

AN ELECTRICALLY CONDUCTIVE PLUG PIN

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This invention relates to electrically
conductive plug pins and is especially, but not
exclusively, concerned with electrically conductive plug
5 pins for use in electric plugs of the kind used in
domestic and similar wiring systems.

It is an object of the present invention to
provide an improved electrically conductive plug pin which
is simple and inexpensive and which is especially, but not
10 exclusively, suitable for use as the neutral pin or the
earth pin of an electric plug.

According to the invention, the improved
electrically conductive plug pin is formed from a blank of
sheet metal or metal alloy which has been folded or
15 otherwise shaped to form a hollow pin of substantially
rectangular transverse cross-section and which has,
integral with one of the major side walls of the pin at
one of its ends, a tag which extends lengthwise of the
pin, which, at its free end, is slit longitudinally for a
20 limited distance at each of two transversely spaced
positions to form two ears, and between the ears, one wall
of a ferrule and which has, spaced from said free end, a
second wall of the ferrule that has been punched out of
the tag, an extreme end part of each ear being folded over
25 to lie in a plane substantially normal to the major side
walls of the pin.

When the bare end of a cable conductor is
introduced into the ferrule of the improved electrically
conductive plug pin and the ferrule is crimped about the

conductor, the folded over extreme end parts of the ears will be spaced longitudinally from the crimped connection. This arrangement has two important advantages. Firstly, the provision of the folded over extreme end parts of the ears at the end of the electrically conductive plug pin remote from its nose facilitates manual insertion of the pin into a hole in an insulating body of a plug because the pin can be pushed into the hole by exerting pressure on the flat extreme end parts of the ears with negligible risk of the operator cutting or otherwise damaging his thumb or finger. Secondly, where the improved electrically conductive plug pin is to be used in a moulded-on electric plug, the provision of folded over ears on opposite sides of the ferrule reduces the risk that any stray wire from the crimped connection will extend from the crimped connection and protrude through the moulded body of the plug.

Preferably, at the end of one or each minor side wall of the pin nearer the ferrule, the minor side wall is folded outwardly to form a shoulder for bearing against an insulating plug body when the pin is inserted into a hole in the body to limit the extent to which the pin will protrude from the body.

The invention also includes an electric plug having at least one improved pin substantially as hereinbefore described.

The invention is further illustrated by a description, by way of example, of a preferred electrically conductive plug pin, with reference to the

accompanying drawings, in which:-

Figures 1 and 2, respectively, are front and side views of the pin;

Figure 3 is an end view of the pin looking in the direction of Figure A in Figure 1;

Figure 4 is a plan view of the preformed base insert of a moulded-on electric plug with the conductors of a flexible cable electrically connected to pins and a fuse contact of the plug, and

Figure 5 is an end view of the preformed base insert and pins shown in Figure 4.

Referring to Figures 1 to 3, the improved electrically conductive plug pin 1 is formed from a blank of sheet metal or metal alloy which has been folded to form a hollow pin of substantially rectangular cross-section having major side walls 2 and 3, minor walls 4 and a nose 5. At the end of the major side wall 3 remote from the nose 5 is a tag 6 which, at its extreme end, is slit longitudinally for a limited distance at each of two transversely spaced positions to form two ears 11 and, between the ears, one wall of a ferrule 7. The other wall 9 of the ferrule is stamped out of that part of the tag between the extreme end of the tag and a folder over part 10 of the major side wall 2. Each of the minor side walls 4 at the end nearer the tag is folded outwardly to form a shoulder 12. Each of the ears at its extreme end is folded to lie substantially normal to the major side wall 3.

When the walls 8 and 9 of the ferrule 7 are

crimped about the exposed end of a cable conductor, the folded over ears 11 are spaced longitudinally from the crimped connection.

In the preformed plug base insert 20 shown in Figures 4 and 5, the neutral pin 21 and the earth pin 22 are each substantially as illustrated in Figures 1 to 3. After the exposed end of the appropriate cable conductor has been crimped between the walls 8 and 9 of the ferrule 7, each of the neutral pin 21 and earth pin 22 can be readily manually inserted into the appropriate hole in the base insert 20 by imparting pressure to the folded ears 11 of the pin to press it into place until the shoulders 12 bear against the face of the preformed base insert. The folded over ears 11 facilitate manual insertion of a pin without risk of injury to the thumb or finger of the operator.

In addition, the folded-over ears 11 substantially reduce risk of a stray wire from the crimped connection protruding into and through the moulded body of a plug.

CLAIMS

1. An electrically conductive plug pin formed from a blank of sheet metal or metal alloy which has been folded or otherwise shaped to form a hollow pin of substantially rectangular transverse cross-section and which has, integral with one of the major side walls of the pin at one of its ends, a tag which extends lengthwise of the pin, which, at its free end, is slit longitudinally for a limited distance at each of two transversely spaced positions to form two ears, and between the ears, one wall of a ferrule and which has, spaced from said free end, a second wall of the ferrule that has been punched out of the tag, an extreme end part of each ear being folded over to lie in a plane substantially normal to the major side walls of the pin.
2. An electrically conductive plug pin as claimed in Claim 1, wherein the end of one or each minor side wall of the pin nearer the ferrule is folded outwardly to form a shoulder.
3. An electrically conductive plug pin substantially as hereinbefore described with reference to and as shown in Figures 1 to 3 of the accompanying drawings.
4. An electric plug having at least one electrically conductive plug pin as claimed in any one of the preceeding claims.

