

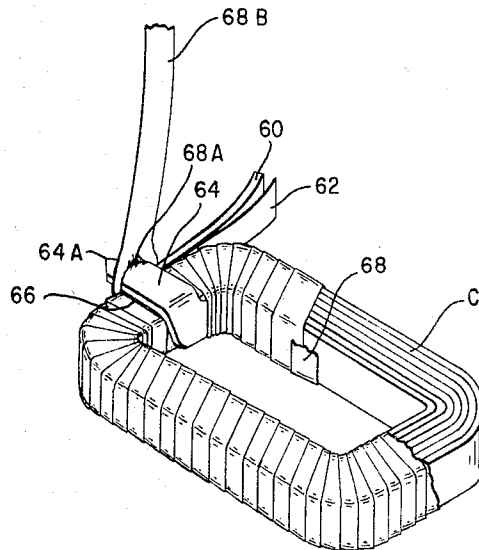
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INSULATED COIL WITH INTEGRAL POINTED TERMINAL

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INSULATED COIL WITH INTEGRAL POINTED TERMINAL

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 Application Jan. 22, 1962, Ser. No. 182,700, now Patent No. 3,232,544, dated Feb. 1, 1966, which is a division of application Ser. No. 769,386, Oct. 24, 1958, now Patent No. 3,084,879, dated Apr. 9, 1963. Divided and this application May 26, 1965, Ser. No. 458,915
 2 Claims. (Cl. 336-192)

This application is a division of application Serial No. 182,700, filed January 22, 1962, now Patent No. 3,232,544, which is a division of application Serial No. 769,386, filed October 24, 1958, now Patent No. 3,084,879.

This invention relates to a form of a toroidal coil which is suitable for use with a taping machine as disclosed in the above-identified applications wherein a method of taping is utilized which allows the flexible insulating tape, to be wound on the coil and about its projecting terminal, to be in close proximity to the terminal for efficiently insulating the same. For this purpose, the terminal is provided with a pointed terminal to pierce the tape.

It is therefore a principal object of this invention to provide an insulated toroidal coil having an inner strip terminal which extends outwardly over the coil body which has a pointed end adapted to pierce the insulating tape to position the insulating tape in close proximity to the terminal.

It is a further object of this invention to provide a strip wound toroidal coil insulated with paper between the turns of its toroidal form, which has an inner integral terminal which extends outwardly over the coil body having a pointed terminal tip adapted to pierce the body of an insulating strip of flexible fabric during winding thereof on the coil body to insulate the terminal.

Other objects and advantages of this invention relating to the arrangement, operation and function of the related elements of the structure, to various details of construction, to combinations of parts and to economies of manufacture will be apparent to those skilled in the art upon consideration of the following description and appended claims, reference being had to the accompanying drawing forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

Referring to the drawing:

The single figure of the drawing shows in perspective view a toroidal coil wound of a conducting strip to which the invention has been applied. The tape is cut away on one side of the coil to show the details of the coil interior.

Referring to the drawing the coil C, to which flexible cotton insulating strip 68 is to be applied, is wound from copper strip material 60, insulated by a paper strip 62 positioned between the turns of the coil. The inner terminal end 64 is bent upwardly and outwardly to overlie the main body of the coil, as shown, and is preferably insulated by a strip of paper 66 positioned between the overlying parts. The tip 64A of the terminal end is pointed to aid in piercing the flexible cotton insulating strip 68 when the tape is wound over it at 68A during the winding operation on the machine disclosed in the above-identified applications for patent.

The flexible insulating tape 68, preferably of cotton braid material, although other insulating materials such as paper, plastic or the like may be used, is supplied in the form of large rolls or containers (not shown) to the taping machine which applies the tape in an even overlapping layer on the sides of the toroidal coil C. The winding of the flexible tape 68 begins on the coil C be-

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hind the terminal 64 and continues in a clockwise direction around the sides of the coil C until the pointed terminal end 64A approaches the winding position, at which time sufficient tension is applied to the tape 68, so that the point end 64A of the terminal pierces the tape at 68A to provide insulation behind the terminal. The outer terminal end 60 of the coil C will, in the meantime, have been bent transversely to the inner terminal 64. The winding cycle ends with the cutting of the tape from the source.

The freely extending end 68B beyond the terminal 64A, is then wrapped manually about the coil and the terminal.

It is to be understood that the above-detailed description of the present invention is intended to disclose an embodiment thereof to those skilled in the art, but that the invention is not to be construed as limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawing since the invention is capable of being practiced and carried out in various ways without departing from the spirit of the invention. The language used in the specification relating to the operation and function of the elements of the invention is employed for purposes of description and not of limitation, and it is not intended to limit the scope of the following claims beyond the requirements of the prior art.

What is claimed:

1. An insulated coil comprising a conducting strip having continuous, integral, terminal ends for connection to an electrical circuit, said terminals both extending from the coil at one side thereof, the inner terminal being bent to extend outwardly across the turns of the coil, the outer terminal extending parallel to said one coil side normal to the inner terminal, insulation between the turns of the coil and between the inner terminal end and the turns including the outer terminal, flexible tape insulation positioned about the coil sides terminating at a point adjacent the inner terminal, said tape insulation being positioned in overlapping layers on the coil, and a pointed tip on the inner terminal end piercing the tape to position the inner terminal in an aperture in the tape at a point where the tape extends across the inner terminal whereby the inner terminal is insulated by the tape.

2. An insulated coil comprising a conducting strip having continuous, integral, terminal ends for connection to an electrical circuit, said terminals both extending from the coil at one side thereof, the inner terminal being pointed and bent to extend outwardly across the turns of the coil, the outer terminal extending parallel to said one coil side normal to the inner terminal, insulation between the turns of the coil and between the inner terminal end and the turns including the outer terminal, and flexible tape insulation positioned about the coil sides in overlapping layers terminating at a point adjacent the inner terminal, the pointed tip on the inner terminal end, piercing the tape to position the inner terminal in an aperture in the tape at a point where the tape extends across the inner terminal whereby the inner terminal is insulated by the tape.

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