

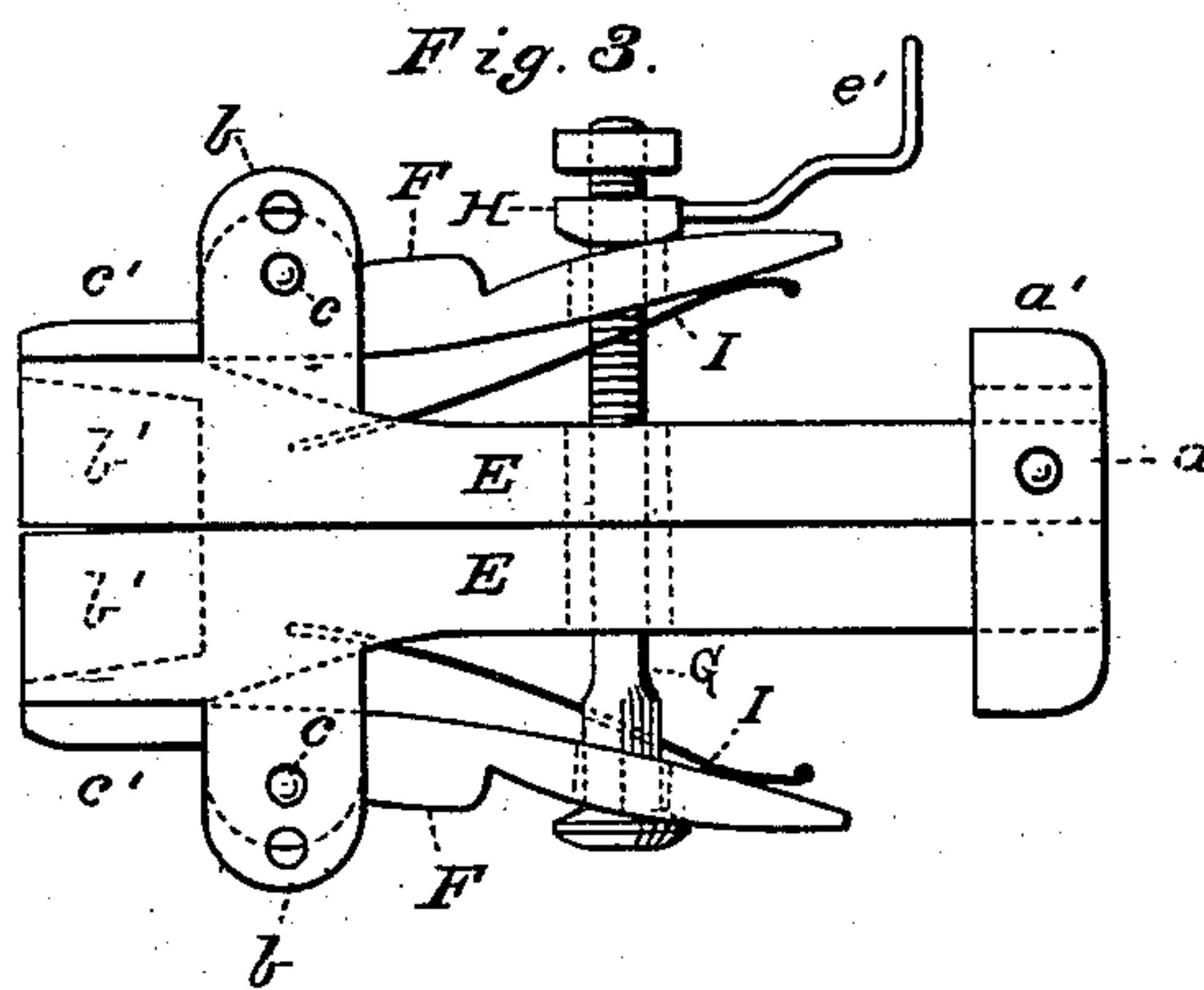
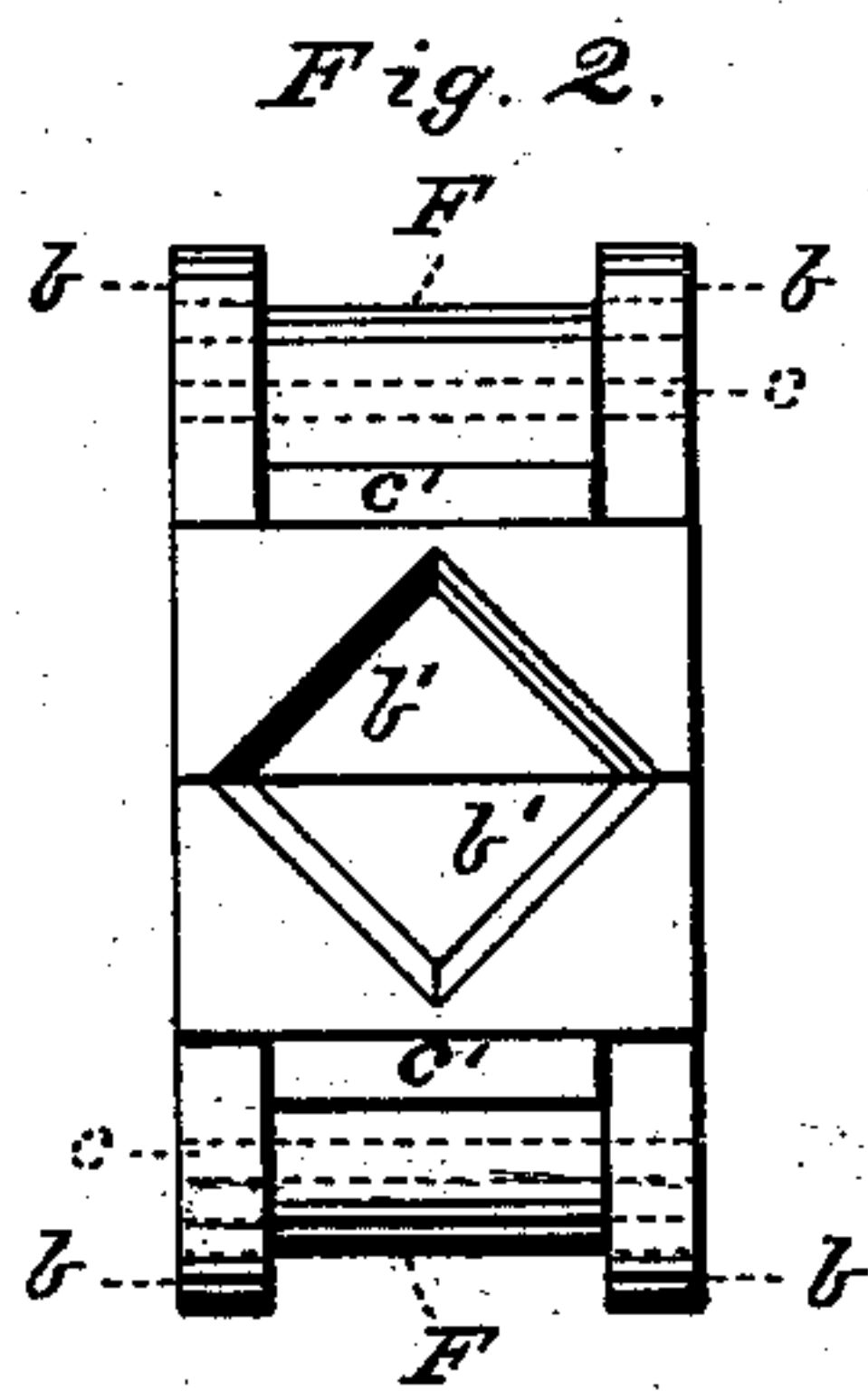
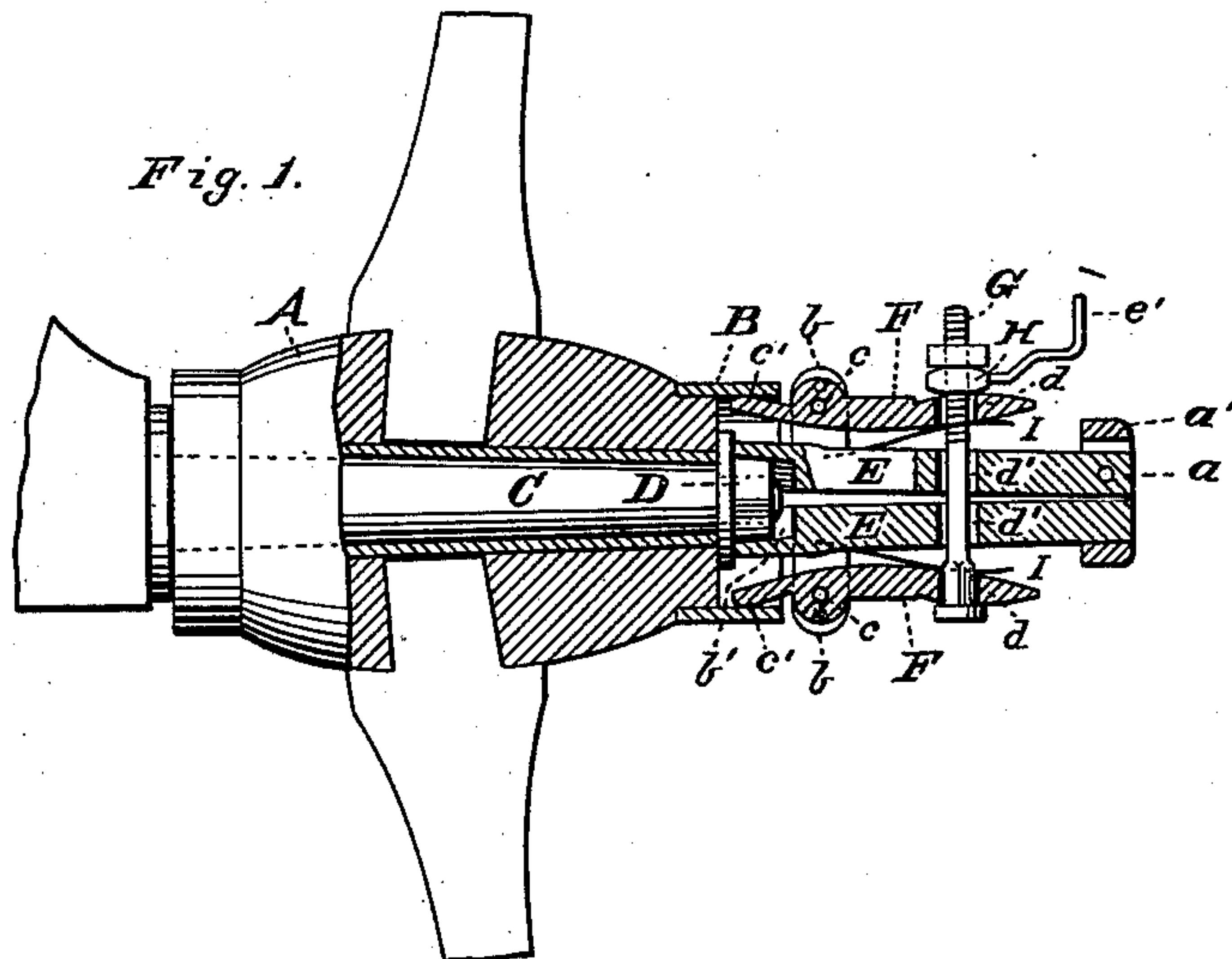
(No Model.)

W. C. PERKINS.

WRENCH.

No. 384,467.

Patented June 12, 1888.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 384,467, dated June 12, 1888.

Application filed March 20, 1888. Serial No. 267,886. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. PERKINS, a citizen of the United States, residing at Sandy Point, in the county of Waldo and State of Maine, have invented certain new and useful Improvements in Wheel-Wrenches for Axle-Nuts; 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of the invention, shown in section attached to the wheel. Fig. 2 is a front view, and Fig. 3 is a side view.

The invention relates to improvements in vehicle-wheel nut wrenches; and it consists in the construction and novel combination of parts, as hereinafter set forth.

The object of my invention is to provide a simple wrench that may be secured to the nut and hub-band by one operation, so that the nut may be taken off and replaced with the wheel by turning the wheel in the proper direction.

Referring to the drawings, A designates a wheel-hub; B, the band thereon; C, the threaded axle-spindle, and D the nut.

E represents the two parallel jaws of the wrench, one of which has the tenon ends *a* pivoted within the rectangular collar *a'*, and the other is rigidly secured to said collar. Both jaws are provided near their opposite ends with the outstanding bearing-lugs *b*. The jaws E in the ends opposite the pivotal point have the angular nut-seat *b'*, adapted to engage the four sides of the nut D.

F shows levers fulcrumed on the pivot *c* between the lugs *b*, and having the outwardly-opening ends *c'*, for engaging the inner surface of the hub-band, as shown. The levers are longitudinally slotted, as at *d*, and the jaws E

have the transverse openings *d'* in line with said slots. A threaded bolt, G, passes through the slots *d* and openings *d'*, and to prevent it from turning the portion *e* adjacent to the head may be squared, as shown. A nut, H, provided with a crank-handle, *e'*, engages the threaded end of the bolt. As the nut H is turned down on the bolt, the levers are forced down, bringing the ends *c'* against the inner surface of the hub-band, and the pressure on the band clamps the angular jaws on the axle-nut; then by turning the wheel on the spindle in a direction opposite to the direction of the spindle-thread the nut is disengaged and the wheel and nut may be taken off together. After the axle-skein shall have been oiled or greased, the wheel and nut may be replaced and the wrench removed by loosening the nut on the bolt.

Springs I are provided to throw the levers outward.

Flat springs, as shown in the drawings, may be used; or, if preferred, spiral springs may be substituted.

Having described my invention, what I claim is—

1. A wheel-nut wrench consisting of the jaw pivoted within the rectangular collar, the fixed jaw, the respective jaws being provided in their ends with the nut-seat, the outstanding bearing-lugs, the levers fulcrumed between said lugs, the threaded bolt, the nut, and the springs, substantially as specified.

2. The combination, with jaws E, of the levers fulcrumed thereon, the threaded bolt passing through the slots in the levers and the openings in the jaws, and the nut having the crank-handle, substantially as specified.

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

WILLIAM C. PERKINS.

Witnesses:

L. A. PARTRIDGE,
L. M. PARTRIDGE.