental design; to provide for expansion and contraction at the joints of the panels, blocks, borders, etc.; to provide by creating "break" joints, for the avoidance of cracking of panels, due to expansion and contraction; to provide means of retaining in position panels which are not "bonded" or do not adhere to the foundation; and to provide a divider strip for these and other purposes which will be rigid and accurate and adaptable for obtaining a straight line or curved line on level, uneven or graded surfaces and which will be adjustable, economical and quickly and easily applied.

Further objects of my invention are to provide in conjunction with a divider strip and supports, means for concealing any opening caused by loose fitting panels or by expansion and contraction and to protect the edges of such joints also to render them tightly held in position.

Further objects of my invention are to provide for the retaining of previously made panels, tile slabs, or blocks which are not held in position by being "bonded" or adhere to the base surface.

I achieve my objects by means of various features of construction hereinafter briefly described. A series of holes is provided in the divider strips to which supporting brackets are adjustably connected. The holes may be round and closely spaced to provide for longitudinal adjustment of the divider strips relative to the supporting brackets but preferably are in the form of longitudinal slots.

The brackets are each provided with a vertical slot adapted to receive screws, bolts or rivets, the slot providing vertical adjustment of the divider strips relative to the brackets to compensate for unevenness in the base or floor. It is not necessary that the divider strip be in contact with the surface to which it is applied. Preferably the brackets are L-shaped with a slotted hole in the foot adapted to receive a screw or other means for securing the bracket to the floor or base to which terrazzo or other materials are to be applied. The slot in the foot makes it possible to position the securing means suitably relative to the divider strip enabling the divider strip to be aligned or to follow an irregular line, as may be desired, and permitting fine adjustment after the brackets have been attached to the base or floor. The brackets may also be bendable to vary the angle of the upright position relative to the foot to compensate for unevenness of the base to which the bracket is secured.

The supporting bracket projections of screw heads and nuts, together with the openings in the divider strips which are not utilized for supporting brackets act to engage the plastic coatings assisting in securing or keying them in place.

A further feature of my invention is that cover strips may be provided attached to the upper edges of the divider strips. These may be made of metal, wood or other materials and may be provided with a resilient under contact surface, such as rubber, to render the contact continuously

free from vibration or for the important purpose of providing an air, water, steam or fume controlling tight joint continuously notwithstanding movement of the panels due to expansion and contraction or vibration.

The invention is hereinafter more particularly described and is illustrated in the accompanying drawing in which

Fig. 1 is a side elevation of part of a dividing strip and brackets mounted on a floor, before the terrazzo has been applied;

Fig. 2 is a vertical cross-section on the line 2—2 in Fig. 1, showing the terrazzo laid;

Fig. 3 is a plan view of a divider strip and bracket, showing a portion of the divider strip bent to form a design;

Fig. 4 is a perspective side view of a bracket;

Fig. 5 is a perspective view of a modified form of bracket.

Fig. 6 is a perspective side and top view of a divider strip showing from left to right a boss or block in place for supporting cover strip, a section of cover strip mounted on the boss, and the construction of divider strip for receiving the boss; and

Fig. 7 is a perspective side view of a cover strip supporting boss.

In the drawing like numerals of reference indicate corresponding parts in the different figures.

The divider strip 1 is composed of a long, thin sheet of brass or other suitable material, which when properly supported is sufficiently rigid to maintain its upright position when the terrazzo or other surfacing material is applied to the floor. A plurality of longitudinally spaced longitudinal slots 2 are formed in the strip 1 preferably slightly below the center line thereof. In place of continuous slots, separate closely spaced round holes may be used, as shown at the right hand end of Fig. 6.

The supporting brackets 3 are preferably L-shaped and are made of brass, iron or other suitable material. The upright portion is provided with a vertical slot 3^a and the foot portion is provided with a horizontal slot 3^b.

The strip 1 and the supporting brackets 3 are connected together by means of bolts 4 and nuts 5, preferably with a washer 6 between the head of each bolt and bracket and a washer 7 between each nut and the strip, one or both of which washers may be of the split ring type with a roughened or gripping surface. The supporting brackets are adapted to be secured to the base or floor 8 by means of screws 9 or other securing members suitable for securing the support to the base. In the drawing the base is shown as concrete and the securing means as screws. At the left hand end of Fig. 1 a wooden plug 2 embedded in the concrete is shown for receiving the screws.

In Fig. 1 part of a strip is shown with the supporting brackets in position. This view shows that the supporting brackets may be mounted on either side of the strip. This is an important advantage of this construction, since the bracket may be located on the side of the strip upon which it is most convenient to apply it owing to the form of the flooring or the location of adjacent walls. The flooring in Fig. 1 is shown as being uneven, such as a rough concrete floor. Owing to the vertical slots 3^a in the supporting brackets 3, the brackets may be vertically adjusted relative to the strip to compensate for unevennesses in the floor, and the strip may be supported above the highest point of the floor. It will be noted that the first bracket on the left of Fig. 1 is mounted on a depressed part of the floor, while the central bracket is mounted on a higher point of the floor, but the strip is held perfectly horizontal. It will also be noted that the right end bracket is secured near one end of the slot 2 in the strip 1, and that the bracket is at an angle to the horizontal, yet the strip is properly supported. In Fig. 2 a further feature of my invention is shown, since it shows the supporting bracket bent at the junction between its foot and upright portion to permit it to conform to an irregular or graded floor surface in such a way that the upright portion remains vertical.

In Fig. 1 at the left end, the screw 9 is screwed into a plug 8^a inserted in a hole in the base or floor 8. At the right end of Fig. 1 and in Fig. 2 the screw is screwed directly into the base material. Frequently holes are bored in the base to receive the screws. The holes need not be placed accurately since the bracket 3 is adjustable longitudinally of the strip 1 by reason of the slot 2 and transversely by reason of the slot 3^b in the foot thereof. Thus the strip 1 can be accurately positioned and the bracket adjusted so that the slot 3^b registers with the hole in the base.

In Fig. 2 a bed 10 of cement or similar material is shown on top of the floor with a terrazzo or composition surface 11 on top of said bed.

In Fig. 3 is shown a bend in the divider strip 1. In heavy material, to facilitate bending, a V-shaped notch may be cut in the strip at 1^d, thus reducing the pieced or mitred joints used and eliminating poor joints.

In Fig. 5 is shown a modification of a supporting bracket in which the bracket is a straight strip or sheet of material which may be embedded in the floor or base material instead of being secured thereto by screws or similar securing means as shown in Figs. 1, 2 and 3.

It is sometimes desirable to have a cover strip 12 over the joints between the blocks or divisions of the surface material. The cover strip 12 comprises a thin strip of metal, wood, or other suitable material having one surface at least substantially flat laid with the plane of its flat surface adjacent to and substantially at right angles to the plane of the surface of the divider strip and extending on either side of the divider strip, to cover said divider strip and the adjacent edges of the blocks or divisions of the surface material. Sometimes the surface material is laid in the form of separate blocks instead of in a plastic condition in which case the cover strip 12 maintains the blocks in position, particularly if the blocks are being applied to a wall. By the use of a cover strip the blocks may be provided with spaces between their edges and the divided strips to allow for expansion and contraction, the cover strip 12 covering the joints as well as holding the blocks in position. Means for mounting such cover strips are illustrated in Figs. 6 and 7, which means comprise bosses 13, having axial internally threaded holes therein adapted to receive screws or bolts 14 which pass through holes in the cover strip 12 for securing said cover strip to said bosses. The bosses may be formed integral with the strip or secured thereto in any desired manner, but preferably the bosses are provided with vertical slots 13^a on each side thereof adapted to slide on the edges of notches 1^a in the upper edge of the divider strip. These notches 1^a may be provided with cut-out portions 1^b in the bottom thereof and the bosses 13

may be formed of sufficiently bendable material and the lower sides of the slots 13a may be bent in to engage the cut-out portions 1b. This may be done by some instrument or by the pressure of the surface material thereon, and serves to prevent the bosses from pulling out.

It will be seen from the above description that I have devised a divider strip and supporting brackets therefor whereby the divider strips may be laid accurately on even or uneven surfaces which are or are not provided with holes to receive securing screws for supporting the brackets on the said surface. By the construction of the divider strips and brackets described, the divider strips may be laid so that they join accurately and their upper edges are substantially horizontal and do not require to be ground down after the floor is laid.

What I claim as my invention is:

1. The combination of a divider strip having spaced notches in its upper edge; and bosses mounted in said notches and internally threaded to receive a bolt for securing a cover strip thereto.

2. The combination of a divider strip having spaced notches in its upper edge; and bosses mounted in said notches, said bosses having slots in opposite sides thereof which receive the edges of the notches, said bosses being internally threaded to receive a bolt for securing a cover strip thereto.

3. The combination of a divider strip having spaced notches in its upper edge; and bosses mounted in said notches said bosses having slots in opposite sides thereof which receive the edges of the notches, said bosses being internally threaded to receive a bolt for securing a cover strip thereto, the notches having cut out portions at their inner ends into which the lower ends of the sides of the slots of the bosses are pressed to retain said bosses in the notches.

4. The combination of a divider strip for terrazzo and similar surfaces provided with the spaced bosses in its upper edge, said bosses having internally threaded holes; a cover strip comprising a thin strip of material having at least one substantially flat surface provided with holes registering with the internally threaded holes in the bosses; and a bolt for securing the cover strip to said bosses with its flat surface substantially at right angles to the plane of the surface of the divider strip and extending on either side of the divider strip, whereby it is adapted to cover said divider strip and the adjacent portions of the surface material when laid.

5. The combination of a divider strip for terrazzo and similar surfaces provided with detachably spaced bosses in its upper edge, said bosses having internally threaded holes; a cover strip comprising a thin strip of material having at least one substantially flat surface provided with holes registering with the internally threaded holes in the bosses; and a bolt for securing the cover strip to said bosses with its flat surface substantially at right angles to the plane of the surface of the divider strip and extending on either side of the divider strip, whereby it is adapted to cover said divider strip and the adjacent portions of the surface material when laid.

6. The combination of a divider strip adapted to be set into terrazzo and similar floors with its edge substantially flush with the surface thereof to divide said surface into various shapes and designs; supporting brackets; and means for securing the divider strip to said brackets, said divider strip and each of the brackets having holes formed therein through which the said securing means is adapted to pass, said holes being formed and arranged so that the relative position of the divider strip and supporting brackets may be adjusted vertically and horizontally.

7. The combination of a divider strip adapted to be set into terrazzo and similar floors with its edge substantially flush with the surface thereof to divide said surface into various shapes and designs; supporting brackets; and means for securing the divider strip to said brackets, said divider strip and each of the brackets having holes formed therein through which the said securing means is adapted to pass, said holes comprising vertical and horizontal slots whereby the relative position of the divider strip and supporting brackets may be adjusted vertically and horizontally.

8. The combination of a divider strip adapted to be set into terrazzo and similar floors with its edge substantially flush with the surface thereof to divide said surface into various shapes and designs, said strip having a series of longitudinally spaced longitudinal slots therein; supporting brackets comprising an upright portion and a foot, the upright portion having a vertical slot; and securing members adapted to pass through the said slots to secure the divider strip to the brackets.

9. The combination of a divider strip adapted to be set into terrazzo and similar floors with its edge substantially flush with the surface thereof to divide said surface into various shapes and designs, said strip having a series of longitudinally spaced holes therein; supporting brackets having an upright portion and a foot portion, the upright portion having a vertical slot and the foot portion having a slot therein; means adapted to pass through said holes in the strip and slots in the brackets for securing the divider strip to the brackets; and means adapted to pass through the hole in the foot part to secure the bracket to a base.

10. The combination of a divider strip adapted to be set into terrazzo and similar floors with its edge substantially flush with the surface thereof to divide said surface into various shapes and designs, said strip having a series of longitudinally spaced longitudinal slots therein; supporting brackets having an upright portion and a foot portion, the upright portion having a vertical slot and the foot portion having a longitudinal slot therein; means adapted to pass through said slots in the strip and the slots in the upright portion of the brackets for securing the divider strip to the brackets; and means adapted to pass through the slots in the foot portion of the brackets for securing the brackets to a base.

11. The combination of a divider strip adapted to be set into terrazzo and similar floors with its edge substantially flush with the surface thereof to divide said surface into various shapes and designs, said strip having a series of longitudinally spaced holes therein; supporting brackets comprising an upright portion and a foot, the upright portion having a hole therein and the foot part having a slot therein; means adapted to pass through the holes in the strip and the holes in the upright portion of the brackets for securing them together; and means adapted to pass through the slot in the foot part of the brackets for securing them to a base.

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