

F. W. YOUNG.
BRIDGING BLOCK FOR DYNAMO ELECTRIC MACHINES.
APPLICATION FILED JUNE 2, 1909.

941,180.

Patented Nov. 23, 1909.

Fig. 1.

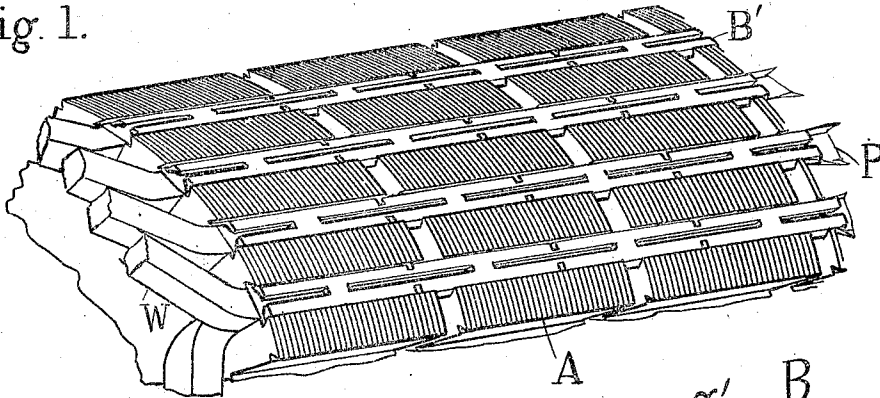


Fig. 2.

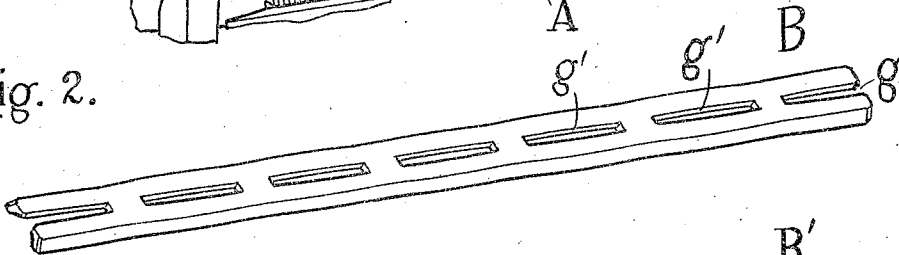


Fig. 3.

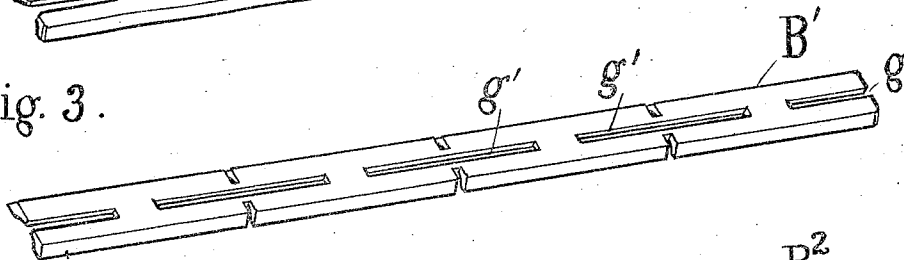


Fig. 4.

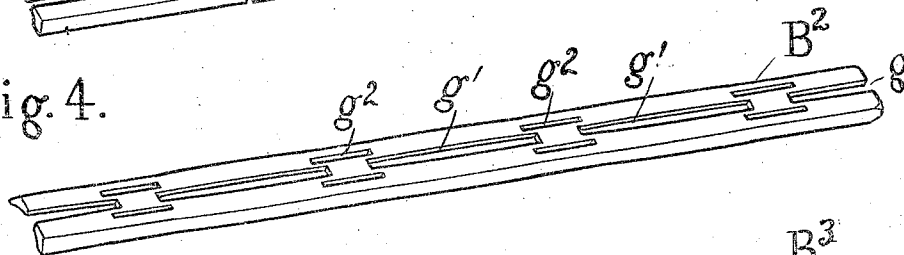
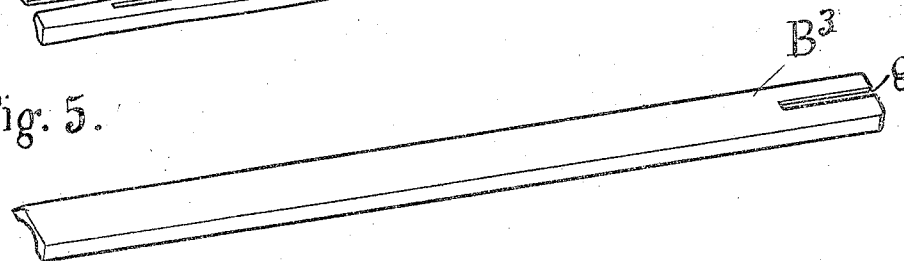


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM 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.

941,180.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed June 2, 1909. Serial No. 499,696.

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.

In the provision of dynamo-electric machine elements, with bridging-blocks, the purpose of which is to close the slots of the element, and hold the windings therein, the labor of assembling is much reduced by making the blocks of considerable length, since then there will be fewer to handle. Owing to the lack of uniformity in the slots, and because it is necessary to interpose insulation, such as paper, which is easily abraded, between the blocks and the engaging sides of the slots, and also provide insulation between the blocks and the windings, I have found it necessary to provide means for facilitating the assembling and for reducing the danger of such abrasion.

The object of this invention is to provide such means and reduce such danger and at the same time provide means which will contribute to the useful, mechanical and magnetic functions of the blocks.

In the accompanying sheet of drawings which forms a part of this application Figure 1 is a perspective of a portion of a dynamo-electric machine element, with windings and bridging-blocks constructed in accordance with my invention. Fig. 2 is a perspective of a bridging-block. Fig. 3 is a perspective of one of the bridging-blocks shown in Fig. 1. Fig. 4 is a perspective of a bridging-block embodying other features. Fig. 5 is a perspective of a simplified form of bridging-block.

The invention is illustrated in connection with a laminated toothed armature A, constituting the dynamo-electric machine element with slots containing windings or coils W. The walls of the slots near their mouths and above the windings are inclined, forming dovetail shaped channels, and into the channels thereby formed, are preferably inserted troughs of paper P to receive and retain slot-closing bridging-blocks B; but in lieu thereof the blocks may be coated with a hard japan or enamel. These blocks are of magnetic ma-

terial, as rolled steel, preferably with high resistivity, but they may be of cast iron particularly in the form of malleable iron. It is economical to make them of considerable length, so that fewer will have to be handled and will be required to fill the channels. At their ends, and particularly at the end of each block which is entered in assembling, is a groove *g* which opens out to the end, so that the end of the block will be forked, and the forks can spring together when meeting with any high points in the slot walls during the operation of pushing the block into place, and thereby avoid cutting or tearing the paper trough. Other grooves *g'* *g'* are provided along the middle line of the block and in line with the groove or grooves at the ends between the forks.

In the form shown in Fig. 3 there are two additional lines of grooves *g*² *g*² on either side of the middle line of grooves, and staggered in position with respect to the grooves along the middle line. All of these grooves are of advantage in increasing the magnetic resistance across the blocks, and they thereby prevent the shunting of magnetism above the windings, such magnetism being ineffective for induction of current in the windings.

In the form shown in Figs. 2 and 4, the sides of the block are slightly spread opposite each of the grooves along the middle line so that when the block is forced into place in its channel, these spread portions will yield to any slight irregularities in the slot walls, and, at the same time, exert a tension making them more secure.

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-containing slots, of windings located in the slots, and elongated slot-closing bridging-blocks, each of which is provided with a forked end, substantially as described.

2. The combination with a dynamo-electric machine element having coil-containing slots, of windings located in the slots, and elongated slot-closing bridging-blocks, each of which is provided with a series of longitudinal grooves, one of the grooves extending to the end of the block and forming a forked end, substantially as described.

3. As an article of manufacture, an elongated slot-closing bridging-block provided

with a forked end, substantially as described.

4. As an article of manufacture, an elongated slot-closing bridging-block provided
5 with a series of longitudinal grooves, one of the grooves extending to the end of the block and forming a forked end, substantially as described.

5. As an article of manufacture, an elongated slot-closing bridging-block provided
10 with a series of longitudinal grooves, the sides of the block being spread opposite each groove, substantially as described.

6. As an article of manufacture, an elongated slot-closing bridging-block provided
15 with a plurality of series of longitudinal grooves, the grooves in one series being in

staggered position with respect to the grooves in the adjoining series, substantially as described.

7. As an article of manufacture, an elongated slot-closing bridging-block provided
20 with a plurality of series of longitudinal grooves, the grooves in one series being in staggered position with respect to the grooves in the adjoining series, one of the grooves extending to the end of the block and forming
25 a forked end, substantially as described.

Signed at East Orange, New Jersey, the 29th day of May, 1909.

FREDERICK WILLIAM YOUNG.

Witnesses:

A. C. BUNKER,

C. D. WHEELER.