

(No Model.)

E. WESTON.
DYNAMO ELECTRIC MACHINE.

No. 401,668.

Patented Apr. 16, 1889.

Fig. 1.

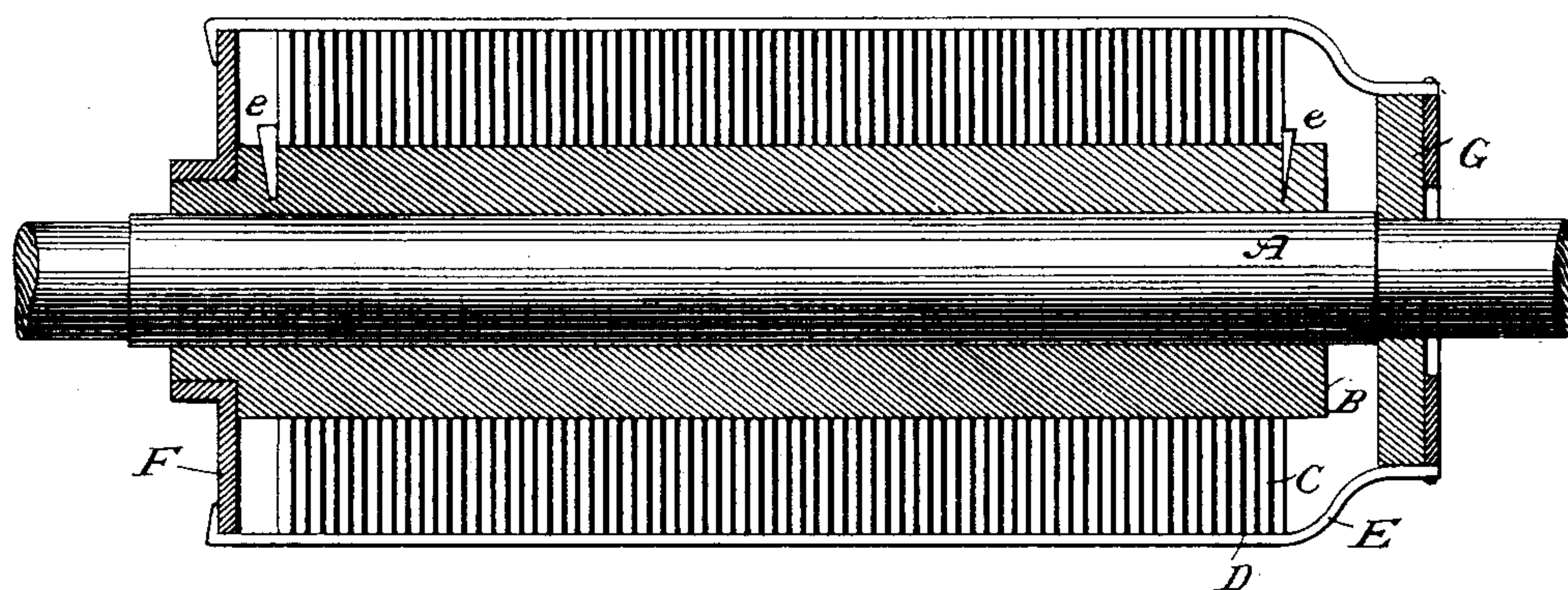


Fig. 2.

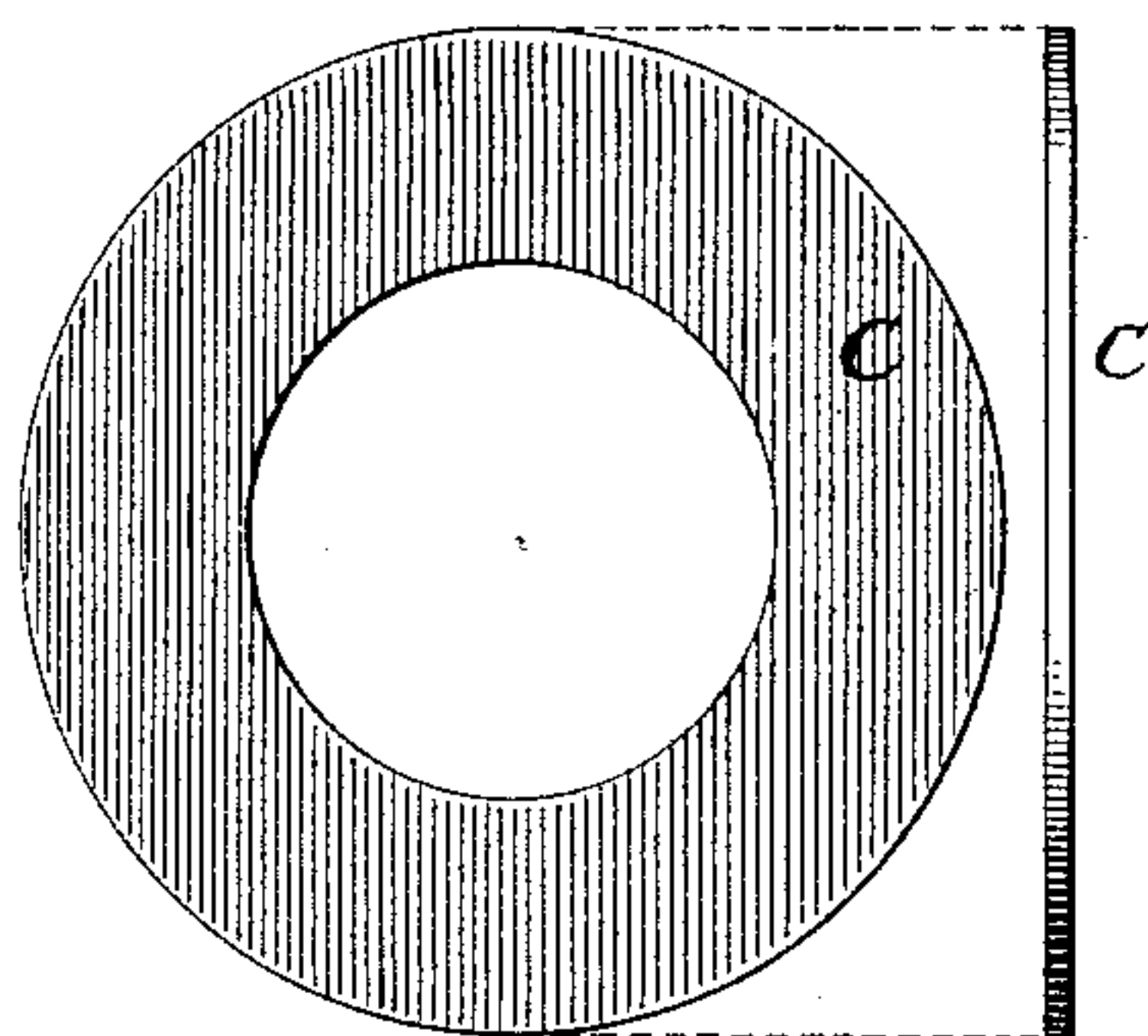
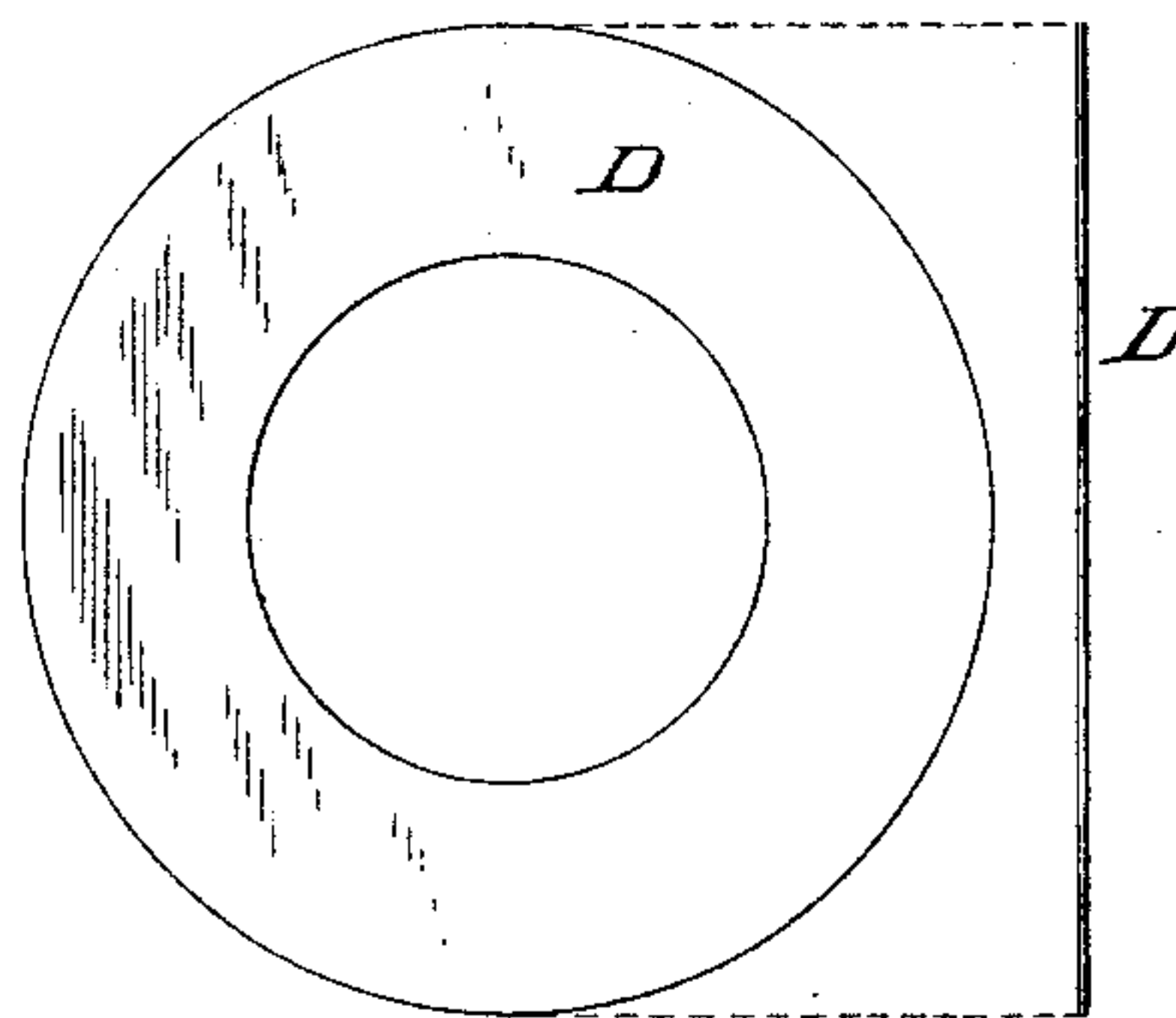


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

EDWARD WESTON, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE UNITED STATES ELECTRIC LIGHTING COMPANY, OF NEW YORK, N. Y.

DYNAMO-ELECTRIC MACHINE.

SPECIFICATION forming part of Letters Patent No. 401,668, dated April 16, 1889.

Application filed September 22, 1882. Serial No. 72,475. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WESTON, a subject of the Queen of Great Britain, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Dynamo-Electric Machines, of which the following is a specification, reference being had to the drawings accompanying and forming a part
10 of the same.

My invention relates to dynamo or magneto electric machines containing cylindrical armature-cores wound longitudinally with conductors, which are caused to move in a
15 magnetic field at right angles to the lines of force.

The invention consists in a novel and useful construction of said cylindrical cores, whereby the circulation of induced currents
20 is effectually prevented and the process of manufacture facilitated and greatly cheapened. These objects I attain by constructing the cylindrical core partly of magnetic and partly of non-magnetic material, the
25 former being in the form of rings or disks, which are strung over a central hub or cylinder of wood or similar insulating substance, and prevented from contact with one another by interposed rings or sheets of insulating
30 material. This plan of construction in detail and the armature produced thereby are illustrated more fully by the accompanying drawings, wherein—

Figure 1 illustrates in central longitudinal
35 section a cylindrical armature-core built up in the manner aforesaid. Fig. 2 shows one of the iron rings, plates, or disks; and Fig. 3, one of the plates or sheets of insulating material employed in the construction of the
40 core.

A is the shaft upon which the armature is mounted, and B a cylinder of wood or other proper substance, which is slipped over the shaft and secured in place. On the wooden
45 hub or cylinder B are strung a number of iron rings, C, and paper rings D alternately, so that the iron rings will be insulated from one another. The rings are held together by pins e, driven into the hub B by collars or by any
50 other suitable means.

The conductors are designated by the let-

ter E. They are wound longitudinally upon the surface of the cylinder formed by the iron and paper rings, connected across the end of the cylinder by a plate, F, and their
55 free ends brought to the segments of a commutator, G. (Shown in section in Fig. 1.) The method of winding and connecting may, however, be greatly varied without departure from the invention, that shown being a sys-
60 tem invented and described by me in previous Letters Patent.

It may be stated with reference to the construction of the armature-core that the plates or rings C are not of necessity of the precise
65 shape shown. They may be indented, as elsewhere described by me, so that when placed together they form a cylinder with grooves or recesses in its periphery for the reception of the coils. The intervening sheets or rings
70 of insulating material may also vary somewhat in character and composition, as is evident from the nature of the case. By their use the plates of iron may be made quite
75 thin and brought very close together, so that a greatly-increased mass of iron will be present, thus producing improved results.

I do not claim, broadly, herein an armature or core composed of magnetic and non-magnetic or insulating sections, nor a core built
80 up of iron rings with plates or rings of insulating material placed between them, as I have made this the subject of an application for separate Letters Patent, filed November
14, 1882, Serial No. 76,757.

Having now described my invention, what I claim is—

In a dynamo-electric machine, the combination, with the shaft, of a cylinder or hub of insulating material secured thereon, iron
90 plates or rings strung over said hub, and plates or sheets of insulating material interposed between said rings, these parts being constructed and combined in substantially the manner set forth for the reception of the coils.

In testimony whereof I have hereunto set my hand this 19th day of September, 1882.

EDWARD WESTON.

Witnesses:

W. FRISBY,
PARKER W. PAGE.