(No Model.)

A. B. FISHER.

ARMATURE FOR DYNAMO ELECTRIC MACHINES.

No. 269,036. Patented Dec. 12, 1882.

Fig. 1.

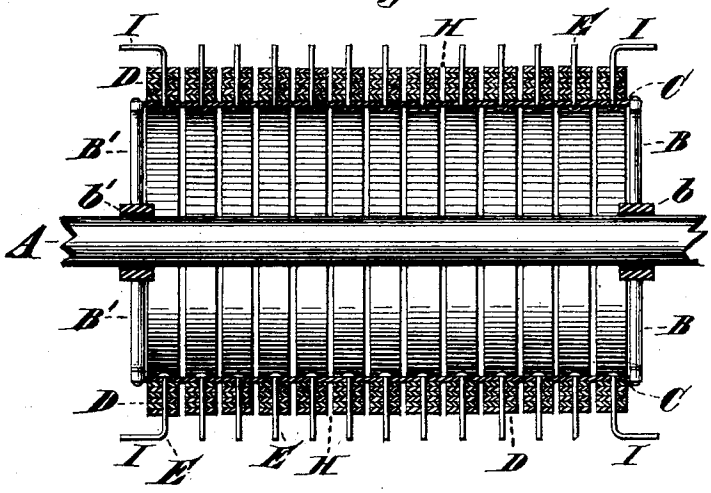


Fig. 2.

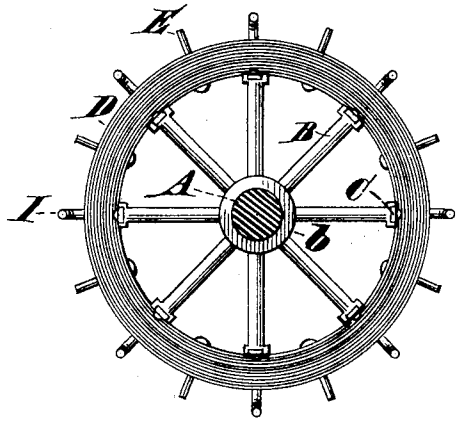
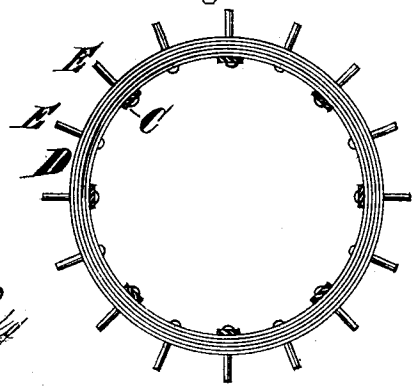


Fig. 3.



Attest
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UNITED STATES PATENT OFFICE.

ANDREW B. FISHER, OF UNION CITY, INDIANA.

ARMATURE FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 269,036, dated December 12, 1882.

Application filed July 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANDREW B. FISHER, a citizen of the United States, and a resident of Union City, in the county of Randolph and State of Indiana, have invented certain new and useful Improvements in Armatures of Dynamo-Electric Machines, of which the following is a specification.

My invention relates to an improved armature of a dynamo-electric machine.

The object of my invention is to increase the efficiency of the armature by arranging the metal so that the entire mass will be subject to a more rapid magnetic change as it is revolved between the magnet-poles, and to cheapen and simplify the cost of the construction, all of which will be fully explained in the description of the accompanying drawings.

Figure 1 represents a longitudinal central section of my improved armature with the bobbins removed. Fig. 2 is an end elevation of the same. Fig. 3 is a detail elevation of one of the convolute ribbons and its series of polar pins.

A represents the shaft of the armature.

B B′ represent the spider-arms at either end of the armature, being secured to the shaft by hubs *b b′*.

C represents tie rods or strips of non-magnetic material, which are secured to arms B B′ in position parallel to the axis of the shaft, and form the base and supporting-frame for the inner periphery of the series of convolute ribbons.

D represents rings made of soft-iron ribbon, preferably insulated with any suitable substance before winding, and wound concentric to the axis and supported by the tie rods or strips C, to which they are attached by means of iron or other suitable pins or bolts, E, which are inserted through holes pierced in the tie-strips or cross-pieces C, and through the convolute ribbons D, which are pierced with suitable holes for the purpose. These pins are allowed to extend a considerable distance through and beyond the ribbons D to form polar projections of the armature. The rings D are placed a sufficient distance apart to allow air-spaces H, which provide suitable ventilation to the armature and prevent heating of the metal.

I represents bent extensions of the outer pins, E, which form suitable hooks, upon which are wound the wire-bobbins. Various methods may be employed for winding the bobbins of the armature. It may be wound either upon the Siemens or Gramme plan, as desired.

Either the hubs *b b′* or the tie-strips C should be insulated from magnetic connection with the shaft A, or the arms B′ should be made of diamagnetic material.

I claim—

1. An armature for dynamo-electric machines, composed of the frame A B C, the convolute iron rings or ribbons D, and the pins E, said rings or ribbons being separated to provide the air-spaces H, substantially as described.

2. An armature for dynamo-electric machines, composed of the frame A B C, convolute iron rings or ribbons D, and pins E, extending beyond the rings or ribbons to form polar projections, said rings or ribbons being separated to provide the air-spaces H, substantially as described.

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

ANDREW B. FISHER.

Witnesses:

JAMES M. STARBUCK,

JOHN W. WILLIAMS.