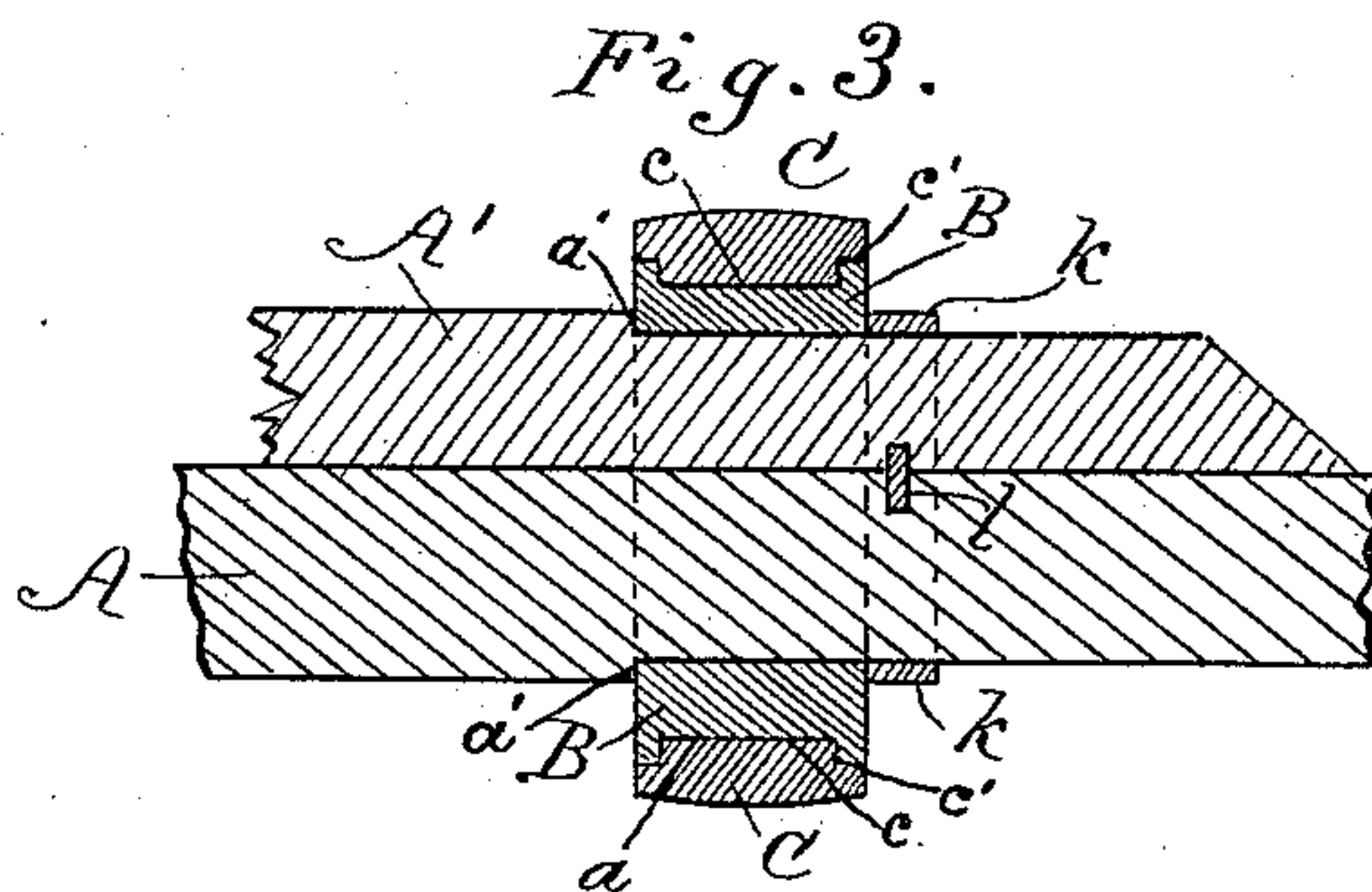
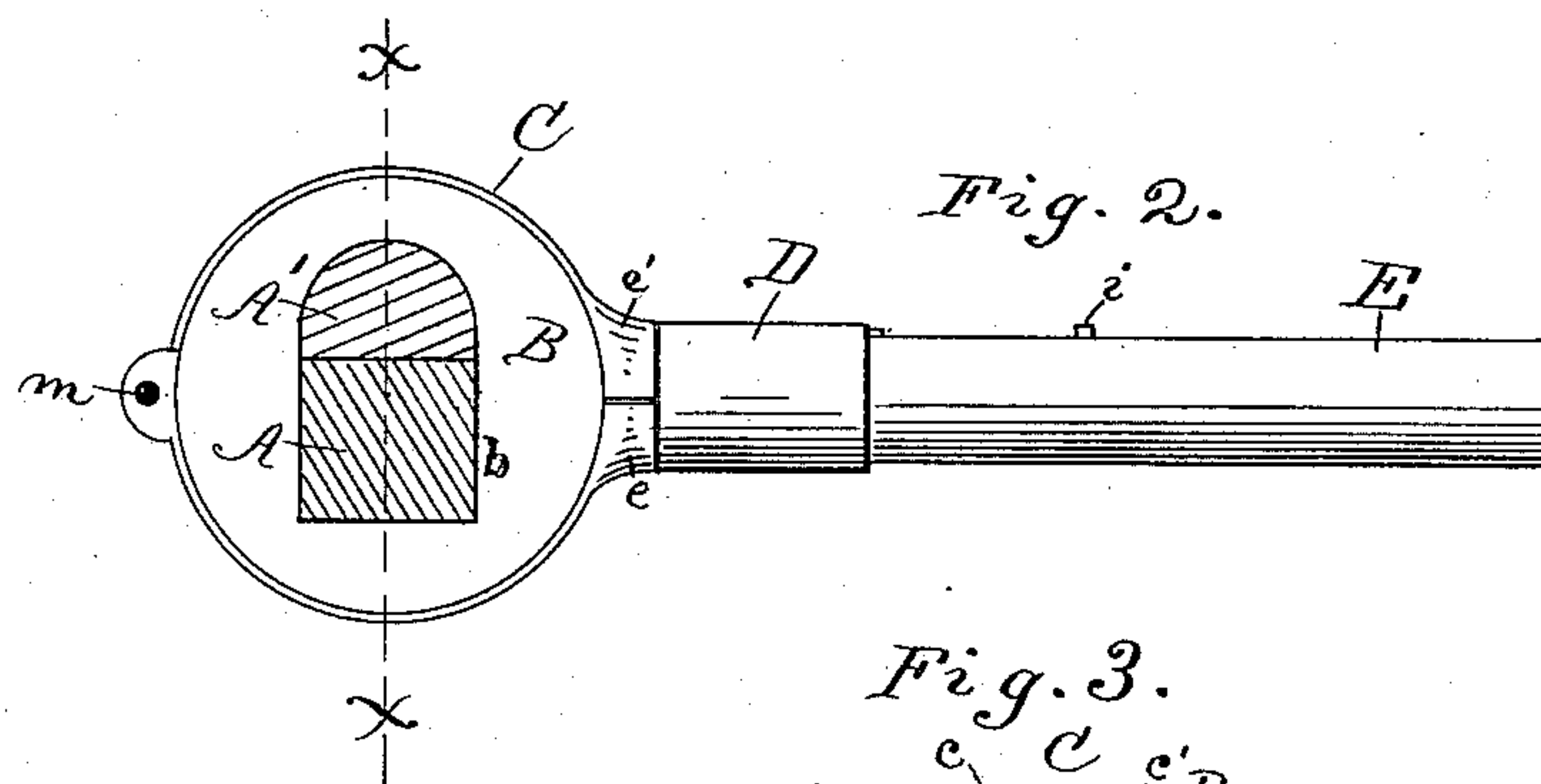
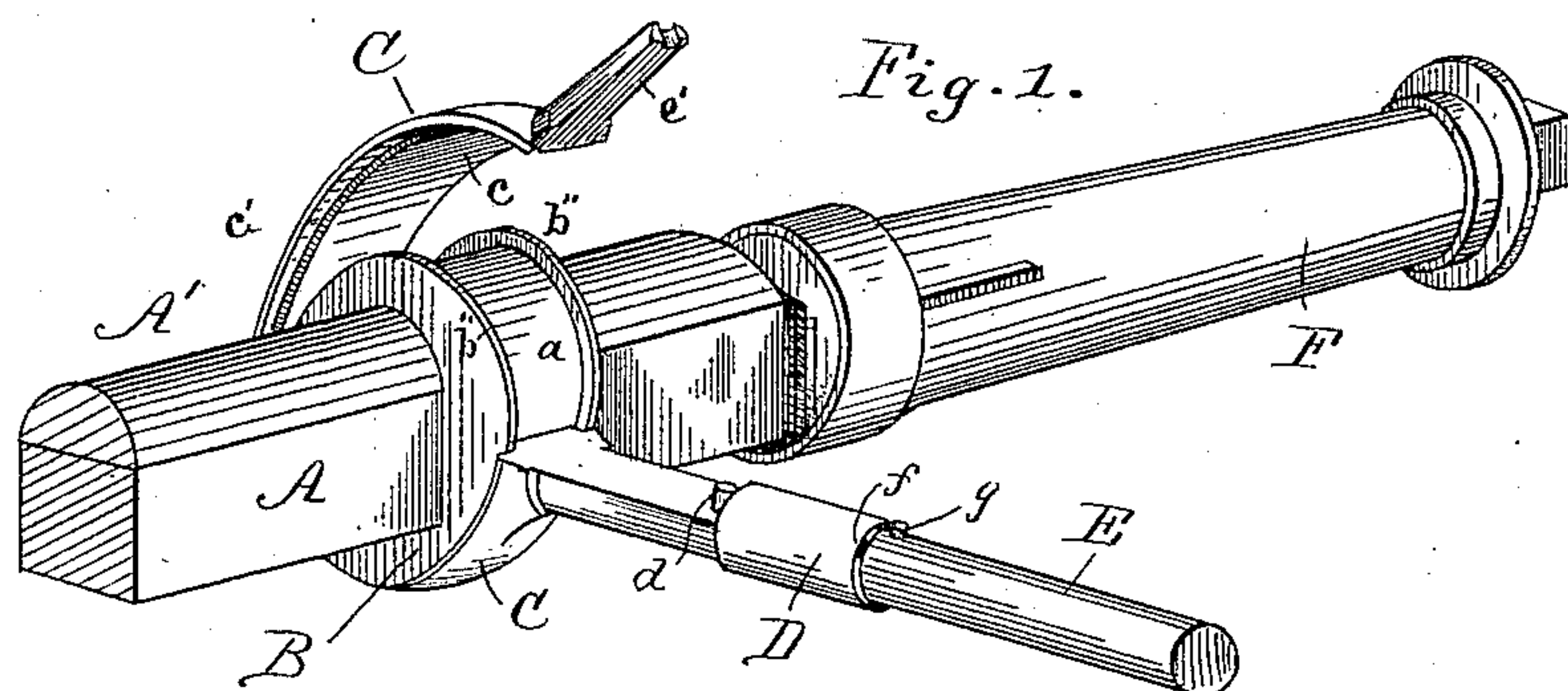


(No Model.)

A. POULSON.
THILL COUPLING.

No. 387,443.

Patented Aug. 7, 1888.



Witnesses:
Thos. Houghton.
John Locke.

Inventor:
Andrew Poulson,
By his Atty.
Wm. R. Singleton.

UNITED STATES PATENT OFFICE.

ANDREW POULSON, OF ST. LOUIS, MISSOURI.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 387,443, dated August 7, 1888.

Application filed March 6, 1888. Serial No. 266,365. (No model.)

To all whom it may concern:

Be it known that I, ANDREW POULSON, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Combined Thill-Coupling and Axle-Clip; 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in a combined thill-coupling and axle-clip, which will be hereinafter more fully described, and pointed out in the claim.

Figure 1 is a perspective view of one end of an axle with the improvement attached thereto. Fig. 2 is an end view of Fig. 1. Fig. 3 is a longitudinal section of the axle-tree on line *xx* of Fig. 2.

A is a metal axle, on top of which is a wooden cap, A'. In most if not all cases where a wooden cap is used on top of the metal axle the cap is secured by clips. The clips used at or near the ends of the axle-tree sustain the thill-couplings. The ordinary clips, which are fastened by nuts and clamps on the ends of the bolts, are very liable to be loosened and become lost. To avoid this difficulty, I use the following device to fasten the cap upon the axle, and likewise to hold the thill-coupling.

B is a sleeve having the mortise *b* made conformable to the cross-section of the metal axle and cap, as shown in Fig. 2. The pe-

riphery of the sleeve B has a recess, *a*, as shown in Figs. 1 and 3.

C is a hinged collar, having the middle part, *c*, made to fit exactly in the recess *a* of the sleeve B, and with a rabbet, *c'*, on each side thereof to cover the flanges *b''* on the sleeve B. The collar C is on the end of the shaft E, and is to be secured over the sleeve B, as seen in Fig. 2, by means of a sliding sleeve, D.

In Fig. 1 the collar C is represented open and sleeve D is moved up on the shaft E. In Fig. 2 the collar C is closed over sleeve B and the sliding sleeve D is in its proper position over the ends *e e'* of the collar to lock it.

The sleeve B, when placed on the axle on the inner side, abuts against the shoulder *a'* on the axle and cap, and is secured in position by a collar, *k*, through which and the axle A and cap A' is passed a key, *l*, in slots provided for it, as shown in Fig. 3.

F is the box or skein of the hub.

Having described my invention, which is an improvement upon the devices shown in the patent granted to me in company with Harry M. Schneider on the 19th of July, 1887, No. 366,684, I claim—

The sleeve B, constructed, as described, of one piece and secured to the axle and cap by a washer and key, and having a recess in its periphery, in combination with the collar C, having the rabbets to cover the flanges of the sleeve, as set forth.

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

ANDREW POULSON.

Witnesses:

WM. R. SINGLETON,
THOS. HOUGHTON.