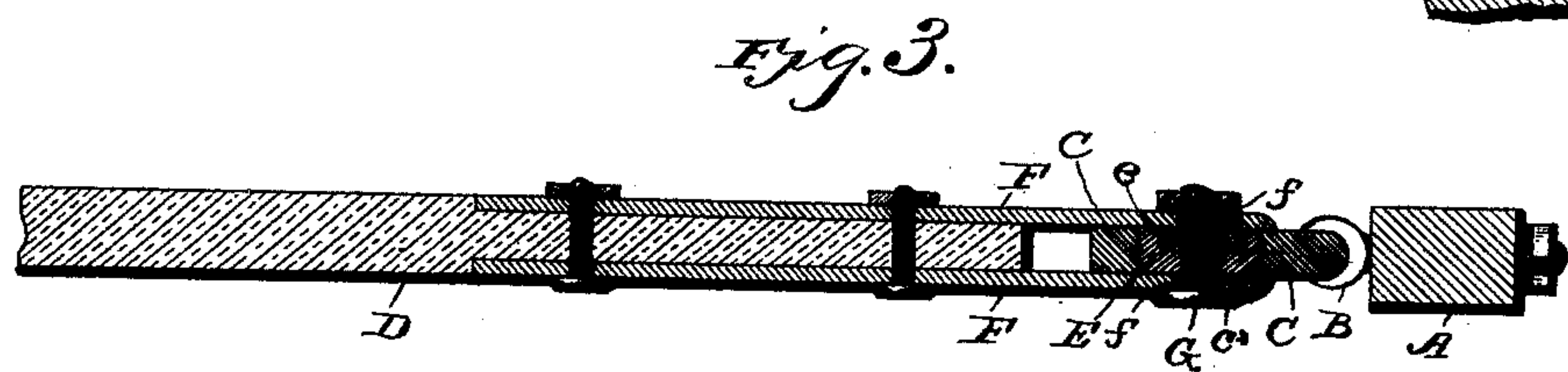
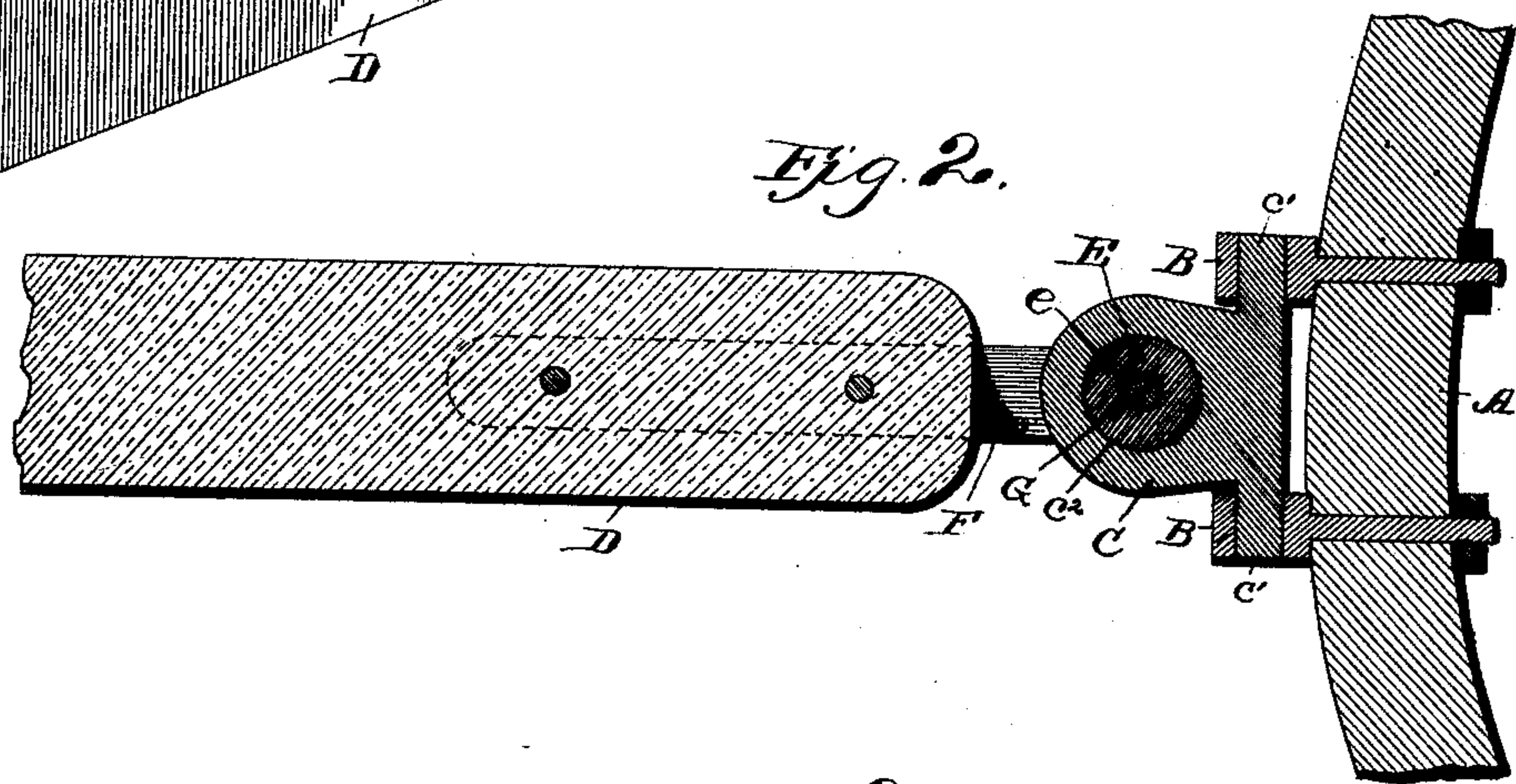
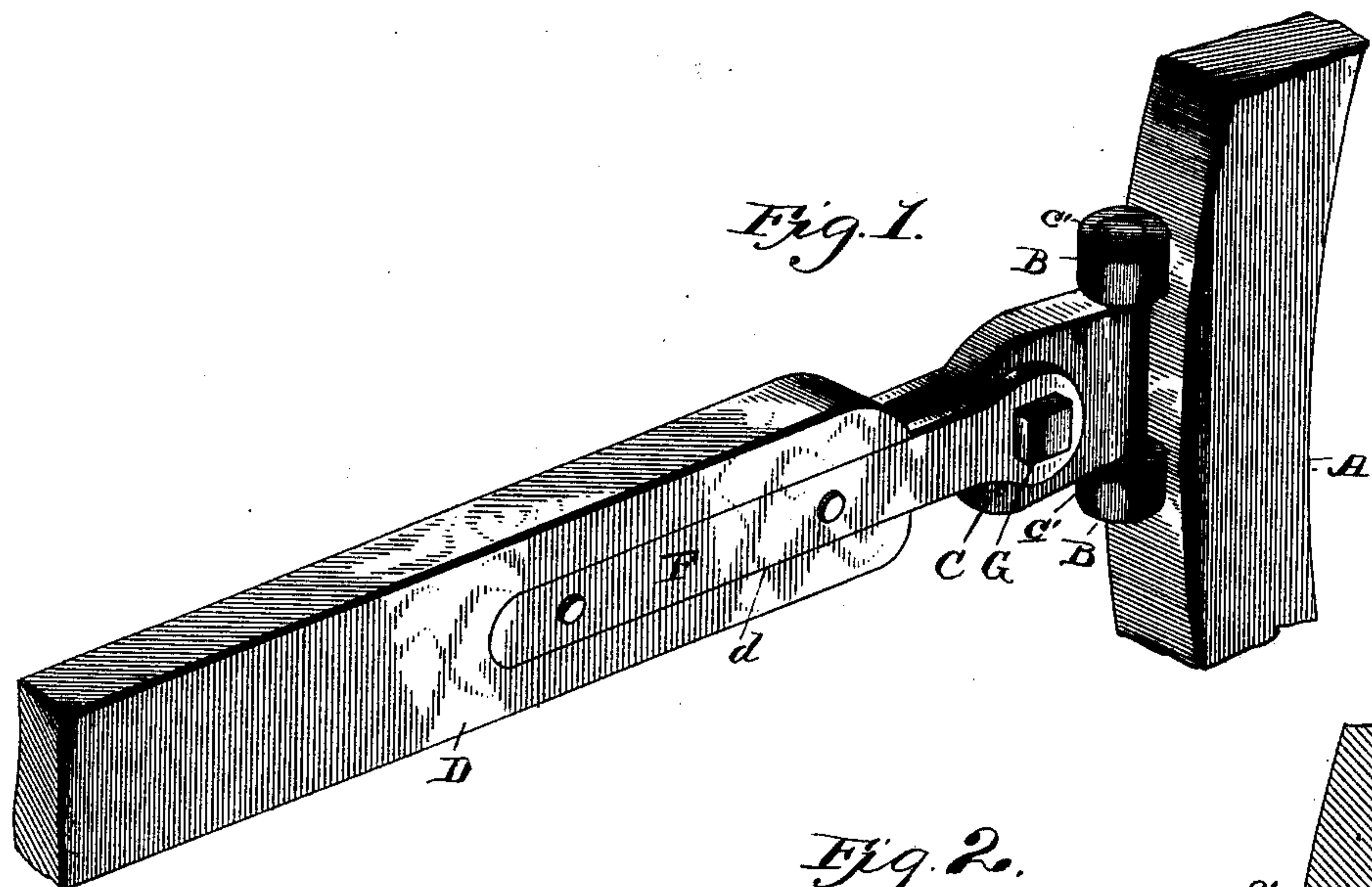


(No Model.)

J. A. CARMICHOEL.
HAME TUG.

No. 414,286.

Patented Nov. 5, 1889.



Witnesses

E. W. Wademan
H. J. Riley

Inventor

By *his* Attorneys, *John A. Carmichael*

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

JOHN A. CARMICHOEL, OF PRIMGHAR, IOWA.

HAME-TUG.

SPECIFICATION forming part of Letters Patent No. 414,286, dated November 5, 1889.

Application filed July 12, 1889. Serial No. 317,344. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. CARMICHOEL, a citizen of the United States, residing at Primghar, in the county of O'Brien and State of Iowa, have invented a new and useful Hame-Tug, of which the following is a specification.

The invention relates to improvements in hame-tugs.

10 The object of the present invention is to provide a hame-tug of simple and cheap construction, adapted for light and heavy harness, and capable of vertical and horizontal movement, and of having the parts which receive the wear readily removed when worn and replaced by new ones.

20 The invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

25 In the drawings, Figure 1 is a perspective view of a portion of a hame provided with a tug embodying the invention. Fig. 2 is a central vertical longitudinal sectional view. Fig. 3 is a horizontal sectional view.

30 Referring to the accompanying drawings by letter, A designates a hame, which is provided upon its rear side with a pair of eyebolts B, arranged a suitable distance apart and designed to form bearings for a plate to which a trace D is attached. The plate C is provided upon opposite edges near the front with vertically-disposed journals c' , which engage the eyes of the bolts B, and the said plate has a central opening c^2 , in which is arranged a bushing E, which receives the wear,

and which may, when it has become worn, be removed and replaced by a new one.

The end of the trace D is recessed at d and is provided with parallel side plates F, one of which lies in the recess d , and said plates F are bolted, riveted, or similarly secured to the trace and project beyond the end thereof, and are provided with perforations f , through which passes a bolt G, which also passes through the opening e in the bushing E, thereby securing the plate C between the parallel plates F. By this construction the trace is vertically movable on the plate C and the latter is horizontally movable in the eyebolts B, thereby producing a hame-tug capable of permitting the parts to be moved both vertically and horizontally.

55 From the foregoing description and the accompanying drawings the construction, operation, and advantages of the invention will readily be understood.

What I claim is—

The combination of a hame provided with eyebolts, the plate C, provided with journals engaging said eyebolts and having a central opening, the bushing arranged in the central opening, a trace provided with parallel side plates having perforations, and a bolt passing through the perforations and the bushing, substantially as described.

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

JOHN A. CARMICHOEL.

Witnesses:

H. E. THAYER,
S. O. REESE.

It is hereby certified that the name of the patentee in Letters Patent No. 414,286, granted November 5, 1889, for an improvement in "Hame-Tugs," was erroneously written and printed "John A. Carmichoel," whereas said name should have been written and printed *John A. Carmichael*; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned and sealed this 3d day of December, A. D. 1889.

[SEAL.]

CYRUS BUSSEY,
Assistant Secretary of the Interior.

Countersigned:

C. E. MITCHELL,
Commissioner of Patents.