

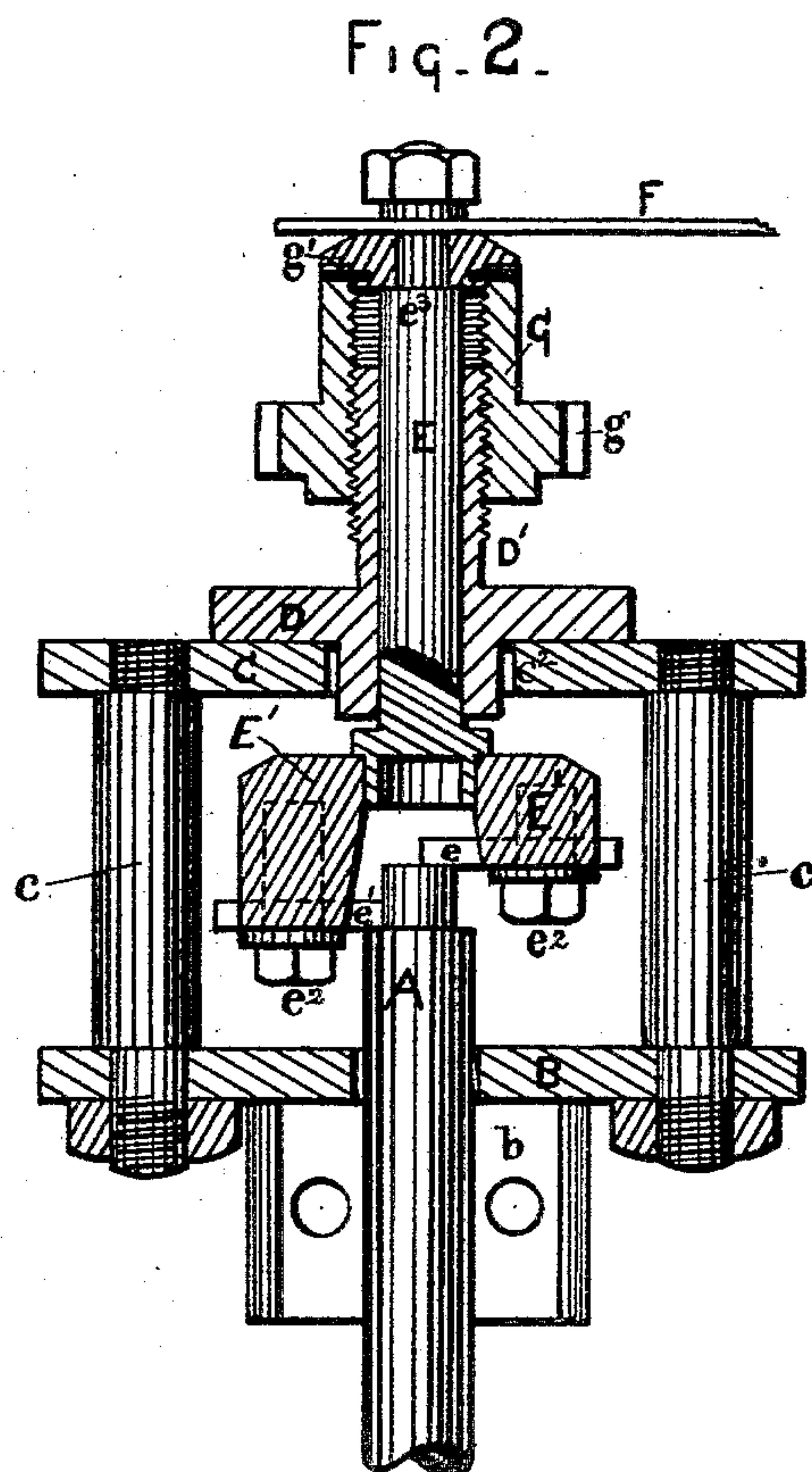
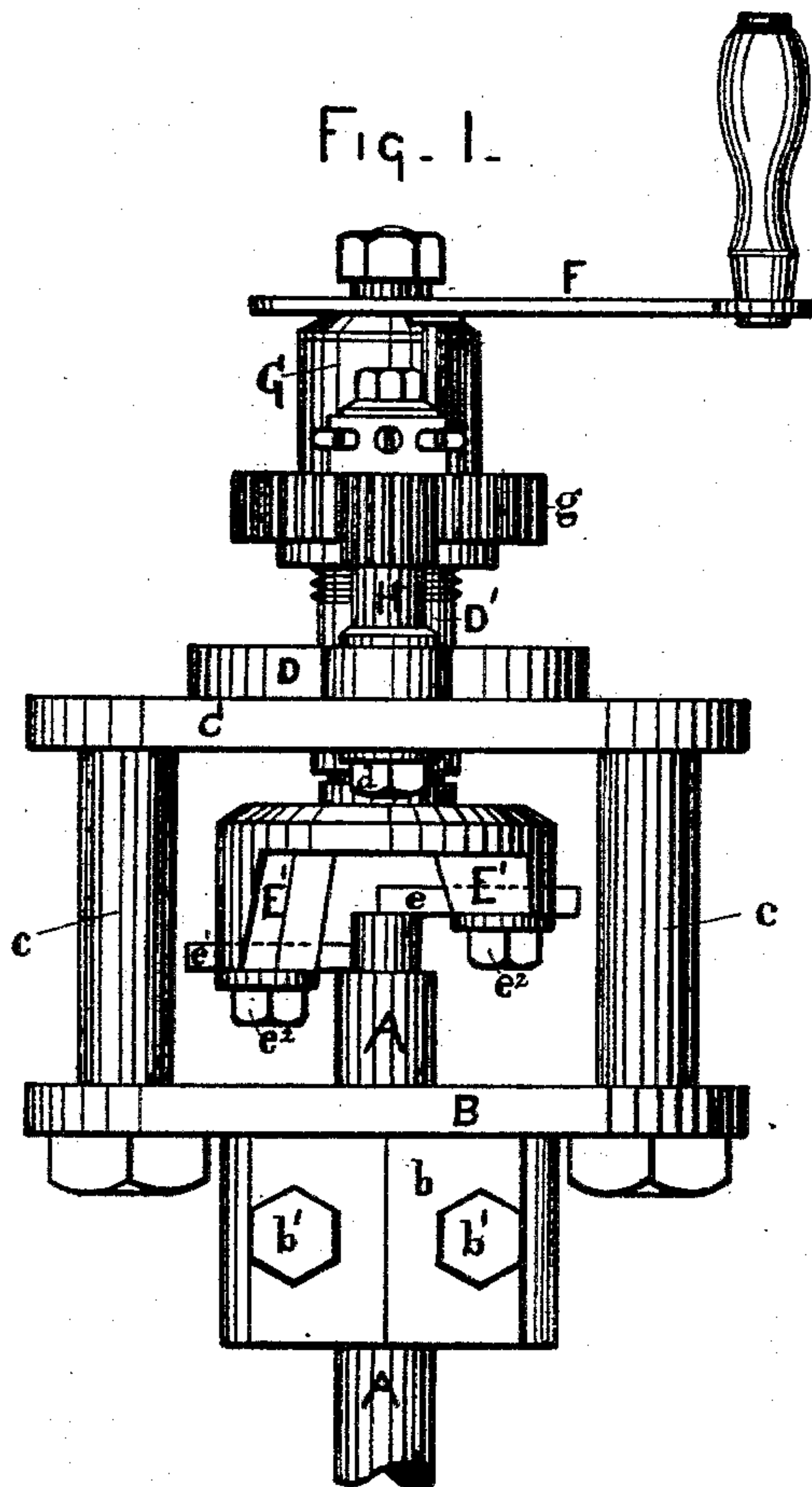
(No Model.)

2 Sheets—Sheet 1.

F. E. BEARDSLEY.
AXLE CUTTER.

No. 412,065.

Patented Oct. 1, 1889.



WITNESSES

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INVENTOR.

Frank E. Beardsley
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Fig. 3.

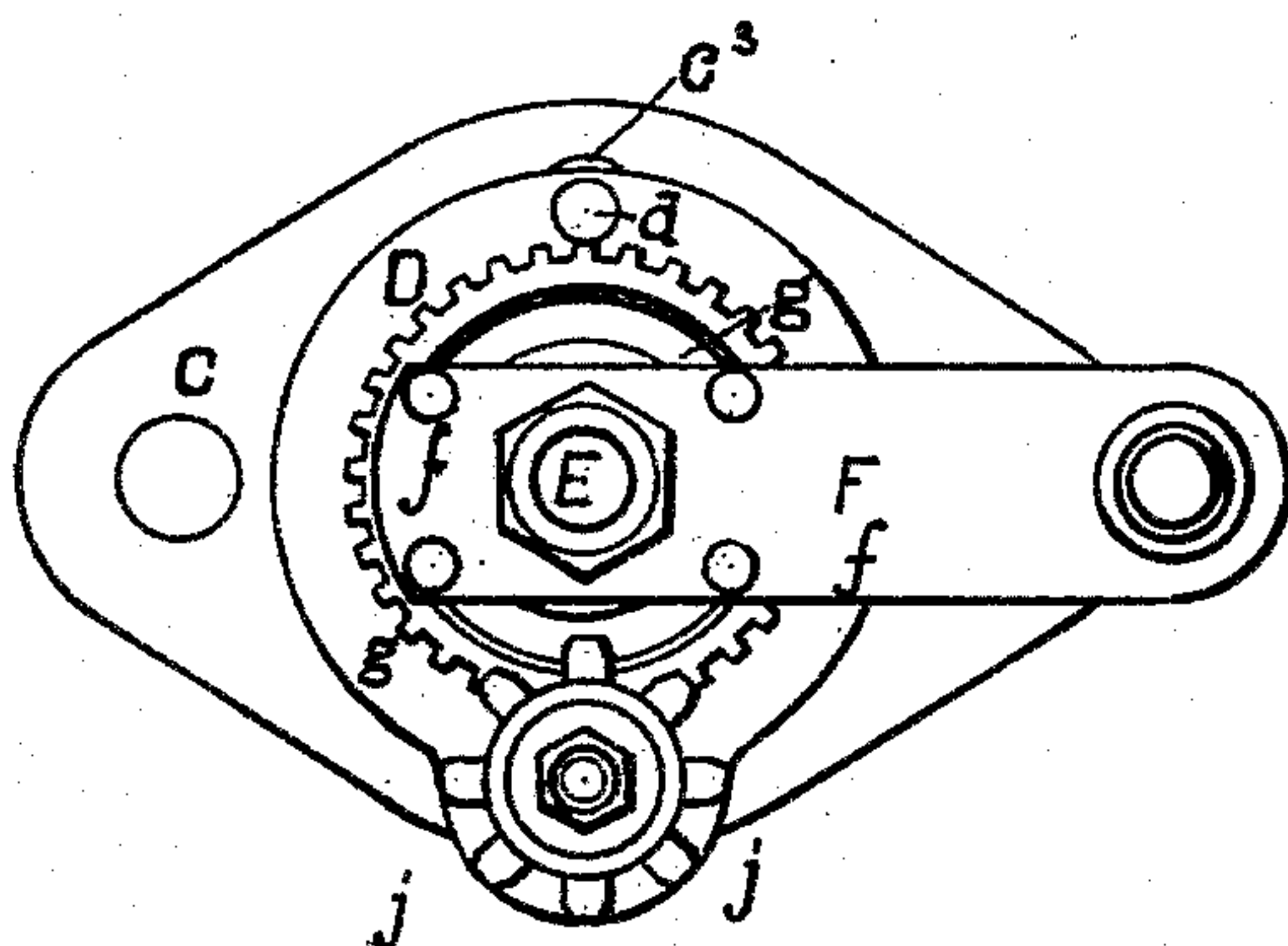


Fig. 5.

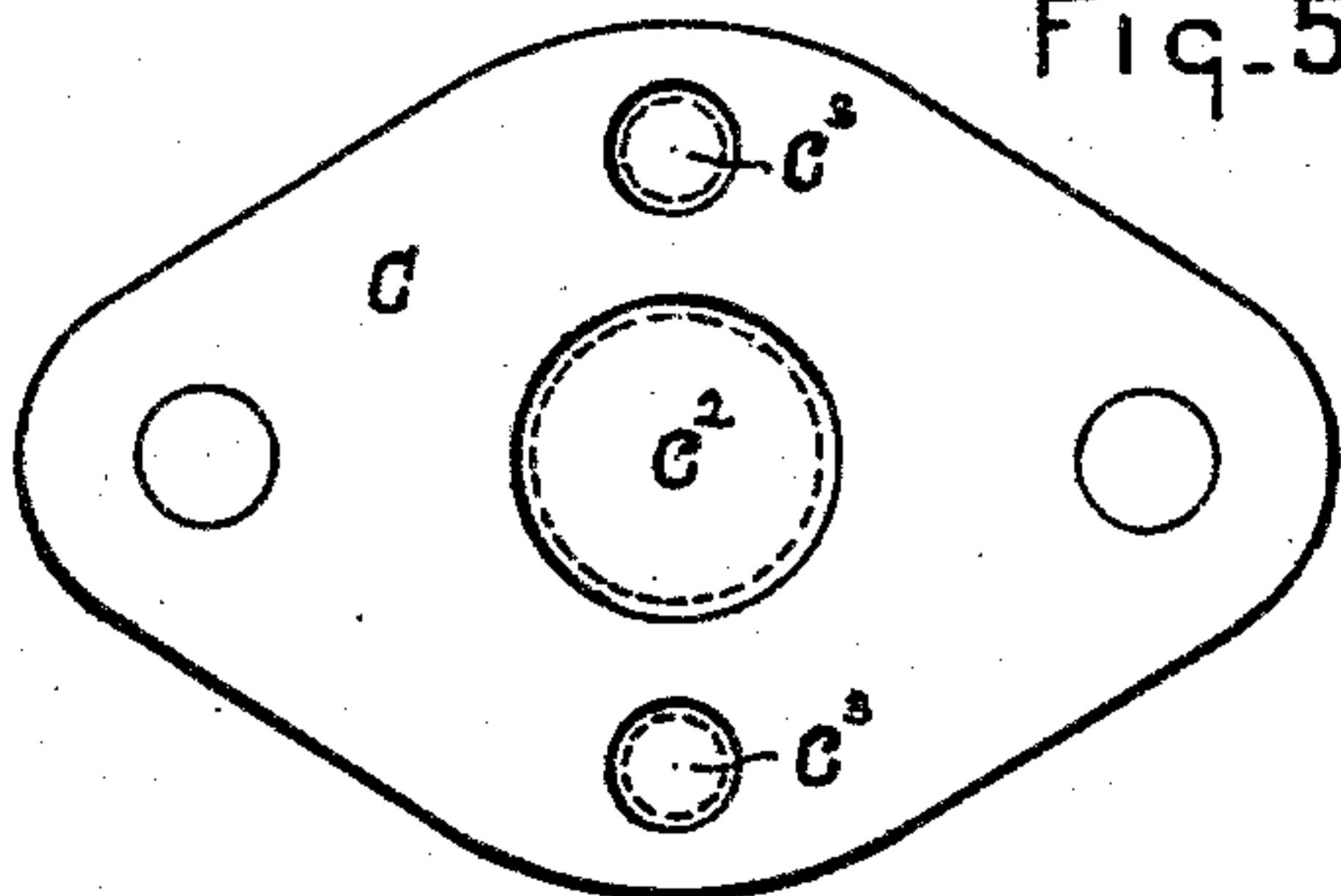
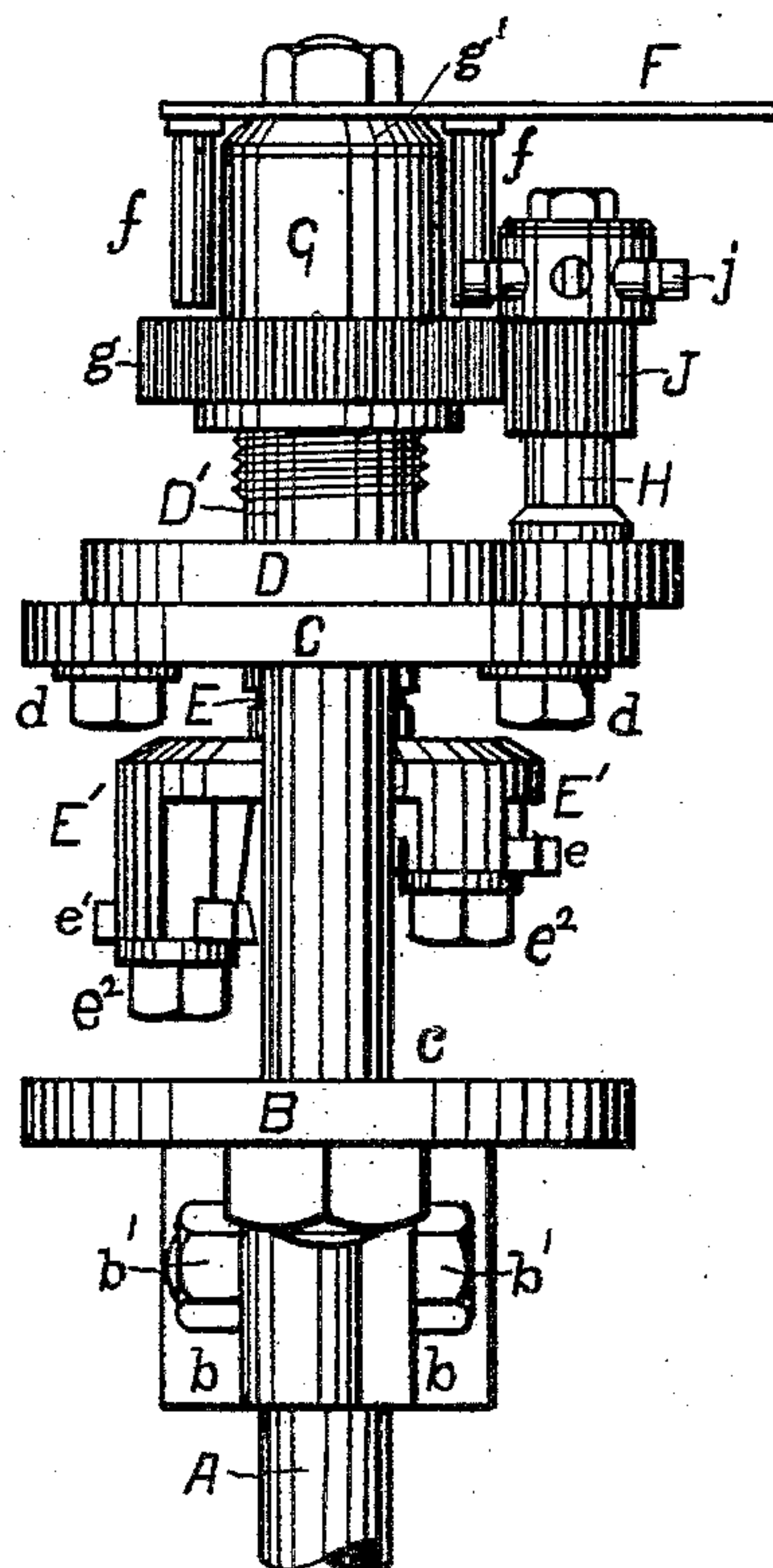


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK. E. BEARDSLEY, OF TRAVERSE CITY, MICHIGAN, ASSIGNOR OF ONE-HALF TO WARREN R. SULLIVAN, OF SAME PLACE.

AXLE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 412,065, dated October 1, 1889.

Application filed April 12, 1889. Serial No. 306,969. (No model.)

To all whom it may concern:

Be it known that I, FRANK. E. BEARDSLEY, a citizen of the United States, residing at Traverse City, county of Grand Traverse, State of Michigan, have invented a certain new and useful Improvement in Axle-Cutters; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to that class of axle-cutters in which rotary knives are used to cut off the ends of the axle and also to cut the shoulder farther up, so that the nut can be run on farther, and thus prevent a longitudinal movement of the hub of the wheel on the spindle.

The object of my invention is to provide a cutter in which the knives will be automatically fed to their work, in which the rate of feed may be readily increased or decreased, in which the shaft of the tool-head shall be journaled in a single adjusting-plate in such a manner that it may be adjusted so as to exactly center over the spindle to be cut, and in other novel features hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation of my cutter attached to an axle-spindle. Fig. 2 is a longitudinal section of the same. Fig. 3 is a plan view. Fig. 4 is a side elevation at right angles to Fig. 1. Fig. 5 is a view of the face-plate, showing the enlarged openings.

In carrying out my invention, A represents the spindle to be cut.

B is what may be termed the "jaw-plate," provided with the clamps *b*, for embracing the axle, and set-screws *b'*, for clamping the same rigidly to the axle.

C is the face-plate, and is attached to the jaw-plate by bolts or rods *c*.

D is what may be termed an "adjusting-plate," and is fastened to the face-plate by the screws *d*. Preferably formed integral with the adjusting-plate is the sleeve *D'*, in which the shaft *E* is journaled. This shaft *E* is provided on its lower end with the tool-head *E'*.

e e' are the knives, rigidly held to the tool-head by the screws *e²*, and yet adjustable thereon, so as to adapt them for a greater or less depth of cut, as desired. The knife *e* may be used to cut off the end of the axle, while the knife *e'* may be used to cut the shoulder.

F is the crank-arm used to revolve the shaft.

G is another sleeve embracing the rigid sleeve *D'* and screw-threaded on its interior to conform to the screw-threaded exterior of the rigid sleeve. Preferably formed integral with this sleeve is the pinion *g*.

Rigidly engaged to the adjusting-plate D is the shaft H, upon which the pinion J revolves. This pinion J is provided on its upper edge with the beveled projections *j*. It will be observed that the opening *c³* in the face-plate through which the shaft passes is enlarged, and that the orifices *c³*, through which the screws *d* pass, are also enlarged. This will permit the adjusting-plate to be so set that the entire operating mechanism may be exactly centered over the end of the axle.

The operation of my cutter will be readily understood. The ring *g'* being keyed to the upper edge of the sleeve G, and being located between the shouldered end *e³* of the shaft and the crank-arm, will cause the shaft and sleeve to have a simultaneous longitudinal movement. When the crank-arm F is revolved, the pins *f*, extending at right angles therefrom, will engage the beveled projections *j* and cause the pinion J to revolve. This will revolve the sleeve G, and the latter, because of its threaded engagement on the rigid sleeve *D'*, will move longitudinally, carrying the shaft and consequently the tool-head and knives with it. If a faster feed is desired, the crank-arm may be provided with more of the pins *f*.

By using a construction as herein shown the mechanism is greatly simplified, and the operating mechanism being located entirely on the single adjusting-plate is a very material advantage in properly locating the cutter for work.

What I claim is—

1. In an axle-cutter, the combination, with a suitable frame-work adapted to be fastened

to the axle, of the tool-head having the cutting-knives located thereon, a shaft for revolving the same, and a movable sleeve embracing said shaft and adapted when moved
5 longitudinally to carry the shaft with it, substantially as described.

2. In an axle-cutter, the combination, with a suitable frame-work adapted to be fastened to the axle, and the shaft E, carrying the tool-
10 head E', of the feeding mechanism, consisting of the sleeve G, screw-threaded on its interior to fit the threaded exterior of the shaft-journal and adapted when moved longitudinally to simultaneously move the shaft in the same
15 direction, the pinion J, for revolving the sleeve G, and means for revolving the pinion J when desired, substantially as described.

3. In an axle-cutter, the combination, with the face-plate C, of an adjusting-plate D, adjustably fastened to the face-plate and carrying the operative mechanism, substantially
20 as described.

4. In an axle-cutter, the face-plate C, having the opening through which the operating-shaft passes considerably larger than the
25 shaft, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

FRANK. E. BEARDSLEY.

Witnesses:

A. J. HOXIE,
S. M. BROWN.