

No. 654,532.

Patented July 24, 1900.

F. FURNESS.
TILE.

(Application filed Nov. 3, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

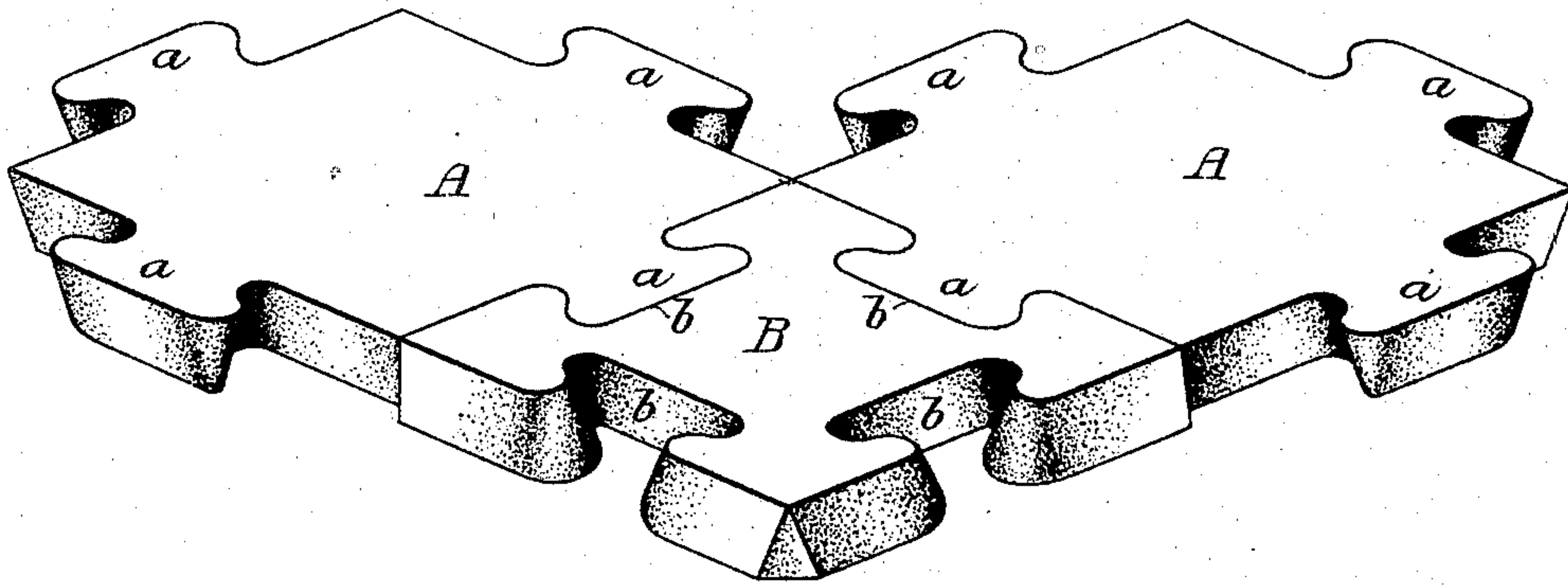


Fig. 2.

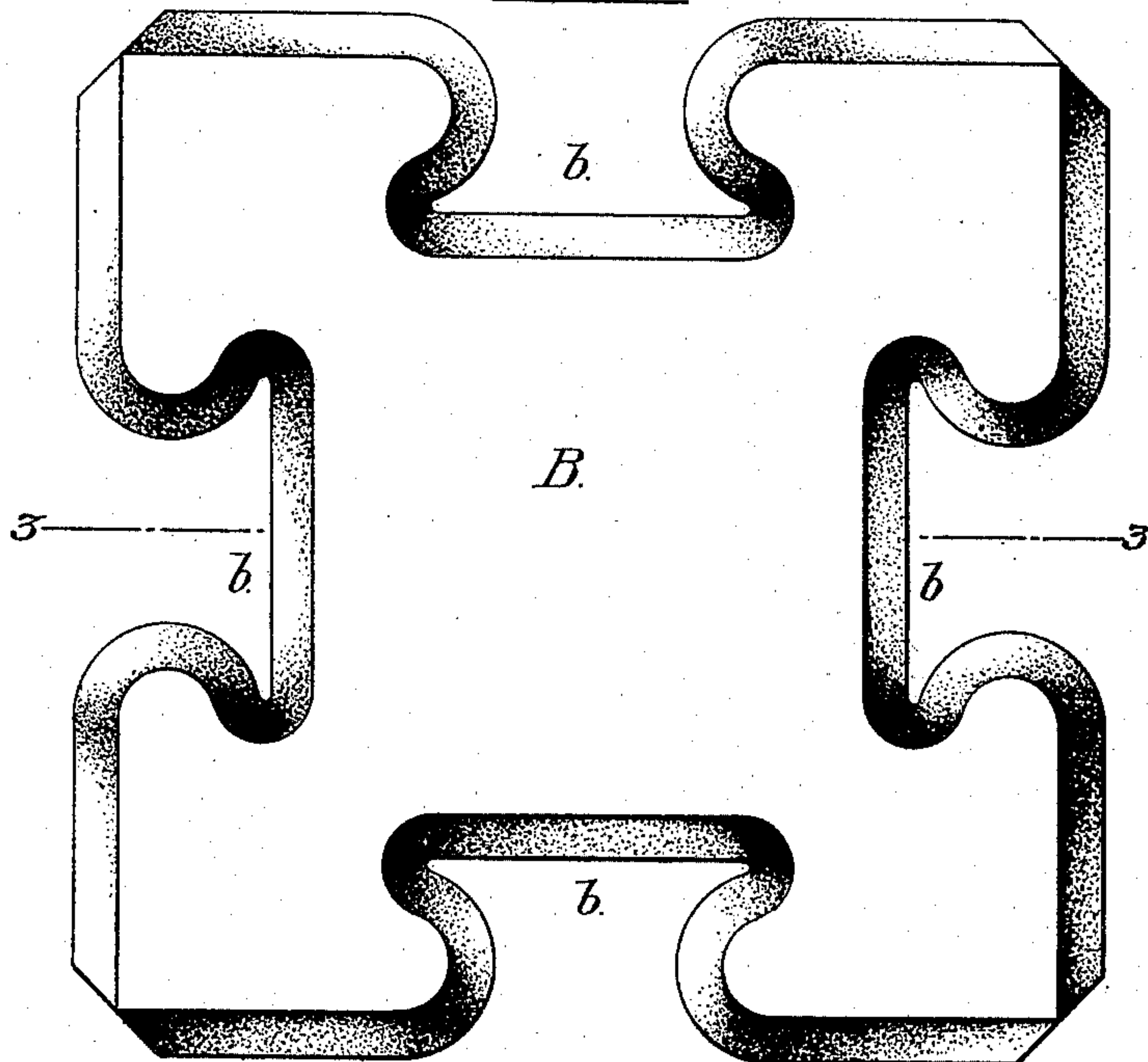


Fig. 3.

Witnesses:-

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Inventor:-

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- by -

His Attorneys.

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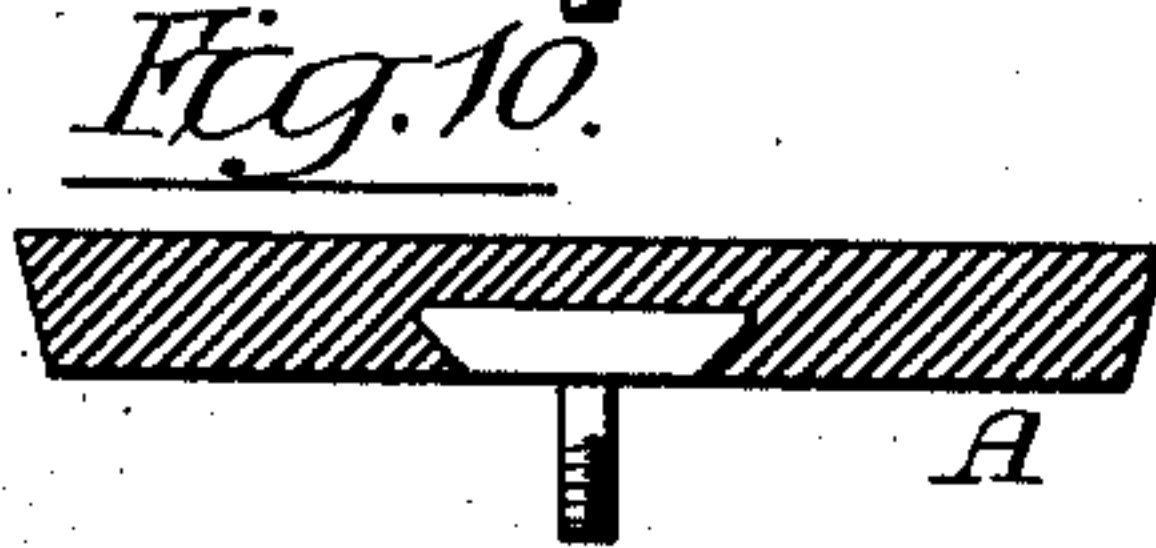
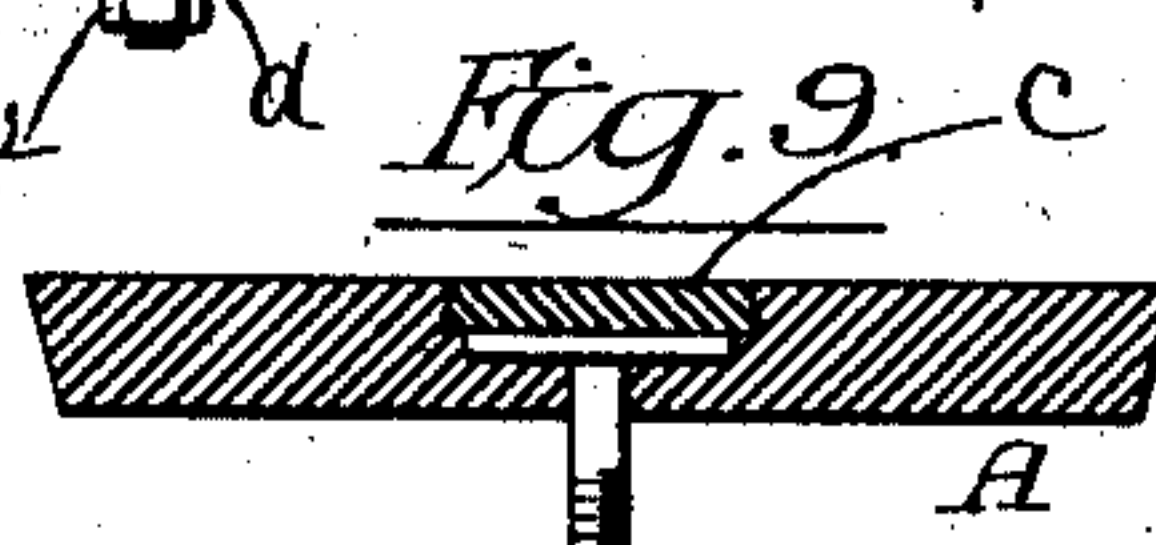
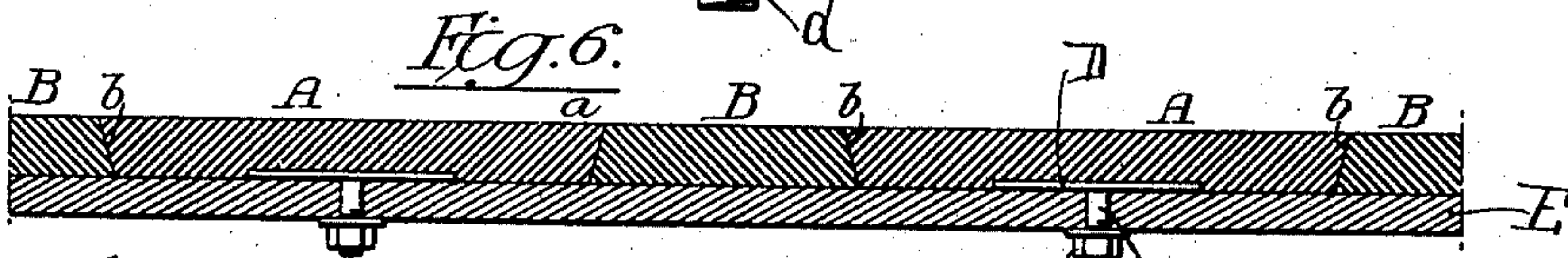
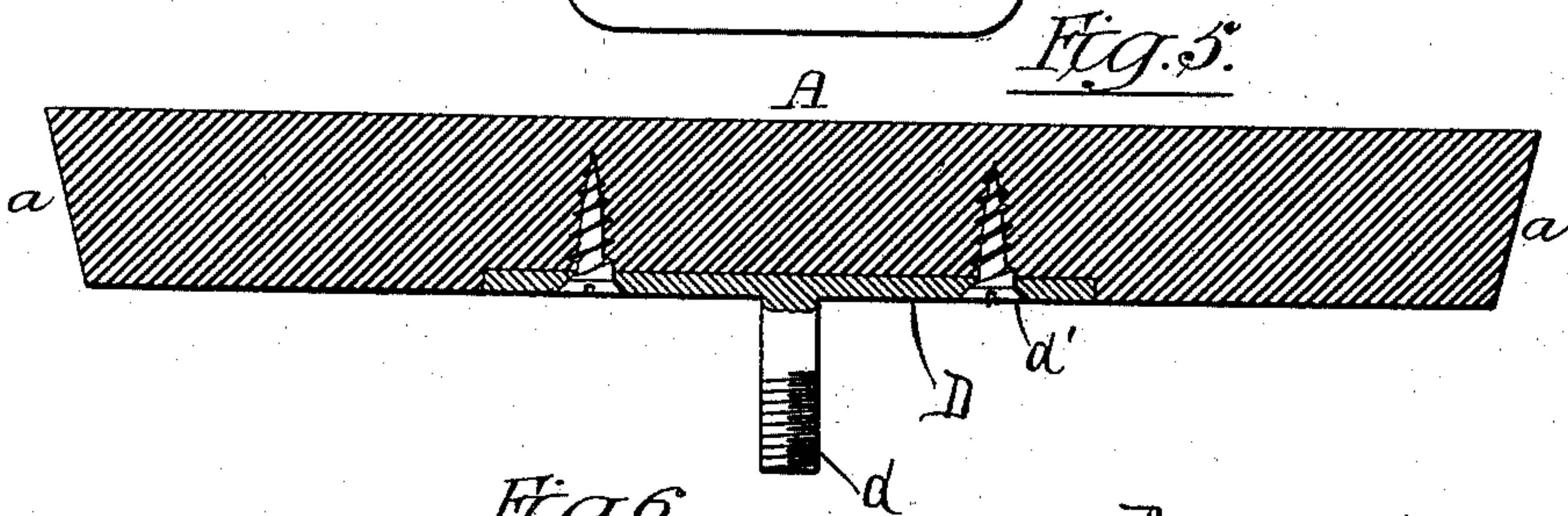
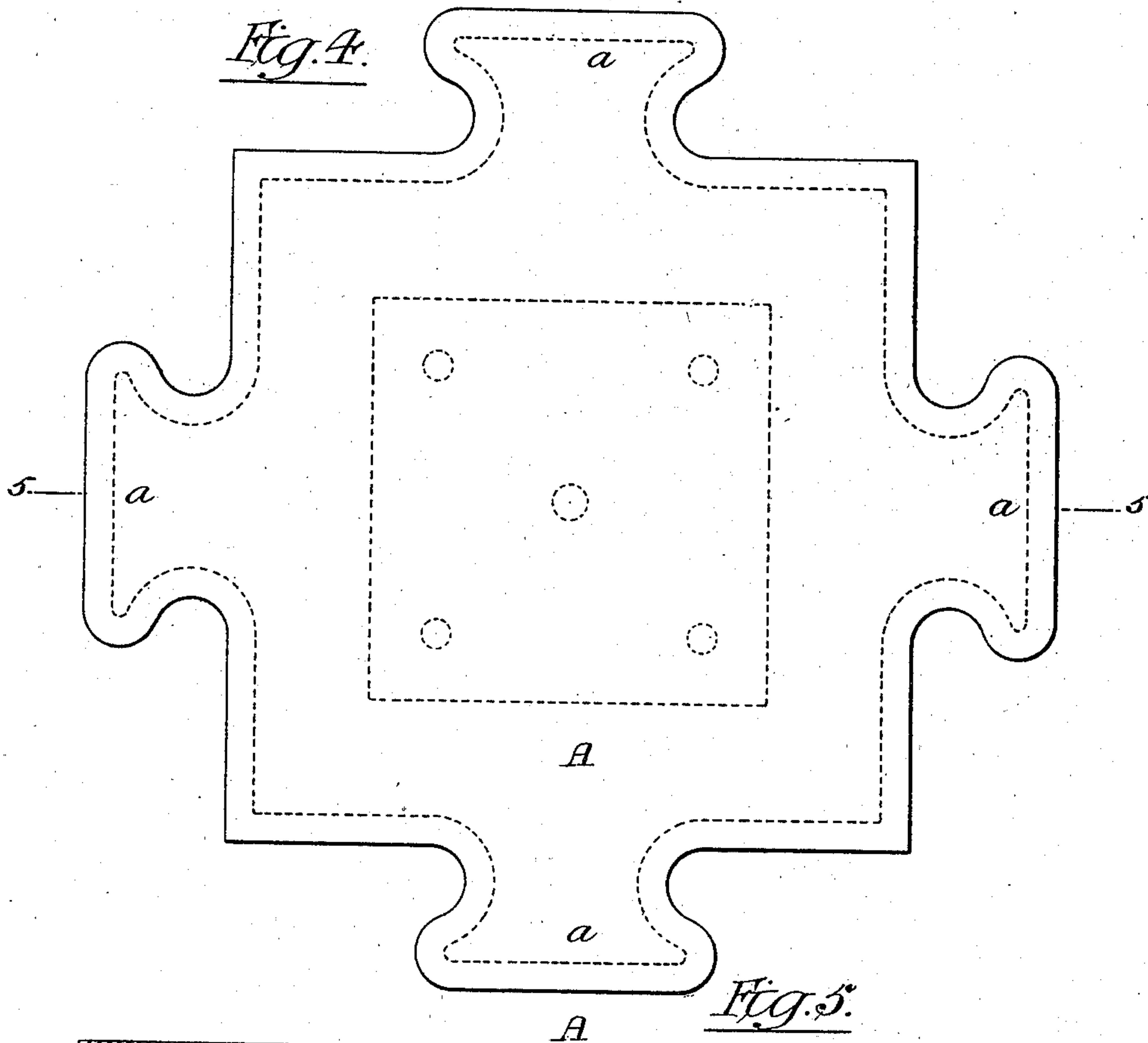
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TILE.

(Application filed Nov. 3, 1899.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses:-

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Inventor:-

Frank Furness.

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UNITED STATES PATENT OFFICE.

FRANK FURNESS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO DAVID H. WATTS, OF SAME PLACE.

TILE.

SPECIFICATION forming part of Letters Patent No. 654,532, dated July 24, 1900.

Application filed November 3, 1899. Serial No. 735,706. (No model.)

To all whom it may concern:

Be it known that I, FRANK FURNESS, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Tiles, of which the following is a specification.

My invention relates to certain improvements in tiles—such, for example, as shown
10 in a patent granted to me on the 23d day of October, 1894, No. 527,961.

The object of my present invention is to so construct the tiles that only alternate tiles need be fastened to the floor, wall, or other foundation.

15 My invention is especially adapted for use upon the decks of vessels or metallic floors, although it will be understood that it may be used at any place where either an elastic tile, as set forth in the above-mentioned patent,
20 or a rigid tile, either of clay or metal, is desired.

In the accompanying drawings, Figure 1 is a perspective view showing three tiles interlocked. Fig. 2 is a plan view of one of the
25 series of tiles, showing the beveled edge. Fig. 3 is a section on the line 3 3, Fig. 2. Fig. 4 is a plan view of the mate tile. Fig. 5 is a section on the line 5 5, Fig. 4. Fig. 6 is a longitudinal sectional view through three of the
30 tiles, and Figs. 7, 8, 9, and 10 are views showing different forms of attaching means.

Referring to Fig. 4, A is a tile, preferably formed of elastic material, such as rubber. This tile has projections *a* at each side, and
35 the projections have undercut heads, as shown. It will thus be seen that the tiles are laterally interlocking—that is to say, the tiles are prevented from lateral displacement in any direction through the medium of the interlocking projections *a* and recesses *b*. The
40 tile is beveled, as shown by dotted lines in Fig. 4 and as clearly shown in Fig. 5, so as to rest over the beveled edge of the tile B, Figs. 2 and 3. This tile B has a series of recesses
45 *b* enlarged to receive the heads *a* of the tile A, and the entire tile is preferably beveled in the reverse direction to the tile A, so that when the tile is placed upon the deck of a vessel, for instance, and the heads of the tile
50 A inserted in the recesses of the tile B and the tile A secured in place the overlapping

edges of the tile A will hold the tile B firmly in place. This is particularly so when the tile B is surrounded by four firmly-secured tiles A.

In securing the tiles to the decks of war-
ships I replace the ordinary wooden floors with the tiles, which are comparatively thick, and secure the alternate tiles directly to the iron or steel floor-plates, as clearly shown in
60 Fig. 6, in which figure I have illustrated one form of fastening, the tile A being recessed on its under side, and adapted to the recess is a plate D, having a screw-threaded projection or bolt *d*. The plate is secured to the
65 tile by ordinary wood-screws *d'* or other fastenings. I have found by practice that this method of fastening a plate to the tile is secure, and the tile is held rigidly in place. A
70 hole is bored through the metallic deck E of the vessel at the proper point, and the projecting bolt *d'* is passed through this hole and a nut *d²* is applied to the bolt, firmly drawing the tile down in position on the deck E.

In laying this tile I preferably use a tem-
75 plet, so that the holes will be drilled accurately in the deck at the proper point. Thus it will be seen that by making the tiles beveled, so that the edges of one set of tiles will overlap the edges of the other set, only every
80 other tile need be attached to the floor.

This tile can be used in places where it is impossible or not desirable to use cement in securing the tiles in position.

It will be understood that by reversing the
85 bevels of the tiles and making the tiles B the overlapping tiles instead of the tiles A and attaching the tiles B rigidly to the floor the same result is attained.

In Fig. 7 is shown the head of the bolt se-
90 curing the tile in place, embedded within the tile.

Fig. 8 shows the bolt adapted to a recess in the face of the tile and passed through an opening in the tile. This may be used in some
95 places where it is impossible to get at the under side of the bolt. The bolt may be screwed directly into the plate or other support.

In Fig. 9 a bolt similar to that shown in
100 Fig. 8 is illustrated, with the exception that it is below the surface of the tile, and a cap-plate

c is secured to the tile above the head of the bolt. This may be secured to the tile by bending the tile, if it is made of flexible material, and inserting the beveled-edge cap, or the cap may be cemented in place or otherwise fastened.

In Fig. 10 is shown a bolt having a beveled head which is adapted to a beveled recess in the under side of the tile, and if this tile is made flexible the tile can be sprung so as to allow the head of the bolt to enter the recess in the tile. It may, however, be cast in the tile if found desirable.

In some instances cement may be used to secure the alternate tiles in position; but the invention is especially adapted for securing the tiles to a base to which cement will not readily adhere and where it is subjected to severe use, such as on board a man-of-war or other vessel.

It will be understood that this form of tile may be used for any purpose for which tiling can be used, as it can be secured as readily in a vertical position as on a horizontal floor.

While I have shown my invention as applied to an interlocking tile—such as that covered by my prior patent, No. 527,961, hereinbefore referred to—it is obvious that my invention is not limited to an interlocking tile or to any particular form of interlock, the latter of which may be varied or wholly omitted as long as the tiles have overlapping abutting edges, as hereinbefore described.

I claim as my invention—

1. The combination of two or more tiles, all the abutting edges of adjacent tiles overlapping each other so as to constitute a plurality of overlapping tiles and underlapping tiles held in place by said overlapping tiles, with means for rigidly fastening the overlapping tiles to the support, whereby the overlapping tiles constitute the means for holding the underlapping tiles in place, substantially as described.

2. The combination of two overlapping tiles, one tile overlapping the other, the overlapping tile having a projecting bolt extending through the support, and means for fastening the bolt to the support, substantially as described.

3. The combination of an elastic tile, a plate on the underside of said tile, and screws passing through said plate and into the body of the tile and securing said plate to said elastic tile, said plate having a securing device projecting therefrom for attaching the tile to the foundation, substantially as described.

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

FRANK FURNESS.

Witnesses:

WILL. A. BARR,
JOS. H. KLEIN.