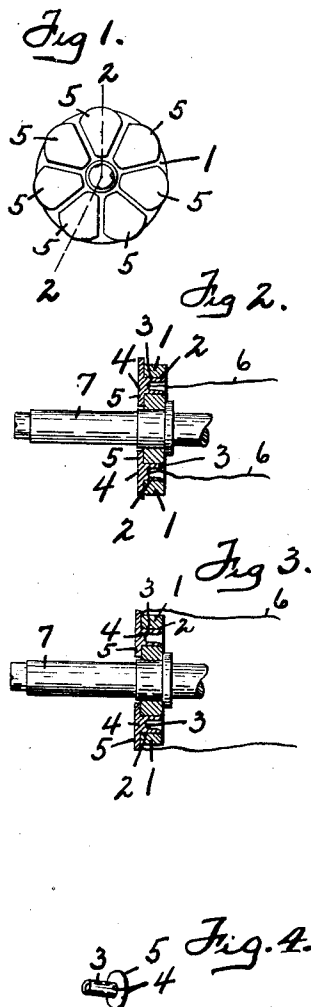


W. SPARKS.
COMMUTATOR.
APPLICATION FILED JULY 16, 1920,

1,421,734.

Patented July 4, 1922.



William Sparks
INVENTOR

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WILLIAM SPARKS, OF JACKSON, MICHIGAN, ASSIGNOR TO SPARKS-WITHINGTON COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

COMMUTATOR.

1,421,734.

Specification of Letters Patent.

Patented July 4, 1922.

Application filed July 16, 1920. Serial No. 396,801.

To all whom it may concern:

Be it known that I, WILLIAM SPARKS, of Jackson, in the county of Jackson, in the State of Michigan, have invented new and useful Improvements in Commutators, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to certain improvements in commutators.

The primary object of the invention is to produce an efficient commutator of relatively simple and inexpensive construction. Other objects and advantages relate to the details of construction as will appear from the following description taken in connection with the accompanying drawings, in which:—

Figure 1 is an elevation of the commutator.

Figure 2 is a cross-section on line 2—2, of Fig. 1.

Figure 3 is a cross-section similar to Figure 2 of a slightly modified form of device.

Figure 4 is a view of the ordinary hollow rivet capable of use in the manufacture of the commutator.

As shown, the commutator comprises a disk —1— of insulating material having formed therein a plurality of, in this instance, seven openings, or conduits —2— each adapted for the reception of the tubular shank —3— of a hollow rivet —4—, the head portion —5— of which may be cut to sector shape, as shown in Figure 1. When the hollow shank —3— has been passed through its respective conduit —2—, the projecting end may be spread or riveted into contact with the adjacent face of the insulating disk —1— to rigidly hold the parts in desired position. The head of each rivet when so assembled with the insulating disk, is adapted to constitute a contact, and when the heads are shaped preferably in the manner shown, each contact is spaced from the adjacent contacts a distance desired, dependent upon the form and size of the rivet head, the diameter of the insulating disk and the extent to which the rivet heads are cut down, if at all. The terminal wires, as

—6—, may perhaps preferably, as shown in Figure 2, be secured within the interior of the hollow shank —3— in any suitable manner, or as shown in Figure 3, the wire —6— may be soldered or otherwise secured to the heads —5— constituting the face contacts of the commutator.

The disk —1— is shown as mounted upon a shaft —3— in the usual manner, and that shaft may or may not be the armature shaft of a motor.

Although I have shown and described a specific construction of device with definitely formed parts assembled and secured together in a particular manner, I do not desire to limit myself to the details of form, arrangement or construction, as many changes may be made in each without departing from this invention as set forth in the appended claims.

What I claim is:

1. A commutator comprising a disk having an opening therethrough and a contact member having a tubular shank extended through said opening and secured to the disk and a head portion in substantial contact with one face of the disk.

2. A commutator comprising an insulating disk having an opening therethrough, and a contact member having a web portion in substantial contact with one face of the disk and a tubular shank centrally engaged with said head and extended through the opening in the disk, and secured to the disk.

3. A commutator comprising an insulating disk having a plurality of openings therethrough, and a plurality of contact members each member having a tubular shank extended through a respective opening and secured to the disk, and a head portion connected with each member, such head portion in substantial contact with one face of the disk.

In witness whereof I have hereunto set my hand this 30 day of June, 1920.

WILLIAM SPARKS.

Witnesses:

ROLLIN R. BLISS,
ROSCOE BROWN.