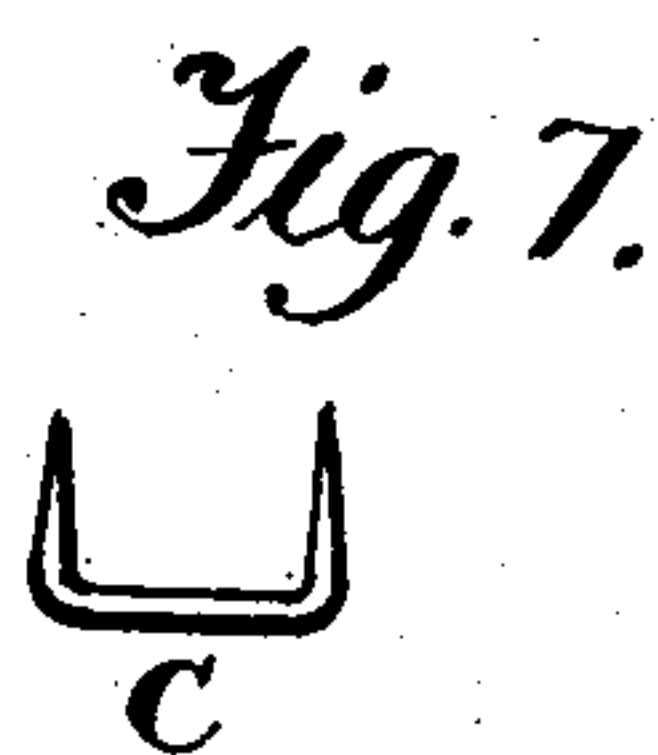
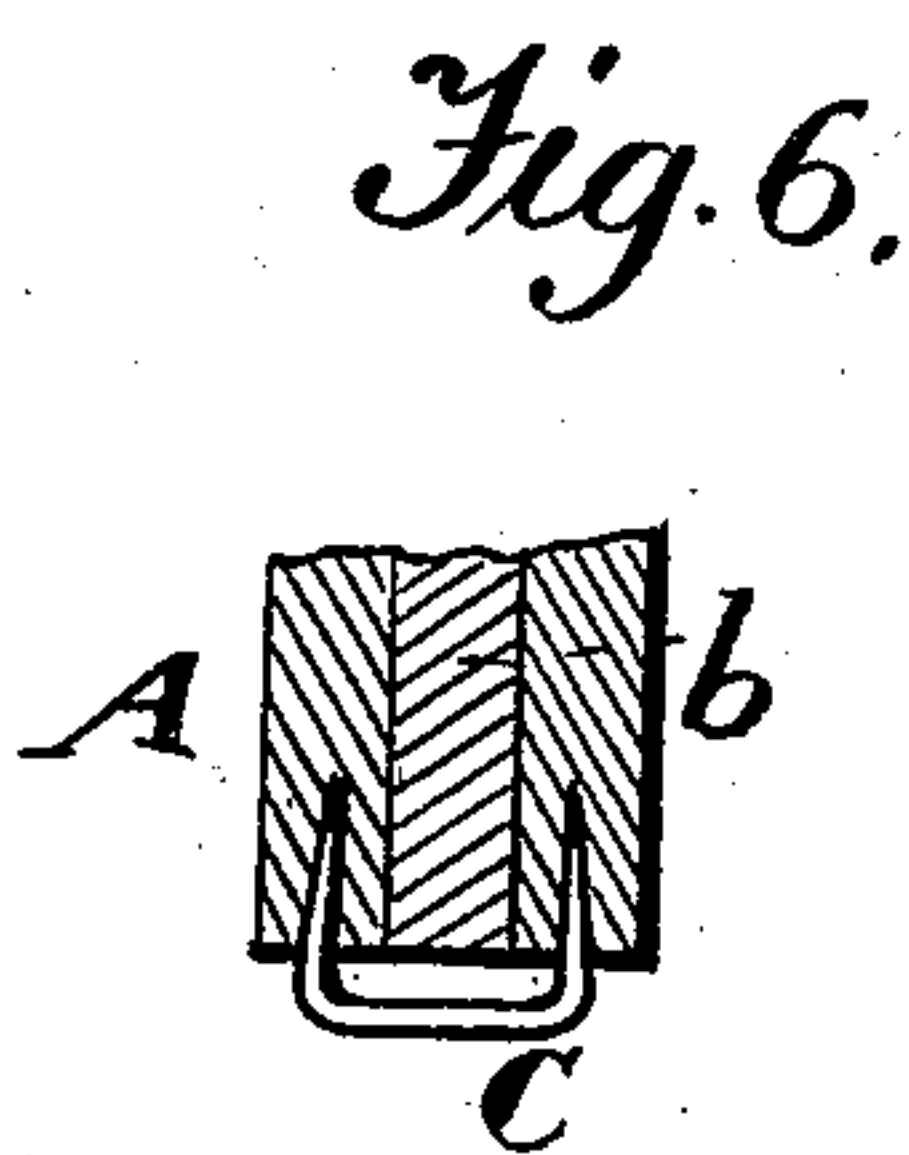
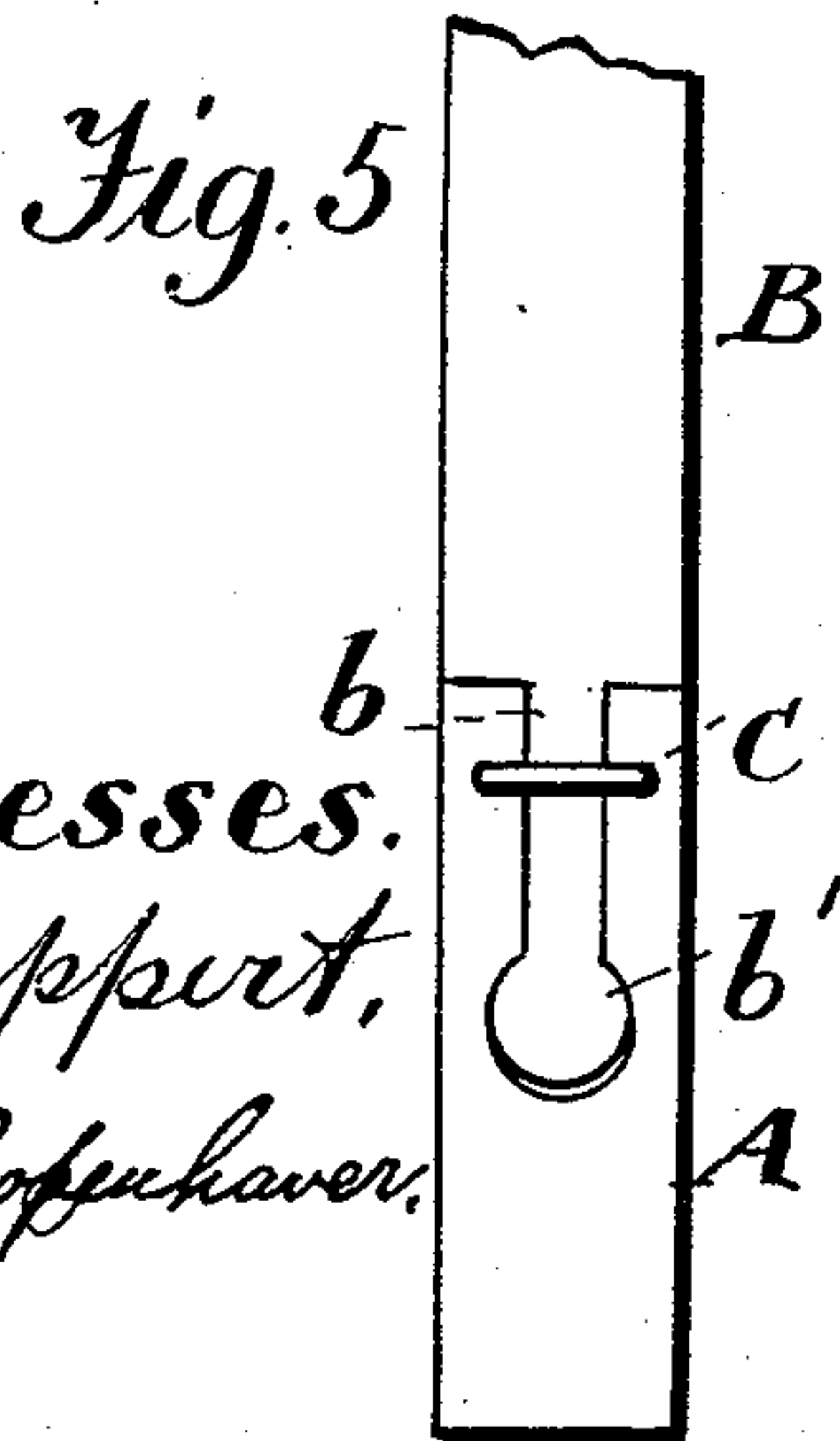
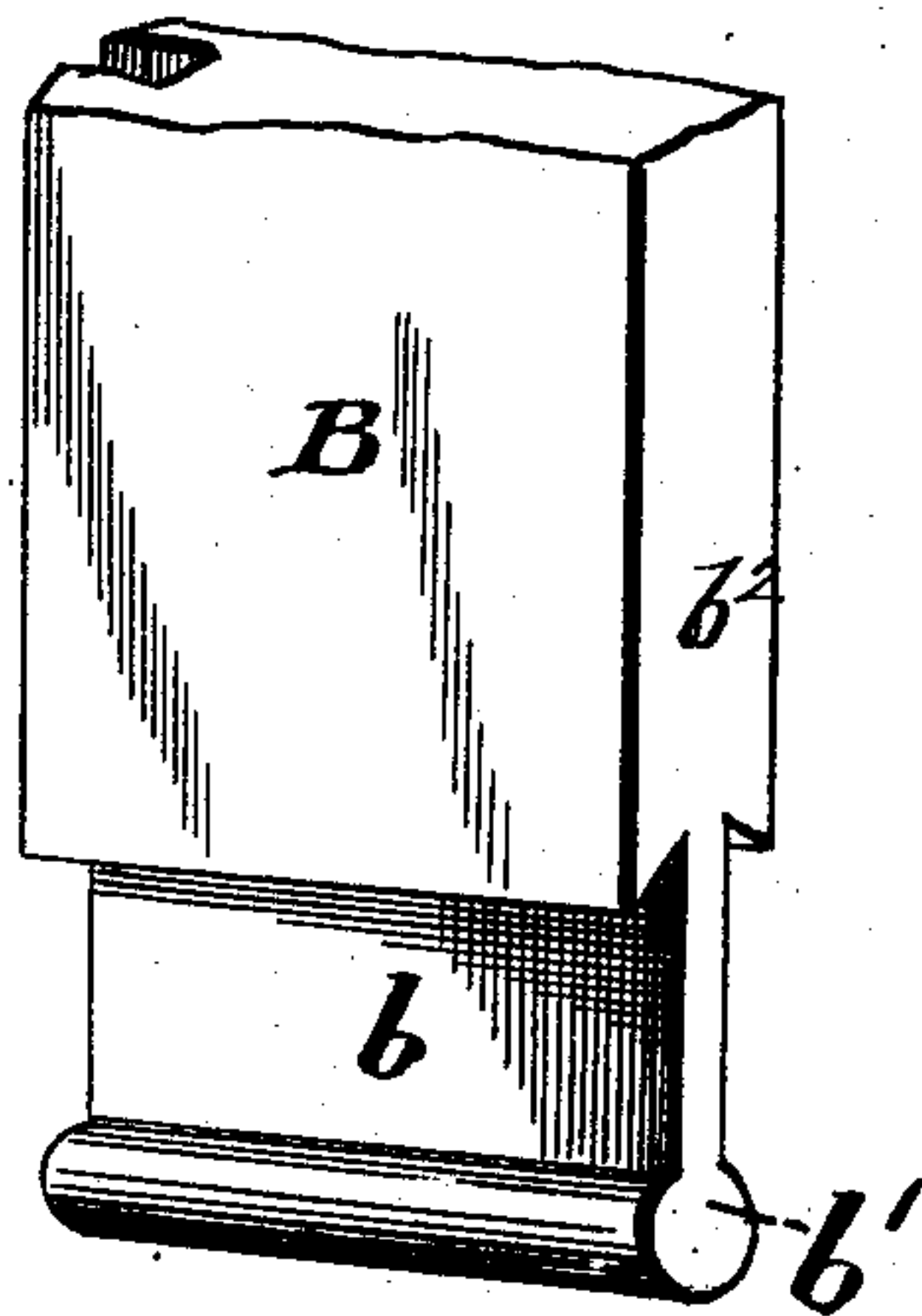
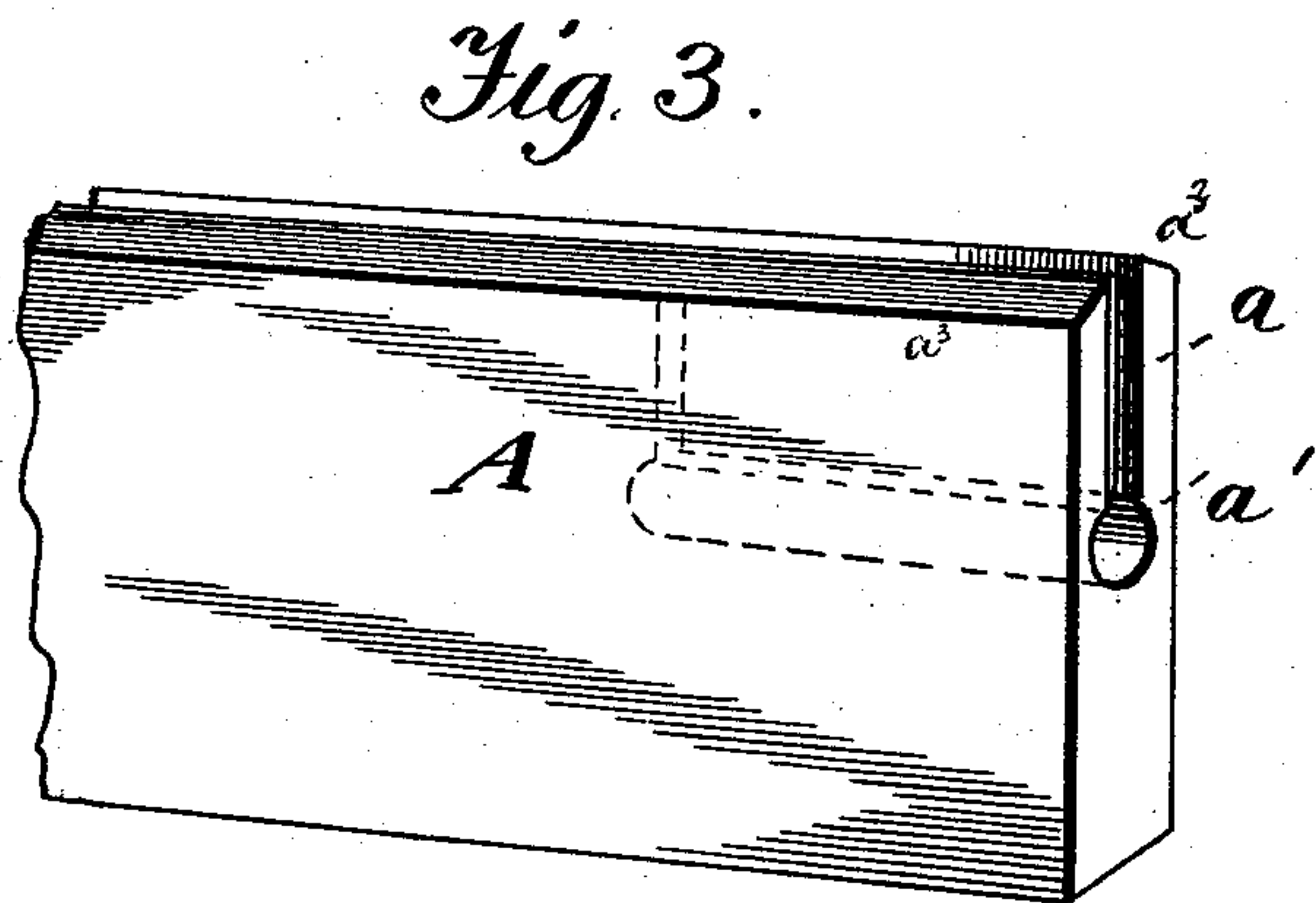
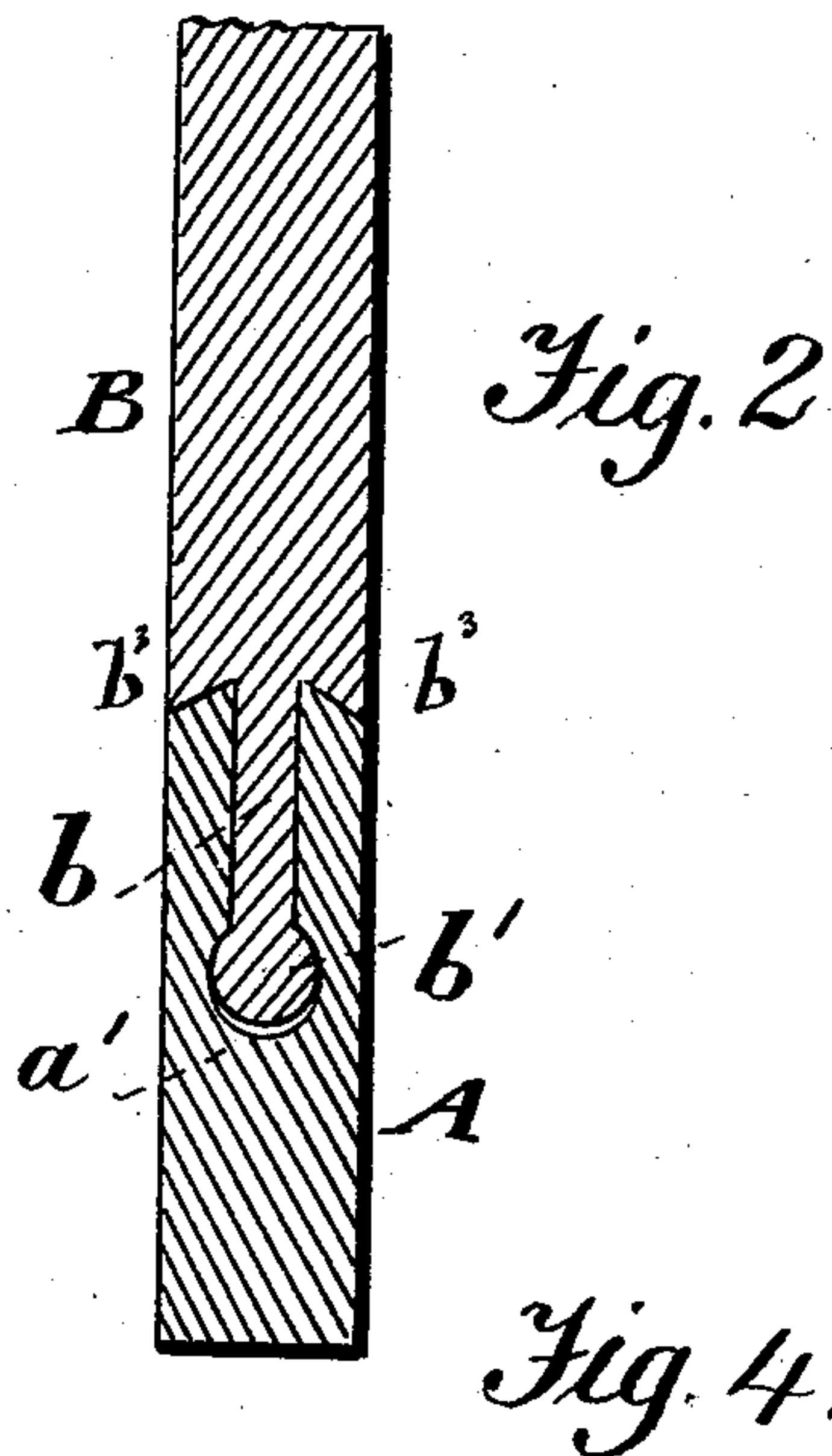
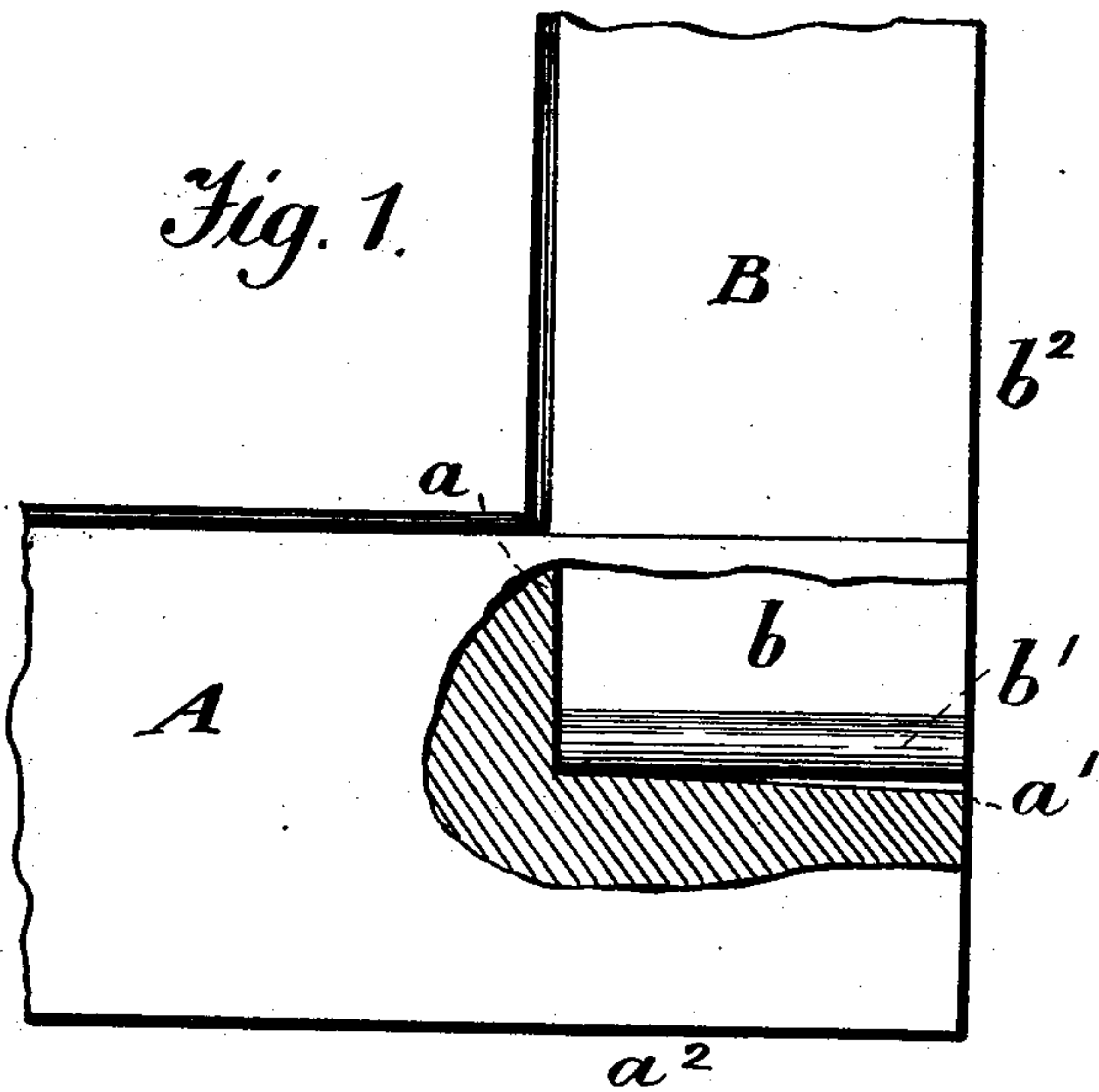


(No Model.)

J. W. COFFEEN, Jr.
LOCK JOINT.

No. 509,364.

Patented Nov. 28, 1893.



Witnesses.
A. Ruppert,
J. M. Coffenauer.

Inventor.
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Per
Thomas P. Simpson
att'y

UNITED STATES PATENT OFFICE.

JOHN W. COFFEEN, JR., OF KENT, OHIO.

LOCK-JOINT.

SPECIFICATION forming part of Letters Patent No. 509,364, dated November 28, 1893.

Application filed March 29, 1893. Serial No. 468,094. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. COFFEEN, Jr., a subject of the Queen of Great Britain, residing at Kent, in the county of Portage and State of Ohio, have invented certain new and useful Improvements in Carpenters' and Cabinet-Makers' Lock-Joints; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains 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.

The special object of the invention is to make a mortise and tenon joint which will lock together two pieces of wood like the vertical and horizontal pieces which inclose the paneling of a door. In putting up cabinet work, and others which must be composed of pieces jointed together, it is important that the joint shall be close, tight and secure.

Figure 1 of the drawings is a side elevation of a corner of a door or a paneled part in cabinet work where the horizontal and perpendicular pieces are jointed together; Fig. 2 a vertical section thereof; Figs. 3 and 4 respectively perspective views of the two pieces which are to be locked together. Figs. 5, 6, 7, are detail views of staple, and joint reinforced by it.

In the drawings, A represents the mortised and B the tenoned piece of wood. The piece A has a bored hole a' which forms the bottom of the mortise a and is not made parallel to the edge a^2 but at an angle thereto, while the tenon b of the other piece which is to be attached to piece A, is made at right angles to the edge b^2 . The tenon b has a rounded

edge b' which corresponds in form to the bored hole a' and fits snugly into it. When the tenon $b b'$ has been forced "home" into the mortise $a a'$, the part b' prevents any movement in one direction while the oblique direction of the hole a' causes the tenon to be "jammed" therein and thus resist all tendency of movement at right angles thereto.

C is a staple-tack, to be used where the shoulders of two pieces are square to draw them close together.

In jointing together the parts of a large door or similar work, the bored hole may run at a greater angle to the edge face so as to cross the grain of the wood and thus prevent any tendency to split. The bored hole a' has a diameter greater than the width of the mortise a and may vary considerably in the degree of its inclination.

The piece A has convex bevel edges $a^3 a^3$, one on each side of the mortise and the piece B a corresponding concave bevel b^3 on each side of its tenon, the bevels $a^3 b^3$ forming a lockjoint which relieves the tenon of nearly all lateral strain.

What I claim as new, and desire to protect by Letters Patent, is—

The piece A having the mortise a hole a' bored on a slight incline, and the convex bevels $a^3 a^3$ on the sides of its mortise, in combination with the piece B having tenon b , enlargement b' , and the concave bevels $b^3 b^3$ as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. COFFEEN, JR.

Witnesses:

MARK G. MCCASLIN,
FREDRICK A. COFFEEN.