

I. KITSEE.
TILE FLOOR, WALL, &c.
APPLICATION FILED MAR. 4, 1904.

2 SHEETS—SHEET 1.

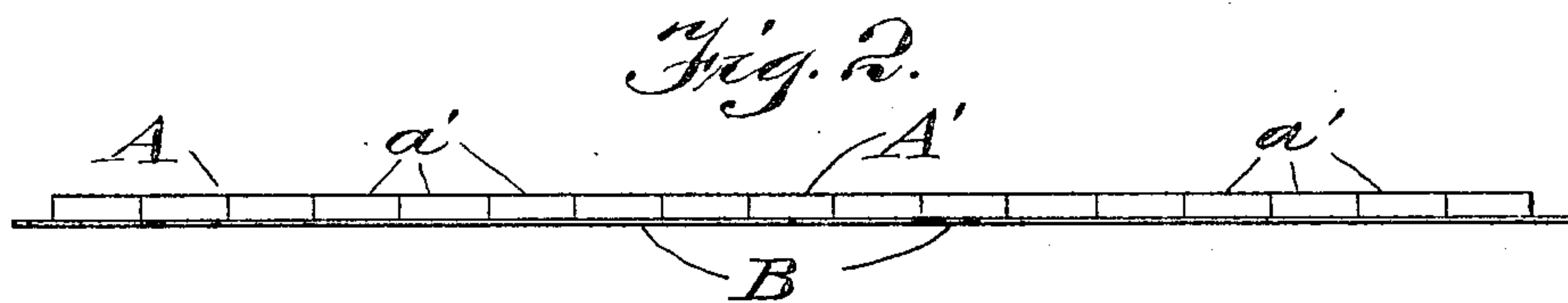
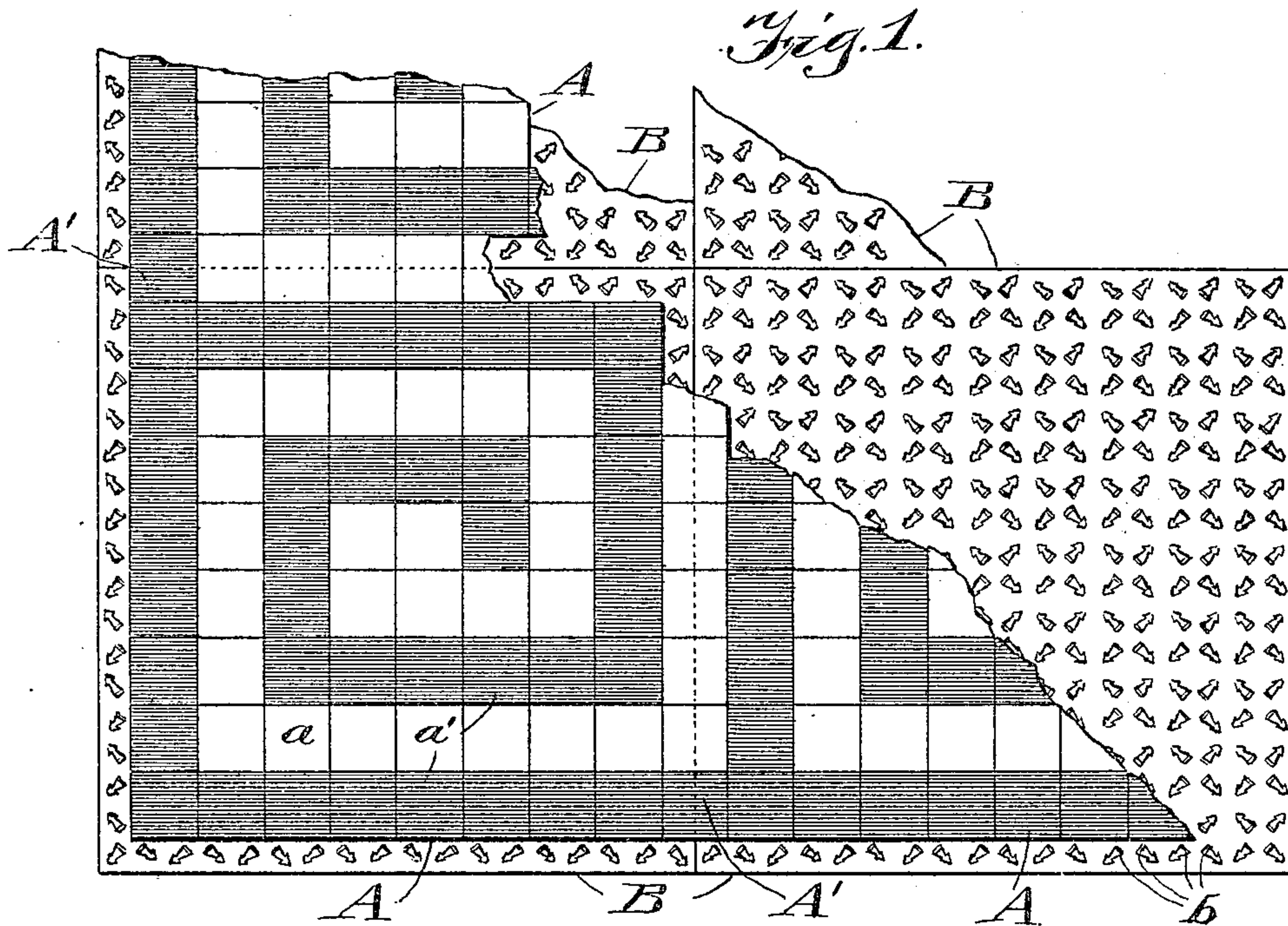


Fig. 3.

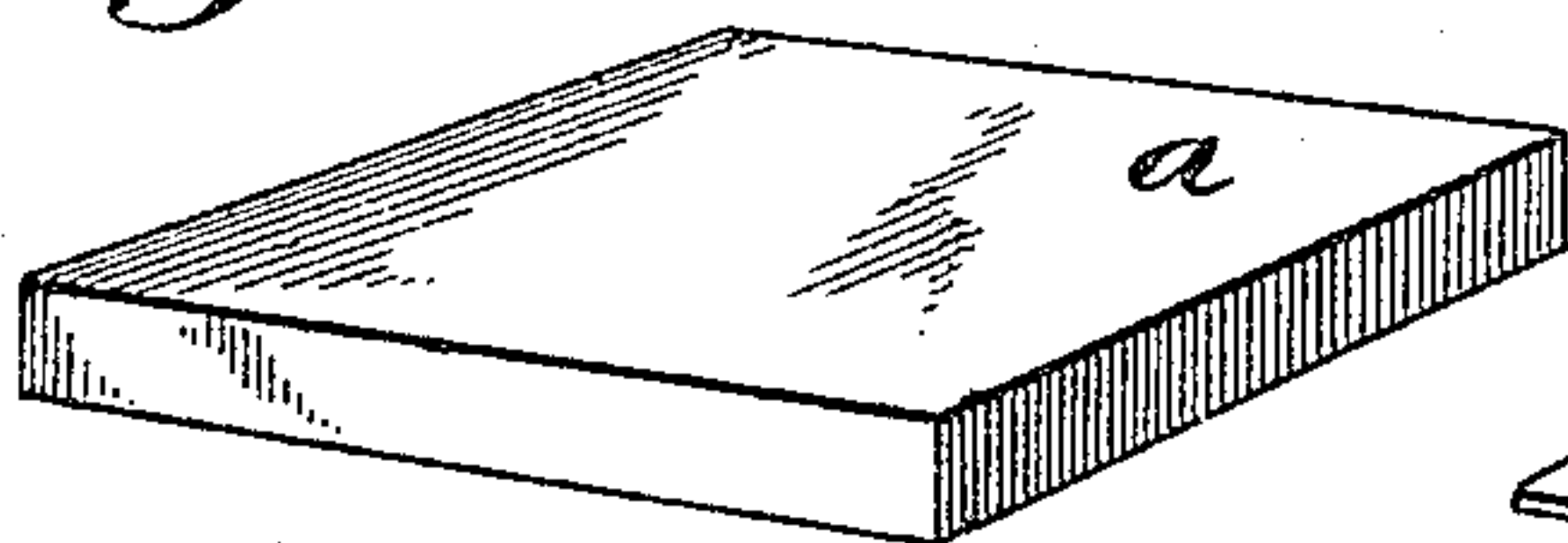
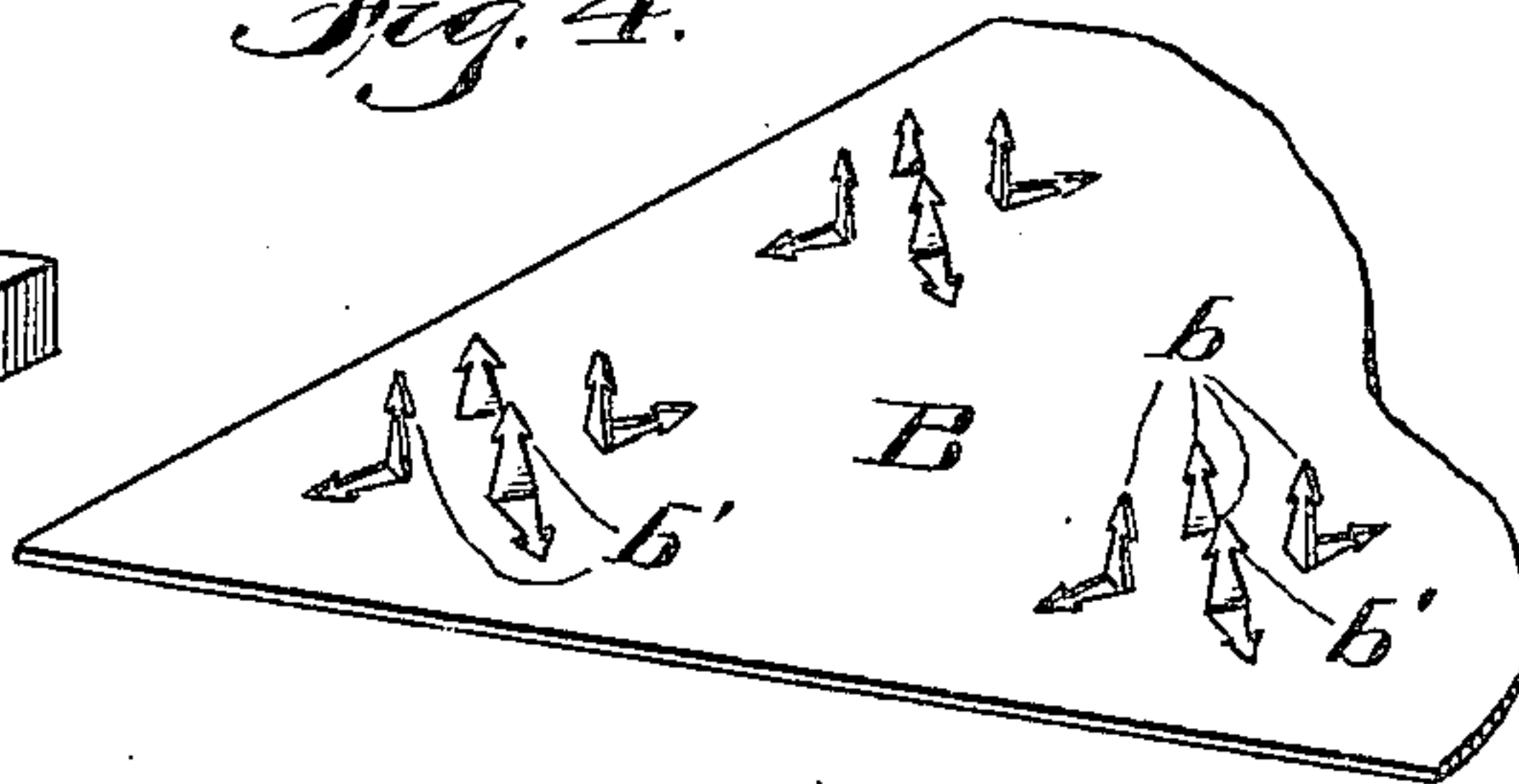


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

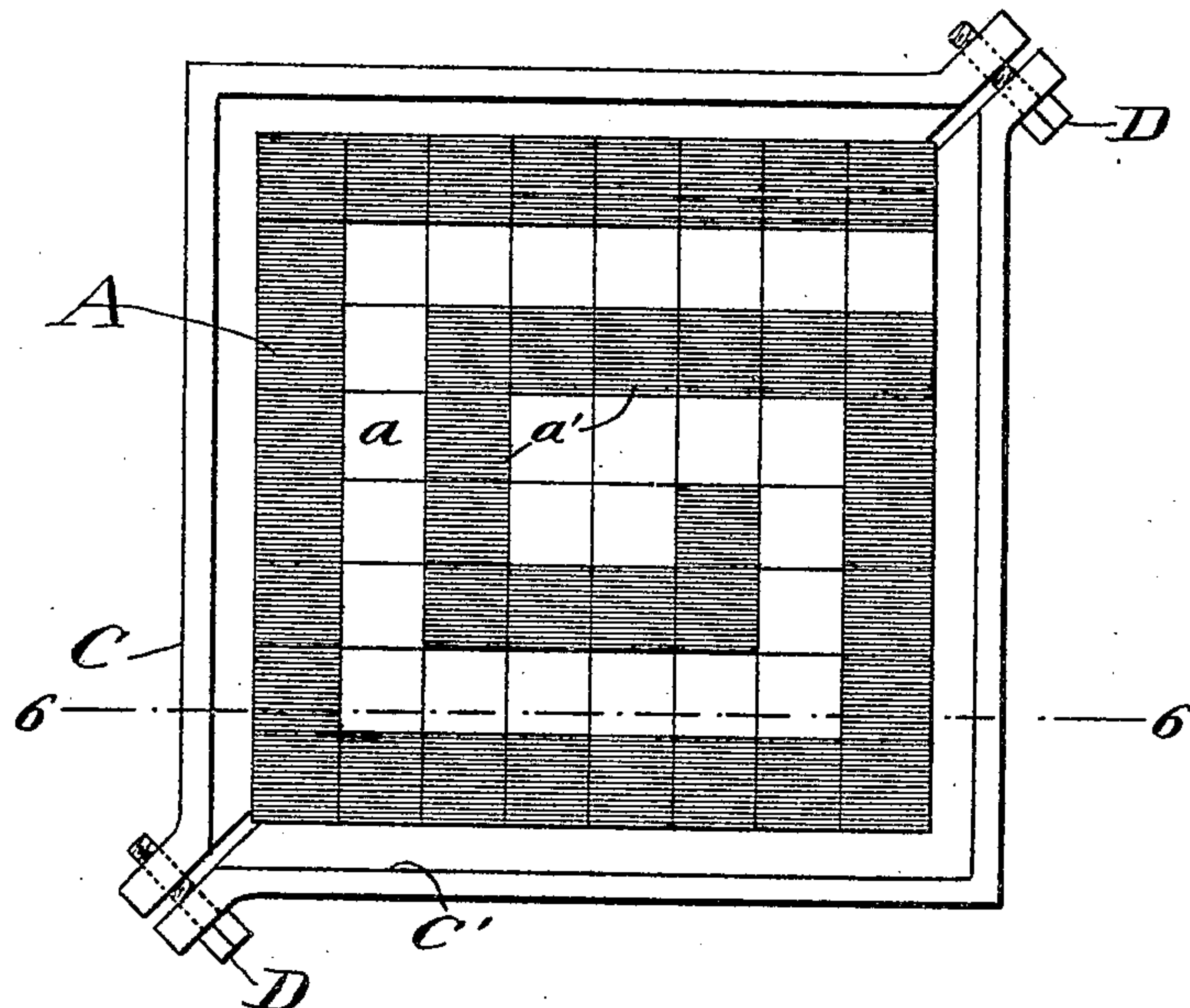


Fig. 6.



Fig. 7.

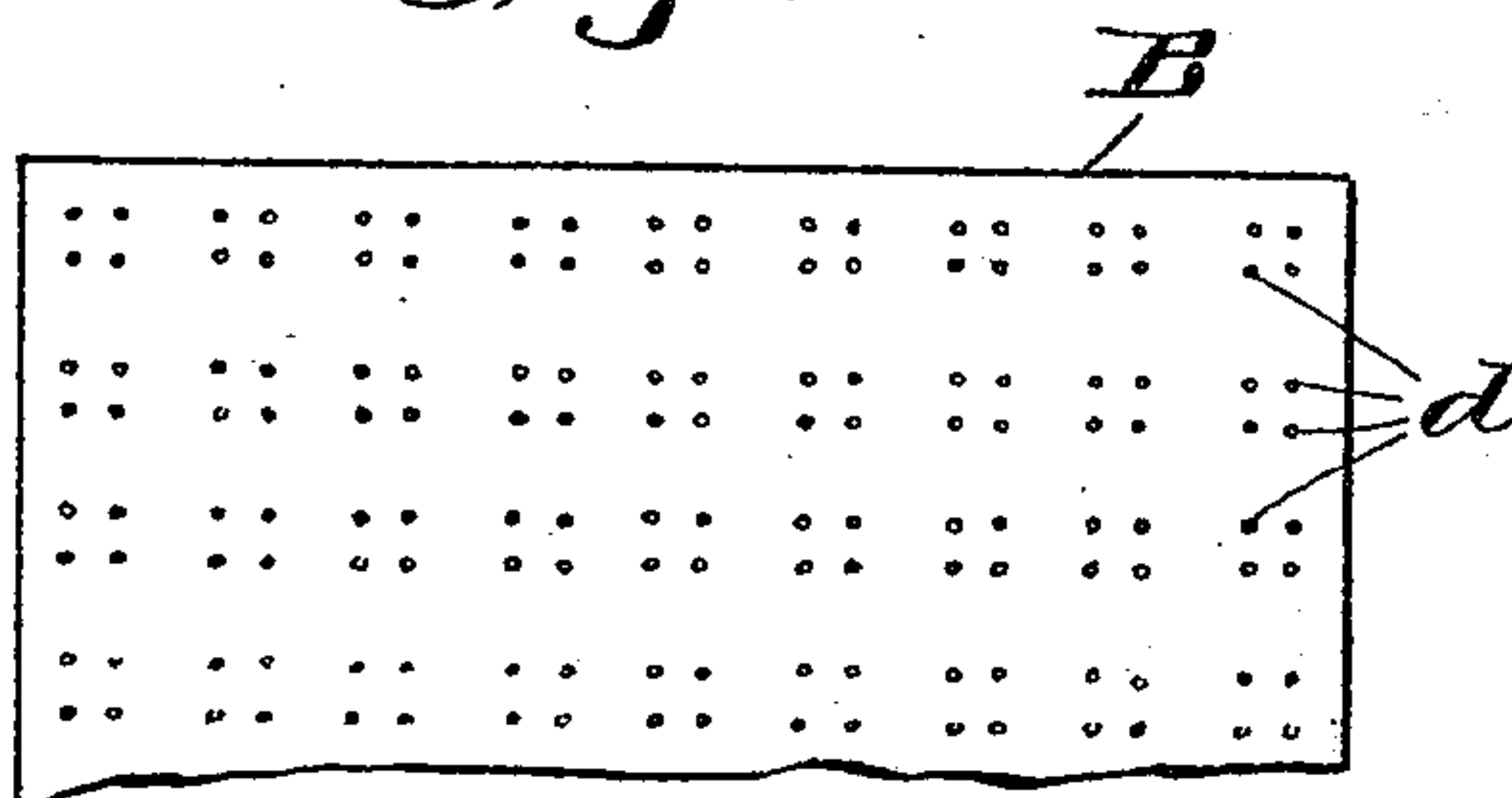
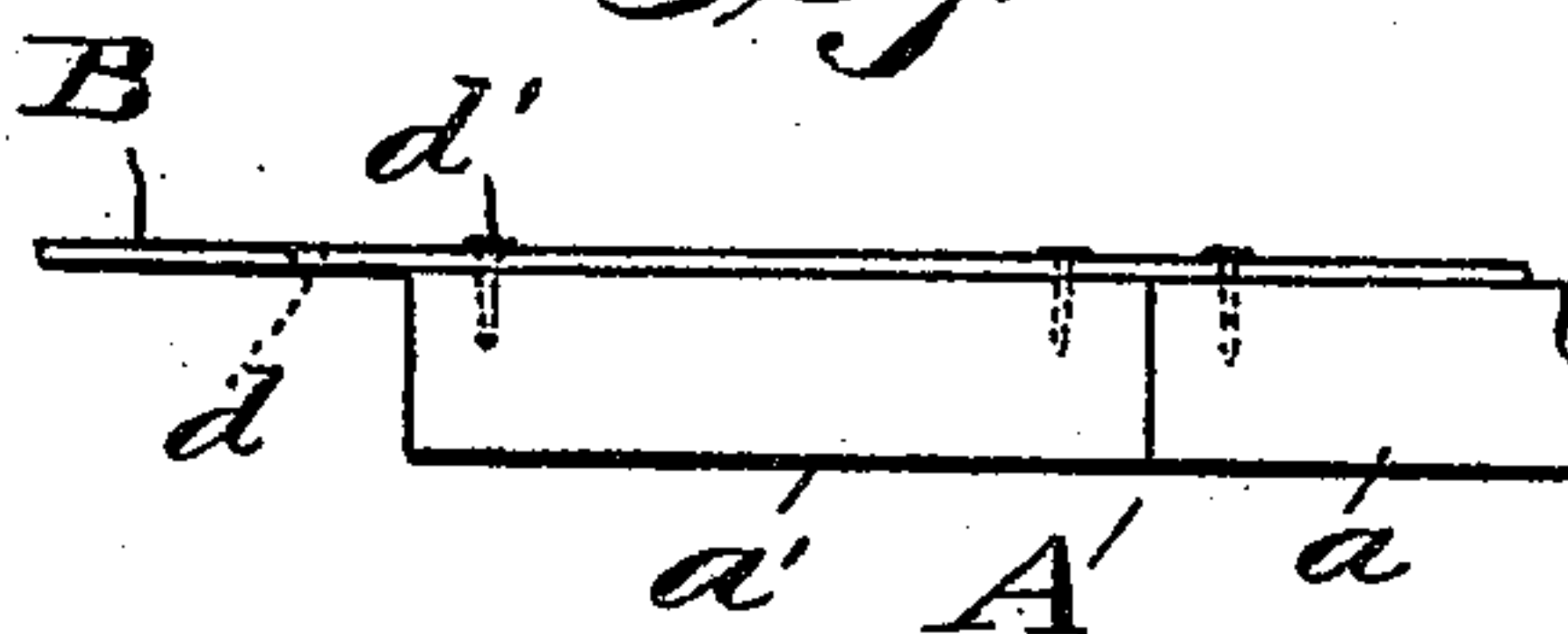


Fig. 8.



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UNITED STATES PATENT OFFICE.

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TILE FLOOR, WALL, &c.

No. 800,655.

Specification of Letters Patent.

Patented Oct. 3, 1905.

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To all whom it may concern:

Be it known that I, ISIDOR KITSEE, of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Tile Floors, Walls, &c., (Case No. 175,) of which the following is a specification.

My invention relates to an improvement in tile floors, walls, &c.

The object of my invention is to provide means whereby a series of individual tiles are securely held together and whereby the laying of said individual tiles is accomplished in a manner more efficient than is to-day practiced.

To this end my invention consists in the features and arrangements, as will hereinafter be described in this specification, illustrated in the accompanying drawings, and more particularly pointed out in the claims following the specification.

In the drawings, Figure 1 is a plan view of the covering of a floor, showing the method of laying said covering in sections, portions of the tiles being removed to show the manner of joining the sections out of which said covering consists. Fig. 2 is an end view of Fig. 1. Fig 3 is a perspective view of a tile used in forming the design of one of the sections. Fig. 4 is a corner of the metal backing in perspective, showing the means of securing the tile to same. Fig 5 is a plan view showing the method of assembling the tiles in a geometrical pattern or design to form one section. Fig. 6 is a section through Fig. 5, illustrating the method of applying the metal backing. Fig. 7 is a plan view of a metal backing in modified form, partially broken away. Fig. 8 is an end view of Fig. 7.

I will first describe the method of producing the separate sections out of which the entire floor-covering consists. This method is clearly illustrated in Fig. 5 and Fig. 6, in which figures A is the design as an entirety, consisting of the single tiles *a* and *a'*, respectively. C and C' are two parts of a frame in the inner space of which the individual tiles are assembled. D represents the means, here shown in the form of screws, for the purpose of tightening together the two parts of the frame, thereby compressing the individual tiles and holding the same securely in place. B is the metallic backing, provided with the prongs *b*, having the barbed ends *b'*.

The *modus operandi* of practicing this my invention is as follows: A series of metallic plates, preferably sheets of steel of about

twelve to fifteen one-thousandths of an inch in thickness and of the desired size, are prepared either by punching holes at predetermined places, as illustrated in Fig. 7, or by stamping out at predetermined places barbed prongs or projections, as illustrated in Fig. 4. A series of individual tiles are then assembled or arranged in a manner so as to form the desired design inside of the space formed by the frame, preferably consisting of two halves, whereby the tiles may be tightly pressed and securely locked to each other. The frame, with its tilings, is then placed on a solid support, and it is preferred that the under side of the tiles should be flush with the under side of the frame, so that both shall firmly rest on said support; but the upper sides of the tiles should extend somewhat above the frame. The metallic sheet is then placed on the upper sides of the tiles (which upper side afterward forms the under side when laid on the floor) and is secured to the tiles either with the aid of pegs or nails or with the aid of the integral projecting prongs *b*. It is preferred that the nails or prongs shall be driven into the tiles at one and the same time, and this operation is preferably performed in the following manner: The frame with its assembled tiles and the metallic sheet placed on the upper side of said tiles in its proper position, is subjected in a power-press to enough pressure so as to drive the nails or prongs into the bodies of the tiles, thereby securely uniting one tile to the other. The sheet of metal should not only cover all the assembled tiles, but should project on each side half the width of a tile, for the purpose as will hereinafter be more clearly explained.

I call a series of tiles assembled as stated and secured to each other with the aid of one continuous sheet of metal a "section." Where, therefore, in this specification or in the claims following this specification I make use of the word "section" or "sectional" I understand under same a series of individual tiles securely fastened to each other and to a continuous metallic sheet with the aid of fasteners, thereby forming a mechanical unit of the desired dimension.

In practice it is preferred that each section should be about one foot square; but it is obvious that the size of these sections may vary to suit requirements.

The assembling of a series of tiles—a "design," so to speak—into one mechanical unit and the securing together of the tiles with a

continuous piece of metal can be performed by skilled hands in the place where such tiles are manufactured or sold, and the securing together of individual tiles, therefore, need
 5 not be placed in the hands of the unskilled labor usually employed in laying floorings. This is found in practice of great advantage, and persons versed in the art will readily understand that the shipping of sections and the
 10 handling of same at places of destination are not accompanied with the disadvantages that a series of small individual tiles and a series of fasteners and the necessity of assembling the same in designs at the place of destination entails. After a series of such sections
 15 as above described are provided they are laid on the floor to be covered with the metallic plate resting directly on the floor. The part of the tile, therefore, which while assembling
 20 into one section was designated as the "under" side now becomes the upper side or surface of the floor-covering.

To cover the whole space of a floor, the following *modus operandi* is preferred: The different sections are placed adjacent to each
 25 other in a manner so that the projecting ends of the different metallic sheets underlying the different sections are in close contact with each other, and as on each section the metallic plate extends the width of half a tile it is
 30 obvious that the space covered by the free part of the metal plates of two adjoining sections is equal to the width of one tile. To join, therefore, these two sections securely
 35 to each other, it is only necessary to cover the free space lengthwise with a series of individual tiles and drive the same so that the prongs or projections of the metallic plate are forced into the body of the tile. In Fig. 1 these
 40 connecting-tiles are designated by the letter A'. In this manner the whole covering of the floor, no matter of what dimensions, will then consist of practically one unit, and the tiles, specially if the same are of rubber, do not,
 45 as is now the case, touch the floor proper—a great advantage when it is taken into consideration that in many of the new buildings the laying of rubber tiling is prohibited for the reason that, according to the architects, the
 50 sulfur in the rubber slowly deteriorates the wood of the floor proper. The continuous sheet of metal also acts in case of conflagration to a great extent as a shield to prevent the spread of the flames.

55 It is obvious that should the floor not be of equal dimensions one or more sections may be cut into the desired shape and of the desired dimensions to suit requirements.

60 Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method of covering floors, walls, &c., which consists in first uniting a series of individual tiles into one section, providing the
 65 under surface of said tiles with a continuous

metallic sheet, securing each of said individual tiles with the aid of fasteners to said metallic sheet in a manner so that part of said metallic sheet remains free on each side of said section, covering the floor with a series of said sections, and uniting the different sections to each other through individual tiles secured with the aid of fasteners to the adjoining free sides of the adjacent metallic plates.

2. The method of covering floors, walls, &c., which consists in causing to be driven through pressure into the bodies of a series of separate and independent tiles so as to form a "section," a series of prongs or fasteners integral to one continuous sheet of metal, thereby forming one mechanical unit constituting one independent section, in causing the floor to be covered with a series of said sections, and causing all of said sections to be united through tiles fastened to the adjacent ends of two metallic supports.

3. The method of covering floors, walls, &c., which consists in causing to be united a series of individual tiles forming a design into one mechanical unit, with the aid of one continuous sheet of metal provided with fasteners in a manner so as to leave part of said sheet free at each side of said unit, causing a floor to be covered with a series of said mechanical units secured to their metallic plates and causing the adjacent mechanical units to be united together with the aid of additional tiles, secured to the free parts of the metallic plates.

4. A covering for floors, walls, &c., consisting of a series of sections, each section consisting of a series of individual tiles, forming a geometrical design or figure, secured to each other and to a continuous metallic plate with the aid of fasteners, each section securely fastened to the adjacent section through tiles overbridging two adjacent metallic plates.

5. A covering for floors, walls, &c., consisting of individual and independent sections, each of said sections consisting of a continuous metallic plate and a series of individual tiles forming a geometrical design secured to said plate with the aid of fasteners so as to form one mechanical unit with each other and with said plate, the different metallic plates secured to each other with the aid of additional tiles fastened each to the ends of two adjoining plates.

6. A tiling or flooring consisting of a series of metallic sheets joined together with the aid of tiles, each of said sheets provided with fasteners and a series of tiles forming a geometrical figure secured thereto with the aid of said fasteners.

In testimony whereof I hereby sign my name, in the presence of two subscribing witnesses, this 1st day of March, A. D. 1904.

ISIDOR KITSEE.

Witnesses:

EDITH R. STILLEY,
 JAMES B. HOBENSACK.