Aug. 9, 1938. H. JANSEN 2,126,394

TILE BLOCK

Filed April 1, 1937

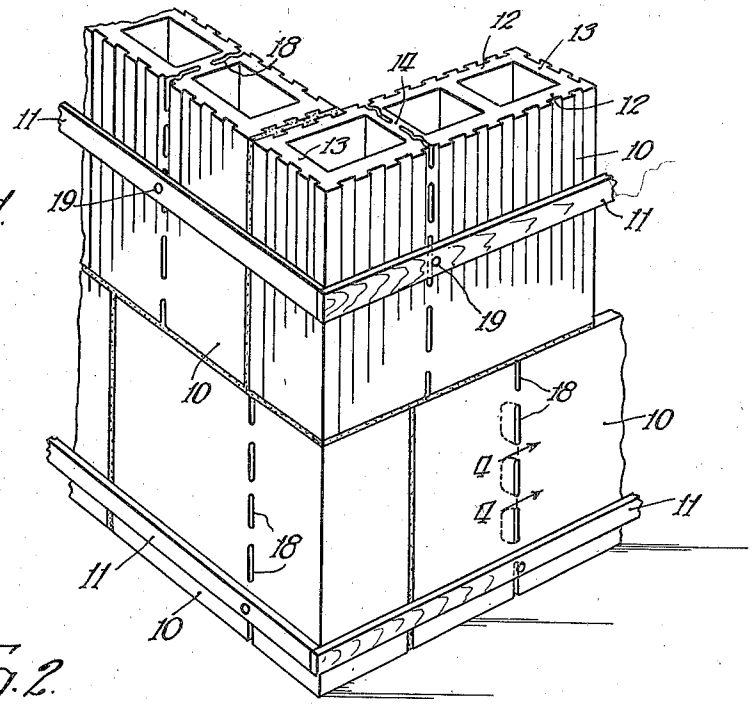


Fig. 1.

Fig. 2.

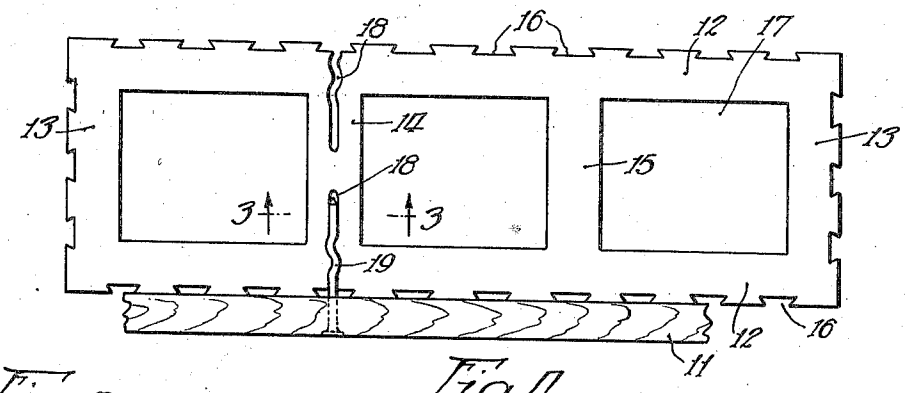
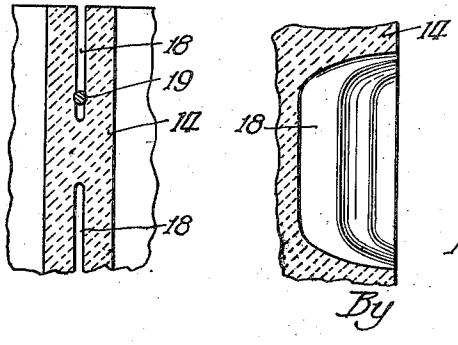


Fig. 3.

Fig. 4.



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2,126,394

TILE BLOCK

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Application April 1, 1937, Serial No. 134,314

11 Claims. (Cl. 72—41)

My invention relates to building materials and more particularly to tile or blocks of similar material suitable for use in buildings and of the same general character as the tile shown in my United States Patent No. 2,000,565 issued May 9, 1935, and described in my co-pending application, Serial No. 88,605, filed July 2, 1936.

Tiles of the character described are adapted for a variety of uses in buildings and when used as wall material, they are preferably but not necessarily made of a width approximately three times their thickness, since these relative dimensions result in a block of a size which can be conveniently handled. The weight of the tile is minimized without undue sacrifice of strength by providing it with a plurality of recesses or openings extending the full length of or from end to end of the tile, the recesses being preferably rectangular and having as large lateral or cross-sectional dimensions as feasible and being separated by narrow walls integrally formed with and of substantially the same thickness as the side and edge walls of each tile.

The invention has among its objects the production of a tile block of the kind described which is so constructed that without the drilling of holes or the use of toggle or expansion bolts, lag screws and the like, a variety of other materials such as fixtures, baseboards, moldings, trim, wall board and the like may be readily and easily secured and permanently anchored to the tiles. The invention has particularly as an object the construction of tile blocks providing means by which said materials and fixtures or the like may be readily and firmly secured in place by means of nails or similar securing devices, the same being driven into the tile with a hammer or other suitable implement.

Many other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosure herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described and more particularly pointed out in the appended claims.

In the drawing, wherein like reference characters indicate like or corresponding parts:

Fig. 1 is a perspective view of a plurality of tiles constructed in accordance with the principles of my invention and arranged in assembled relation;

Fig. 2 is an enlarged top end view of one of the tiles illustrating more in detail certain novel features characterizing the invention; and

Figs. 3 and 4 are respectively taken substantially on lines 3—3 and 4—4 of Fig. 2.

Referring now more particularly to the drawing, Fig. 1 shows a plurality of my improved tile blocks, each indicated as a whole by the numeral 10, and assembled in a fragment of wall construction with other construction elements such as strips 11 formed of wood or the like attached thereto.

The respective blocks 10 are shown as of hollow tile construction having oppositely disposed side walls 12, end walls 13 and transverse walls 14 and 15 dividing the interior space into a plurality of longitudinally extending recesses 17 and in the assembly the blocks are so arranged that the recesses extend vertically or horizontally. The walls 14 and 15 are integrally formed with the side walls 12, the latter being provided with longitudinally extending undercut grooves 16 by means of which plaster, mortar or the like may be keyed thereto either for fastening the blocks together or for retaining plaster or other coats of finishing material on the surface of the tile.

Tile blocks of the character described are usually hard and brittle when ready for use and as a result drilling of holes therein to receive screws, nails or other fastening means is expensive, time consuming and frequently results in damaging or cracking the blocks. This difficulty has been hitherto overcome in part by the provision of continuous longitudinally extending grooved recesses formed in the side walls of the tile when the material is plastic.

The grooved recesses are bounded by irregular surfaces and are provided as a receptacle into which nails are adapted to be driven and distorted slightly by having to conform to the irregular bounding surfaces. The grooved recesses are normally of substantial depth and their existence creates a weak zone in the tile and requires that the tile material be substantially increased adjacent the grooves. The grooved recesses are formed while the tile is plastic and when reinforced by extra material the tile is frequently bent or distorted along the recessed line by handling before the material has hardened. After the tile material has set, the capacity of the recessed portions to resist stresses is diminished unless reinforced by additional material. The increased amount of material adds to the weight of the blocks and even more to their cost since the extra material necessarily diminishes the area of the longitudinal recesses or apertures and in order that such increase of material be a minimum, the cross-sectional area of

the apertures is made irregular. Blocks having such irregular apertures are obviously more expensive than those having recesses or apertures of square, rectangular or other symmetrical cross-sections.

The invention provides a tile having the necessary grooves in its outside walls so constructed and positioned that no extra material is required and without weakening the tile. This result is accomplished by providing a plurality of longitudinally aligned grooves 18 extending from either or both side walls 12 into the separator or spacer walls 14 and 15 and of a depth adapting the grooves to receive a nail. The distances between the longitudinally aligned recesses 18 are such that the tile is not unduly weakened thereby particularly as to its load carrying capacity or resistance to compression which is normally the only stress to which wall tiles are subjected.

The grooved recesses 18 are shown as more or less sinuous in the direction of their depth as best illustrated in Fig. 2. The ends of the recesses 18 are convergent inwardly and the normal width of the recesses is approximately the diameter of a nail 19 driven therein as shown in Fig. 3 and as providing means for fastening the strip 11 to the tile. The sinuosity of the recesses 18 is relatively slight so that a nail can be easily driven therein, the sinuosity being sufficient however, to distort the nail in an amount that it is held securely in position.

The tile blocks 10 may be set with the recesses 18 extending vertically or horizontally or a portion of the blocks may be set with the recesses extending vertically and a portion extending horizontally, depending upon the preference of the user and the devices that are to be attached to the blocks, the tiles being equally strong in either direction.

Tiles having a plurality of recesses 18 spaced as shown are as capable of resisting any direct load stresses as are unrecessed tiles and are substantially as resistant to such distortion stresses as may be caused by unequal settling of the wall.

It is a simple matter to attach furring strips, wall board and other materials to a wall or ceiling in a minimum of time and with a minimum of labor, the only equipment required being a hammer and nails if tiles embodying the principles of the invention are used. The grooved recesses are easily and cheaply formed while the material is plastic, and with very little or slight expense over ordinary tiles.

Thus it will be seen that I have provided an improvement in tiles of the kind described whereby fixtures and other material may be fastened to the tile without requiring additional tile material as reinforcement contiguous to the fastening means and without weakening or rendering the tile unfit for its normal load carrying function.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of the invention, hence I do not wish to limit myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:

1. A hollow tile block having a partition wall connecting the opposite side walls, one of said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough and terminating in said partition wall.

2. A hollow tile block having a partition wall connecting the opposite side walls, said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough, said recesses also extending into and terminating in said partition wall.

3. A hollow tile block having a partition wall connecting the opposite side walls, one of said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough, said recesses terminating in said partition wall and having transverse cross-sectional dimensions slightly less than the diameter of nails they are designed to receive.

4. A hollow tile block having a partition wall connecting the opposite side walls, one of said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough, said recesses terminating in said partition wall and having transverse cross-sectional dimensions slightly less than the diameter of nails they are designed to receive, the thickness of said side wall being less than and the depth of said recess being greater than the length of said nails.

5. A hollow tile block having a partition wall connecting the opposite side walls, said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough, said recesses terminating in said partition wall and having transverse cross-sectional dimensions slightly less than the diameter of nail they are designed to receive.

6. A hollow tile block having a partition wall connecting the opposite side walls and integrally formed therewith, one of said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough and terminating in said partition wall, one bounding side face of said recesses being sinuous in the direction of their depth.

7. A hollow tile block having a partition wall connecting the opposite side walls and integrally formed therewith, said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough and terminating in said partition wall, the bounding side faces of said groved recesses being sinuous in the direction of their depth.

8. A hollow tile block having a partition wall connecting the opposite side walls and integrally formed therewith, one of said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough and terminating in said partition wall, the transverse cross-sectional dimensions of said recesses being slightly less than the diameter of nails they are designed to receive, and the bounding side faces of said grooved recesses being irregularly sinuous in the direction of their depth.

9. A hollow tile block having a partition wall connecting the opposite side walls and integrally formed therewith, said side walls forming boundaries for a plurality of elongated longitudinally aligned grooved recesses extending therethrough, said recesses terminating in said partition wall and having transverse cross-sectional dimensions slightly less than the diameter of nails they are designed to receive, the thickness of said side wall being less than and the depth of said recesses being greater than the length of said nails, the opposite bounding side faces of said recesses being irregularly sinuous in the direction of their depth.

10. A hollow tile block having a partition wall

connecting and integrally formed with opposite side walls of the block, one of said opposite side walls providing a relatively short recess terminating in the partition wall, the transverse cross sectional dimension of the recess being approximately equal to the diameter of nails it is designed to receive and its depth being approximately equal to or greater than the length of such nails, one bounding side face of the recess being sinuous in the direction of its depth.

11. A hollow tile block having a partition wall connecting and integrally formed with opposite side walls of the block, said opposite side walls each providing a relatively short external recess in alignment with said partition wall, the transverse cross sectional dimensions of said recesses being approximately equal to the diameter of nails they are designed to receive, the opposite bounding sides of each recess providing a longitudinally extending groove contiguous to a longitudinally extending projection, the groove in each face being opposite to and spaced from the projection in the other face to maintain uniformity of spacing of the bounding side walls of the recesses throughout their depth.

HENRY JANSEN.