

No. 632,908.

Patented Sept. 12, 1899.

F. L. O. WADSWORTH.
TILE STRUCTURE.

(Application filed Apr. 12, 1898.)

(No Model.)

Fig. 1.

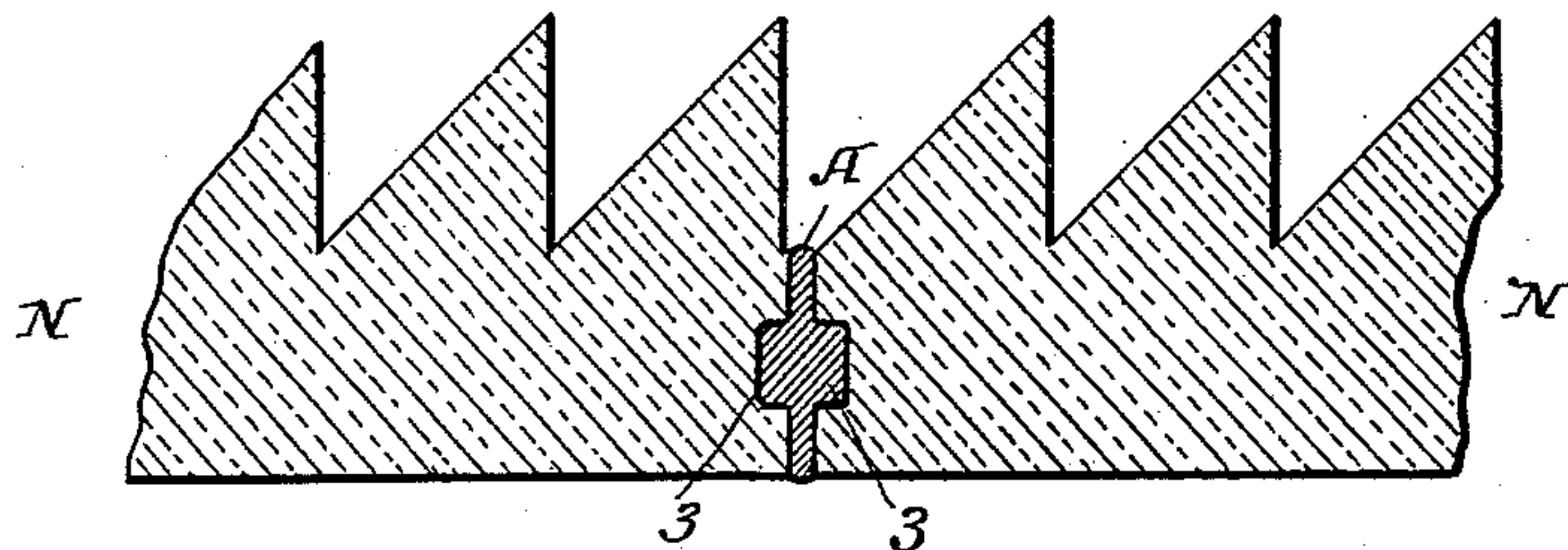


Fig. 2.

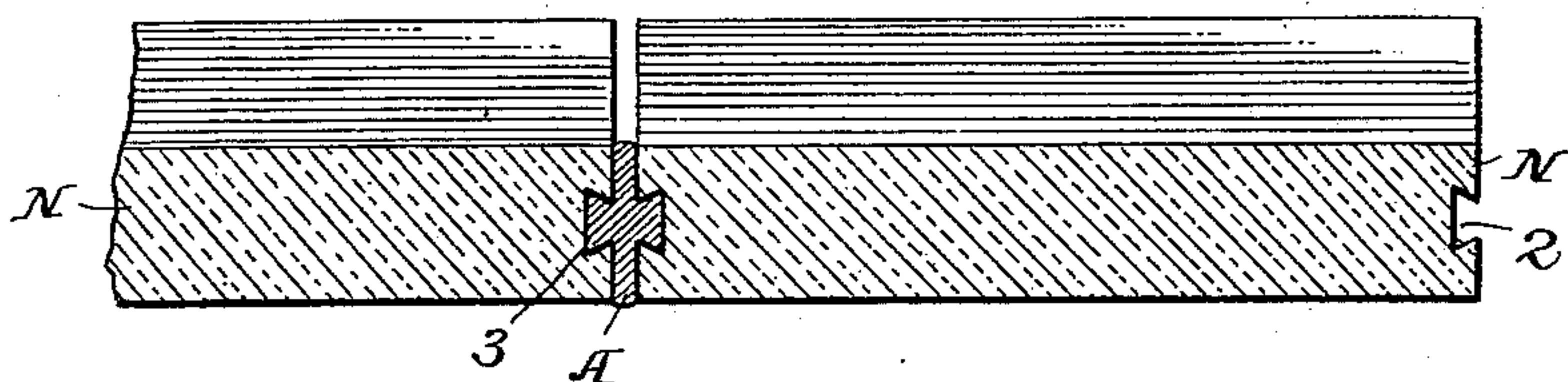


Fig. 4.

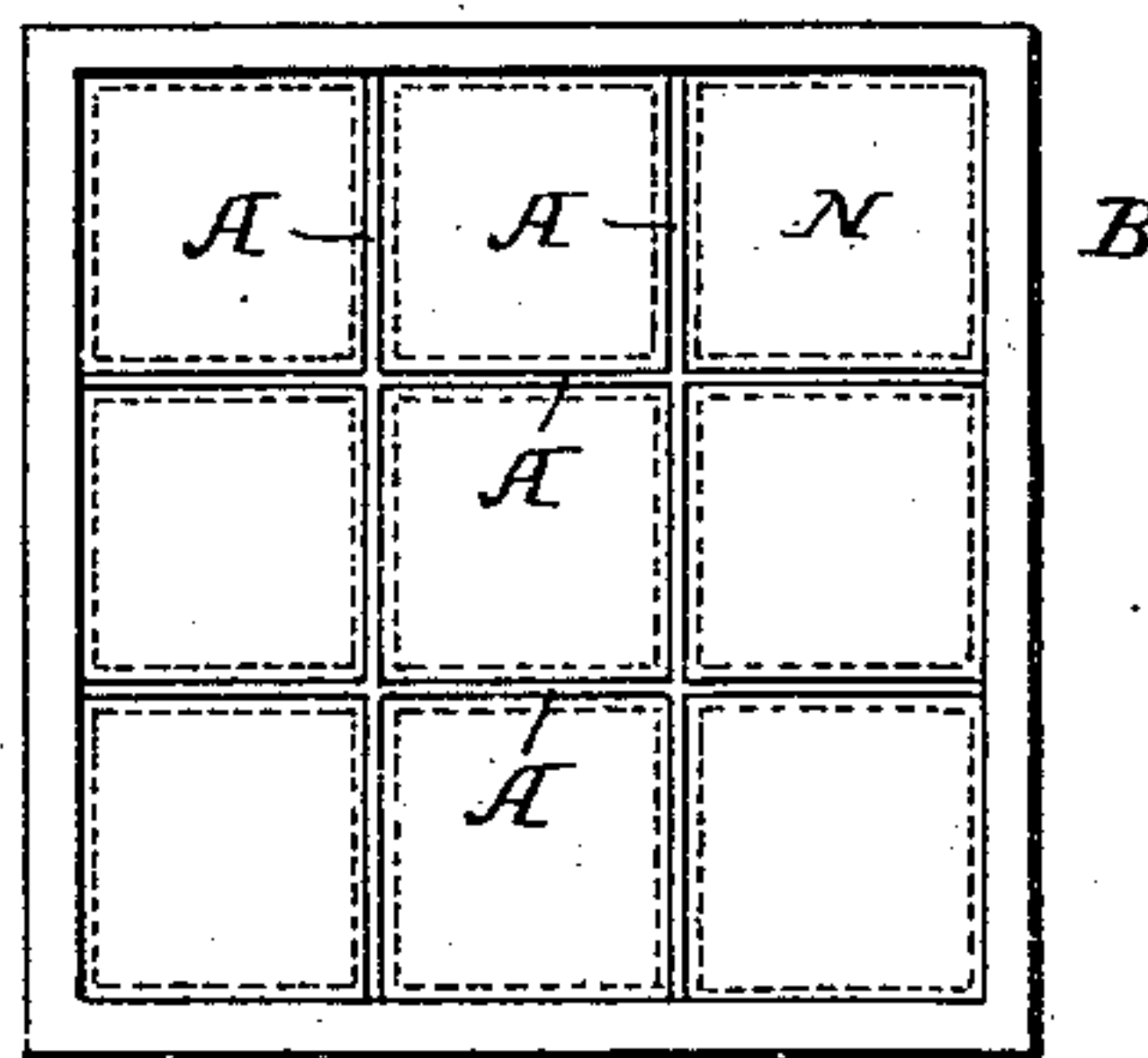


Fig. 5.

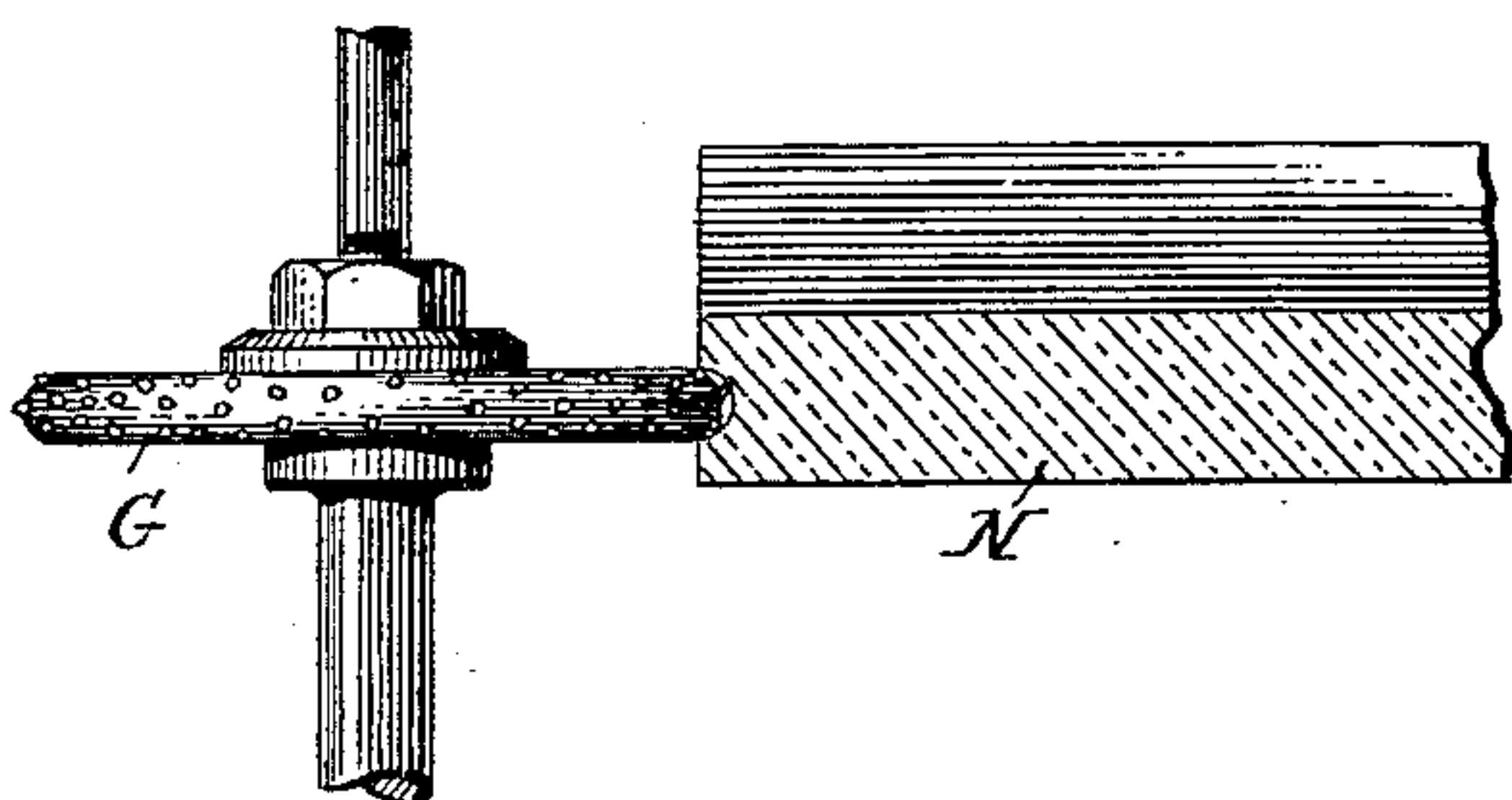


Fig. 3.



Witnesses

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TILE STRUCTURE.

SPECIFICATION forming part of Letters Patent No. 632,908, dated September 12, 1899.

Application filed April 12, 1898. Serial No. 677,317. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. O. WADSWORTH, a citizen of the United States, residing at Williams Bay, in the county of Walworth and State of Wisconsin, have invented certain new and useful Improvements in Tile Structures, of which the following is a specification.

My invention relates to tile structures—that is, to structures in which a series of tiles is assembled and connected together in a panel, platform, &c.; and my invention consists of such a structure having tiles with grooved edges and slightly separated and connected and supported by intervening strips, substantially as described hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of part of a tile structure with my improvement; Fig. 2, a like view showing another form of connecting and supporting strip; Fig. 3, an edge view showing a modification; Fig. 4, a plan view of a completed panel; Fig. 5, a view illustrating one means of grooving the tiles.

The invention is applicable to any kind of tiles or plates N N which must be assembled and united in the same plane to form a panel, platform, or wall. As shown, they are the prismatic tiles of an illuminator.

In the edges of each tile are grooves or recesses 3, which may be of uniform width, as shown in Fig. 1, undercut or dovetailed, as in Fig. 2, or rounded, as in Fig. 5, and continuous or at intervals, as in Fig. 3.

In connecting the tiles those which are to be united are assembled upon a flat plate or support and with their edges separated to a slight extent, and metal is introduced into these spaces, filling the same and the grooves 3 and constituting a supporting-strip A. The material comprising the strips may be of different kinds applied in different ways. It may be of metal poured in a molten state between the tiles after properly heating the latter; but I prefer to deposit it electrically by first applying a coating of plumbago or other metallic coating to the edges of the tiles and in the grooves and then immersing the tiles in a proper solution and filling the intervening spaces with metal by electrodeposition in any well-known manner. This method I do not here claim. By this means I secure a

framework or sash the cross-strips A or pieces of which have each side ribs 3 3, which enter the grooves 2 and constitute supports for the edges of the tiles, and when the grooves 2 are undercut, as in Fig. 2, the said ribs further bind the tiles laterally together. In any case the strips A also seal the joints, making a watertight panel.

When the tiles are of earthenware, the grooves may be molded in the body material in molding the tile itself, and the same may be done in molding vitreous tiles; but in other cases, as where the tiles have already been formed, the grooves may be formed by means of a rapidly-revolving diamond saw, emery-wheel, or wheel of soft metal fed with grinding material, as illustrated in Fig. 5. This also may be used in making intermittent or sectional grooves, as shown in Fig. 3.

In making a panel or sash the tiles are arranged within a frame or mold so that the material will surround the whole body of the tiles, constituting when complete a continuous frame B, with cross-pieces A A, as shown in Fig. 4.

It will be seen that by the means above described the tiles may be brought closely together with but little space between them, the frame being practically concealed and embodied in the tiles and supporting the latter in their relative positions.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination in a tile structure of separated tiles having grooves in the edges and intervening metallic strips completely filling the grooves and the spaces between the tiles, substantially as described.

2. A tile structure consisting of a series of tiles having grooved edges and arranged in a plane, slightly separated, and a metallic frame in one continuous piece surrounding the tiles and extending into and completely filling the spaces between the tiles and the grooves thereof, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

F. L. O. WADSWORTH.

Witnesses:

HARRY E. HAY,

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