

Title (en)

Double disconnect, waterproof electrical connector assembly for electrified vacuum hose for wet/dry vacuum cleaner.

Title (de)

Wassergeschützte elektrische Verbindungsanordnung mit zweifacher Unterbrechung für einen Vakuumschlauch mit elektrischen Leitern für ein Nass/Trocken-Vakuumreinigungsgerät.

Title (fr)

Ensemble de connecteur électrique étanche à double déconnexion pour tuyau à conducteurs électriques incorporés pour un appareil de nettoyage par le vide sec/humide.

Publication

EP 0079418 A1 19830525 (EN)

Application

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Priority

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Abstract (en)

A cylindrical molded plastic cuff (24) at one end of a double flexible tube electrified vacuum hose for a wet-dry vacuum cleaner includes an integral molded plastic pocket (50) bearing an elongated receptacle body (48) of insulation material. The body includes two laterally spaced bores (84, 86), counterbored from one end, which counterbores (88, 90) bear enlarged peripheral recesses (92, 98) intermediate of their ends. Cylindrical plungers (108, 110) sized to the counterbores and having a radially enlarged collar intermediate of their ends, in excess of the diameter of the counterbore but less than the peripheral recess, are slidably mounted therein with the collar positioned in the radial recess. A coil spring (112, 114) sized to the peripheral recess is compressed between the collar and one end (102) of the radial recess to spring bias the plunger (108, 110) away from the bore. An O-ring seal (116, 118) whose outside diameter is approximately equal to that of the radial recess is positioned on the plunger (108, 110) to the side of the collar opposite that of the coil spring (112, 114). The end of the plunger (108, 110) facing the bore carries a reduced diameter portion acting as a male contact which slidably fits into a small diameter axial hole within the facing end of a female contact (104, 106) having a base portion sealably carried within the bore of the receptacle body. A plug (38) bears male contact prongs (40, 42) which project into female contacts formed within the end of the plunger opposite the compression spring. The plug (38) locks to the cuff (24) when the plug male contact prongs (40, 42) mate with the female contacts of the plungers, and the plungers (108, 110) are forcibly displaced against the bias of the springs (112, 114) to engage their male contact ends with the axial holes within the fixed female contacts (104, 106) to complete a two part electrical connection through the plug (38) and between the electric motor driving a scrubber mechanism of a vacuum cleaner vacuum pick up head and an electrical source at the opposite end of the hose.

IPC 1-7

H01R 13/71; **A47L 9/24**

IPC 8 full level

A47L 9/24 (2006.01); **H01R 13/71** (2006.01)

CPC (source: EP)

A47L 9/246 (2013.01); **H01R 13/71** (2013.01)

Citation (search report)

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Designated contracting state (EPC)

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