No. 646,178. Patented Mar. 27, 1900.

H. HUBERT.

TILE AND MEANS FOR SECURING SAME IN PLACE.

(Application filed Apr. 13, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 8.

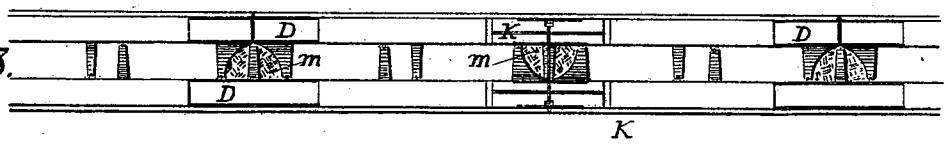
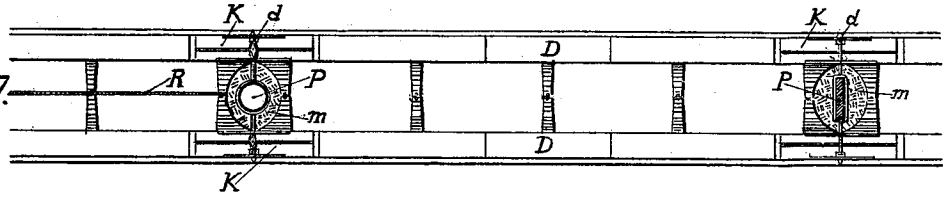


Fig. 7.



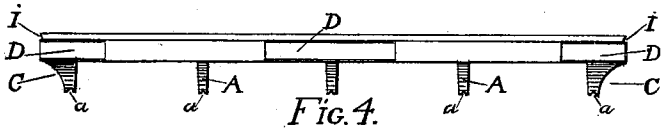


Fig. 4.

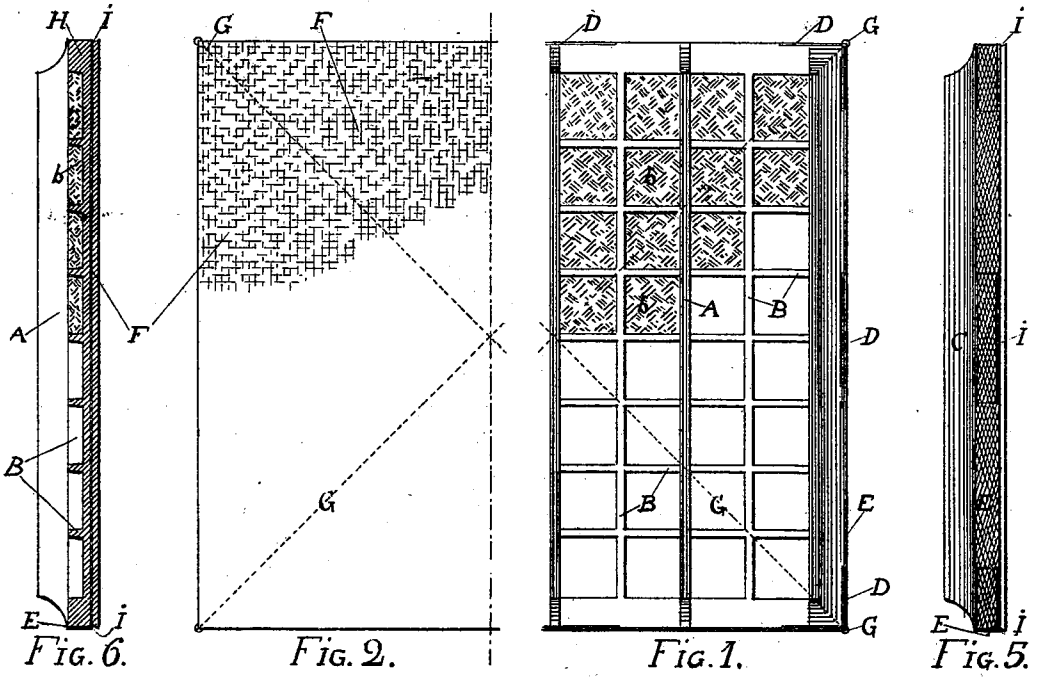


Fig. 6. Fig. 2. Fig. 1. Fig. 5.

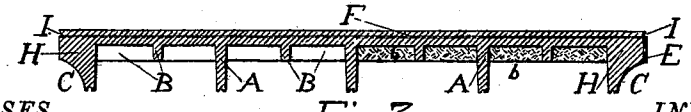


Fig. 3.

WITNESSES.

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TILE AND MEANS FOR SECURING SAME IN PLACE.

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(No Model.) 2 Sheets—Sheet 2.

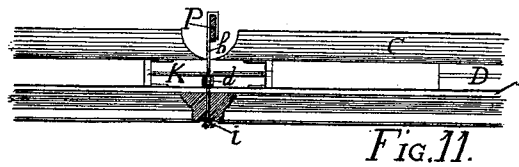


Fig. 11.

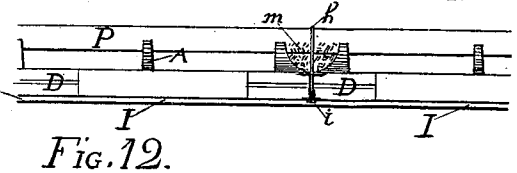


Fig. 12.

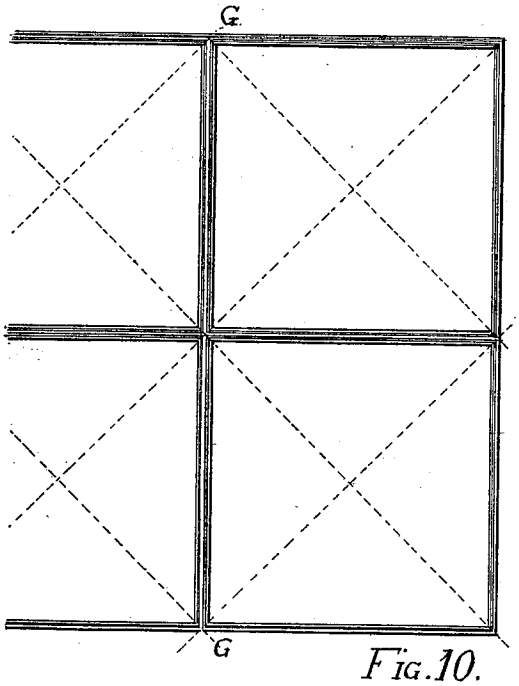


Fig. 10.

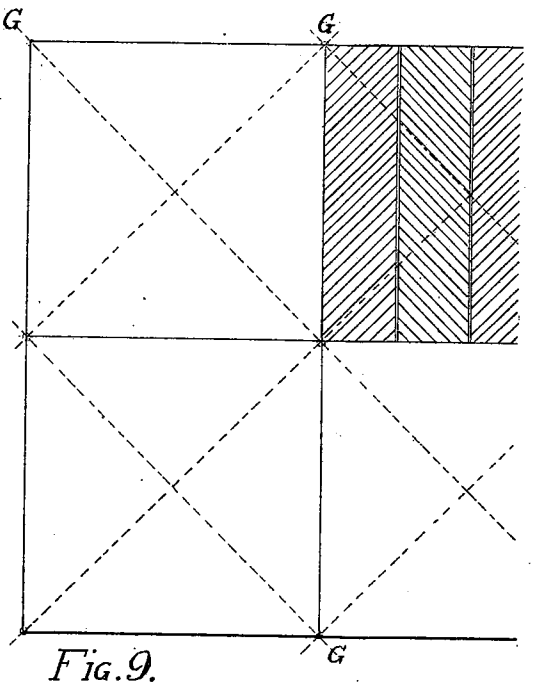


Fig. 9.

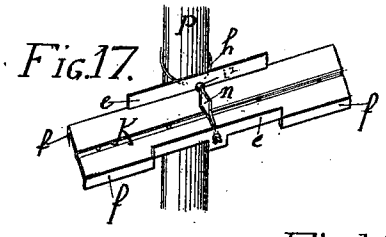


Fig. 17.

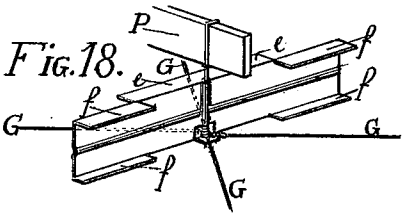


Fig. 18.

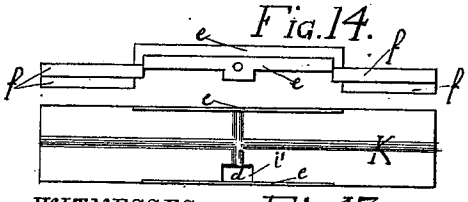


Fig. 14.

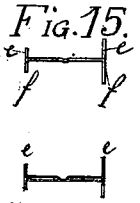


Fig. 15.



Fig. 16.

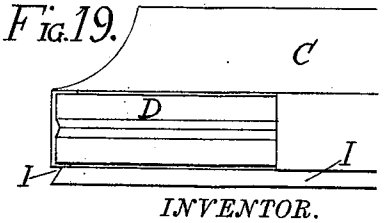


Fig. 19.

WITNESSES.

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UNITED STATES PATENT OFFICE.

HENRI HUBERT, OF DETROIT, MICHIGAN.

TILE AND MEANS FOR SECURING SAME IN PLACE.

SPECIFICATION forming part of Letters Patent No. 646,178, dated March 27, 1900.

Application filed April 13, 1898. Serial No. 677,458. (No model.)

To all whom it may concern:

Be it known that I, HENRI HUBERT, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Tiles and Means for Securing the Same in Place; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to tile and the means for fastening tile in place on walls and ceiling; and it has for its object an improved finishing-tile that is to be used for an interior construction and finish or the exterior coatings of buildings.

The particular object of the invention is to produce a tile that is adapted to be secured to the wall of a building or to the ceiling of a building by means of hooks and socket-plates so arranged as to be entirely concealed when the tile is in place.

A second object of the invention is to produce a tile that is adapted to engage with adjacent tiles with an interposed cushion of flexible material, which will enable the adjacent tiles to be drawn into tight contact without danger of breaking or marring the surface of the tile in any way.

Another object of the invention is to produce a tile that can be placed back to back with a similarly-constructed tile and with an interposed deadening of flexible material, like felt or some similar material, or without such interposed deadening, but with projections on the one tile cemented to corresponding projections on the other, or the same tile may be used in a wall in which similar tiles are placed on the opposite face of the wall with the projections lapping by, so as to make a wall of less thickness than where the two are cemented together, as just previously described, or there may be a space between the two facings—such, for instance, as the spaces arranged for sliding doors to draw back into.

Another object of the invention is the socket-piece by means of which the tile are held by a wire hook or bolt to the studding or joist.

Still another object of the invention is to produce a tile with moldings on the rear side, near the edges thereof, of peculiar shape, such that when the tile are assembled there will be a round or substantially round hole surrounding the studding, and the space between the studding and the tile and molding may be filled with suitable material, so as to obtain and form a strong and solid bond with the studding; and still another object of the invention is to produce a tile the back of which is formed with cavities into which may be pressed or placed material that is non-conducting of sound or fire, or both, and which is cheaper than the material of which the tile proper is made.

Still another object of the invention is to produce a tile with a webbing of fiber or wire embedded therein and with diagonal cross-wires embedded therein. Such cross-wires engaging with the netting are firmly in the tile and engaging with holding-screws hold the tile firmly in place.

In the drawings, Figure 1 is an elevation of the rear of the tile. Fig. 2 is a front elevation, on part of which are indicated the cross-wires and woven web which lie in the body of the tile. Fig. 3 is a horizontal section. Fig. 4 is a top edge view. Fig. 5 is an end edge view, and it shows also the joint ribbon or packing provided on two adjacent or four edges of the tile. Fig. 6 is a vertical section. Fig. 7 is a horizontal plan of tablets set in wall form and arranged to form a partition of full width. Fig. 8 is a plan view of tile set in wall form of half the thickness of Fig. 7. Fig. 9 indicates plain tiling. Part of it shows rough faces adapted to be smooth-faced on the wall. Fig. 10 represents paneled tiling with molding covering the joints. Fig. 11 is a longitudinal section of a ceiling with moldings or adornments, showing the attachment of same with hook and nut passing through the clamp. Fig. 12 is a cross-section of a ceiling with plain surfaces. This figure shows a clamp with hook and nut inside the facing. Fig. 13 is a plan of the socket arranged to hold the tiles in place on the wall. Fig. 14 is a front view of the same socket. Fig. 15 shows one end of the socket. Fig. 16 is a cross-section of the central portion of the socket at the middle. Fig. 17 is a perspec-

tive of a socket in the position it takes when holding a vertical wall. Fig. 18 is a perspective of the socket in the position it takes when holding a ceiling.

In Fig. 17 the means for holding the socket to the vertical post or stud is shown as a looped wire, being the same form which is shown in Fig. 7. In Fig. 18 the device shown for suspending the socket is shown as a hook terminating at its shank end with a screw.

The tiling may be in any desired geometrical figure, preferably rectangular, either squares or parallelograms. Its face or obverse side may be finished flat and smooth or in any ornamental configuration which may be desired, or it may be rough and provided with opposed diagonally-running undercut beads to form key or clench, as shown in Fig. 9. The reverse side has a marginal cornice running entirely around the tile, and those parts of the marginal cornice II which are intended to be placed vertically are concaved with a curved rabbet C. Between those vertical sides which are rabbeted are vertical ribs A, at the rearmost side of which is a groove *a*, adapted to receive putty or cement, as hereinafter described.

Between the vertical ribs A are shorter ribs B, both vertical and horizontal, dividing the tile into small squares. This secondary ribbing is for the purpose, first, in order that the body of the tile may be made thin and light and yet strong, the thin portion between the ribs being small and the ribs being large enough to add the requisite amount of strength to the tile. The second purpose is to enable the cavities between the ribs to be filled with some porous material, such as that indicated at *b*, which will act to prevent the vibration and consequent transmission of sounds through the walls. That portion of the tile which lies in front of the ribs and constitutes the body of the tile has embedded in it a fiber or wire-netting F, and in each tile two cross-wires G, which extend from corner to corner of the tile, and each of which wires terminates at each end with an eye G′, adapted to engage over the hook or pin by which the tile is held in place.

At the corner of each tile and at the middle of each side of each tile is a recess D. This recess D extends from the extreme back of the molding H to an angular rabbet I, that entirely surrounds the tile. The rabbet I surrounds the tile and furnishes a small angular groove immediately at the rear of the edges, running around the front of the tile, into which groove when the tiles are hung is placed a cement or putty used to completely fill the cracks or joints between adjacent tiles.

The joint edges of the marginal cornice are provided with a strip of ribbon of any suitable flexible cushioning material, which may be felt, cloth, or any similar material. Such a strip is indicated at E in Figs. 1, 3, 5, and 6. There may be interposed between the two walls a sheet of such material, as indicated at R in Fig. 7.

Means by which the tile are hung to the wall or ceiling are shown in Figs. 7, 8, 11, 12, 13, 14, 15, 16, 17, and 18.

The studding of the wall are composed, preferably, of iron pipe or tubing, angle-bars, or rectangular bars of considerably-smaller size than the thickness of the wall which is to be constructed. Around the studding are placed hooks, which in shape conform to the shape of the stud or joist with which they are used. A wire, such as that shown in Fig. 17, may be bent around the stud, or a hook and nut, such as that shown in Fig. 18, may be used.

The tile-support consists of a metal saddle, (shown in Figs. 13 to 18,) and this saddle has its main part of a flat sheet of metal, with one or more stiffening-flutings running lengthwise of it and with the sides of the metal cut and bent so that at each end there are flanges *f f* extending to one side and at the middle there are flanges *e e* extending in the other direction, making a double trough, as it were, the cavities of which lie back to back. At the center a portion *d* is cut from the body and left straight with one of the flanges *e*. This leaves in the body of the saddle, midway between the ends and at that side which is intended to lie farthest from the stud, a slot *i*′. In the opening are gathered the meeting ends of the cross-wires that project from the corners of the tile. At the other side of the holder, opposite the slot *i*′ through the flange *e*, is a round hole i^2 for the passage of the stem of the hook *h*. The hook *h*, if made of wire, as shown in Fig. 17, passes through the hole i^2 and through a corresponding hole in the flange opposite and is secured on the outside by either bending the ends of the wire, as shown in Fig. 17, or by running a nut on a screw-threaded terminal, if that style be employed. With the wire connection shown in Fig. 17 after the protruding ends of the wire are bent over to engage outside the flange *e* of the saddle the saddle is drawn tightly up against the stud P by inserting a wedge between the wires and spreading them, as indicated at *n*. This form of support is used, preferably, in those cases where tile without the cross-wires G are used or where the cross-wires G are not engaged over the supporting hook-stem. Where the cross-wires G are employed, I prefer to use the hooks shown in Fig. 18, in which the hook-stem is passed through the overlying eyes of the meeting corners of the tile, as indicated in Figs. 11 and 12 and as indicated in Fig. 18, where the position of the wires with the tile removed therefrom is shown.

In erecting the wall the studding are put in place and a row of tiling, with hooks and supports K, placed in position and a second row of tiling placed in position adjacent

thereto, so that both cavities of the support K will be filled. In placing the tile in position the proper cement is placed between adjacent tiles within the cavities formed between adjacent tiles by the rabbets I. After placing the tile in position the wires or hooks *h* are properly caught through the corner-eyes G and the nut run on the protruding end of the hook H, and, if desired, the nut is covered with a cap of plastic material similar to the material of which the tile is formed.

By placing the tiles exactly opposite each other in a double wall, as is shown in Fig. 7, there is formed around each stud a circular cavity, within which the stud lies, and is so arranged as to be entirely free from contact with the tile. The space between the stud and the tile may be filled with cement or insulating material, as indicated in Fig. 7, and the grooves *a* between the meeting edges of the wide ribs A are preferably filled with cement, so that the opposite tiles are not only held by the studs and holders K, but are cemented together.

If a thinner wall is desired, it may be built without studding. In this case the tile are set to break joints, so that those running lengthwise of one face of the wall are arranged with their joints alternating with those of the other face of the wall. In this case a pair of holders K are arranged and held together by bolts, which pass from one side to the other of the wall and tie the holding-sockets K together, and one set of sockets engages with the upper and under sides of tiles at the middle of the tiles. The opposite holding-socket engages with the meeting ends of the two tiles above and the meeting ends of the two tiles below.

It is easily seen that if solid walls are desired the entire space left between the two facing tiles may be filled with any suitable material.

What I claim is—

1. A tile provided with a marginal cornice on its reverse side, with two of the cornice-lines rabbeted and with recesses for the reception of a support, substantially as described.

2. A tile provided with a marginal cornice on its reverse side, and with grooved ribs crossing the tile, substantially as described.

3. A tile provided with a marginal cornice on its reverse side, with two rabbeted cornice-moldings, and with grooved ribs parallel to the rabbeted cornice-moldings, substantially as described.

4. The combination of a tile, with wires embedded therein crossing the tile diagonally, and projecting from the corners of the tile, substantially as described.

5. The combination of a tile, with wires embedded therein crossing the tile diagonally, projecting from the corners and provided with terminals adapted to engage supports, substantially as described.

6. In combination with a tile, a ribbon of cushioning material secured to the edge of said tile, substantially as described.

7. A tile having an angular rabbet around its edge and a recess at each side of the tile adapted to receive a saddle, substantially as described.

8. In combination with a tile provided with embedded wires having projecting ends, a saddle arranged with an opening to receive the projecting ends of said wire, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRI HUBERT.

Witnesses:

CHARLES F. BURTON,

VIRGINIA M. CLOUGH.