Oct. 2, 1923. 1,469,469

S. R. WRIGHT

METHOD OF AND MEANS FOR APPLYING THE INSULATION OF HIGH TENSION COILS

Filed Aug. 22, 1921

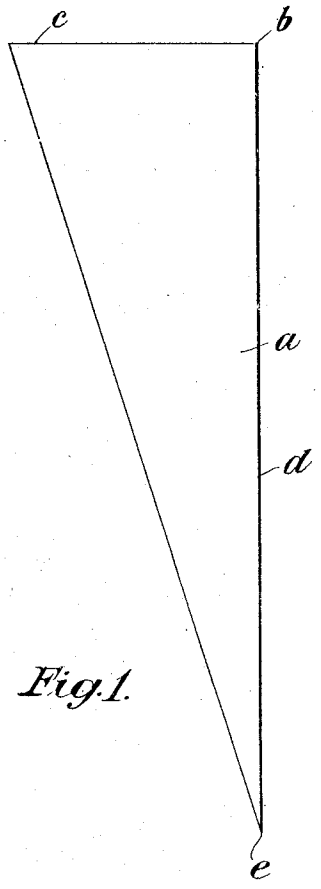



Fig. 1.

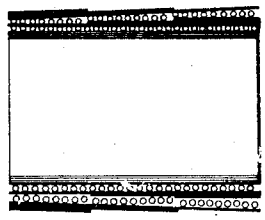
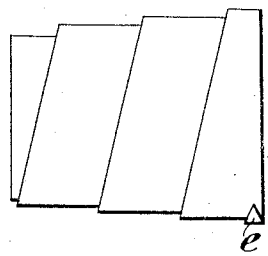


Fig. 2.

Fig. 3.




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By
B. Singer. Atty.

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# UNITED STATES PATENT OFFICE.

STANLEY ROBERT WRIGHT, OF RAWDON, NEAR LEEDS, ENGLAND, ASSIGNOR TO IGRANIC ELECTRIC COMPANY LIMITED, OF LONDON, ENGLAND, A CORPORATION OF GREAT BRITAIN.

## METHOD OF AND MEANS FOR APPLYING THE INSULATION OF HIGH-TENSION COILS.

Application filed August 22, 1921. Serial No. 494,409.

(GRANTED UNDER THE PROVISIONS OF THE ACT OF MARCH 3, 1921, 41 STAT. L., 1313.)

*To all whom it may concern:*

Be it known that I, STANLEY ROBERT WRIGHT, a subject of the King of Great Britain, and resident of Rawdon, near Leeds, Yorkshire, England, have invented certain new and useful Improvements in a Method of and Means for Applying the Insulation of High-Tension Coils (for which I have obtained a patent in Great Britain, No. 142,681, dated May 29, 1919), of which the following is a specification.

This invention relates to high tension coils in which a high insulation is disposed between consecutive layers of conducting material at the end of each layer where occurs the maximum difference of potential.

The object of the present invention is to provide improvements in the insulations of such coils whereby such disposition of high insulation is obtained simultaneous with the maintenance of a high space factor.

The present invention consists in the winding of high tension coils of the above character, of an insulation strip, adapted to be disposed between consecutive layers of conducting material, which is of tapering width and of such a shape that when applied to the coil the thickness of the insulation increases from one end of the coil to the other which is the end where occurs the maximum difference of potential.

This is effected by cutting the strips of insulation, before application, to the required length and then diminishing the width from a maximum at one end which corresponds substantially to the width of the coil, to a minimum at the other in such a manner that one long edge is at right angles to the edge of the maximum width. In other words I use insulation strips which are triangular or approximate to the triangular in shape, one of the angles being a right angle, and it will be readily seen that if these triangular strips be wound between each layer or winding of the conducting material there will be a graduated thickness of insulation.

In order that the invention may be clearly understood, its practical application will now be described by aid of the accompanying drawings, in which:—

Fig. 1 is a plan of the triangular strip of insulation previous to winding the same on the coil.

Fig. 2 is a longitudinal section of several layers of a coil constructed in accordance with this invention, and Fig. 3 is a side elevation of the same.

Referring now to the drawings, the strips of insulating material *a* are cut as shown in Fig. 1, one corner *b* being a right angle whilst the top edge *c* corresponds with the full width of the coil to be wound.

The length of the side *d* of the strip *a* is predetermined from the number of convolutions of insulating material it is required to put between consecutive layers of wire.

In Fig. 2 the alternate layers of insulation and conductors or wiring is clearly shown, the respective sides *d* of alternate insulating strips being disposed at opposite ends of the core.

It will be seen from the example given that coils wound in accordance with this invention possess a high insulation at the high potential difference end of each winding of wire in the coil with the simultaneous maintenance of a relatively high space factor.

What I claim and desire to secure by Letters Patent is:—

1. In a winding of high tension coils, an insulating strip adapted to be wound between adjacent layers of the conducting winding, said strip varying in width from one end to the other for the purpose specified.

2. In the winding of high tension coils an insulating strip, adapted to be disposed between consecutive layers of conducting material, having one edge of maximum width, which gradually tapers to the desired minimum at the other end, such edge of maximum width being at right angles to one of the side or long edges of the strip for the purposes specified.

In witness whereof I affix my signature

STANLEY ROBERT WRIGHT.