(No Model.)

T. A. EDISON.

COMMUTATOR FOR DYNAMO ELECTRIC MACHINES.

No. 438,302. Patented Oct. 14, 1890.

Fig. 1.

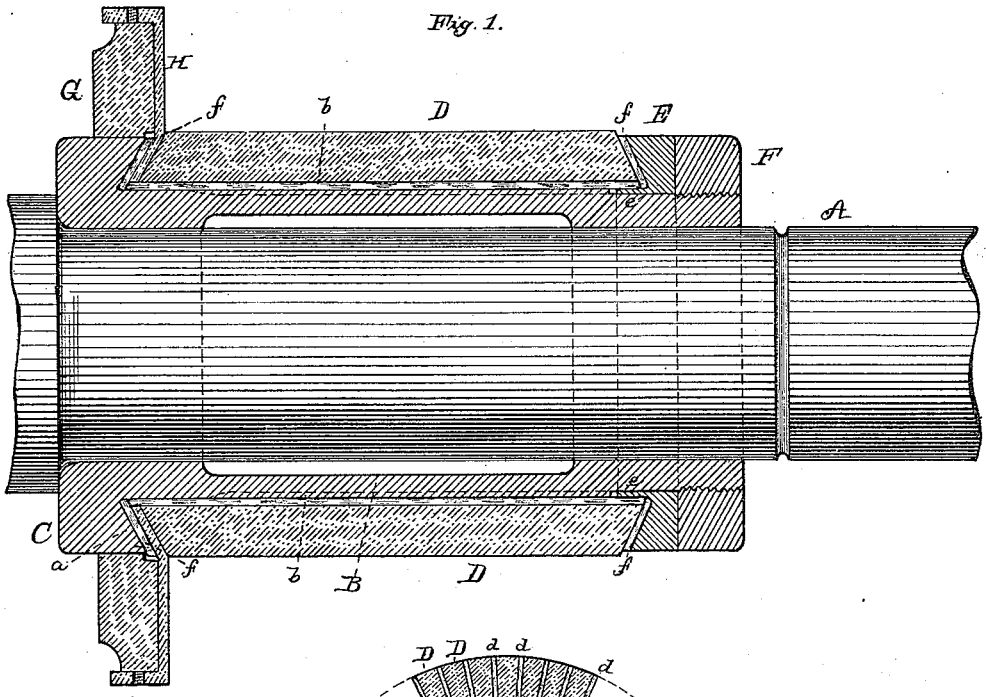
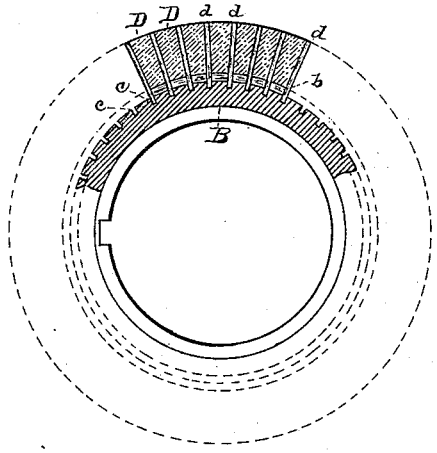


Fig. 2.



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THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

COMMUTATOR FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 438,302, dated October 14, 1890.

Application filed October 10, 1883. Serial No. 108,554. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Commutators for Dynamo-Electric Machines, (Case No. 585,) of which the following is a specification.

The object of my invention is to provide a simple and durable construction for the commutators of dynamo-electric machines; and my invention consists in the novel devices and combinations of devices employed by me in accomplishing the above-named objects, as hereinafter set forth and claimed.

In carrying out my invention the main portion of the commutator consists of a metal cylinder which is keyed to the armature-shaft. The conducting-strips are placed upon this cylinder with a layer of mica between said strips and said cylinder, and mica also between the strips themselves. A metal ring is placed at the end of the cylinder, separated by mica from the conducting-strips, to hold the parts, it being secured by a clamping-ring screwed tightly upon it.

In the annexed drawings, Figure 1 is a longitudinal section of a commutator-cylinder embodying my invention, and Fig. 2 a cross-section thereof. In Fig. 2 the entire cross-section is not shown, but merely enough for illustration, the remainder being indicated by dotted lines.

A is the armature-shaft, to which is keyed the iron cylinder B. Upon the end of said cylinder nearest the armature is a flange or collar C, which has an inner bevel at *a*. The other end of the cylinder is screw-threaded.

D D are the conducting-strips having beveled ends, which are placed upon the cylinder B and separated therefrom by a layer of mica *b*.

The cylinder B is provided with a number of longitudinal slots or grooves *c c*. These slots hold strips of mica *d d*, which extend up between the conducting strips or bars D and separate them from one another.

A ring E, having its inner side beveled correspondingly to the bevel on the collar C, is placed upon the end of the cylinder, the flange *e* extending beneath the conducting-strips and insulation *b*. Mica *f* extends up between the ring E and strips D, and also between the ring C and said strips. The clamping-ring E is then placed upon the screw-threaded end of the cylinder B and screwed up tightly against the ring E. This holds the cylinder, the insulation, and the conducting-strips firmly and securely together, the beveled conducting-strips D being held between the beveled rings C and E.

G is a vulcanized fiber disk, which supports and separates the devices connecting the armature-coils with the commutator-strips. Such connections are made by the strips H, which are brazed to the ends of the strips D.

The above features relating to the connections between the armature and commutator are claimed in another application, the present case relating only to the construction of the commutator-cylinder.

What I claim is—

1. In a commutator, the combination, with the cylinder having longitudinal grooves, of the conducting-strips, the insulating material held by such grooves and extending between said strips, and the layer of insulating material between said cylinder and said conducting-strips, substantially as set forth.

2. In a commutator, the combination, with the cylinder having longitudinal grooves and an inwardly-beveled metal collar at each end, of the beveled conducting-strips on said cylinder, insulating material held by said grooves between the strips, insulating material between the cylinder and the strips, and insulating material between the ends of the strips and said collars, substantially as set forth.

3. In a commutator, the combination, with the cylinder having an inwardly-beveled collar at each end, of the beveled conducting-strips, a layer of mica between the cylinder and the strips, mica between the several strips, and mica between the strips and the collars, substantially as set forth.

This specification signed and witnessed this 27th day of July, 1883.

THOS. A. EDISON.

Witnesses:
H. W. SEELEY,
EDWARD H. PYATT.