(No Model.)

C. F. BRUSH.

ARMATURE FOR DYNAMO ELECTRIC MACHINES.

No. 310,876. Patented Jan. 20, 1885.

Fig. 1.

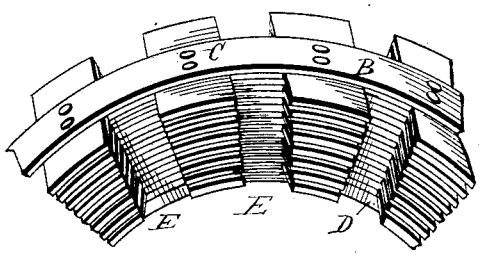

Fig. 2.

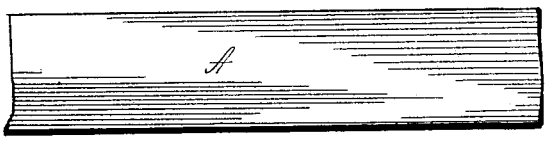

Fig. 3.

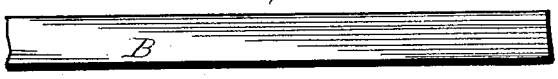

Fig. 4.

WITNESSES

Wm. M. Monroe.
Chas. N. Dorer

Chas. F. Brush
INVENTOR

By Leggett and Leggett
Attorneys

UNITED STATES PATENT OFFICE.

CHARLES F. BRUSH, OF CLEVELAND, OHIO.

ARMATURE FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 310,876, dated January 20, 1885.

Application filed May 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. BRUSH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Armatures for Dynamo-Electric Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

Figure 1 is a perspective view of a part of the completed armature-ring without the bobbins. Figs. 2 and 3 show the strips used in forming the ring, and Fig. 4 is a perspective view similar to Fig. 1, showing the ring as it appears before the bobbin-spaces are cut out.

The present invention relates to that kind of armature-ring for dynamo-electric or electro-dynamic machines for which Patent No. 285,457 was granted to me September 25, 1883; and it consists in building up the armature-ring of alternating narrow and wide bands of iron, the wide bands being subsequentl cut away to the width of the narrow band in the places where the bobbins are to be wound. The ring may be built up in several ways; but I prefer to form it by winding together into the form of a roll a wide and a narrow band until sufficient convolutions have been formed to make up the desired thickness of the ring. It is evident, however, that the ring may be built up of short pieces held between the superposed convolutions of a longer band wound into the form of a roll; or the layers may be distinct concentric pieces held in place by rivets or the like. In any case a ring is formed of alternately wide and narrow layers, and the wide layers are afterward cut away to form the bobbin-spaces, as described above.

In the drawings, A is a band of soft iron, of the full width of the armature, and B is a narrower band of the same material, preferably of about the width of that part of the ring upon which the wire is wound. These two bands are built up or wound together so as to alternate one with another, as shown in Fig. 4, and the layers are then firmly secured together by rivets or bolts passing radially through the same, as indicated at C, Fig. 1. The bands may be built upon a base-ring, D, to give greater rigidity to the ring and afford a means of attaching the hub. The ring having been formed in this way, the wider bands, and, if necessary, part of the narrower ones, are cut away at E to form the radial slots, into which the insulated wire is wound to form the bobbins. The cutting away may be done by any suitable slotting or milling machine, or in any other way known to the trade.

One or both of the bands may be covered with insulation—such as Japan varnish or paper—or a strip of paper or other insulator may be interposed between the layers during the building up of the ring.

I claim herein as my invention—

1. An armature-ring formed of bands or strips of iron of different widths, the bands or strips being cut away to form bobbin-spaces, substantially as set forth.

2. An armature-ring formed of alternate layers of wide and narrow band-iron, the wide bands being cut away at the bobbin-spaces to the width of the narrow bands.

In testimony whereof I sign this specification, in the presence of two witnesses, this 23d day of April, 1884.

CHARLES F. BRUSH.

Witnesses:

E. B. PHILLIPS,

ALBERT E. LYNCH.