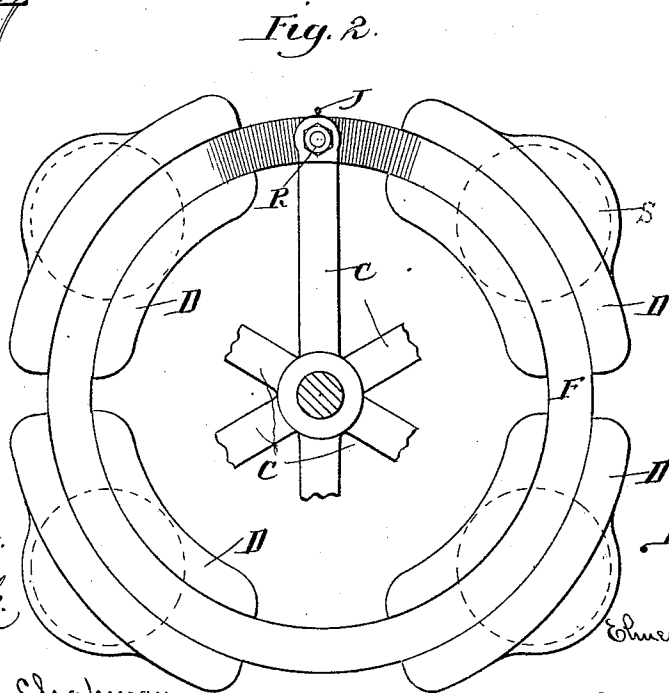
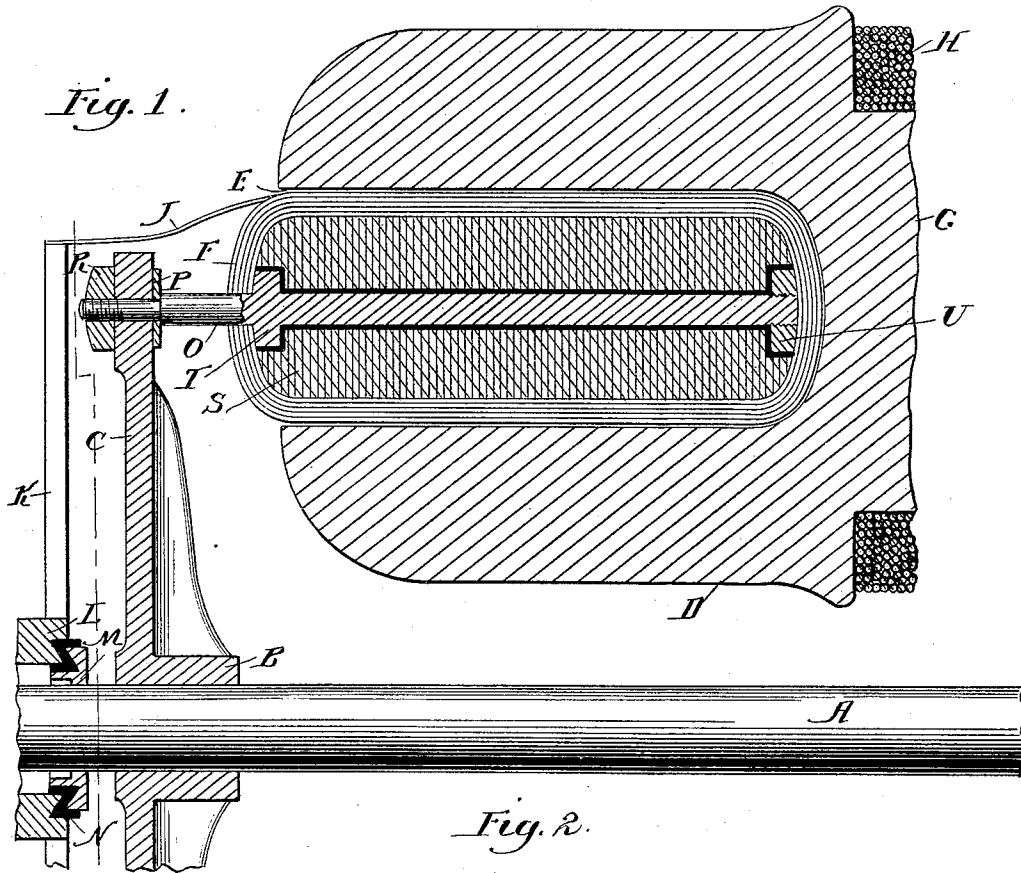


(No Model.)

E. A. SPERRY.
DYNAMO.

No. 405,441.

Patented June 18, 1889.



Witnesses:
H. B. Hallock.

Celeste P. Chapman.

Inventor:

E. A. Sperry.

By Francis W. Parker
Attorney.

UNITED STATES PATENT OFFICE.

ELMER A. SPERRY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE SPERRY ELECTRIC COMPANY, OF SAME PLACE.

DYNAMO.

SPECIFICATION forming part of Letters Patent No. 405,441, dated June 18, 1889.

Application filed February 11, 1889. Serial No. 299,477. (No model.)

To all whom it may concern:

Be it known that I, ELMER A. SPERRY, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dynamos, of which the following is a specification.

My invention relates to improvements in dynamo-electric machines, and has for its object to provide means for conveniently and securely supporting the armature.

My improvement is illustrated in the accompanying drawings, wherein—

Figure 1 is a cross-section through one field-magnet and one portion of the armature, and Fig. 2 is a front view of the field-magnets and armature with commutator removed.

Like parts are indicated by the same letter in all the figures.

A is the armature-shaft, which carries the spider B, having sundry arms C radiating therefrom.

D D are the field-magnets, composed each of a single piece having the channel E to receive the cylindrical armature F and the end G to receive the winding H. The armature is wound with transverse coils divided into sections, from each of which passes a conductor J to strip K, which in turn is connected with the commutator-bar L, which is supported on the shaft by means of the collar M and the insulation N. On each arm of the spider is supported a bolt O by means of the washer P and nut R on opposite sides of such arm.

S is the armature-core on which the wire is wound. On the bolt O is the flange T, and on its extremity is the nut U. About this bolt is suitable insulation.

The use and operation of my invention are as follows: The shaft being rotated, the armature is rotated in the channels of the field-magnets, and if such magnets are energized currents will be developed on the armature and given off on the commutator in the usual manner. The arrangement of collar, flange, and nuts on each bolt, whereby it is secured

to the spider and the armature to it, is such that the strains resulting from the support of such armature on the bolt and from the support of the bolt and armature on the spider are independent of each other, and the strain on the armature is wholly within itself. From this results a far greater security and accuracy in fixing and retaining the armature in position with reference to the field-magnets.

I claim as new and desire to secure by Letters Patent—

1. In a dynamo-electric machine, the combination of a rotating spider with a series of bolts projecting therefrom and secured thereto and an armature secured on such bolts independently of the spider.

2. In a dynamo-electric machine, the combination of a rotating spider with a series of bolts projecting therefrom and secured thereto by a collar and nut on opposite sides of such spider-arms, with an armature secured to such bolts independently of the spider.

3. In a dynamo-electric machine, the combination of a rotating spider with a series of bolts secured thereto and projecting therefrom, and an armature secured on such bolts between a flange and a nut on each of said bolts.

4. In a dynamo-electric machine, the combination of a rotating spider with a series of bolts projecting from the arms thereof, each secured thereto by a flange and nut on opposite sides of such spider-arm, with an armature secured on such bolts, between a flange and a nut on each of them.

5. In a dynamo-electric machine, the combination of a rotating spider with an annular armature and bolts, which project from and are secured to the spider, and to which in turn is secured the armature independently of the spider.

Dated this 9th day of February, 1889.

ELMER A. SPERRY.

Witnesses:

CELESTE P. CHAPMAN,
FRANCIS M. IRELAND.