## C. F. ADAMS.

## COMMUTATOR LEAD AND MODE OF MAKING SAME.

APPLICATION FILED AUG. 8, 1903.

NO MODEL.

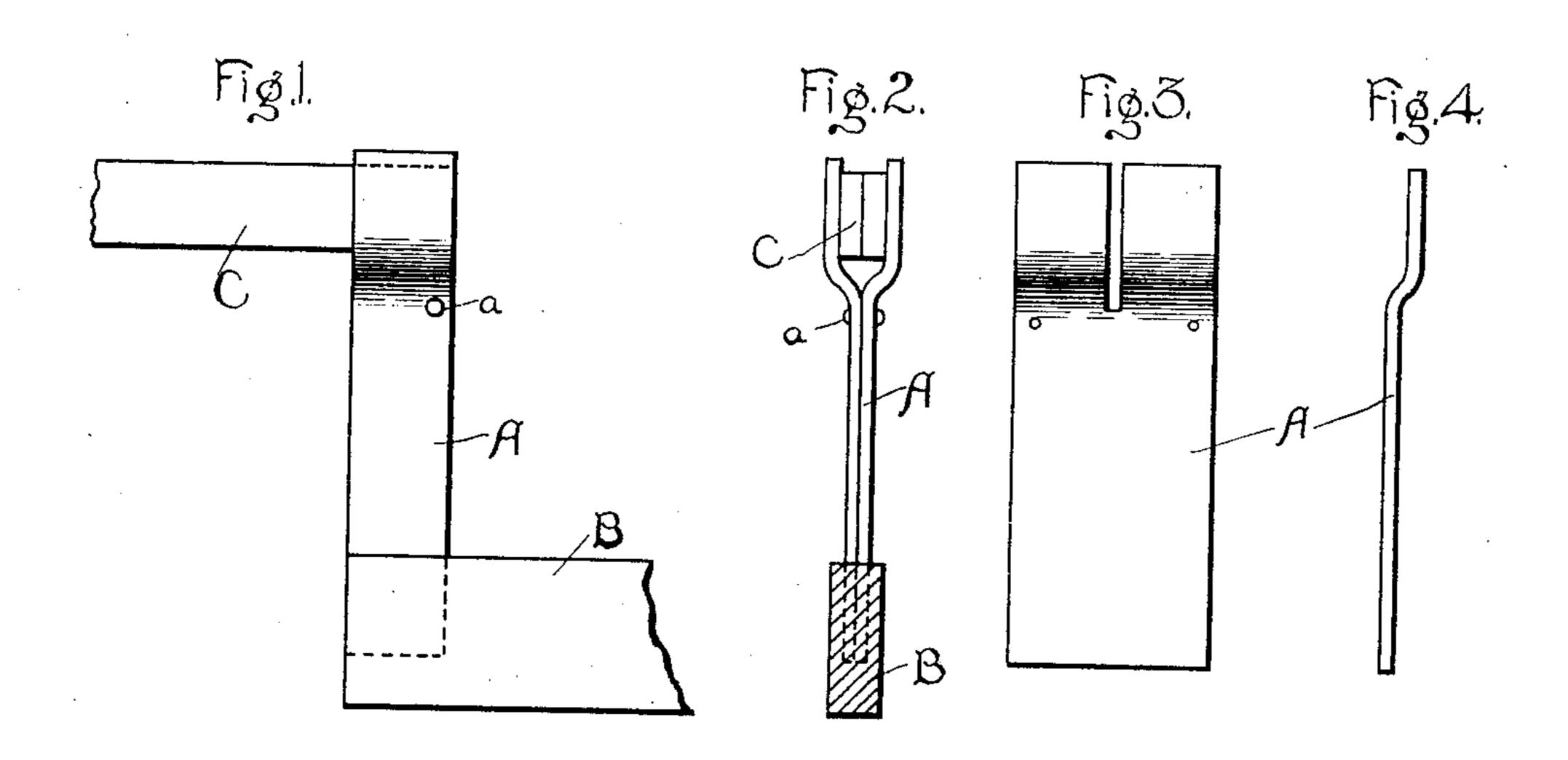
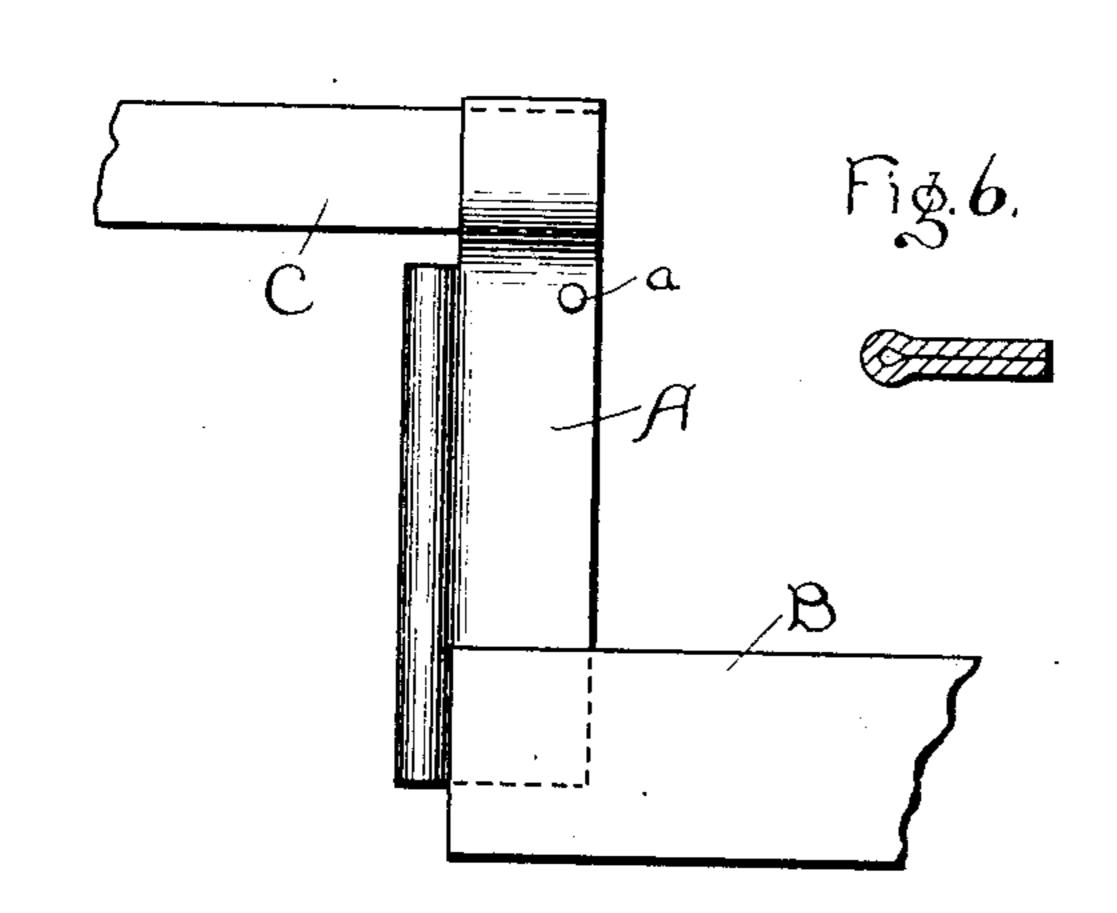
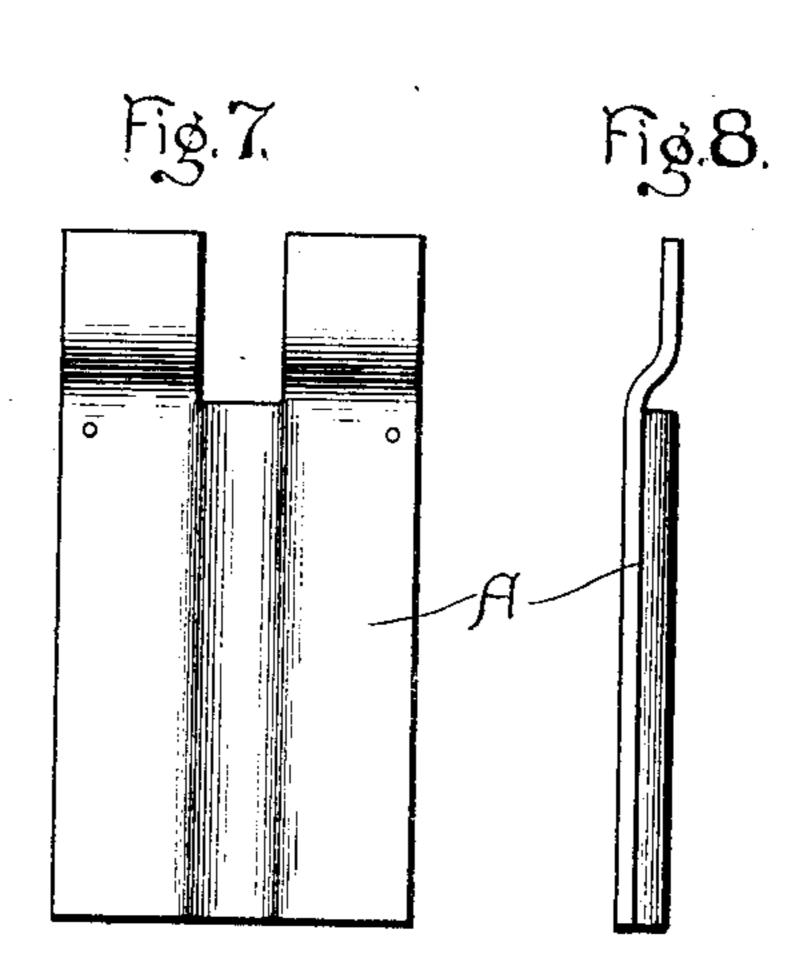


Fig.5.





WITNESSES:

INVENTOR.

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## United States Patent Office.

CHARLES F. ADAMS, OF PITTSFIELD, MASSACHUSETTS, ASSIGNOR TO STANLEY ELECTRIC MANUFACTURING COMPANY, OF PITTSFIELD, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

## COMMUTATOR-LEAD AND MODE OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 751,440, dated February 9, 1904.

Application filed August 8, 1903. Serial No. 168,725. (No model.)

To all whom it may concern:

Be it known that I, Charles F. Adams, a citizen of the United States, and a resident of Pittsfield, Massachusetts, have invented certain new and useful Improvements in Commutator-Leads and Mode of Making Same, of which the following is a specification.

My invention relates to leads for commutators of dynamo-electric machines; and its object is to provide a lead which shall be more simple, efficient, and economical than those

heretofore constructed.

In the accompanying drawings, Figure 1 shows a lead constructed in accordance with my invention. Fig. 2 is a side view of the same. Fig. 3 shows the lead after it is stamped out. Fig. 4 shows a side view of the same. Fig. 5 shows a modified form of the lead. Fig. 6 shows a cross-section of the same. Fig. 7 shows the modified form stamped out. Fig. 8 is a side view of the same.

In Fig. 1, A represents the commutator-lead, which is set into a slot in commutator-bar B. C represents an armature-conductor, which is fitted into the forked end of commu-

tator-lead A.

The method of forming the lead is as follows: The lead is stamped out of sheet-copper or other conducting material in the form shown in Fig. 3 and a slit is cut part way down the median line, as shown. The sheet is also bent near the bottom of the slit, as shown in Fig. 4. The sheet is then folded over on the median line and the two parts fastened together in any suitable manner, as by the rivet a, as shown in Fig. 1. It will be seen that not more than a single rivet is required. The stamping out of the lead and the slitting of the end may be performed in a single operation, and then by folding over and pressing together the lead is completely formed.

Fig. 5 shows a modified form in which a bead or rib is left on the edge of the lead for the sake of lateral stiffness. The process of stamping and folding is the same as has already been described, the bead or rib being formed in the stamping operation, as shown by the groove in Fig. 7. It is not essential that the transverse bend at the bottom of the slit

(shown in Figs. 4 and 8) should be formed 50 when the lead is stamped out. This bend may be formed after the strip is folded over.

I do not desire to limit myself to the particular construction and arrangement of parts here shown, since changes therein which do 55 not depart from the spirit of my invention and which are within the scope of the appended claims will be obvious to those skilled in the art.

Having thus fully described my invention, 60 I claim as new and desire to protect by Letters Patent—

1. The process of making commutator-leads which consists in stamping out strips of sheet metal, slitting one end of said strips along the 65 median line, and folding said strips on the median line.

2. The process of making commutator-leads which consists in stamping out of sheet metal strips slitted at one end along the median line, 70 and folding said strips on said median line.

3. The process of making commutator-leads which consists in stamping out of sheet metal strips slitted part way along the median line and grooved the rest of the way along said 75 line, and folding said strips on said groove.

4. As a new article of manufacture, a commutator-lead formed of a single strip of sheet metal folded along its median line and split at one end along said line.

5. As a new article of manufacture, a commutator-lead formed of a single strip of sheet metal folded along its median line and split at one end along said line, the ears formed by said split being bent apart to receive an ar- 85 mature-conductor.

6. As a new article of manufacture, a commutator-lead formed of a single strip of sheet metal folded along its median line in such manner as to form a rib along said line, said strip 90 being split at one end along said line.

Signed at Pittsfield, Massachusetts, this 3d day of August, 1903.

CHARLES F. ADAMS.

Witnesses:

L. A. HAWKINS, R. E.HAYNES.