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(71) Applicant
The Plessey Company plc

(Incorporated in United Kingdom),

Vicarage Lane, Ilford, Essex

(72) Inventor
Andrew Philip Cheer

(74) Agent and/or Address for Service
**G. Sorenti, The Plessey Company plc, Intellectual
Property Department, Vicarage Lane, Ilford, Essex**

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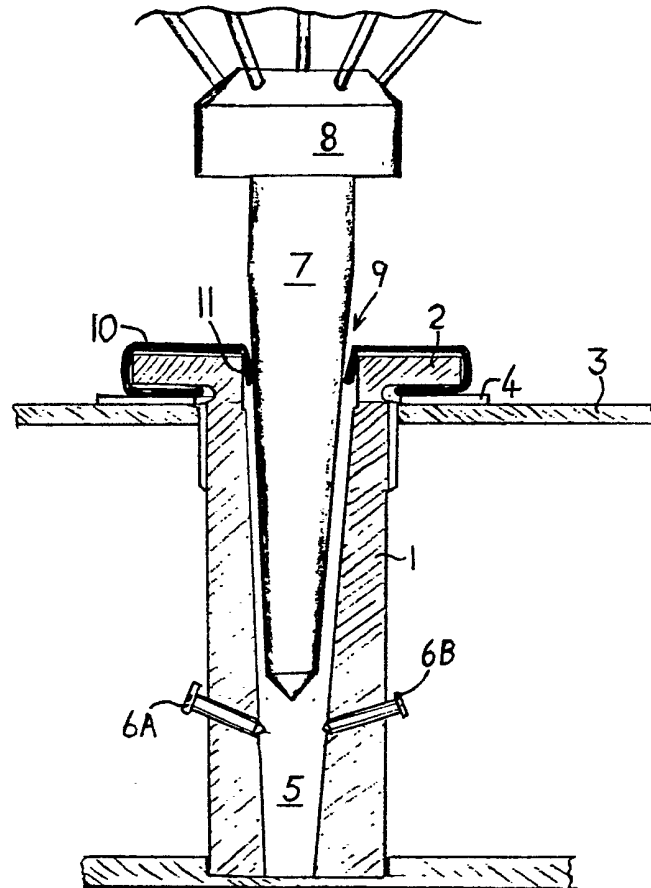
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(54) Aerial socket assembly

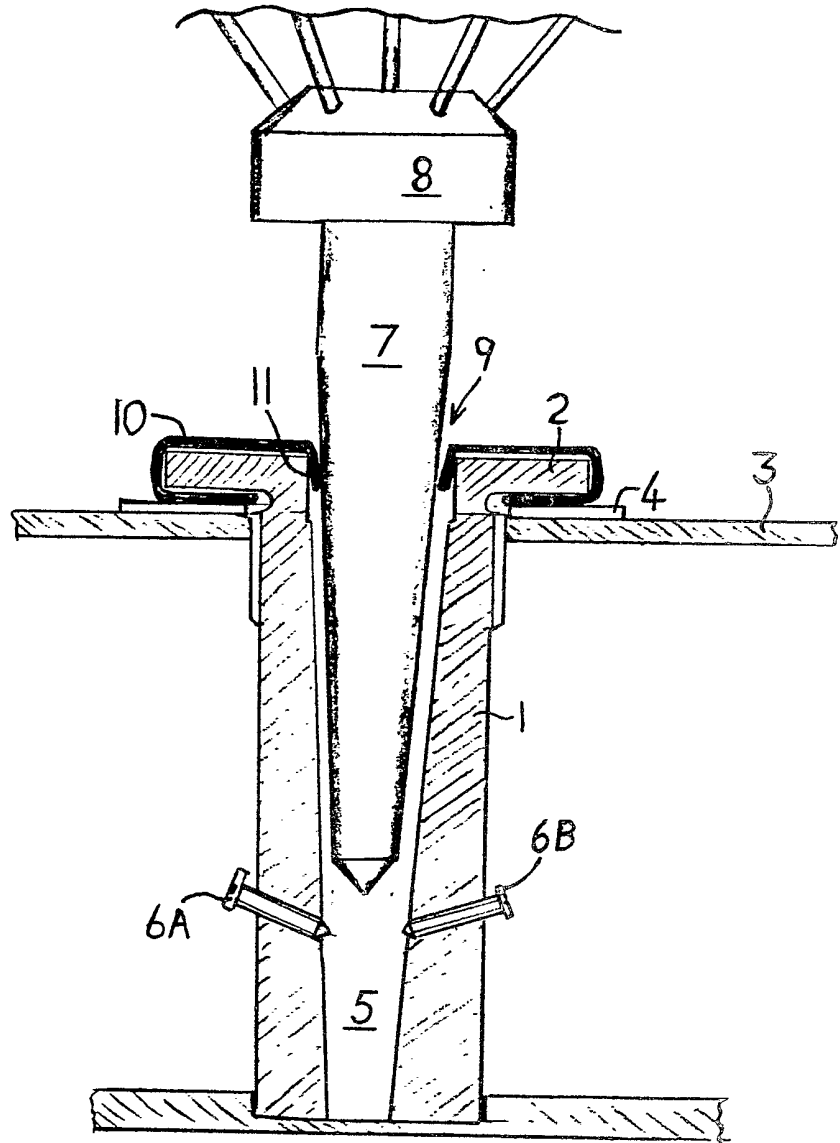
(57) An aerial socket assembly comprises an electrically insulative socket housing (1) having a tapered socket passage (5) for receiving a conductive aerial plug connector (7) with a complementary taper and a pair of electrical power supply contacts (6A, 6B) which project through the housing wall into the passage (5) whereby, consequent upon insertion of the connector (7) into the passage (5), the electrical power supply contacts (6A, 6B) are interconnected via the connector (7), the connection serving to switch on radio equipment with which the socket is operatively associated. A flexible plastics membrane 10 which seals the socket is ruptured on insertion of the connector and tends to form a sealing gasket 11 between the socket and the connector.

The equipment may therefore be deployed rapidly when necessary and there is no need to provide a conventional ON/OFF switch on the equipment.



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SPECIFICATION

Aerial socket assembly

This invention relates to aerial socket assemblies.

5 According to the present invention an aerial socket assembly comprises an electrically insulative socket housing having formed therein a tapered socket passage for receiving a conductive aerial plug connector having a complementary taper and a pair of electrical power supply contacts which project through the housing wall into the passage whereby, consequent upon insertion of the connector into the passage, the electrical power supply contacts are interconnected via the connector the connection serving to switch on radio equipment with which the socket is operatively associated.

The radio equipment may include an integral battery which is arranged to provide power for the equipment only at a time when the connector is inserted in the socket.

The radio equipment may comprise portable radio signal jamming equipment.

The equipment may therefore be deployed very rapidly and may be of simple construction with no external controls or conventional on/off switch since the actuation is effected by the simple plug-in operation of fitting the aerial.

In order to prevent the aerial plug from becoming dislodged and falling out of the socket passage, the contacts may be pointed and set in the housing wall at an angle to define internal barbs which tend to dig into the plug connector if a withdrawal force is applied thereto.

In order to facilitate the sealing of the socket passageway against ingress of moisture or other foreign matter, an entrance aperture to the socket passage through which the plug connector is introduced, may be normally closed prior to use with a plastics membrane which is ruptured by insertion of the plug connector.

The provision of a membrane has the significant advantage that the thickness and material of the membrane may be chosen so that after insertion of the plug connector part the membrane becomes trapped between the plug connector part and the wall of the socket passage thereby in use to act as a seal which serves to resist the entry of water or other foreign matter.

One embodiment of the invention will now be described by way of example with reference to the accompanying drawing which is a sectional view of an aerial socket assembly showing an aerial partly plugged therein.

Referring now to the drawing the aerial socket assembly comprises a housing 1 having a flanged upper portion 2. The housing is shown projecting through a wall 3 of an equipment case with a sealing washer 4 positioned between the flange 2 and the wall 3.

The housing 1 is formed with a tapered internal socket passage 5 into which a pair of pointed electrical contacts 6A and 6B are arranged to project.

The passage 5 is arranged to receive a

conductive aerial plug connector 7 of an aerial assembly 8. The plug connector 7 is arranged to be tapered to match the passageway and as can be seen from the drawing, when the plug connector is fully inserted in the socket passage the electrical contacts 6A and 6B will bite into the surface of the plug connector 7. Since the contacts 6A and 6B are set at an angle and are pointed they act as internal barbs within the socket passage 5 which barbs serve to resist withdrawal of the plug connector from the socket passage 5. An entrance aperture 9 to the socket passage 5 is arranged normally to be closed by means of a flexible plastics membrane 10 which prior to insertion of the conductive aerial plug connector 7, serves to seal the aperture 9 and resist entry of water or other foreign matter. After insertion of the plug connector 7 into the socket passage 5 such that the membrane is ruptured it can be seen from the drawing that the plastics membrane 10 tends to serve as a sealing gasket 11 which is positioned between the walls of the socket passage 5 in the region of the aperture 9 and the plug connector 7, thereby to resist the entry of water or foreign matter.

Thus it may be arranged that the electrical contacts 6A and 6B are connected in the power supply line feeding radio apparatus with which the socket assembly is associated whereby electrical power to the apparatus is switched on only when the plug connector is inserted such that the contacts 6A and 6B are electrically coupled.

It will be appreciated by those skilled in the art that radio signals may be fed in any conventional manner to the aerial 8 and for example high frequency radio signals may be fed to the aerial through the contacts 6A or 6B via capacitive coupling means (not shown).

CLAIMS

105 1. An aerial socket assembly comprising an electrically insulative socket housing having formed therein a tapered socket passage for receiving a conductive aerial plug connector having a complementary taper and a pair of electrical power supply contacts which project through the housing wall into the passage whereby, consequent upon insertion of the connector into the passage, the electric power supply contacts are interconnected via the connector the connection serving to switch on radio equipment with which the socket is operatively associated.

110 2. A socket assembly as claimed in claim 1, in which the said radio equipment comprises an integral battery arranged to provide power for the equipment only at a time when the aerial plug connector is inserted in the socket.

115 3. A socket assembly as claimed in claim 2, in which the said radio equipment comprises portable radio signal jamming equipment.

120 4. A socket assembly as claimed in any one of claims 1 to 3, in which the said power supply contacts include pointed ends and are set in the housing wall to define internal barbs which tend to dig into the plug connector if a withdrawal force is applied thereto.

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5. A socket assembly as claimed in any one of claims 1 to 4, in which the said socket passage includes an entrance aperture which, prior to use, is closed by a plastics membrane that is capable of being ruptured upon insertion of the plug

connector.

6. An aerial socket assembly substantially as hereinbefore described with reference to the accompanying drawing.

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