March 18, 1924. 1,486,935

J. SWANSON ET AL.

FIREPROOF BUILDING CONSTRUCTION

Filed Aug. 4, 1919

Fig. 1

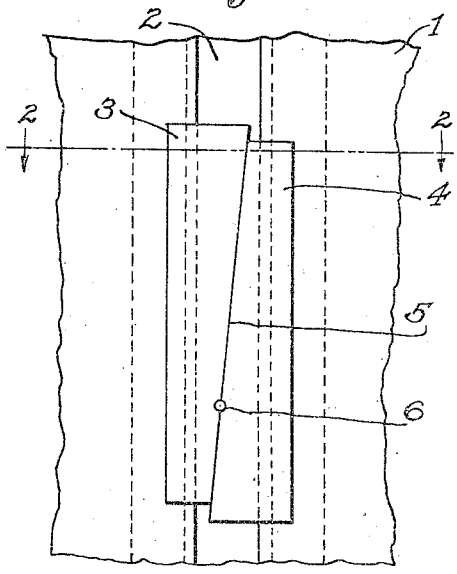


Fig. 3.

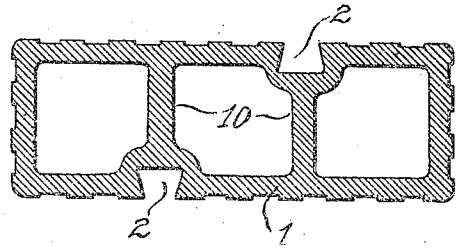


Fig 4

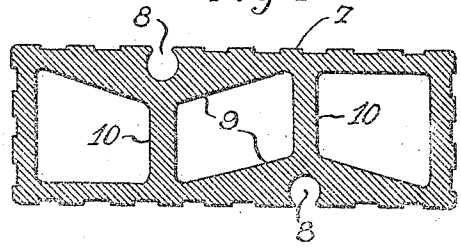
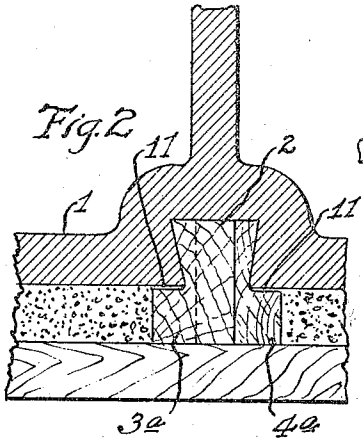
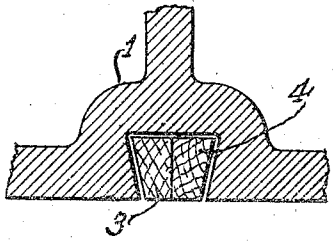


Fig. 2





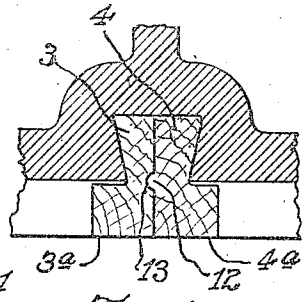


Fig 5

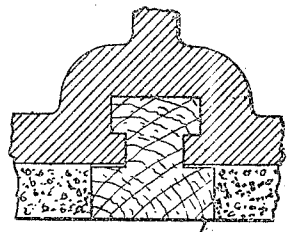
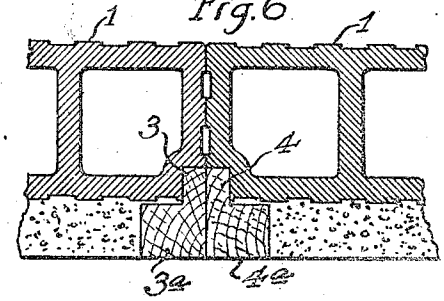


Fig. 7

Fig. 6



Inventor
John Swanson
Lyle B. Lockhart
By Parker & Coates Attys

Patented Mar. 18, 1924. 1,486,935

UNITED STATES PATENT OFFICE.

JOHN SWANSON AND LYLE C. LOSHBOUGH, OF CHICAGO, ILLINOIS.

FIREPROOF BUILDING CONSTRUCTION

Application filed August 4, 1919. Serial No. 315,267.

To all whom it may concern:

Be it known that we, JOHN SWANSON and LYLE C. LOSHBOUGH, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fireproof Building Constructions, of which the following is a specification.

This invention relates to improvements in fireproof building constructions and has for its object to provide a new and improved device of this description. In fireproof buildings where fireproof material such as tile or the like is used difficulty is encountered in fastening the trim, rails or other parts which must be fastened to the walls or ceiling, and the present invention has for its object to provide a simple, effective, and cheap construction whereby any part which it is required to fasten to the wall or ceiling can be easily and quickly attached thereto.

The invention has other objects which are set forth in the description hereto attached. The invention is illustrated in the accompanying drawings, wherein—

Fig. 1 is a front elevation of a portion of a wall showing a construction embodying the invention;

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a sectional view of a tile or building section showing one form of groove;

Fig. 4 is a view of a tile or building section showing another form of groove;

Fig. 5 is a view showing a modified form of fastener receiving device;

Fig. 6 is a further modification.

Figs. 7 and 8 are further modifications.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawings we have shown in Figs. 1 and 2 one form of construction embodying the invention. In this construction the fireproof section or tile 1, of which the wall or ceiling is composed, is formed with a groove 2 therein. This groove may be of any desired shape. Contained within this groove is a fastener receiving device for receiving the fastener for fastening the trim, rail or other device to the wall. When this fastener is a nail or screw or the like the fastener receiving device will be made of some material which will readily receive the nail or screw, such as wood, composition or the like. We prefer to form the groove and the fastener receiving device in such a way as to get a wedge action so that the fastener receiving device will be securely held in position and may be placed in the tile or section either before or after the wall is formed.

In the construction shown in Figs. 1 and 2, the groove 2 is enlarged at its bottom or is in the form of a dovetailed groove. The fastener receiving device is made in two parts 3 and 4, the two parts being wedge shaped and having inclined meeting edges 5. This construction can be placed in position after the wall is formed. The two parts of the fastener receiving device preferably have the projecting parts 3^a and 4^a so as to form a larger area or surface for the fastening device. It will be noted that the portions of the pieces 3 and 4 located in the groove 2 have different cross sectional areas at different parts of the groove, the cross sectional area of one decreasing from one end to the other, and the cross sectional area of the other increasing. In putting this device in the groove after the wall is formed, the two parts are moved so that one projects a considerable distance past the other in order to reach a position where the two portions can be placed in the groove. The parts are then slid relatively longitudinally until the parts in the groove substantially fill it so that the fastener receiving device will be held in position. The end of one or both of these pieces may be struck or pressed so as to secure a wedge action if desired. We may have a locking piece 6 which prevents their relative movement when the pieces are in position. This may consist of a nail or screw or pin or the like. The fastener receiving device is preferably of such thickness that its outer face is in line with the face of the plaster or other material placed on the wall, although any other suitable thickness may be used.

When it is desired to place the trim or the rail or any other device on the wall or ceiling such device can be nailed or screwed to the fastener receiving device, the fasteners of whatever nature entering this device and holding the trim, rails or other parts in position. The grooves in the tile or section may be dovetailed, square, round, or of any other desired shape. We prefer to arrange the parts 3^a and 4^a so that there will be a space 11 between them and the top. This causes the inner face of the parts of the fastener receiving device to bear against the bot-

tom of the groove and not against the outer face of the tile, and gives a more firm locking effect, and prevents loosening when nailing, and it also prevents the pushing of the dovetailed parts of the wedge off of the outside portion when driving nails into it.

In Fig. 3 we have shown a section of a tile provided with grooves. In Fig. 4 we have shown a section or tile 7, and the grooves 8 of this tile are shown circular. In this event we prefer to have the opening of the groove smaller than the diameter although this is not necessary. This construction also shows the tile made with reinforcement 9 near the points where the grooves are formed. This construction gives high compressive strength without internal strains when used in arch construction. The grooves or receiving spaces for the fastener receiving devices in Figs. 1, 2 and 4 are arranged opposite the connecting walls 10 of the tile or section, although, of course, they may be arranged in any other position. This position gives greater strength when nails are being driven into the fastener receiving device.

In Fig. 5 we have shown a construction where there is a tongue and groove connection between the two sections of the fastener receiving device, one of them being provided with a tongue 12 and the other a groove 13 in which the tongue fits. The tongue and groove may be of any desired shape. This tongue and groove may be in the projecting parts 3^a and 4^a if desired, or in the parts which enter the groove. In some cases the projecting parts 3^a and 4^a may be omitted, as shown in Fig. 8.

In Fig. 6 we have shown the construction where the groove or receiving opening for the fastener receiving device is made a part in one tile and a part in the adjacent tile.

We have described in detail certain particular constructions embodying the invention, but it is of course evident that the parts may be varied in many particulars, without departing from the spirit of the invention as set forth in the claims hereto appended, and we therefore do not limit ourselves to the particular construction shown. The grooves may, of course, be vertical or horizontal or at any other angle.

In Fig. 6 the groove has substantially parallel sides. In Fig. 7 we have shown a construction where the fastener device consists of a single piece 14.

We claim:—

1. A fireproof building construction comprising a wall or ceiling made up of series of tiles or sections of fireproof material, said sections provided with grooves suitably located, fastener receiving devices in said grooves each comprising two separated engaging parts having inclined engaging side faces the side faces of the parts engaging each other when the fastener receiving device is in position and adapted when moved relatively to produce a wedge action so as to hold the parts in position, and a locking device for locking the two parts against relative movement when in position.

2. A fireproof building construction comprising a wall or ceiling made up of series of tiles or sections of fireproof material, said sections provided with grooves suitably located, fastener receiving devices in said grooves each comprising two separated overlapping parts having inclined engaging faces adapted when moved relatively to produce a wedge action on said overlapping parts so as to hold the parts in position, said separate parts having projections which project laterally, there being spaces between said projections and the face of the fireproof section when the fastener receiving devices are in position.

3. A fireproof building construction comprising a wall or ceiling made up of series of tiles or sections of fireproof material, said sections provided with grooves suitably located, fastener receiving devices in said grooves of a material different from the tile and into which fastening devices may be driven after the tile is in position in the wall said fastener receiving devices each comprising two separated parts having their dimension extending substantially parallel with the face of the wall along which the groove extends, and having inclined engaging faces adapted when moved relatively to produce a wedge action so as to hold the parts in position, and a tongue and groove connection between the two parts of the fastener receiving device the tongue and groove being substantially parallel with the face of the tile so as to act to prevent relative movement of the two separated parts toward and away from the face of the tile.

4. A fire proof building tile or section having a groove therein open at the face of the tile, a wooden fastener receiving device adapted to easily receive a fastener after the tile is in position in the wall and made up of two engaging parts having their longest dimension extending substantially parallel to the face of the section along which the groove extends and having relatively inclined engaging faces, said parts varying in width at different points along their length and adapted when moved relatively to vary the width of the fastener receiving device so that it may be inserted in the open face of the slot, said parts adapted to be moved relatively to increase the width of the fastener receiving device so that the fastener receiving device may be held in position at any desired point along said groove.

5. A fireproof hollow building tile or section having a dove-tailed groove therein, a

fastener receiving device of material different from the tile and adapted to easily receive a fastener, said fastener receiving device made up of two engaging parts inversely varying in width from end to end and having relatively inclined engaging faces so that when the parts are moved relatively in one direction the width of the fastening device is decreased so that it may be inserted in said groove, said parts when moved relatively in the opposite direction causing the width of said fastening device to be increased so that it tightly fits the groove to hold it in position, said parts each having projections which project laterally beyond the edges of the groove, the outer faces of said parts being in a different plane from that of the outer face of said tile or section.

Signed at Chicago, in the county of Cook and State of Illinois, this 25th day of July, 1919.

JOHN SWANSON.
L. C. LOSHBOUGH.

Witnesses:
EDNA B. PETERSON,
EDITH L. PORTER.