

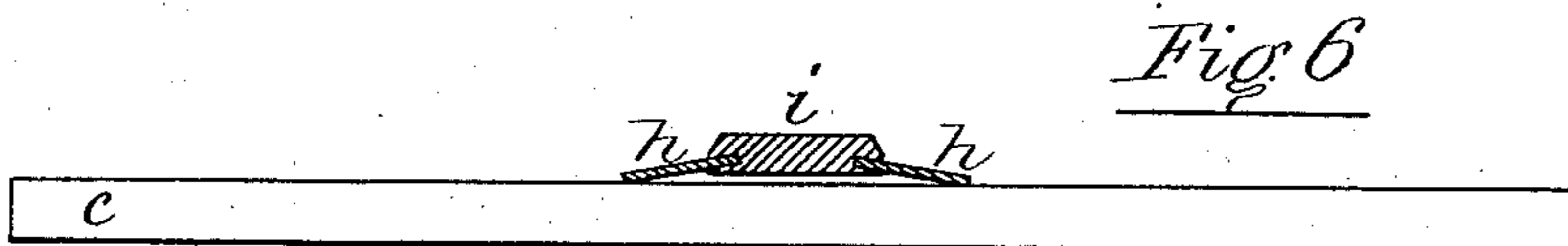
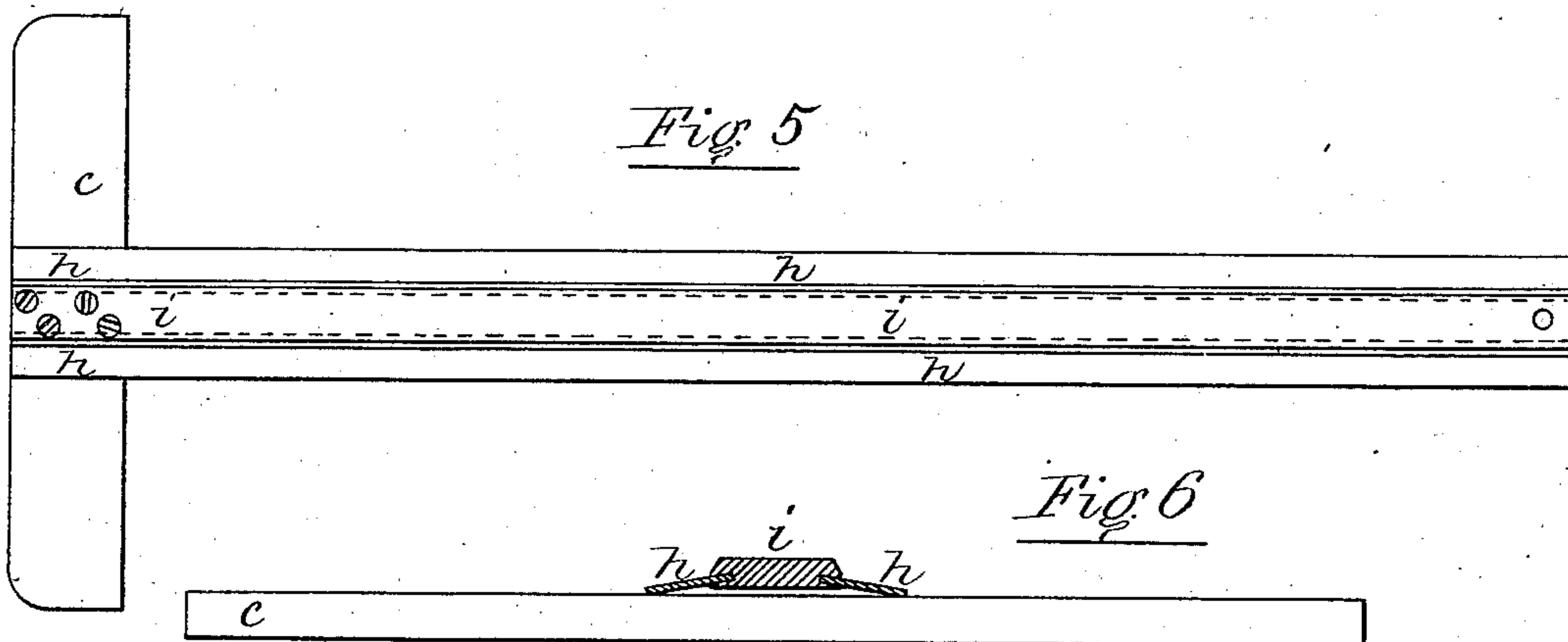
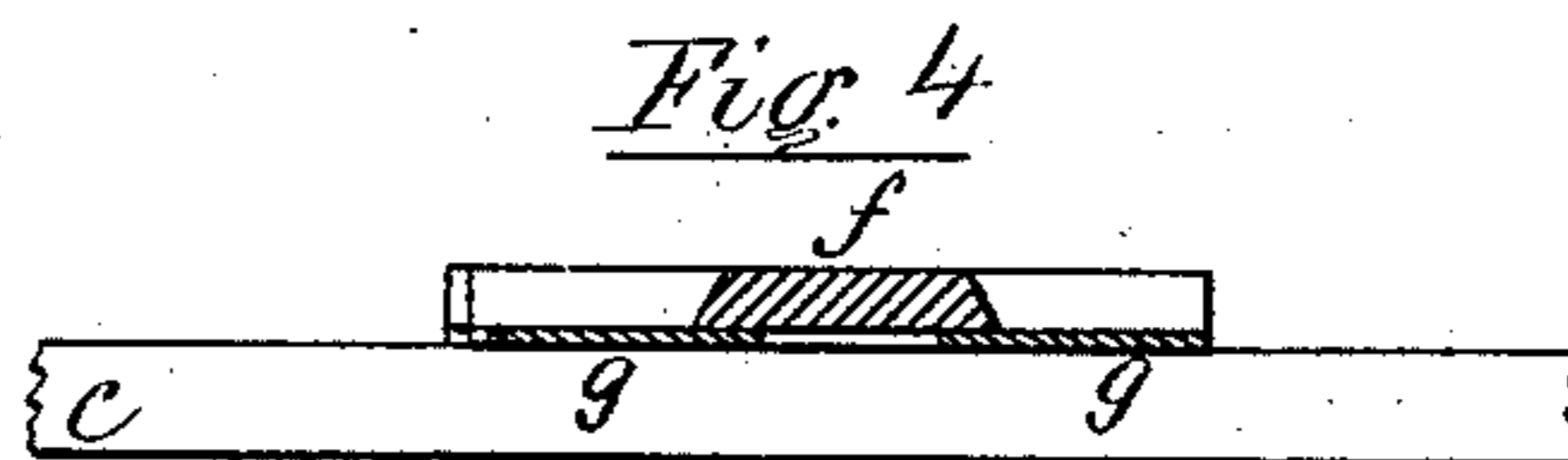
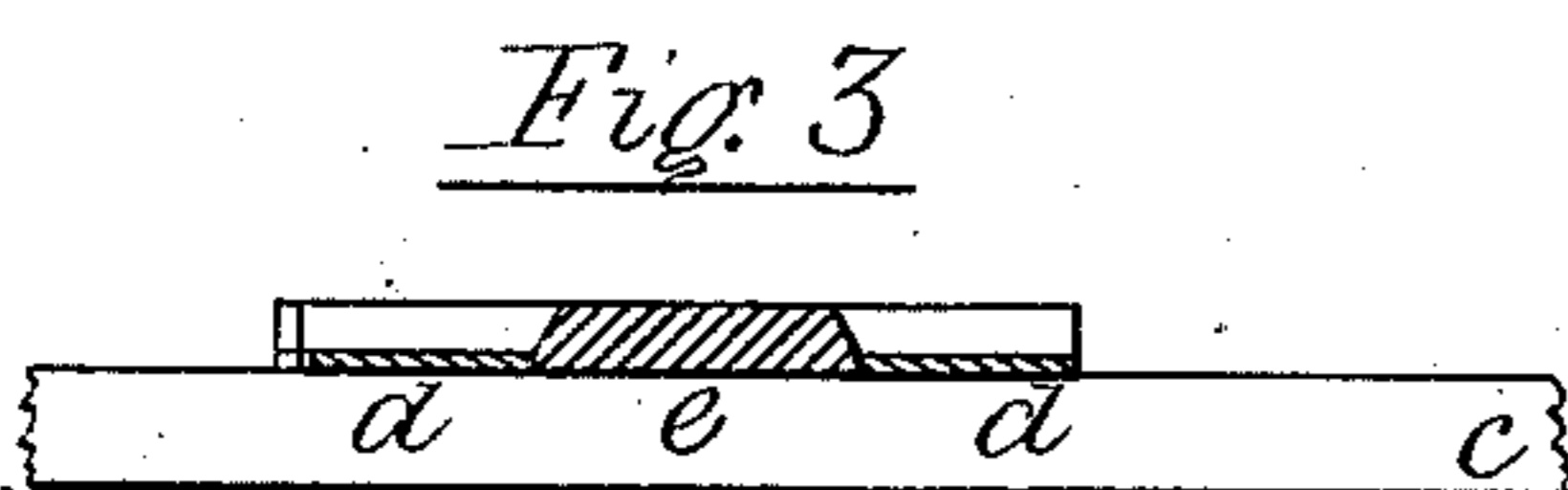
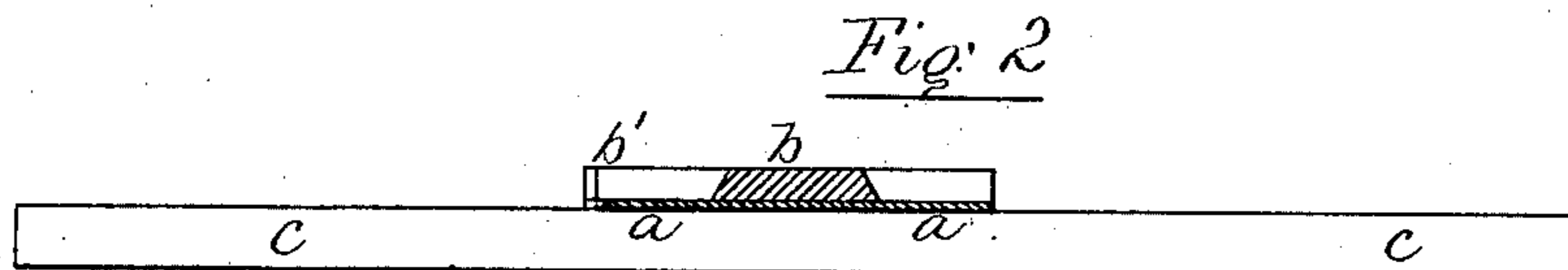
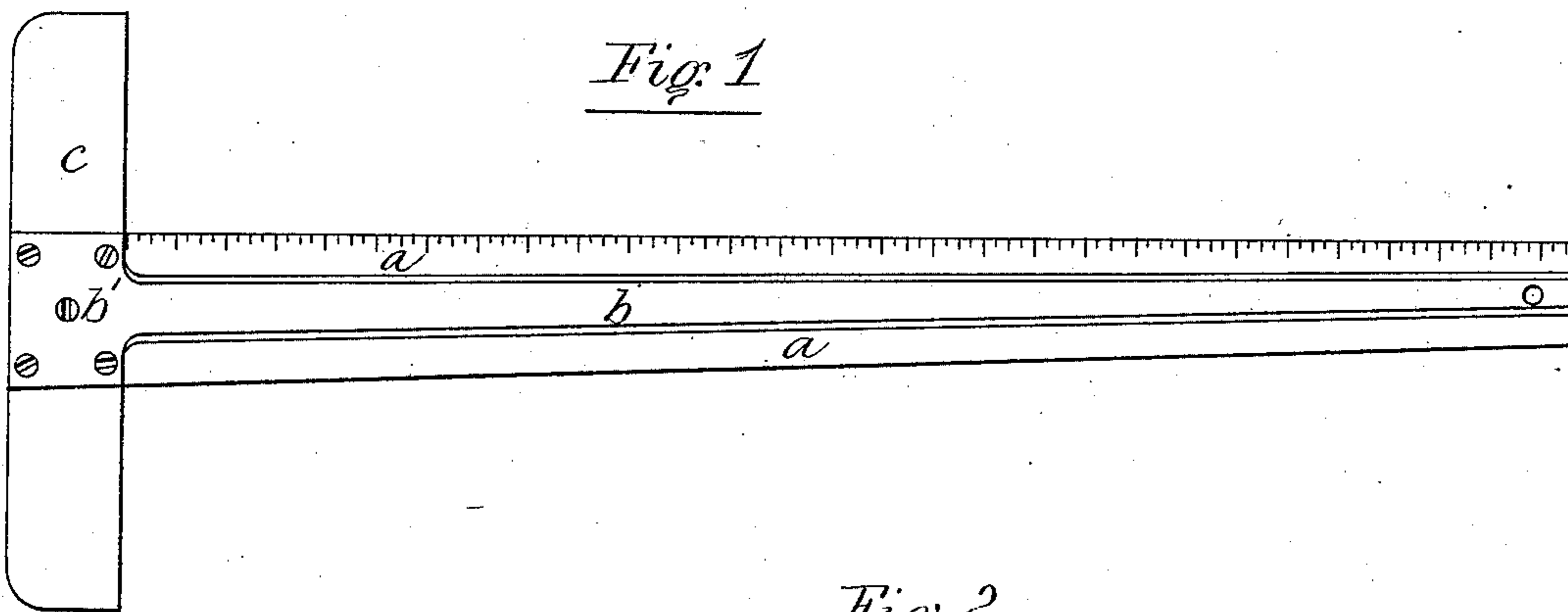
(No Model.)

J. GARDAM.

T SQUARE.

No. 285,404.

Patented Sept. 25, 1883.



Witnesses
H. D. Williams
C. E. Baker.

Joseph Gardam.
Inventor.
per Alfred Theobald
att'y.

UNITED STATES PATENT OFFICE.

JOSEPH GARDAM, OF BROOKLYN, NEW YORK, ASSIGNOR OF TWO-THIRDS
TO FREDERICK W. GARDAM AND WILLIAM GARDAM, OF SAME PLACE.

T-SQUARE.

SPECIFICATION forming part of Letters Patent No. 285,404, dated September 25, 1883.

Application filed August 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH GARDAM, a citizen of the United States, residing at Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in T-squares, of which the following is a specification.

The improvement in T-squares for draftsmen's use relates to the construction of and new material for the blades, and has for its object to make the same of some transparent material, to enable lines covered thereby to be seen, thus facilitating the setting of the instrument so that its edge shall be in proper relation to lines already drawn, also to make the marking-edges prove permanent and less liable to abrasion. To this end my invention consists in making the blades of T-squares of glass, and further consists in securing thereto strips of wood, vulcanite, or other tenacious material, whereby they are made to stand any ordinary rough usage.

Figure 1 represents a plan view of my improvements in T-squares. Fig. 2 is an enlarged transverse section of the same through the line *x x*, and Figs. 3, 4, 5, and 6 show modifications.

Referring to Figs. 1 and 2, the blade proper of the T-square is made of a piece of glass, *a*, strengthened by means of the strip of wood or other tenacious material, *b*, secured to its upper surface by means of a suitable cement. This strip of wood is considerably narrower than the glass along the working part of the blade, so as to expose the edges of the same, thus permitting the lines of the drawing under the blade to be seen; but where the blade connects to the stock or head *c*, the wood *b* widens, as at *b'*, to entirely cover the glass. The blade and the strip are fastened together by the screws, as shown, or by other suitable means.

The sectional view, Fig. 3, of a T-square blade shows two strips of glass, *d d*, and a central strip of wood *e* connected together edge to edge by means of a suitable cement; and Fig. 4 is a similar view of another modification, in which the central strip of wood *f* is fastened to two strips of glass, *g g*, on the upper sides at their under edges.

Figs. 5 and 6 show, respectively, a plan view and enlarged transverse section of another modification, in which two strips of glass, *h h*, are secured to the strengthening central strip of wood *i* by having their inner edges placed and cemented in grooves formed in the edges of the strip of wood. In this modification the strips of glass are arranged at an angle, so that their outer edges only bear on the paper, thus allowing the blade to slide very freely over the paper; and the glass blades in the other views of the drawings may, if desired, be made longitudinally concave on the under side, to cause their outer edges only to bear on the paper, although flat blades made according to my invention, of glass, are a vast improvement over blades heretofore made of any other material, in that the instrument may be more readily moved and adjusted in the desired position. The glass blades may be graduated, as shown at Fig. 1.

The strengthening-strip of wood or other tenacious material may be secured to the glass by means of screws or rivets instead of by cement; or both means can, if thought necessary, be employed to hold the parts together.

Besides the advantages enumerated above, my glass-blade T-squares are more cleanly than others, keeping the paper in better condition, and when they become soiled are more easily cleaned.

Other drawing-instruments—as set-squares or triangles—may be made of glass, provided with backing of wood or other tenacious material, by the use of which the advantages due to my glass-blade T-square will be had.

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

In a T-square, the combination of the glass blade *a* with the strip of wood or other tenacious material, *b*, substantially as set forth.

In testimony whereof I have hereunto set my hand, at New York, county and State of New York, this 28th day of August, A. D. 1882.

JOSEPH GARDAM.

Witnesses:

JAS. HY. GRALLSWARD,
ALFRED SHEDLOCK.