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FIG. 1.

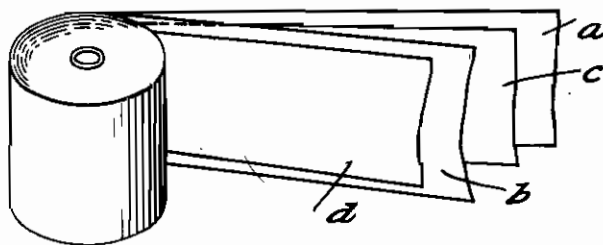
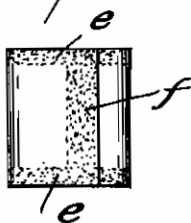


FIG. 2.



FIG. 3.



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METHOD OF MANUFACTURING FLATTENED CONDENSERS

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This invention relates to a method of manufacturing flattened condensers of stable form by the use of a dielectric consisting of artificial material.

As is well known artificial foils may be employed as a dielectric for manufacturing electric condensers which possess in part excellent electrical values, particularly a small loss angle and a capacity which remains constant over wide limits. To retain the good properties a condenser of stable form is among other things necessary; for instance, a condenser of the roll type. However, roll condensers present the disadvantage in that they utilize the space of the casing to a very slight extent and it is therefore desirable to manufacture also the reel by the use of a dielectric consisting of artificial material in the form of a flattened condenser. However, the flattened condenser has, on the other hand, the disadvantage that if it is not firmly held in a clamping device it loses its form with time, so that the capacity of the dielectric is no longer constant.

The object of the present invention is to provide a method of manufacturing a flattened condenser of stable form by the use of a thermoplastic dielectric of artificial material, which consists in winding at first the dielectric strips together with the coatings consisting of separate metal foils or of metal coatings applied to the strips on to a deformable hollow mandrel and then in flattening this reel under circumstances at a high temperature by pressing it between pressure bodies and in applying such a heat with the press as to weld the parts of artificial material lying upon each other. In this matter, a condenser of a very stable form is obtained so

that it may be inserted in the casing without the use of a clamping device. The condenser is therefore pressed into a flattened form by the simultaneous application of heat in order that the dielectric intermediate layers become more easily deformable and do not break when kinked.

In this case the heating should be so intense as not to fear a softening of the insulating material, whereas the heating necessary for welding the parts of artificial material must be increased to the softening point or to a value in the neighborhood thereof. When welding the parts together it is preferable to apply a sudden quantity of heat which softens only the outer layers or the edges of the strips of artificial material projecting from the ends thereof; in this manner damages of the condenser due to short-circuits or to a reduction of the disruptive strength are prevented.

Furthermore, it has been found advantageous to employ as a mandrel, one consisting of the same or a similar material as the dielectric in order that also the latter is welded when heated together with the wound body so as to form a stable unit; in this manner the condenser is sealed against the atmosphere also from the side of the mandrel.

If the mandrel is caused to project from the wound body at the front side the leads extending to the wound body may be mechanically fixed thereto in a known manner. It is also possible to fix the entire condenser to the projecting end of the mandrel, for instance, to arrange it in the casing as a freely supported condenser.

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