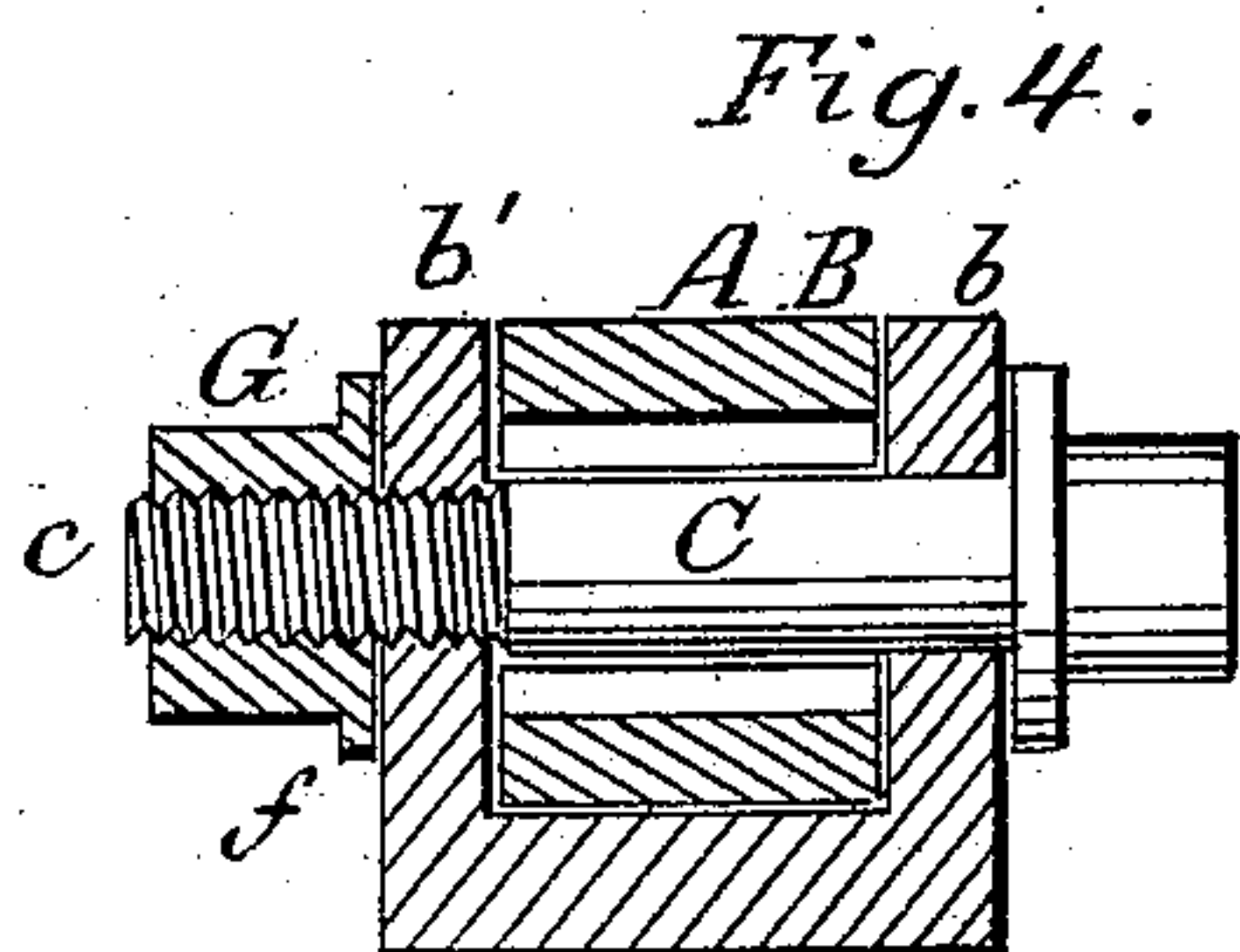
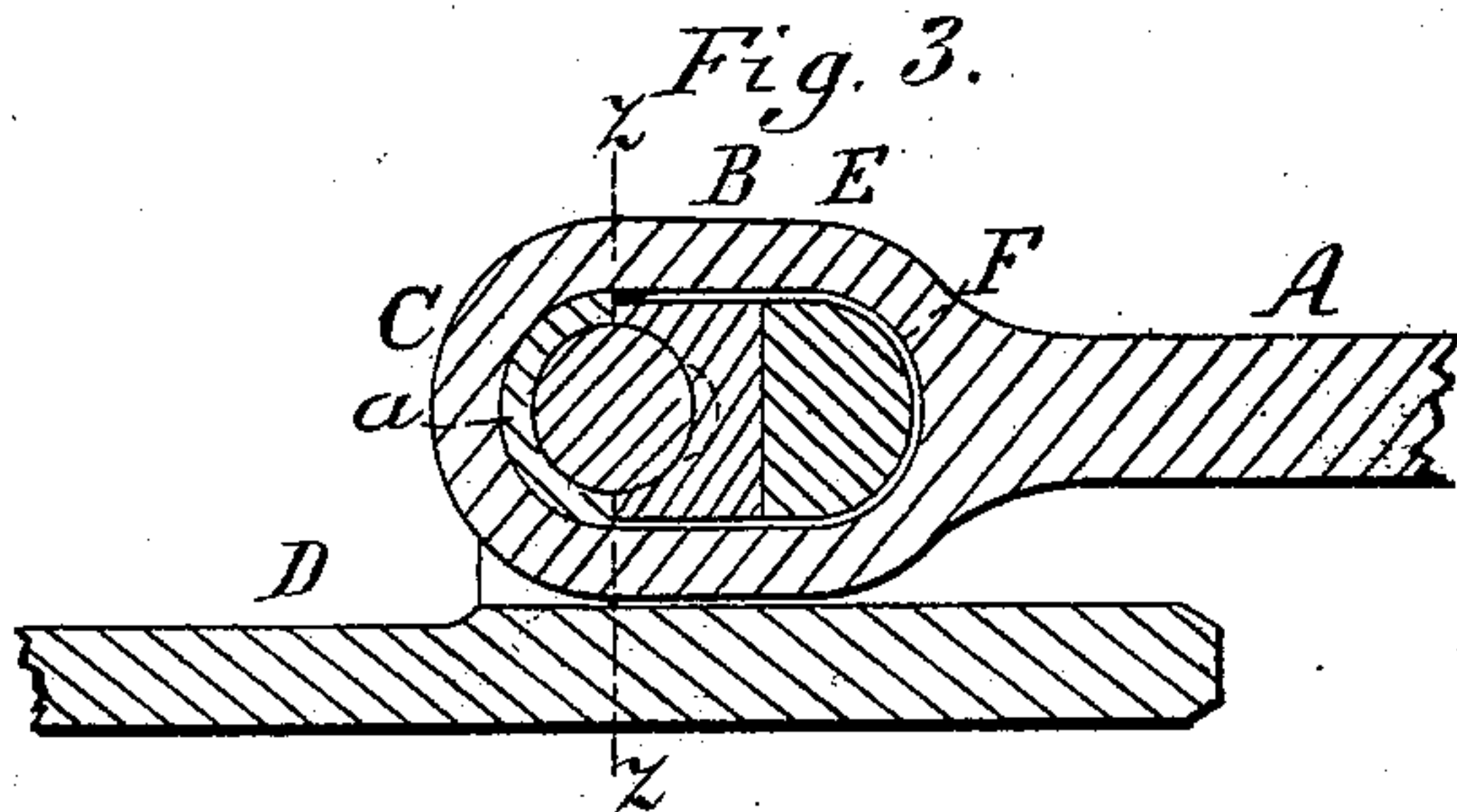
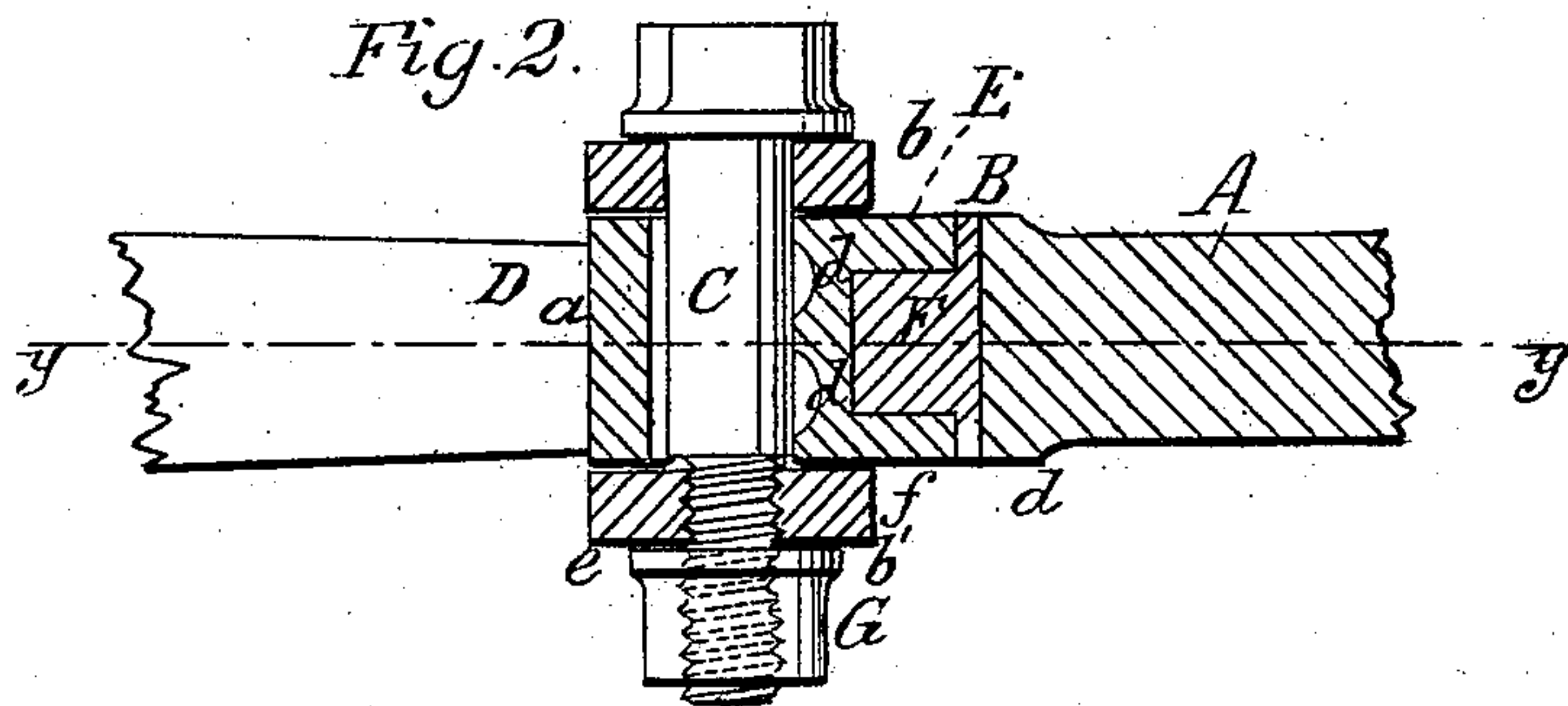
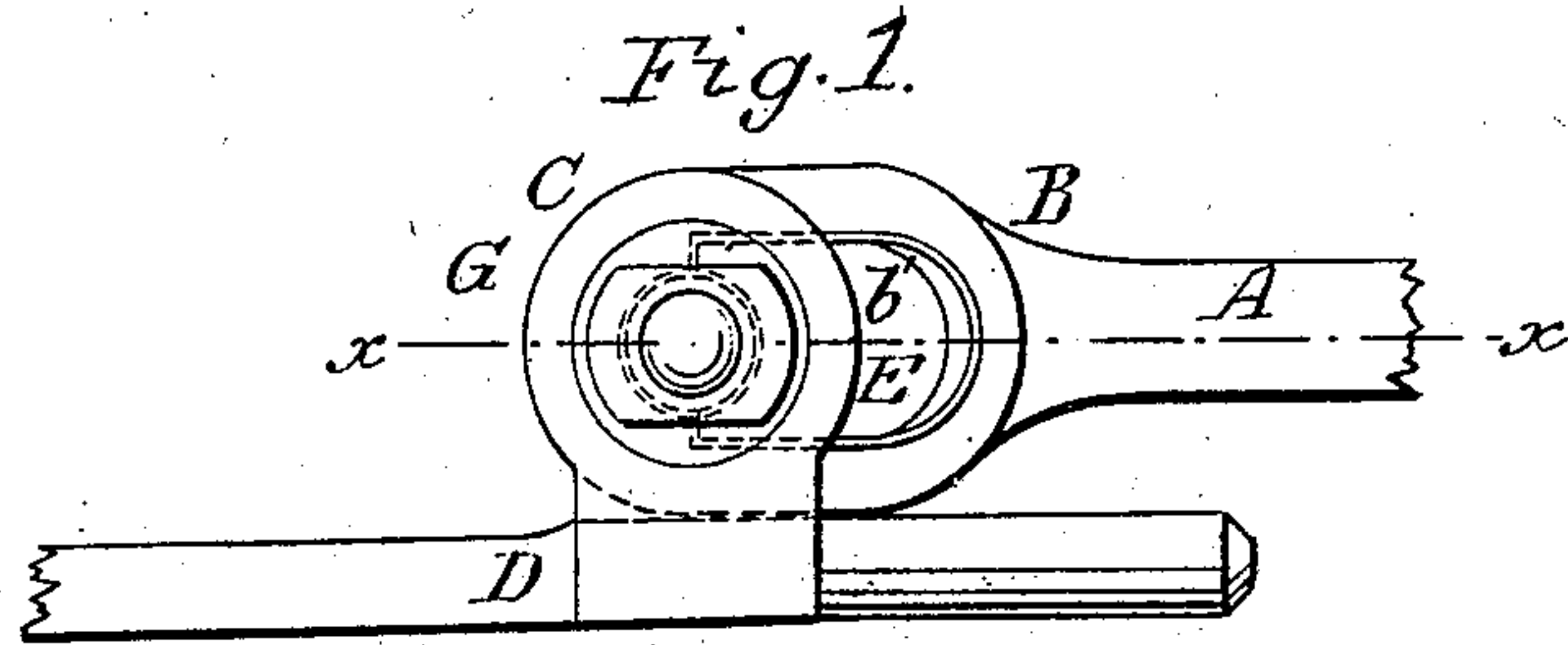


B. RICE.  
Thill-Coupling.

Patented Sept. 2, 1862.

No. 36,369.



Witnesses.

*J. W. Coombs.*  
*G. A. Reed.*

Inventor.

*Benjamin Rice*  
*per. Wm. H. Co.*  
*attys.*

# UNITED STATES PATENT OFFICE

BENJAMIN RICE, OF HASTINGS, NEW YORK.

## IMPROVEMENT IN ATTACHING THILLS TO AXLES.

Specification forming part of Letters Patent No. 36,369, dated September 2, 1862.

*To all whom it may concern:*

Be it known that I, BENJAMIN RICE, of Hastings, in the county of Westchester and State of New York, have invented a new and Improved Coupling for Attaching Thills to the Axles of Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a longitudinal section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a longitudinal section of the same, taken in the line *y y*, Fig. 2; Fig. 4, a transverse section of the same, taken in the line *z z*, Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

This invention consists in having an eye of oblong elliptical form made at the end of the thill-iron and having a steel bearing therein, and also a loose box having a spring bearing against it to compensate for wear, the above parts being used in connection with a steel connecting-pin and Babbitt's metal bearing fitted in the yielding box, all being arranged as hereinafter fully shown and described, whereby a very strong and durable coupling is obtained, and one in which wear is fully compensated for.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the iron, which is attached to the back end of the thill, and which is provided with an eye, B, of oblong elliptical form. This eye has a concave steel head, *a*, welded or otherwise secured within it at its back end, which serves as a bearing for the steel coupling-pin C, which passes through lugs or ears *b b'*, attached to the clip D, which encompasses the axle, and a portion of which is shown in the drawings.

In the front part of the eye B there is fitted a box, E, which may be of brass or other metal, and which has a spring, F, of metal,

india-rubber, or other suitable elastic substance interposed between its back end and the front end of the eye B, as shown clearly in Figs. 2 and 3. The spring F has a tendency to keep the front end or face of the box E, which is concave, in contact with the front side of the steel pin C, and also keep the steel head *a* in the eye in contact with the back side of said pin. In the face or concave side of the box E there are made recesses to receive Babbitt metal, *d*. (Shown in Fig. 2.) The steel coupling-pin C has a screw, *e*, cut on one end of it, and on this screw a nut, G, is fitted. The screw *e* also fits in a female thread, *f*, in the lug or end *b'*, and the nut G therefore serves as a jam-nut. By this arrangement it will be seen that the yielding box E will compensate for all wear, as the spring F will keep said box in contact with the steel coupling-pin C, and all rattling and unnecessary play of the coupling on the pin avoided.

In consequence of having the screw *e* of the pin C fit in an internal screw-thread in the lug or ear *b'* and a jam-nut, G, on its outer end, said pin is prevented from being casually detached, and lost, for if the jam-nut should become loose and work off the screw *e* the bolt will be held by said screw fitting in the female screw in the lug or ear *b'*. The Babbitt metal, which is fitted in the face side of the box E, prevents wear both of the box and coupling-pin, while the steel head *a* greatly resists the wear occasioned by the pull or draft movement of the animal.

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

The employment of the oblong eye B, in combination with the steel head *a*, loose box E, spring F, and pin C in the manner herein shown and described.

BENJAMIN RICE.

Witnesses:

JAMES STEWART,  
LYMAN COBB, Jr.