Aug. 23, 1932. N. H. CEDERQUIST 1,872,888

TILE PANEL ALIGNMENT

Filed Dec. 1, 1931

Fig. 1

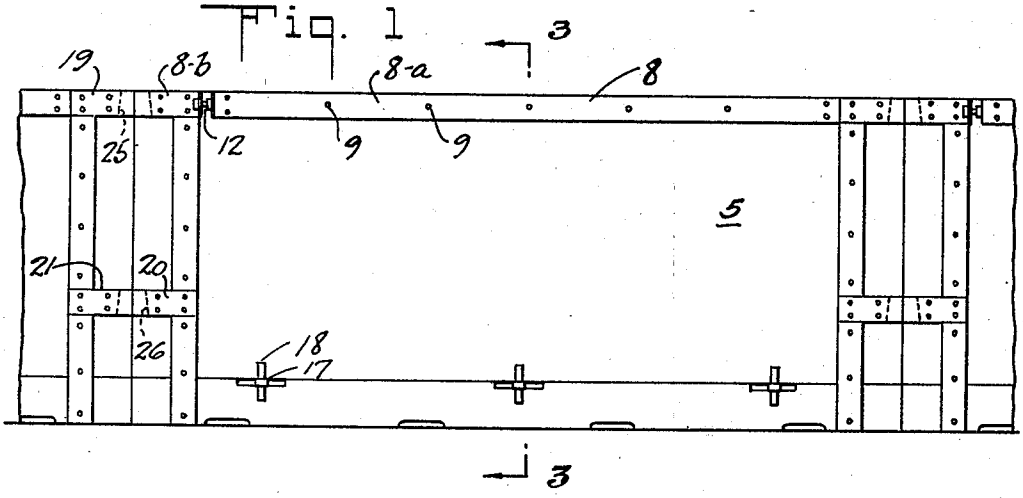


Fig. 2

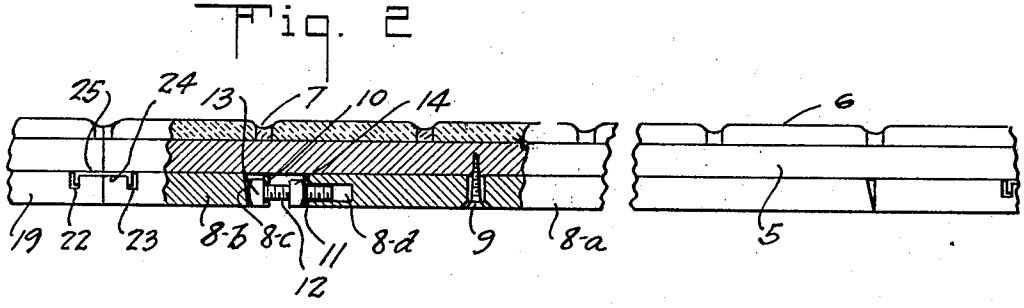


Fig. 3

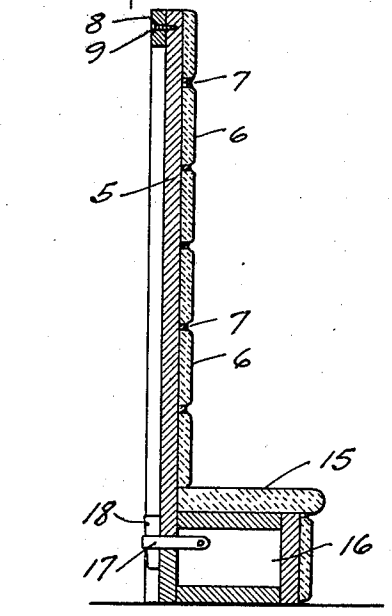
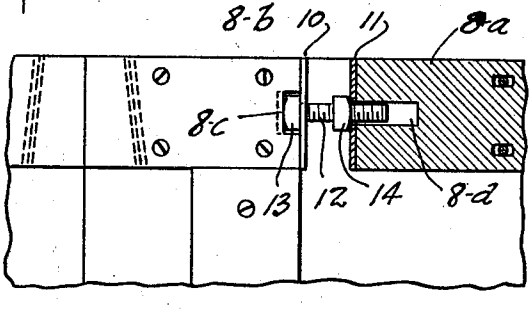


Fig. 4



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UNITED STATES PATENT OFFICE

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TILE PANEL ALIGNMENT

Application filed December 1, 1931. Serial No. 578,332.

This invention relates to tile panel units comprising ceramic or like ornamental tile mounted on a base of suitable size and shape for assembly of units for various purposes.

Tile slab panels are now in current use comprising a wood or fibre board backing upon which backing tiles of biscuit form are laid and cemented to the backing by an elastic adhesive. The spaces between tiles are pointed with cementitious material, such as magnesite cement, for the purpose of simulating tile which is usually set in such cement or mortar applied directly to the surface of the structure which is to be tiled. Magnesite cement expands on setting. The result is that buckling outwardly of the panel occurs due to the combined layer of tile and pointing cement expanding in relation to the backing.

The present invention has for its primary object the provision of a panel unit of the character described having adjustable means to stretch the backing along the direction of buckling and thereby straighten and maintain straight the panel.

These objects, together with other objects and corresponding accomplishments are attained by means of the embodiment of my invention illustrated in the accompanying drawing, in which:

Fig. 1 is a rear elevation of an assembly of units, the end units being shown fragmentarily; Fig. 2 is a plane view partly in section on an enlarged scale of adjacent units with the stretcher adjuster on one unit; Fig. 3 is a section as seen on line 3—3 of Fig. 1; and Fig. 4 is a rear elevation partly in section showing a fragment of a unit and stretcher with the adjuster shown partly in section.

Referring more particularly to the drawing, the base or backing of the panel is indicated generally by 5. This base is preferably a wooden slab which may be built up of thin strips in successive layers which are glued together to form a neutralized backing. This specific structure is not an essential of the invention, it merely being essential that the backing slab be of material which is bendable. To the front of the slab 5 tiles 6 of biscuit form are secured, preferably by means of an elastic cement such as an asphaltum compound. The tiles are then pointed with cement 7 which is preferably magnesite cement. In the construction of such a panel, the last operation in laying the tile is the pointing, and before pointing the slab back is substantially flat. After pointing, the cement sets and expands, causing the layer of tile to expand and resulting in buckling of the back. A stretcher has been provided to straighten the panel and indicated by 8.

This stretcher 8 is loosely secured to the slab 5 by screws 9. The stretcher consists, as shown, of two sections 8*a* and 8*b* having opposing end faces with a space therebetween. The section 8*b* has an inset beveled bearing face 8*c* whose high side is at the outer margin of the section. The section 8*a* is provided with a shank socket 8*d* to loosely receive the shank of a bolt. As shown herein, the beveled bearing face is recessed. A metal plate 10 is placed over the end of the section 8*b* and a corresponding plate 11 is placed over the end of the section 8*a*. These plates have registering bores for the shank of a bolt 12. The bolt 12 has its head 13, which is substantially flat, disposed in the recess between the plate 10 and the bearing face 8*c*. A nut 14 is threaded on the shank of the bolt 12 and bears on the outer side of the plate 11. The bolt and nut constitute a turnbuckle. By screwing the nut 14 toward the far end, the head 13 is caused to bear against the high side of the beveled bearing face 8*c* and the nut bears against the plate 11 which constitutes a bearing face on the section 8*a*. Compression is exerted on the outer side of the stretcher strip and the latter is expanded to accommodate the back to the layer of tile and cement and thereby straighten the unit. It is obvious that adjustment may be initially made and if buckling occurs after initial adjustment, further adjustment may be made by merely turning the nut 14.

Stretcher strips may be disposed in position ranging along the back of the unit in any of the positions necessary to overcome buckling. In the structure disclosed herein, the unit is elongated with the stretcher strip

extending across the top. At the bottom of the unit is a platform 15 having sleepers 16 to which are attached U-shaped straps 17 extending through slots in the backing so that wedges 18 may be placed in the straps and pressure exerted to securely fasten the platform to the panel. Since the platform would be straight, the panel is pulled into shape at its lower edge so that no stretcher strip is required at the bottom in the specific construction.

End units are shown attached to the central unit. These end units have their end edges which abut the center unit, of like construction. Referring to one, there is a strip 19 which registers with the stretcher strip 8 and may include a stretcher means. There is also a strip 20 on the center unit and a corresponding strip 21 on the end unit. The strips 19 and 8b have downwardly ranging grooves 22 and 23 which are inclined toward one another. There is also a recess 24 on the front of the strips so that a U-shaped wedge key 25 may be inserted and driven into place. This causes the abutting ends of the units to be drawn closely together and in alignment due to the yoke of the wedge 25 being seated in the recess 24. A wedge key 26 is disposed in strips 20 and 21 in a similar manner. This wedge key construction forms no part of the present invention.

What I claim is:

1. A tile panel slab unit comprising a bendable base, tile cemented on the front thereof forming a veneer face, a slab stretcher ranging along and secured to the back of said base, and means in said stretcher to adjustably lengthen the latter.

2. A tile panel slab unit comprising a bendable base, tile cemented on the front thereof forming a veneer face, a slab stretcher having sections disposed in seriatim, said stretcher ranging along and being secured to the back of said base, and means between said sections to adjustably expand the stretcher.

3. A tile panel slab unit comprising a bendable base, tiles cemented on the front thereof forming a veneer face, a slab stretcher having sections arranged in seriatim, said stretcher ranging along and being secured to the back of said base, and a turnbuckle device between said sections to adjustably expand the stretcher.

4. A tile panel slab unit comprising a bendable base, tiles cemented on the front thereof forming a veneer face, a stretcher strip ranging along and being secured to the back of said base, said strip having sections disposed in seriatim, a bolt and nut disposed between said sections with the head of the nut bearing on the end of one section and the nut on the end of the contiguous section whereby the stretcher may be adjustably expanded.

5. A tile panel slab unit comprising a bendable base, tiles cemented on the front thereof forming a veneer face, a stretcher strip ranging along and being secured to the back of said base, said strip having sections in seriatim, a bearing face on one section opposing a bearing face on a contiguous section and being beveled with its high side at the outer edge, a turnbuckle device having its ends bearing against the contiguous bearing faces, said turnbuckle device having a substantially flat head at the end bearing against the beveled face.

6. A tile panel slab unit comprising a bendable base, tiles cemented on the front thereof forming a veneer face, a stretcher strip ranging along and secured to the back of said base, said strip having sections in seriatim, a bearing face on one section opposing a bearing face on a contiguous section and being beveled with its high side at the outer edge, a shank socket on the section opposing the beveled face, a bolt having a substantially flat head bearing against the beveled face with its shank loosely mounted in said socket, and a nut on said shank bearing against the face opposite to said beveled face.

7. A tile panel slab unit comprising a wooden base, ceramic tiles cemented on the front thereof forming a veneer face, pointing cement between said tiles, a slab stretcher on the back of said base, and means in said stretcher to adjustably lengthen the latter.

8. A tile panel slab unit comprising a wooden base, ceramic tiles cemented on the front thereof forming a veneer face, pointing cement expansible on setting disposed between said tiles, a slab stretcher having sections in seriatim, said stretcher ranging along and being secured to the back of said base, and means between said sections to adjustably expand the stretcher.

9. A tile panel unit comprising a wooden base, ceramic tiles cemented to the front thereof forming a veneer face, pointing cement expansible on setting disposed between said tiles, a slab stretcher having sections in seriatim, said stretcher ranging along and being secured to the back of said base, and a turnbuckle device between said sections to adjustably expand the stretcher.

10. A tile panel slab unit comprising a wooden base, ceramic tiles cemented on the front thereof forming a veneer face, pointing cement expansible on setting disposed between said tiles, a stretcher strip ranging along and being secured to the back of said base, said strip having sections in seriatim, a bolt and nut disposed between said sections with the head of the bolt bearing on the end of one section and the nut on the end of a contiguous section whereby the stretcher may be adjustably expanded.

11. A tile panel slab unit comprising a wooden base, ceramic tiles cemented on the front thereof forming a veneer face, pointing cement expansible on setting disposed be-

tween said tiles, a stretcher strip ranging along and being secured to the back of said base, said strip having sections in seriatim, a bearing face on one section opposing a bearing face on a contiguous section and being beveled with its high side at the outer edge, a turnbuckle device having its ends bearing against the contiguous bearing faces, said turnbuckle device having a substantially flat head at the end bearing against the beveled face.

12. A tile panel slab unit comprising a wooden base, ceramic tiles cemented on the front thereof forming a veneer face, pointing cement expansible on setting disposed between said tiles, a stretcher strip ranging along and being secured to the back of said base, said strip having sections in seriatim, a bearing face on one section opposing a bearing face on a contiguous section and being beveled with its high side at the outer edge, there being a shank socket in the section opposing the beveled face; a bolt having a substantially flat head bearing against the beveled bearing face with its shank loosely mounted in said socket, and a nut on said shank bearing against the other face.

In witness that I claim the foregoing I have hereunto subscribed my name this 20th day of November, 1931.

NILS H. CEDERQUIST.