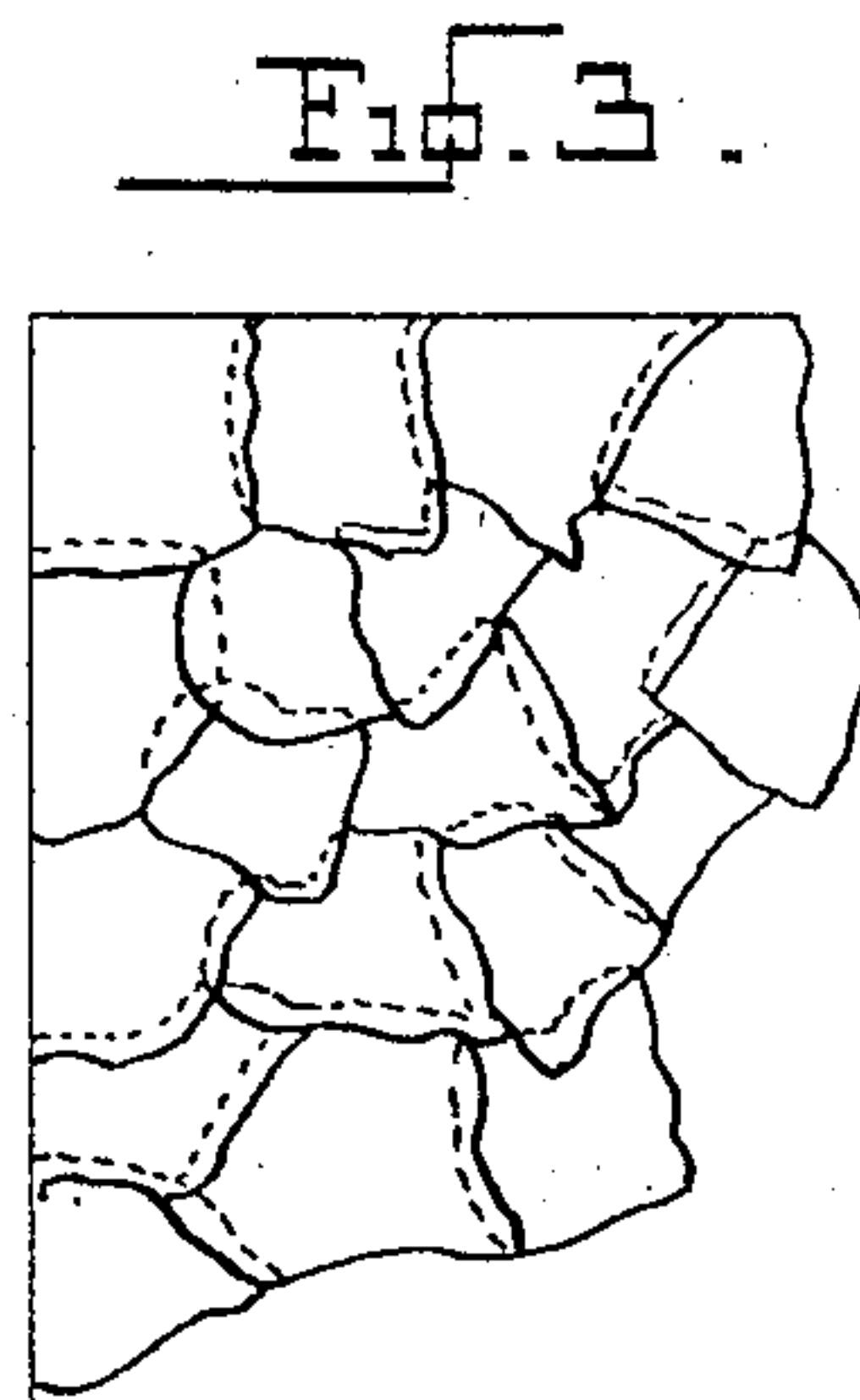
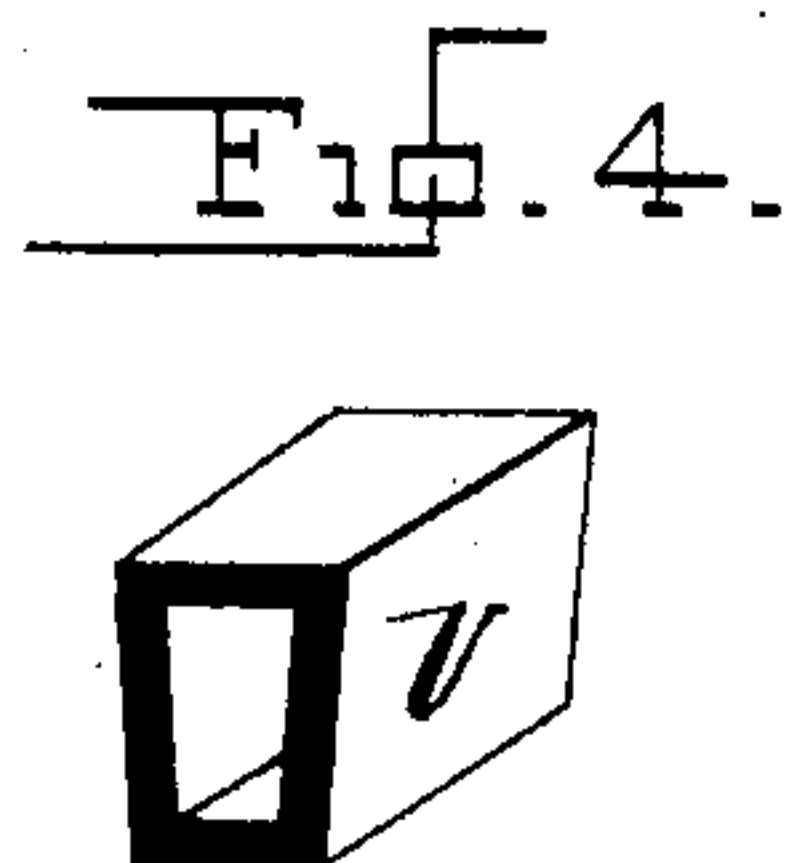
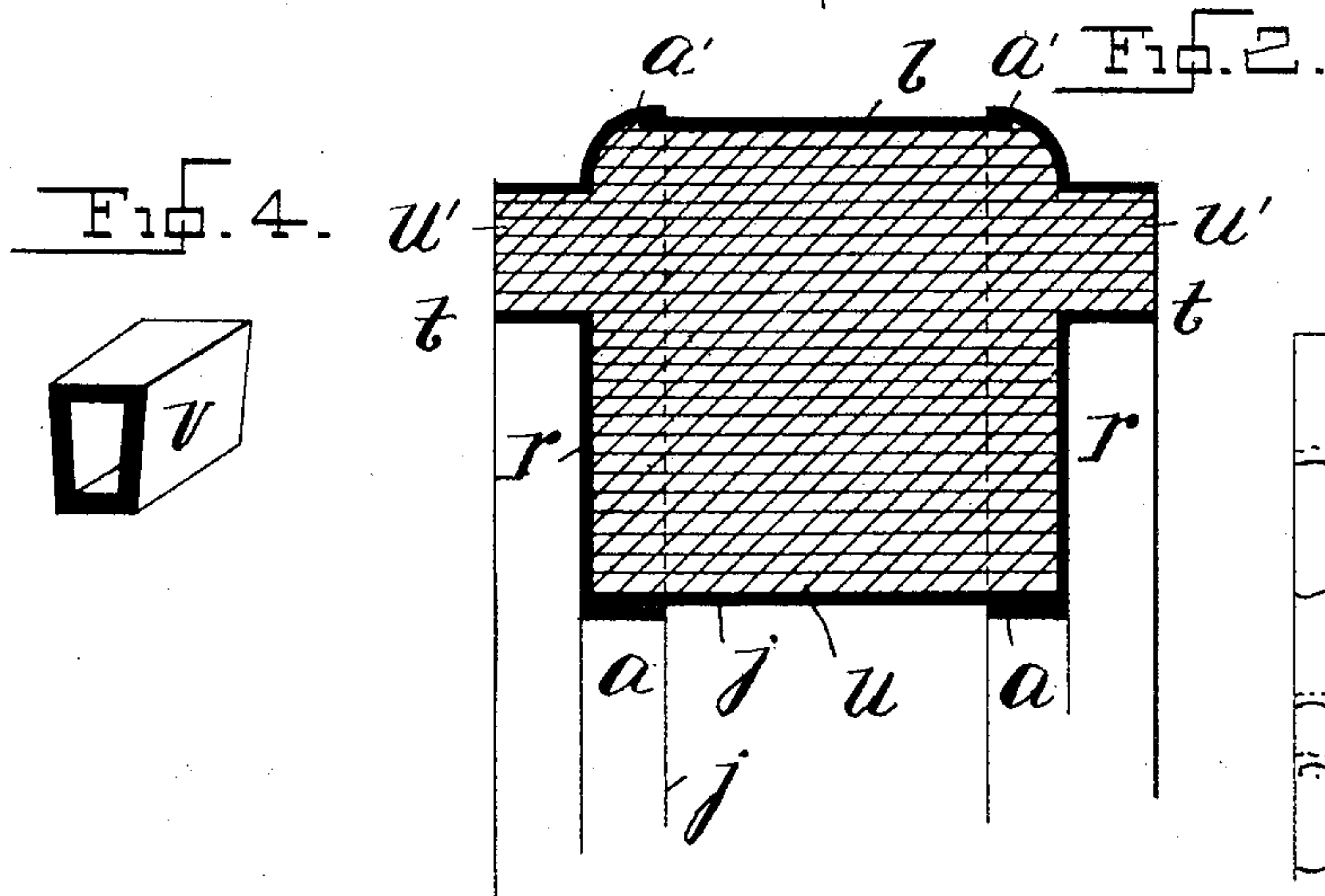
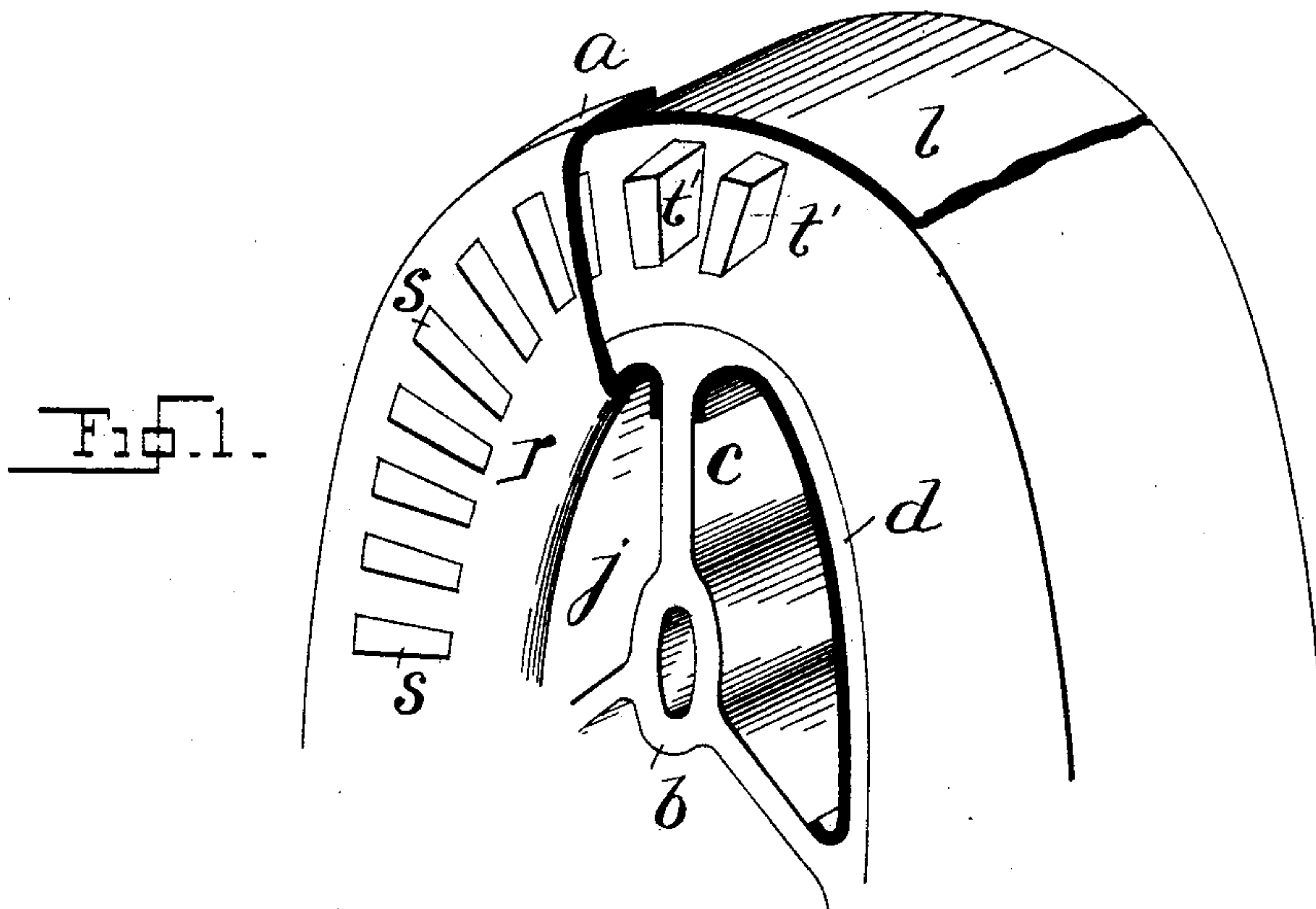


C. W. JEFFERSON.
RING ARMATURE.

No. 500,902.

Patented July 4, 1893.



Witnesses

Wm. A. Courtland

Lecadia M. Leman

Inventor

Charles Wilkins Jefferson

By his Attorney,

Edward P. Thompson

(No Model.)

2 Sheets—Sheet 2.

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Fig. 5.

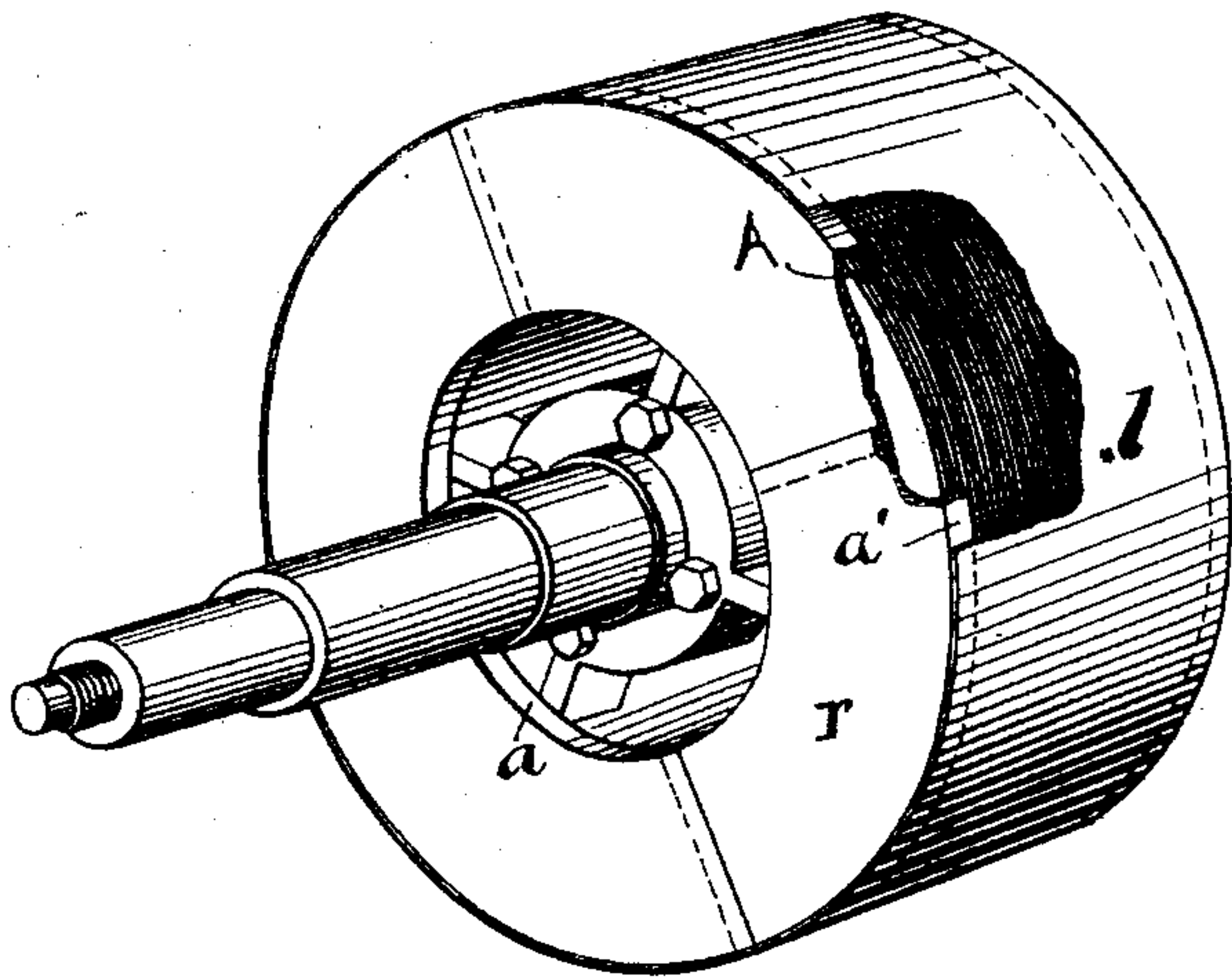
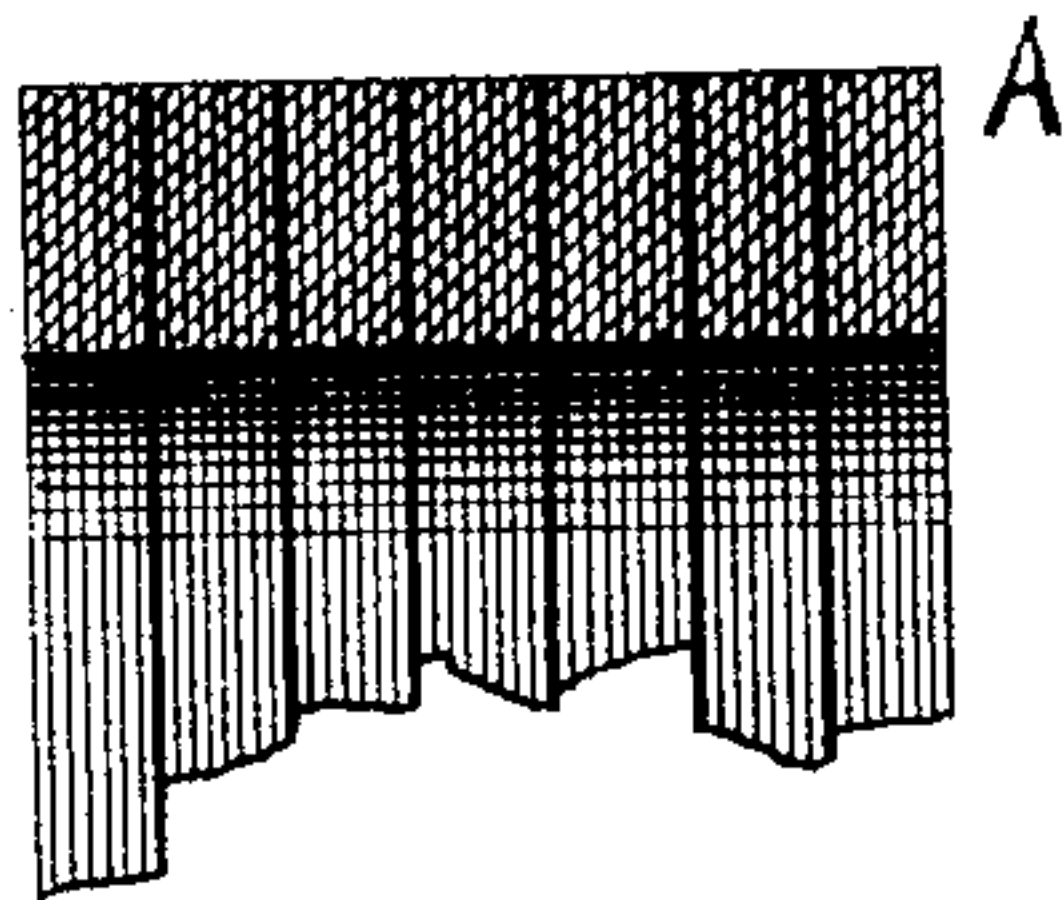


Fig. 6.



Witnesses:
John Becker
Theodore Becker.

Inventor:
Charles W. Jefferson
By his Attorney
Edward P. Thompson

UNITED STATES PATENT OFFICE.

CHARLES WILKIN JEFFERSON, OF SCHENECTADY, ASSIGNOR TO EUGENE
MUNSELL & CO., OF NEW YORK, N. Y.

RING-ARMATURE.

SPECIFICATION forming part of Letters Patent No. 500,902, dated July 4, 1893.

Application filed February 13, 1893. Serial No. 462,058. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WILKIN JEFFERSON, a subject of the Queen of Great Britain, and a resident of Schenectady, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Ring-Armatures, (Case No. 5,) of which the following is a specification.

My invention relates to the equipment of a ring armature for dynamo electric machines or electric motors for purposes of insulation.

The object of the invention is to surround the whole core of the armature with an armor of mica.

All the details of the invention are set forth in the annexed drawings.

Figure 1 is a perspective view of the larger part of an armature to which is applied the mica equipment, the mica being broken off or slightly removed in order that its manner of application may be apparent. Fig. 2 is a section of a portion of the armature in a plane which includes the axis of the armature. Fig. 3 is a plan of a portion of the material used as insulation. Fig. 4 is a perspective view of one of the details. Fig. 5 shows a preferred construction in perspective. Fig. 6 is a section of a part of Fig. 5.

The device embodying the invention consists of the combination of an iron ribbon *u* having wider portions *u'*, all wound in convolutions whereby projections *t* are formed by the portions *u'*, doubly flanged annular disks *r* having perforations *s* through which pass said projections *t*, the flanges of the disk lapping over the interior and exterior of the ring, insulating mica tubes *v* fitted upon and cemented to the projections *t*, curved insulating sheets *j* applied to the interior of the ring between the spokes thereof, and a cylindrical mica covering applied to the exterior of the ring. The projections are clearly seen as to their location and general shape in Fig. 1, where they are represented by *t'* as being solid, thereby forming, a modification of the construction described by reference to Fig. 2.

The tubes *v* and covering *j* and *l* are made from a sheet substantially like that presented in Fig. 3, consisting of pieces of mica with overlapping edges cemented together and more particularly described in a patent grant-

ed to my colleague Arthur Henry Salisbury Dyer, No. 483,646, October 4, 1892. The flanged rings may be made as in my patent of February 14, 1893.

The wire which is wound upon the armature is not shown because it does not form a part of the invention, and because the manner of applying it is well known in the art.

Tubes like that shown in Fig. 4 are pasted upon the projections *t'* before the wire is wound upon the armature.

The flanges *a* on the inner periphery of the flange rings *r*, lap over the inner lining or covering *j* while the flanges *a'* on the outer periphery of said rings overlap the covering *l*.

That part of the iron ribbon which forms convolutions within the limits of the projections *t* has widened portions, so that the projections will be formed.

b is the hub, *c* are the spokes and *d* is the rim of a wheel or pulley upon which the ribbon is wound.

By omitting the projections *t* or *t'* and constructing the core of annular disks *A* instead of ribbon *u*, omitting the perforations in the flanged disks *r*, which may be constructed in sections for large armatures, the construction shown in Figs. 5 and 6 is obtained. The interior lining may be omitted in cases where the conducting wires do not pass through the interior of the ring.

I claim as my invention—

1. An armature consisting of the combination of an iron ribbon *u* having a wider portion *u'*, all wound in convolutions whereby projections *t* are formed by the portion *u'*, a flanged annular mica disk *r* having perforations *s* through which pass said projections *t*, the flanges of the disk lapping over the interior and exterior of the ring, insulating mica tubes *v* fitted upon and cemented to the projections *t*, curved insulating mica sheets *j* applied to the interior of the ring between the spokes thereof, and a cylindrical mica covering applied to the exterior of the ring.

2. An armature consisting of the combination of a ring having end projections, circularly arranged, flanged annular mica disks applied to the ring and having perforations through which pass said projections, the flanges of the disks lapping over or under the

interior and exterior of the ring, insulating mica tubes fitted upon the projections and curved insulating mica sheets applied respectively to the inner and outer surfaces of the ring.

5 3. An armature consisting of the combination of a laminated iron ring, annular mica disks applied to the ends of the ring, a mica covering fitting over or under the outer surface of the ring, and flanges on said disks lapping over the exterior and interior surfaces of the ring.

10 4. An armature consisting of the combination of an iron ring, annular mica disks applied to the ends of the ring, a mica covering fitting over the outer surface of the ring, and flanges on said disks lapping over the exterior and interior surfaces of the ring, the flanged mica disks being made in sections and fastened together with overlapped joints.

15 5. An armature consisting of the combination of an iron ring core, and a covering for the same, consisting of sheets of mica cemented together with overlapping edges.

20 6. The combination of an armature core and

an insulator covering the same, consisting of sheets of mica cemented together with overlapping edges.

7. An insulator for armature heads consisting of an annular disk, having flanges on one or both peripheries and consisting of alternately arranged and parallel layers respectively of cement and mica sheets with overlapping edges.

8. An insulator for armature heads consisting of an annular disk, having flanges on one or both peripheries and consisting of alternately arranged and parallel layers respectively of cement and mica sheets with overlapping edges, the said disk being provided with perforations.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two witnesses, this 10th day of February, 1893.

CHARLES WILKIN JEFFERSON.

Witnesses:

S. W. JACKSON,

ARTHUR W. HUNTER, Jr.