

(No Model.)

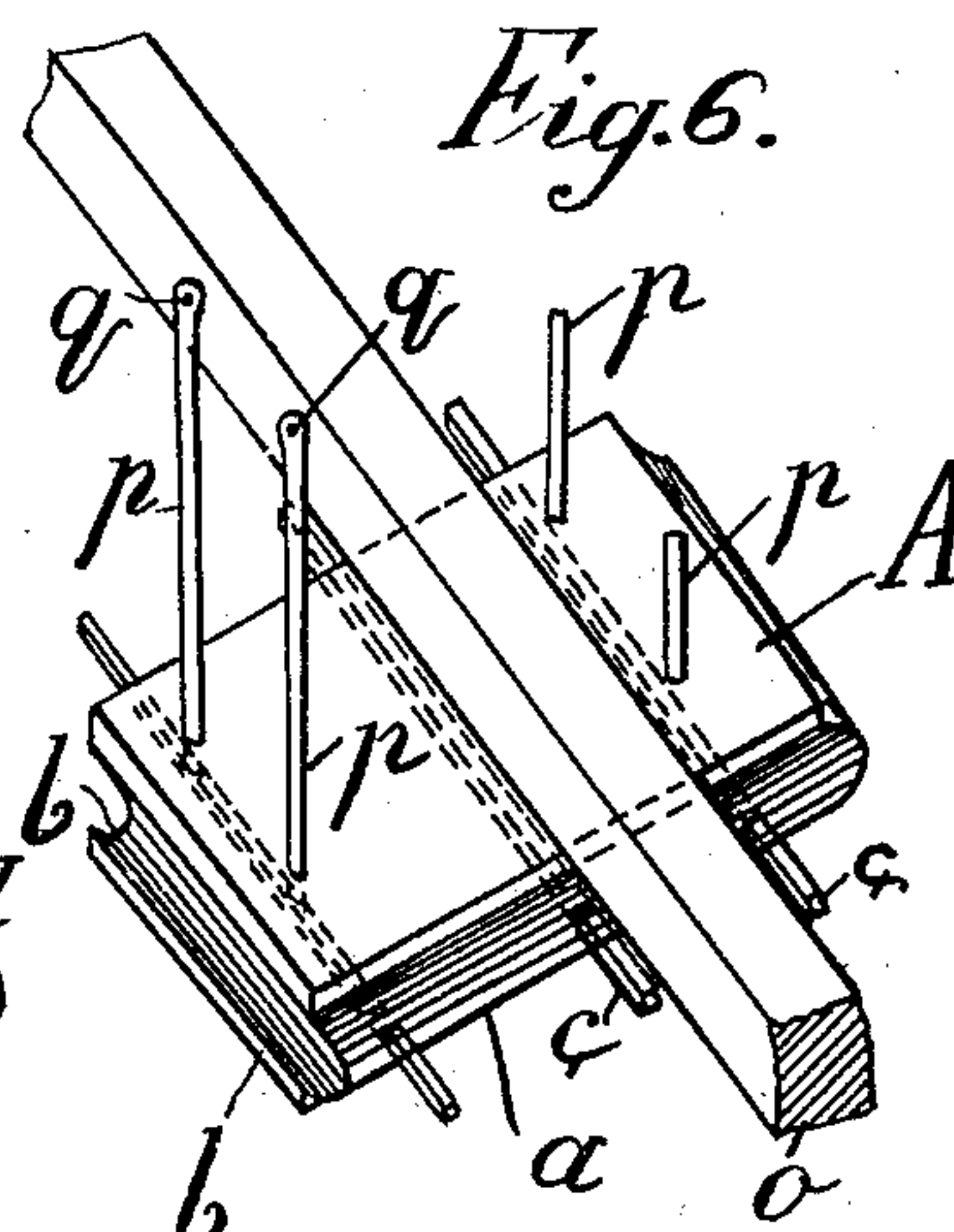
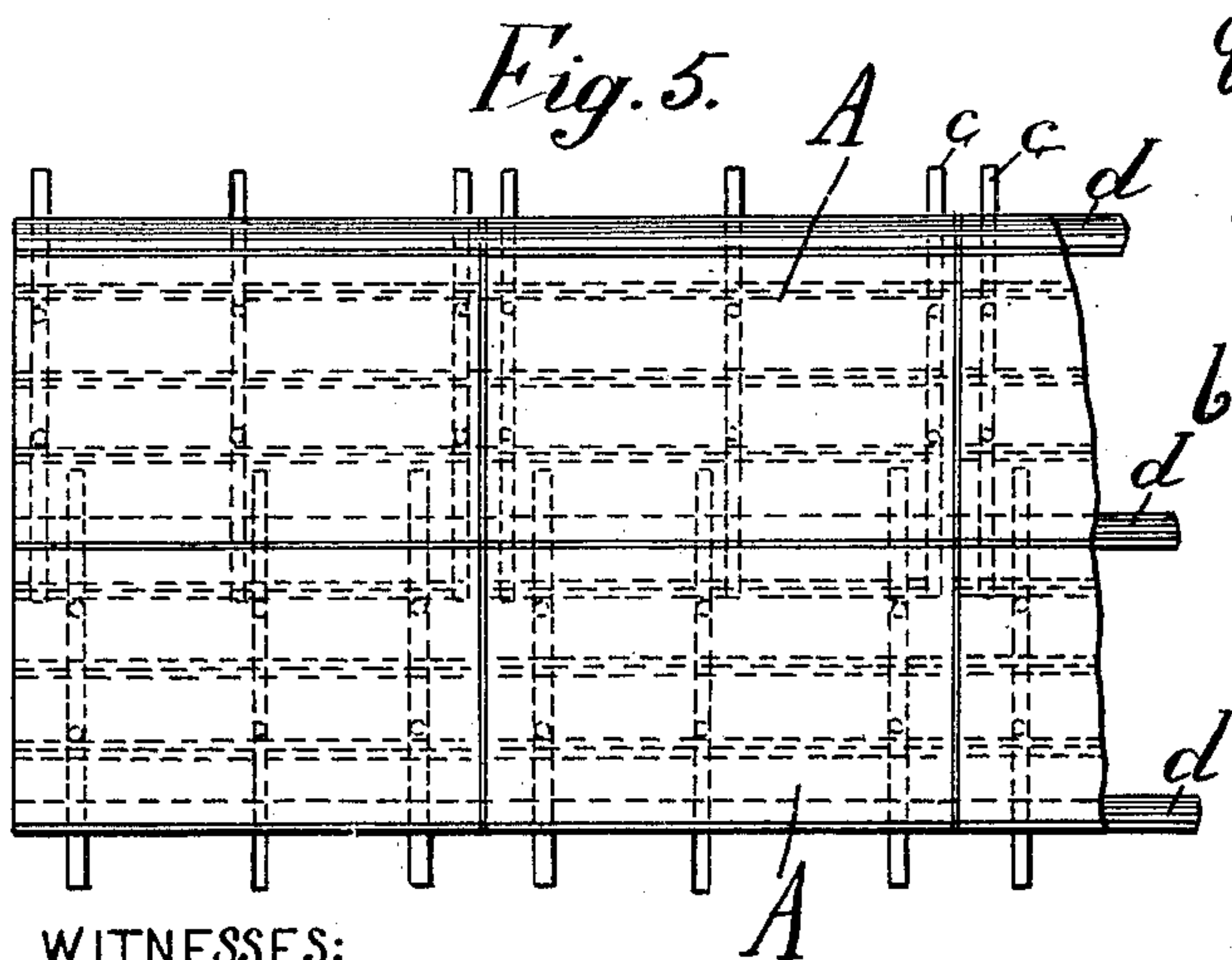
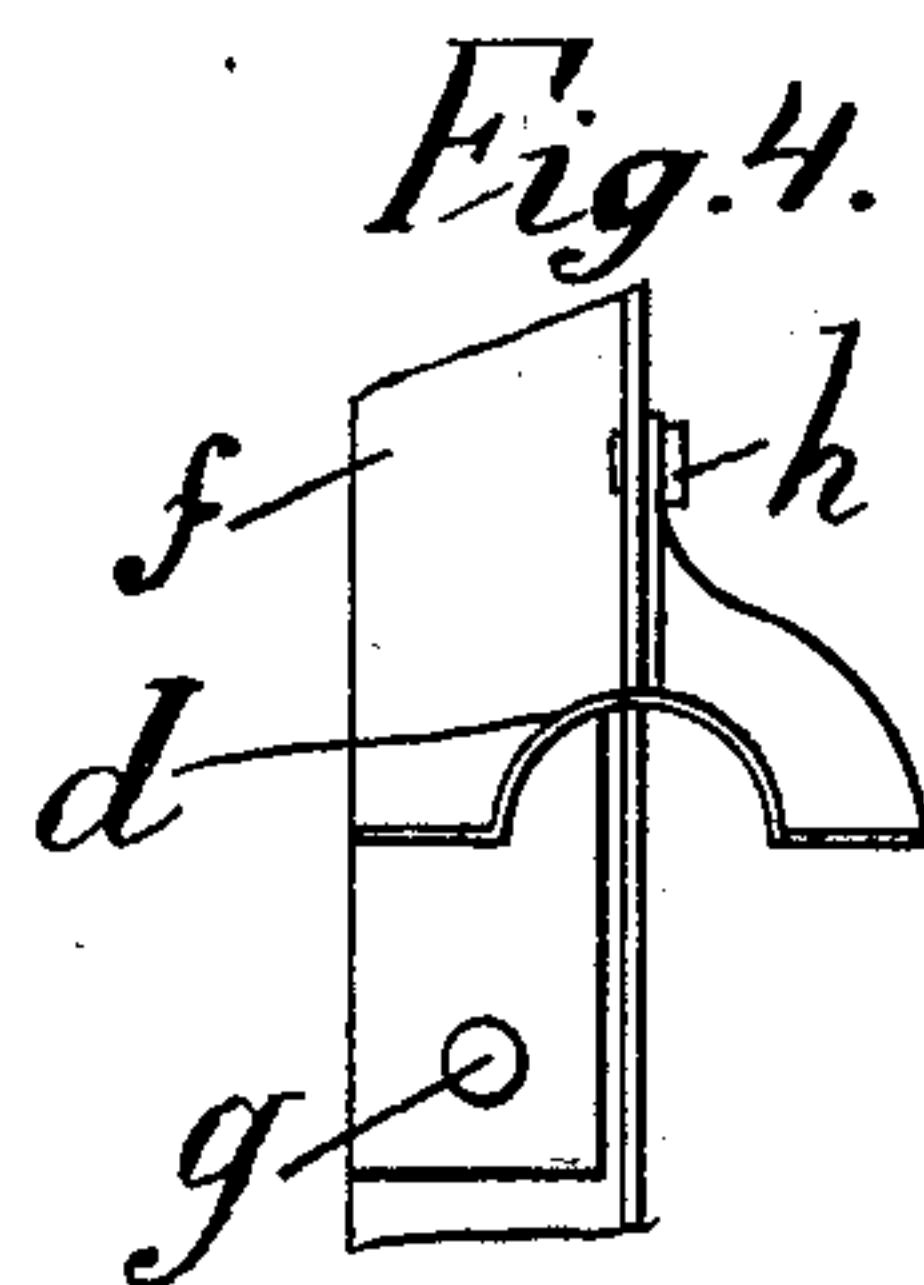
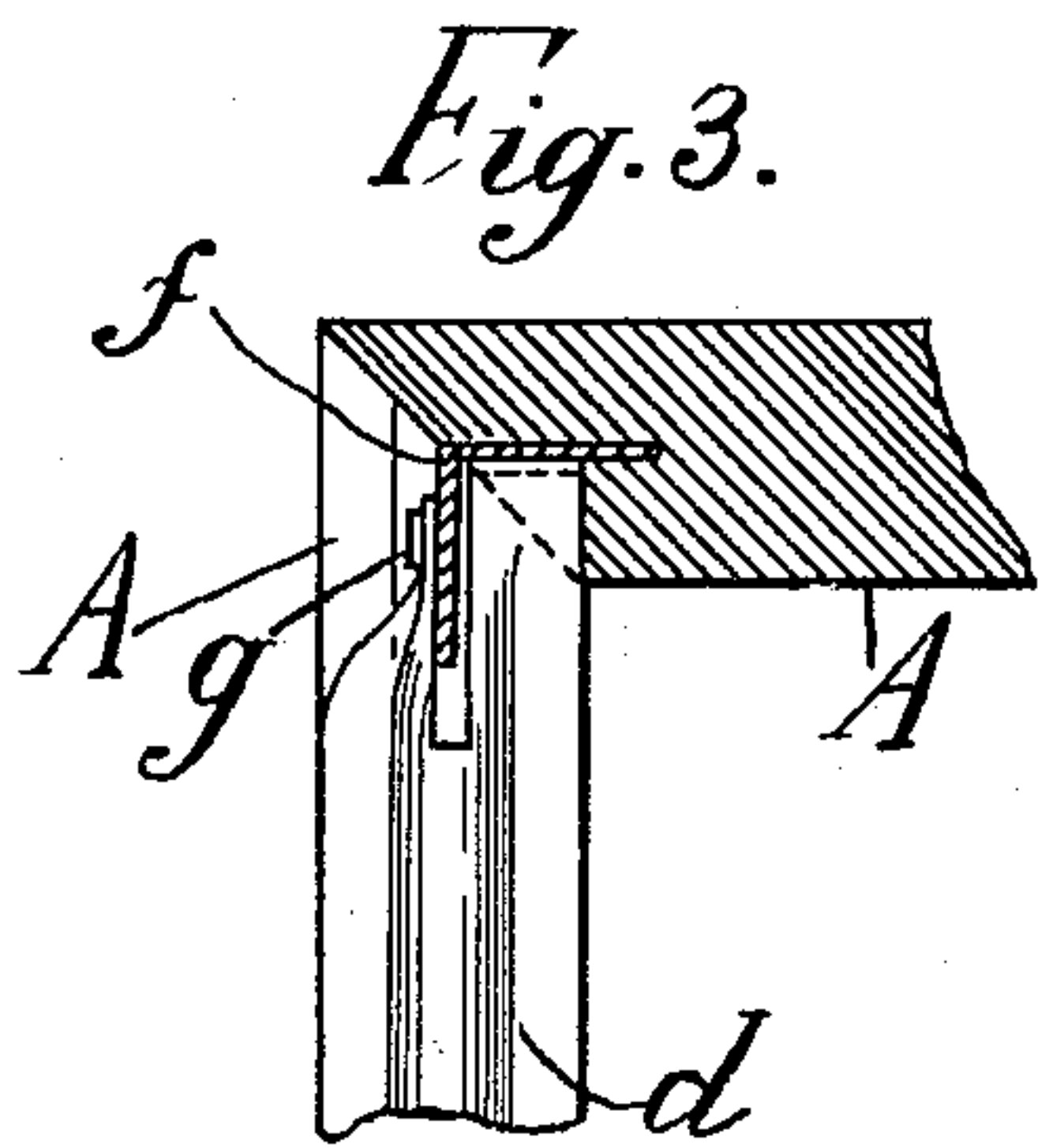
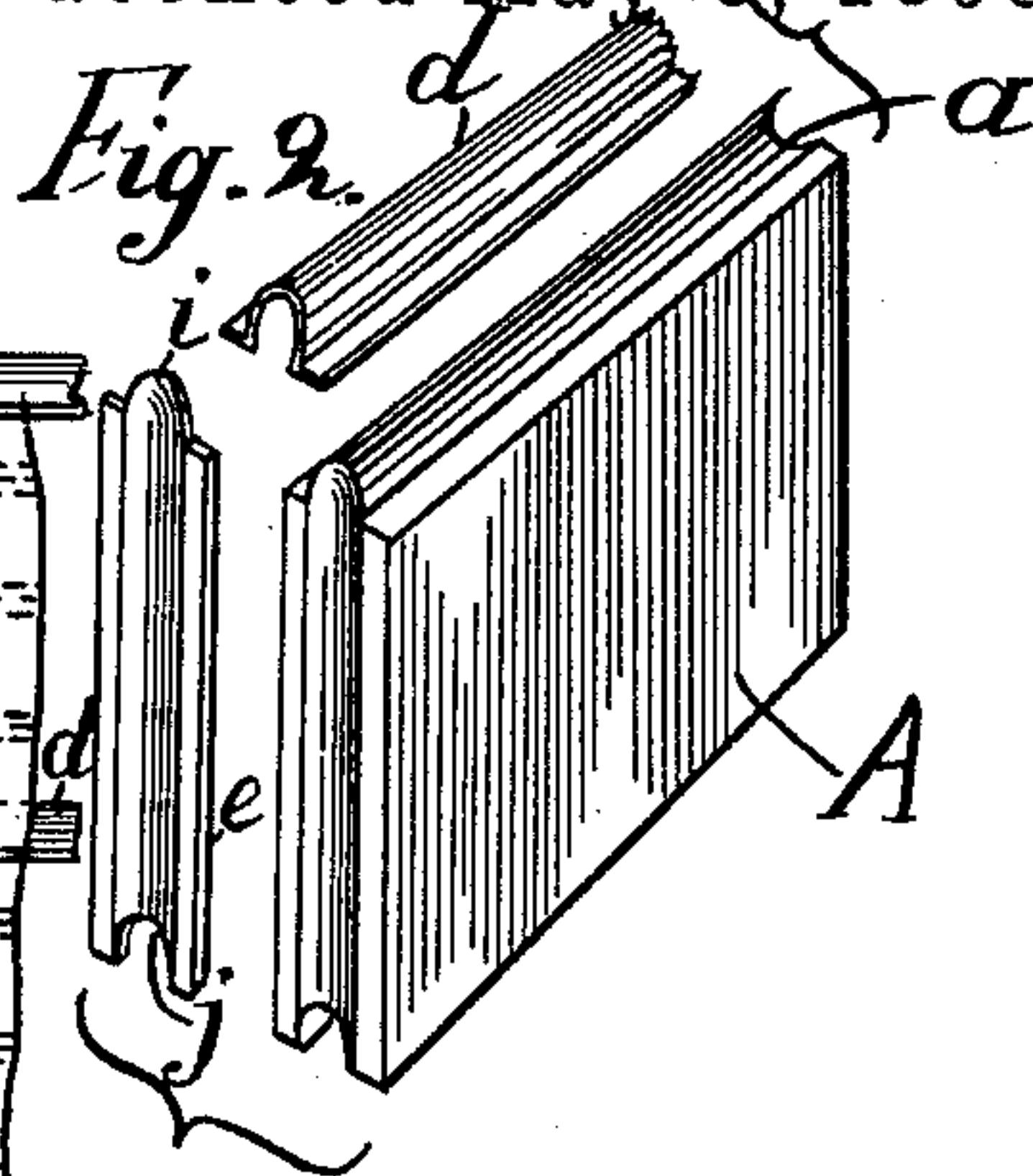
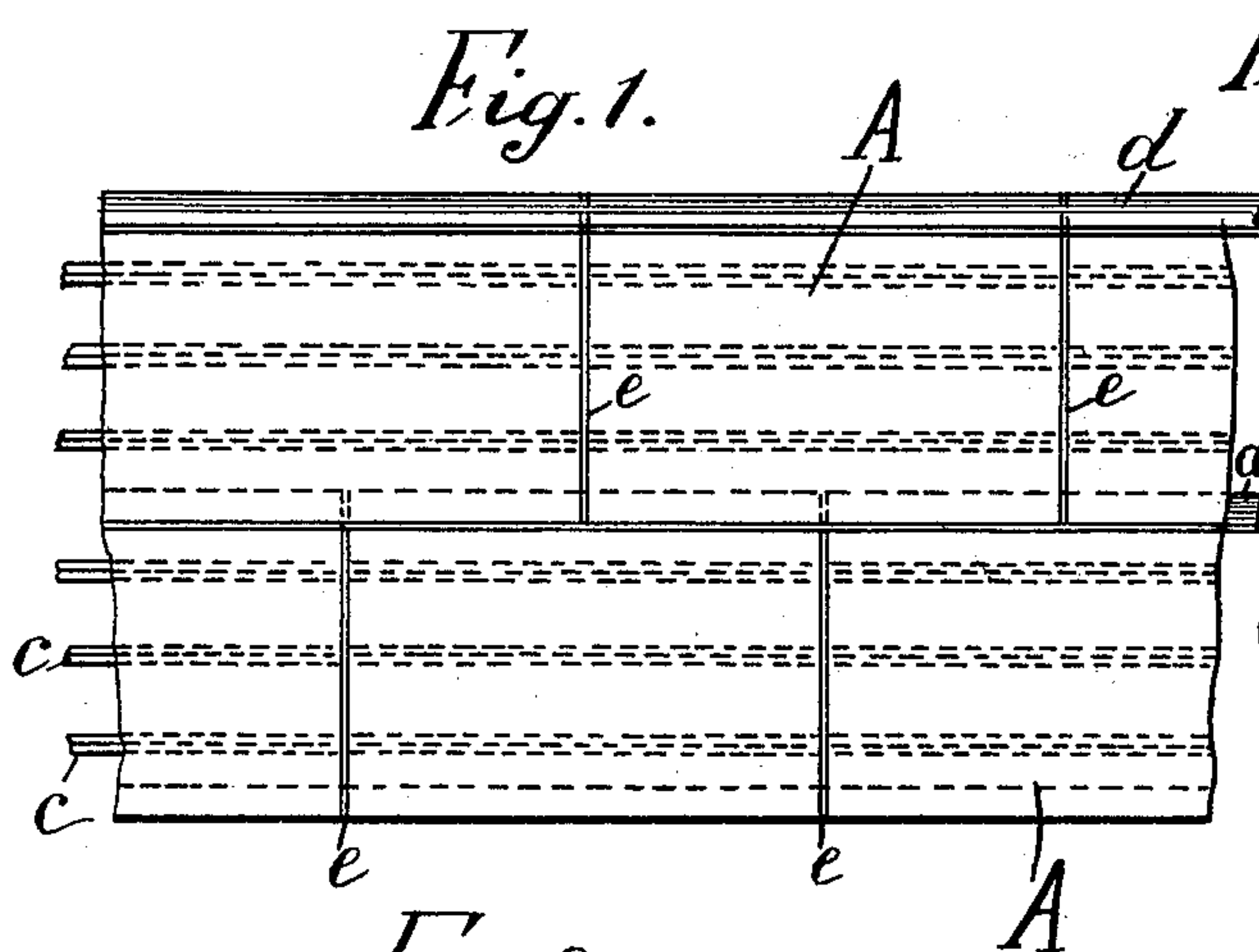
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T. BAILEY.

FIREPROOF PARTITION OR OTHER WALL AND CEILING.

No. 603,591.

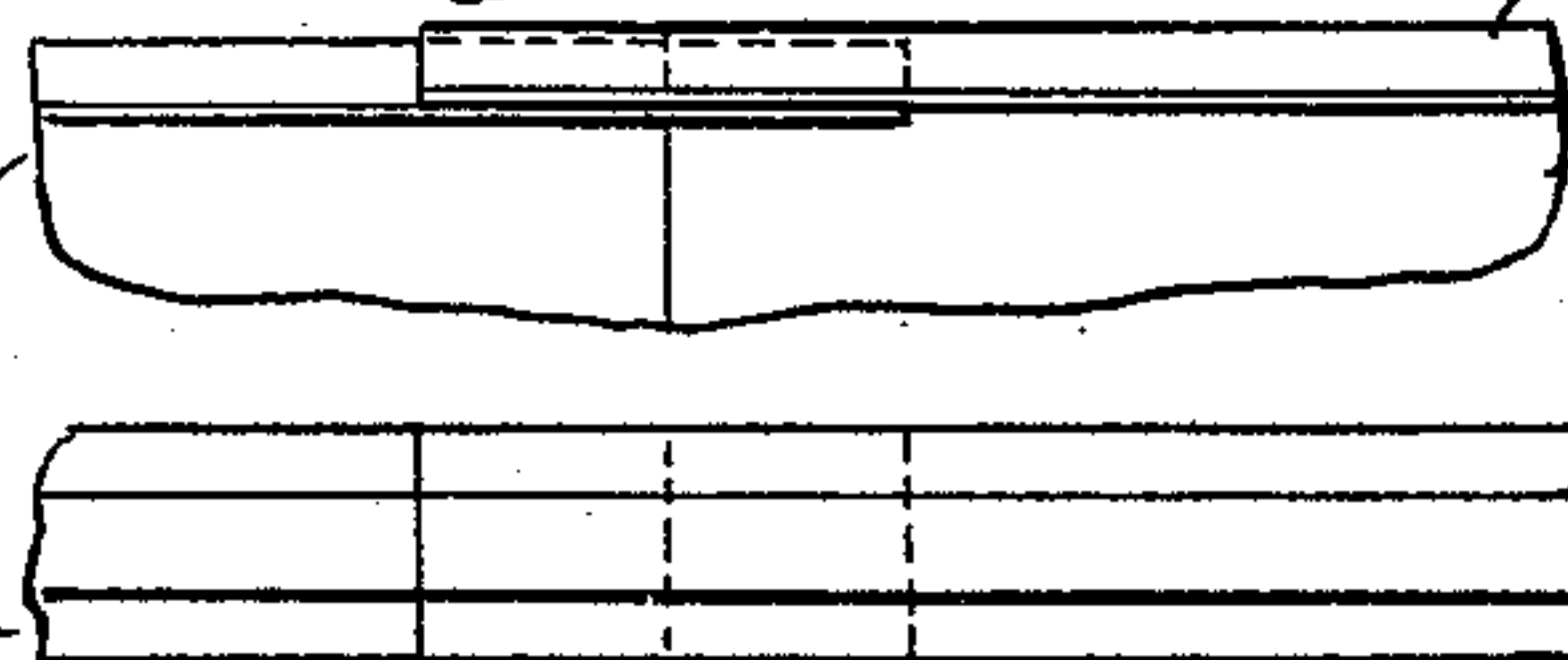
Patented May 3, 1898.



WITNESSES:

O. J. Morgan
Geo. T. Foster

Fig. 11.



INVENTOR:

Thos Bailey
by
A. P. Thayer
att'y

(No Model.)

2 Sheets—Sheet 2.

T. BAILEY.

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Fig. 7.

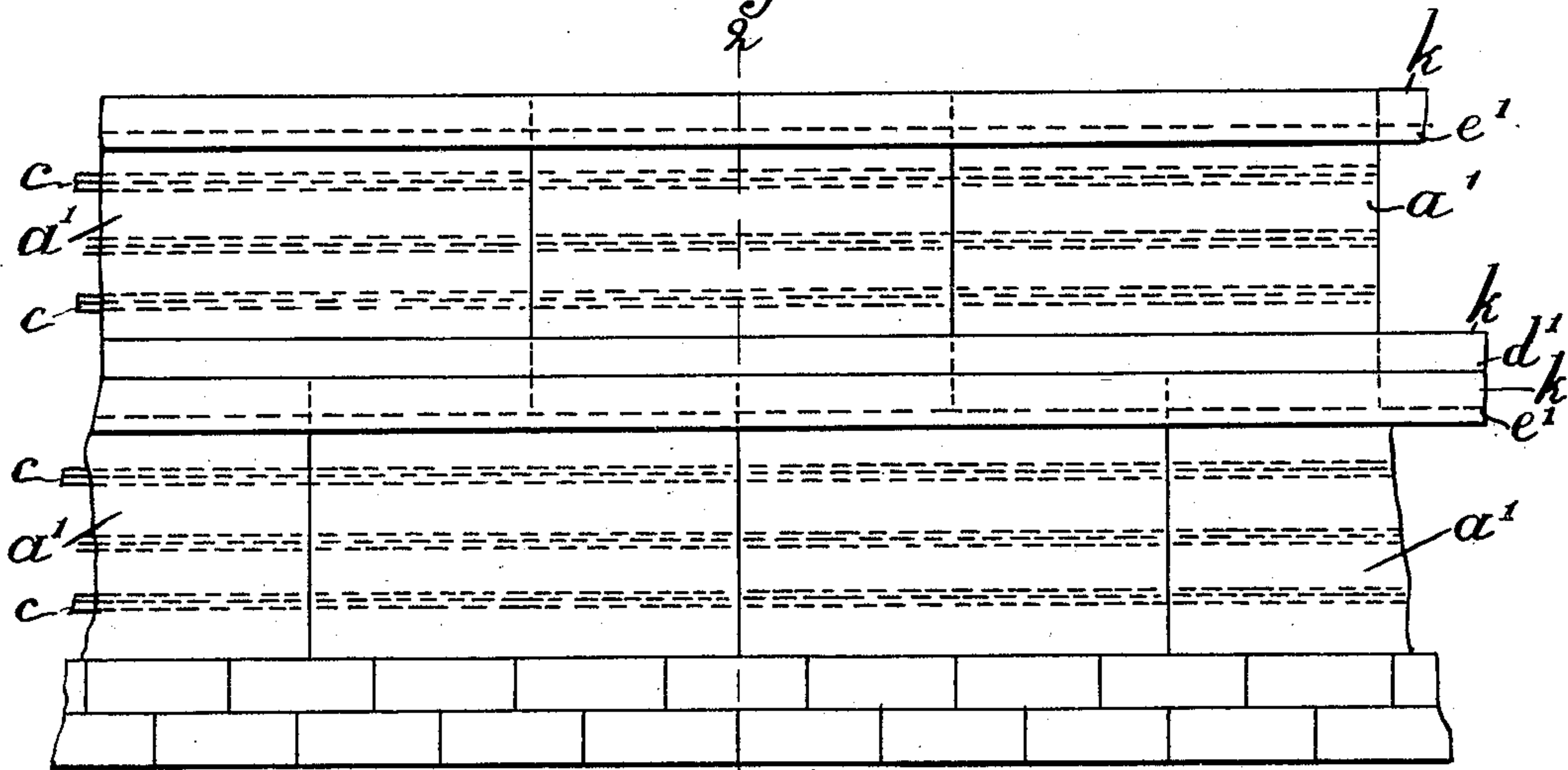


Fig. 8.

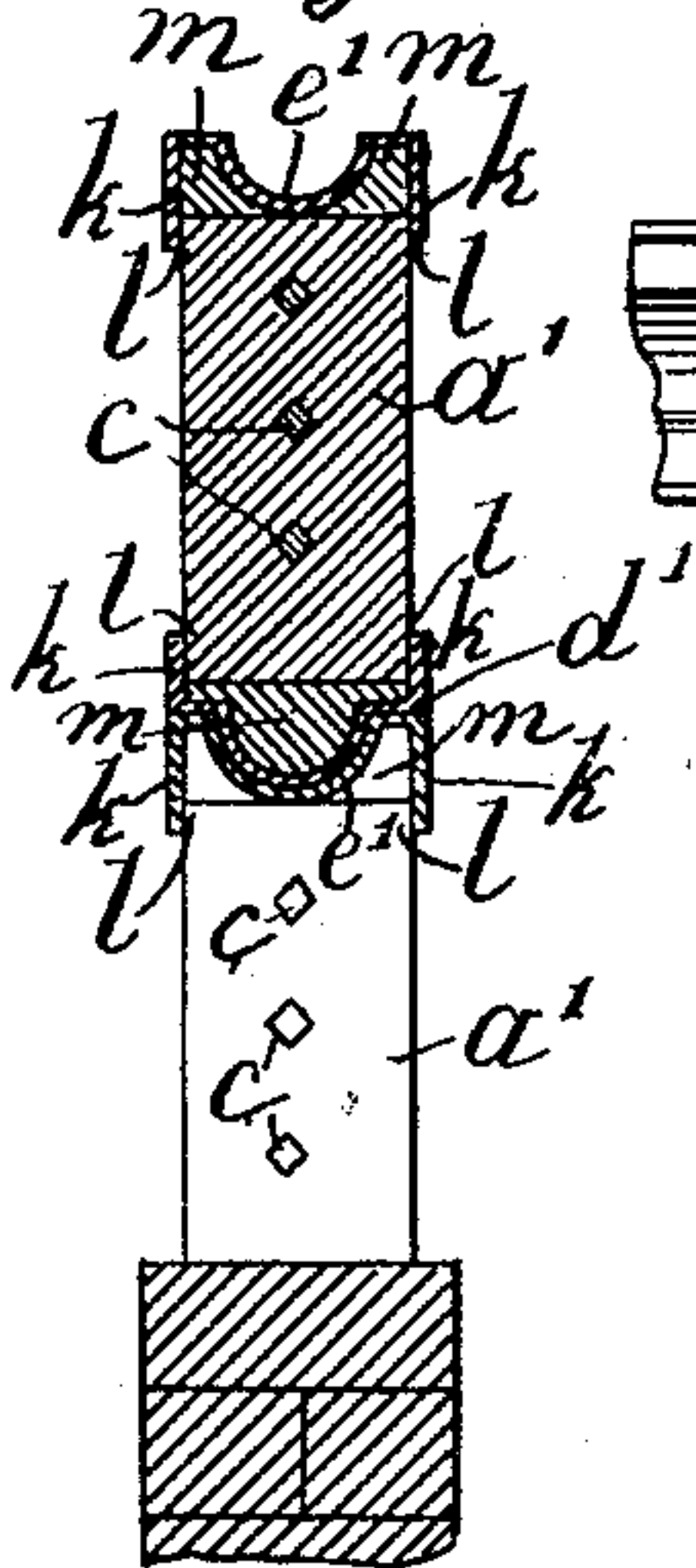


Fig. 9.

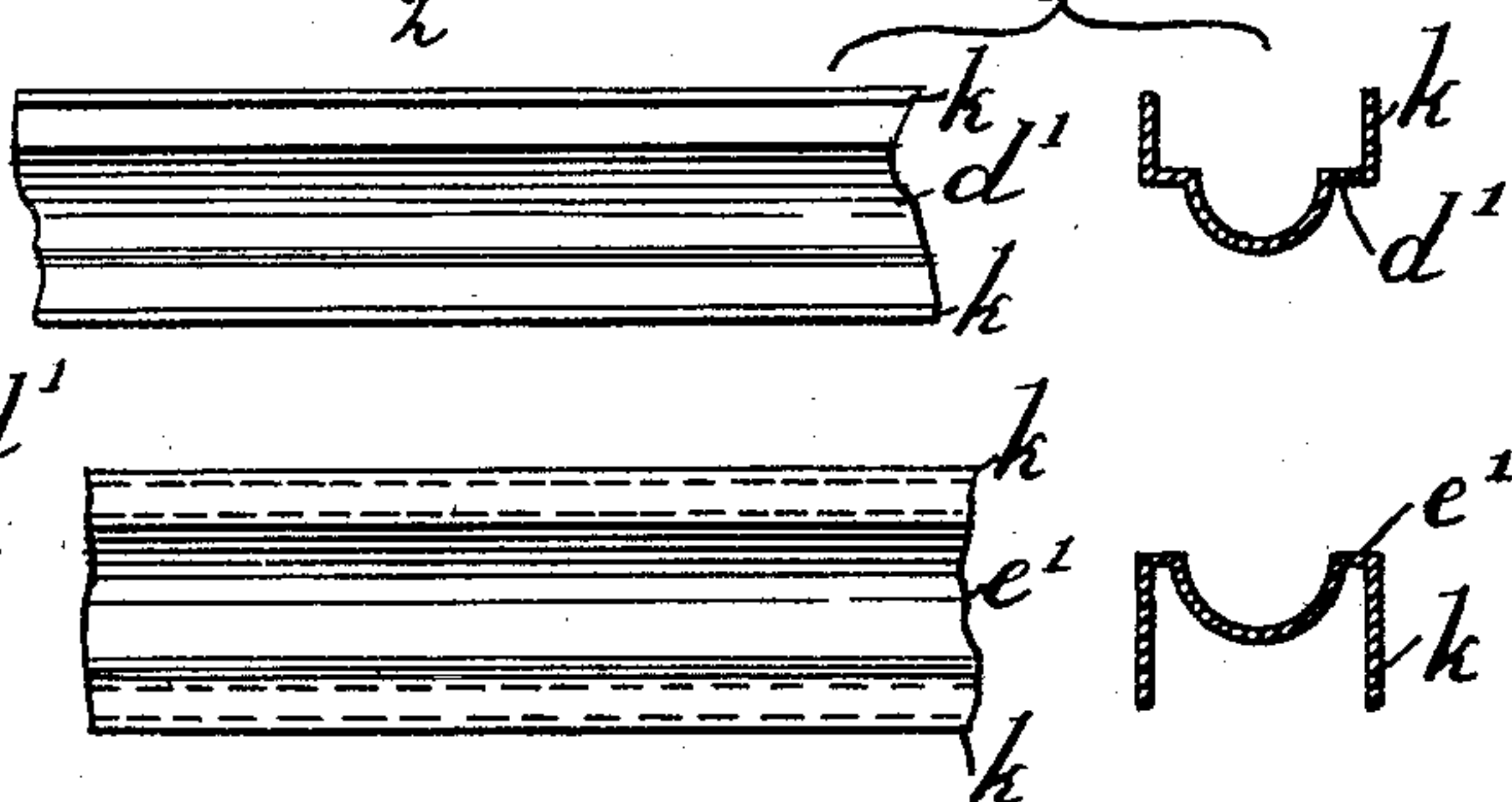
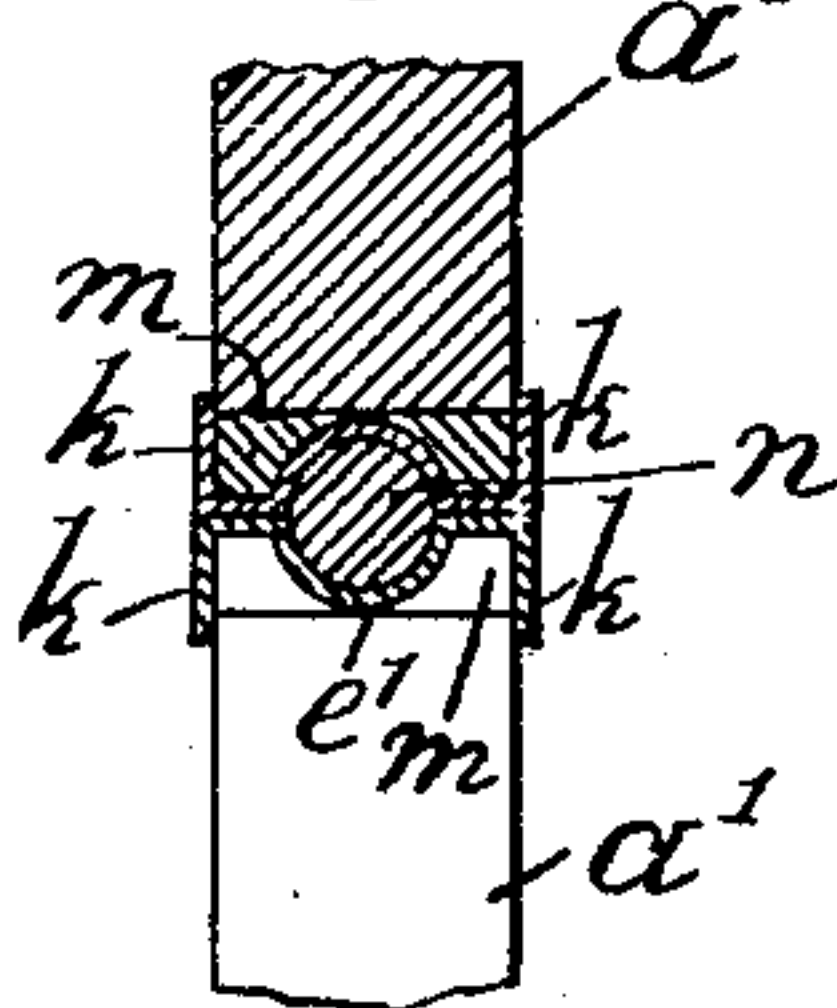


Fig. 10.



WITNESSES:

W. J. Morgan
Charles Sproull

INVENTOR

Thos. Bailey

BY

A. P. Thayer

ATTORNEY

UNITED STATES PATENT OFFICE.

THOMAS BAILEY, OF NEW YORK, N. Y.

FIREPROOF PARTITION OR OTHER WALL AND CEILING.

SPECIFICATION forming part of Letters Patent No. 603,591, dated May 3, 1898.

Application filed April 1, 1897. Serial No. 630,236. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BAILEY, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Fireproof Partitions or other Walls and Ceilings, of which the following is a specification.

My invention relates, essentially, to metallic tongued-and-grooved matching strips arranged between the edges of terra-cotta and other manufactured slabs, blocks, or plates employed in the construction of the walls, partitions, ceilings, and the like for greater strength laterally and for economy of labor in construction.

It also relates to improvements in the construction of the blocks or plates by incorporating stiffening-bars of wood or metal in the bodies of the blocks both for stiffening and to match adjoining edges, the stiffeners being made to project at the ends into recesses of the other blocks, and means for connecting suspending-hangers for supporting ceilings below the floor-beams from heat in case of fire, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is an elevation of part of a wall or partition constructed according to my invention. Fig. 2 is a perspective view of a block and matching strips. Fig. 3 is a plan of a corner-section of a wall, showing the manner of arranging the horizontal matching strips with angle-iron posts, with which the ends of the blocks connect by notches in said ends. Fig. 4 is a side elevation of part of an angle-post and section of a matching strip fastened thereto. Fig. 5 is a plan view of a section of ceiling as I arrange it according to my invention. Fig. 6 is a perspective view of a ceiling-block suspended from the floor-beam by hangers. Fig. 7 is a side elevation of part of a wall with matching strips as I prefer to arrange them when terra-cotta blocks are used. Fig. 8 is a transverse section of the wall of Fig. 7 on line 2 2, and Fig. 9 represents plans and sections of the matching strips of Figs. 7 and 8. Fig. 10 is a detail of a terra-cotta wall matched with grooved strips and a key-rod. Fig. 11 represents in side and plan views overlapped ends of the

tongued-and-grooved matching strips at the joints of the blocks or elsewhere as they may be when preferred or necessary.

A represents slabs or blocks of plaster, cement, or any material that may be molded in a soft state and will harden sufficiently for use. They are molded with tongued-and-grooved edges *a b*, preferably on both edges and ends, but may be on either alone, the others being plain, and they are also preferably made with incorporated wood or metal strips or bars *c* for stiffening purposes, which may or may not project for matching at the edges, as shown in Fig. 5, where the projecting ends of the stiffeners enter matching holes of the adjoining blocks.

d and *e* represent tongued-and-grooved matching strips of metal adapted to fit between the tongued-and-grooved edges of the slabs for stiffening the walls laterally. The horizontal strips *d* extend from end to end of the wall and are suitably notched at the ends to engage the flanges of angle-posts *f* and may be flanged and riveted to said posts, as at *g* and *h* or in any other way. The upright strips *e* extend from course to course of the slabs and are tongued and notched at the ends *i j* to fit the horizontal strips; but I may of course arrange the long strips vertically and the short ones horizontally, if desired.

When using burned blocks of terra-cotta and the like, as *a'*, Figs. 7, 8, and 10, in which tongues and grooves would not be straight in all cases owing to the liability of such blocks to warp by the effect of the heat, I prefer to make such blocks with plain edges and make the metal strips, as *d' e'*, with flanged edges *k* to embrace the sides of the blocks at the edges, as *l*, Figs. 8 and 10, which can be trimmed and straightened to receive the strips, and fill the flanged strips to the depth of the tongues and grooves with plaster or other cement *m* when laying up the walls. The plaster unites with the edges of the blocks and forms ribs and grooves to match the strips.

In some cases I will arrange the joint with two grooved strips *e*, either with flanged edges *k* or not, with the grooves face to face, and with a key-rod *n* inserted, as in Fig. 10, more particularly for upright joints, but in horizontal joints also when desired.

When angle-iron posts *f* are used in the

corners, the blocks will be formed with bevel edges for miter-joints, and the edges will be notched for the flanges of the posts, as in Fig. 3, and will also be suitably notched for the flanges of the joint-binding strips, which are to be riveted to the flanges of the posts. If the long strips are arranged vertically, they will be likewise fastened at the ends to sills and floor-beams, respectively.

In Fig. 6 I represent a ceiling-block suspended from floor-beams *o* by metallic-rod hangers *p*, nailed to the beams at *q* and being connected at the lower ends with rods or bars *c*, incorporated with the substance of the block. These may be first connected with said rods or bars *c* and be, together with them, incorporated with the blocks when formed when the blocks consist of cement or plaster, as they generally will be for ceilings; but they may be connected with said bars *c* through holes formed in the terra-cotta blocks coincident with screw-threaded holes in said bars *c* to apply the hangers after the blocks have been burned.

In Fig. 11 the strips *d* are shown as lapped on each other at the joints of the blocks or may be lapped elsewhere in case of need, the strips being so thin that they may be lapped anywhere without detrimental effect, and being so lapped they are nearly if not quite as effective for lateral strength as continuous strips, for, owing to the slightly-greater thickness at the lap, somewhat greater pressure of the overlying blocks is caused thereat, by which lateral rigidity is insured.

When using plaster or cement blocks of low cohesive strength, I will mold them on the strips *d* and *e*, said strips being placed in or forming parts of the molds for forming the edges of the blocks and being so made that the strips will adhere to the blocks and be removed with them for protection of the edges against breaking in handling the blocks. In such cases the strips may be slightly longer than the blocks to overlap, as in Fig. 11, at the meeting ends of the blocks, and when the edges of two blocks, both having a strip, meet together one strip may be removed or the two strips, being of like form, may be retained, one being placed on the other.

I claim—

1. In walls or ceilings composed of blocks of cement or burnt clay, the combination with the edges of said blocks to be joined, of flanged metallic stiffening-strips confined on the edges of said blocks respectively by their flanges overlapping the sides of the blocks, and being tongued and grooved along the middle for interlocking to stiffen the walls or ceilings laterally substantially as described.

2. In walls or ceilings composed of blocks of cement or burnt clay, the combination with the edges of said blocks to be joined, of flanged metallic stiffening-strips, confined on the edges of said blocks respectively by their flanges overlapping the sides of the blocks,

and being tongued and grooved along the middle for interlocking and bedded on said edges with plaster substantially as described.

3. In walls or ceilings the combination of prepared blocks of cement or burnt clay, said blocks tongued and grooved on the edges to be joined, and a correspondingly tongued-and-grooved metallic laterally-stiffening strip placed between the layers of blocks and said tongued-and-grooved edges and said strips having marginal surfaces in angular relation to the tongues and grooves substantially as described.

4. In walls or ceilings composed of blocks of cement or burnt clay, the combination with said blocks, of metallic strips in the joints adapted for stiffening said joints laterally, and at the ends fastened to the posts, or to sills and floor-beams substantially as described.

5. In walls or ceilings composed of blocks of cement or burnt clay, the combination with said blocks tongued and grooved on the edges to be joined, of a correspondingly tongued-and-grooved metallic laterally-stiffening strip interposed between and interlocking said edges, and fastened at the ends to posts substantially as described.

6. In walls or ceilings composed of blocks of cement or burnt clay, the combination with said blocks tongued and grooved on the edges to be joined, of a correspondingly tongued-and-grooved longitudinal metallic laterally-stiffening strip interposed between the blocks at each joint, and like transverse strips between the end joints of the blocks and being tongued and notched at the ends to match the longitudinal strips substantially as described.

7. In walls or ceilings composed of blocks of cement or burnt clay, having tongued-and-grooved interlocking edges, the combination with said blocks, of interposed stiffening-bars, and a tongued-and-grooved metallic laterally-stiffening strip, interposed between the blocks at the joints, said stiffening-bars projecting at the edges of the blocks and through the stiffening-strips into the adjacent blocks substantially as described.

8. In ceilings composed of blocks of cement or burnt clay having tongued-and-grooved interlocking edges, the combination with said blocks of interposed stiffening-bars, a tongued-and-grooved metallic laterally-stiffening strip interposed between the blocks at the joints, and suspending hanger-rods connected with the interposed stiffening-bars substantially as described.

Signed at New York city, in the county and State of New York, this 17th day of March, A. D. 1897.

THOMAS BAILEY.

Witnesses:

W. J. MORGAN,
GUSTAF SJÖSTRÖM.