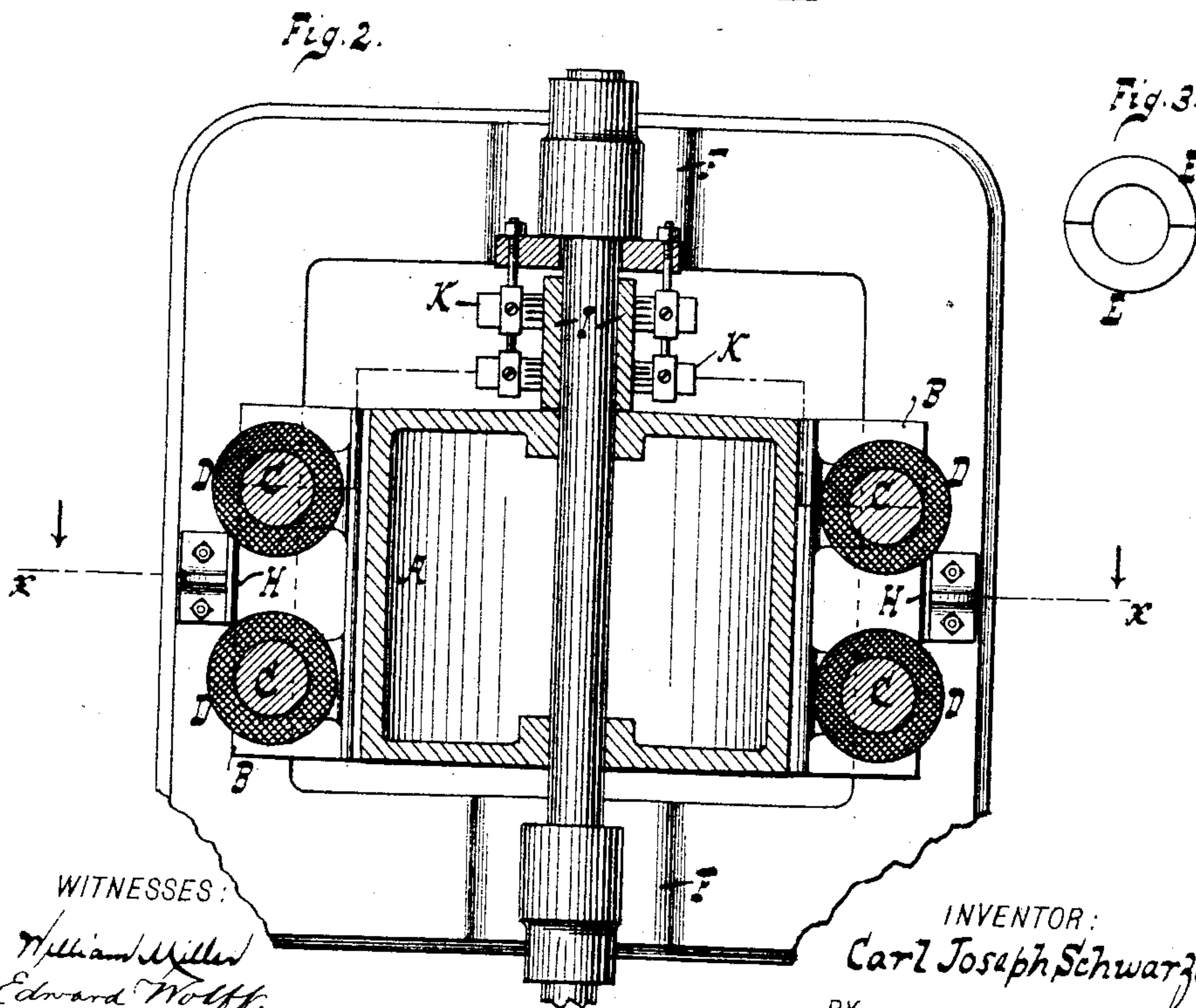
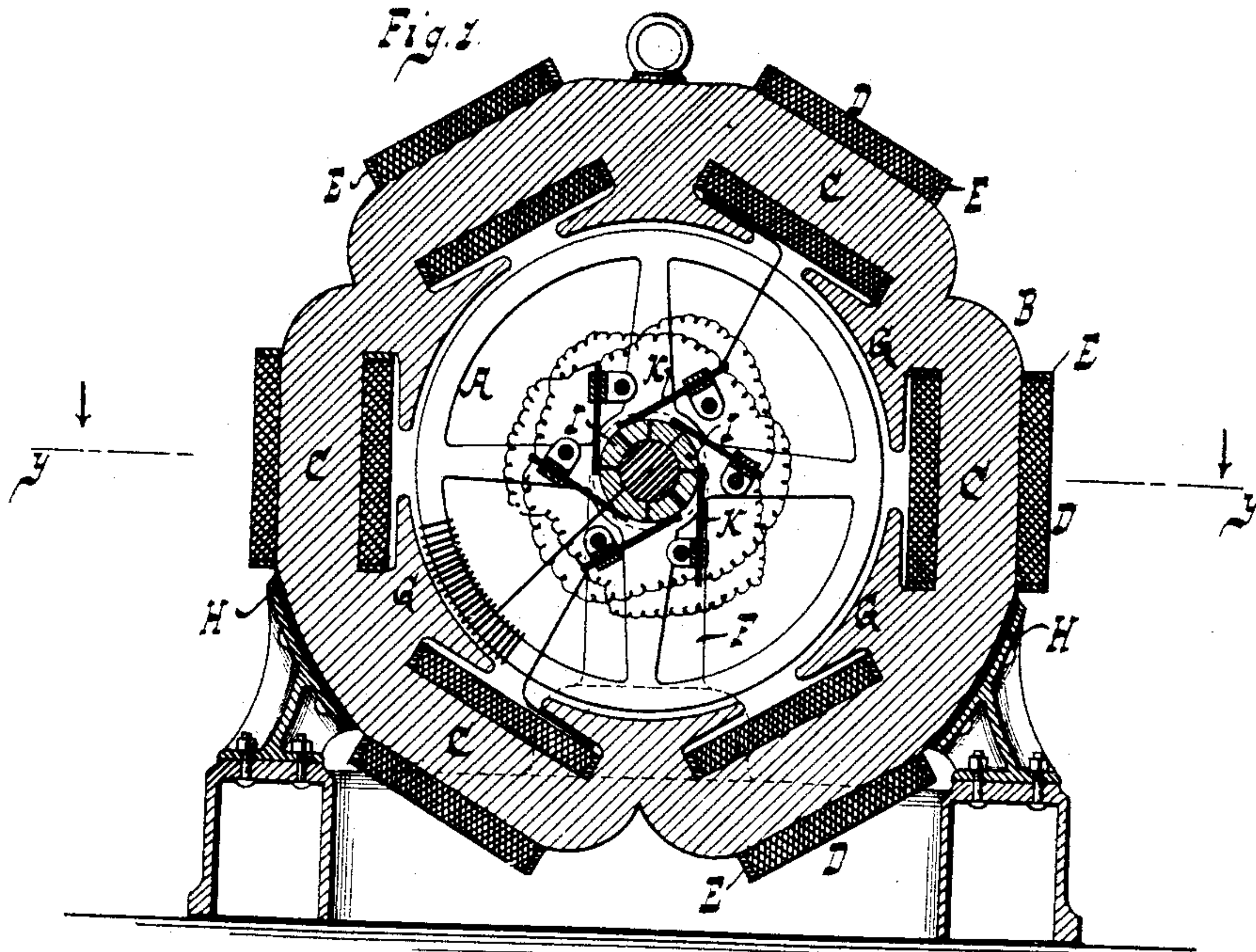


(No Model.)

C. J. SCHWARZE.
DYNAMO ELECTRIC MACHINE.

No. 445,906.

Patented Feb. 3, 1891.



WITNESSES:
William Miller
Edward Wolff.

INVENTOR:
Carl Joseph Schwarze
BY
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his ATTORNEYS

UNITED STATES PATENT OFFICE.

CARL JOSEPH SCHWARZE, OF BROOKLYN, NEW YORK.

DYNAMO-ELECTRIC MACHINE.

SPECIFICATION forming part of Letters Patent No. 445,906, dated February 3, 1891.

Application filed October 2, 1890. Serial No. 366,807. (No model.)

To all whom it may concern:

Be it known that I, CARL JOSEPH SCHWARZE, a citizen of the German Empire, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Dynamo-Electric Machines, of which the following is a specification.

This invention relates to improvements in dynamo-electric machines; and the invention consists in the details of construction set forth in the following specification and claim, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a dynamo-electric machine sectioned along $x x$, Fig. 2. Fig. 2 is a section along $y y$, Fig. 1. Fig. 3 is an end view of a spool.

In the drawings, the letter A indicates an armature which is situated in the interior of the frame B, which contains the field-magnets. The cores C of said field-magnets are made integral with the frame, and they are rectilinear and cylindrical, so that the wire D can be wound thereon by proper mechanism, and much time in the construction of the machine is saved. The wire is wound on spools E, which are made in halves, as indicated in Fig. 3, so that the two halves can be placed upon the cores and then fastened together by any suitable means, and since these spools are mounted on rectilinear cylindrical wires a revolving motion can be imparted to each spool by bringing the same in contact with a revolving roller, so that the wires can be wound upon the spools with little loss of time.

The armature may be of any well-known construction and provided with a commuta-

tor in the well-known way. The standards F are shown adapted to support the axle or shaft of the armature. By casting the frame as shown a series of pole-pieces G are formed, and the magnets C D lie intermediate to the pole-pieces. The frame with its cores C and pole-pieces G, being of one piece, will form a serviceable and durable structure. The frame B is shown properly insulated by being supported on insulating-pieces H, which are interposed between the frame and its base or support.

The commutator is indicated by I and the brushes by K. Six brushes are shown in Fig. 1; but of course the number of brushes can be varied. The current from the brushes can be sent either entirely or partially through the coils D, as required. In Fig. 1 the alternate brushes are shown connected with one another; or, in other words, the positive brushes are connected to one another and the negative brushes are also connected to one another.

What I claim is—

The combination, with the armature A, of a frame B, surrounding said armature and provided with cores C and pole-pieces G, formed integral with each other, the cores C being rectilinear and cylindrical, substantially as described.

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

CARL JOSEPH SCHWARZE.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.