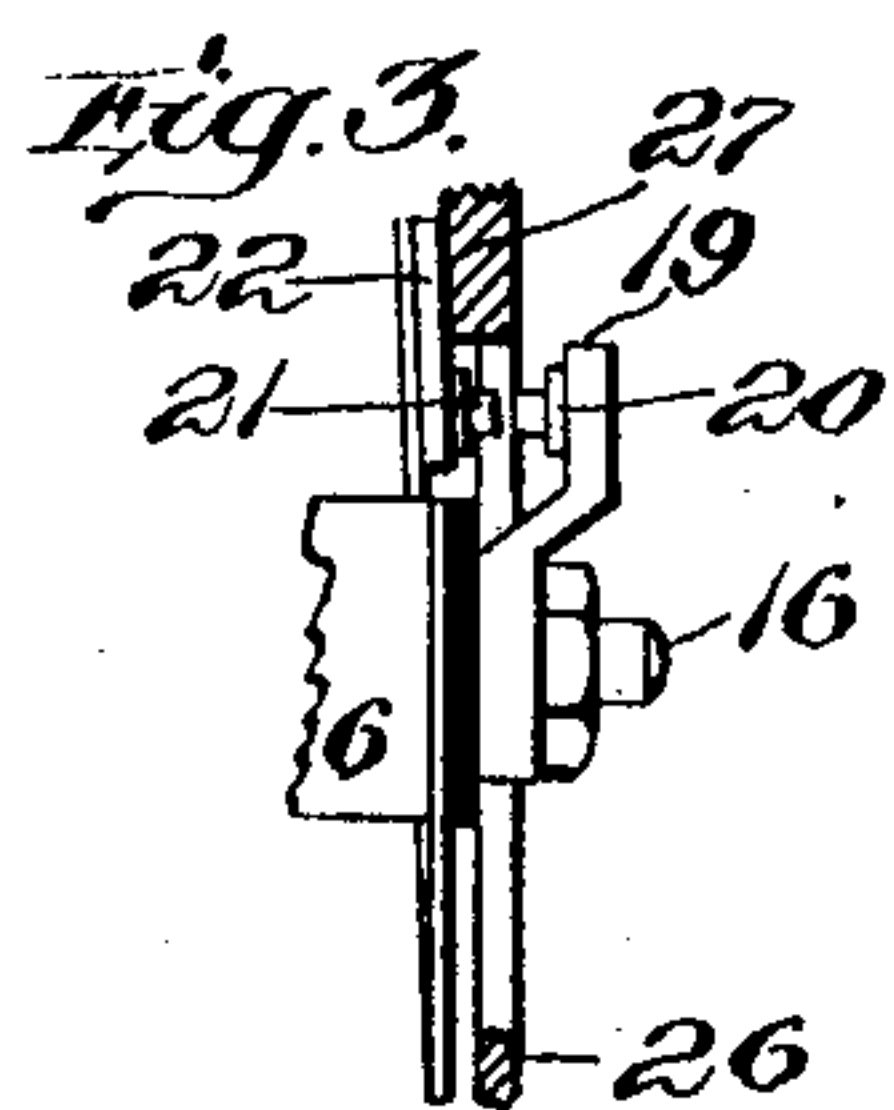
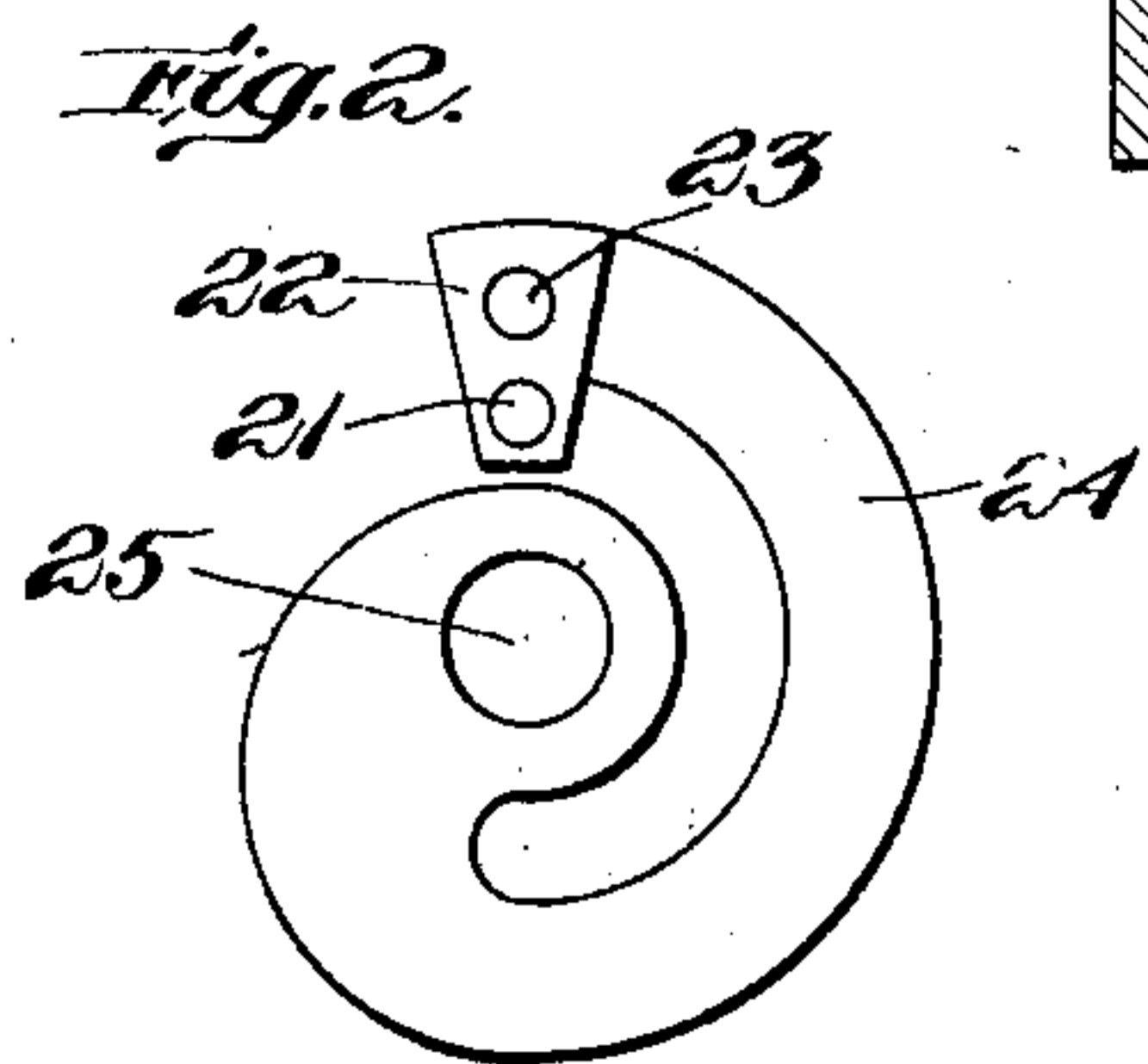
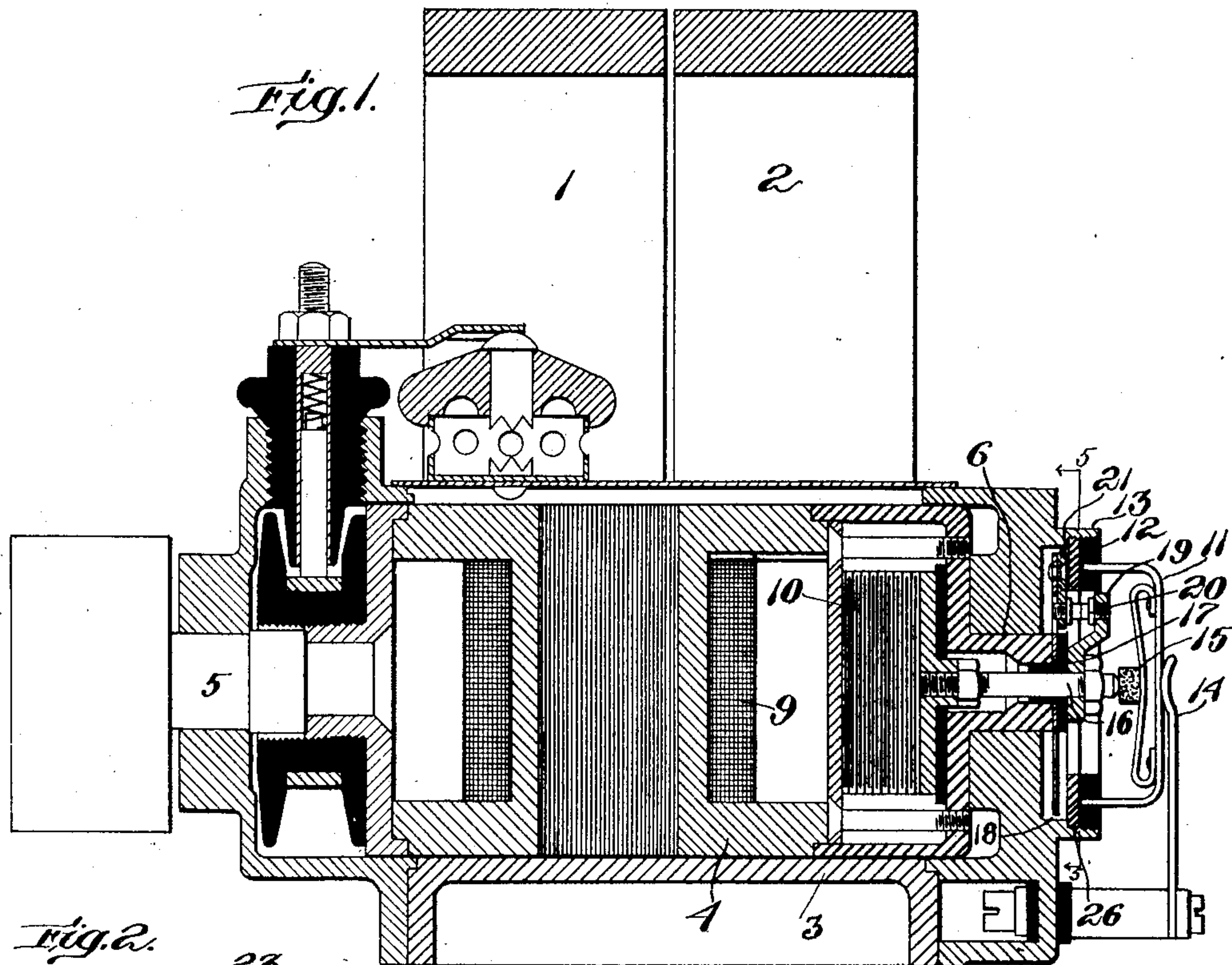


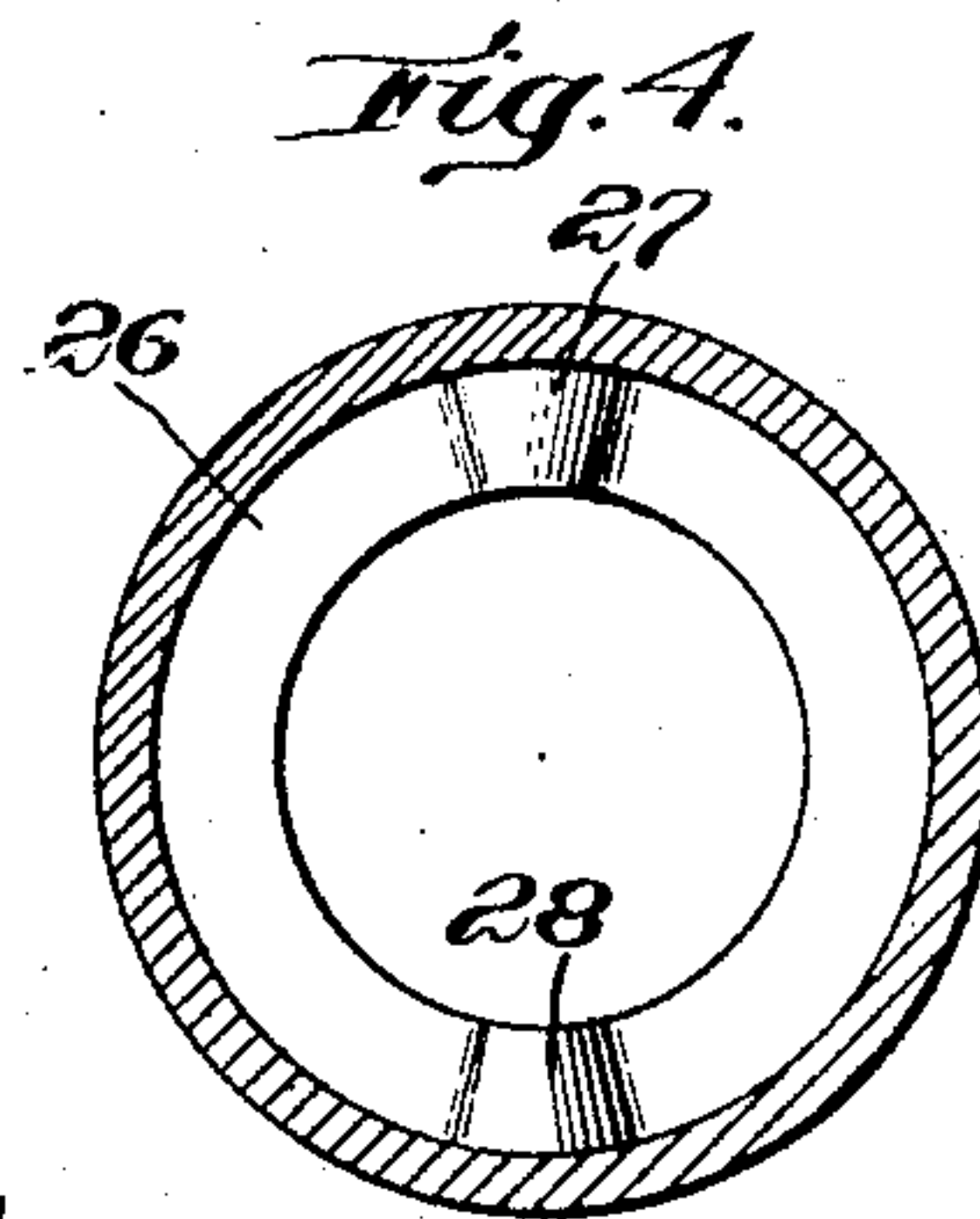
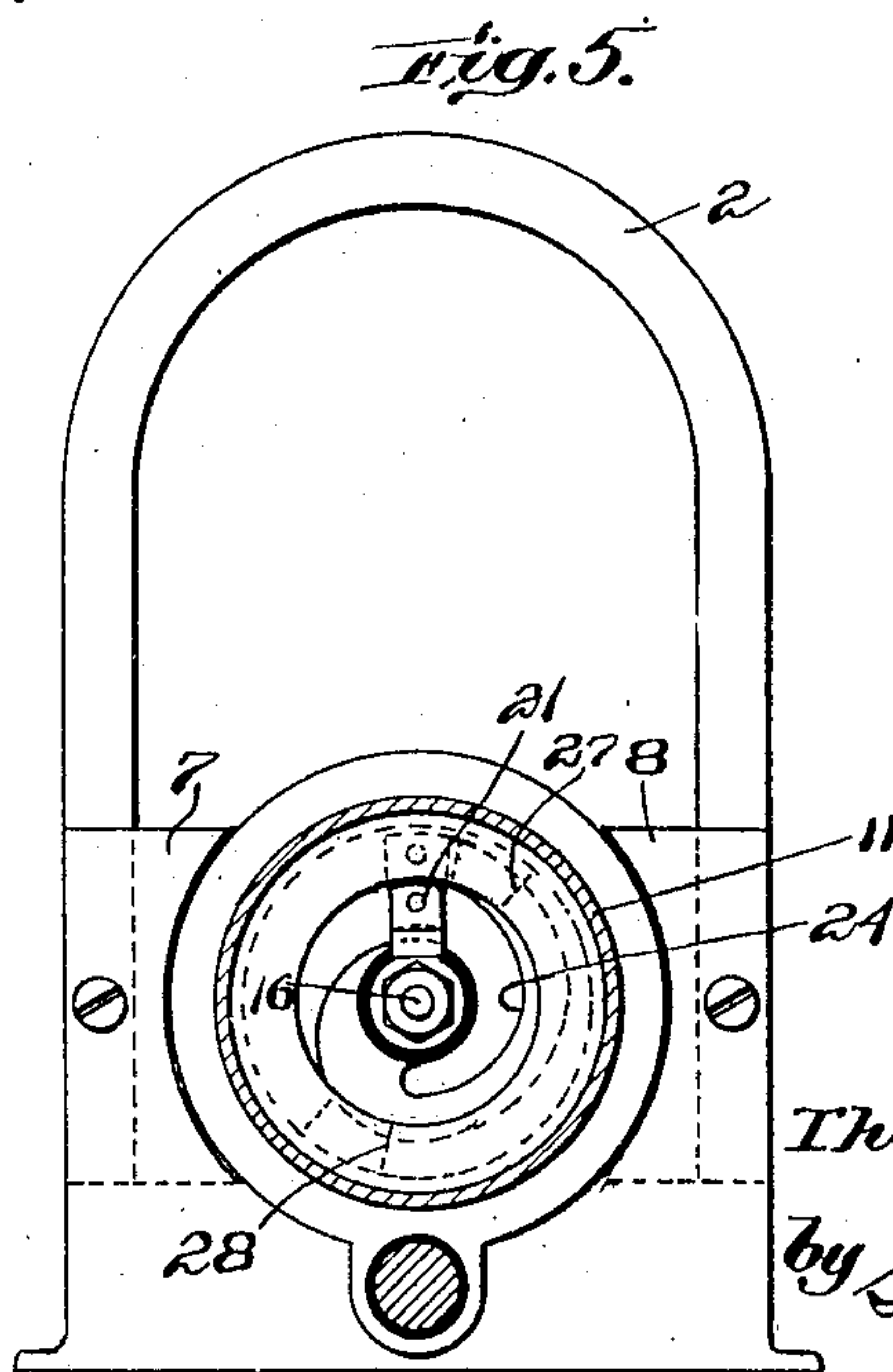
No. 845,368.

PATENTED FEB. 26, 1907.

T. M. MUELLER.  
 INTERRUPTER FOR MAGNETOS.  
 APPLICATION FILED DEC. 10, 1906.



*Witnesses:*  
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# UNITED STATES PATENT OFFICE.

THEODOR MARTIN MUELLER, OF BRAINTREE, MASSACHUSETTS, ASSIGNOR  
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## INTERRUPTER FOR MAGNETOS.

No. 845,368.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed December 10, 1906. Serial No. 347,223.

*To all whom it may concern:*

Be it known that I, THEODOR MARTIN MUELLER, a subject of the German Empire, residing at Braintree, in the county of Norfolk and State of Massachusetts, have invented an Improvement in Interrupters for Magnetos, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

For certain purposes—as, for instance, automobiles—it is necessary to construct magnetos with extreme compactness, thereby leaving only an extremely-limited space for the interrupter.

My present invention relates to this class of devices and provides an interrupter which occupies an exceedingly small space and at the same time gives a sure but light contact, thereby eliminating the prevalent hammer-like blow, my construction also avoiding transmission of current through bearings or movable parts, thereby insuring uniformity of action and long life.

The constructional details of my invention will be pointed out more at length in the course of the following description, taken with reference to the accompanying drawings, in which I have shown a preferred embodiment of the invention.

In the drawings, Figure 1 is a central vertical longitudinal section showing my interrupter applied to a usual magneto. Fig. 2 shows an interrupter contact spring or support in front elevation. Fig. 3 is a sectional detail of the interrupter similar to Fig. 1, but showing the same in circuit-breaking position. Fig. 4 is a sectional view showing the interrupting-cam in elevation. Fig. 5 is a cross-sectional view showing the interrupter in front elevation.

The magneto itself may be of any construction desired, comprising, as herein shown, fixed magnets 1 2, mounted on a base 3, and an armature 4, journaled at 5 6 to rotate between the pole-pieces 7 8, and provided with a usual winding 9, condenser 10, &c. The interrupter in this class of devices is usually located at the right-hand end and rotates with the armature, said end being closed by a cap 11, fitted into a groove in a fiber washer 12, secured in the threaded flange 13 at the end of the frame and held in position by a spring 14, which maintains a carbon contact 15 in

engagement with the outer end of an axial rod 16, insulated from the armature-bearing 6 at 17.

My invention permits the recess or cavity at 18, in which the interrupter is mounted, to be much smaller and thinner or narrower than heretofore. On the rod 16 is clamped an angular arm 19, provided with a fixed contact or anvil 20, and cooperating therewith is a movable contact 21, secured in a block 22, riveted at 23 to the free end of a convolute or helical spring 24, preferably thin and flat, as shown clearly in Figs. 2 and 3. This spring 24 passes spirally to the center, where it has an opening 25 fitting on the insulating-collar 17, by which it is clamped fast against the hub or bearing 6 of the armature and rotates therewith. I prefer to rotate the contact-spring, although it will be understood that it is necessary merely to provide relative rotary movement between the contact-carrying spring 24 and the cam which actuates the latter. Said cam in the preferred form of my invention herein shown consists of a ring 26, having opposite projecting cam-surfaces 27 28 in position to engage the block 22 at desired intervals for raising the same, and thereby causing the contact-points 20 21 to break contact, as shown in Fig. 3. The spring support, shaped as shown at 24, is not only strong in the sense of being durable and occupies little space, but it gives quick action with light contact, having sufficient length to afford the desired yielding movement without such resistance as would produce a hammer-like blow, yet it returns the movable contact with sufficient speed to circuit-closing position to produce an interrupter of high efficiency. Also my construction permits each contact to be carried by a part fixedly secured to the adjacent contact member, the spring 24 being fast on the hub or frame of the armature and the contact-carrying arm 19 being fast on the axial bolt 16, so that thereby the current is not required to pass through any swinging and pivoted member or movable bearing. Also the interrupter-cam engages the spring or movable contact carrying member beyond the contacts, so that the separation of the latter is thereby rendered positive and certain, notwithstanding the fact that it is supported on a spring.

In operation the armature is driven in



usual manner and rotates the rigid contact-carrying arm 19 and the yielding spring contact-carrier 24 in unison, said two contact-carrying members being separated momentarily by the cam projections 27 28 during each revolution, thereby separating the contacts 20 21, which immediately come together again as soon as the cam projections are passed.

10 As already intimated, I am not restricted to the precise constructional details herein shown; but various changes may be resorted to within the scope of my claims hereinafter contained.

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

1. An interrupter of the kind described, comprising a fixed contact and a cooperating 20 movable contact, a spiral spring yieldingly supporting said movable contact, a cam projection for operating said movable contact, and means for relatively rotating said contacts and said cam projection.

25 2. The combination with the armature of a magneto, of a laterally-extending spiral spring fast thereon provided adjacent its

outer end with a contact, and a rigid arm also fast thereon provided at its outer end with a contact in position to cooperate with the 30 spring-carried contact, said spring and arm being insulated from each other, and a fixed cam-ring in position to engage and separate said spring-carried contact from the cooperating contact as said contacts rotate with 35 said armature.

3. The combination with the armature of a magneto, of a flat spiral spring and a rigid arm insulated from each other and coaxially secured to said armature to rotate therewith, 40 and each provided at its outer end with contacts normally in circuit-closing position, said flat spring carrying a projection, and a cam-ring secured in fixed position and provided with cam projections to engage the 45 aforesaid projection for separating said contacts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEODOR MARTIN MUELLER.

Witnesses:

S. W. LAMBIE,

CARLOTTA NIX.