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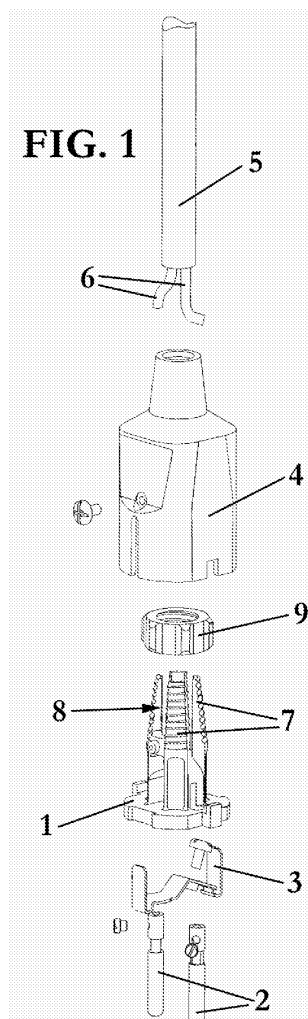
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(54) **Electrical connector**

(57) The electrical connector comprises retaining means of an electrical cable (5), and it is characterised in that said retaining means of the electrical cable (5) comprises a plurality of flexible legs (7) externally threaded around a housing (8) for the electrical cable (5), and a complementary nut (9) which is threaded on said flexible legs (7), so that said legs (7) flex to said housing (8), retaining the electrical cable (5).

The internal surface of said legs (7) can be biased or cylindrical.

It is obtained an electrical connector in which the cable can be hold comfortably and easily, without using any tool, such as a screwdriver.



Description

[0001] The present invention refers to an electrical connector, such as an electrical base or plug, comprising retaining means of the electrical cable.

Background of the invention

[0002] In the state of the art, when it is necessary to retain the electrical cable in an electrical connector different systems are applied, all based in the compression system of the cable.

[0003] There are known two retaining systems of the cable. In the first of these systems, the retention is done screwing on two flat or rough plastic parts, the cable passing through the centre of them.

[0004] In the second system, the retention is done inserting the cable by interference inside a housing, and the cable is retained inside the housing by the compression of other plastic part which presses the cable when the electrical connector is closed.

[0005] The described state of the art has some drawbacks for the final users, because in cables with retaining means with screwing systems it must be used screwdrivers to fix the cable, and when holding systems by grooves are used, the cable only remains fixed when the connector is closed, and in these cases it is also the drawback that, depending on the size of the cable, it is difficult to insert it inside the groove.

Description of the invention

[0006] With the electrical connector of the invention said drawbacks can be solved, presenting other advantages that will be described.

[0007] The electrical connector of the present invention comprises retaining means of an electrical cable, and it is characterised in that said retaining means of the electrical cable comprises a plurality of flexible legs externally threaded around a housing for the electrical cable, and a complementary nut which is threaded on said flexible legs, so that said legs flex to said housing, retaining the electrical cable.

[0008] Thanks to this feature, it is obtained an electrical connector in which the cable can be held comfortably and easily, without using any tool, such as a screwdriver.

[0009] According to two alternative embodiments, the internal surface of said legs is biased or cylindrical.

Brief description of the drawings

[0010] For a better understanding of the previous description some drawings are attached, in which, diagrammatically and only as a non-limitative example, it is shown a pair of practical cases of embodiment.

Fig. 1 is an exploded perspective view of the electrical connector of the present invention, according to

a first embodiment;

Fig. 2 is a perspective view of the electrical connector of the present invention, according to said first embodiment;

Fig. 3 is an exploded perspective view of the electrical connector of the present invention, according to a second embodiment;

Fig. 4 is a perspective view of the electrical connector of the present invention, according to said second embodiment.

Description of a preferred embodiment

[0011] First of all, it must be pointed out that the present invention refers to an electrical connector, that can be an electrical plug (shown in Figs. 1 and 2) or an electrical base (shown in Figs. 3 and 4), or any suitable electrical connector.

[0012] As it can be seen in Figs. 1 and 2, the electrical connector of the present invention comprises a base 1 provided with two through holes, through which plugs 2 pass. Said base 1 also comprises a ground connection 3 protruding at its upper part. Said connector also comprises a lid 4 which is fixed to the rest of the connector.

[0013] An electrical cable 5 passes through the connector, which is provided with a pair of internal cables 6, which are connected in a known way to the plugs 2 and to the earth connection 3.

[0014] According to the invention, the connector comprises a plurality of flexible legs 7, four in the case of the shown embodiment, which are placed around a housing 8 for the electrical cable 5.

[0015] These flexible legs 7 are externally threaded to receive a complementary nut 9. Therefore, when the nut 9 is threaded, the legs 7 flex inwardly into the housing 8, retaining the electrical cable 5.

[0016] The internal surface of said legs 7 can be tapered or cylindrical.

[0017] In Figs. 3 and 4 is shown a second embodiment of the electrical connector of the present invention, in which the retaining means of the cable are identical to those described in the first embodiment.

[0018] In this embodiment the same reference numerals are used to designate the common components with the first embodiment or equivalent components.

[0019] In this case, the connector also comprises a base 1 provided with a vertical support 10, in which two alveoli 2 are connected, equivalent to the plugs previously described. Said base 1 also comprises a ground connection 3 fixed to said vertical support 10.

[0020] As in the previous case, said connector also comprises a plurality of flexible legs 7, four in the case of the shown embodiment, which are placed around a housing 8 for the electrical cable 5.

[0021] These flexible legs 7 are externally threaded to house a complementary nut 9. Therefore, when the nut 9 is threaded, the legs 7 flex inwardly inside the housing 8, retaining the electrical cable 5.

[0022] The internal surface of said legs 7 can be tapered or cylindrical.

[0023] Even though reference is made of a pair of specific embodiments of the invention, it is apparent for a person skilled in the art that the described electrical connector can be subjected to numerous variations and modifications, and that all the mentioned details can be substituted by other technically equivalent ones, without departing from the scope of protection defined by the attached claims. 5 10

Claims

1. Electrical connector, comprising retaining means of an electrical cable (5), **characterised in that** said retaining means of the electrical cable (5) comprises a plurality of flexible legs (7) externally threaded around a housing (8) for the electrical cable (5), and a complementary nut (9) which is threaded on said flexible legs (7), so that said legs (7) flex to said housing (8), retaining the electrical cable (5). 15 20
2. Electrical connector according to claim 1, **characterised in that** the internal surface of said legs (7) is biased. 25
3. Electrical connector according to claim 1, **characterised in that** the internal surface of said legs (7) is cylindrical. 30

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