No. 803,853. PATENTED NOV. 7, 1905.

H. G. REIST.

BRUSH HOLDER.

APPLICATION FILED MAR. 26, 1904.

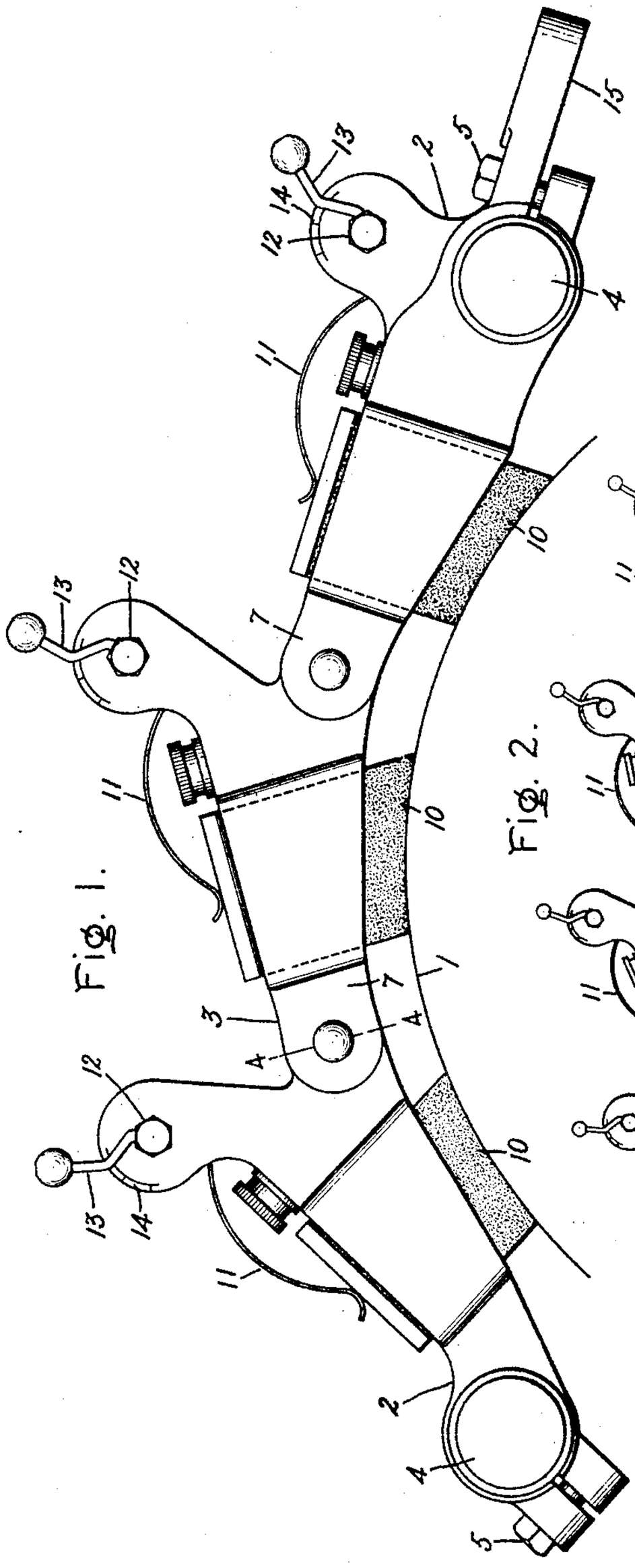

Fig. 1.

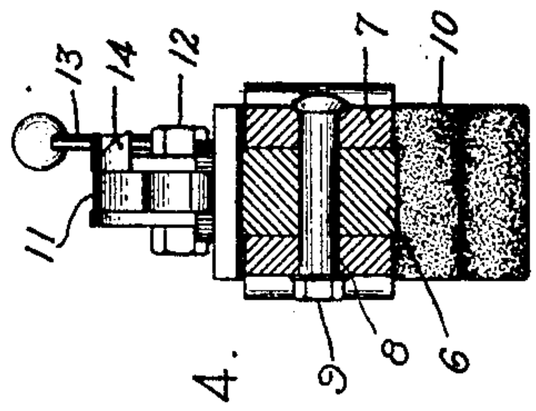

Fig. 4.

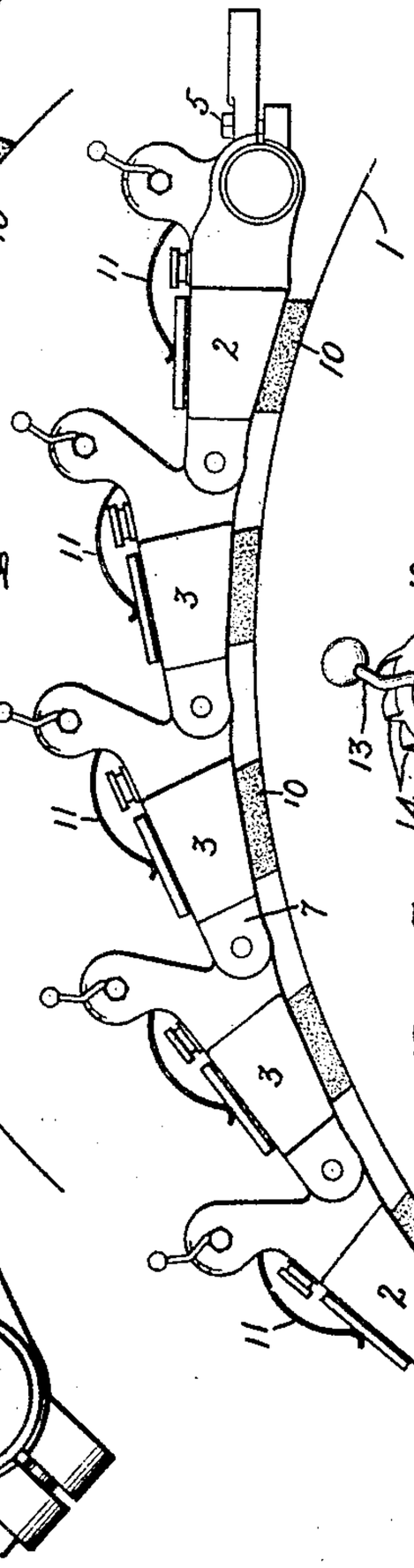

Fig. 2.

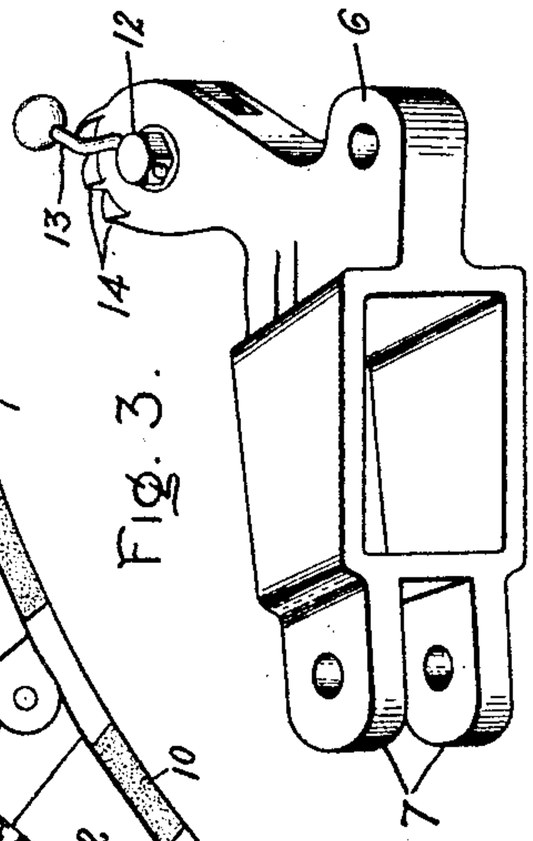

Fig. 3.

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UNITED STATES PATENT OFFICE

HENRY G. REIST, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

BRUSH-HOLDER.

No. 803,853. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed March 26, 1904. Serial No. 200,163.

To all whom it may concern

Be it known that I, HENRY G. REIST, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Brush-Holders, of which the following is a specification.

The object of my present invention is to improve the construction of means for establishing electrical connection between fixed and moving parts in dynamo-electrical machines or the like.

In carrying out my invention I employ a plurality of brush-holder units connected together to form a single current-collecting or contact device. Each unit is connected to one or more other units of the same device, and one or more units of each device is connected to a suitable support or supports.

The various features of novelty which characterize my invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

For a better understanding of my invention, however, reference may be had to the accompanying drawings and description, in which I have illustrated and described an embodiment of my invention.

In the drawings, Figure 1 is an elevation showing a current-collecting device formed of three units. Fig. 2 is an elevation showing a current-collecting device formed of five units. Fig. 3 is a perspective view showing one of the intermediate units, and Fig. 4 is a section taken on the line 4 4 of Fig. 1.

In the form of my invention shown in Figs. 1 and 2 of the drawings a portion of a cylindrical member 1, such as the collector-ring of a dynamo-electro machine, is shown as the part with which it is desired to make electrical contact. A current-collecting or contact device coöperating with the cylindrical member 1 comprises a number of brush-holder units arranged end to end in series, with each unit rigidly connected to an adjacent unit. In Fig. 1 the contact device shown comprises two end units 2 and an intermediate unit 3, while in Fig. 2 the contact device is shown as comprising two end units 2 and three intermediate units 3.

In the forms shown in Figs. 1 and 2 each of the end units 2 is provided with a split collar through which a supporting stud or post 4 passes. Suitable screws 5 are employed to draw the parts of the split collars together to lock each end unit to its corresponding stud or post 4 with the unit in any desired position. The member 1 and the current-collecting or contact device are ordinarily relatively movable. Usually the contact device is fixed, and the member 1 revolves about its axis.

Each of the units shown in Figs. 1 and 2, except the right-hand end unit, is formed with a projection or part 6 at its right-hand end, which is inserted between a coöperating pair of parts or projections 7, carried at the left-hand end of the adjacent unit. A bolt 8 passes through apertures formed for the purpose in the projections 6 and 7. The bolt 8, which is threaded at one end, and its coöperative nut 9 form a means for clamping the projections 6 and 7 rigidly together. Each unit is formed with a box or guideway in which a suitable brush 10 slides. Suitable means are employed to press each brush against the member 1. In the construction shown each unit is equipped with a tension device, which comprises a bent spring 11, one end of which presses against the brush, while the other end is secured to a bolt 12, which may be held in different positions by means of a crank or arm 13, secured to one end of the bolt and coöperating locking projections 14. The particular tension-adjusting means described and illustrated is that shown in the United States patent to Erben, No. 705,055, dated July 22, 1902. Instead of this construction, however, any other suitable form of brush-tension device may be employed. The right-hand end unit 2 (shown in the drawings) is provided with a projection 15, to which any suitable current-carrying conductor or lead may be secured. It will be understood that all of the brushes employed in a single contact device are of one polarity and that one or more contact devices may be employed in conjunction with each member 1.

While in Fig. 1 of the drawings I have shown a contact device made up with one intermediate unit and in Fig. 2 I have shown a device made up with three similar intermediate units, it will be readily understood that the number of intermediate units may be varied to meet requirements of the particular construction in which the contact device is employed. In some cases I have found one stud or post 4 sufficient to support each contact device. In such cases one of the end units

may be dispensed with. Ordinarily I prefer, however, to employ two studs or posts, engaging the contact device at its ends, as shown.

By loosening the nut 9 and adjusting adjacent units angularly the contact device as a whole can be fitted to cylindrical members of widely-varying diameters. Where it is not desirable to make a single contact device adjustable to fit cylindrical members of varying diameters, I may employ a rivet in place of the threaded bolt 8 and permanently secure adjacent units in fixed relations to each other.

While I have shown and described the best form of my invention now known to me, it will be readily understood by all those skilled in the art that many changes can be made in the form of my invention without departing from its spirit.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A current-collecting or contact device comprising a number of brush-holder units connected together end to end.

2. A current-collecting or contact device comprising a number of brush-holder units connected together end to end, each of said units being angularly adjustable with respect to its neighbor.

3. A current-collecting or contact device comprising a support and brush-holder unit rigidly secured to said support, and one or more brush-holder units carried by said first-mentioned brush-holder unit.

4. A current-collecting or contact device comprising a number of units arranged end to end in a series, and means for adjustably securing each of said units to an adjacent unit.

5. A current-collecting or contact device comprising a number of brush-holder units, a support, means for securing one of said units to said support, and means for securing the other of said units to the first-mentioned unit.

6. In combination, a support, a brush-holder unit, means for securing said unit to said support, a second brush-holder unit, and means for securing said second brush-holder unit to the first-mentioned brush-holder unit.

7. In combination, a cylindrical contact-surface, a coöperating contact device comprising a plurality of brush-holder units connected together in a series extending circumferentially along said contact-surface, and a brush for each of said units movably supported therein.

8. In combination, a cylindrical contact-surface, a coöperating contact device comprising a series of brush-holder units connected together and extending circumferentially about said contact-surface, and a brush movably supported in each of said units.

9. In combination, a cylindrical contact-surface, and a coöperating contact device comprising a plurality of separable brush-holder units connected together in a series extending circumferentially along said contact-surface.

10. In combination, a cylindrical contact-surface, and a coöperating contact device comprising a series of separable brush-holder units connected together and extending circumferentially about said contact-surface.

In witness whereof I have hereunto set my hand this 25th day of March, 1904.

HENRY G. REIST.

Witnesses:
EDWARD WILLIAMS, Jr.,
HELEN ORFORD.