

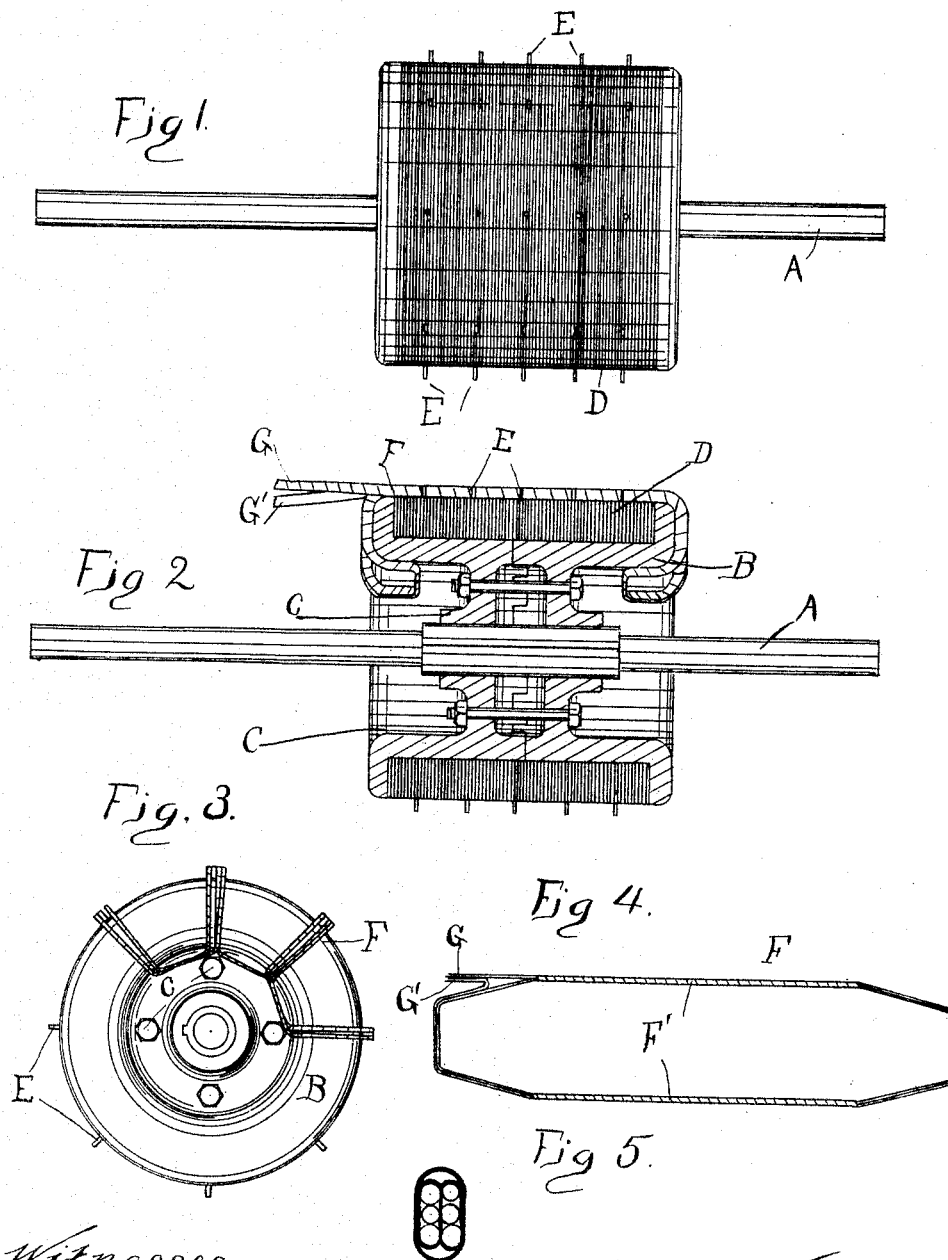
(No Model.)

G. E. DORMAN.

MULTIPOLAR DYNAMO ELECTRIC MACHINE ARMATURE.

No. 491,990.

Patented Feb. 21, 1893.



WITNESSES

Walter J. Gunthorp.
Virginia Welley

Inventor
George E. Dorman

Francis M. Parker,
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE EDENSOR DORMAN, OF CHICAGO, ILLINOIS.

MULTIPOLAR-DYNAMO-ELECTRIC-MACHINE ARMATURE.

SPECIFICATION forming part of Letters Patent No. 491,990, dated February 21, 1893.

Application filed January 4, 1892. Serial No. 416,947. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EDENSOR DORMAN, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Multipolar-Dynamo-Electric-Machine Armatures and the Windings Thereof, of which the following is a specification.

My invention relates to improvements in multipolar dynamo electric machine armatures and the windings and coils thereof, and has for its object to provide convenient means and methods for winding armatures. It is illustrated in the accompanying drawings wherein

Figure 1 is a side view of an armature. Fig. 2 is a longitudinal section. Fig. 3 is an end view. Fig. 4 is a detail view of a single coil. Fig. 5 is a cross section through the coil containing six turns or convolutions arranged in two flat parallel rows of three turns each and such a coil should be suitably wrapped or taped.

A is the armature shaft on which the armature core B is secured. This core may be shaped as desired but is preferably in the form shown with circular rests or apertures at both ends. It may be formed of two sections secured together by the bolts C C and keyed upon the shaft.

D D are surrounding rings or laminations from which project the pins E E whereby the coils are prevented from moving about the armature.

F are the coils shaped as shown, each making a continuous coil of one or more convolutions wrapped preferably at their middle portions. This wire is of course insulated. The

two ends of the coil G G' terminate at one end of the armature and they may be taped or wrapped if desired. These coils are then bent about the armature core into the position indicated in Fig. 2 with the ends of the wires projecting as there shown. The coils are laid successively one after the other upon the core as indicated in Fig. 3, their inner ends being bent and forced within the circular cavities at the ends of the core. The wires at the ends of the coils thus cross each other within the cavity and at a point where their relative relation is of little consequence. If but one convolution is used on the coil there would be no occasion for the taping or wrapping at the middle portion. If however two or more convolutions or turns constitute the coil they should be wrapped and are laid side by side so as to form together a flat tape or conductor, the several convolutions being kept in this position by the taping or wrapping. The free ends are of course connected in any suitable manner with the commutator segments. The preferred form of the coil is that of one or more flat strips composed each of two or more turns of wire the whole taped together.

I claim—

The combination of an armature core having circular rests at its ends with a series of coils substantially elliptical and placed upon the core parallel to the axis and having their ends bent over into such rests to be thus secured.

GEORGE EDENSOR DORMAN.

Witnesses:

FRANCIS W. PARKER,
VIRGINIA WILLEY.