

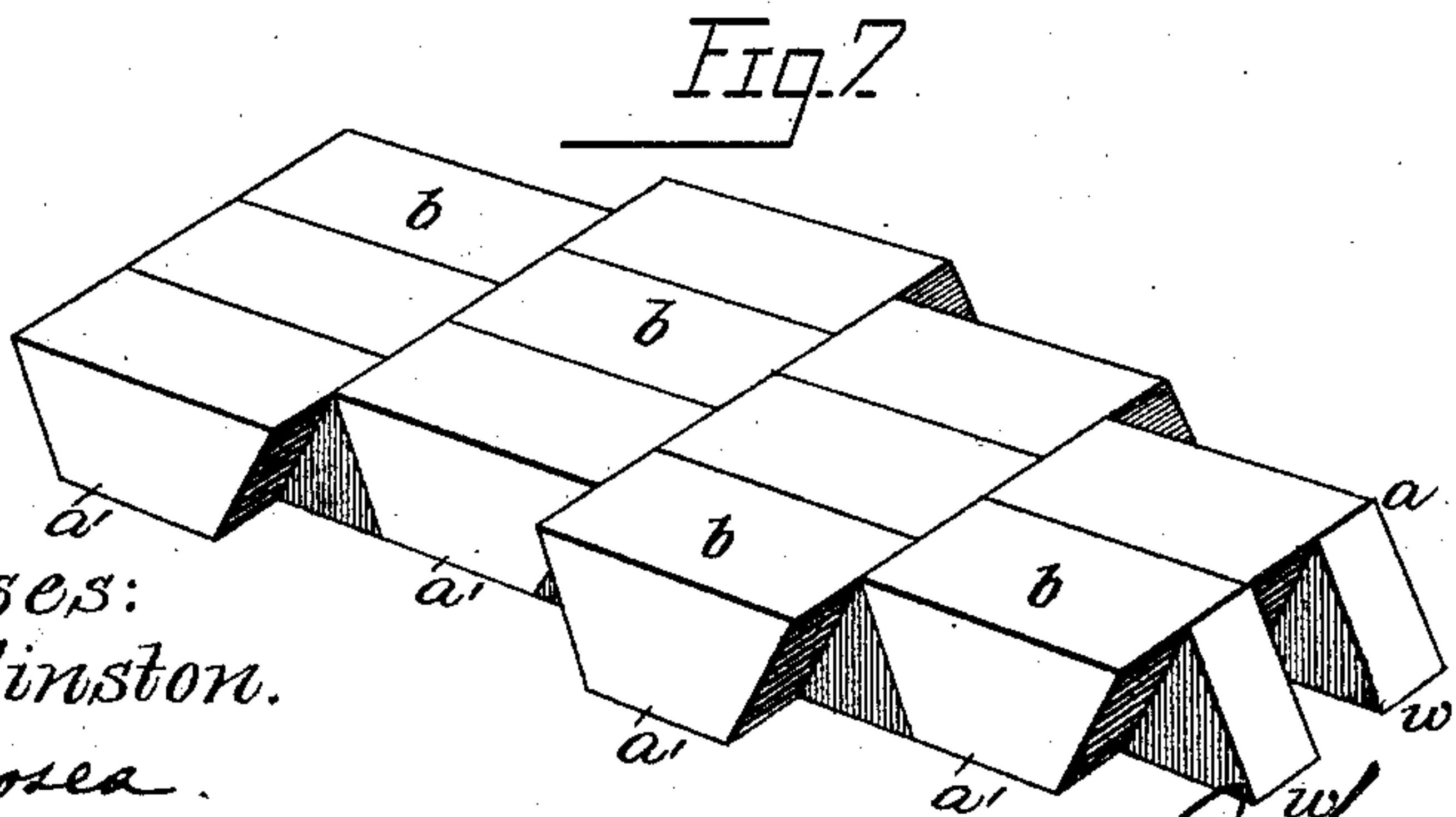
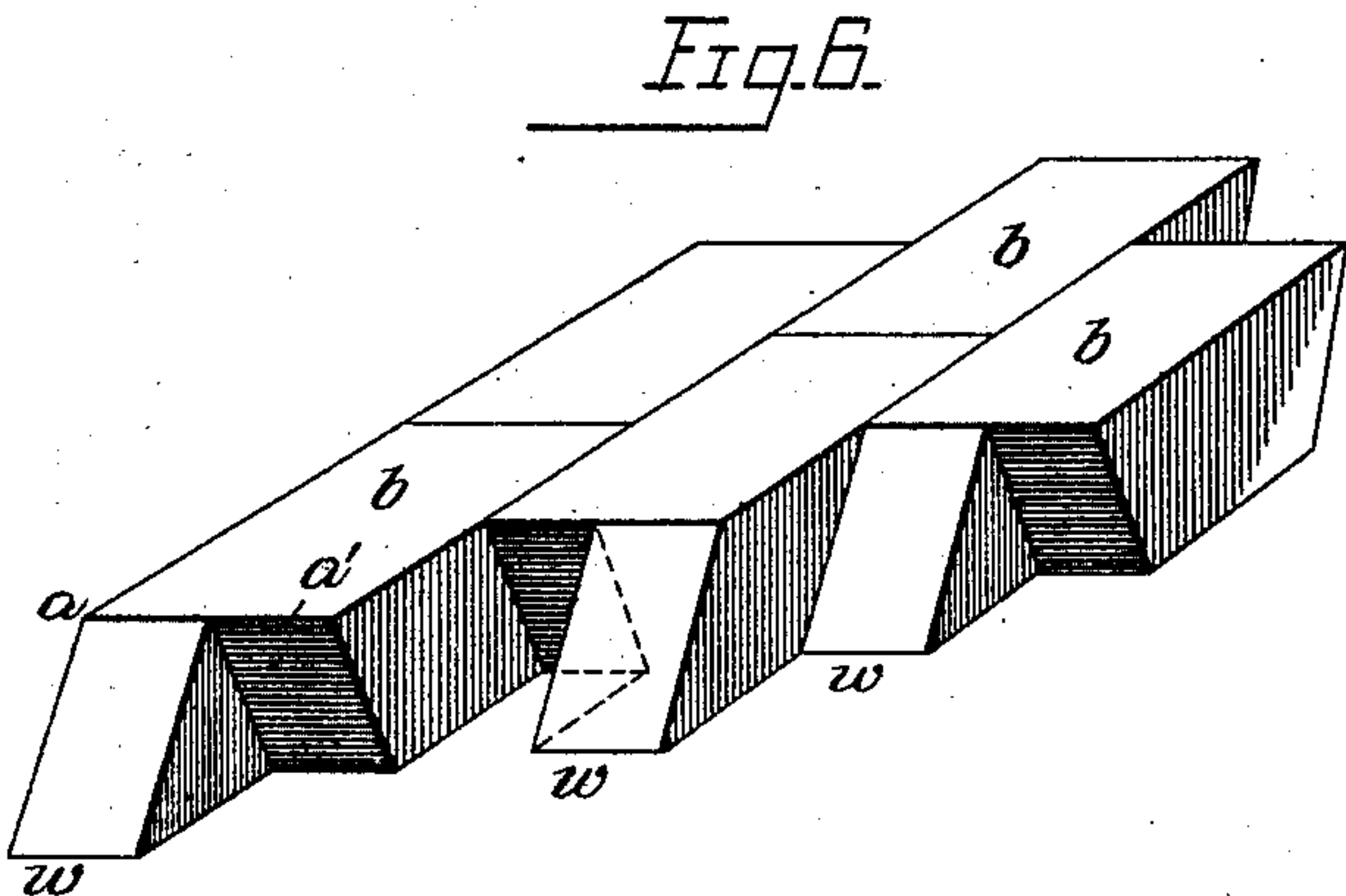
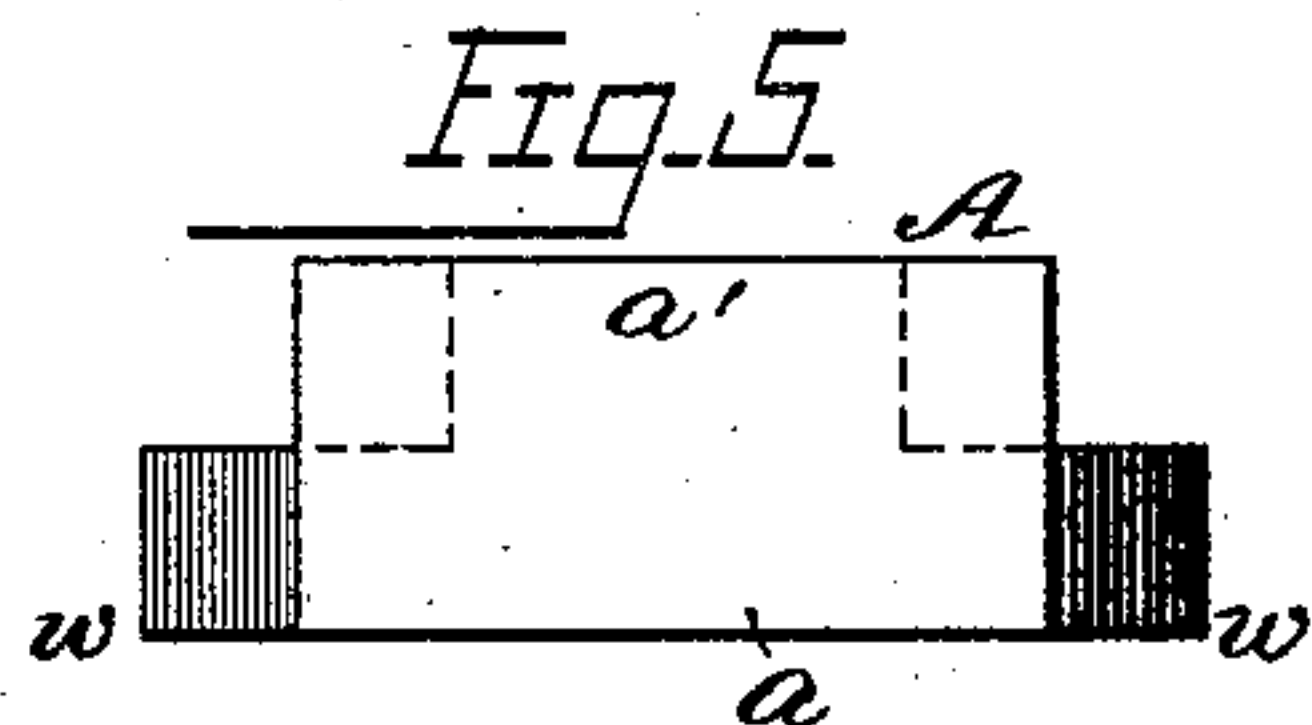
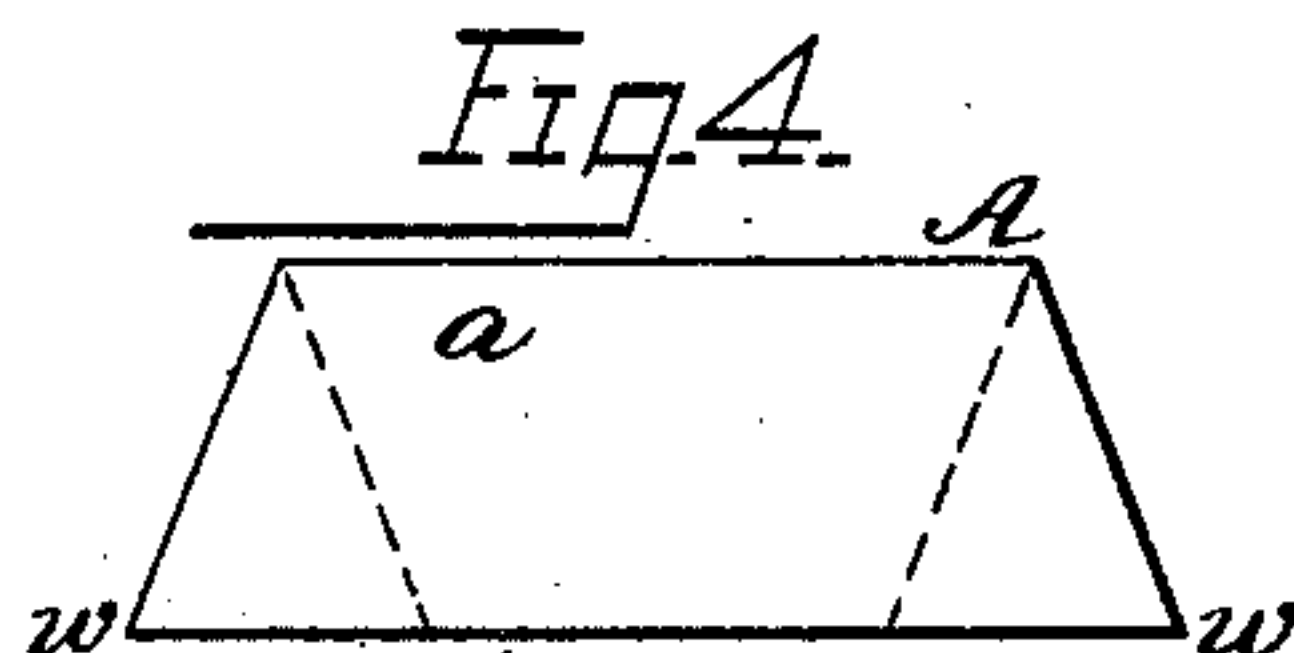
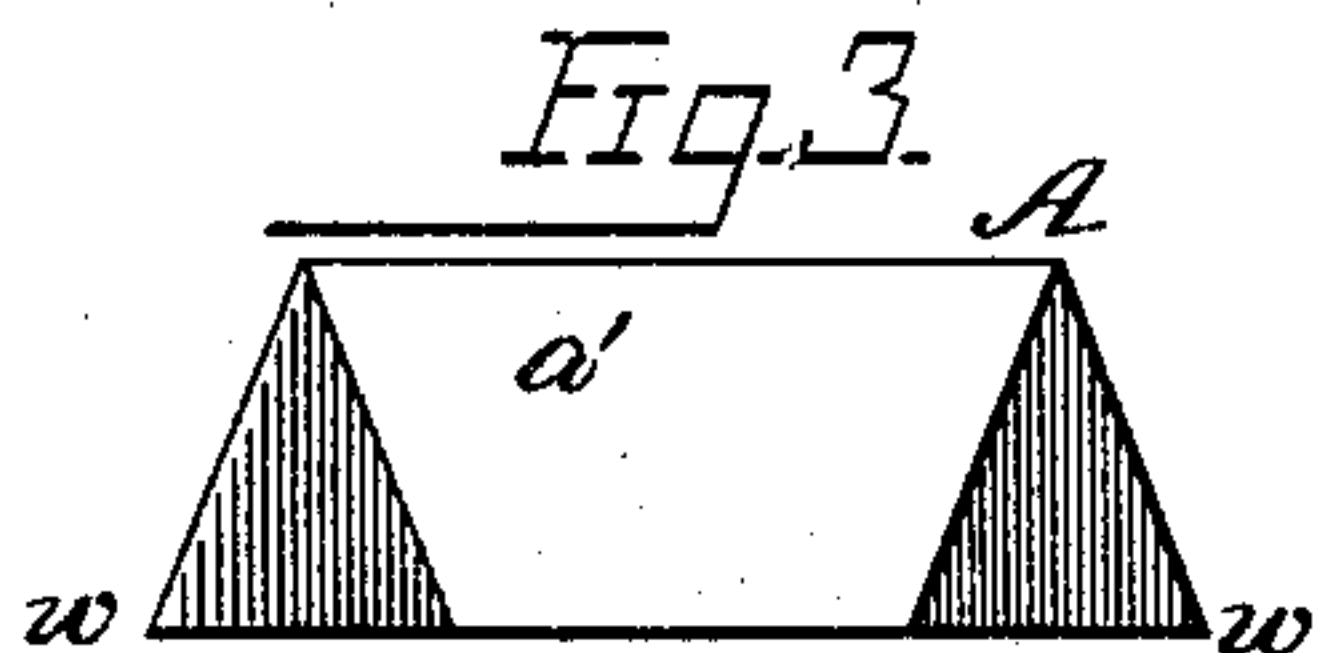
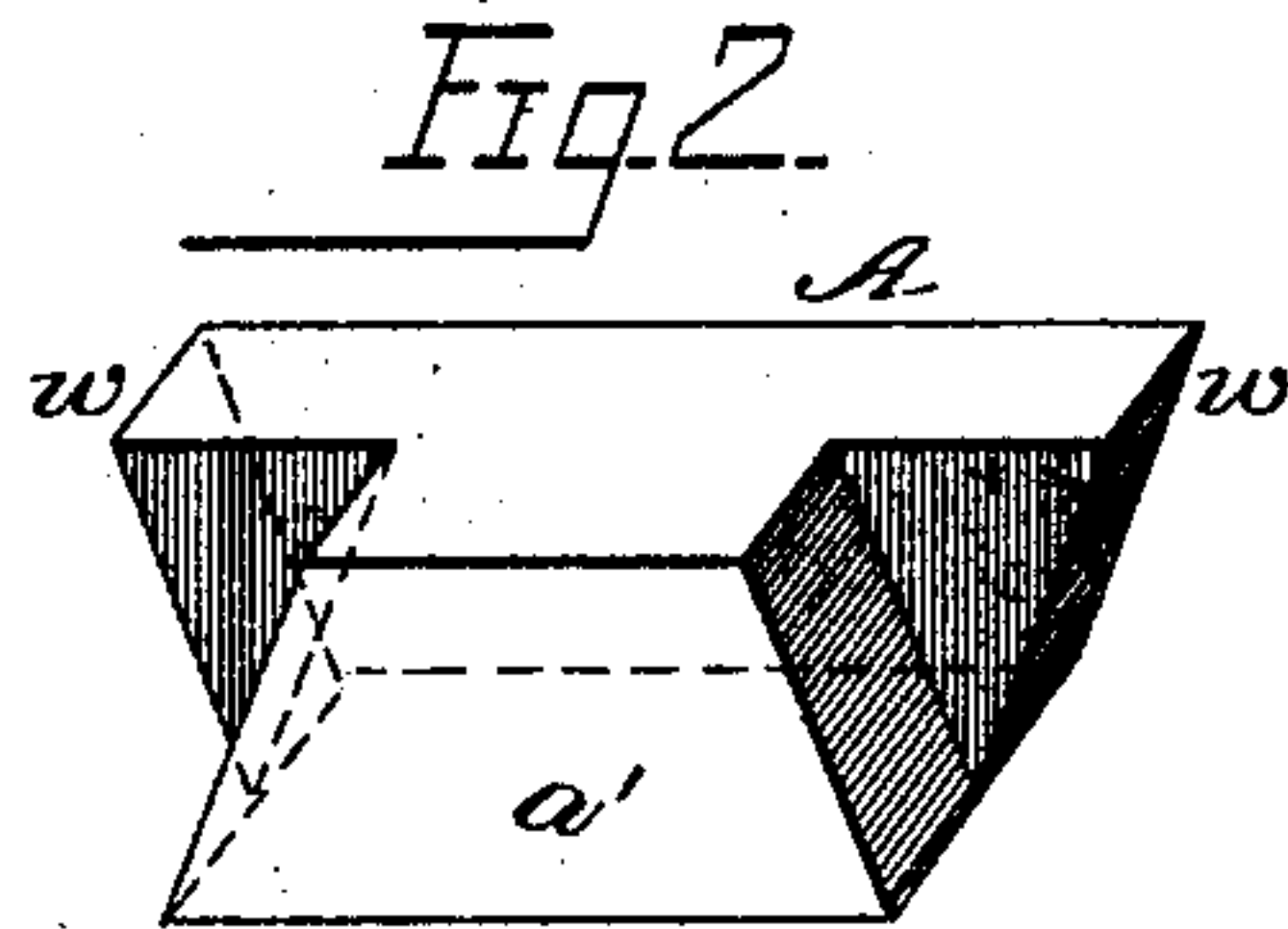
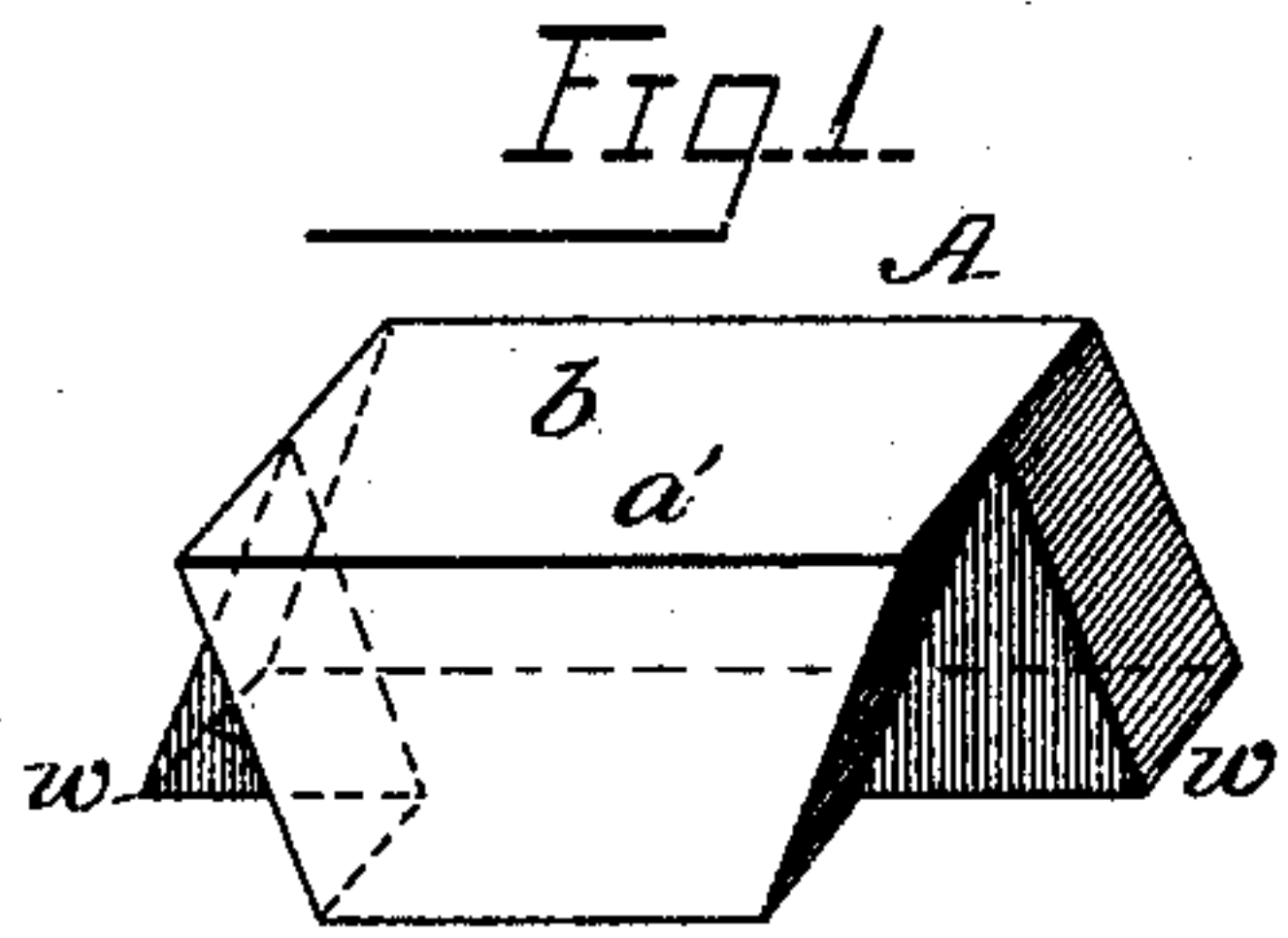
(No Model.)

C. E. SIMPSON.

INTERLOCKING BLOCK FOR BUILDING, PAVING, &c.

No. 472,590.

Patented Apr. 12, 1892.



Witnesses:
W. C. Jirdiniston.
L. C. Hosea.

Inventor:

Charles E. Simpson
by L. C. Hosea, Attorney.

UNITED STATES PATENT OFFICE.

CHARLES E. SIMPSON, OF PORTSMOUTH, OHIO, ASSIGNOR OF ONE-HALF TO
W. Q. ADAMS, OF SAME PLACE.

INTERLOCKING BLOCK FOR BUILDING, PAVING, &c.

SPECIFICATION forming part of Letters Patent No. 472,590, dated April 12, 1892.

Application filed December 2, 1891. Serial No. 413,781. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SIMPSON, a citizen of the United States, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented new and useful Improvements in Interlocking Blocks for Building, Paving, &c., of which the following is a specification.

My invention relates to bricks or blocks for building or paving, &c., and is intended to provide a building or paving brick or block so formed as to present interlocking surfaces and portions in such manner that when laid in a pavement or wall each brick or block will interlock with and be supported by its neighbors against a displacing force either horizontally or vertically, as may be desired.

To this end my invention consists in a brick or paving block formed, substantially, of two wedge frusta joined side by side, inclined on opposite directions, and terminating in parallel planes constituting opposite bounding-surfaces of the brick or block. These frusta are taken from lineally-consecutive portions of a given wedge, the frustum plane of one being projected as the base plane of the other, so that the brick or block presents one outside face as a true rectangle, enabling the pavement to be laid with the usual outer surface divisions of equal rectangles. When laid as a pavement, one half of the brick or block has a wedge or "flat-arch" support end to end upon the adjacent members of the same course, while the other half has a similar support against the same members as against an upward stress and also a correspondingly-lengthened base-support upon the foundation material. When laid side upon side in a vertical wall, the same advantages are obtained with respect to stresses in a lateral direction, while the overlapping extensions within the face of the wall form "ties," adding materially to the strength of the structure, even where the joints are not otherwise broken in the succession of courses.

My invention is illustrated in the accompanying drawings, in which—

Figures 1 and 2 are perspective elevations of the improved brick or block, showing the top and the bottom, respectively; Figs. 3, 4, and 5, opposite end elevations and a plan view,

respectively; and Figs. 6 and 7, views of the blocks aggregated in a pavement, showing two different modes of laying.

Referring now to the drawings, the brick or block A may be described as composed of successive frusta of equal axial length cut from the same wedge and placed face to face in opposite angular relations and merged into one structure, or, considering the main body of the brick or block as a rectangular parallelopipedon, two half-wedges w of half the width of the main body are cut from opposite ends at the same side and added to the uncut portions adjoining. For convenience of explanation in describing the functions of the parts, I may consider the brick or block as a union of two wedges of unequal size, a designating the larger and a' the smaller. The upper face of the brick or block is a true rectangle formed of the base-surface of the smaller wedge portion a' and the frustum of the larger wedge portion a , as shown in Fig. 1, while the opposite face b' presents a plane T-shaped, as shown in Fig. 2. These bricks or blocks so formed may be laid with either of the side or top faces outward in the course, since the end projections overlap as well in a horizontal as a vertical position.

In the two modes of laying shown in Figs. 6 and 7 the bricks or blocks are shown laid in a pavement, the courses running in the first case lengthwise of the bricks and in the second crosswise. In either case it will be seen that the wedge-shaped smaller portion a' of each brick has a resting support against downward pressure upon the wedge-surfaces w of the larger portions a of the bricks longitudinally adjacent, while the larger portion a has a similar wedge-support against upward pressure upon the smaller portions a' of the said adjacent bricks. It will also be observed that the larger portions a of the bricks as a compensation for the lack of end support against downward pressure have a relatively increased base area resting upon the foundation material of the roadway. That these are substantial advantages is obvious when the nature of the stresses due to street travel is considered. By the interlocking of the integral elements of the pavement, giving both vertical and lateral support, it is practically

impossible for any one block to sink below or be forced above the proper surface alignment. For a like reason a canting over of the block is impossible, so that a firm and level roadway is durably maintained.

In buildings and structures where bricks are used the advantages are equally marked.

The interlocking of the bricks, presenting a rigid support against vertical pressure, lends itself to the construction of flat arches over openings in walls or in the construction of floors. They are also especially useful in the construction of furnaces and the lining of boshes and smelting-pots and hearths, where the "floating" of bricks is to be avoided.

I claim as my invention and desire to secure by Letters Patent of the United States—

1. A paving or building brick consisting of two wedge frusta of parallel sides having the base of one equal to the frustum plane of the other, merged side to side in such relation that the said base and frustum constitute a single

rectangular plane as one face of the brick and the opposite base and frustum constitute a rectangular plane extended at corresponding opposite sides as the other face of the brick, while the ends present one half inclined outward and the other half inward in corresponding relations, substantially as set forth.

2. A brick or building-block consisting of two wedge frusta of equal length and width, being successive portions of a given wedge cut by parallel planes at right angles to the axis and merged side to side, the smaller base of one being a projection of the larger base of the other, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES E. SIMPSON.

Witnesses:

WM. B. GRICE,
KATIE SCHUMANN.