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(54) **Electric device with electric socket and separable shells.**

(57) An electric device (10) comprises a first shell (11) and a second shell (12) which can be fitted together to form a casing for electrical components (13) secured to the first shell (11) and for an electric socket (14) secured to the second shell (12).

Between the electrical components (13) and the electric socket (14) is a separable electrical connection comprising a printed circuit terminal strip (17) constituting an electrical connection between the pins (15, 16) of the socket and flat springs (18, 19) which, when the shells (11, 12) are fitted together, come into elastic contact with corresponding electrical contact projections (20, 21) connected on said first shell to said electrical components.

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ELECTRIC DEVICE WITH ELECTRIC SOCKET AND SEPARABLE SHELLS

This invention refers to a device comprising generic electrical components housed in a casing generically made up of two shells, the electrical components being secured inside one shell and the other shell being provided with an electric socket with its plug-in portion facing outwards. In particular, in the known technique this arrangement, which is quite common, generally involves the need to provide a connection by means of electric wires between the socket and the remaining electrical components of the device, thereby joining the two shells which cannot easily be separated, for example, in order to install the device, without disconnecting said wires. Moreover, this type of arrangement of known technique constitutes a problem also during assembly of the device at the factory, due to the need to connect the parts fitted on said two shells by means of electric wires.

The general scope of this invention is to obviate the aforementioned problems by providing a technical solution for the connection between the socket and the rest of the circuit, which does not require wires and which consequently continues to maintain the independence of the two shells.

This scope is achieved according to the invention by providing an electric device comprising a first shell and a second shell which can be fitted together to form a casing for electrical components secured to the first shell and an electric socket secured to the second shell with the part designed to receive a corresponding plug disposed on the outer surface of the latter, the socket being provided inside the device with power pins electrically connected to said electrical components on the first shell, characterized by the fact that for said electrical connection the power pins are welded onto tracks on a printed circuit terminal strip carrying, riveted to said tracks, corresponding flat springs designed to come into contact, when the shells are fitted together, with corresponding electrical contact projections connected on said first shell to said electrical components, in order to enable the first and second shell to be completely separated.

The innovatory principles of this invention and its advantages with respect to the known technique will be more clearly evident from the following description of a possible exemplificative and non-restrictive embodiment applying such principles, with reference to the sole accompanying drawings.

With reference to the drawings, a device generically indicated by reference 10 (partially and schematically represented in cross-section) comprises two shells 11 and 12 (for example in moulded plastic) containing generic electrical compo-

nents 13 secured to the first or bottom shell 11, and a power socket secured to the second shell or lid 12 and with its plug-in portion protruding from the surface of the latter.

According to the invention, pins 15, 16 for electrical connection of the socket are welded onto a printed circuit terminal strip 17 carrying, riveted to the tracks connected to the weldings of the pins 15 and 16, corresponding flat springs 18 and 19 for contact, when the shells are fitted together, with corresponding electrical contact projections 20 and 21 connected to the electric power supply of the electrical components 13.

In this way, the lid 12 is easily separable from the base 11 since there are no wires connecting the parts.

The electrical components 13, which are represented only schematically since they can be of any known type can, for example, comprise a power transformer for the rest of the device, for example a wall-mounted hair drier of the type described in the Italian industrial utility model application N° 20983 B/89 on behalf of the same Applicant. In this case, the contact projections 20 and 21 can advantageously be electrical terminals of the transformer.

The foregoing description of an embodiment applying the innovatory principles of this invention is obviously given purely by way of example in order to illustrate such innovatory principles and should not therefore be understood as a limitation to the sphere of the invention claimed herein.

For example, the springs 18 and 19 on the printed circuit can be disposed in positions different from the one shown (for example disposed parallelly side by side) so as to adapt to particular reciprocal positions of the contact projections 20 and 21.

Claims

1. An electric device comprising a first shell and a second shell which can be fitted together to form a casing for electrical components secured to the first shell and an electric socket secured to the second shell with the part designed to receive a corresponding plug disposed on the outer surface of the latter, the socket being provided inside the device with power pins electrically connected to said electrical components on the first shell, characterized by the fact that for said electrical connection the power pins are welded onto tracks on a printed circuit terminal strip carrying, riveted to said tracks, corresponding flat springs designed to

come into contact, when the shells are fitted together, with corresponding electrical contact projections connected on said first shell to said electrical components, in order to enable the first and second shell to be completely separated.

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2. Device as claimed in Claim 1, characterized by the fact that said electrical components comprise a transformer, the connecting terminals of the latter consisting of said electrical contact projections.

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