

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) SUPPORT FOR AN ELECTRICAL COMPONENT

(71) We, PHILIPS ELECTRONIC AND ASSOCIATED INDUSTRIES LIMITED, of Abacus House, 33 Gutter Lane, London, E.C.2., a British Company, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

10 THE INVENTION relates to a support of a thermoplastic synthetic resin for an electrical component having a base which is provided with apertures in which solderable connecting pins are inserted. Supports of
 15 this kind are used, for example, for manufacturing coils which are suitable for soldering in a printed circuit. In such a case the support usually consists of a circular-cylindrical portion on which the coil is wound, said portion being formed from thermoplastic synthetic resin as one assembly with the base. After the coil has been wound, the ends of the coil wire are soldered to the connecting pins. A drawback
 20 thereof is that the connecting pins transfer heat to the synthetic resin during soldering, so that the latter becomes soft, thus causing the pins to work loose or be inclined.

25 The invention has for its object to provide a construction eliminating this drawback to a considerable extent. According to the invention, this object is achieved in that each of the connecting pins consists of a strip of conducting material, which is twisted over
 30 at least the portion of its length which engages the aperture, the apertures consisting of round holes having a diameter which is approximately equal to the width of the strips, and in that the portion of each strip
 35 engaging an aperture is twisted at least through 90°.

40 In this construction the transfer of heat to the synthetic resin is reduced in that the cross-section of the twisted strip is considerably smaller than that of a round pin which

fits in the same hole, and in that the contact area between the connecting pin and the synthetic resin is reduced from the entire inner wall of the aperture to a double helical line.

50 A reduction of the heat transfer might also be achieved by using a non-twisted strip-shaped pin instead of a round pin, but this solution has the drawback that such a pin is poorly secured in a direction perpendicular to the plane of the strip, so that the object i.e. preventing the pin from assuming a position other than the desired position, is only partly achieved. By twisting the
 55 portion of the pin engaging the aperture over at least 90°, the pin is secured in all directions. The twisted shape offers the additional advantage that, should the synthetic resin along the contact line with the pin happen to become soft anyway, a helical
 60 groove would be produced in the synthetic resin so that the pin does not drop out of the aperture, but remains "screwed in" as it were.

65 In order that the invention may be readily carried into effect, one embodiment thereof will now be described in detail, by way of example, with reference to the accompanying diagrammatic drawings, in which:

70 Figure 1 is a side view of a coil which is wound on a support according to the invention, and

75 Figure 2 shows a longitudinal section on an enlarged scale through a portion of the support of Figure 1.

80 The coil 1 shown in Figure 1 is wound on a circular-cylindrical former 3, which forms a support together with a base 5. The coil former 3 can accommodate a ferromagnetic core 7 which is to be screwed in for adjusting the inductance of the coil.

85 In the base 5 are recessed grooves 9 which extend in Figure 1 from the upper edge to the lower edge of the base and in which the wire ends 11 of the coil 1 extend,

[Price 25p]

said wire ends 11 being soldered to connecting pins 13. As is shown in Figure 2, each connecting pin 13 consists of a twisted strip-shaped conductor which is inserted into a round aperture in the base 5, the diameter of said aperture being approximately equal to the width of the strip. By twisting the connecting pin over its entire length as shown in Figure 2, it is possible to feed a long strip of material continuously through a twisting device and to cut connecting pins of the desired length subsequently. This is less expensive than the twisting of each connecting pin individually.

15

WHAT WE CLAIM IS:—

1. A support of a thermoplastic synthetic resin for an electrical component having a base which is provided with apertures in which solderable connecting pins are inserted, characterized in that each of the connecting pins consists of a strip of

conducting material which is twisted over at least the portion of its length which engages the aperture, the apertures consisting of round holes having a diameter which is approximately equal to the width of the strips, and in that the portion of each strip engaging an aperture is twisted at least through 90°.

2. A support as claimed in Claim 1, characterized in that each strip is uniformly twisted over its entire length.

3. A support, in particular for a coil, substantially as herein described with reference to the accompanying diagrammatic drawing.

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