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CORE

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8 Claims. (Cl. 175—21)

This application is a refile of my abandoned application Serial No. 611,475, filed May 16, 1932.

The invention relates to cores and especially to insulating cores for electrical coils.

At the present time electrical coils are formed in various shapes other than round, the rectangular or flat sided shape being commonly used for many purposes. The smaller types of coils, both as to size of core and size of wire, are wound on machines adapted to wind a multiplicity of coils simultaneously. It is essential that each coil have an insulating core, and to provide such core the practice has been to wind on the mandrel a sufficient number of turns of paper which shall be common to all the coils. The several wires are then wound on the core at the selected points to form the coils. When the windings are completed the coils are cut into individuals either before removal from the mandrel or after they are removed as a unit.

Where the core is rectangular the wire wound on it exerts considerable pressure upon the corners of the core and frequently causes the sides thereof to bulge or bow inwardly and thereby destroy the usefulness of the coil.

The object of the present invention is to provide a simple, cheap hollow flat sided core that will maintain its shape in a coil or other article formed thereon.

The invention consists in the novel combination of parts hereinafter described and illustrated in the accompanying drawing, in which drawing Figure 1 is a plan view of the blank from which the core is formed.

Figure 2 is an edge view of the same.

Figure 3 is a perspective view of the core.

Figure 4 is an end view of a coil with the core therein.

Figure 5 is a side view of the coil partly in section.

I have found by folding a sheet of suitable fibrous material such as wood, into the desired shape, and securing the abutting edges of the sheet together, that a very desirable tube or core is formed which will withstand the pressure produced at its corners by the wire or other material wound upon it.

In accomplishing the invention I preferably use a thin sheet of wood 1, and apply a binder 2 to one side thereof. The binder may be fabric or paper. I then cut the scorings or angular grooves 3 in the opposite side of the sheet and at right angles to the grain thereof, the angle of the scorings being preferably 45° for the rectangular

core. The scorings are separated the required distance so that the sections 4 adjacent to them will form the flat sides of a tube. The opposite side edges 5 are each bevelled at 45°. The wood is substantially cut through at the scores, the binder 2 holding the side-forming sections together. Upon folding the blank on the scorings the bevelled walls at each scoring abut and the opposite outer edges 5 abut to form square corners. A tape 6 is applied over the joint formed by the edges 5 and the tube 7 is thereby held in shape for winding other material thereon.

In the manufacture of the smaller electrical coils the blank will be formed of such length that it will be common to all the coils to be simultaneously wound. The blank is wrapped about the mandrel and the tape 6 is applied to complete the tube. The several windings and insulation between the layers thereof are then wound on the tube and when finished the coils 8 are separated by cutting through the insulation and the tube either while the unit remains on the mandrel or after it is removed therefrom.

The cutting of the tube is readily accomplished since it is made with the grain of the wood.

The tube or core 7 in each coil is relatively stiff and retains its shape and is not appreciably affected by the pressure of the wire wound upon it.

While I prefer to use a suitable form of wood for my hollow core, any fibrous or other insulating material of suitable form and capable of resisting the pressure of the material wound upon it will suffice.

I claim:

1. A core for electrical coils formed of a single rectangular blank having parallel scorings in one side spaced to define folded wall sections of a tubular core when the core is set up, a binder on the opposite side of the blank and means for securing together the abutting edges of the opposite end sections of the blank to lock the walls in position.

2. A core for electrical coils formed of a wood blank having transverse scorings in one side spaced to define folded wall sections when the core is set up, a binder on the opposite side of the blank and common to all said sections and a member engaging the abutting edges of the opposite end sections of the blank to lock the walls in position.

3. A core for electrical coils formed of a thin wood blank having transverse scorings in one side spaced to define folded wall sections when the core is set up, a binder on the opposite side