

PATENT SPECIFICATION

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(54) METHOD OF FORMING A TILED CONCRETE WALL STRUCTURE

- (71) We, FUJI YOGYO Co., LIMITED, a Japanese Joint Stock Company of No. 14-5, Shintomi 2-Chome, Chuo-Ku, Tokyo, Japan, do hereby declare the invention for which we pray that a Patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—
- 10 This invention relates to a method of forming a tiled concrete wall structure, comprising securing a plurality of tile members onto a face of a concrete wall.
- 15 According to the present invention a method of forming a tiled concrete wall structure comprises the steps of detachably securing a plurality of tile members to an inner surface of a mould wall by nails, each of which has a head of a size to enable it to pass through holes in the tile members, charging concrete into the mould to partially embed the tile members in said concrete, drying said concrete to cause it to solidify and removing the mould from the concrete and tile members to leave the tile members partially embedded in the concrete, the nails being removed simultaneously with the removal of said mould wall with their heads passing through said holes in the tile members. One feature of this invention is in that the number of steps for forming a wall structure is decreased in comparison with conventional methods, thus reducing time and cost without skilled techniques.
- 25 Another feature of the present invention is in that the tiling is effected simultaneously with drying of the raw material of concrete.
- 40 Still another feature of the present invention is that increased adhesion between the concrete and the tile member is attained, thus preventing the tile member from falling off the concrete.
- 45 This invention will now be more particu-

larly described with reference to the accompanying drawings, in which:—

Figure 1 shows a cross sectional view illustrating a method according to this invention, and

Figure 2 shows a cross sectional view illustrating a method shown in Figure 1, with the front board of said mould removed from the tiled concrete wall structure.

Referring now to Figures 1 and 2, a front board 3 of a mould is provided with a plurality of packing members 4 disposed as depicted. The provision of such packing members has the purpose of packing a gap formed by a specific shape of a tile member 1. When a tile member is used having, for example a substantially rectangular shape which does not form such a gap, it is, of course, not necessary to provide the packing member 4.

There are also provided a back board 5, a pair of side boards (left and right side) (not shown), and a bottom board (not shown) for forming said mould.

Said packing members 4 are provided with a plurality of nails 2 to hold said tile members 1 on the inner surface of said front board 3. Each of said nails 2 has a head which is reduced radially as shown by numeral 2 in Figure 1. Further, each nail is provided at its intermediate portion with a cushion member 21 in the form of cylindrical or square column and made of synthetic resin such as polyvinyl chloride or natural rubber.

The tile members 1 are disposed and held with the packing members 4 on the inner surface of said front board 3 by said nails 2. Further, said tile members 1 are disposed so that the surfaces of said tile members 1 are closely in contact with said inner surface of said front board 3. The cushion members 21 which are mounted on the intermediate portions of said nails 2

are so arranged that said members 21 prevent the tile members 1 from being broken by incorrectly striking the nails. Each of said tile members 1 is formed so that a curved portion 6 of the tile member 1 has a depth corresponding to the vertical width of the packaging members 4. Further, each of said tile members 1 is formed so that its lower end rests on said packing member 4 and the tile members 1 are disposed so that a gap 7 is formed between the lower end of one tile member 1 and the top end of the other tile member 1, in order to prevent entry of rainwater.

When said mould is completed by said front board, said pair of side boards (left and right), and said bottom board, a raw material of concrete is charged into said mould.

After said concrete material has dried to set, the front board 3 is removed. Said nails which were used to hold said tile members 1 on said packing member 4 on the inner surface of said front board 3, are easily pulled out due to the fact that said tile members 1 are fixedly connected to the concrete 8 and said nails 2 have no contact with the concrete because said nails 2 have been driven so far that their radially reduced head portions lie flush with the respective surfaces of said function members 21, as shown in Figure 1. Thus, the concrete wall structure is completed. Each of said tile members 1 is provided on its

inner surface with a projection 11, as shown in Figure 1, to increase bonding between the tile member and the concrete wall.

WHAT WE CLAIM IS:

1. A method of forming a tiled concrete wall structure comprising the steps of detachably securing a plurality of tile members to an inner surface of a mould wall by nails, each of which has a head of a size to enable it to pass through holes in the tile members, charging concrete into the mould to partially embed the tile members in said concrete, drying said concrete to cause it to solidify and removing the mould from the concrete and tile members to leave the tile members partially embedded in the concrete, the nails being removed simultaneously with the removal of said mould wall with their heads passing through said holes in the tile members.

2. A method as claimed in Claim 1, wherein each nail is provided with a surrounding cushion member.

3. A method of forming a tiled concrete wall structure substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

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