

(No Model.)

2 Sheets—Sheet 1.

C. A. HUSSEY.
BRUSH HOLDER FOR ELECTRIC MOTORS OR DYNAMO ELECTRIC MACHINES.
No. 471,819. Patented Mar. 29, 1892.

Fig. 1

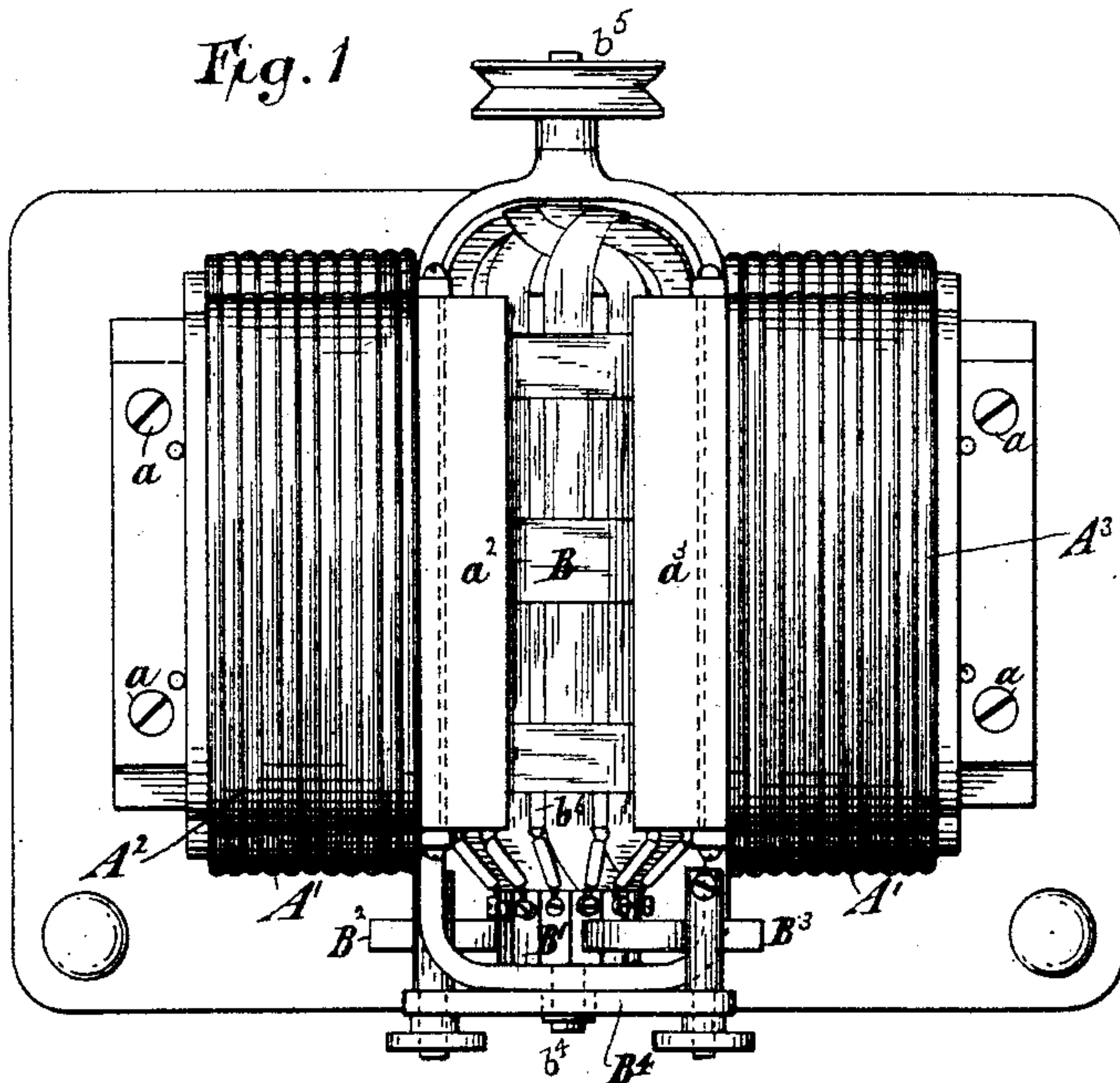
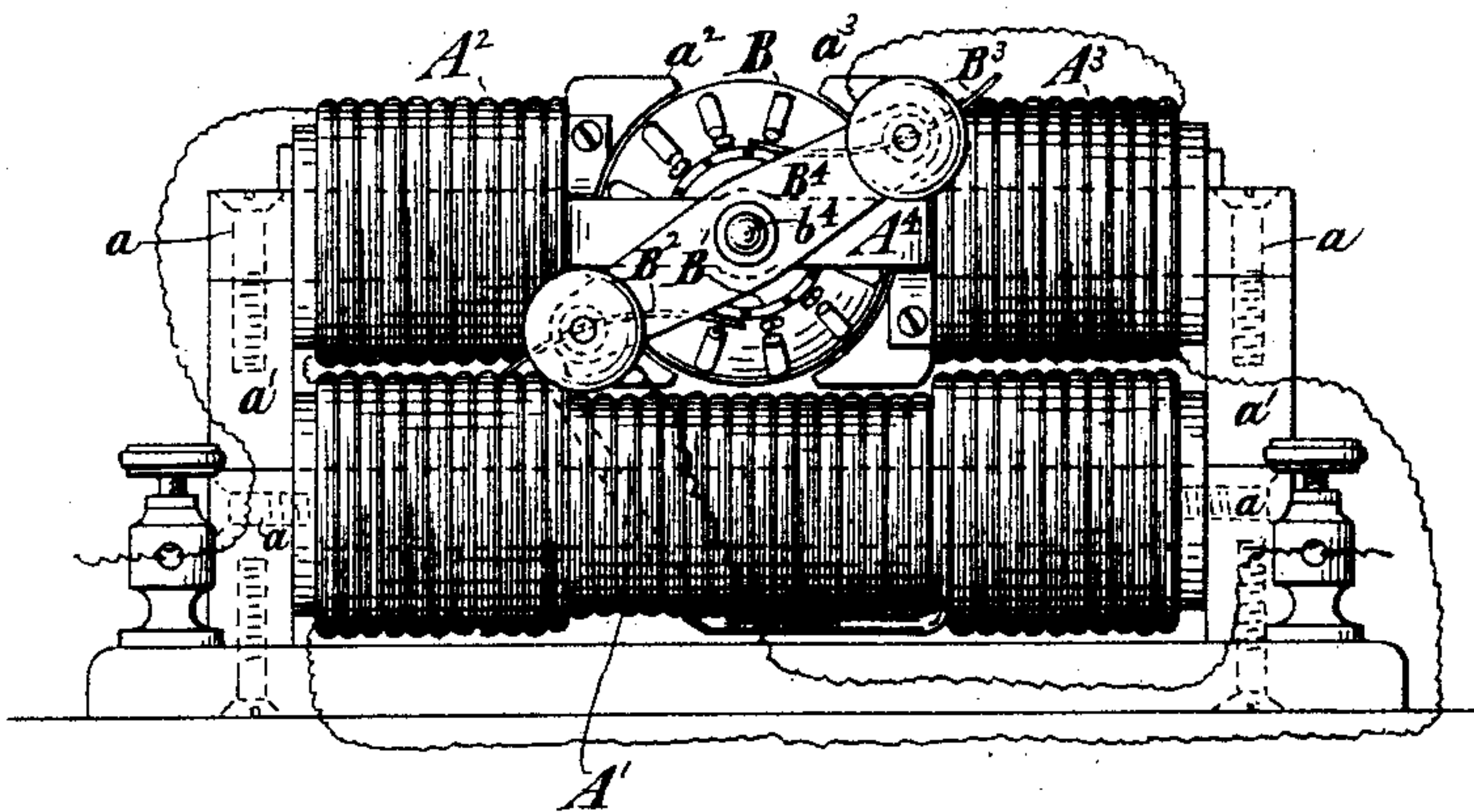


Fig. 2



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Fig 4.

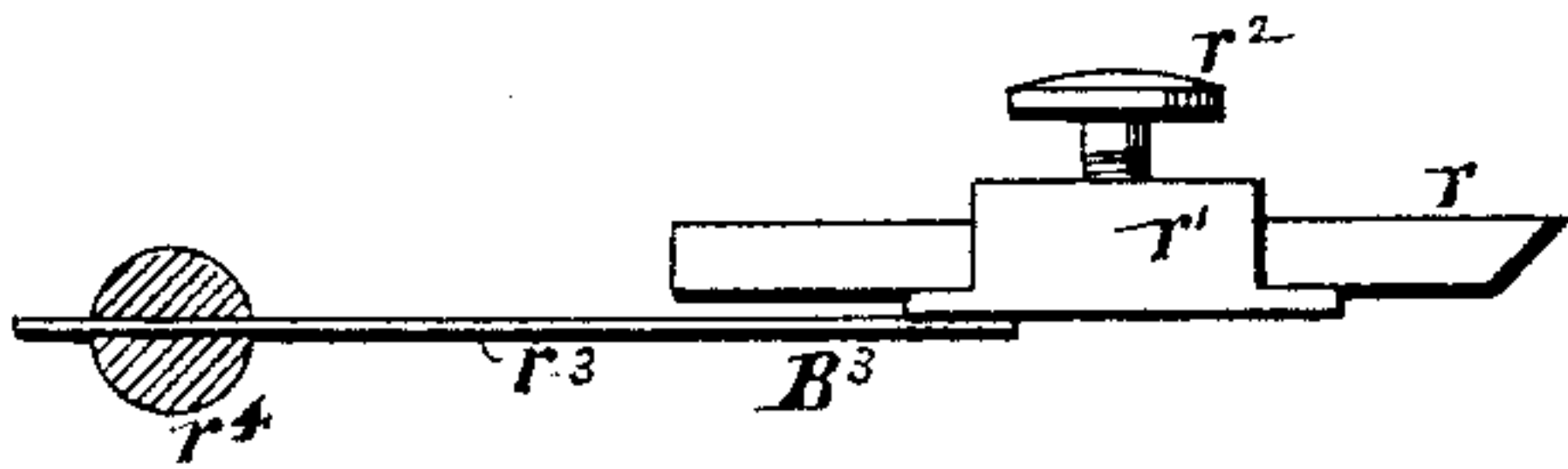


Fig 5.

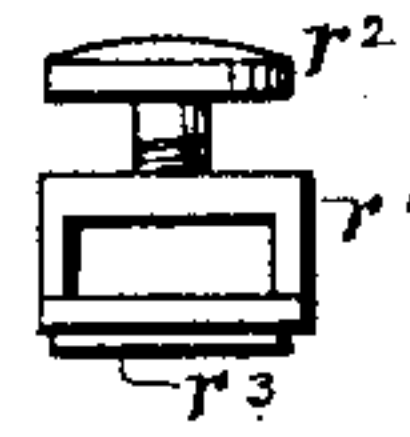


Fig 3.

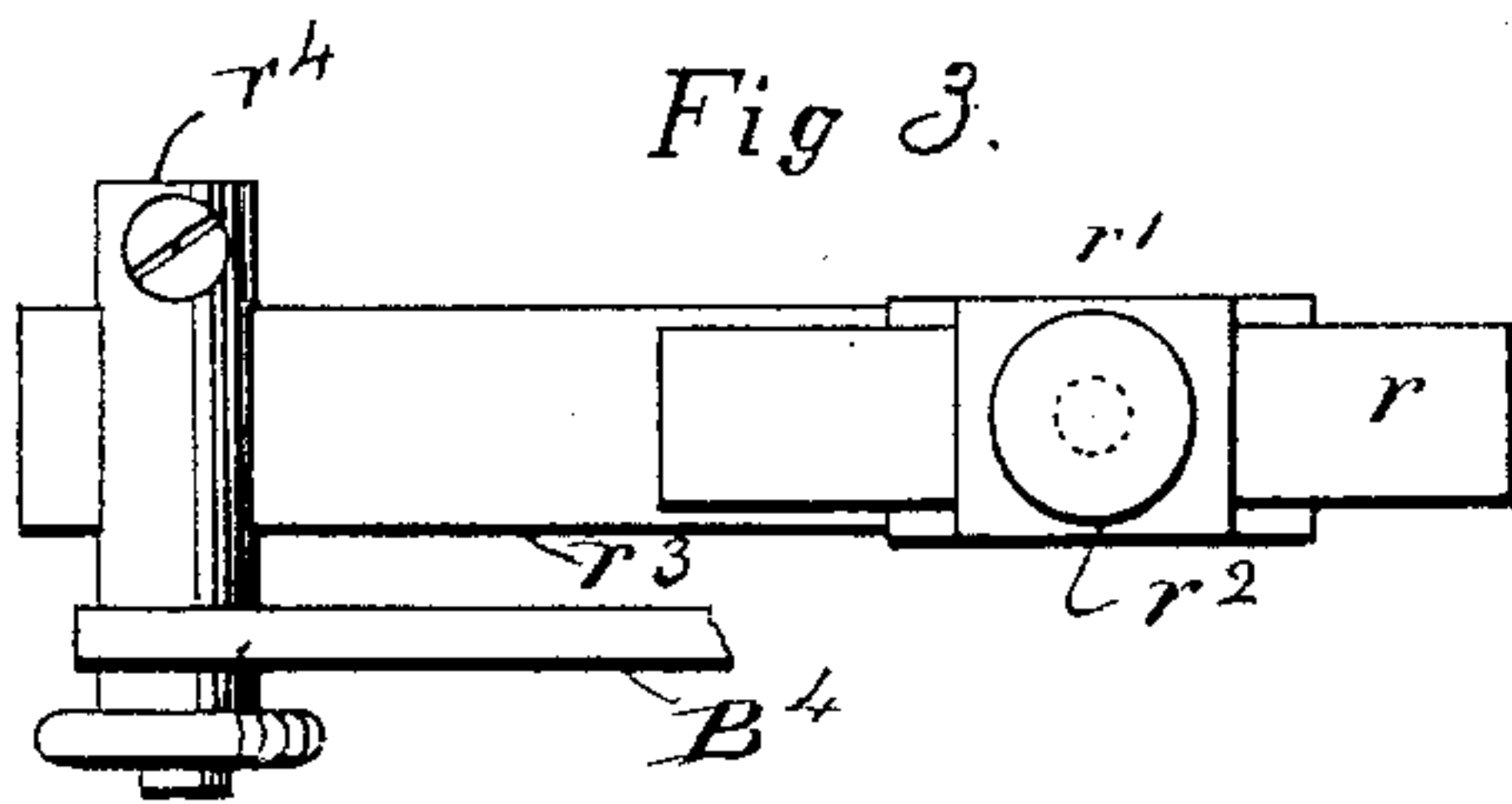


Fig 6.

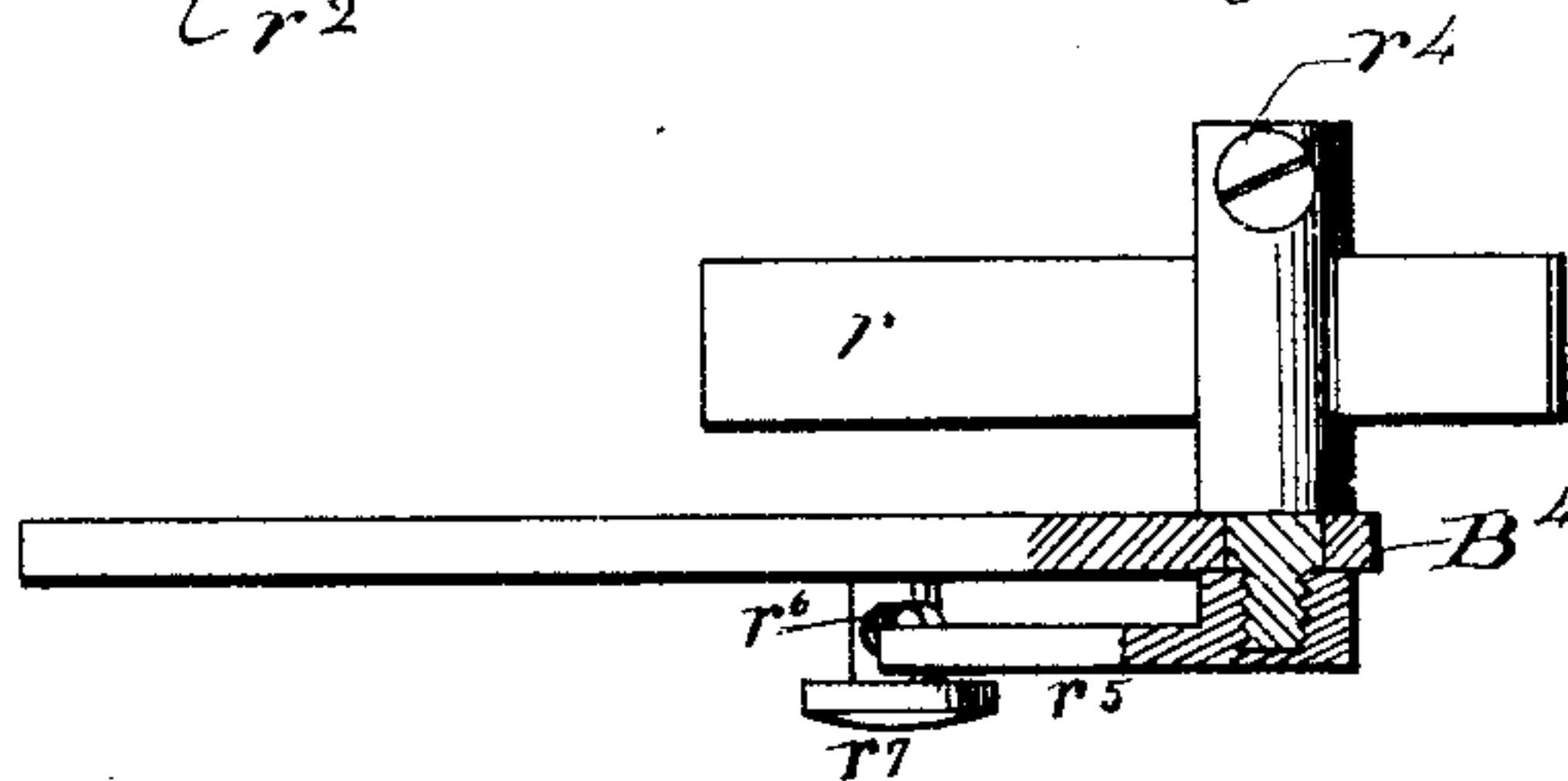
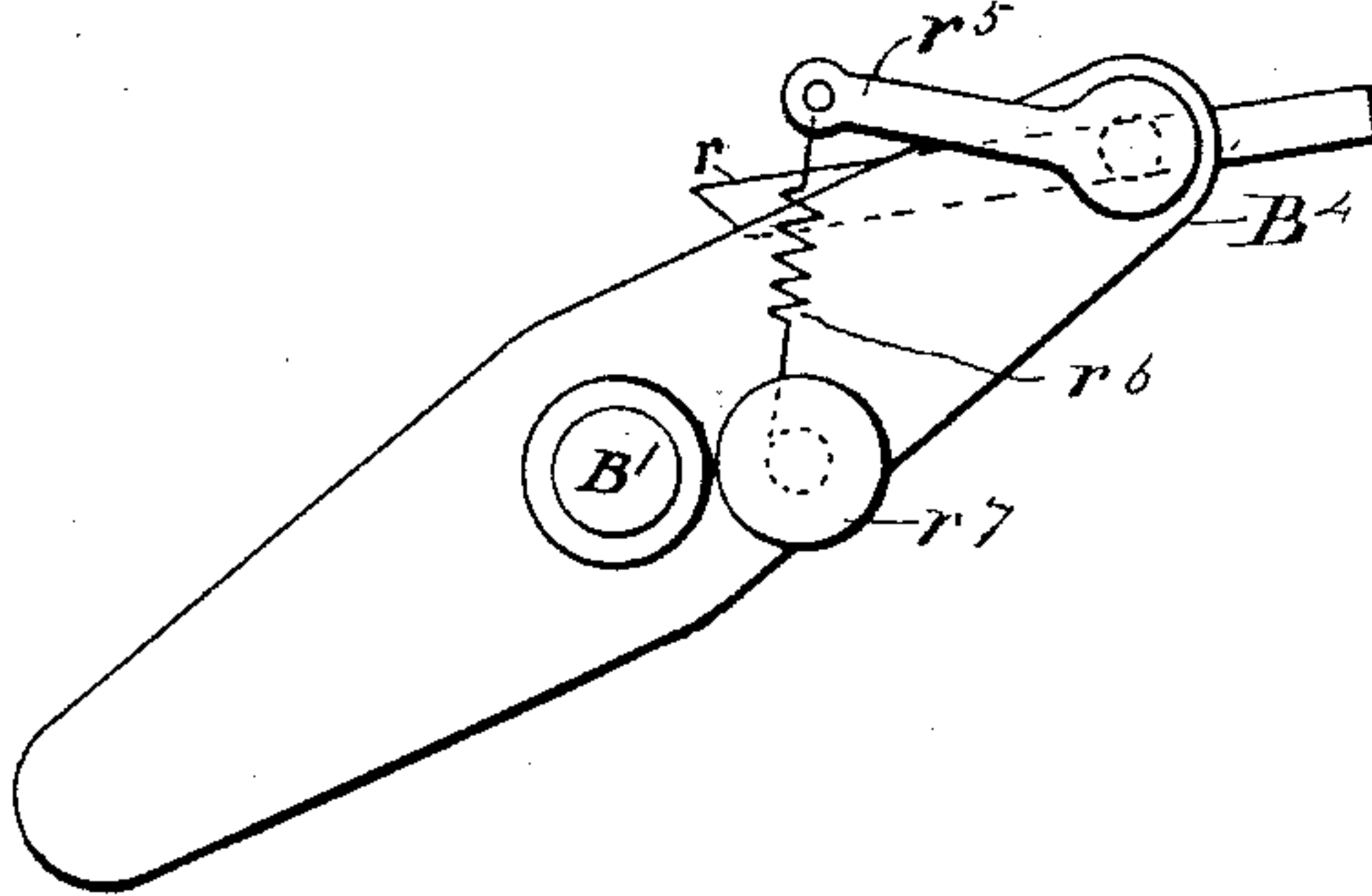


Fig 7.



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UNITED STATES PATENT OFFICE.

CHARLES A. HUSSEY, OF NEW YORK, N. Y.

BRUSH-HOLDER FOR ELECTRIC MOTORS OR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 471,819, dated March 29, 1892.

Application filed May 6, 1889. Serial No. 309,784. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. HUSSEY, of New York, in the county and State of New York, have invented a certain new and useful Improvement in Electric Motors and Dynamo-Electric Machines, of which the following is a specification.

I will describe a motor embodying my improvement and then point out the novel features in the claim.

In the accompanying drawings, Figure 1 is a top view of a motor and dynamo-electric machine embodying my improvement. Fig. 2 is an end view of the same. Fig. 3 is an enlarged top view of one of the brushes. Fig. 4 is a side view thereof. Fig. 5 is an end view of the same. Fig. 6 is a plan of a brush and appurtenances somewhat modified. Fig. 7 is an end view.

Similar letters of reference designate corresponding parts in all the figures.

A' A² A³ designate the field-magnet of the machine. It consists, essentially, of a main portion A' and two smaller portions A² A³, the latter being connected to the main portion by connecting-pieces a', and having at their opposite extremities pole-pieces a² a³, between which the armature B rotates. The cores of the portions A' A² A³ are secured to the connecting-pieces a' in any desirable manner. In the present instance the connecting-pieces a' extend past the ends of the core of the main portion A', and the cores of the portions A² A³ are extended over the top of the connecting-pieces. Screws a passing through the contiguous parts unite them.

The field-magnet may be secured to any suitable base-piece—as, for example, the base-piece C of wood or other suitable material.

B represents the armature having journals b⁴ b⁵. A commutator-wheel B' is fastened to one of the journals of the armature-core. The commutator-brushes B² B³ are secured to an oscillating bar B⁴, which is mounted on a neck or flange belonging to the adjacent bracket A⁴ and which may be oscillated to adjust the brushes.

I will now call attention to certain novel features in the brushes illustrated by Figs. 3, 4, and 5. The brush consists, essentially, of a strip of carbon r, fitted in a socket r'. This socket consists, essentially, of a plate having a loop. The strip of carbon fits between the plate and the loop. The loop is provided with a clamping-screw r² for holding the carbon strip. The socket may be cast of any suitable metal. It is attached by solder or otherwise to a metal spring r³. This spring is shown as fitting in an ordinary brush-holder r⁴. This holder is secured to the bar B⁴. The spring r³ enables the carbon strip to act with a yielding pressure upon the commutator-wheel.

In Figs. 6 and 7 I have shown a carbon strip r inserted directly in a brush-holder r⁴. In this case the brush-holder r⁴ is supported in the bar B⁴, so as to be free to rotate, and has affixed to its outer end an arm r⁵. This arm r⁵ is connected to a spring r⁶ and the latter is fastened to a string which is wound upon a windlass r⁷, which is inserted in the bar B⁴, and can be rotated to wind or unwind the string to put more or less tension upon the spring. The windlass r⁷ fits tightly in the bar B⁴, so that it will be held in position when adjusted. It will be seen that the carbon strip in this instance, as well as in the other example of this brush improvement, is made to bear with a yielding pressure upon the commutator-wheel.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with an electric motor or dynamo-electric machine, of the brush-holder supported and rotating in the bar B⁴, an arm on said brush-holder, a spring r⁶, connected to the arm, a windlass r⁷, inserted in the bar B⁴, a connection between the spring and windlass, and a carbon strip inserted in the brush-holder, substantially as specified.

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Witnesses:

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