

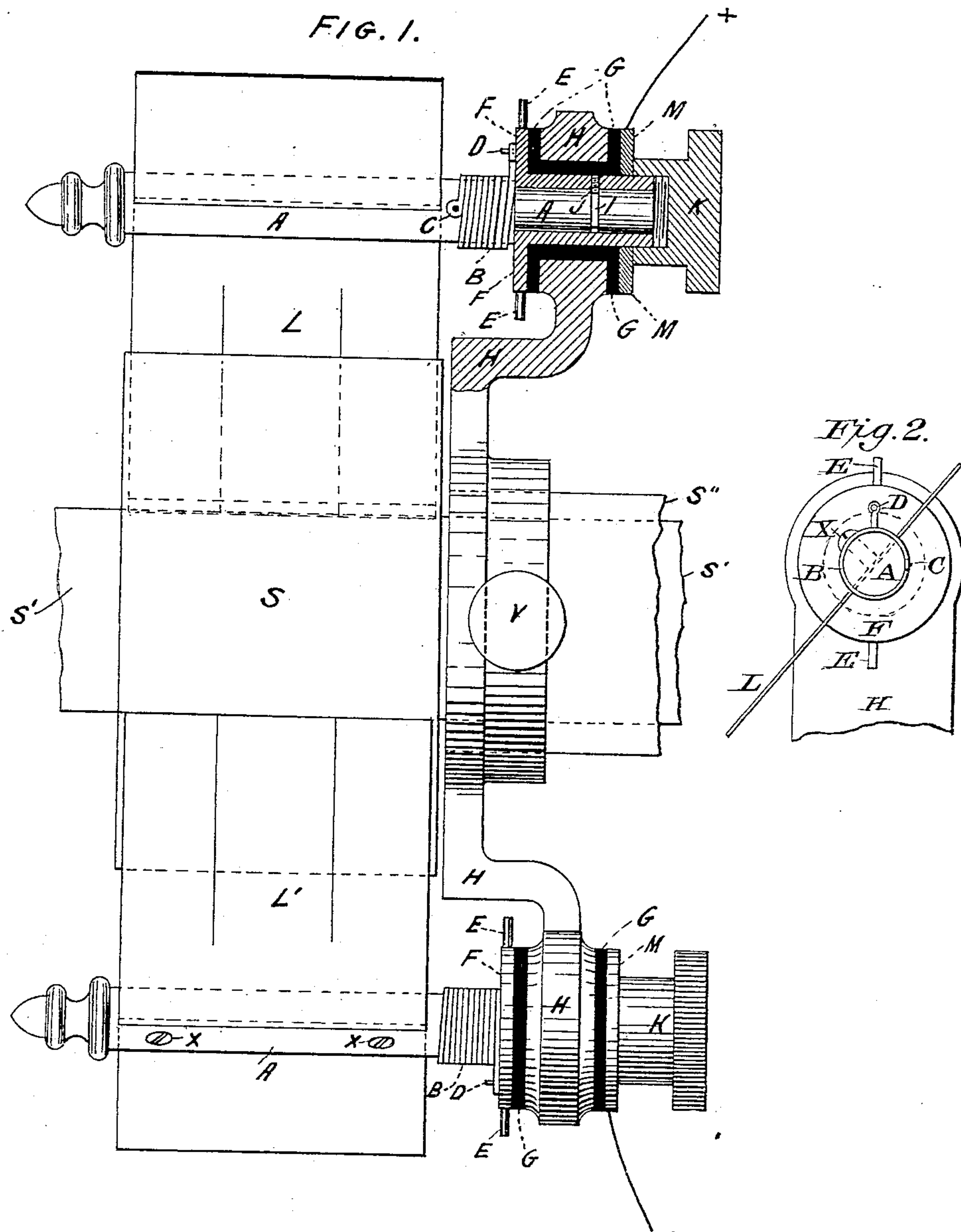
(No Model.)

E. R. KNOWLES & F. E. IDELL.

DYNAMO ELECTRIC MACHINE.

No. 292,121.

Patented Jan. 15, 1884.



WITNESSES.

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UNITED STATES PATENT OFFICE.

EDWARD R. KNOWLES, OF BROOKLYN, NEW YORK, AND FRANK E. IDELL,
OF HOBOKEN, NEW JERSEY, ASSIGNORS TO THE CONSOLIDATED ELECTRIC LIGHT COMPANY, OF NEW YORK.

DYNAMO-ELECTRIC MACHINE.

SPECIFICATION forming part of Letters Patent No. 292,121, dated January 15, 1884.

Application filed September 6, 1882. (No model.)

To all whom it may concern:

Be it known that we, EDWARD R. KNOWLES and FRANK E. IDELL, citizens of the United States, residing, respectively, in Brooklyn, in the county of Kings and State of New York, and Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Dynamo-Electric Machines, of which the following is a description in such full, clear, concise, and exact terms as will enable any one skilled in the art to which our invention appertains to make and use the same, reference being had to the accompanying drawings, making part of this specification, and to the letters and figures of reference marked thereon.

Our invention relates to that part of a dynamo-electric machine known as the "commutator-brush holders;" and it consists in so constructing and arranging the parts thereof that the brushes are applied to the commutator with a constant and even pressure, readily adjustable to any degree; and, further, so that the brushes can be advanced when worn away at their ends.

In the drawings, Figure 1 is a side view, partly in section, of a brush-arm and yoke constructed according to our invention. Fig. 2 shows the spring and pin connection, the adjustable spring-sleeve, and the means for fastening the brush into the brush-arm.

H is a yoke passing around the bearing of the machine, about which it can be rotated, and to which it can be clamped in any desired position. The hole through the end of H is bushed with the insulating-ring G. Through G is passed the metal sleeve F, provided with the projecting pins or handles E E. Through the sleeve F is passed the end of the brush-arm A, and which is secured in F by the groove I and pin J, or in any suitable manner. The end of the sleeve F is screw-threaded, as shown, Fig. 1, and a hollow nut, K, is screwed

on it. Between the nut K and the insulating ring G is a loose metal ring, M, to which the conductor is attached. Around the brush-arm A is coiled the spring B, one end of which is fastened to A at C, and the other end to F at D, Figs. 1 and 2. The brush L is retained in the arm A by the screws X X, or in any other suitable manner.

The operation of the mechanism is as follows: After the brushes L are adjusted to proper lengths and securely fastened in the arms A by means of the screws X, they are made to press against the commutator-cylinder S by turning the sleeve F by the arms E until the proper pressure of the brush against the commutator-cylinder is obtained by uncoiling the springs B against themselves. When this is accomplished, the nut K is screwed up tight against M, thus binding the sleeve F and ring M against the insulating-ring G, and retaining the sleeve F in the desired position. The arm A is, however, free to rotate, and the spring B will keep the brush constantly pressed against the commutator S.

We do not claim the use of a spring brush-arm, broadly, as we are aware that there are other spring brush-arms in use which are intended to accomplish similar results to those secured by ours; but

What we do claim, and desire to secure by Letters Patent, is—

In a dynamo-electric machine, the combination, with the brushes and commutator, of an arm, A, a spring, B, an adjusting-sleeve, F, a contact-ring, M, and a tightening-nut, K, the whole being supported upon a yoke, H, substantially as described, for the purpose so specified.

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Witnesses:

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