(No Model.)

A. SCHMID.

ARMATURE FOR DYNAMOS.

No. 434,206. Patented Aug. 12, 1890.

Fig. 1.

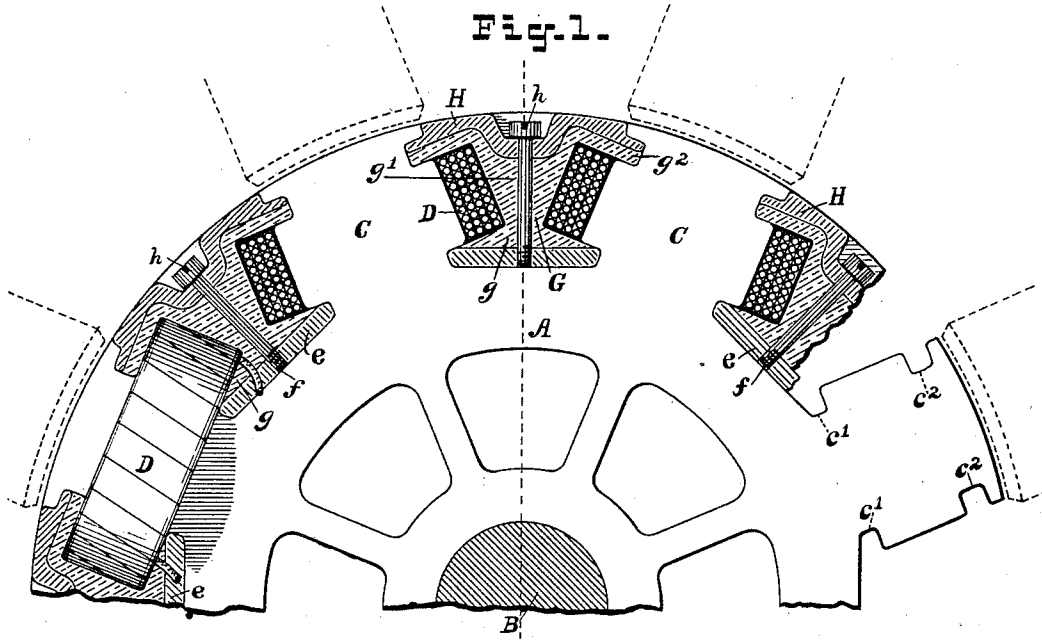
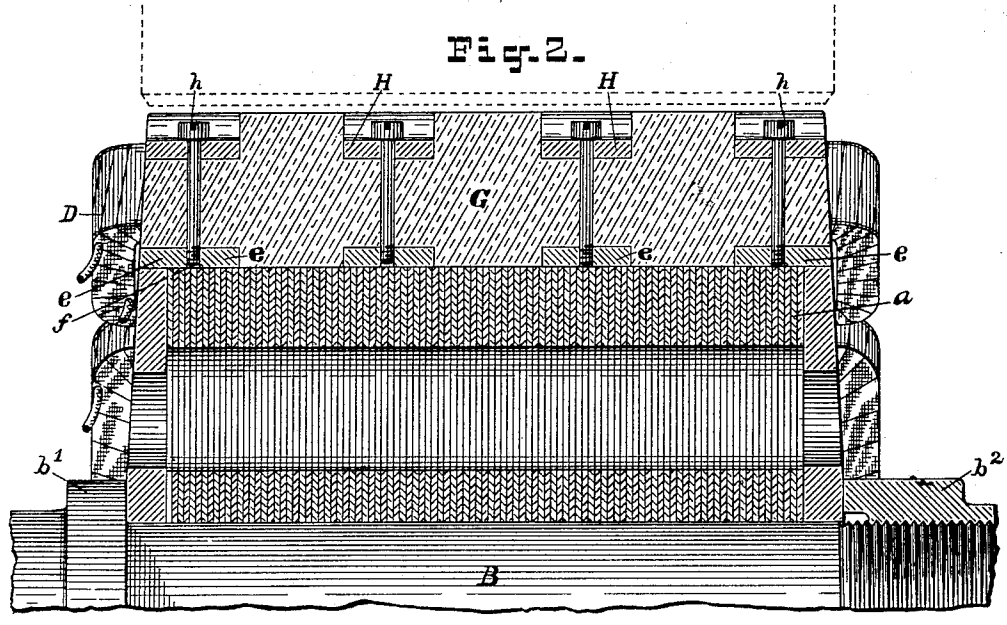


Fig. 2.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALBERT SCHMID, OF ALLEGHENY, ASSIGNOR TO THE WESTINGHOUSE ELECTRIC COMPANY, OF PITTSBURG, PENNSYLVANIA.

ARMATURE FOR DYNAMOS.

SPECIFICATION forming part of Letters Patent No. 434,206, dated August 12, 1890.

Application filed December 7, 1889. Serial No. 332,962. (No model.)

To all whom it may concern:

Be it known that I, ALBERT SCHMID, a citizen of the Republic of Switzerland, residing in Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Armatures for Electric Machines, (Case No. 372,) of which the following is a specification.

The invention relates to the construction of armatures for electric generators and motors; and the object of the invention is to provide a simple and efficient form of armature, and one which may be easily constructed and in which the coils may be readily applied and replaced as found necessary.

The invention may be described as consisting of a core, which may be laminated in a manner well understood, and is provided with radiating pole-pieces, over which the coils are slipped and about which they are firmly held by suitable clamps and wedge-blocks. The coils are wound upon suitable formers, and when placed over the cores are wedged in position by suitable blocks, which are inserted from the outer surfaces of adjacent coils, and clamps of peculiar construction are employed for holding the core-pieces and wedges in position.

The invention will be described more in detail in connection with the accompanying drawings, in which—

Figure 1 is an end view, partly in section, of a portion of the armature, and Fig. 2 is a cross-section of a portion of the armature.

Referring to the figures, A represents the armature-core. It is represented as composed of laminæ *a*, which are mounted upon a shaft B and held in position by a flange b' at one end and a suitable nut b^2 at the other end. The plates are formed with radiating pieces C, forming the pole-pieces of the armature. Each is constructed with two cuts, forming longitudinal grooves, as represented at c' c^2. The coils D are wound upon formers and properly insulated, and after the core itself has been properly built the coils are slipped over the respective pole-pieces. One or more plates *e* are let into the grooves c', and these plates are formed with openings *f*, properly provided with screw-threads. These plates may be built into the core when it is built up, and in that event the openings c' may be provided only in those laminæ which are to receive the plates *e*. A block G, which may with advantage be of wood or bonsilate or other non-conducting material, is driven in endwise between the outer surfaces of two adjacent coils. These are constructed with a spreading flange *g* at the bottom, passing underneath the coils, while its web g' is of wedge shape, adapted to fill the space between the coils, and it is further provided with overhanging lugs or flanges g^2, which pass outside the coils. Suitable clamps or plates H are then let into the outer surface of these blocks, and these are of metal or other strong material, and threaded bolts *h* are then extended from the plates H to the plates *e*, binding them securely together. The plates H may be let into the block G before it is inserted, and then the ends of the plates, together with the projections g^2 of the blocks, will enter the grooves c^2, thus securing a firm mechanical construction which will resist the great centrifugal force which the revolution of the armature produces.

I claim as my invention—

1. The combination, with an armature-core, of coils separately wound and applied to the core, holding-plates beneath the coils, blocks between the outer sides of adjacent coils, and holding-bolts extending through said blocks into said plates.

2. In an armature for electric machines, the combination of the plates let into the core of the armature beneath the coils, wedges placed between the outer edges of the adjacent coils, outer plates entering grooves in the poles of the core, and bolts binding said outer with said inner plates.

3. In an armature for electric machines, the combination of the coils surrounding the respective poles, clamps extending outside said coils and entering grooves formed in the pole-pieces, and bolts binding the central portions of said clamps in position.

4. In an armature for electric machines, the combination, with a core having pole-pieces formed with grooves at the outside surfaces of said coils, of plates entering the grooves, and bolts extending through said plates into the core, substantially as described.

In testimony whereof I have hereunto subscribed my name this 5th day of December, A. D. 1889.

ALBERT SCHMID.

Witnesses:
J. M. TATE, Jr.,
J. W. SMITH.