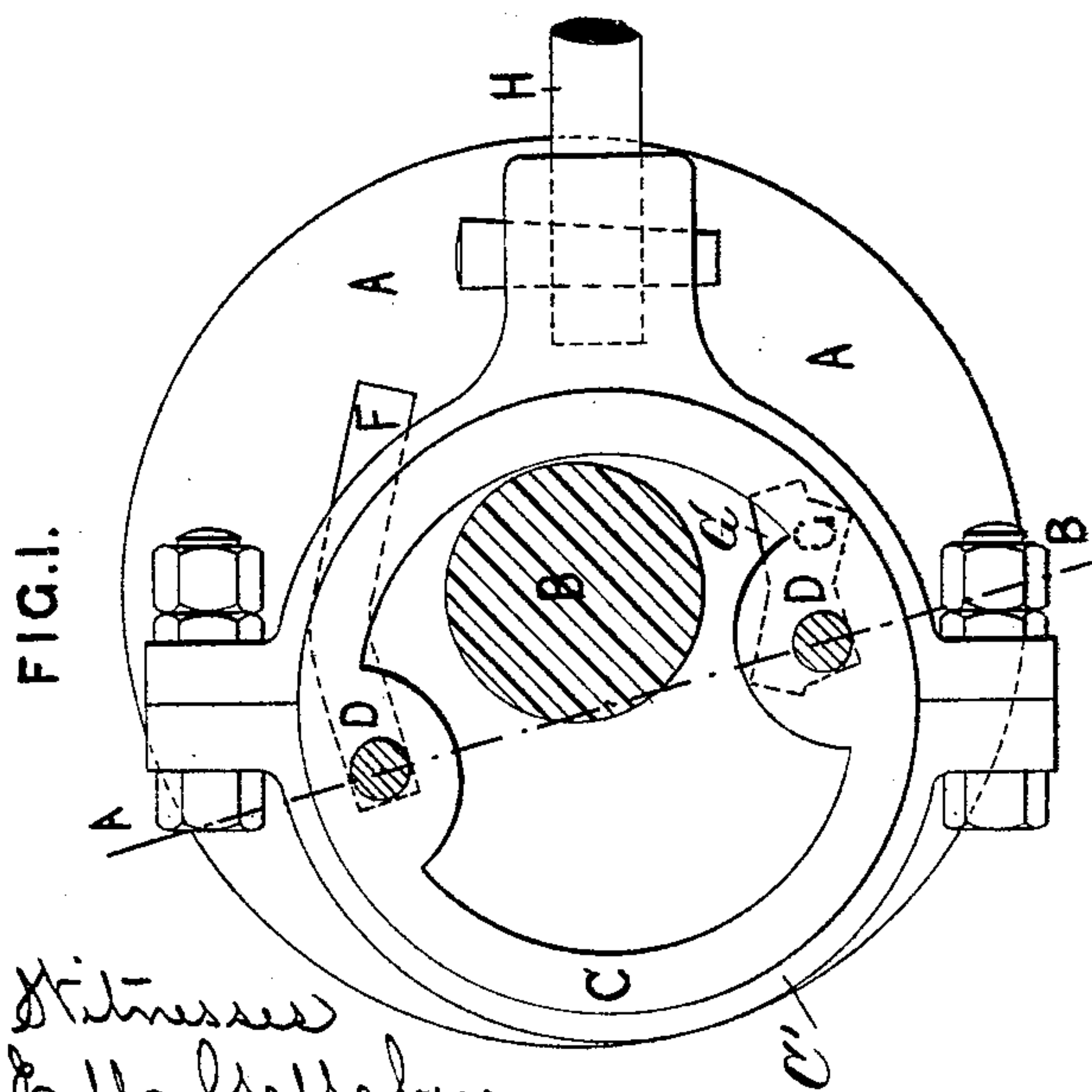
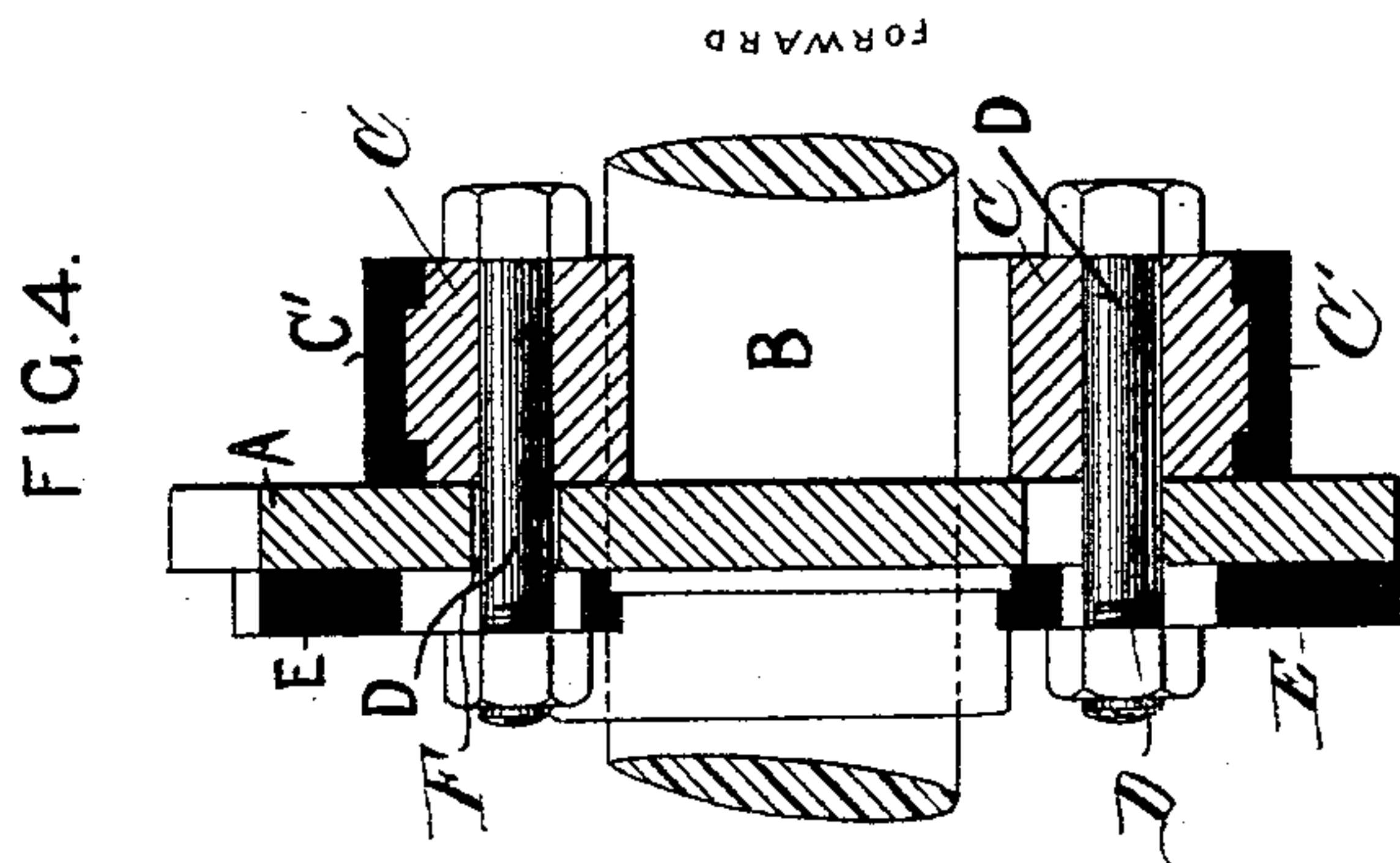
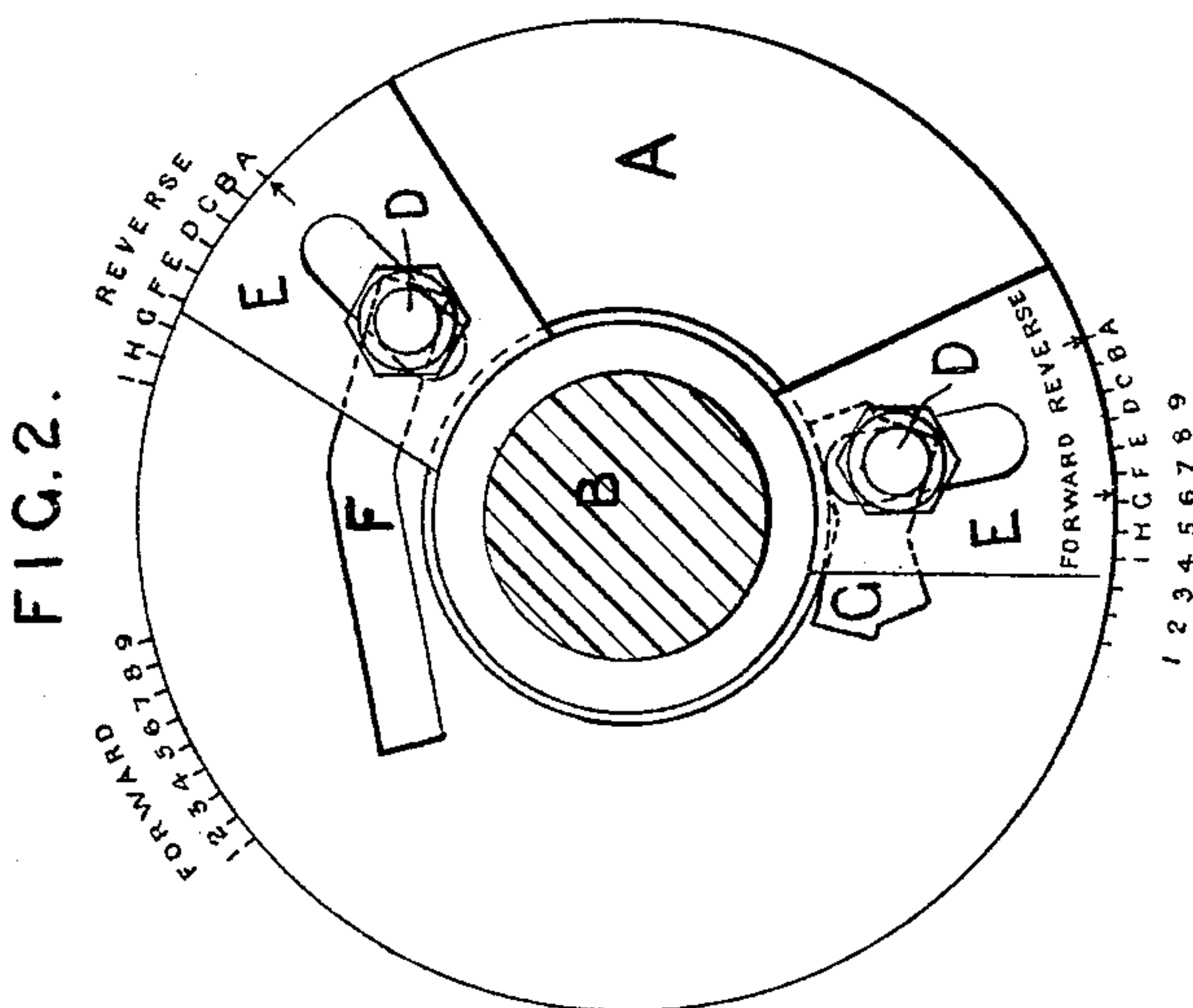


(No Model.)

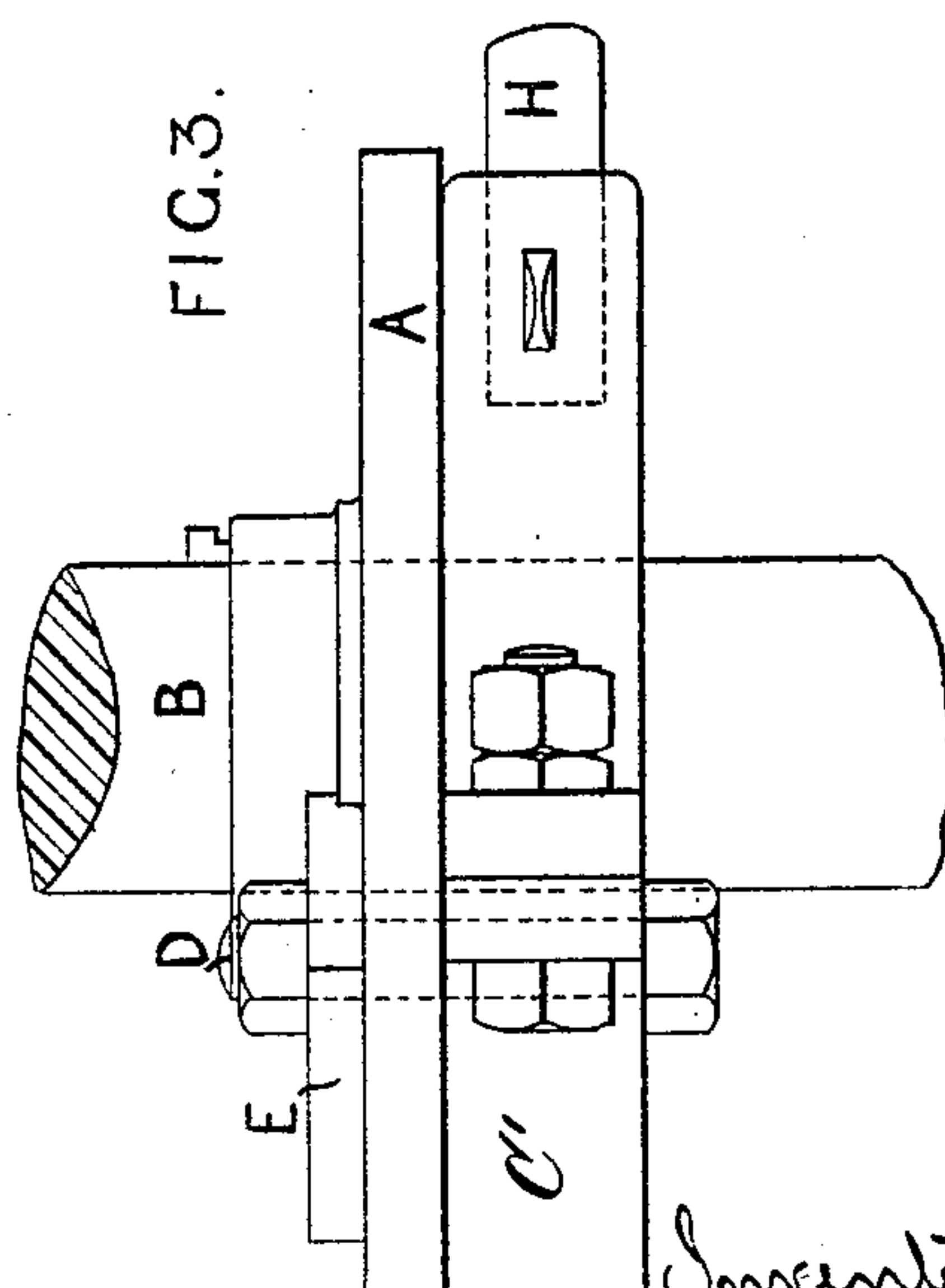
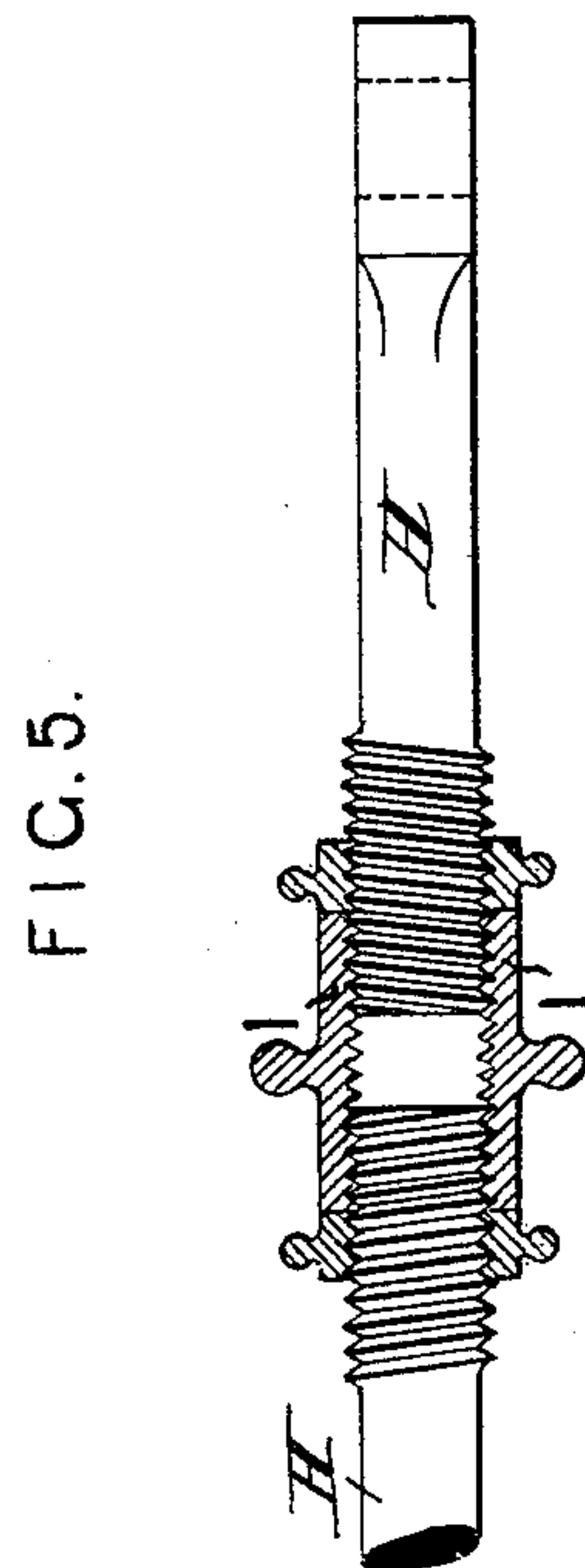
S. WALKDEN.
ECCENTRIC.

No. 389,268. REVERSE

Patented Sept. 11, 1888.



Witnesses
C. M. Gallahan
M. E. Rogers.



Inventor.
Samuel Walkden.
per Henry M. M. Att'y

UNITED STATES PATENT OFFICE.

SAMUEL WALKDEN, OF BEXHILL, COUNTY OF SUSSEX, ENGLAND.

ECCENTRIC.

SPECIFICATION forming part of Letters Patent No. 389,268, dated September 11, 1888.

Application filed April 25, 1888. Serial No. 271,814. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL WALKDEN, a subject of the Queen of Great Britain, and a resident of Bexhill, in the county of Sussex, England, have invented a new and useful Eccentric which is Adjustable as regards Throw and Angle, of which the following is a specification, reference being had to the accompanying drawings.

10 This eccentric is so constructed that its throw can be varied as desired, and also its angular position on the shaft. It is thus applicable, for instance, for slide-valves and other motor-fluid admission and emission valves where the stroke has to be varied according to the expansion desired, and also the "lead" or the angle which the eccentric forms with the crank, thus also facilitating reversing of motion. According to this invention I fix on the shaft a disk, which I call a "carrier," and I make the eccentric in the shape of a ring or open-work or skeleton having holes or parts for applying bolts, screws, or other suitable means for readily attaching it to and detaching it from the carrier. The latter is formed with slots of such form as to admit of the bolt or bolts being passed through any of them, so as to admit of adjusting and fixing the eccentric on the carrier, according to the throw and angle required. The eccentric-rod is connected to the slide-rod by right and left hand screw-threaded socket for the purpose of length adjustment.

35 In the accompanying drawings, Figure 1 is a front side elevation of an eccentric, eccentric-rod, and carrier constructed according to my invention. Fig. 2 is a back side elevation, and Fig. 3 a plan. Fig. 4 is a section on line A B, Fig. 1. Fig. 5 is a detail.

40 A is the disk-shaped carrier, which is fixed on the shaft B by keying or otherwise.

C' is the eccentric-strap.

C is the eccentric, made in the shape of a ring, provided with two holes for bolts D, with nuts, whereby the eccentric is fixed to the carrier A.

E E are sector-shaped slotted plates, which are held to the carrier and against its center boss by the same bolts. The carrier is formed with slots F and G of the form shown; but this is only as an example, as they will have to be somewhat varied in form and length, according to the varying requirements of expansion and lead. The eccentric-rod H is made in two parts, having right and left hand screw-thread and united by socket-nut I, which affords facility for length adjustment of the eccentric-rod as required. The edge of the carrier is provided with division-notches and letters or numbers to indicate the grade of expansion and forward and back gear of the engine, the edge or other specially-marked part of the plates E serving to set the eccentric to the required division number or figure on the edge of the carrier.

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

1. The ring-shaped or open eccentric C, in combination with the carrier A, fixed on the shaft B, and provided with the slots F and G, and the bolts D, for adjustably fixing the eccentric C to the carrier A, substantially as set forth.

2. The ring-shaped or open eccentric C, in combination with the carrier A, fixed on the shaft and provided with the slots F and G, and the bolts D, and the sector-shaped plates E, for adjustably fixing the eccentric C to the carrier A, which is provided with marks for the purpose of accurate adjustment, substantially as set forth.

SAMUEL WALKDEN.

Witnesses:

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Huntmonceux, Sussex.

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