(No Model.)

W. E. HARRINGTON.

WIRE JOINT FOR COMMUTATORS.

No. 441,487. Patented Nov. 25, 1890.

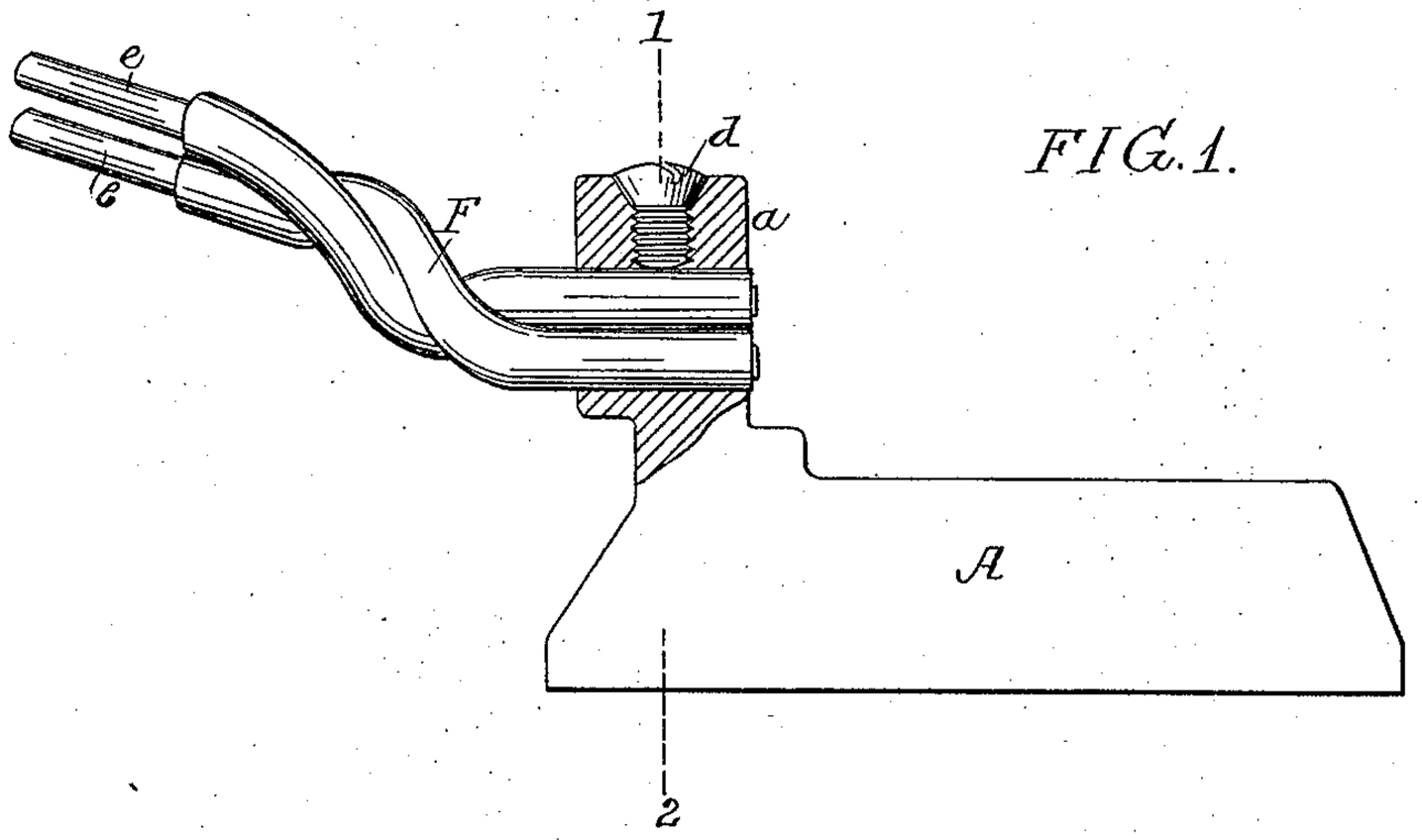


FIG. 1.

FIG. 3.

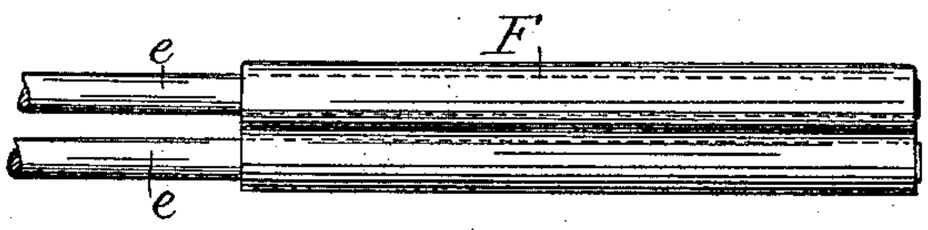
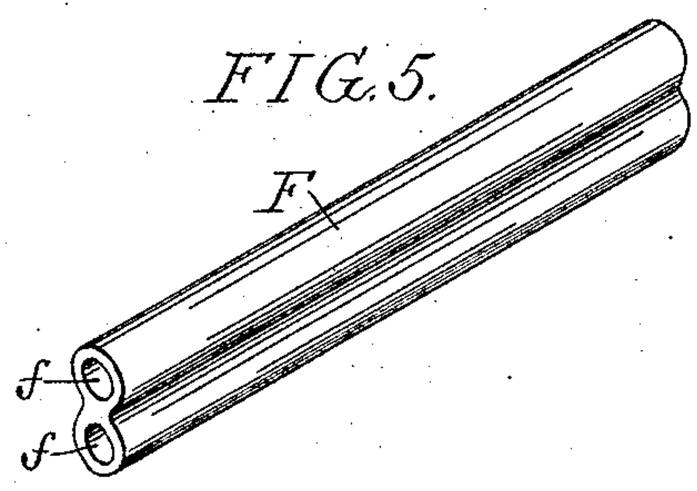


FIG. 5.



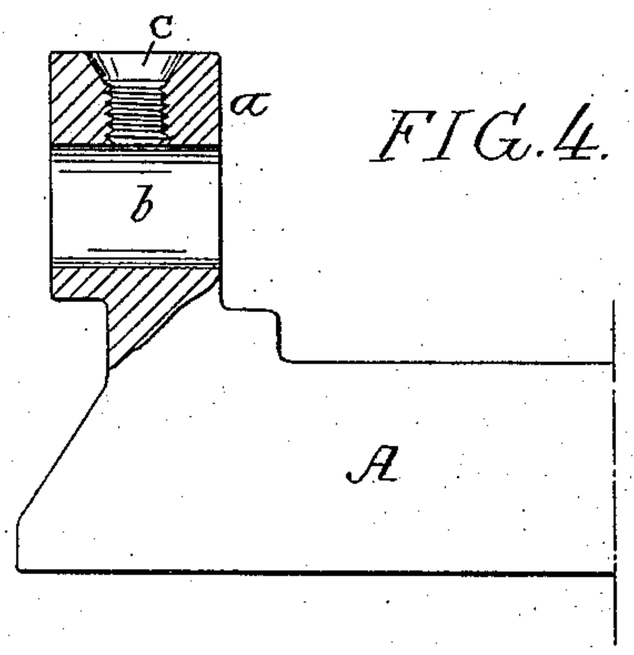


FIG. 4.

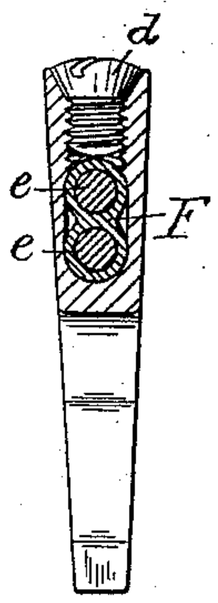


FIG. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

WALTER E. HARRINGTON, OF ATLANTIC CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO LEONARD ATWOOD, OF PHILADELPHIA, PENNSYLVANIA.

WIRE JOINT FOR COMMUTATORS.

SPECIFICATION forming part of Letters Patent No. 441,487, dated November 25, 1890.

Application filed August 28, 1890. Serial No. 363,290. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. HARRINGTON, a citizen of the United States, and a resident of Atlantic City, Atlantic county, New Jersey, have invented certain Improvements in Wire Joints for Commutators, of which the following is a specification.

The object of my invention is to securely couple the armature-wires of a dynamo or electric motor to the commutator-plates, so that they will not work loose when the dynamo or motor is working, but can be readily detached when repairs or alterations are necessary.

In the accompanying drawings, Figure 1 is a view, partly in section, of one of the plates of a commutator, showing the wires leading from the armature attached thereto. Fig. 2 is a transverse section on the line 1 2, Fig. 1. Fig. 3 is a view of the wires prepared for attachment to the commutator-plate. Fig. 4 is a view, partly in section, of a portion of the commutator-plate, showing the orifice into which the wires are to be inserted; and Fig. 5 is a perspective view of the double sleeve into which the ends of the wires are placed previous to their insertion in the orifice in the commutator-plate.

The common practice at present in connecting a wire of an armature to a commutator is to slot or groove the plates of the commutator, and the wires are secured to these slots or grooves by solder to make a tight joint between the plate and the wires. Owing, however, to the high speed at which the dynamos and motors revolve the plates are highly heated, and the solder which secures the wires to the plates become molten, and once loosened the centrifugal force due to the velocity of the commutators is sufficient to throw the wires from the grooves. I overcome these objections in the following manner: In the head A of the commutator-plate is an elongated orifice *b*, adapted to receive the two wires *e e*, leading from the armature, the wires being first passed through the openings *f f* in a sleeve, as shown in Fig. 5, and being twisted together with the sleeve, in the manner shown in Fig. 1, in order to make good contact between the sleeve and the wires, a portion of the sleeve and wires being left straight, so that they can be inserted in the orifice *b* in the head A, the wires and sleeve being secured therein by the set-screw *d*, adapted to a threaded orifice *c*. By this arrangement it is impossible for one wire to become detached from the other, and it is also impossible for the wires to become detached from the commutator-plate, and a much larger contact-surface is had between the sleeve and the plate. This construction is, moreover, desirable in the manufacture or in testing the dynamo or motor, as it is only necessary to tighten the set-screw *d* to secure the wires in position.

I claim as my invention—

1. The combination of the commutator-plate provided with an orifice *b*, the wires *e e*, a sleeve F, covering the ends of said wires and adapted to the orifice in the commutator-plate, and means for securing the sleeve and wires to said plate, substantially as described.

2. The combination of the commutator-plate having an orifice therein, the wires *e e*, a sleeve adapted to said wires and to the orifice, and a set-screw in said commutator-plate, adapted to secure the sleeve to said plate, substantially as described.

3. The combination of the commutator-plate, the wires *e e*, and the sleeve to which the wires are adapted, the said wires and sleeve being twisted together, substantially as shown and described, and secured to the said commutator-plate, substantially as set forth.

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

WALTER E. HARRINGTON.

Witnesses:
LUCIUS I. WRIGHT,
CLEMENT J. ADAMS.