June 9, 1959

O. B. LILJENBERG

2,890,433

CABLE CONNECTOR MEMBER

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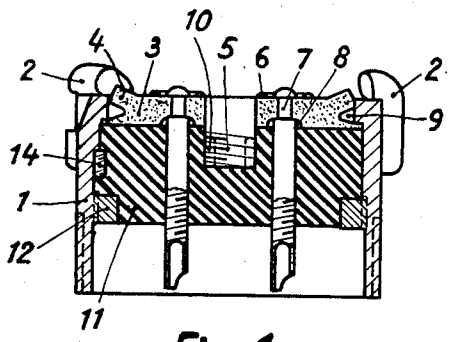


Fig. 1

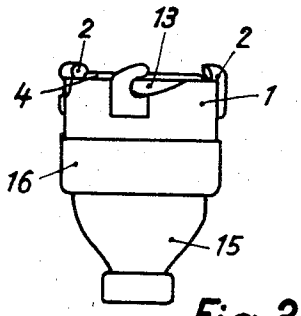


Fig. 3

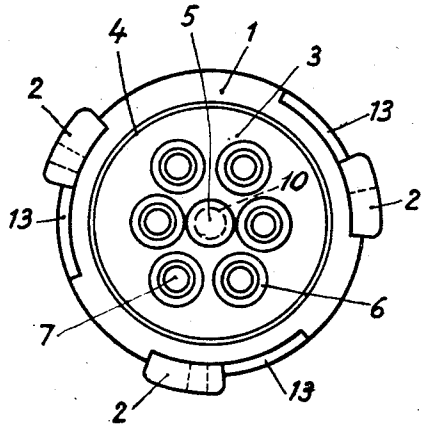


Fig. 2

INVENTOR
OVE BIRGER LILJENBERG
BY Hane and Nydick
ATTORNEYS

United States Patent Office

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Ove Birger Liljenberg, Sundbyberg, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

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5 Claims. (Cl. 339—48)

The present invention relates to a multipole contact device such as is particularly used for telephone cables and which comprises two cylinder-shaped contact halves having contact pins extending axially. The object of the invention is to provide a simple and practical device of this kind. This is achieved by providing two identical contact halves having contact pins resilient in an axial direction, said contact pins being in the form of rivet-heads at the contact point.

The invention will be described more in detail with reference to the annexed drawing. Fig. 1 shows a contact half seen laterally and in section. Fig. 2 shows a plan view of a contact half. Fig. 3 illustrates on a reduced scale how a cable box is connected to a contact half.

Each contact half comprises a cylindrical contact casing **1**, which for connection to the corresponding second exactly equal contact half, is provided with two locks **2**. These are somewhat unsymmetrically arranged around the periphery in order to ensure only one locking position forming angles of for instance 110, 110 and 140 degrees between each other. The openings of the contact halves towards each other are covered with rubber plates. The rubber plate **3**, Figs. 1 and 2, is cemented to a support **11** of rigid insulating material, for instance moulding material, comprised in the casing **1**. The plate **3** on the outside along the periphery is provided with an elevated edge **4** and beneath this edge there is a recess **9** in the plate. The edge **4** forms a tight seal when two contact halves are assembled, recess **9** providing sufficient elasticity to prevent the rubber from being compressed, when the edge **4** is pressed down.

The electrical contact between the contact halves is effected by a number of contact pins **7** extending axially. The contact pins **7** are fixed to the rubber plate **3** but they are slidable in the support **11**. At the contact point the pins **7** are shaped as rivet-heads, the under sides of which are resting against the outer side of the rubber plate **3**. The inner side of the rubber plate is adjacent to and about each contact pin provided with a recess **8**, said recess lending elasticity to the contact pins in axial direction when two contact halves are joined and the rivet-heads are pressed towards each other. On the outside of the rubber plate, encompassing each contact pin, there is a ring-shaped elevation **6**, abutting surfaces thus being formed about each contact point when the contact halves are assembled. During the assembly and disassembly of the contact halves the rivet-heads will slide a little towards each other due to slanted camming surfaces **13** of locks **2** on contact casing **1**.

The contact pins **7** may suitably rest against the recesses **8** on the inner side of the rubber plate **3** by means of small shoulders on the pins, they being thus fixedly

secured in the rubber plate. The pins **7** in the shown example terminate in the usual way in soldering tabs for connection of the wires in a telephone cable. A cable box **15**, Fig. 3, may be connected to the contact half by means of a cable lock **16**, which is screwed upon the contact casing **1**.

The support **11** is retained in the casing **1** by means of a lock ring **12**, which is screwed to a thread on the inner side of the casing. A locating pin **14** fixes the right position of the support. To avoid intermingling of contact halves not complementary, rubber plates and supports are in the centre provided with a recess **5**, in the bottom of which there are threads **10** for receiving different centre pins. These recesses, like the centre pins, will not fit contact halves not complementary.

I claim:

1. A cable connector member for use with a complementary connector member, said connector member comprising a rigid cylindrical shell open at both ends, an elastic insulation disc fitted in the shell at one end thereof, said shell constituting the receiving end thereof, a rigid cylindrical body fitted in the shell, one face of said body abutting against the inner side of said disc, a contact pin extending through the disc and the insulation body parallel to the shell axis, said pin being axially slidable in said body and having an enlarged contact head resting upon the outer side of said disc, the disc area on the inner side of the disc surrounding and adjacent to the pin being recessed to permit a limited axial displacement of the pin within the body in response to an axial pressure upon the contact head, and locking means including a slanted camming surface adapted to coact with the complementary member for pulling the two connector members toward each other upon locking of the connector members to each other to hold the contact heads of the two pins in pressure engagement.

2. A cable connector member according to claim 1, wherein said elastic disc of the connector member has on its outer side a circumferentially raised edge and in its peripheral wall a peripheral groove to provide a tight pressure along the periphery of the disc upon locking the two connector members to each other.

3. A cable connector member according to claim 1, wherein the surface area on the outer side of the disc of the connector member surrounding and adjacent to the contact head is raised, the raised area of the connector member being engageable with a raised area on the complementary connector member when the two connector members are locked to each other.

4. A cable connector member according to claim 1, wherein the disc of the connector member has a central aperture and the insulation body a central recess contiguous of said aperture, said recess being internally threaded to receive a locating pin.

5. A cable connector according to claim 1, wherein several contact pins parallel to each other extend through the disc and the insulation body.

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