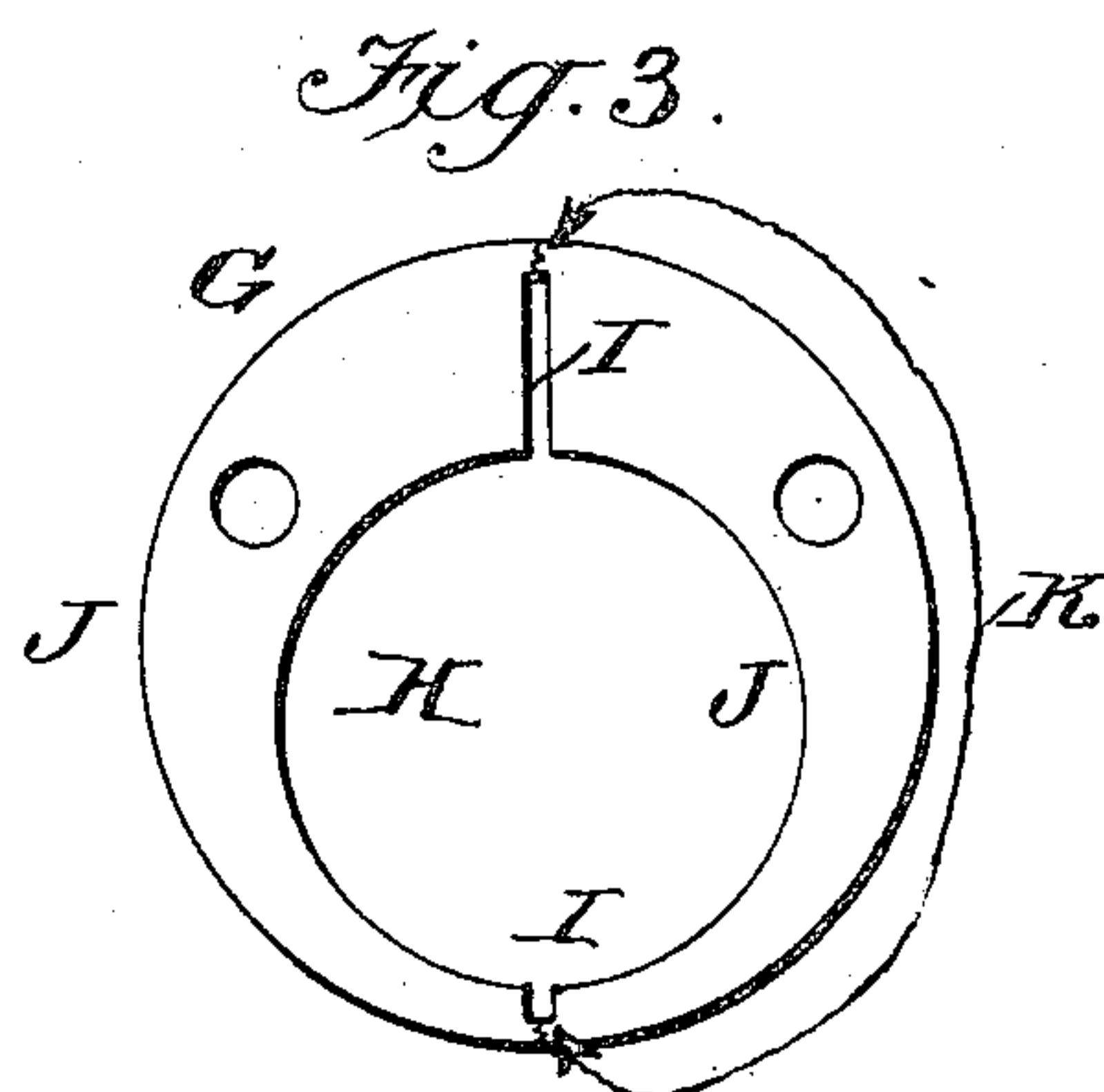
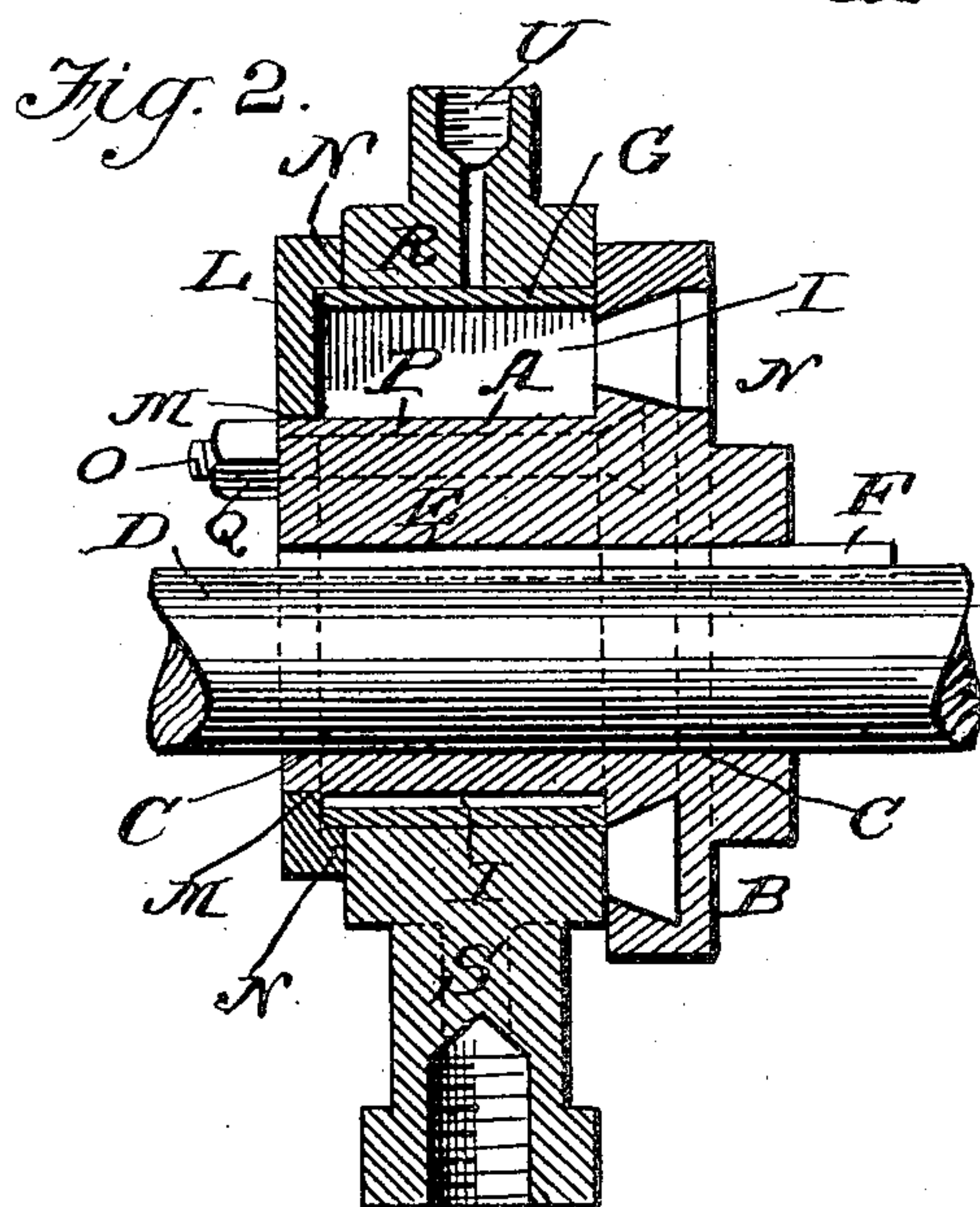
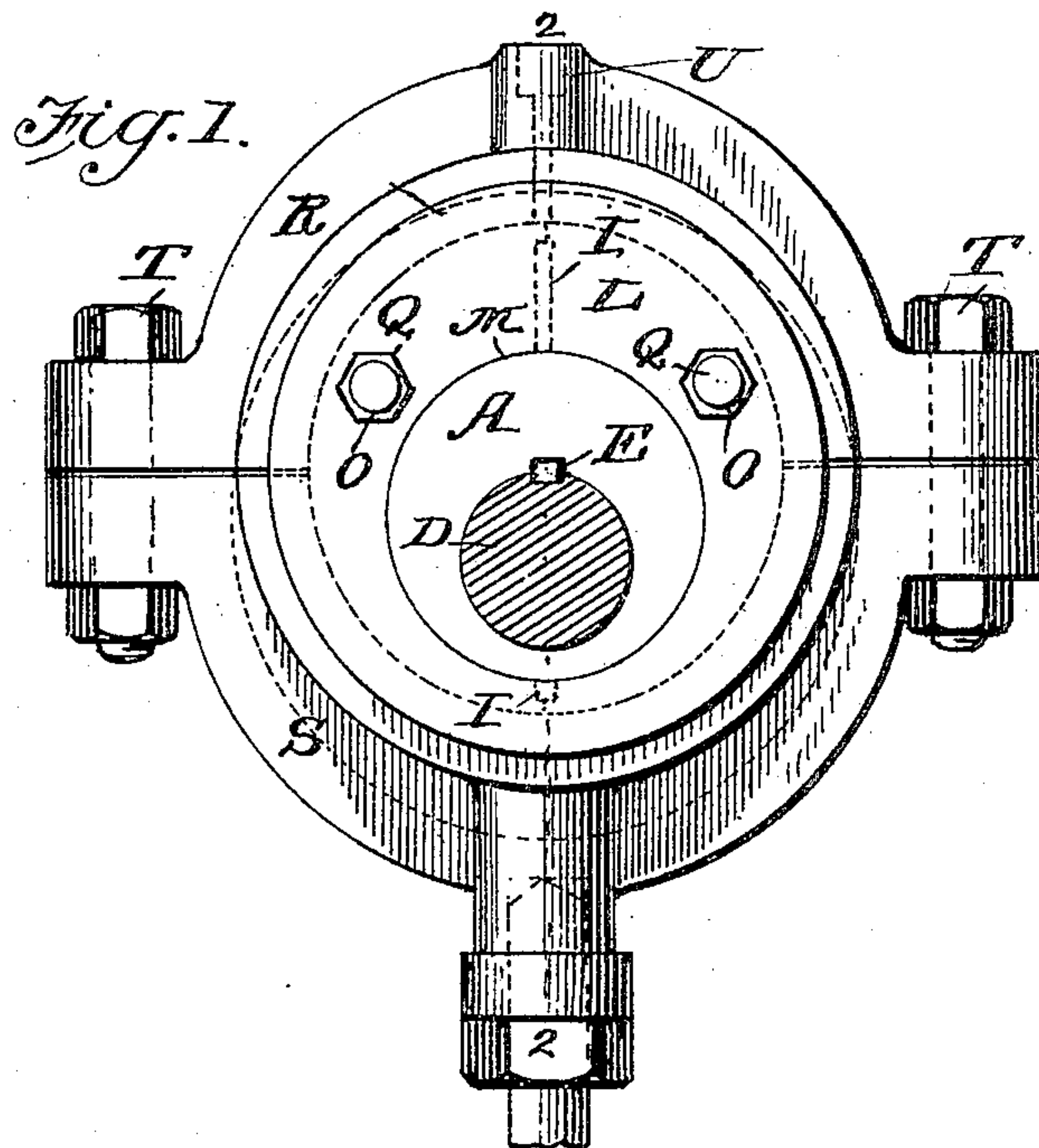


No. 817,617.

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F. M. BERGER.
ECCENTRIC.

APPLICATION FILED SEPT. 29, 1905.



WITNESSES:
Jos. A. Ryan
Harrison B. Brown

INVENTOR
Francis M. Berger.
BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANCIS M. BERGER, OF BASIN, MONTANA.

ECCENTRIC.

No. 817,617.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed September 29, 1905. Serial No. 280,633.

To all whom it may concern:

Be it known that I, FRANCIS M. BERGER, a citizen of the United States, residing at Basin, in the county of Jefferson and State of Montana, have invented a new and Improved Eccentric, of which the following is a specification.

My invention is designed to obviate objections to machine-eccentrics in general as same have heretofore been constructed—that is to say, objections to all forms of such devices known to me whereby endwise motion is imparted to a rod or shaft from a driving-shaft having rotary motion and longitudinally disposed at an angle to the driven rod or shaft.

The invention consists of the special construction, arrangement, and combination of parts shown by the accompanying drawings and hereinafter fully described.

In the drawings, Figure 1 is a view illustrating my invention in side elevation, the same being shown arranged on a driving or power shaft. Fig. 2 is a transverse sectional view taken on line 2 2 of Fig. 1, and Fig. 3 is a detail view of the bushing or adjustable throw attachment employed in my completed eccentric.

In the practice of my invention, I employ a round hub A, having at one end a circular or other shaped flange B. This is constructed with a transverse eccentrically-located opening C, adapted for the reception of any supporting or driving shaft D, and the opening suitably slotted, as at E, whereby through means of a suitable spline or key F the hub may be fixedly secured against turning on its driving-shaft.

G denotes a peculiar bushing or ring, which in the following description of my invention will be referred to as the "adjustable throw device." It is intended in the construction of the adjustable throw device to cast same with an eccentrically-located transverse opening H, fashioned for proper reception of and arrangement on the hub A. When casting the adjustable throw device or at other times, it is provided with openings I, extending from the opening H therethrough, as at L, to near its outer edge, substantially as shown in Fig. 3. The throw device as thus far described is next formed into two similar practically half portions J by the introduction of a tool in openings I with force, effecting a separating fracture extending from the inner end of the openings I to and

through the outer edge of the disk or throw device, substantially as indicated by the crooked lines K in Fig. 3. It is apparent that a bushing or "throw device," as same is termed by me, may be cheaply manufactured and readily converted into two accurately-fitting parts adapted for the purpose.

In further carrying out my invention I utilize a circular or otherwise shaped plate L, having an eccentrically-arranged transverse opening M, adapted to receive the hub A, and an annular flange N, projecting laterally from its outer edge, as shown in Fig. 2. The flange N is intended to fit on the throw device overlying its adjacent side, as shown in Fig. 2. Transversely-disposed holes O are formed in the plate L and also in the respective half portions J of the throw device. Similar and coinciding holes P are formed extending transversely through the hub A and its flange B. The holes O, O, and P are intended for the reception of securing-bolts Q, having any suitable head at one end and provided with a screw-threaded nut at their other ends, as will be understood. My invention may be further described as employing any suitable two-part eccentric-strap R S, constructed and adapted to be secured together by bolts T, and, if desired, one part of the strap may have an opening U suitable for the supply of lubricant to the outer or wearing surface of the throw device between same and the strap portions R S.

The construction of my improved eccentric will be understood from the above description. The leading idea comprehended by my invention is an eccentric for use with ore-digging machines and, in fact, all character of machinery whose wearing parts may be quickly and effectively replaced without disturbing or removing the eccentric supporting or driving shaft from its bearings, and I accomplish the same through means of the novel and peculiarly-constructed parts fully described.

With an eccentric constructed according to my invention should it be desired to change the crank-operating action thereof or replace the throw device when by use it has become worn or broken it becomes necessary to simply loosen up the bolts T of the strap portion R S and the removal of the nuts from the holding-bolts Q, by which latter the plate L and throw device are secured, after which manipulation or unfastening of the bolts the plate L may be drawn backwardly

sufficient for removal of the present throw device and replacement thereof by a new one of the same size or for the introduction of a larger or smaller like throw device. Upon
5 replacement of the throw device as just described the parts are rearranged in position. The bolts Q T may now be quickly tightened up, securing all the detached parts of the eccentric in much less time and facility than
10 possible with any similar eccentric heretofore invented and known to me.

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

15 1. An interchangeable throw device, consisting of a two-part disk having an eccentrically-arranged transverse opening there-through and openings extending from aforesaid transverse opening to near the outer
20 edge of the disk, substantially as described.

2. As an article of manufacture, a bushing or throw device, consisting of a disk having an eccentrically-arranged transverse opening therethrough, and openings extending
25 into the body of the bushing or disk from aforesaid transverse opening, to near its outer edge, whereby to facilitate converting the disk into two separate parts, substantially as described.

3. The combination in an eccentric, of a 30 hub, having a transversely-disposed flange at one end, a bushing on the hub, consisting of a disk, having a transverse opening there-through, and openings extending from aforesaid opening, into the body portion of the 35 disk to near its outer edge, and the disk divided into two parts, a two-part strap encircling the disk, a plate whereby to confine the two-part disk in place, and bolts extending through the hub-flange, disk, and confining- 40 plate, substantially as described.

4. The combination in an eccentric, of a hub having a flange at one end, a two-part throw device on the hub, the throw device consisting of a body portion having an eccentrically-arranged transverse opening there- 45 through, and openings extending outwardly from aforesaid opening, a securing-plate having a lateral flange adapted to overlie the adjacent side of the throw device, a strap ar- 50 ranged encircling the throw device, and securing - bolts extended through the hub-flange, throw device and securing-plate, substantially as described.

FRANCIS M. BERGER.

Witnesses:

EDWIN P. SUITER,
LEW D. THOMAS.