

(No Model.)

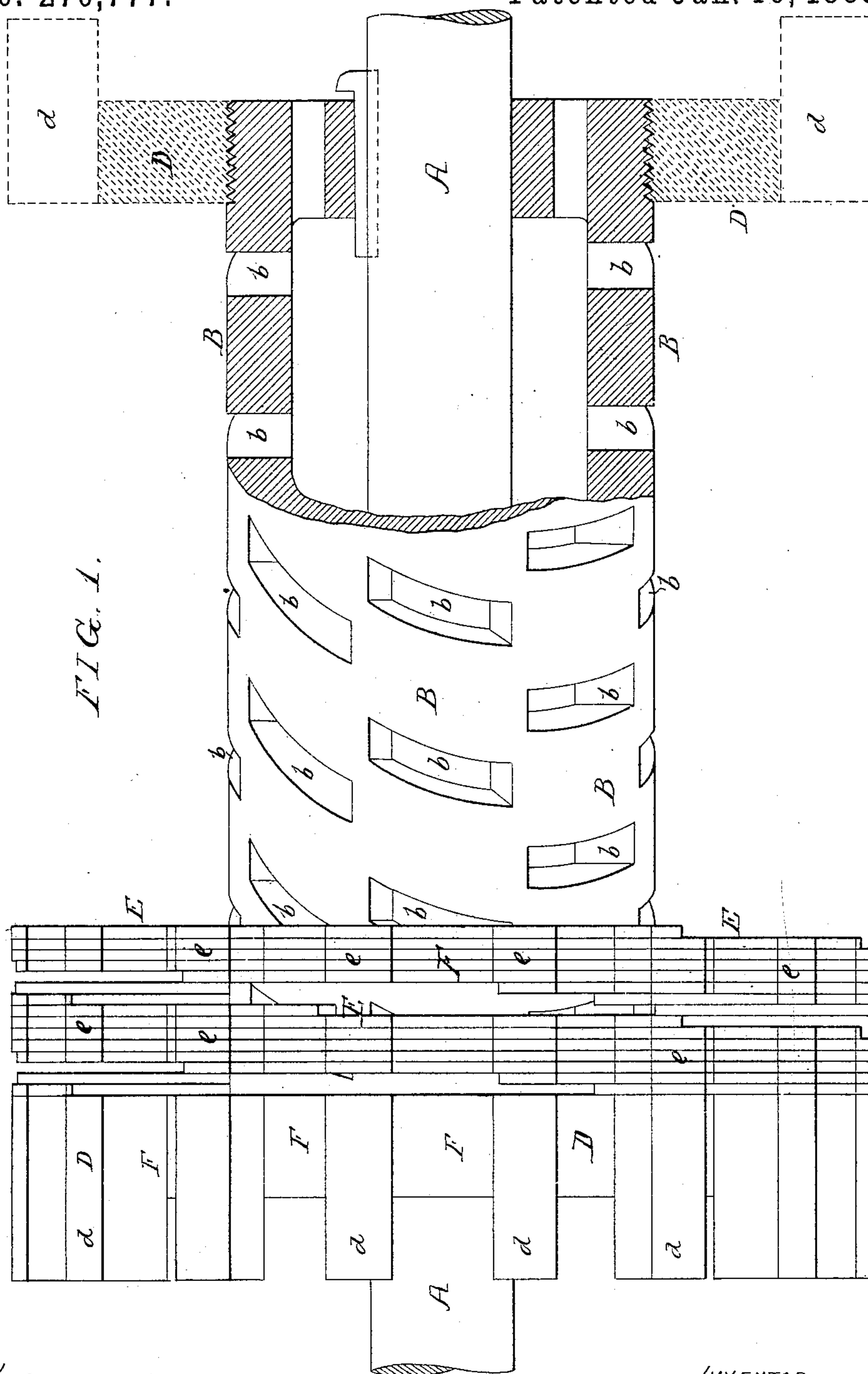
2 Sheets—Sheet 1.

W. K. FREEMAN.

ARMATURE FOR DYNAMO ELECTRIC MACHINES OR ELECTRIC MOTORS.

No. 270,777.

Patented Jan. 16, 1883.



WITNESSES :

David S. Williams

Harry Drury

INVENTOR:

Walter K. Freeman
By his Attorneys
Howe and Jones

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Howson and Jones

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FIG. 2.

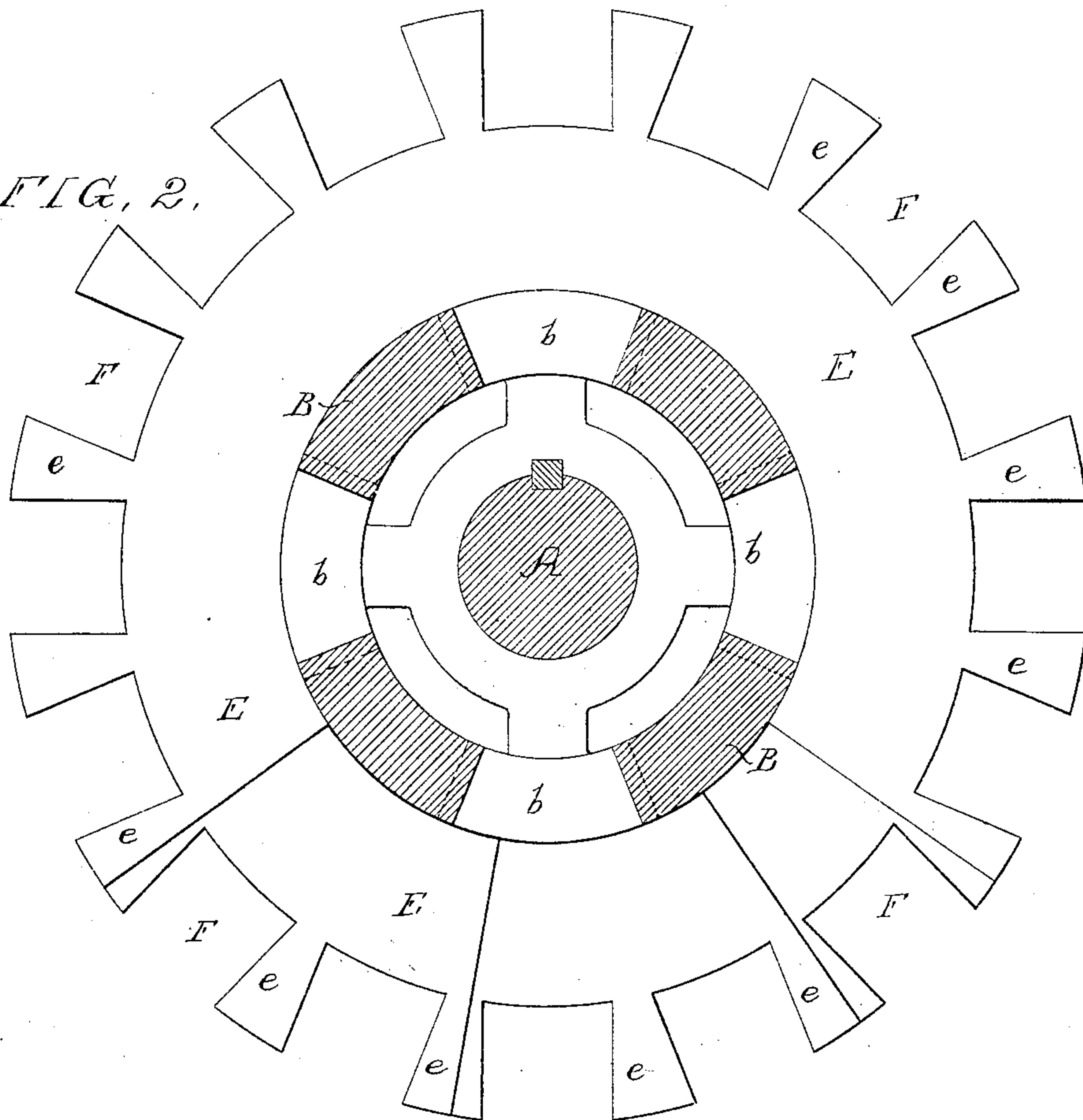
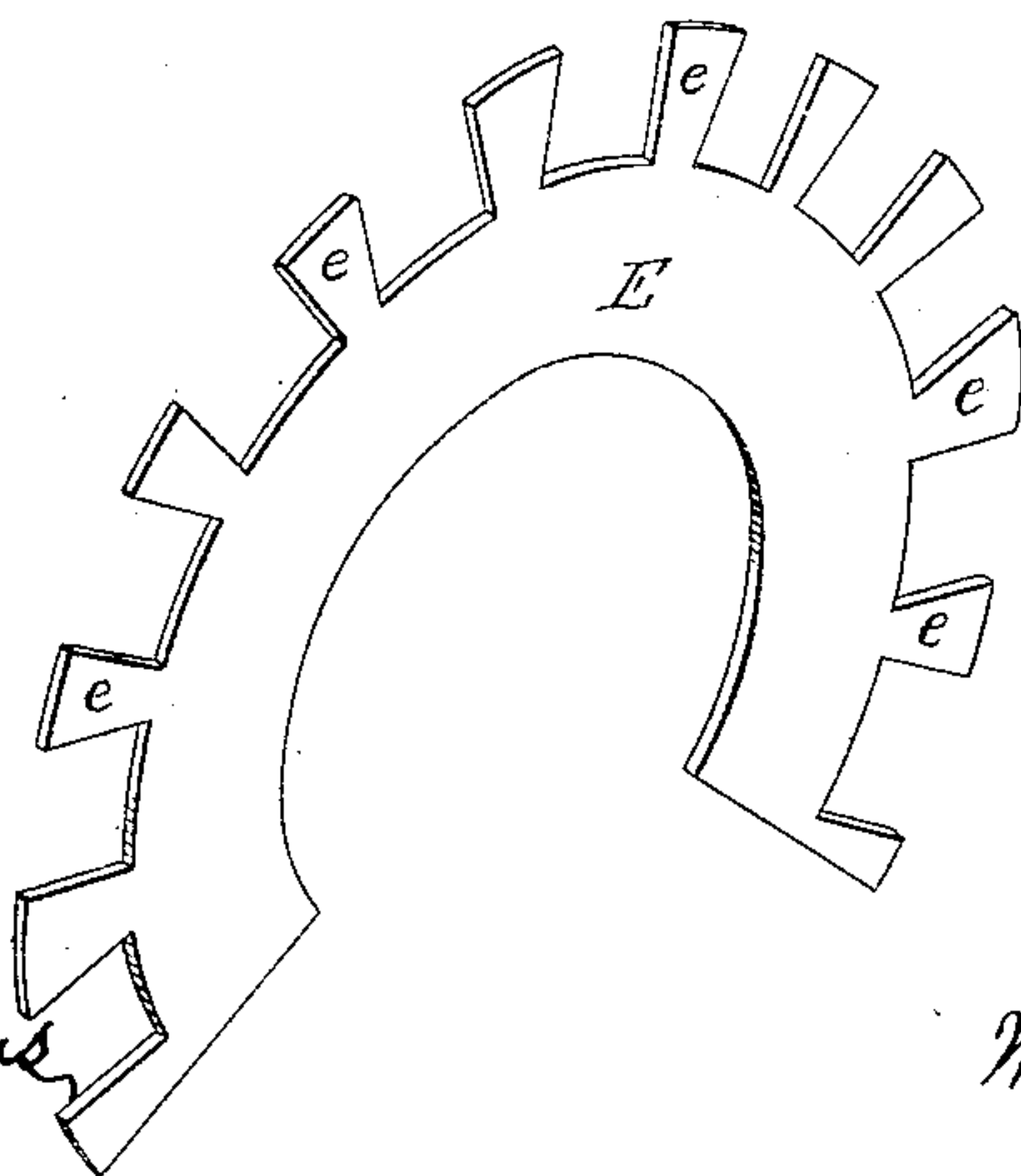


FIG. 3.



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UNITED STATES PATENT OFFICE.

WALTER K. FREEMAN, OF BROOKLYN, NEW YORK, ASSIGNOR TO W. F. JOBBINS, OF EAST ORANGE, NEW JERSEY.

ARMATURE FOR DYNAMO-ELECTRIC MACHINES OR ELECTRIC MOTORS.

SPECIFICATION forming part of Letters Patent No. 270,777, dated January 16, 1883.

Application filed June 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, WALTER K. FREEMAN, a citizen of the United States, and a resident of Brooklyn, New York, have invented certain
5 Improvements in Armatures for Dynamo-Electric Machines or Electric Motors, of which the following is a specification.

My invention consists in certain improvements in the construction of rotary armatures
10 for dynamo-electric machines and electric motors, as more fully described hereinafter.

In the accompanying drawings, Figure 1 is a side view, partly in section, of my improved armature-core partially fitted; Fig. 2, a trans-
15 verse section, and Fig. 3 a perspective view of one of the segmental plates of which the core of the armature is partly made up.

A is the shaft of the armature, on which is keyed a hollow cylindrical drum, B, of brass,
20 having a series of holes, *b*, cut through it, preferably at an angle, as shown, or of such a shape and in such a position as not to allow parts of the segments, hereinafter described, to slip into them out of position.

25 On each end of the drum is formed a screw-thread for the reception of a ring, D, of cast-iron, provided with radial teeth *d d*, which project some distance outward beyond the end of the drum in the direction of the line of the shaft,
30 as shown in Fig. 1. After one of these cast-iron toothed rings D has been screwed onto one end of the drum, there are slipped on from the other end a series of sheet-metal segments of rings, E, Fig. 3, each segment being
35 greater than a semicircle, so that when placed on the drum it will stay in position as readily as a complete ring. I prefer to make the segments about two-thirds of a complete circle. Each segment has teeth *e* of a size and num-
40 ber corresponding with those of the rings D, so that when the segments have been placed on the full length of the drum, and the rings D at opposite ends, screwed up (the teeth of

all the segments and rings being in line) there will be formed a complete core with longitudinal grooves F, in which the coils of covered
45 wire may be wound in any desired way, the projecting teeth on the rings D forming corresponding guide-notches at each end of the drum. The segments E are put on the drum
50 so that the portions of the rings cut away to form the segments shall not be in line, but shall be arranged irregularly or regularly on different parts of the drum. However they
55 may be arranged, they will allow more or less air to pass from within the hollow-drum through the openings *b*, and the spaces formed between the ends of the segments and between the coils as the armature revolves.

I claim as my invention—

60 1. An armature-core consisting of a drum fitted with a series of sheet-metal segments of rings, each segment being greater than a semicircle, substantially as described.

2. An armature-core consisting of a drum
65 fitted with a series of sheet-metal toothed segments of rings, each segment being greater than a semicircle, and retaining-rings secured to each end of the drum.

3. An armature-core consisting of a hollow
70 perforated drum fitted with a series of sheet-metal segments of rings, each segment being greater than a semicircle.

4. The combination of the brass drum mounted on the shaft with toothed sheet-metal seg-
75 ments of rings, each larger than a semicircle, and cast-iron toothed rings secured to each end of the drum, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two sub-
80 scribing witnesses.

WALTER K. FREEMAN.

Witnesses:

JOHN H. KATTENSTROTH,
HUBERT HOWSON.