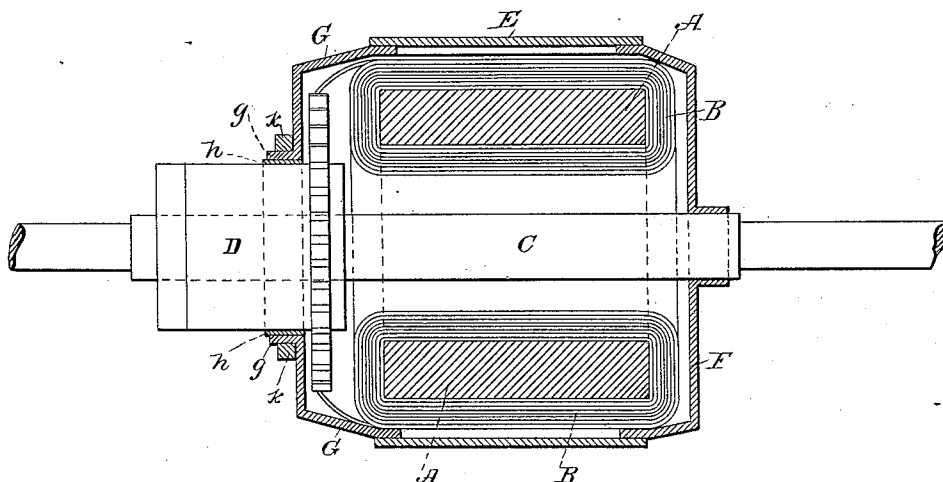


(No Model.)

A. L. RIKER.
PROTECTING CASE FOR ARMATURES.

No. 408,045.

Patented July 30, 1889.



Attest:
Jas. H. McLaughlin
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his attorney.

UNITED STATES PATENT OFFICE.

ANDREW L. RIKER, OF NEW YORK, N. Y.

PROTECTING-CASE FOR ARMATURES.

SPECIFICATION forming part of Letters Patent No. 408,045, dated July 30, 1889.

Application filed April 24, 1889. Serial No. 308,348. (No model.)

To all whom it may concern:

Be it known that I, ANDREW L. RIKER, of New York city, in the county and State of New York, have invented a new and useful
5 Improvement in Protection for Armatures of Dynamos or Motors, which improvement is fully set forth in the following specification.

This invention has reference to the protection of electric motors when used in such position as to involve exposure to the elements
10 and to prevent the injury that results from this cause.

It has been found in the case of motors used in a street-railway system, in which they are usually placed under the car-body, that by reason of the moisture taken up by the armatures they are burned out with great rapidity, and this experience has proved in many instances quite expensive. I propose to avoid
20 this injury by inclosing the armature in a hermetically-closed metallic shell or case, which is so light as not to add materially to the weight of the armature and so thin as not to effect the proximity of the armature to the poles of the field-magnet. The shell or casing fitting tight over the armature holds the coils thereof in place and renders unnecessary the wrapping ordinarily employed for that purpose. The same mode of protection
25 could obviously be applied to the field-magnets.

The accompanying drawing represents in longitudinal section the manner in which the invention is or may be carried into effect.

35 A is an armature-ring; B, the coils; C, the armature-shaft, and D the commutator, all of ordinary or of any suitable description.

E is a tube, of brass or other suitable metal, drawn out in one piece and of just the size
40 to fit snugly around the armature. This tube

need not be more than one thirty-second part of an inch in thickness. As shown in the drawing, the thickness of the casing is much exaggerated. Ordinarily the armature-coils B are wrapped with fine wire to keep them in place on the core. The tube E renders the wrapping of the coils unnecessary. At one end of the armature is a thin cup-shaped disk or cap F, also preferably of brass, which at its larger ends fits under (or it might be
50 over) the tube E and is soldered thereto. The smaller end fits close to the shaft C and this joint is also made tight with solder. G is a similar cap and is similarly secured to tube E. It is made slightly larger than the commutator D and is provided with a flange g. Under this flange is placed a ring or strip h, of rubber or other insulating material, and the flange g is clamped against this by a ring k, which is shrunk on said flange. Thus the
55 armature is hermetically sealed and may be used in exposed positions without injury.

I claim as my invention—

1. A dynamo or motor having its armature protected by a hermetically-closed metallic case fitting closely around the armature, substantially as described.

2. A dynamo or motor having its armature protected by a casing consisting of a thin metallic tube fitting closely around the armature, and caps or cups at each end, that on the side of the commutator being insulated therefrom, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ANDREW L. RIKER.

Witnesses:

PHILIP MAURO,
A. POLLOK.