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METHOD OF MANUFACTURING FINELY GRADED
SPIRAL ELECTRIC RESISTORS
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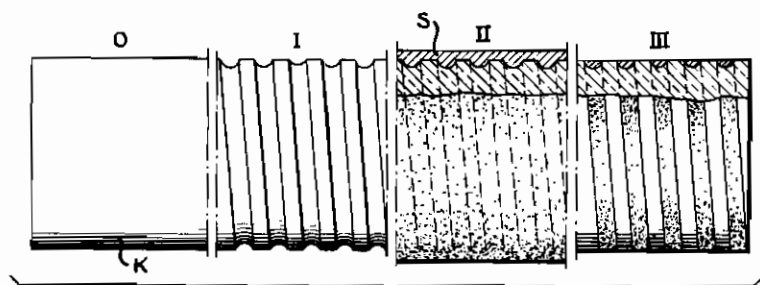


Fig 1

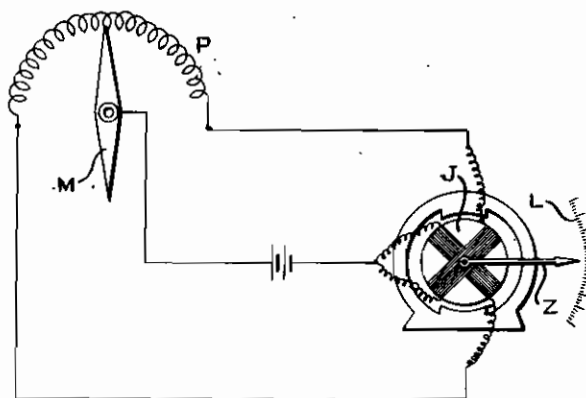


Fig 2

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METHOD OF MANUFACTURING FINELY GRADED SPIRAL ELECTRIC RESISTORS

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This invention relates to a method of manufacturing finely graded spiral electric resistors.

Finely graded spiral electric resistors which are, for instance, employed in flight control instruments in which a magnetic needle or the like of a small directional force slides on the spiral designed in the form of a potentiometer have hitherto been made of wire which was given a diameter of only a few hundredths of a millimeter in order to attain accurate indications and an accurate control. Notwithstanding this small cross-section of wire such resistors are not sufficiently finely graded for certain purposes.

Methods are further known in which an insulating body is first provided with a resistant compound and in which body a spiral is then milled. These methods present the drawback in that they are complicated and therefore expensive, since during the milling process the spirals are liable to be easily destroyed.

The above-mentioned drawbacks are avoided by the method according to the invention which consists in providing an insulating body with a fine thread, coating said body with a layer of conducting material and then in reducing the thickness of the conductive layer at least to the original diameter of the insulating body.

In the accompanying drawings is shown an embodiment of the invention in diagrammatic form.

Fig. 1 shows an enlarged view of a resistor made according to the invention and in which are illustrated the steps of the novel method.

K denotes a cylindric insulating body which may be made of Bakelite. O designates the piece of the cylinder before being machined according to the method of the invention. Section I shows the insulating body provided with a thread. Section II shows the body partly in section coated with a layer of insulating material. Section III shows the finished resistor also partly in section after the conducting layer has been reduced to the outer diameter of the insulating body.

The conducting layer S may be applied to the insulating body by any suitable method, for instance, by the known Schop spraying method.

In Fig. 2 is shown a potentiometer P made according to the novel method which is connected to a cross coil instrument J. A magnetic needle M passes over the potentiometer P and its deflections are transmitted to a scale in a known manner by the instrument J provided with a pointer Z.

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