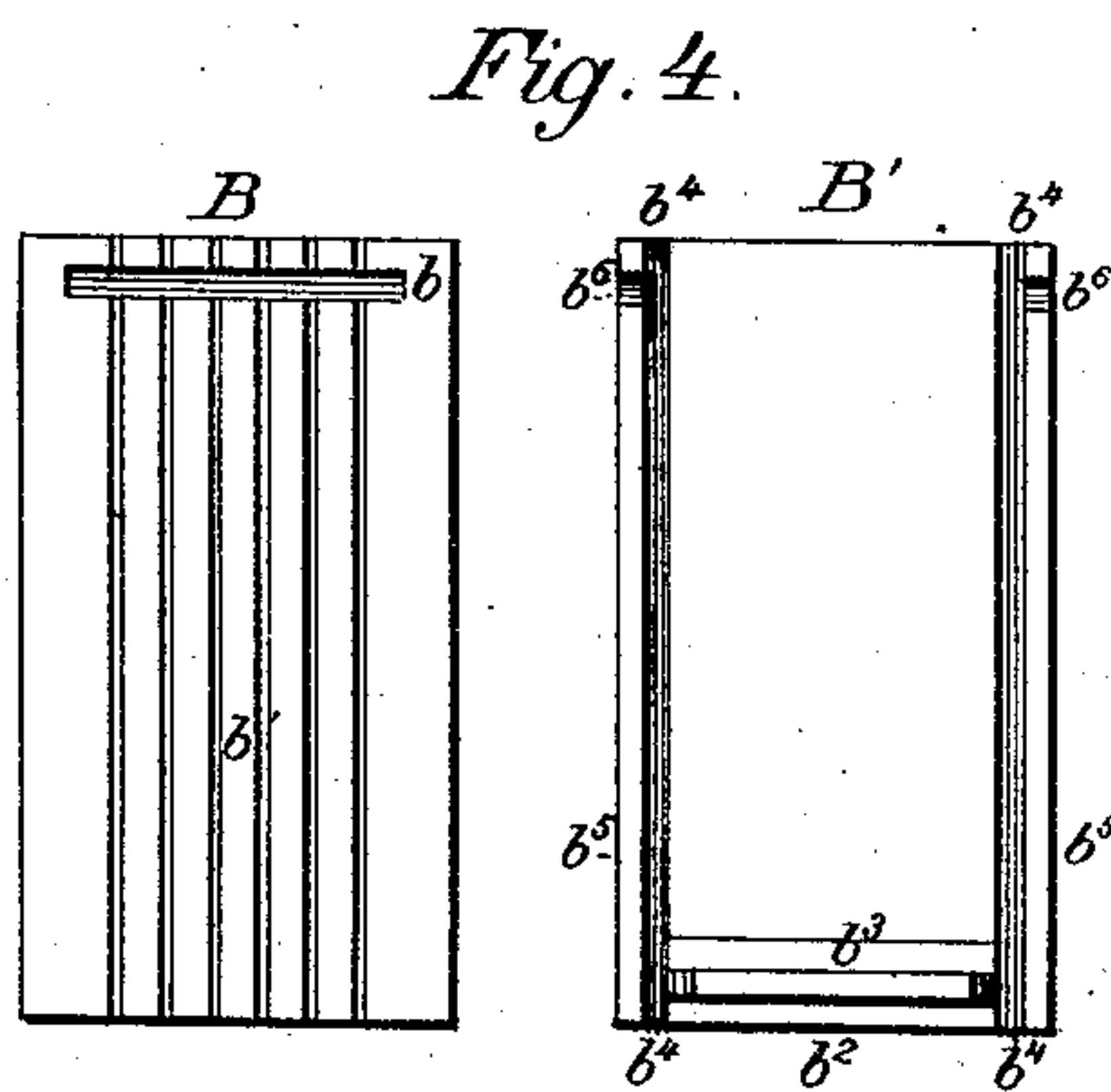
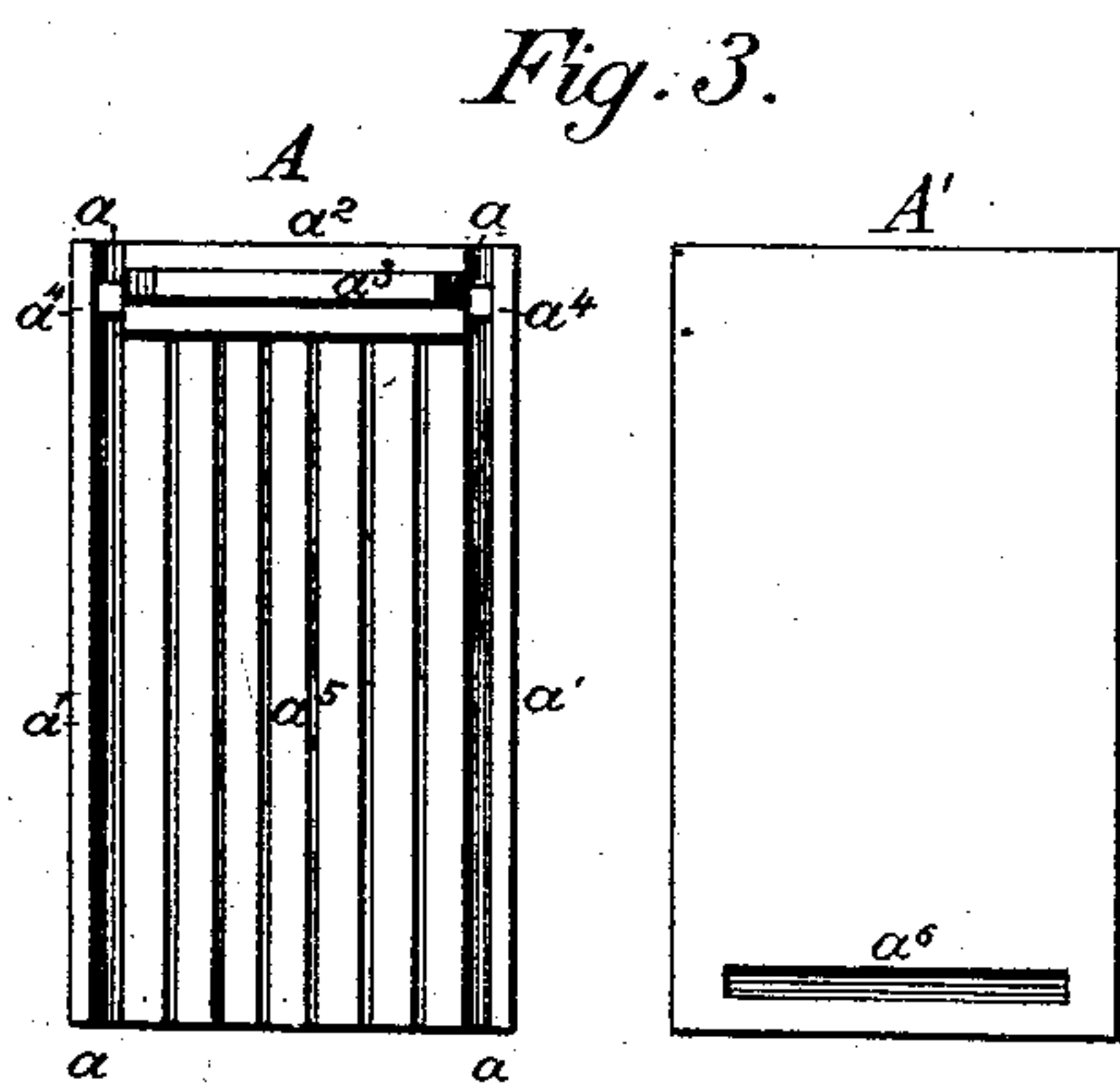
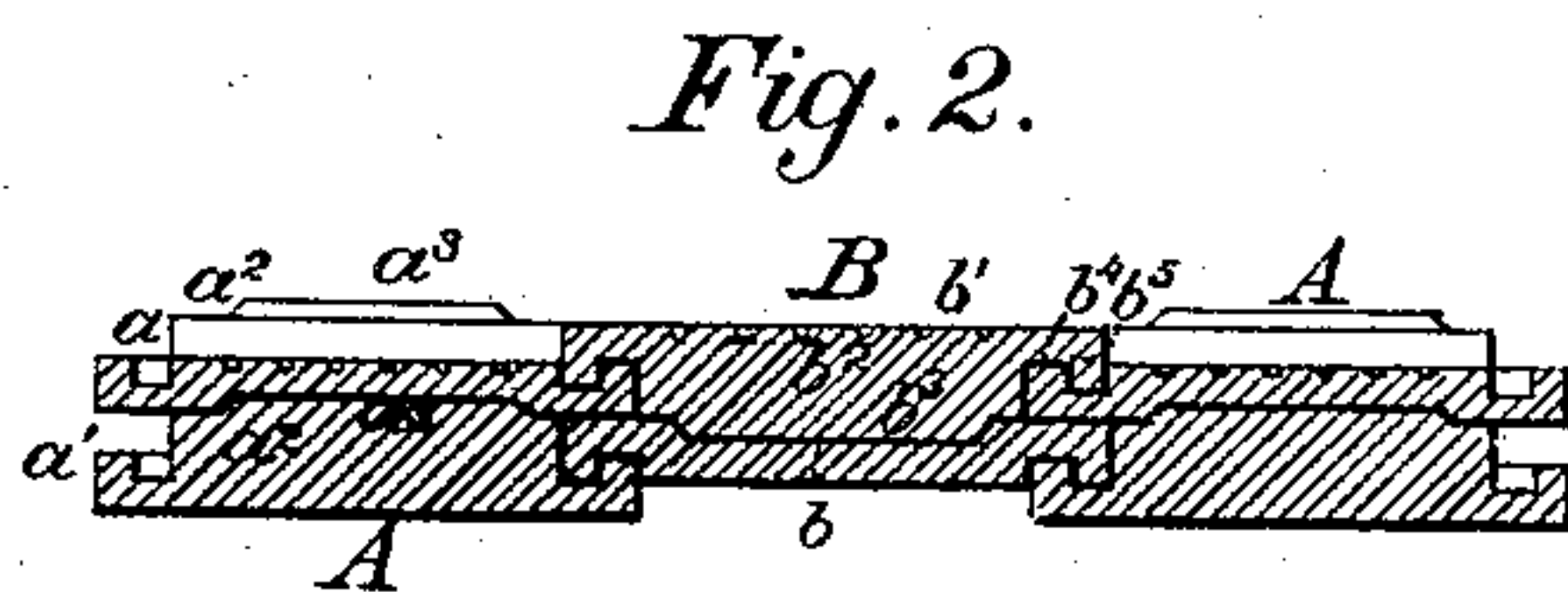
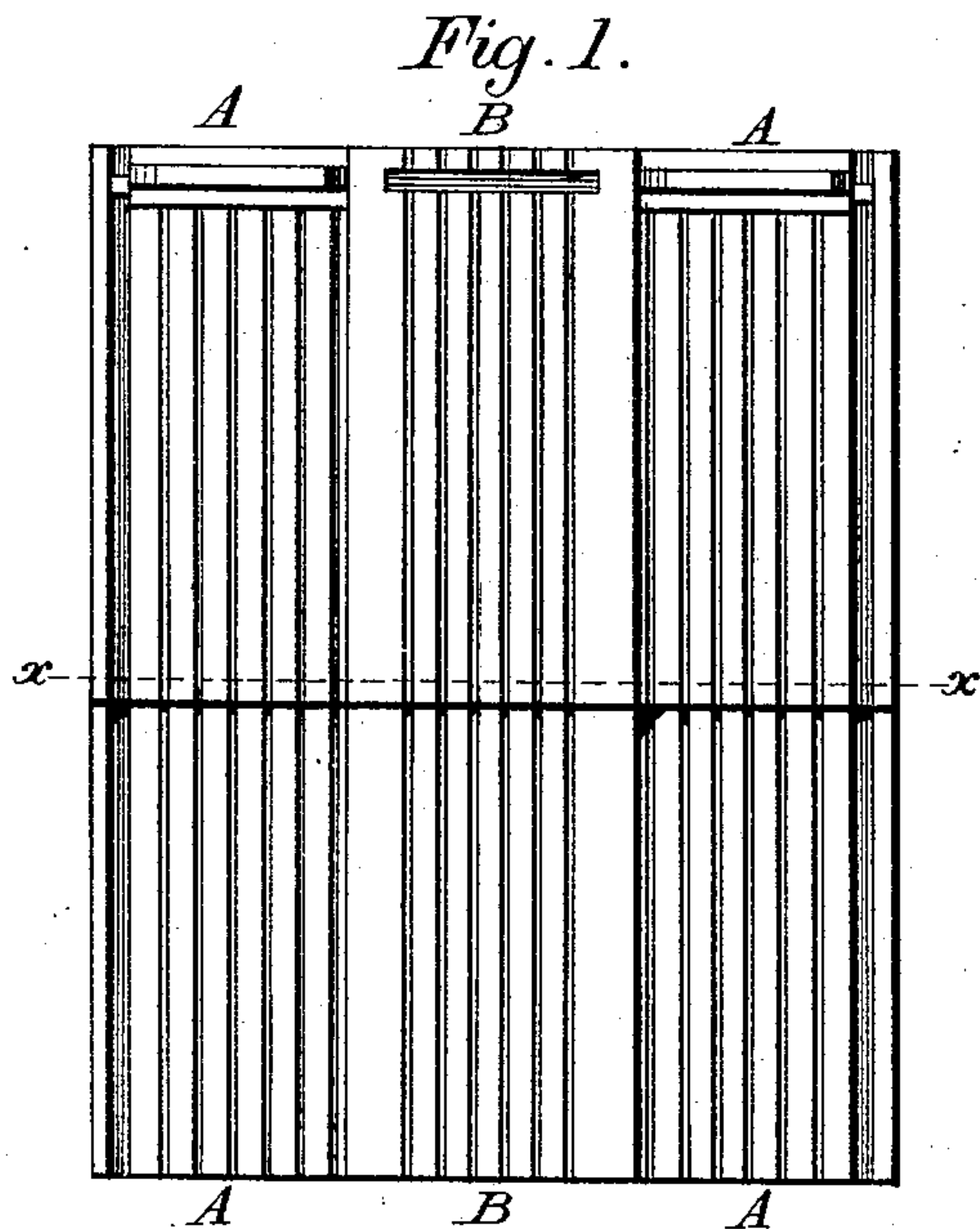


J. M. LEWIS.
Roofing-Tile.

No. 160,445.

Patented March 2, 1875.



Attest:
Robert Moore Sr.
J. Q. Thompson

Inventor:
John M. Lewis.
per Robt. A. Lacey
attorneys

UNITED STATES PATENT OFFICE.

JOHN M. LEWIS, OF NEW CASTLE, OHIO.

IMPROVEMENT IN ROOFING-TILES.

Specification forming part of Letters Patent No. **160,445**, dated March 2, 1875; application filed January 13, 1875.

To all whom it may concern:

Be it known that I, JOHN M. LEWIS, of New Castle, in the county of Coshocton and State of Ohio, have invented certain new and useful Improvements in Roofing-Tile; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in roofing-tiles. It consists in the construction of the tiles in the manner hereinafter fully described, and specifically pointed out in the claim.

In the drawings, Figure 1 is a plan view of a portion of a roof constructed from tiles made in my improved form. Fig. 2 is a sectional view on the line $x x$, and Figs. 3 and 4 are views of opposite sides of a tile of each series.

A and B are the two tiles. The tile A composes what I, by preference, denominate the first or under series, and B the second or upper series. In the first series the upper and under sides of a tile are shown in Fig. 3, A' being the under side; and the same with reference to the second series is shown in Fig. 4, B' being the under side.

In tile A, on the upper side, and at suitable distance from the edge, is cut the half-depth of said tile, the longitudinal grooves a forming the tongues a^1 . Across the upper end of the tile, and extending between and flush with the grooves a , is raised the shoulder a^2 , having a thickness equal to half the thickness of tile B, and on the central portion of this shoulder is formed the tongue or rib a^3 . a^4 are two stops or keys placed in grooves a , opposite, or nearly opposite, the ends of the tongue a^3 . a^5 are a number of water-channels formed on the top of the tile, to facilitate the collection and carrying away the water that may fall thereon. The under side of tile A, as shown at A', Fig. 3, is made smooth, except that I form the groove a^6 across the

lower end, into which the tongue or rib a^3 on the tile in the course next below fits.

The second or upper series of tiles B are made very similar to series A, the similarity of construction appearing reversely, or on opposite sides and ends. The upper side is provided with the cross-groove b at its upper end, and is furnished with the water-channels b^1 . The under side is provided, at its lower end, with the shoulder b^2 and tongue b^3 , and with the grooves and tongues $b^4 b^5$, corresponding to grooves and tongues $a a^1$, with which they interlock. b^6 are two notches cut across the tongues b^5 to fit over and lock on the keys a^4 .

In laying the tiles to form the roof I commence at, and lay a course or portion thereof along, the eave. The tiles A are the first placed. Each two contiguous tiles are placed apart such distance that when the tile B is placed in position the tongues and grooves $a a^1$ and $b^4 b^5$ will interlock, and the intervening space be closed. The tile B being put in position and interlocked, as above stated, the notches b^6 will lock over the keys a^4 , and effectually prevent the tile from slipping downward, and thus obviate the necessity of nailing every tile.

It will be seen that were the first course along the eave firmly secured the entire roof could be laid without the use of any nails. In the construction of the tiles I form suitable nail-holes in the grooves a , so that, when desired, such tiles may be nailed as may be deemed best.

In continuing the laying of the roof, the tongues and grooves across the lower under side of each tile fit over and on the corresponding construction on the upper end and side of the tile in the course next below, each tile joining upon the one of its own series in the lower course. The shoulders $a^2 b^2$ close down tight against its connecting tile, and completely close the space between the two courses.

Thus it will be seen that a close-fitting joint is formed, as shown in Fig. 2, through which no snow or rain can be driven by the

wind, and that a firm, substantial roof is constructed.

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

The tiles A and B, constructed with the longitudinal grooves $a b^4$, tongues $a^1 b^5$, shoulders $a^2 b^2$, cross-grooves $a^6 b$, tongues or ribs $a^3 b^3$, stops or keys a^4 , and notches b^6 , when

arranged to join together in the manner and for the purpose specified.

In testimony that I claim the foregoing as my own I hereto affix my signature in presence of two witnesses.

JOHN M. LEWIS.

Witnesses:

HENRY M. LEWIS,
ORLEN C. MILES.