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O. F. NELSSON

2,090,804

BUILDING CONSTRUCTION

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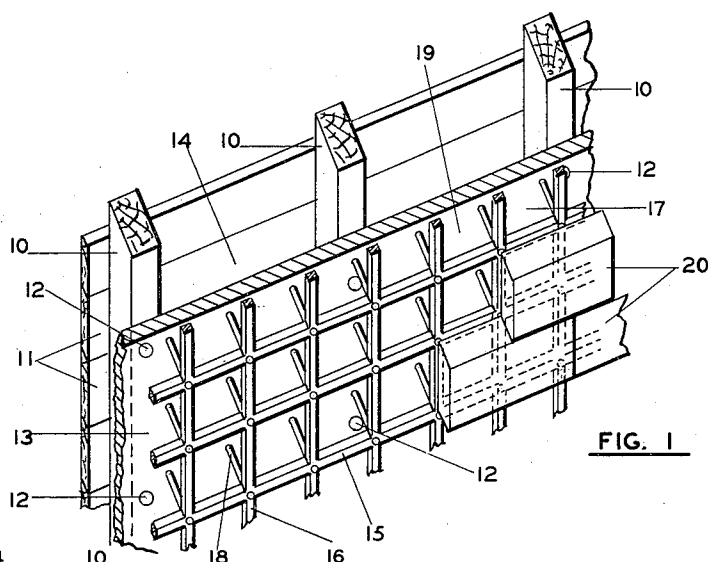


FIG. 1

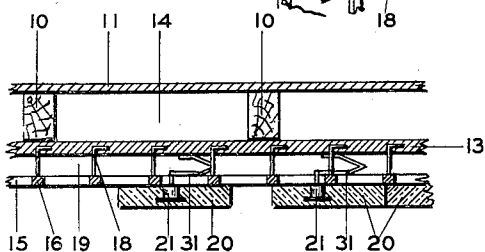


FIG. 2

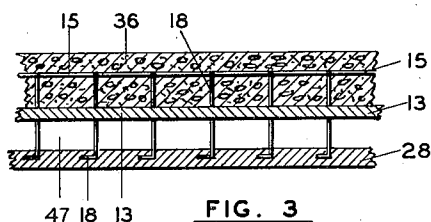


FIG. 3

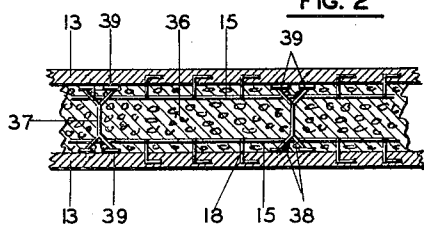


FIG. 4

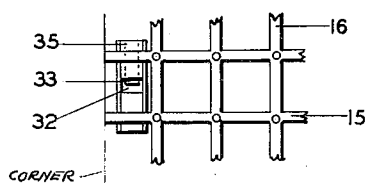


FIG. 5

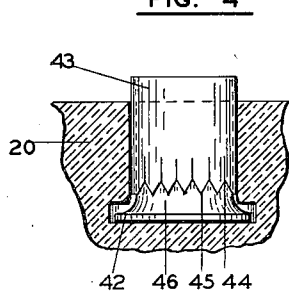


FIG. 7

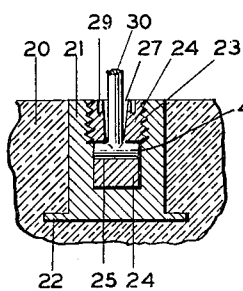


FIG. 8

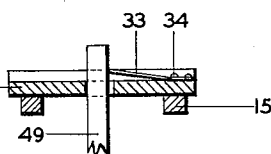


FIG. 6

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BUILDING CONSTRUCTION

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7 Claims. (Cl. 72-30)

This invention relates primarily to a building construction such as walls, ceilings, and floors, and more particularly to a novel means for securing bricks, tiles, plates or facing members to walls, either the inside or the outside, without the use of cement, nails or plastic material.

The object of the invention is to provide a construction that shall be sound-proof and airtight due to the provision of an air space.

Another object of the invention is to provide a construction that may be employed in several different combinations and in connection with old as well as new building operations.

Another object of the invention is to provide a construction that shall be cheap, durable, efficient, and readily installed.

A further object of the invention is to provide in a building construction, means whereby facing bricks, plates, and other facing members may be rigidly and securely attached without the use of cement and without the attaching means showing on the face of the brick.

Another object being to provide a construction that when employed in connection with concrete walls, shall provide an added reinforcement to the regular construction.

Another object of the invention is to provide means that may be employed as a mold for a concrete wall and which is intended to be left in place after the concrete is poured to form a finished surface for both sides of the wall.

With these and other objects in view, my invention consists in certain new and useful construction and combination of parts as will hereinafter be fully described and claimed and further illustrated in the accompanying drawing which forms a part hereof, and in which like figures of reference refer to corresponding parts in all of the views, and it is understood that slight changes may be made without departing from the spirit of the invention.

In the drawing:

Figure 1 is a fragmental sectional view of a wall embodying the features of my invention, and is shown in perspective.

Figure 2 is a fragmental sectional view of a wall showing the method of attaching the facing members thereto.

Figure 3 is a fragmental sectional view of a wall showing a modified construction, or the application of the device to cement work.

Figure 4 illustrates the method employed by the invention in the construction of concrete walls in which the molds provide one or both of the finished surfaces.

Figure 5 illustrates the method employed for attaching the tiles to the supporting grill when adjacent to a corner, doorway or window.

Figure 6 is a detail view of a modified form of the attaching means.

Figure 7 is an enlarged detail view of means for securing a repair bushing into a brick or tile.

Figure 8 is an enlarged detail view of the bushing.

Referring to the drawing:

In Figure 1, I have shown in a wall the usual uprights or studding 10 to the outer face of which are attached the siding 11.

To the inner face of this studding 10 is secured by the nails or other attaching means 12, a wall board 13 of some suitable material such as plywood or one of the well-known ceiling composition boards, leaving an air space 14 between it and the siding 11, as in the usual construction.

Secured to this wall board 13 and spaced therefrom is a metal grid formed of the crossed rods 15 and 16 which may be of any suitable size, shape, and spacing and either set at right angles to each other as shown or placed at an angle to each other to form the openings or spaces 17.

To the junctions of these rods 15 and 16, are secured one end of the spacing or mounting pins 18 which project at right angles to the plane of the grid.

The inner ends of these pins 18 are inserted into and secured within the wall board 13, thus securing the grid to the wall board 13 in a permanent and rigid manner, and spaced therefrom to form a second air space 19 between the grid and the wall board 13.

The facing members or tiles 20 are provided in their manufacture with an insert or bushing 21 which is molded therein flush with the rear face of the tile 20, and which comprises a metal bushing 21 formed with an anchoring flange 22 and a threaded bore 23 within which is mounted a plug 24 formed with a transverse slot 25 in the outer end thereof, a threaded nut 26 having an axial tapered bore 27 and provided with means for rotating the nut, such as the holes 29 for a pin wrench.

The tile 20 attaching means comprises a resilient arm 30 having a bent body portion 31 and a T-headed end 47 adapted to be inserted through the bore 27 of the nut 26 and engaged by the transverse slot 25 of the plug 24 in such a manner that the arm 30 may be set at any desired angle with the rear face of the tile 20, and secured from rotation by tightening the nut 26 and the

plug 24 within the bore 27, but allowing the arm 30 to swing on the T-headed end 47 as a pivot and as limited by the taper of the bore 27.

To mount the tile 20 upon the grid, the arm 30 is inserted through one of the spaces 17, and the tile 20 moved to bring the arm 30 back of one of the rods 15 or 16 as the case may be to compress the bent body 31 of said arm 30 between the rod and the wall board 13 creating friction between the rear face of the tile 20 and the front face of the rods 15 and 16 to retain the tile 20 in place.

It will thus be seen that the arm 30 may be set in any suitable relation with the rear face of the tile 20 so that it can be engaged with the proper rod by sliding the tile 20 upon the face of the grid.

In securing the tiles 20 adjacent to a corner, window or door casing, where it is not possible to move the tile 20 either up, down or sidewise, a clamp plate 35 is employed which is formed with a transverse opening 32 into which projects the end of a resilient latch 33 secured into the clamp as at 34, and in place of the arm 30, a straight arm 49 is employed; the clamp 35 being placed in position back of and engaging one or more of the rods and the end of the arm 49 is inserted through the opening 32 within which it is held from removal by the latch 33.

As shown in Figure 3, the grid is composed of the bars 15 and 16 and provided with the pins 18 projecting from one side thereof; the pins having their ends anchored in the wall board 13 and passing through and secured to a board 28 which with the wall board 13 forms an air space 47; the grid being embraced by the concrete 36.

The construction shown in Figure 4, comprises two wall boards 13 which not only serve the purposes of forming two finished wall surfaces but are also used as molds between which the concrete 36 may be poured. These wall boards 13 have secured thereto the grids 15 and 16 by the pins 18 and are spaced apart and retained together by the members 37 which are formed with the hooks 38 engaging the grid and the plates 39 abutting the boards 13 to retain the wall boards in place.

Should one of the bushings 21 become broken out of the tile 20, a repair bushing 41 is inserted as shown in Figure 7, the body of this bushing 41 being of less diameter than the original bushing, and curved 46 where it joins the flange 42 and a tube 43 is provided to fit over the body of the bushing 41 and having its lower end slit as at 44 to form teeth 45 than when the tube 43 is forced down will curve outward following the curve 46 to form a new flange and anchor the bushing 41 in the tile 20.

Having thus described my invention, what I claim is new and desire to secure by Letters Patent, is:

1. In a building construction of the class described, comprising a wall board adapted to be incorporated into the building, a grid composed of a plurality of intersecting rods in spaced relation with each other forming openings, and

means for attaching the grid to said wall board in spaced relation therewith to provide an air space between said grid and said wall board.

2. In a building construction of the class described, comprising a wall board adapted to be incorporated into the building, a grid composed of a plurality of intersecting rods in spaced relation with each other forming openings, means for attaching said grid to said wall board in spaced relation therewith to provide an air space between said grid and said wall board, a series of facing members and means for securing the same to the grid.

3. In a building construction of the class described, comprising a wall board adapted to be incorporated into the building, a grid composed of a plurality of intersecting rods in spaced relation with each other forming openings, means for attaching said grid to said wall board in spaced relation therewith to provide an air space between said grid and said wall board, a series of facing members and means for securing the same to the grid, and means for adjusting the securing means.

4. In a building construction of the class described, comprising a wall board adapted to be incorporated into the building, a grid composed of a plurality of intersecting rods in spaced relation with each other forming openings, means for attaching the grid to said wall board in spaced relation therewith to provide an air space between the grid and said wall board, a series of facing members, means for adjustably securing the same to the grid comprising a bushing mounted in said facing member, and a resilient arm adjustably secured in said bushing and adapted to engage with said grid.

5. In a building construction of the class described, comprising a wall board, a grid composed of intersecting cross bars forming openings therebetween, a series of pins secured to the intersections of said grid and to said wall board and spaced therefrom to form an air space, a series of facing members, bushings secured therein and resilient arms adjustably secured therein and adapted to be engaged with said grid to attach said facing members to said grid.

6. A device for retaining tiles and the like to walls, comprising in combination with a tile, of a bushing secured therein, said bushing formed with a threaded bore, a plug mounted in said bore, one end of said plug formed with a transverse slot, a nut threaded into said bore upon said plug, said nut formed with an axial bore, and a curved resilient arm, one end of said arm formed with a bent portion adapted to be retained by said nut and the slot in said plug in an adjustable relation with the tile.

7. In a building construction of the class described, comprising a pair of mold boards and finished wall facings, of grids secured to the adjacent sides thereof, and a series of transverse separating and retaining members secured to said grids for maintaining said boards in spaced relation with each other.

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