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U. GUBLER

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METHOD OF MAKING ELECTRICALLY INSULATING FORM PIECES

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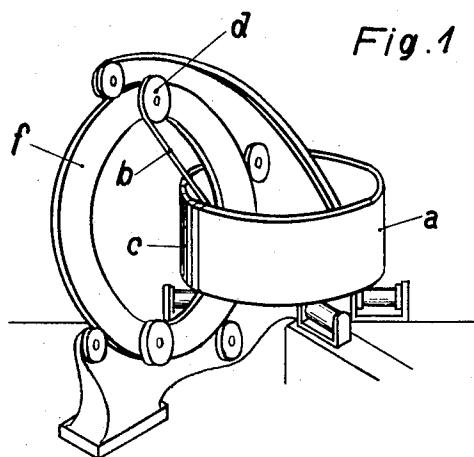
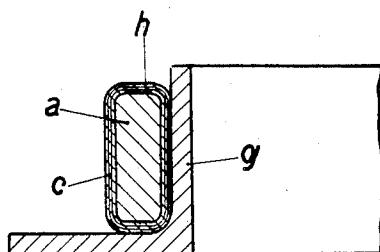


Fig. 2

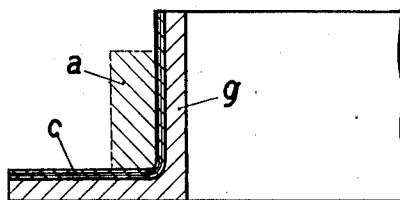


Fig. 3

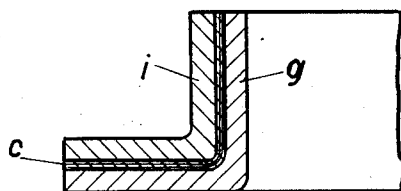


Fig. 4

Inventor
Ulrich Gubler
By *Alfred H. Dyer*
Attorney

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METHOD OF MAKING ELECTRICALLY INSULATING FORM PIECES

Ulrich Gubler, Ennetbaden, Switzerland, assignor to Micafil Aktiengesellschaft, Altstetten, near Zurich, Switzerland, a joint-stock company of Switzerland

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5 Claims. (Cl. 154—2.6)

This invention relates to a new method of manufacturing electrical insulating form pieces with an open profile cross-section of uniform thickness and consists in this, that in the first place band-shaped insulating material (for example paper strip) is wound helically on a mandrel, the mandrel thereupon removed and finally the insulating body pressed to the desired shape. This method is particularly suitable when the paper strip is wound on a mandrel in the form of a straight bar, so that, after the mandrel has been withdrawn in the axial direction, a tubular insulating body remains, which is thereupon pressed to a straight bar of T-shaped or other cross-section. When, however, annular form pieces for instance are to be made, it is advisable to wind the paper strip on to an annular mandrel, thereupon to place both into the matrix of a pressing device, then to cut open the paper body and to bend open the cut ends, after which the mandrel can be removed and the paper ring pressed to form an annular piece of any desired cross-section.

In the accompanying drawing the stages of manufacture of a form piece made according to the new method are illustrated. Of the means used for carrying out the method only those are indicated, which are necessary for understanding the essential features of the invention. In Fig. 1 *a* is an annular mandrel of rectangular cross section, around which a paper strip *b* is wound in such a manner that in the first place a paper ring *c* is formed. The paper strip *b* unwinds from the spool *d* which together with its supporting ring revolves around the wrapping place, while at the same time the winding mandrel *a* is rotated horizontally for providing the requisite forward feed. When the paper ring *c* is finished, it is taken together with its mandrel *a* out of the ring *f*, which is arranged to hinge open (not shown), and is placed on the annular matrix *g* (Fig. 2) of a pressing device. The paper ring *c* is thereupon cut open at *h* along a circular line, the edges of the cut are bent away on either side and the mandrel *a* is removed (Fig. 3). The annular matrix *i* (Fig. 4) is then placed over the paper ring *c* and the latter pressed to the required shape (for instance an angle or U). The further treatment of the ring *c* may be carried out, in a known manner, in press moulds consisting of a plurality of parts by pressing them together for instance by means of screw bolts or in a hydraulic press, in the cold or warm state. The hand-shaped insulating material may also be wound on the mandrel in such a manner that

adjacent winding layers overlap one another crosswise, so as to increase the strength of the wound blank. It is also possible to use an insulating band which has been coated or saturated with varnish or resin and to bake the form piece after pressing.

The form piece made in this manner may be used for a great variety of purposes, for instance as protective caps for high tension windings of transformers. They have the advantage that they are not only reliable in operation but are also cheap, as their manufacture takes relatively little time.

The invention claimed is:

1. The method of forming annular insulating members which comprises winding a strip of insulating fabric upon an annular mandrel to form a toroidal tube, cutting open the tube along one side thereof to form an annular blank, placing said annular blank upon a matrix, and subjecting said annular blank to a shaping operation while on the matrix.
2. The method of forming annular insulating members which comprises winding a strip of insulating fabric in several layers of different pitch upon an annular mandrel to form a toroidal tube, cutting open the tube along one side thereof to form an annular blank, and subjecting said annular blank to a shaping operation.
3. The method of forming annular insulating members which comprises winding a strip of fabric impregnated with insulating material upon an annular mandrel to form a toroidal tube, cutting open the tube along one side thereof to form an annular blank, placing said annular blank upon a matrix, and subjecting said annular blank to a shaping operation while on the matrix.
4. The method of forming annular insulating members which comprises winding a strip of insulating fabric upon an annular mandrel to form a toroidal tube, cutting open the tube along one side thereof to form an annular blank, placing said annular blank upon a matrix, and subjecting said annular blank to shaping by the application of heat and pressure while on the matrix.
5. The method of forming annular insulating members which comprises winding a strip of insulating fabric upon an annular mandrel to form a toroidal tube, placing the tube and mandrel upon a matrix, cutting the tube along one wall, and subjecting said cut material to a shaping operation while on the matrix.

ULRICH GUBLER.