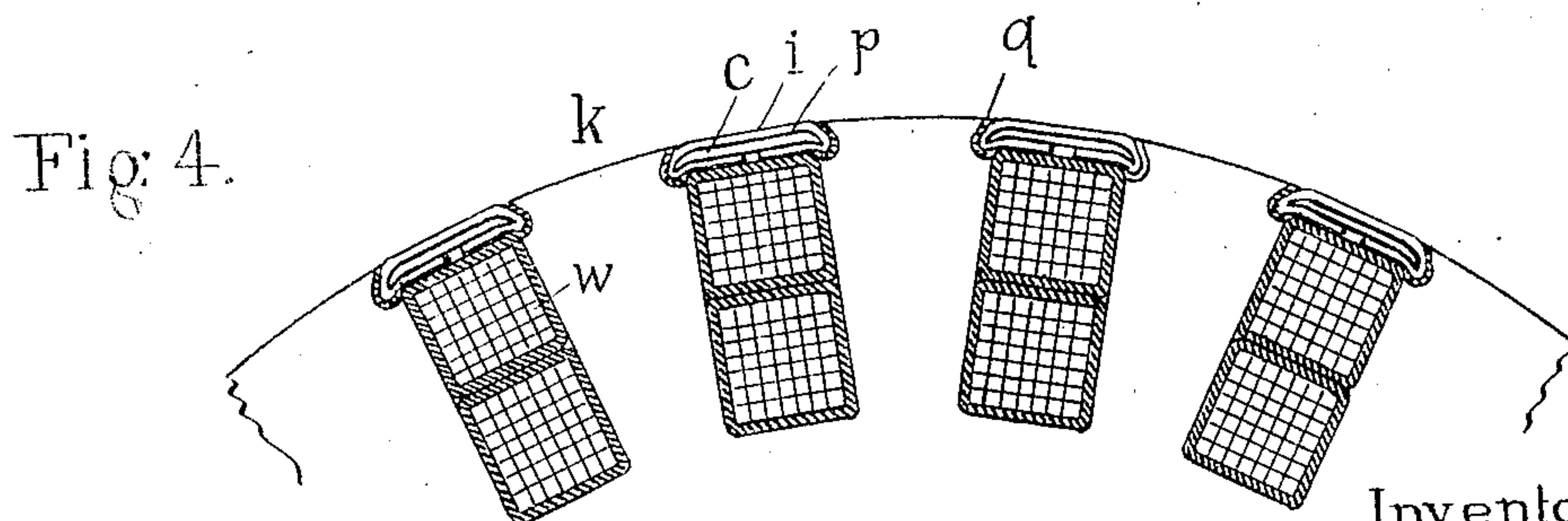
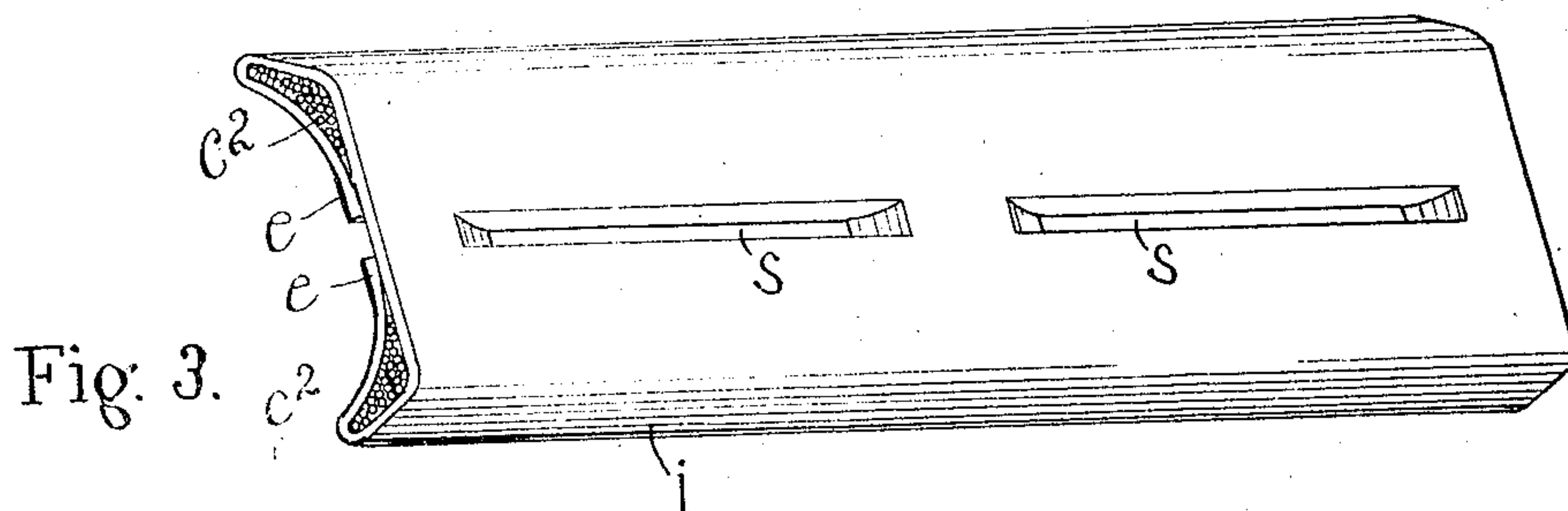
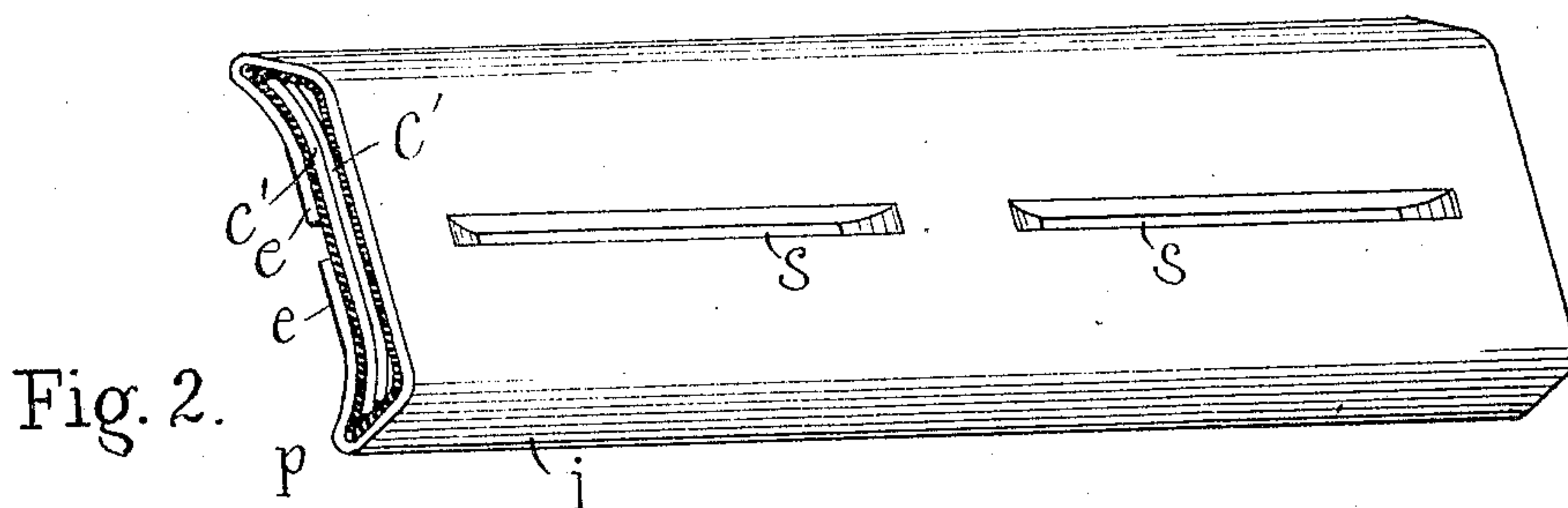
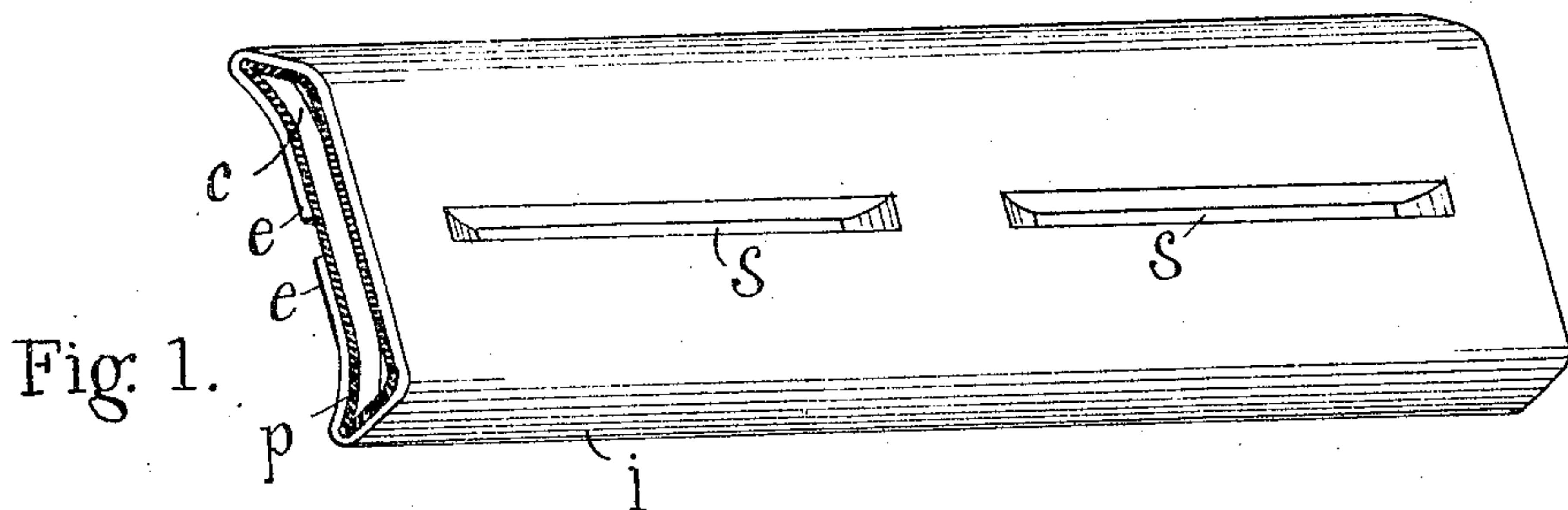


F. W. YOUNG.
BRIDGING BLOCK FOR DYNAMO ELECTRIC MACHINES.
APPLICATION FILED AUG. 19, 1908.

990,180.

Patented Apr. 18, 1911.



Witnesses:

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UNITED STATES PATENT OFFICE.

FREDERICK WM. YOUNG, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO CROCKER-WHEELER COMPANY, OF AMPERE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

BRIDGING-BLOCK FOR DYNAMO-ELECTRIC MACHINES.

990,180.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed August 19, 1908. Serial No. 449,220.

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM YOUNG, a citizen of the United States of America, and a resident of East Orange, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Bridging-Blocks for Dynamo-Electric Machines, of which the following is a specification.

10 The object of this invention is to provide in connection with a dynamo-electric machine element, the periphery of which is slotted to receive and retain windings, means for a substantial magnetic closure of the slots above the windings so as to secure a sufficiently uniform magnetic flux into and out of the element.

15 A further object is to interrupt such closure sufficiently to prevent material magnetic leakage between the teeth above the windings.

20 A further object is to so construct the blocks that they will not be a seat for harmful eddy currents. They also serve as wedges for binding the windings in place, are manufactured with facility with accurate control of cross-section and uniformity, and possess some elasticity permitting of ready assembly and insuring security when in place.

25 In the accompanying sheet of drawings which forms a part of this application—Figures 1, 2 and 3 are perspectives of three forms of bridging-blocks involving my invention and drawn to an enlarged scale. Fig. 4 is a face view of a portion of an armature provided with bridging-blocks such as are illustrated in Fig. 1.

30 The bridging-block in the form illustrated in Fig. 1 is provided with a core consisting of a strip of iron *c*. This core is insulated with a wrapping of paper or a coating of japan *p*. The insulated core is wrapped with a sheet of iron *i* which lies across one side of the core and has its edges *e e* folded over the edges and against the other side of the core, the edges preferably not lapping or touching. The section of the iron wrapping which extends across one side of the core is perforated at intervals, as by longitudinal slots *s s*. The bridging-block is applied to a laminated armature-core *k* which constitutes a dynamo-electric machine element with coil-retaining slots in its pe-

riphery, and has windings *w w* located in the slots. The walls of the slots are notched near their mouths to receive and retain the bridging-blocks. The bridging-blocks are preferably electrically separated from the laminae of the armature-core by insulation *q* which may be either a coat of japan applied to the sheet iron wrapping, or paper or fiber placed in the notches in the slot walls.

35 In the form shown in Fig. 2 the core consists of a plurality of strips or laminations of sheet iron, two strips *c' c'* being illustrated.

40 In the form shown in Fig. 3 the iron strips of the core are in the form of round wires *c² c²* disposed longitudinally in the wrapping, in two groups or bundles spaced apart so as to better reduce magnetic leakage over the windings.

45 The insulation between the blocks and the armature core, as well as that between the cores of the blocks and the sheet iron wrappings, is not material to the mechanical structure, and is thin so that there will be a ready passage for the magnetic flux between the iron parts of the blocks and the adjoining teeth of the armature core. Resistance across the blocks is beneficial because it prevents shunting of magnetism across the slots above the windings. This resistance is localized as far as possible at the middle axes of the blocks so as not to reduce the magnetic flux between the iron parts of the blocks and the adjoining teeth of the armature core.

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

1. The combination with a dynamo-electric machine element having coil-retaining slots, of windings located in the slots, and slot-closing bridging-blocks each consisting of a core and a folded sheet iron envelop which extends across one side of the core and is folded over the opposite edges thereof, substantially as described.

2. The combination with a dynamo-electric machine element having coil-retaining slots, of windings located in the slots, and slot-closing bridging-blocks each consisting of an iron core and a folded sheet iron envelop which extends across one side of the core and is folded over the opposite edges thereof, substantially as described.

3. The combination with a dynamo-electric machine element having coil-retaining slots, of windings located in the slots, and slot-closing bridging-blocks each consisting
5 of an iron core formed of a plurality of parallel strips of iron and a folded sheet iron envelop which extends across one side of the core and has each edge folded over one of the core strips, substantially as described.

10 4. The combination with a dynamo-electric machine element having coil-retaining slots, of windings located in the slots, and slot-closing bridging-blocks each consisting
15 of a core and a folded sheet iron envelop which extends across one side of the core and is folded over the opposite edges thereof, the section which extends across one side of the core being perforated, substantially
as described.

20 5. As an article of manufacture, a slot-closing bridging-block consisting of a core and a folded sheet iron envelop which extends across one side of the core and is folded over the opposite edges thereof, sub-
25 stantially as described.

6. As an article of manufacture, a slot-closing bridging-block consisting of an iron core and a folded sheet iron envelop which extends across one side of the core and is

folded over the opposite edges thereof, substantially as described.

7. As an article of manufacture, a slot-closing bridging-block consisting of an iron core formed of a plurality of strips of iron and a folded sheet iron envelop which ex-
35 tends across one side of the core and has each edge folded over one of the core strips, substantially as described.

8. As an article of manufacture, a slot-closing bridging-block consisting of a core
40 and a folded sheet iron envelop which extends across one side of the core and is folded over the opposite edges thereof, the section which extends across one side of the core being perforated, substantially as de-
45 scribed.

9. In a dynamo-electric machine, a slot-closing device consisting of magnetic material having its longitudinal sides bent upon themselves to provide thick edges connected
50 by a thinner central portion, substantially as described.

Signed by me at East Orange, New Jersey,
this 17th day of August, 1908.

FREDERICK WM. YOUNG.

Witnesses:

C. N. WHEELER,
J. M. SMITH.