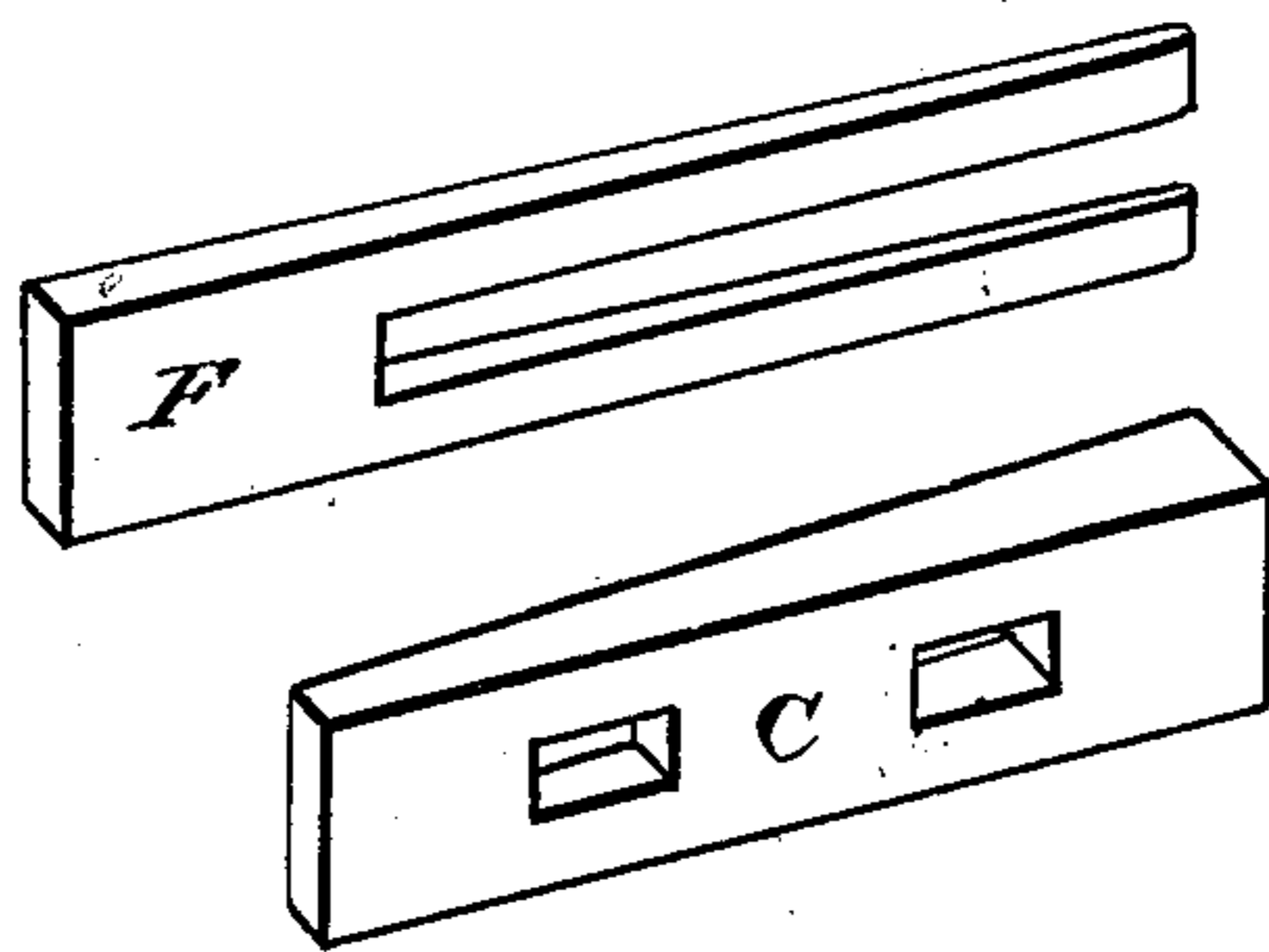
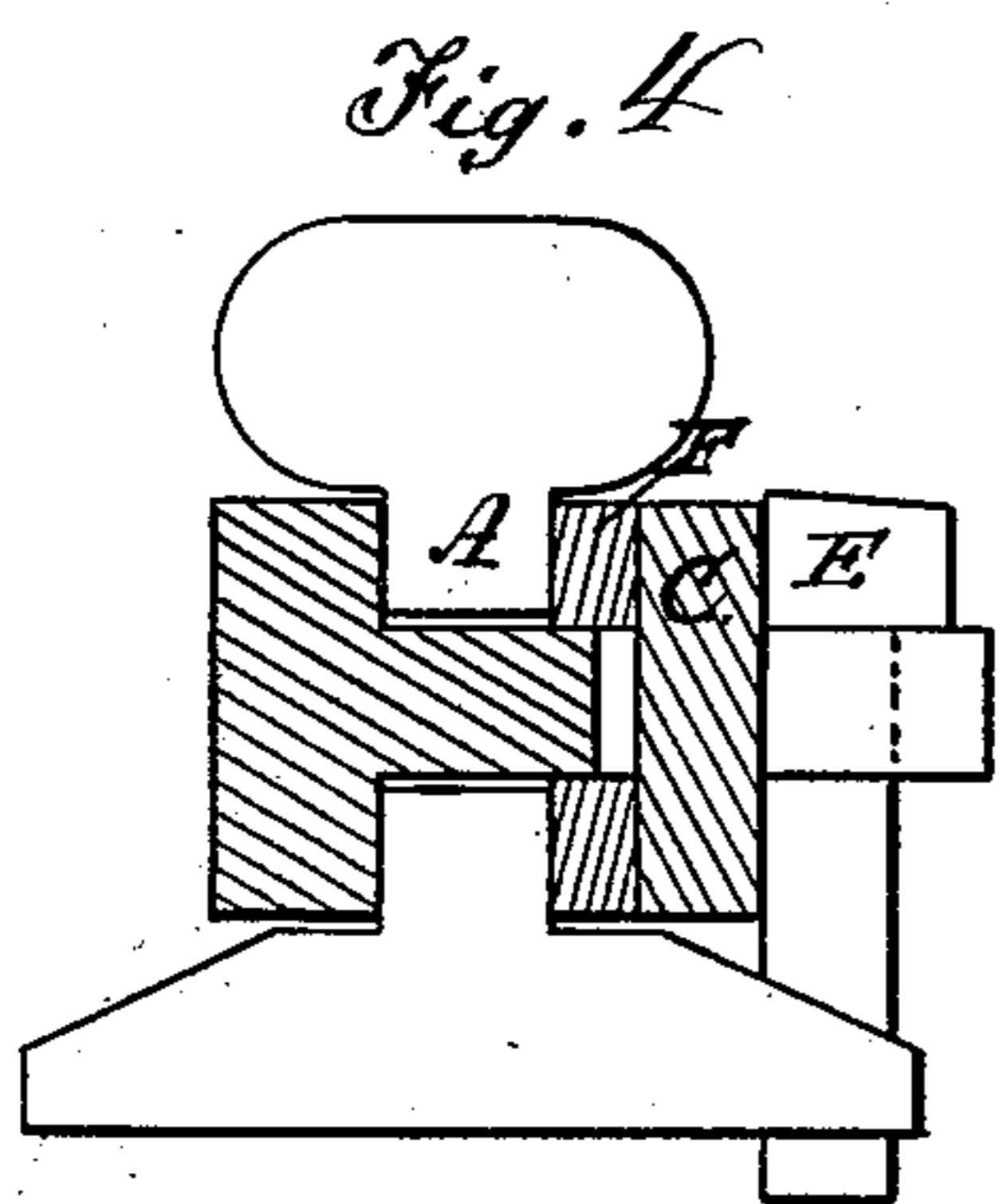
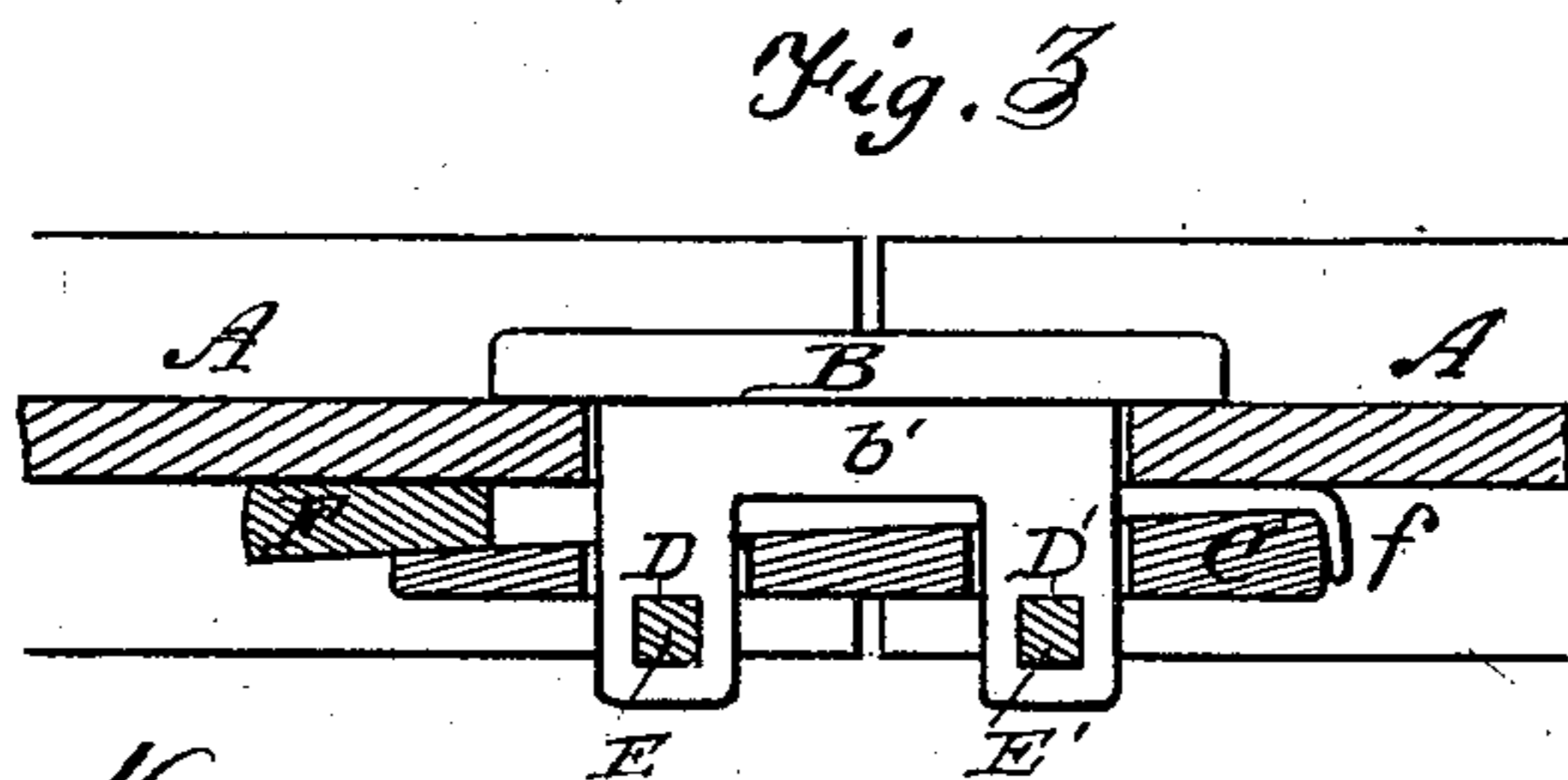
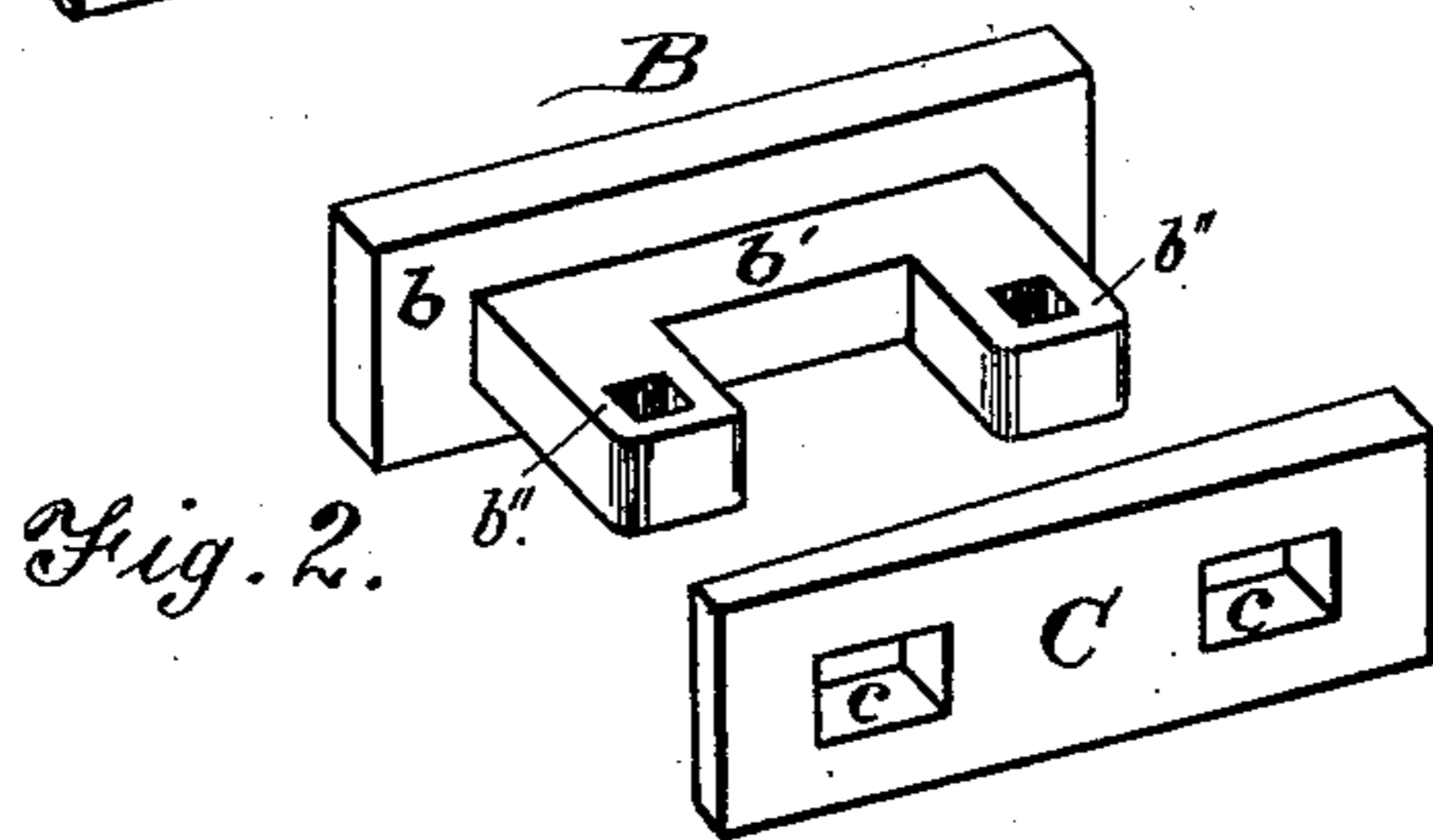
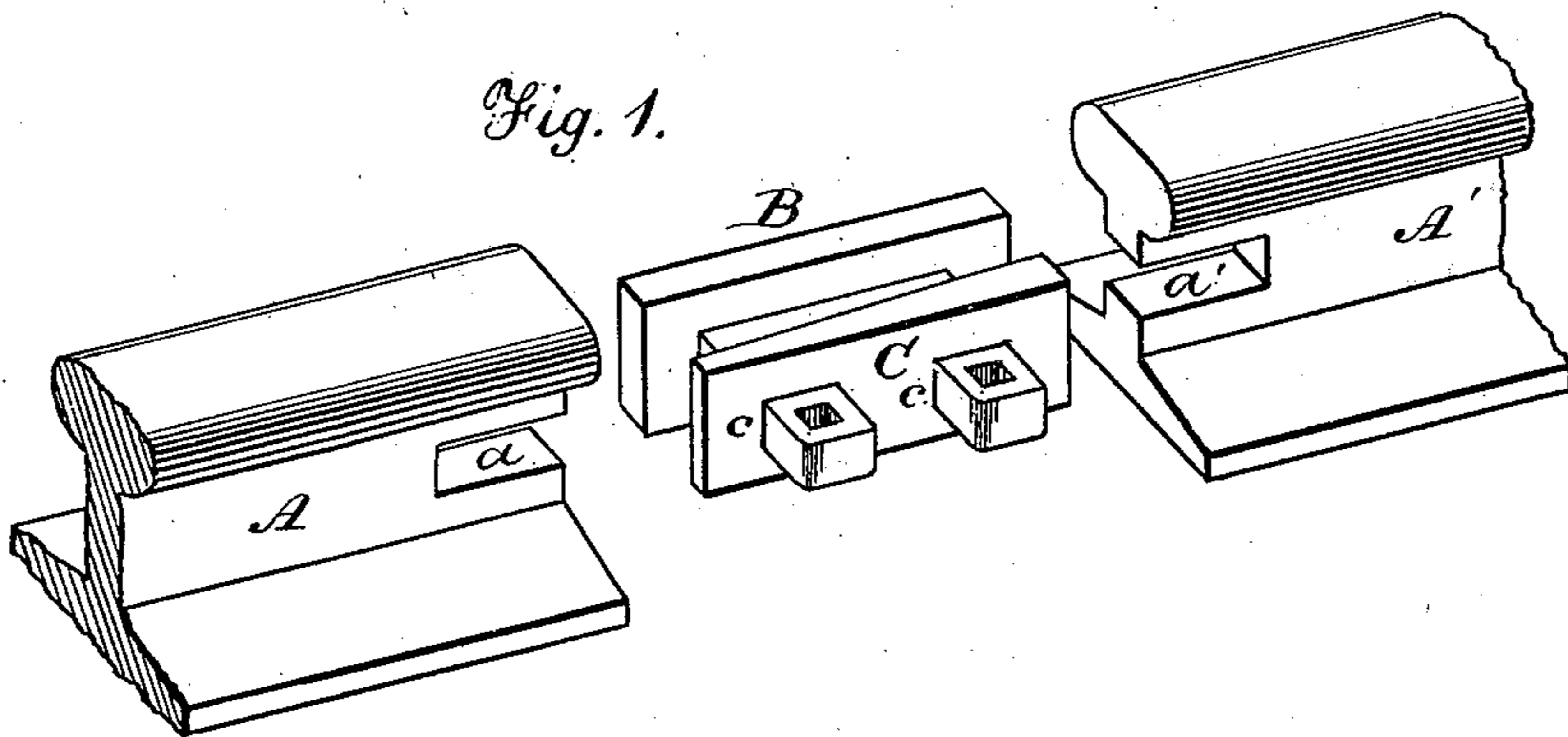


E. J. ROBERTS.
Rail-Joints.

No. 201,290.

Patented March 12, 1878.



Artist
Walter Knight
John L. Condon

Inventor
E. J. Roberts
By Knight Bros.
Attys.

UNITED STATES PATENT OFFICE.

EDWARD J. ROBERTS, OF ASHLAND, KENTUCKY, ASSIGNOR OF A PART OF HIS RIGHT TO DAVID A. FISHER, GEO. F. LONG, ELZA MANRING, JERRY MOYNIHAN, L. E. VEYSSIE, GEO. MILLARD, JNO. LAUTERBACH, WM. B. MOORE, L. T. MOORE, BENJ. W. SINGER, SAMUEL S. SAVAGE, EDWARD F. TRACY, GEO. BURGRAFF, CHAS. F. BARTELL, PATRICK MORAIRTY, JR., JACOB ARZHEIMER, AND ADOLPH MILLER.

IMPROVEMENT IN RAIL-JOINTS.

Specification forming part of Letters Patent No. **201,290**, dated March 12, 1878; application filed November 16, 1877.

To all whom it may concern:

Be it known that I, EDWARD J. ROBERTS, of Ashland, in the county of Boyd and State of Kentucky, have invented a new and useful Railway-Joint, of which the following is a specification:

My invention relates to improvements in those railway-joints whose contiguous rail ends are notched for the reception of a flanged block, for the purpose of preventing deflection; and my improvement, in its most complete form, comprises a T-shaped block whose shank fits and occupies the opening formed by the contiguous end notches in the rails, and which, passing through a slotted fish-plate on the other side, is secured thereto, a forked wedge being driven longitudinally between the rail and fish-plate, to cause the head of the T-block and the said fish-plate to closely bind the two rail ends between them, and thus prevent lateral deflection, while the stem of the block, by filling the notches in the rail ends, effectually prevents any vertical displacement.

I give the stem of the T-block a sufficient length to extend well beyond the fish-plate, so as to receive two spikes or keys, whose removal enables the detachment of the block and fish-bar and the displacement of the rails.

In the accompanying drawings, Figure 1 is a perspective view of my block and fish-bar and of the ends of two consecutive rails drawn apart and separated from the block. Fig. 2 is a perspective view of the T-head and fish-plate detached. Fig. 3 is a horizontal section of my joint. Fig. 4 is a transverse section of

the same on a larger scale. Fig. 5 represents the slit and perforated wedges detached.

A A' may represent the contiguous portions of two rails having corresponding end notches *a a'*. B represents the T-block of my joint, consisting of head *b* and stem *b'*. C is the fish-plate, having one or more mortises, *c*, for corresponding tenons *b''* on the end of stem *b'*. These tenons, after insertion through the notched rails and into the fish-plate C, are secured by keys or spikes E E'.

The fish-plate C is of wedge shape, and interposed between it and the rail is a split or slotted wedge, F, which, being driven firmly in and clinched, as at *f*, serves to tighten all the parts. When thus secured, the rail ends are proof against all deflection, lateral as well as vertical.

By the use of this joint a broken rail can be rendered almost as strong as before its fracture.

Having thus described my invention, the following is what I claim as new and desire to secure by Letters Patent:

The combination, with the notched rails A A', of the T-formed perforated block B, spikes or keys E E', mortised fish-plate C, and wedge F, substantially as and for the purposes set forth.

In testimony of which invention I hereunto set my hand.

EDWARD J. ROBERTS.

Attest:

GEO. H. KNIGHT,
BEN. W. SINGER.