Aug. 3, 1926. 1,594,614

G. D. HAINES

TILED WALL OR THE LIKE

Filed August 26, 1925

Fig. 1.

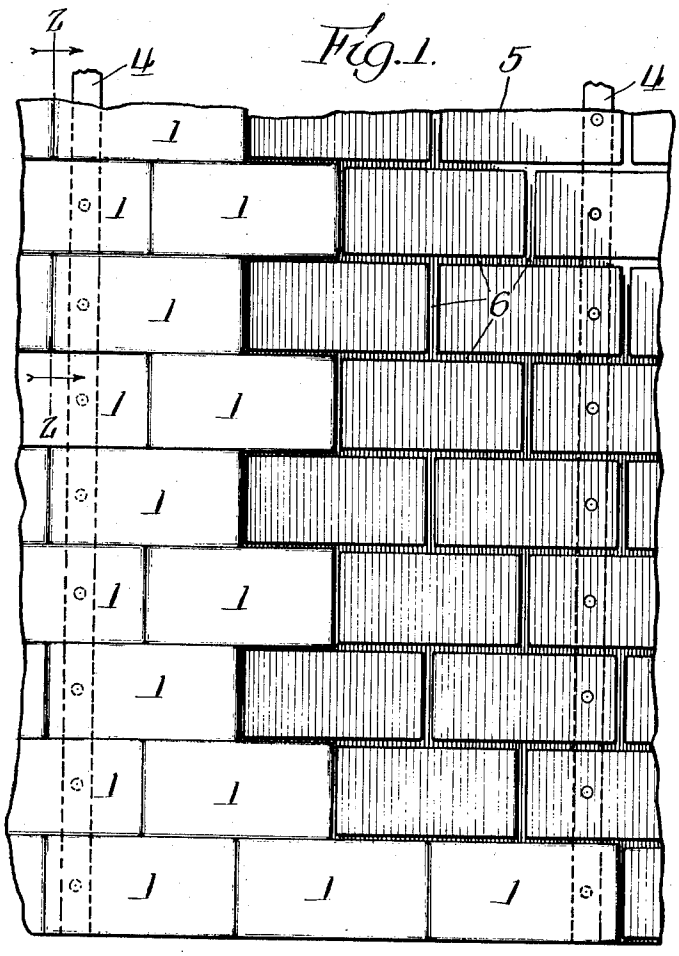


Fig. 2.

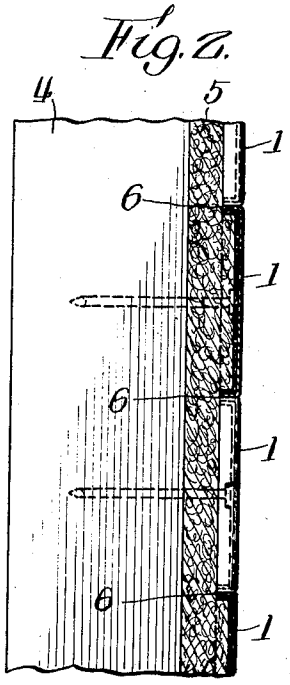
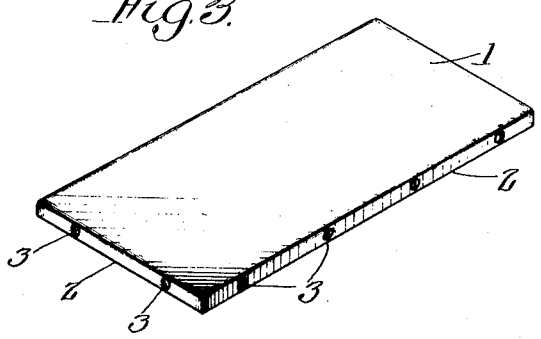


Fig. 3.



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TILED WALL OR THE LIKE.

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The method commonly used in the production of a tiled wall, wainscoting or the like comprising vitrified clay tiles includes the following steps: Expanded metal lath is secured to the studs. The lath is then coated with a mortar made of lime, sand, cement and hair. When this coat has set, another coat of sand and cement mortar is applied, the last mentioned coat being scratched or roughened. When the second coat has set, a coat of pure cement about one-fourth inch thick is applied, a smooth, plane surface being produced by means of a float. The tiles are then successively "buttered" on their backs and edges with white hydraulic cement and set against the wall. Because of the relative fragility of the tiles, it is essential that a rigid, permanent wall be provided in the manner hereinbefore described or its equivalent, before the tiles are set, as otherwise settling of the house or warping of the wall would crack the tiles or distort the tiled surface. It will be evident that the production of a wall or wainscoting faced with clay tiles requires considerable skill and time and hence is relatively expensive.

The object of the present invention is to improve and cheapen the production of tiled walls. This object I attain by substituting for clay tiles tiles formed of sheet metal and coated with vitreous enamel, said tiles having rearwardly-extending marginal flanges, and by substituting for the multiple-layer wall of lath and mortar a base or foundation consisting of a single sheet of such material as wall-board, "Celotex," "Sheetrock," "Insulex," or the like, said sheet being grooved to receive the flanges of the metallic tiles. The advantages attendant upon the present invention will be pointed out more fully hereinafter.

In the accompanying drawings, Figure 1 is a fragmentary side or face view of a wall embodying the features of my invention.

Fig. 2 is a transverse section through the wall on line 2—2 of Fig. 1.

Fig. 3 is a perspective view of one of the sheet-metal tiles.

Reference may first be made to Fig. 3 which shows a tile consisting of a metal plate 1 having marginal rearwardly-extending flanges 2. The outer face of the tile, including its flanges, is coated with vitreous enamel, the inner side of the tile preferably also being enameled. If desired, the flanges 2 may be perforated as at 3 for convenience in handling the tiles during the enameling operation, and in order to effect a better bond when the tiles are set. While the dimensions of the tiles may vary within wide limits, they may be made of the same width and length as standard clay tiles, namely, three inches wide and six inches long, the flanges being approximately three-sixteenths of an inch wide.

The vertical wooden studs constituting the ordinary framework of a wall or partition are indicated at 4 in Figs. 1 and 2. To the studs is nailed or otherwise secured a sheet of wall-board 5 or the like, shims being inserted between the studs and the sheet 5 if necessary to obtain a plane surface. The face of the sheet 5 has therein a set of grooves or channels 6 to receive the flanges 2. These grooves are formed in the process of manufacturing the sheet 5. As will be understood, the width, depth and spacing of the grooves 6 correspond to the dimensions and desired arrangement of the tiles, the width of the grooves being preferably slightly greater than twice the thickness of the flanges 2.

The sheet 5 having been nailed to the studs 4, the tiles are successively coated on their backs and flanges with white hydraulic cement, and set against the sheet 5, the flanges 2 being placed in the grooves 6. Because of the thinness of the layer or film of cement between the tiles no attempt has been made to indicate said film in the drawings. Inasmuch as the grooves 6 indicate precisely where the tiles are to be set, the placing of the tiles becomes a purely mechanical routine, requiring no skill, consuming relatively little time, and obviating the possibility of error.

The vertical dimension of the sheet 5 is preferably a multiple of the width of a tile, plus suitable allowance for the film of cement between adjacent tiles. The horizontal dimension of the sheet may be a multiple of sixteen inches, the usual spacing of the studs 4. The sheet may be of any desired thickness affording sufficient rigidity.

Since the horizontal dimension of the surface to be tiled will vary, and since it is customary to set the tiles to break joints, the tiles will be made in fractional lengths, or means provided for cutting tiles to the length necessary to fill the required space.

It will be apparent that the improved

method herein described possesses numerous advantages over the process heretofore practiced. The sheet 5 may be purchased in sizes as large as can be conveniently handled, can be sawed to fit the required space, and can be quickly secured to the studs. The channels 6 constitute guides whereby the tiles may be rapidly and accurately set in place, no attention being required to insure horizontality of the courses and vertical alinement of the broken joints, and a minimum of care being necessary to produce a plane surface. The tiles, being of metal, are much stronger than clay tiles, danger of breakage being eliminated. When cemented to the sheet 5, the tiles reinforce the sheet. The wall may be completed in a small fraction of the time required under the old system, the materials needed are less expensive than those heretofore used, and the necessity of employing highly skilled labor is obviated.

As hereinbefore indicated, the construction disclosed may be modified in various respects without departing from the spirit and scope of the invention, as set forth in the appended claims. The term "sheet" is intended to include sheets of mineral or fibrous material typified by those known as "Beaverboard" and "Sheetrock", and fibrous insulating material in sheet form such, for example, as "Celotex" and "Insulex".

I claim as my invention:

1. A tiled wall consisting of a plurality of studs, a foundation sheet secured to the studs, said sheet having in its face a set of grooves and a plurality of vitreous-enameled sheet-metal tiles covering said sheet and cemented thereto, said tiles having marginal flanges extending into said grooves.

2. A tiled wall consisting of a plurality of studs, a foundation sheet secured to the studs, said sheet having in its face a set of grooves, and a plurality of metal plates covering said sheet and cemented thereto, said plates having members extending into said grooves.

3. A tiled wall consisting of a framework, a sheet secured to the framework, said sheet having in its face a plurality of straight grooves, and a plurality of rectangular tiles covering said sheet and cemented thereto, said tiles having marginal members extending into said grooves.

In testimony whereof, I have hereunto affixed my signature.

GEORGE D. HAINES.