

(No Model.)

2 Sheets—Sheet 1.

G. E. DORMAN.
DYNAMO ELECTRIC MACHINE.

No. 468,416.

Patented Feb. 9, 1892.

Fig. 1.

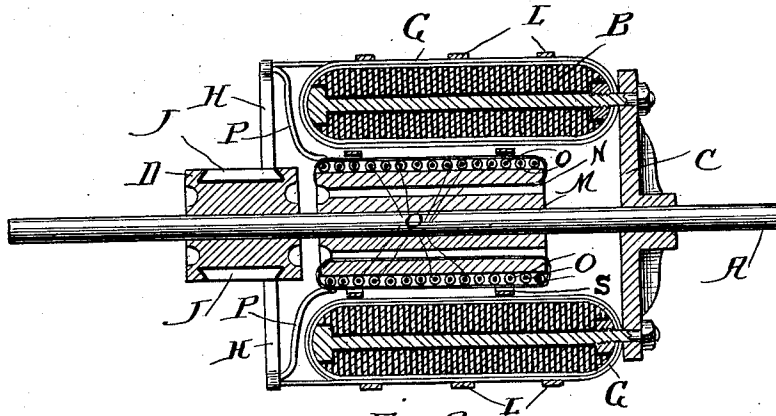


Fig. 2.

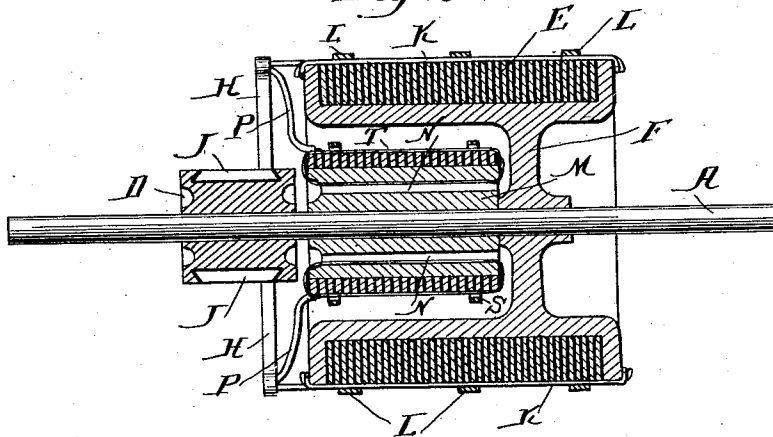
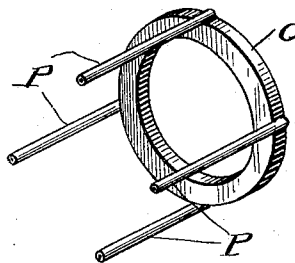
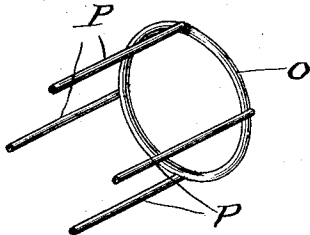


Fig. 4.

Fig. 3.



Witnesses
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Harriet M. May.

Inventor:
George Edward Dorman
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Fig. 5.

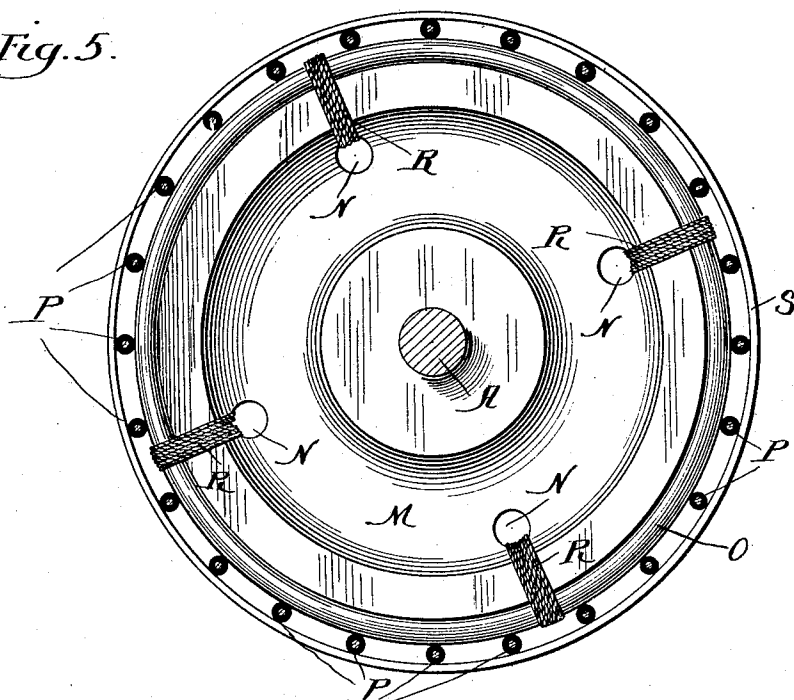
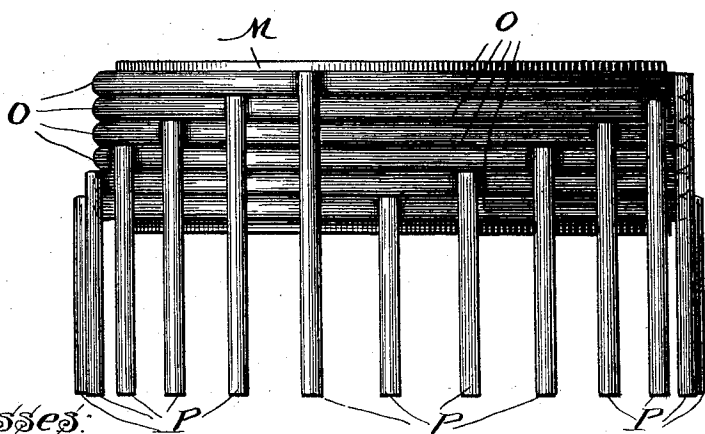


Fig. 6.



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Inventor:

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UNITED STATES PATENT OFFICE.

GEORGE EDEUSOR DORMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE
STANDARD ELECTRIC COMPANY, OF ILLINOIS.

DYNAMO-ELECTRIC MACHINE.

SPECIFICATION forming part of Letters Patent No. 468,416, dated February 9, 1892.

Application filed December 17, 1890. Serial No. 374,992. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EDEUSOR DORMAN, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Dynamo-Electric Machines, of which the following is a full, clear, and exact specification.

My invention relates to dynamo-electric machines, and has for its object to provide means for connecting various commutator-strips together. It is illustrated in the accompanying drawings, wherein—

Figure 1 is a cross-section through the armature and connecting device. Fig. 2 is a cross-section as applied to a modified form of armature. Fig. 3 is a detail of the connecting-rings, as shown in Fig. 1. Fig. 4 is a detail of the same, as shown in Fig. 2. Fig. 5 is an end view of the connecting-drum, and Fig. 6 is a plan view of a portion thereof.

Like parts are indicated by the same letters in all the figures.

A A is the armature-shaft. B is a Gramme-ring armature supported on such shaft by the spider C. D is a commutator on such shaft.

E is a drum-armature supported on the spider F.

G are the armature-coils of the Gramme-ring armature, terminating each in a strip H, which leads to a commutator-segment J.

K are coils on the drum-armature, leading in like manner to the strips H and the commutator-segments J.

L L are the binding-strips, which hold the coils upon the armature.

M is a drum keyed to the shaft A and placed within the armature. It is provided with longitudinal apertures N N, and carries about it rings O O, either round or in the shape of washers or otherwise, as may be desired, from which project the insulated conductors P in the manner shown. The conductors P are secured upon the periphery of such rings, so that the rings may be placed in succession, as shown in Fig. 6, while the insulated conductors pass over the tops of the other rings without making contact therewith. Each ring has four conductors P, and this will be the arrange-

ment in the case of an eight-pole dynamo. These conductors P are led forward and over and along the drum M, and are then bent up and connected with the segment-strips H, so that four segment-strips are connected to each ring. These rings are bound securely into position upon the drum by means of the cords R, passing through the apertures N N. The conductors P are held securely in position by the bands S, passing about the drum. From this it is obvious that the four commutator-strips so connected by each of said rings are electrically connected, and hence that a brush placed upon any one of them will receive current from all of them. By this arrangement in a multipolar machine any reasonable number of poles may be shown, and the two brushes may be placed in comparatively close proximity—as, for instance, at or near the top of the commutator—so as to be easily accessible, and yet the entire current will be taken from the machine. The method of connecting the apparatus is sufficiently set out in the foregoing.

The drum should of course be of insulating material, or at least the rings O O should be insulated. I have shown the drum as composed of wood or the like, with insulation-strips T between the rings in Fig. 2. In Fig. 1 I show the rings covered with insulation.

It is evident, of course, that the device described is equally applicable to a motor or generator.

I claim—

In a multipolar dynamo-machine, a cross-connecting device consisting of a drum within the armature, said drum having thereon a series of insulated rings, each ring provided with a series of bars connected to its outer edge and running parallel with its axis, securing-bands which pass longitudinally about the rim of such drum and securing the rings, and surrounding rings which pass about and secure the bars.

GEORGE EDEUSOR DORMAN.

Witnesses:

CELESTE P. CHAPMAN,
HARRIET M. DAY.