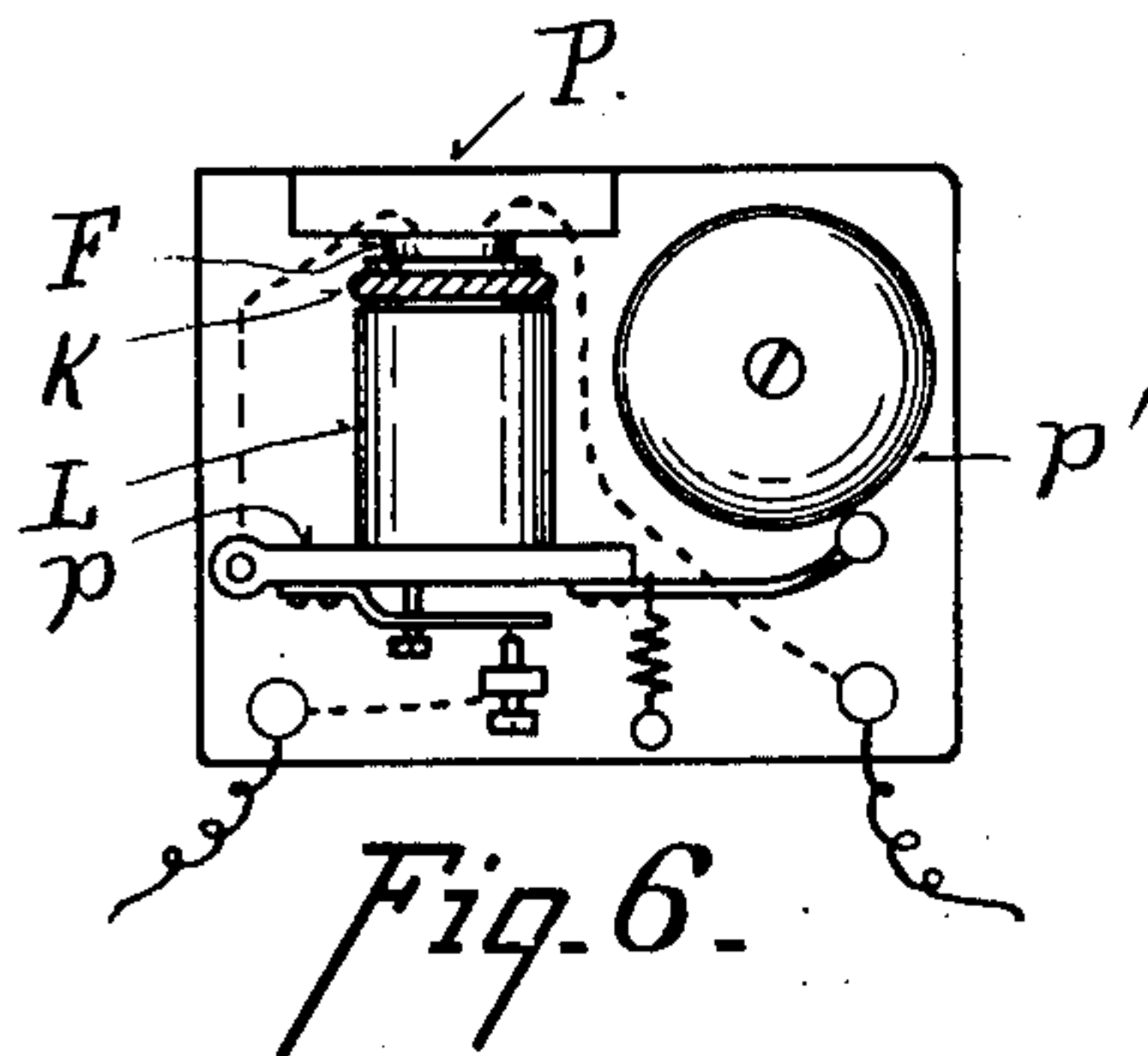
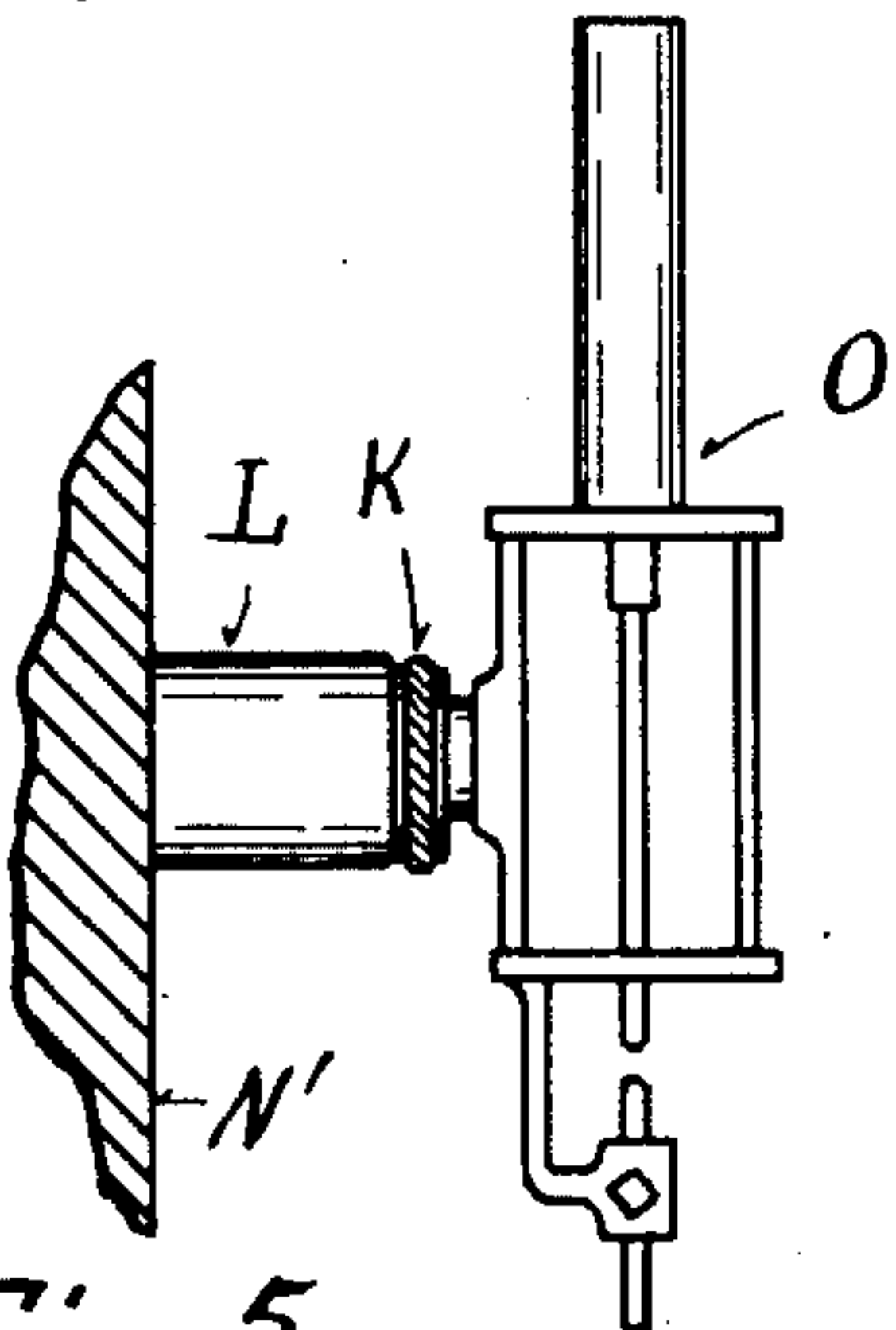
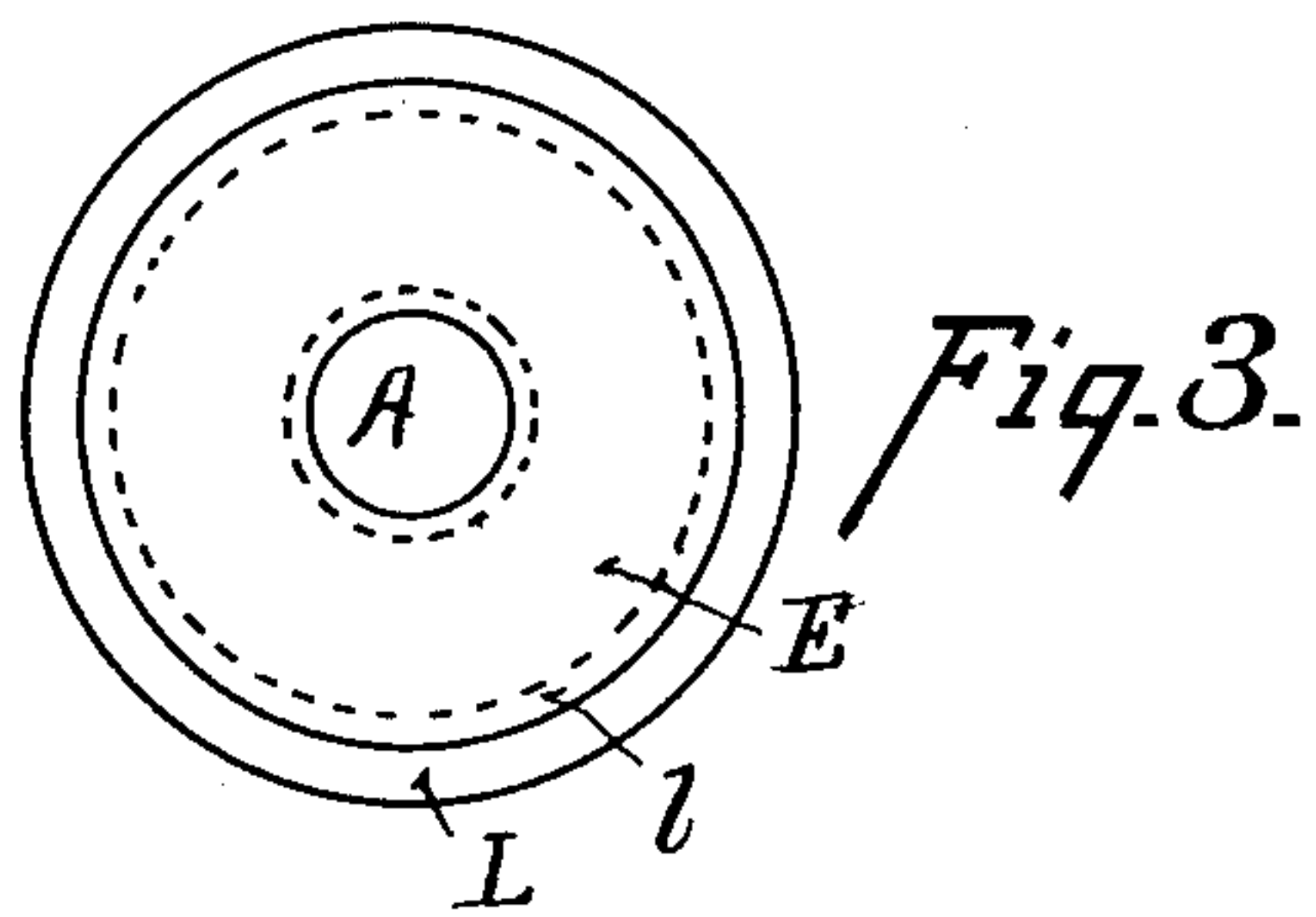
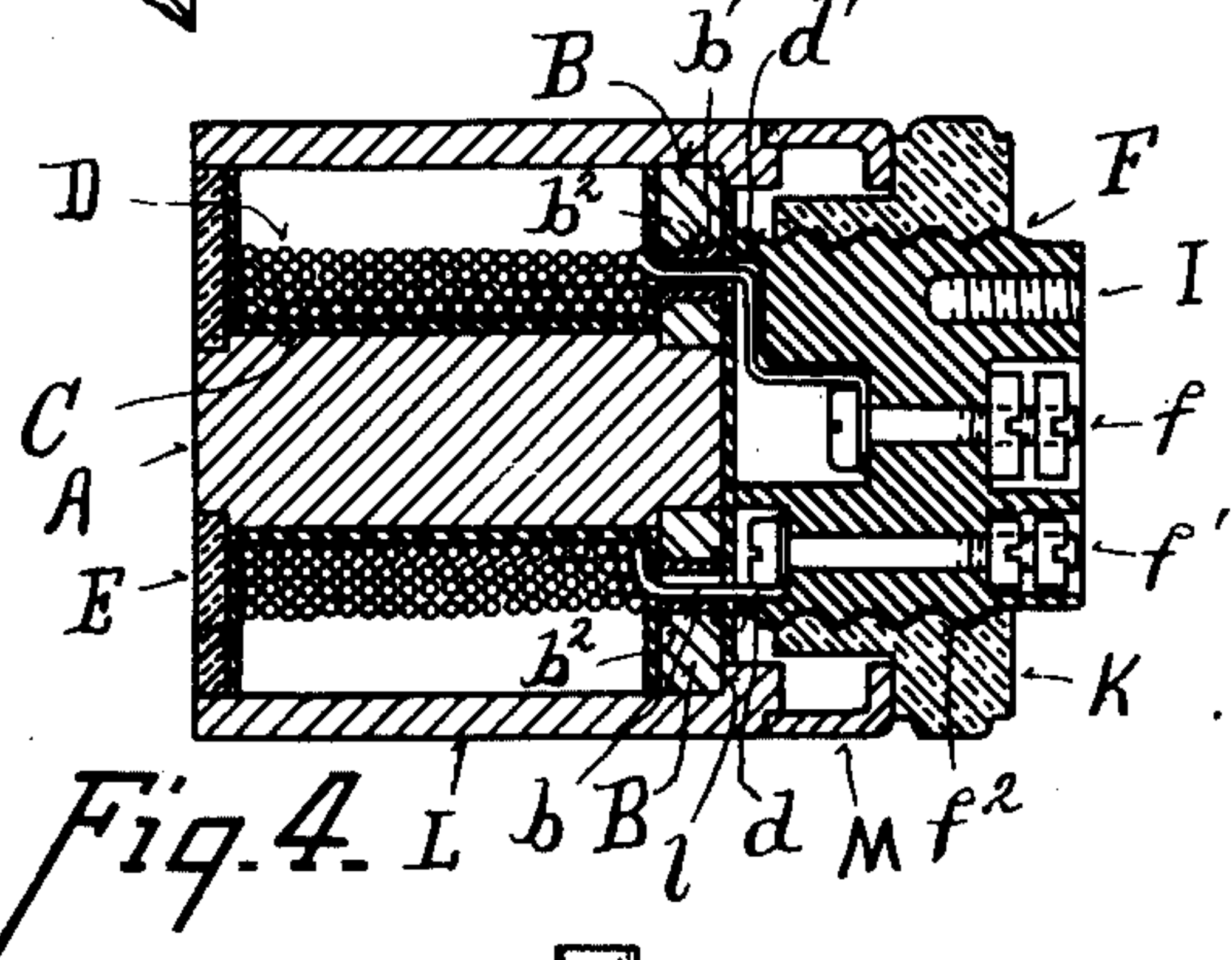
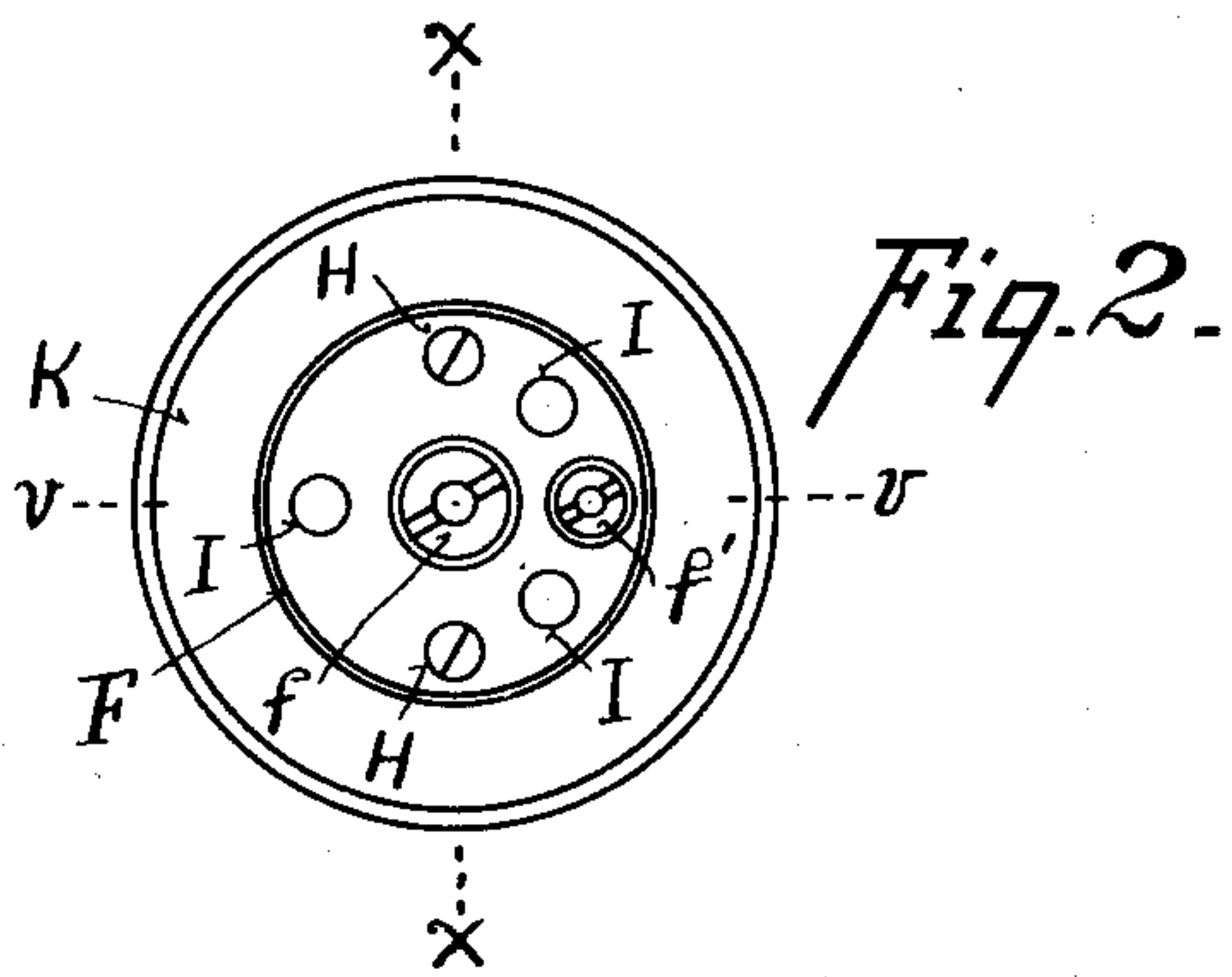
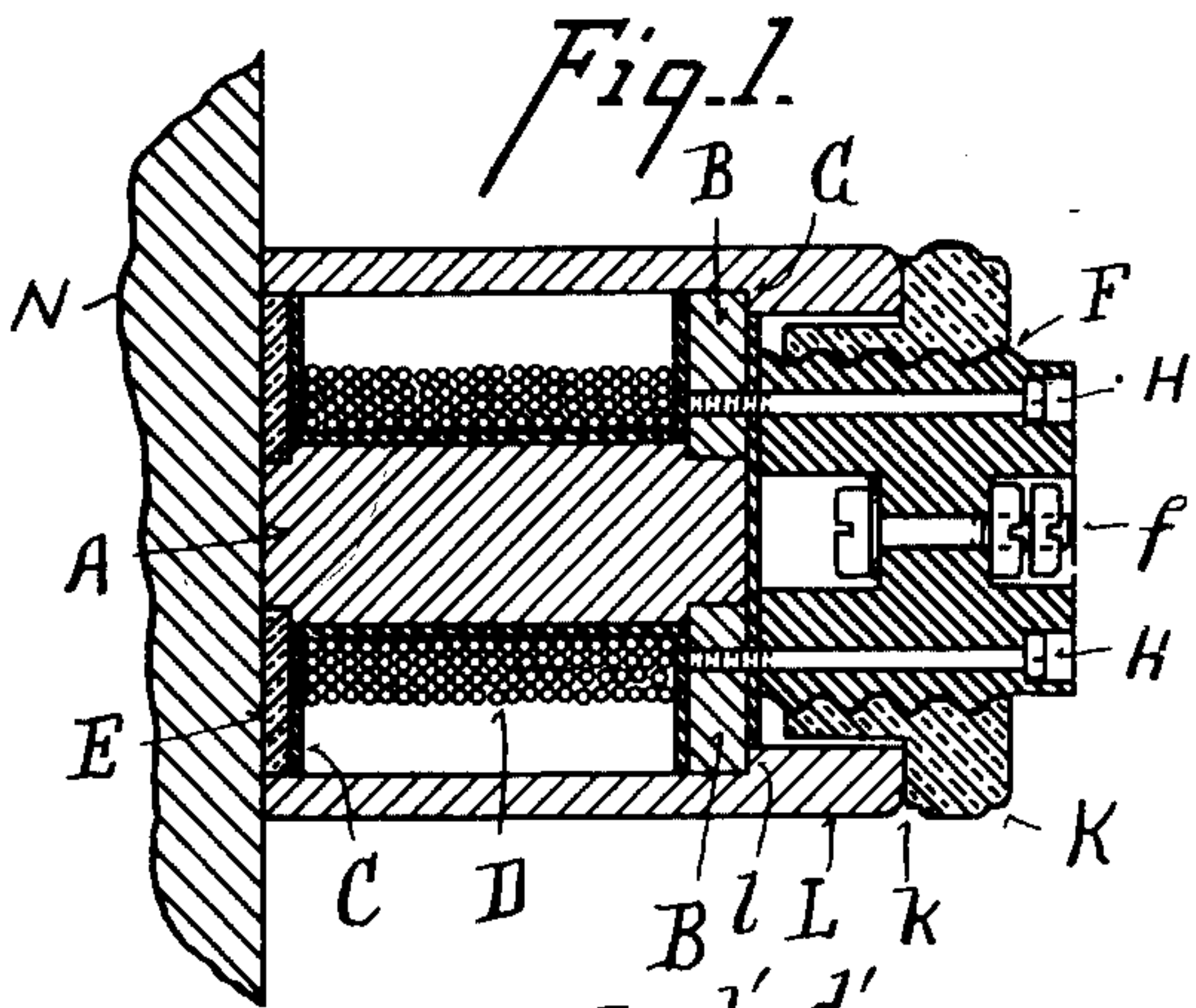


930,177.

Patented Aug. 3, 1909.



Witnesses

Adah Denis.
Halter Murray

By

David J. Hauss
C. W. Miles

Inventor

Attorney

UNITED STATES PATENT OFFICE.

DAVID J. HAUSS, OF AURORA, INDIANA.

ELECTROMAGNET.

No. 930,177.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed September 2, 1908. Serial No. 451,279.

To all whom it may concern:

Be it known that I, DAVID J. HAUSS, a citizen of the United States, residing at Aurora, in the county of Dearborn and State of Indiana, have invented certain new and useful Improvements in Electromagnets, of which the following is a specification.

My invention relates to improvements in electromagnets to be employed for the various uses to which electromagnets are ordinarily applied.

One of its objects is to provide a compact magnet of efficient form, and not liable to injury.

Another object is to provide an improved arrangement of parts and means for assembling whereby the parts are readily assembled, firmly secured together and at the same time readily separable for repairs.

Another object is to provide means for assembling or separating the parts without disturbing or injuring the magnetic coil.

It further consists in certain details of form, combination and arrangement, all of which will be more fully set forth in the description of the accompanying drawings in which:

Figure 1. is a central vertical section through my improved magnet on line $x-x$ of Fig. 2. Fig. 2. is a plan view of one end of the magnet. Fig. 3. is a plan view of the opposite end of the magnet. Fig. 4. is a section through the same on line $v-v$ of Fig. 2., and illustrating a modification of the assembling mechanism. Fig. 5. is a side elevation of one of my improved magnets employed to support an arc lamp. Fig. 6. is a plan view of an electrically operated bell actuated by one of my improved magnets.

In the accompanying drawings A represents a central core piece of magnetic material. Tightly fitted to the rear end of the core A preferably by a drive fit is a disk or washer of magnetic material B. The disk B is of sufficient thickness to carry economically the magnetic flux. A light spool C of insulating material is wound with a coil of insulated wire D and slipped over the core A. The spool C and coil D are held in place upon the core A by means of a disk or washer E of non-magnetic material fitted to the forward end of core A. The terminals $d-d'$ of the coil D are preferably passed through openings $b-b'$ in the disk B, which openings are lined with washers b^2 of insulating material.

F represents a head, preferably of porcelain, hard rubber or other insulating material which is provided with binding screws $f-f'$ adapted to be electrically connected at one end to the terminals $d-d'$ of the coil D, and at the opposite end to be connected to the live wires supplying current to energize the magnet.

G represents an insulating plate preferably interposed between the head F and the disk B, and end of core A.

H represents screws threaded into disk B to lock the head F to the disk B.

I represents threaded holes to receive screws by means of which the magnet may be attached to any object or mechanism desired.

The head F has threads f^2 on the exterior which are engaged by the threads of the nut or collar K.

L represents a tubular or cylindrical housing of magnetic material which is recessed on the interior to receive and closely fit the periphery of the disks B E and having a shoulder or off-set l against which the disk B seats. As shown in Fig. 1, the head k of collar K seats upon the end of sleeve L and serves to draw the core A and disks B E into sleeve L and to lock them firmly therein. As shown in Fig. 4, a cylindrical shell M is interposed between the head of collar K and the end of sleeve L.

The magnetic path is from the armature or magnetic object N through core A, disk B and sleeve L to the armature N, the sleeve L serving as one pole of the magnet and the core A as the other pole. The sleeve L also serves as a housing to protect the coil D from injury. The collar K permits the parts to be readily assembled or taken apart as desired.

As shown in Fig. 5, the magnet may be employed to support an arc lamp C or any other object desired in position upon an iron frame or support N'.

As shown in Fig. 6, the magnet is stationarily attached to a frame P and employed to actuate an armature p to ring a bell p' , or for other similar purpose.

The mechanism herein illustrated and described is capable of considerable modification without departing from the principle of my invention.

Having described my invention, what I claim is:—

1. In an article of the character indicated,

a core of magnetic material having a non-magnetic disk attached to one end, a magnetic disk attached to the opposite end, a coil of insulated wire encircling said core, and a tubular housing of magnetic material recessed upon the interior to receive said disks and to form a shoulder against which said disk of magnetic material seats and is locked when the parts are assembled.

2. In an article of the character indicated, a core of magnetic material having a disk of non-magnetic material attached to one end and a disk of magnetic material attached to the opposite end, a coil of insulated wire encircling said core between said disks, a head attached to said disk of magnetic material and provided with external threads, a sleeve of magnetic material recessed upon its interior to receive said disks and to form a shoulder against which said disk of magnetic material seats, and a collar threaded to said head and serving to draw said core and disks into said sleeve.

3. In an article of the character indicated, a core, a disk of magnetic material attached to one end of said core, a disk of non-magnetic material attached to the opposite end of said core, a coil of insulated wire encircling said core between said disks, said disks of magnetic material having recesses for the passage of the terminals of said coil, a head attached to the end of said core carrying said disk of magnetic material, a

sleeve of magnetic material recessed upon the interior to receive said disks and to form a shoulder against which said disk of magnetic material seats, and means engaging said head and sleeve to lock said core and disks within said sleeve.

4. In an article of the character indicated, a core, a disk of magnetic material attached to one end of said core, a disk of non-magnetic material attached to the opposite end of said core, a coil of insulated wire encircling said core between said disks, said disk of magnetic material having recesses for the passage of the terminals of said coil, a head of insulating material attached to the end of said core carrying said magnetic disk, said head being provided with binding posts to connect the terminals of said coil with the live wires; and with means for attaching said magnet in position for use, a sleeve of magnetic material recessed upon the interior to receive said disks and to form a shoulder against which said disk of magnetic material seats, and means engaging said head and sleeve to lock said core and disks within said sleeve.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DAVID J. HAUSS.

Witnesses:

ADAM DENIS,
C. W. MILES.