

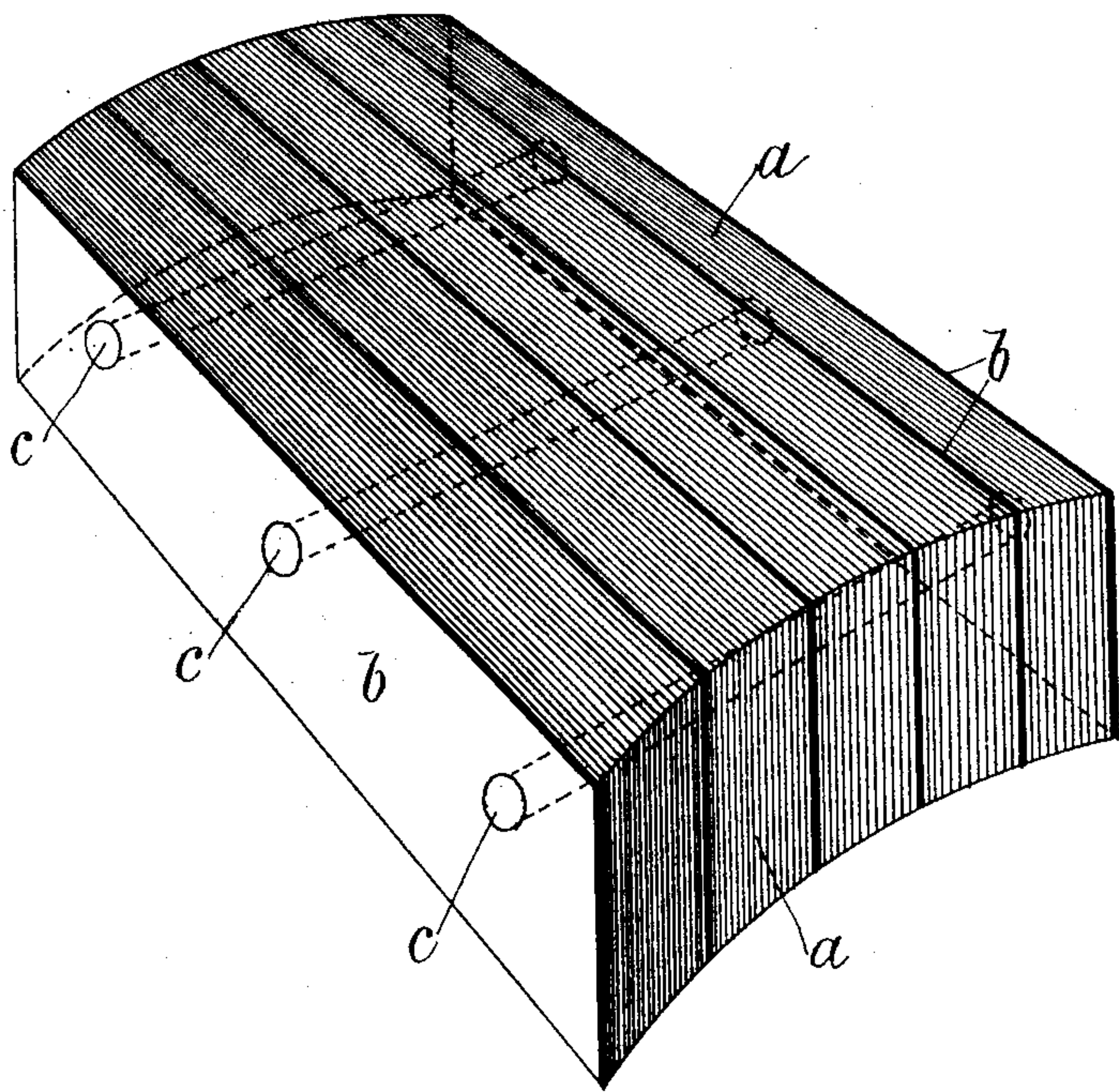
(No Model.)

L. S. M. PYKE & E. S. HARRIS.

MAGNETIC INDUCTOR FOR DYNAMO ELECTRIC MACHINES.

No. 476,818.

Patented June 14, 1892.



Witnesses:  
L. M. Hachschlager,  
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Lazarus S. M. Pyke,  
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By Briesen & Knauts  
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# UNITED STATES PATENT OFFICE.

LAZARUS SIMON MAGNUS PYKE AND EDWARD STEPHEN HARRIS, OF  
LONDON, ENGLAND.

## MAGNETIC INDUCTOR FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 476,818, dated June 14, 1892.

Application filed February 5, 1892. Serial No. 420,469. (No model.)

*To all whom it may concern:*

Be it known that we, LAZARUS SIMON MAGNUS PYKE and EDWARD STEPHEN HARRIS, electrical engineers and contractors, both of  
5 34 New Tothill Street, in the city of Westminster, England, have invented new and useful Improvements in Dynamo-Electric Machines, of which the following is a full, clear, and exact description.

10 This invention relates to dynamo-electric machines in which the magnetic-field inducing and induced wire coils are all stationary and in which electric currents are produced by commutation of the magnetism by means  
15 of moving masses of magnetic material (commonly termed "inductors") usually composed of the softest iron laminæ juxtaposed (with intervening sheets of paper) in such number as to form a mass of relatively great  
20 width in proportion to its thickness. These laminated inductors are subject to great magnetic and centrifugal strains, to resist which great rigidity is required. The laminæ composing an inductor are usually bolted together  
25 and fixed to strong metal supports by bolts in which, placed as they are in a powerful magnetic field of varying intensity, eddy currents producing local heat and waste of power are liable to be set up.

30 Our invention has for its object to mechanically strengthen the above-mentioned laminated inductors, so as to enable them better to resist the magnetic and mechanical strains to which they are exposed.

35 The invention consists in the combination, with the soft-iron laminæ, of thin laminæ of a strengthening metal, preferably hard steel or bronze, interspersed with the soft-iron laminæ in the numerical proportion of from about  
40 one of the strengthening metal to from six to twelve of the soft-iron laminæ constituting the inductor, the first and last plates preferably being of the strengthening metal and the whole being united by bolts of preferably  
45 German silver.

The accompanying drawing shows a per-

spective view of one of the inductors of the dynamo-electric machine described in another application for United States patent of even date herewith, No. 420,470; but the present  
50 invention is not limited to this particular machine, but is applicable to all machines of the same type.

*a* are the soft-iron laminæ, (represented by fine lines,) and *b* the strengthening laminæ of  
55 similar shape and linear dimensions to those *a*, with which they are interspersed, as represented by thick lines.

*c* are preferably German silver rivets or bolts uniting the whole together to constitute  
60 the magnetic inductor.

When the inductor is required to be of the transversely-curved form shown, the laminæ would be assembled together upon a suitable  
65 "former," temporarily clamped together by suitable means, and the whole mass drilled to receive the bolts or rivets. The advantages of this improved construction are less waste in eddy currents, cooler working, greater or  
70 more equally-distributed rigidity, less bolt-surface, and less weight.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed,  
75 we declare that what we claim is—

In dynamo-electric machines of the type in which the field-magnet inducing and induced wire coils are all fixed, a magnetic inductor composed of laminæ of soft iron and laminæ of hard metal interspersed one with another  
80 for the purpose of strengthening the inductor, substantially as specified.

The foregoing specification of our improvements in dynamo-electric machines signed by us this 12th day of January, 1892.

LAZARUS SIMON MAGNUS PYKE.

EDWARD STEPHEN HARRIS.

Witnesses:

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