

(No Model.)

T. E. MORFORD.
INSULATION OF DYNAMO ARMATURES.

No. 491,490.

Patented Feb. 7, 1893.

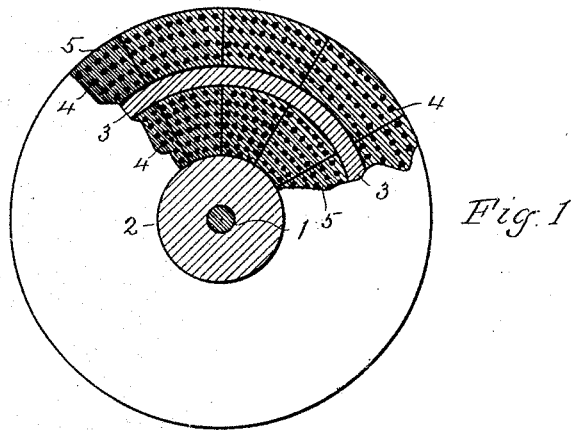


Fig. 1

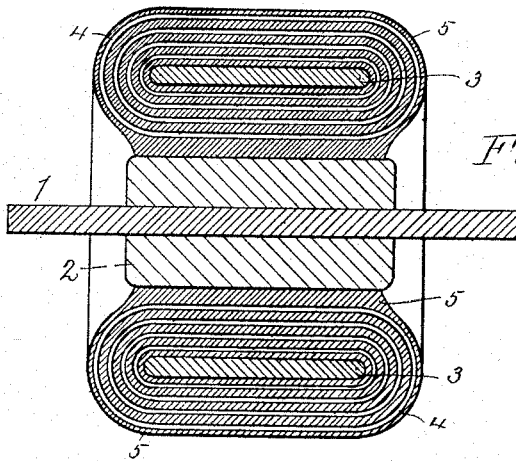


Fig. 2

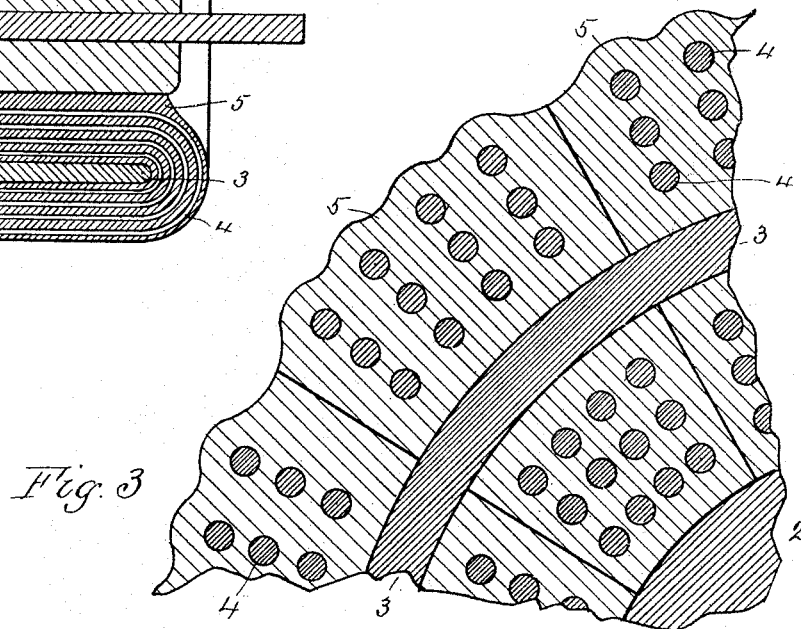


Fig. 3

Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS E. MORFORD, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR, BY DIRECT
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INSULATION OF DYNAMO-ARMATURES.

SPECIFICATION forming part of Letters Patent No. 491,490, dated February 7, 1893.

Application filed January 28, 1891. Serial No. 379,379. (No model.)

To all whom it may concern:

Be it known that I, THOMAS E. MORFORD, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a certain new and useful Improvement in Insulation of Dynamo-Armatures, of which the following is a specification.

My invention relates to means for insulating the coils or conductors of armatures for dynamos; and the object of the invention is to provide an insulating material in an integral mass in which the conductors are completely and effectively embedded. This object is accomplished in the manner illustrated in the accompanying drawings, in which—

Figure 1 is an end view, partly sectional, of an armature constructed according to my improvement; Fig. 2 is a longitudinal section of the same; and Fig. 3 is an enlarged view of a partial transverse section.

In said drawings 1 designates the shaft and 2 a wooden, or other, cylinder attached thereto.

3 is the metal core in the form of a flat ring encircling the cylinder, and 4 the wires wound about the ring in courses parallel to the shaft. These are arranged in segmental divisions in the usual manner, and these segments are connected to a commutator (not shown), in the usual manner. The wires 4 are not separately wound with insulating material, as is customary, but are insulated from the core and from one another by an enameling, or like substance, 5, which may be made adherent to the core and extend as a continuous mass from the cylinder 2 to the periphery of the armature.

In applying the wires and the insulation, a coating of the insulating material may be first applied to the core 3 and on it laid the desired convolutions of wire, and a second coat of enamel then applied; another set of convolutions of the wire laid and another coating of enamel applied, and so on to the finish. Each layer of the insulating substance may be hardened before the next is applied, or, by using the substance in suitable condition, all of the material may be applied and all the wires laid before the insulating substance is hardened.

Having described my invention, what I claim is:

1. In a dynamo armature, the combination with the core and the conducting coils, of an insulating enamel adherent to the core and embedding the coils, substantially as set forth.

2. In a dynamo armature, the combination with the core and the conducting coils, of an enamel securing the coils to while insulating them from the core and from one another, substantially as set forth.

3. The method of insulating dynamo armatures, which consists in coating a core with successive layers of an insulating enamel and afterward hardening the insulator, whereby an integral mass embedding the coils and adhering to the core is produced, substantially as set forth.

THOMAS E. MORFORD.

Witnesses:

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