

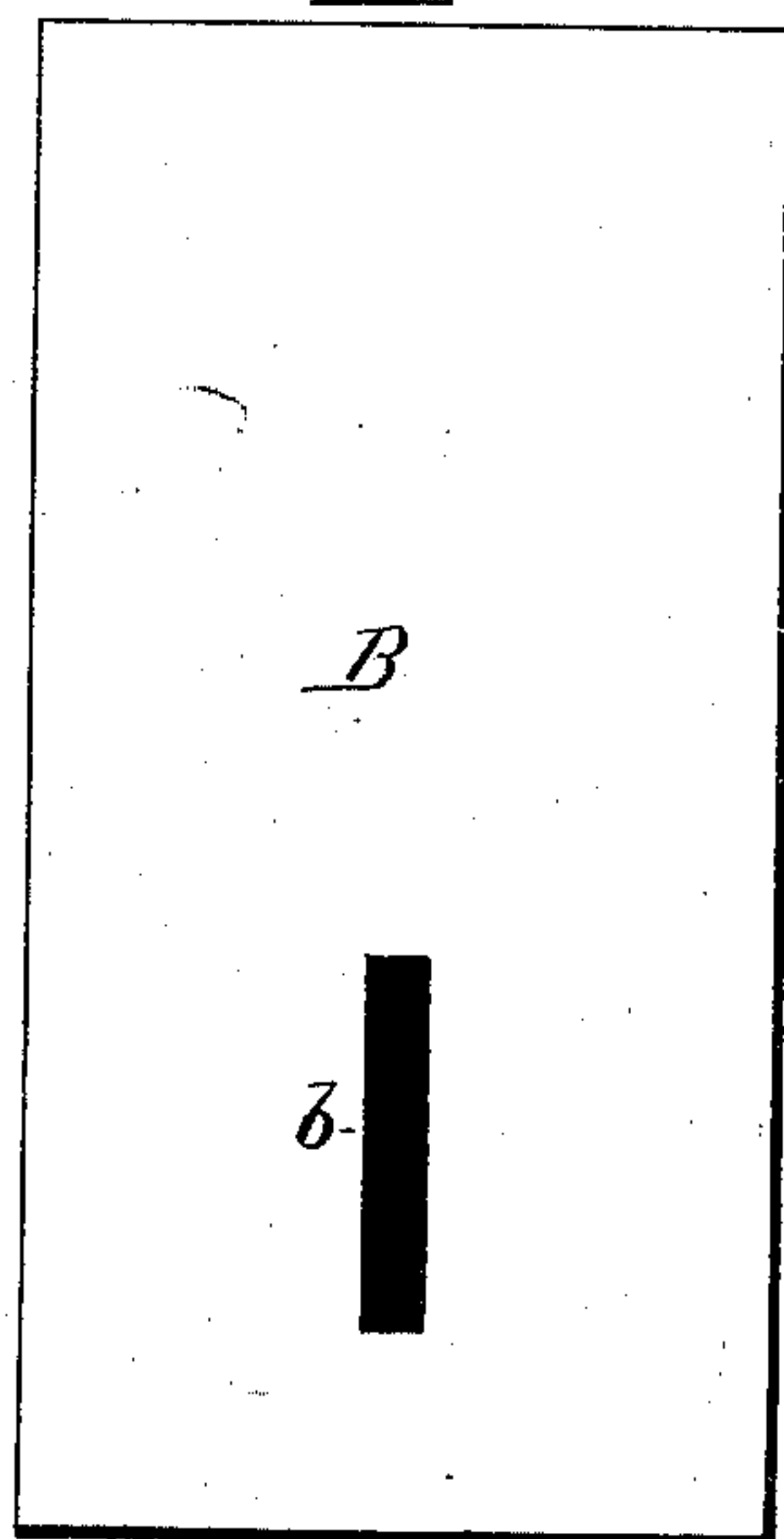
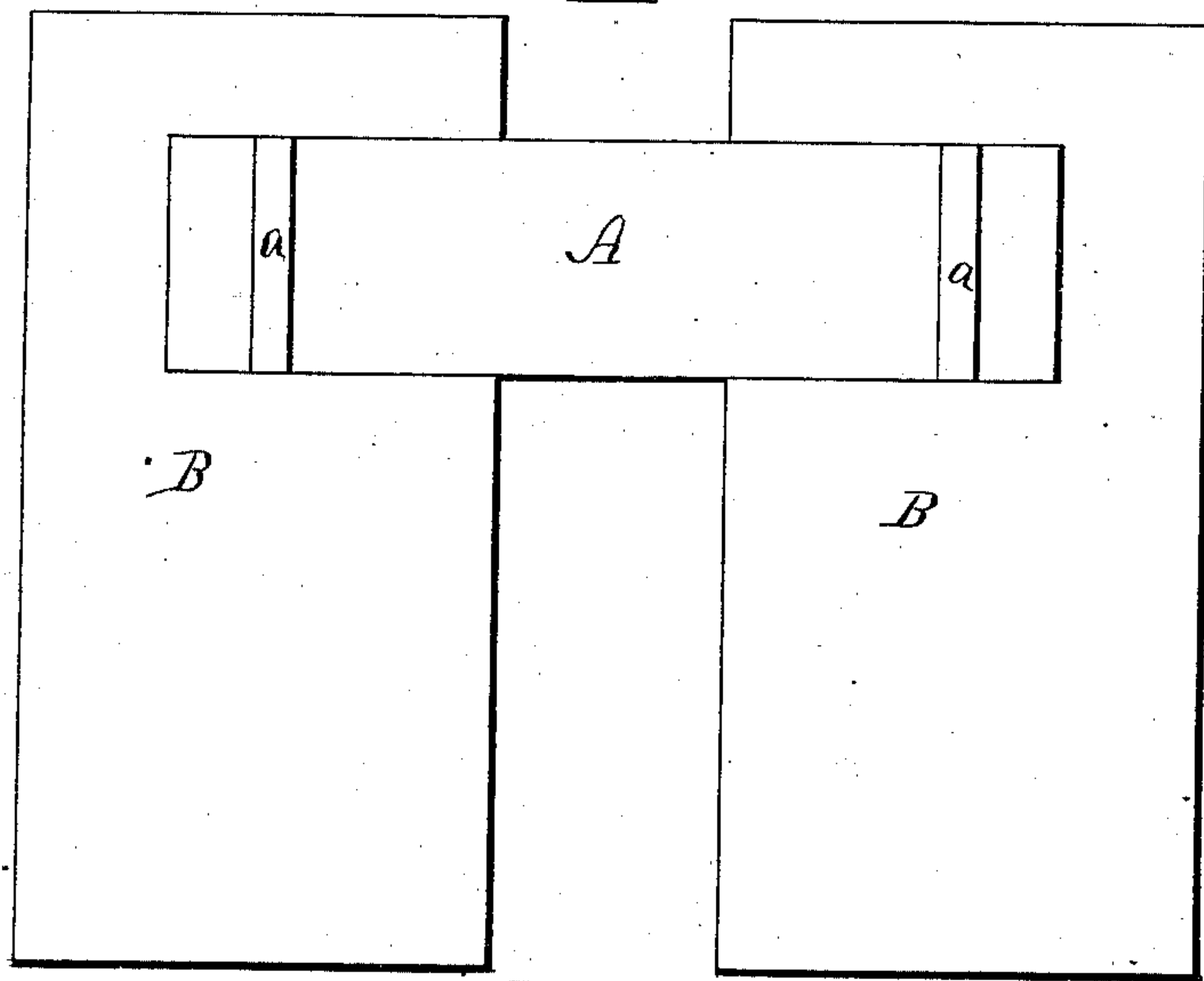
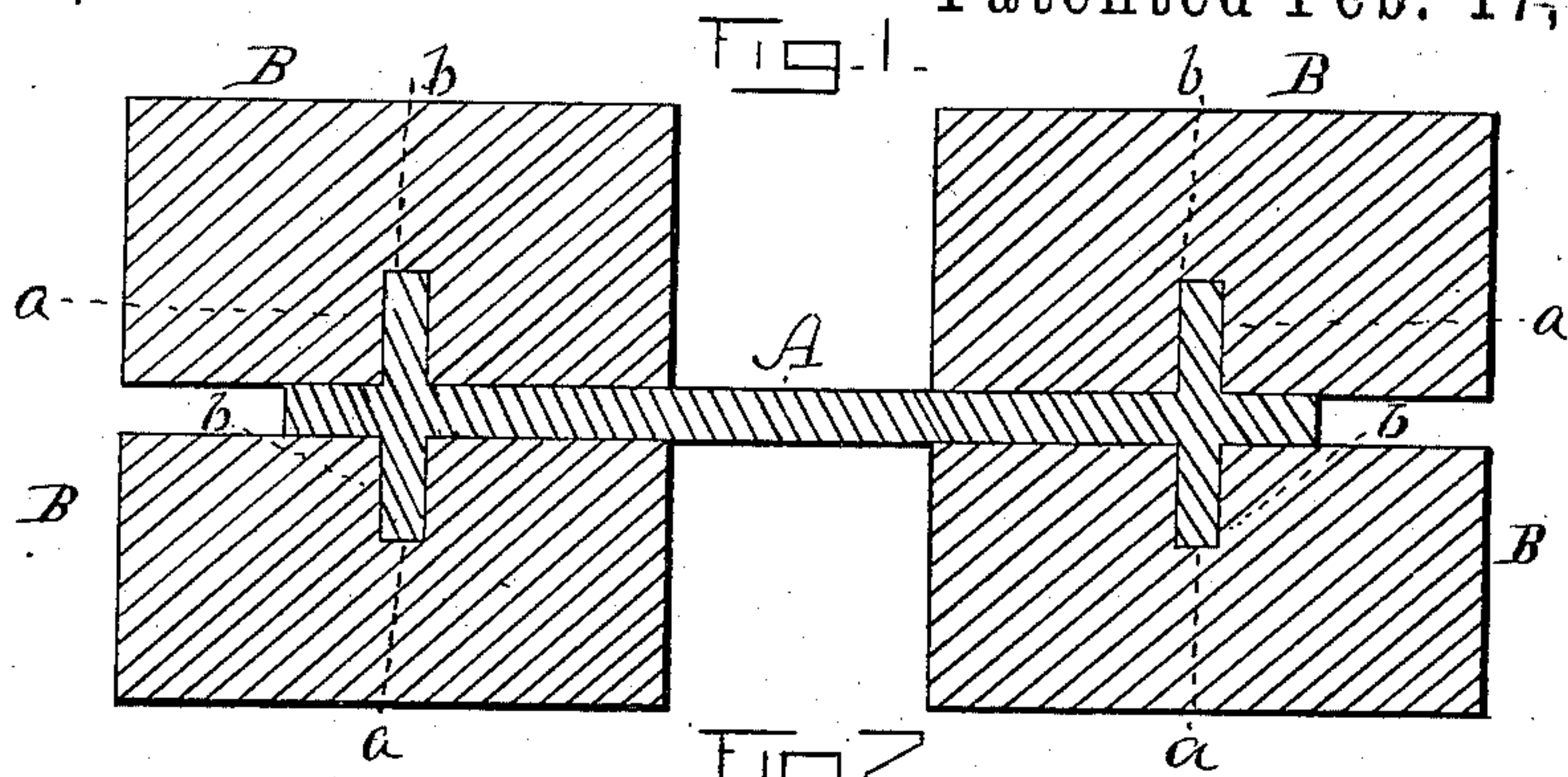
(No Model.)

H. HARWOOD.

# METHOD OF CONSTRUCTING HOLLOW BRICK WALLS.

No. 312,464.

Patented Feb. 17, 1885.



WITNESSES:

St. A. Clark.

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# UNITED STATES PATENT OFFICE.

HENRY HARWOOD, OF WARREN, OHIO.

## METHOD OF CONSTRUCTING HOLLOW BRICK WALLS.

SPECIFICATION forming part of Letters Patent No. 312,464, dated February 17, 1885.

Application filed December 24, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY HARWOOD, a citizen of the United States, residing at Warren, in the county of Trumbull and State of Ohio, have invented a new and useful Improvement in Constructing Hollow Brick Walls; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Heretofore hollow brick walls usually have been constructed by building across the hollow space between the outer and inner walls with bricks at intervals, so that at these points the wall was solid, thereby preventing the free circulation of air, and at the same time forming a conductor of moisture from the outer wall through the vacant space to the inner wall at those points.

In the accompanying drawings, Figure 1 represents a vertical section of a portion of a hollow brick wall constructed with my improvements; Fig. 2, a plan of two bricks, as in the wall, tied together with my improved wall-tie; Fig. 3, a top view of one of the bricks constructed to receive one of the ties.

Like letters designate corresponding parts in all of the figures.

By my improved use of the hollow-wall tie the wall is hollow from bottom to the top, admitting the free circulation of air to any extent desired, thus securing a strictly dry wall for the inner wall; and the wall is very strong, not liable either to bulge out from the interior space nor to collapse into the space, and the cost of a hollow wall is thereby lessened.

My improved wall-tie A is made of cast-iron, and is therefore comparatively inexpensive, although, if preferred, it may be made of wrought-iron. It consists of a flat plate with lugs or flanges *a a* projecting from the sides near the ends. The thickness of the tie is not greater than the mortar usually put between the courses of bricks in walls, so that it requires no additional room.

Each brick B made to receive the ties is molded with a recess or slot, *b*, sufficiently large and deep to admit one of the lugs or flanges *a a* of a tie, A. In order to provide for breaking joints in building the wall, the recess *b* in the brick is preferably made in one side between one end and the middle thereof, as shown in Fig. 3, although this is not essential. The ties are only placed at intervals in the wall sufficient in number to properly tie the parts together, leaving a free space between for circulation of air, so that ordinary bricks are used for the walls, except those in immediate contact with the ties A A. In such places four of the recessed bricks B B B B are used to receive the four flanges or lugs *a a a a* of each tie, as shown in the section in Fig. 1.

It is obvious that this tie will prevent both the spreading and the collapsing of a hollow wall; and since it does not reach to the outer edge of the bricks B B, it is not shown in the outer surface of the wall. By using lugs in the bricks the tie is not liable to misplace bricks and to lose its efficiency thereby.

I claim as my invention—

1. The combination of a hollow-wall tie formed of a horizontal flat plate, A, and vertical lugs *a a*, projecting from its upper and lower surfaces, and a brick, B, formed with a recess or mortise, *b*, in one side and adapted to receive one of the lugs of the wall-tie, substantially as and for the purpose herein specified.

2. A hollow brick wall constructed with bricks B B, each having a recess, *b*, in one side, and wall-ties formed of horizontal flat plates A A, having vertical lugs *a a* on its upper and lower surfaces, the said bricks and wall-ties being arranged at suitable intervals in the wall, substantially as and for the purpose herein specified.

HENRY HARWOOD.

Witnesses:

L. F. HUNTER,  
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