

(No Model.)

F. ALCAN.
APPARATUS FOR PRODUCING MOSAIC WORK.

No. 538,311.

Patented Apr. 30, 1895.

Fig. 2

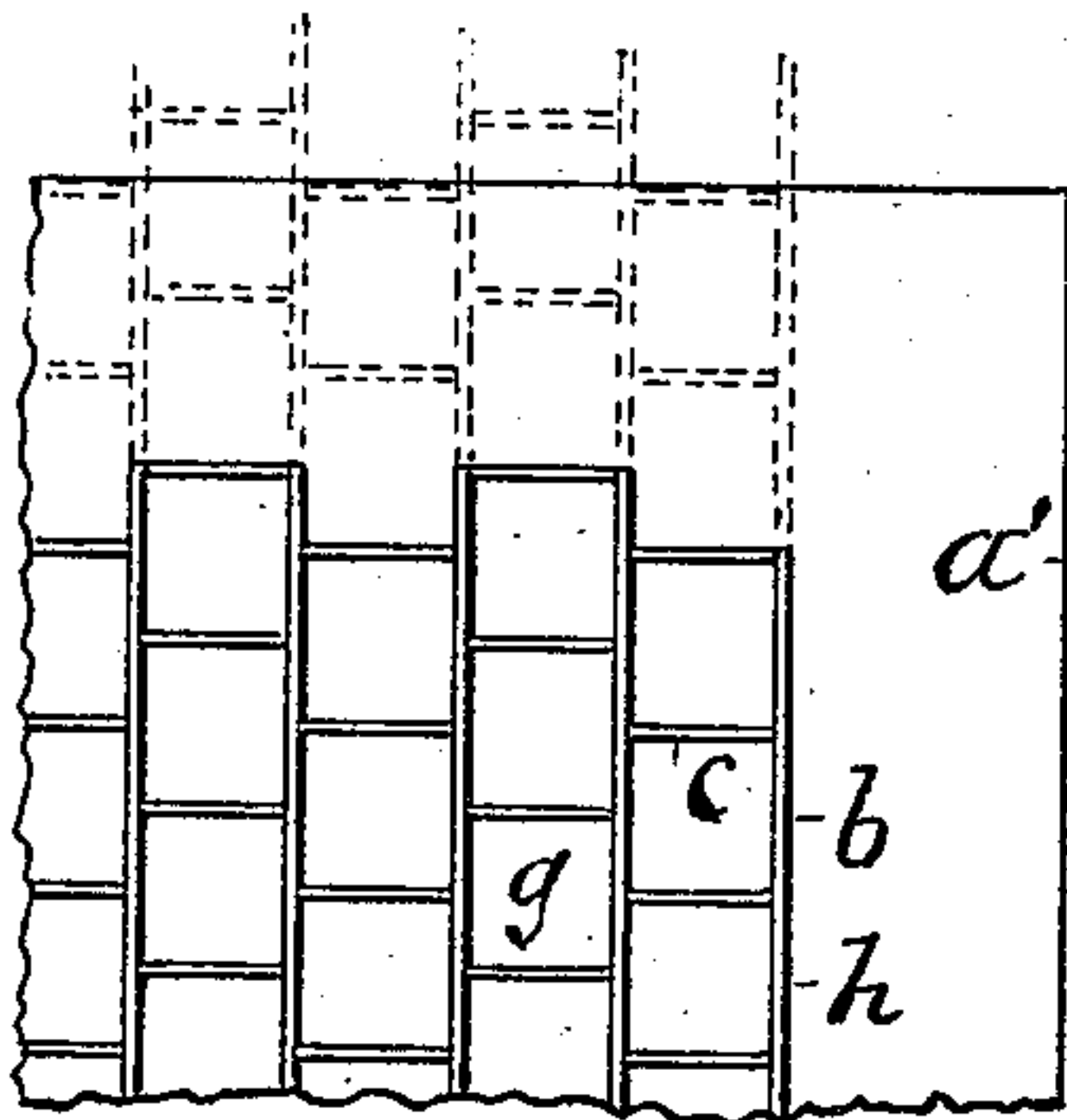


Fig. 1

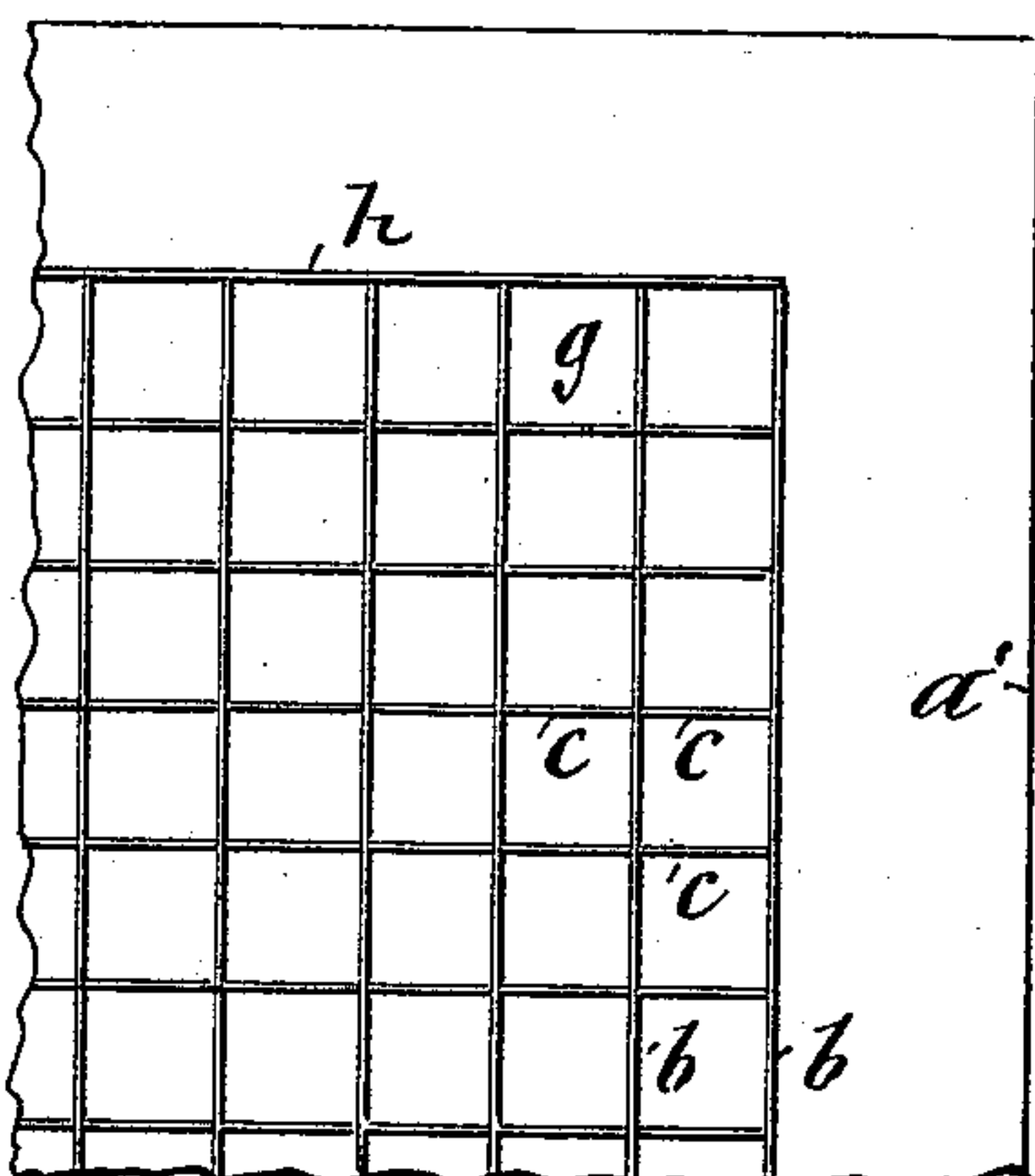


Fig. 3

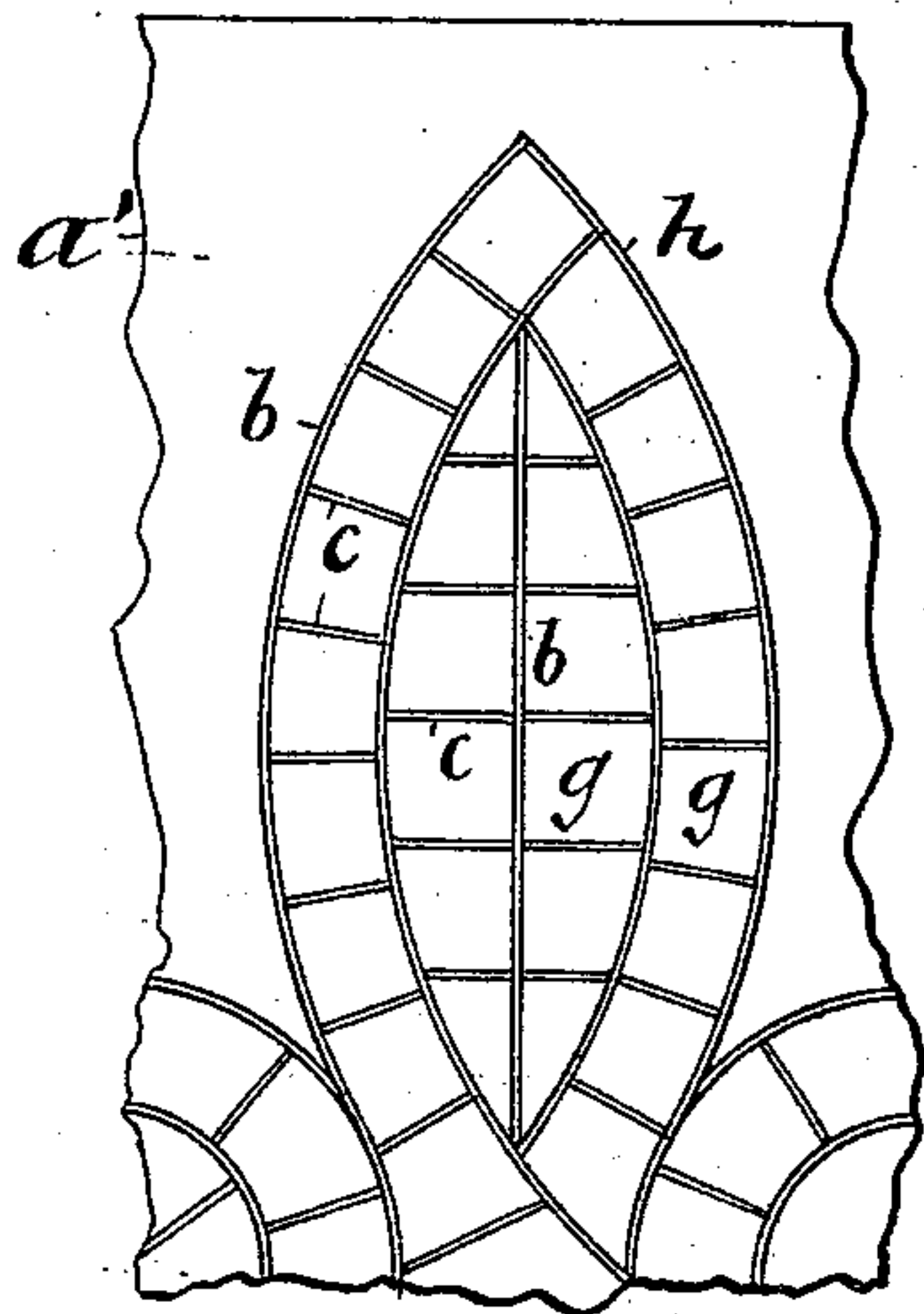


Fig. 4

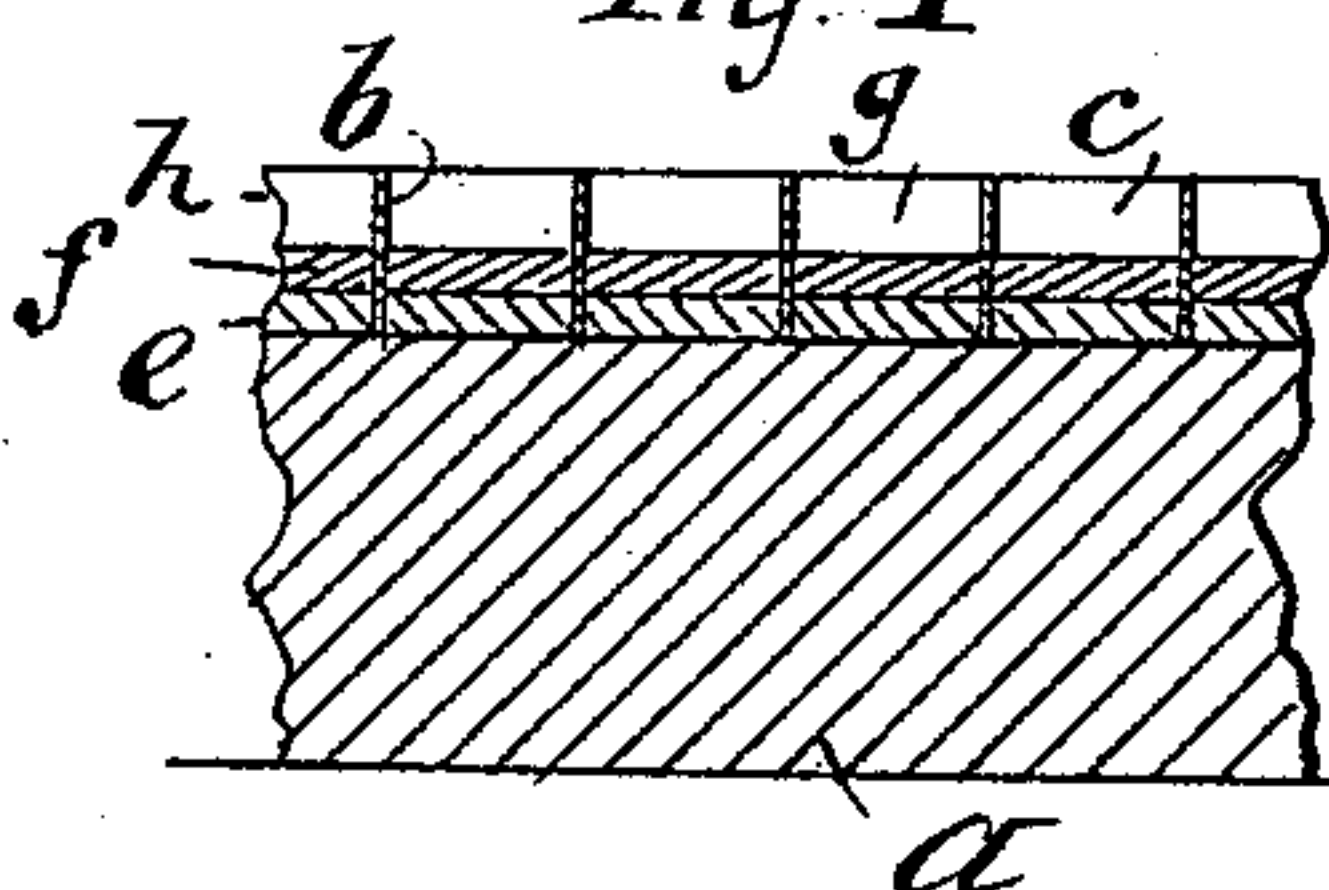
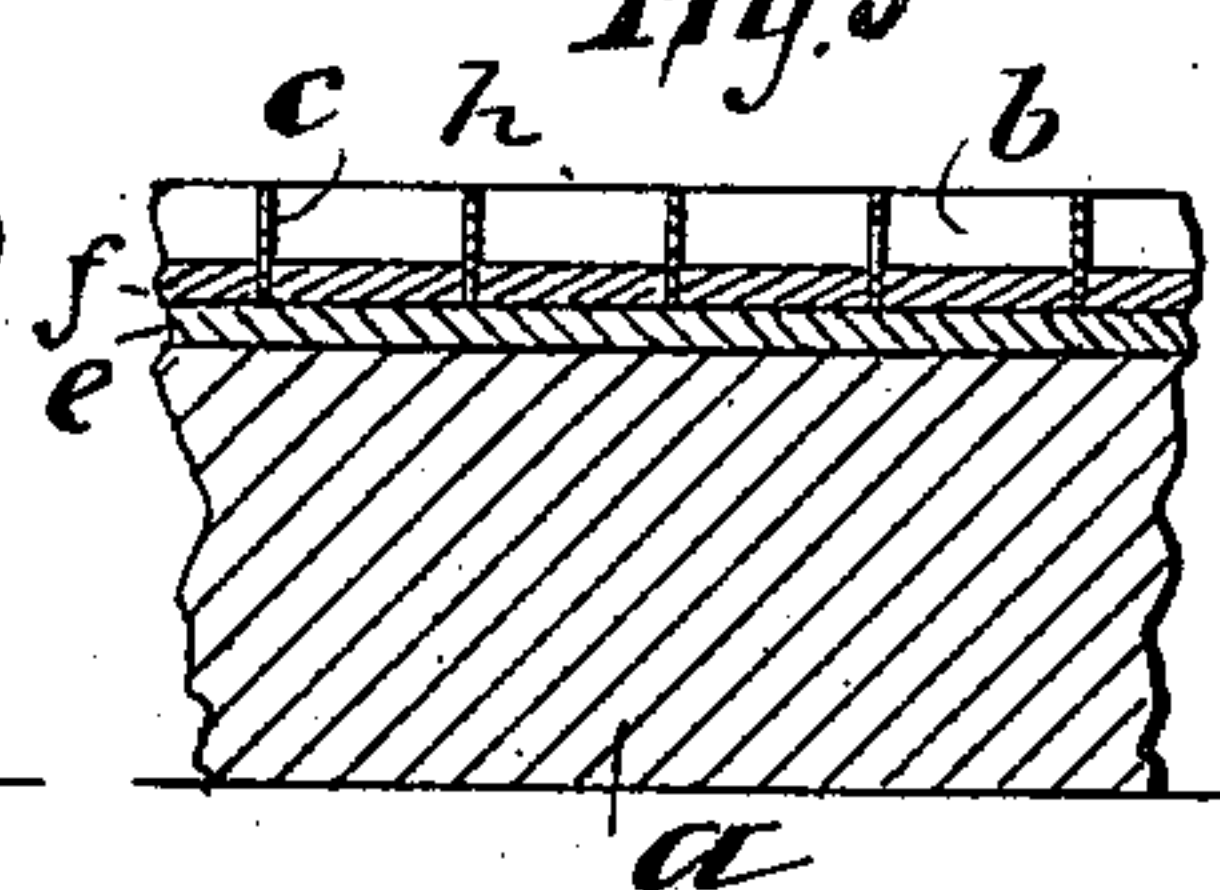


Fig. 5



Witnesses
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR PRODUCING MOSAIC WORK.

SPECIFICATION forming part of Letters Patent No. 538,311, dated April 30, 1895.

Application filed February 5, 1895. Serial No. 537,363. (No model.)

To all whom it may concern:

Be it known that I, FELIX ALCAN, a citizen of the United States, residing in the city of New York, county and State of New York, have invented a new and useful Apparatus for Producing Mosaic Work, of which the following is a specification.

The object of my invention is to provide a portable and durable apparatus capable of being quickly and cheaply constructed for the production of geometrical and ornamental mosaic work, and by which duplicates in any quantity of a design may be obtained when desired.

In the accompanying drawings, Figure 1 is a top view of an apparatus constructed according to my invention. Fig. 2 is a similar view thereof, the cross lines of the design being arranged to break joints with one another and showing in dotted outline the manner in which the edges of mosaic work when made in sections by the apparatus may interlock with one another. Fig. 3 is a similar view thereof, a portion of the lines of the design being shown curved. Fig. 4 is a vertical section of a part of the apparatus. Fig. 5 is a similar view thereof, the section being taken at right angles to that of Fig. 4.

a, designates a base or support, preferably of wood, upon which is erected a framework, *h*, containing a series of cells, *g*, for the reception of ordinary mosaic stones adapted in shape and color to form the design. This frame is composed of thin metallic bands, *b* and *c*, respectively, forming partitions arranged to correspond with the lines of the design, the former, *b*, extending the long way thereof, as in Fig. 3, and the latter extending crosswise thereof.

a', is a marginal frame of suitable thickness rigidly secured upon the base, *a*, and having its inner opening conforming in shape to the outer border lines of the design.

The bands, *b* and *c*, are secured in position in the following manner: After the design has been drawn or otherwise placed upon the base, *a*, the marginal frame *a'* is secured in position. The bands, *b*, are then one after the other arranged over the main lines of the design and secured by strips, *e*, of wood or other appropriate material of approximately the same length as the bands, *b*, which they se-

cure. These strips, *e*, are pressed tightly against the base portions of the bands, *b*, thereby forcing the latter against the preceding strip, *e*. The strips, *e*, may be successively secured to the base, *a*, by tacking or other means. The cross bands, *c*, are then arranged and secured one at a time to correspond with the cross lines of the desired design. These bands, *c*, are narrower than the bands, *b*, to compensate for the thickness of the strips, *e*, upon which they rest, their top edges being flush with those of the bands, *b*. These bands, *c*, are secured in position by short strips, *f*, which are forced tightly against their base portions, one after the other. The strips, *f*, may be secured to the strips, *e*, by tacking or other means.

The marginal frame *a'*, may be formed by two thicknesses of the strips *e*, if desired.

The method by which any design may be produced in mosaic by my apparatus is as follows:—The designer will first indicate in any suitable manner, the color of the block desired for each particular cell such as by marking the surface of the strips, *f*, within each cell, the requisite color, or by inserting colored pieces of paper to guide the operator in selecting the blocks of proper color to insert. After the entire series of cells have been filled with the appropriate blocks to form the design or section thereof, the apparatus is shaken after the manner of a sieve, to cause the blocks to adjust themselves squarely within their respective cells and bring them into proper alignment with one another to accurately correspond with the design. A sheet of paper covered with adhesive material is then laid upon the combined surfaces of the blocks to adhere thereto and a flat board or its equivalent placed upon the paper. The entire apparatus with its contents is then inverted, and the former lifted from the blocks, leaving the latter to become firmly united to the paper as the adhesive material thereon becomes hard. The mosaic work thus produced may be of any desired length and width suitable for handling or transportation. Surfaces of great extent can be made in sections whose side edges can be formed to interlock with one another, as shown in Fig. 2. When laid, the work is placed with the paper uppermost upon the usual bed of cement, and

when sufficiently secured to the latter, the paper is washed off, leaving the design exposed, and presenting the appearance of accurate and well defined lines and blocks composing
5 the design, arranged with mathematical precision. The interstices between the blocks are filled with fluid cement which hardens and completes a flush surface.

The apparatus for designs involving curved
10 lines, is prepared in a similar manner (see Fig. 3), the metallic strips being sufficiently resilient to conform to the said lines. The mosaic blocks are then cut to the shape of the cells, one by one, as needed by the operator,
15 in an ordinary machine used for the purpose, and inserted in their appropriate cells.

I claim—

The apparatus herein described for forming

mosaic work, consisting of a base, *a*; metallic bands, *b*, arranged thereon to correspond
20 with the lines of the design in one direction; strips, *e*, of approximately the same length as the bands, *b*, to which they are adjacent and fitting tightly between the base portions thereof and rigidly secured to the base, *a*;
25 short metallic bands, *c*, arranged to correspond with the cross lines of the design and resting upon the strips, *e*; and strips, *f*, fitting tightly between the base portions of the bands, *c*, and rigidly secured to the strips, *e*,
30 substantially as described.

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Witnesses:

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