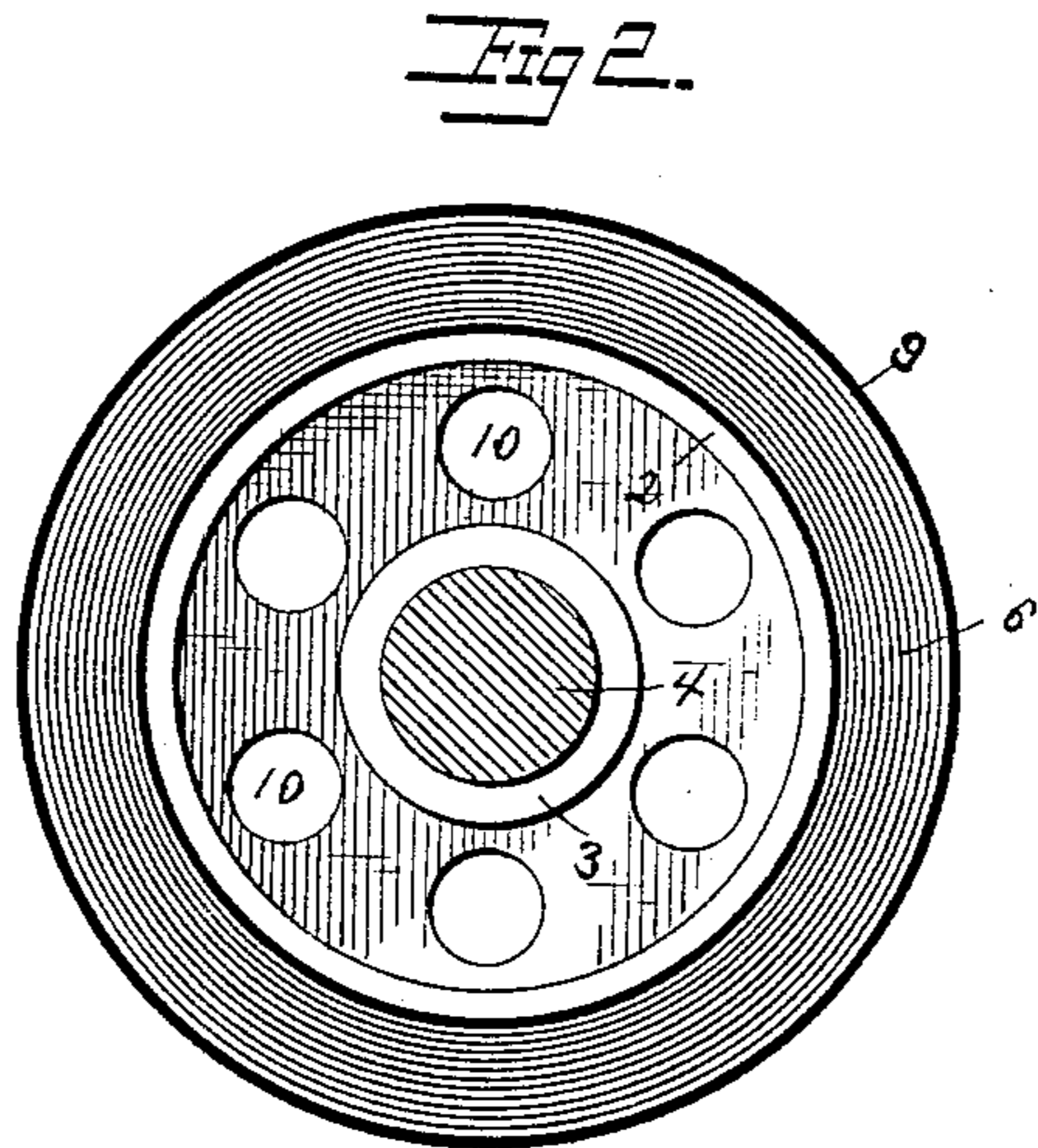
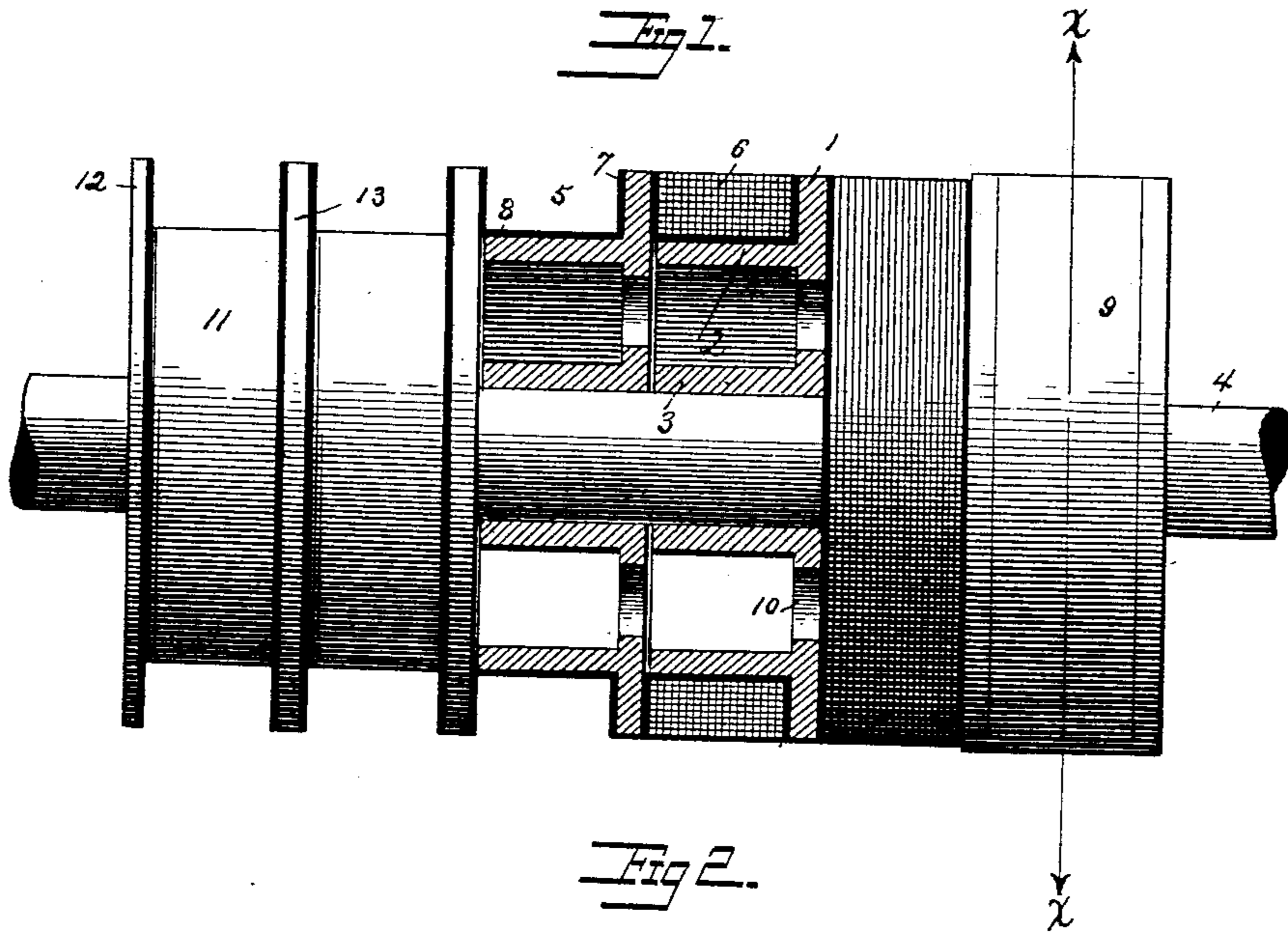


(No Model.)

W. S. HILL.
ARMATURE CORE FOR DYNAMOS.

No. 390,301.

Patented Oct. 2, 1888.



Witnesses
Jno. G. Hinkel, Jr.
Wm. A. Harries

Inventor
W. S. Hill
by Foster & Freeman
Attorneys

UNITED STATES PATENT OFFICE.

WARREN S. HILL, OF BOSTON, MASSACHUSETTS.

ARMATURE-CORE FOR DYNAMOS.

SPECIFICATION forming part of Letters Patent No. 390,301, dated October 2, 1888.

Application filed October 12, 1887. Serial No. 252,126. (No model.)

To all whom it may concern:

Be it known that I, WARREN S. HILL, a citizen of the United States, residing at Boston, Suffolk county, Massachusetts, have invented
5 certain new and useful Improvements in Armature Cores, of which the following is a specification.

My invention relates to armature-cores for electric generators or motors; and it has for
10 its object to improve and simplify the construction thereof and produce a core which shall prevent heating and the effects from side currents, and at the same time furnish good
15 magnetic qualities; and to these ends my invention consists in a core constructed substantially as hereinafter set forth.

Referring to the accompanying drawings, Figure 1 is a side view, partly in section, of
2 so much of a core as is necessary to illustrate my invention. Fig. 2 is a section of the same on the lines *x x* of Fig. 1.

In carrying out my invention I provide a series of disks, 1, preferably of cast-iron, having side flanges, 2, and preferably with a laterally-extending collar, 3. These disks are
25 adapted to fit snugly by being driven or otherwise applied to the shaft 4 of the core, and any number may be arranged thereon, according to the size of the core desired. These
30 disks, when placed in position, as shown in the drawings, provide recesses 5, in which is placed a coil of uninsulated iron wire, 6, which preferably fills the recesses flush with the edge of the disks.

Between the coils of wire and the disks I
35 place suitable insulating material, preferably of paper, and these may be in the form of rings 7, which fit accurately over the flanges 2, so as to extend between the sides of the coils and
40 the disks, and other pieces of paper, 8, may be wound around the flanges, so as to properly insulate the core therefrom. When the recesses have been filled with wire, they may be covered with insulating material, 9, of any suitable
45 substance, as paper, which will aid in maintaining the wire in position in the recesses, as well as serve as insulating material; but if the core is to be wound with insulated
50 wire this additional insulating material 9 is not absolutely necessary.

In order to provide means for ventilating this core, I form in the webs of the disks perforations 10, which furnish a passage for the

free circulation of the air through the core between the coils and the shaft.

55 It will be observed that this core may be cheaply made, as all the disks may be cast from the same pattern, with the exception, perhaps, of the end disk, 11, which has to be provided with two disks for one side flange in
60 order to furnish a bearing for the coils therein; and this may be done by forming one of the disks, as 12, without the side flange, 2, or by uniting two disks, as 12 and 13, by a single
65 flange, 11. Upon the core made up as thus described may be wound in any suitable manner the wire forming the coils of the armature; and I have not deemed it necessary to show any particular form of winding.

By this construction of the core I provide a
70 very simple and cheap structure; but it is evident that it is a strong and rigid core. The parts, being united as set forth, are not liable to become loose or get out of place; and I am
75 also enabled to avoid the heating effects due to the so-called "Foucault" currents, which are apt to circulate through the machine, not only producing heat, but interfering more or less with its magnetic qualities.

Having thus described my invention, what I
80 claim is—

1. An armature-core composed of a series of disks having side flanges arranged to be secured upon a shaft, substantially as described.

2. An armature-core composed of a series of
85 disks having side flanges and provided with collars adapted to fit snugly upon the supporting-shaft, substantially as described.

3. An armature-core composed of a series of disks having side flanges, forming recesses,
90 and coils of iron wire secured in said recesses, substantially as described.

4. An armature core composed of a series of disks having side flanges, the said disks being secured upon a shaft, coils of iron wire supported by said flanges, insulating material
95 between the coils and the disks and flanges, and perforations through said flanges, substantially as described.

In testimony whereof I have signed my name
100 to this specification in the presence of two subscribing witnesses.

WARREN S. HILL.

Witnesses:

CHARLES M. BARNES,
F. B. TIFFANY.