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(54) Perfected wire protector-guide

(57) The invention refers to a protector formed by a piece of plastic or similar material capable of carrying out two functions, firstly, providing splash-proof protection, and secondly, guiding a wiring bundle. It is formed basically of an eminently trunco-tetrapyramidal body consisting of two halves which fold onto one another by virtue of being joined by a hinge, the bases of this body having an eminently cylindrical opening which allows the wire bundle to pass through and into the inside of the protector, the bundle being conducted towards a connector which will be locked in place by the bottom part of the protector.

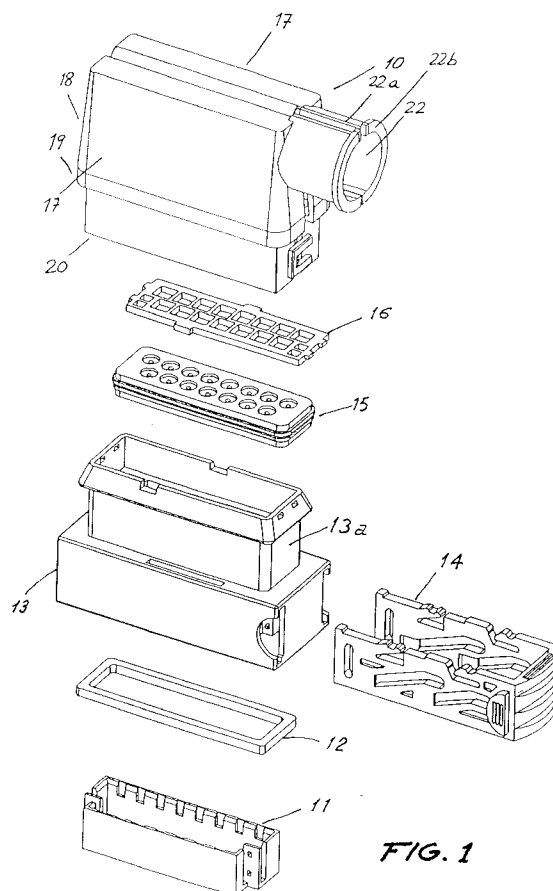


FIG. 1

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Description

[0001] This Patent of Invention application, as its name indicates, consists of a "PERFECTED WIRE PROTECTOR-GUIDE", whose new characteristics of construction, conformation and design comply with the mission for which they have been specifically designed with maximum safety and efficacy.

[0002] More specifically, the invention refers to a protector formed by a piece of plastic or similar material capable of carrying out two functions, firstly, providing splash-proof protection, and secondly, guiding a wiring bundle. Moreover, the snap-on function is carried out independently of the connector, as the latter simply adapts to the design, without containing any specific part designed to snap onto the protector.

[0003] The arrival of a bundle of wires at a connector fitted with the corresponding male or female terminals, is difficult to arrange and adapt to a limited space, where, in certain circumstances, the bundle sometimes changes direction abruptly around the connector, whereupon, and as a result of the stiffness of the wires, a perfect design is required to make the proper connection between the male and female terminals.

[0004] Additionally, the connection between male and female terminals via the connectors requires protection against water, whereby the suggested protector provides two functions, one being to protect the connector from splashing water, and the other to guide the bundle of wires.

[0005] The suggested protector is formed basically of an eminently trunco-tetrapyramidal body consisting of two halves which fold onto one another by virtue of being joined by a hinge, the bases of this body having an eminently cylindrical opening which allows the wire bundle to pass through and into the inside of the protector, the bundle being conducted towards a connector which will be locked in place by the bottom part of the protector. Additionally, a third function is obtained, namely that regardless of the specific characteristics of the connector to which the protector is fitted, no specific design is required for the pieces to be joined, simply that the inside perimeter of the protector should match that of the connector, as the body of the connector extends to an eminently prismatic bottom area.

[0006] Other details and characteristics will become apparent in the course of the description provided hereunder, where reference is made to the figures attached to this abstract, and which, somewhat schematically, represent the preferred details. These details are given by way of example, referring to a possible case of a practical embodiment, but are not limited to the details expounded herein; this description may therefore be regarded as an illustrative point of view, with no type of limitation whatsoever.

[0007] The following is a detailed embodiment of the different elements which are mentioned in this application: (10) protector, (11) spacer, (12) joint, (13) body of

the connector, (13a) opening, (14) lever, (15) monoblock joint, (16) cover of the joint, (17) semi-covers, (18) top area, (18a) side bases of (18), (19) intermediate area, (19a) the side bases of (19), (20) bottom area, (20a) side bases of (20), (21) catches of the protector, (22) opening, (22a) semi-opening, (22b) rim or edge, (23) hinge, (24) lug, (25) step, (26) wires, not represented in the figures.

[0008] Figure no. 1 is an exploded view of the protector (10) applied to a standard connector, formed by a spacer (11), a joint (12), the actual body of the connector, its opening (13a), monoblock joint (15), and the cover of the joint (16), all joined together by a lever (14).

[0009] Figure no. 2 is a view of the protector (10), open and seen from the bottom.

[0010] Figure no. 3 is a view of the protector (10), assembled on the opening (13a) of the body (13) of the connector.

[0011] In one of the preferred embodiments of the present application, and as can be seen from figure no. 2, the protector (10) is formed by two semi-covers (17) which fold onto each other along their bottom perimeter (17) via a hinge (23) which joins them and permits the relative rotation of the semi-halves (17) on the hinge (23) until they both meet, having been fitted with a locking mechanism consisting of catches (21) and lugs (24) located on the bottom area (20) of the protector (10).

[0012] The protector (10) is formed by an eminently tetrapyramidal top area (18), whose longer bases are sloping, and side bases (18a) extending to an eminently prismatic intermediate area (19) with side bases (19a) which in turn extend downwards through a step (25) onto a prismatic bottom area (20), whose side bases (20a) are fitted with the catches (21) and the lugs (24), and when the lug (24) slides into the catch (21) the two semi-covers are brought together, see figure no. 1.

[0013] The opening (22) is perpendicular to the side bases (18a) of the top area (18). The wires (26) enter through the aforementioned opening (13a) which is formed by two cylindrical semi-openings (22a), and which end in a rim or edge (22b) perpendicular to the cylindrical area which conforms the semi-openings (22a).

[0014] When closed, see figures nos. 1 and 3, the bottom of the protector (10) fits into the body of the connector (13), as does the opening (13a), simply by lining up the perimeter of the aforementioned bottom area with the perimeter of area (13a), whereby the protector (10) can be used with a number of types of connectors, such as the one represented in figure 1, or similar ones, with no need for the different component elements of the connector, represented by way of example in figure no. 3, to coincide with it.

[0015] The protector's special configuration, described previously, permits the insertion of the wire bundle through the opening (22), and the bundle can also be folded at a right angle and conducted vertically towards the body of the connector (13) for the connection

of the male and female terminals inside the connector, being protected, at the same time, from any water splashing from above.

[0016] Now that the Patent of Invention has been properly described, as shown in the attached plans, it may be understood that any detailed modifications deemed necessary may be introduced, provided that any variations introduced do not alter the essence of Patent of Invention which is summarised in the following Claims.

Claims

1. "PERFECTED WIRE PROTECTOR-GUIDE", of the kind used to protect connections between male and female terminals inside the connector from water splashing from above, and which can be specially applied inside automobiles, characterised in that the protector (10) presents an eminently regular trunco-tetrapyramidal configuration, whose bottom area (20) has no base and into which the opening (13a) of a connector (13) snaps, while the side base (18a) of the protector (10) has an opening (22) for the insertion of wires (26), formed by two semi-cylindrical areas (22) with a rim or edge (22) on the free end which is perpendicular to the aforementioned semi-cylindrical areas (22a).
2. "PERFECTED WIRE PROTECTOR-GUIDE", characterised according to the 1st claim in that the protector (10) is formed by two semi-covers (17) joined by a hinge (24), with (17) presenting a first trunco-tetrapyramidal top area (18) with side bases (18a) which extends downwards to an intermediate area (19), lower in height than (18) and eminently prismatic, with side bases (19a), and being joined to a bottom area (20), also prismatic, via a step, with side bases (20a) located in this bottom area (20) which contain the harbour the closing mechanism of the protector (10).
3. "PERFECTED WIRE PROTECTOR-GUIDE", characterised according to the 1st claim in that in the protector (10), area (18) is formed by two semi-covers (17) which are joined by virtue of having, at the bottom of the protector, tongues (21) which lock into the lugs (24).

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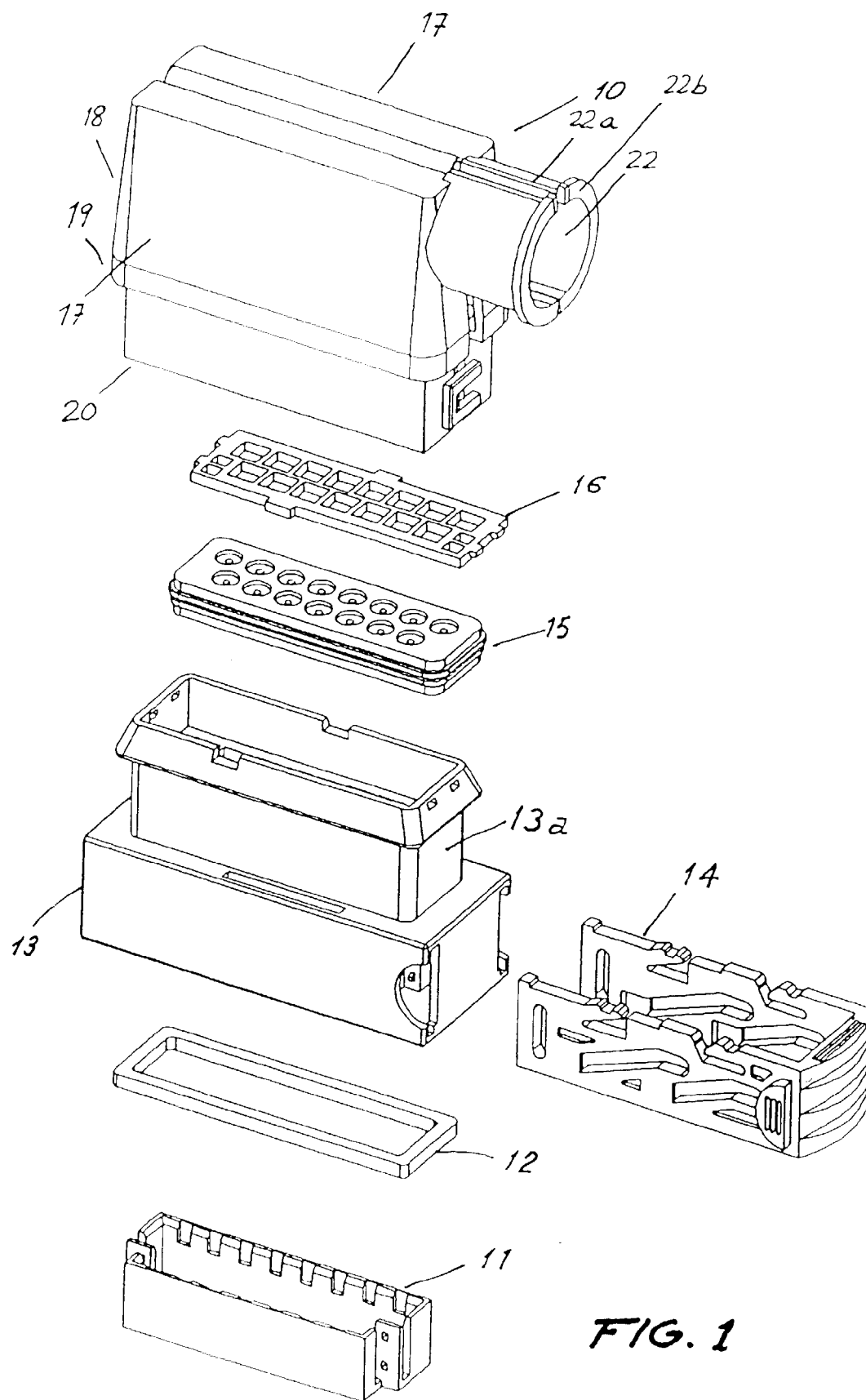


FIG. 1

