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- (71) Applicant: **EMBLATION LIMITED** [—/GB]; 3 Forrester Lodge, Inglewood, Alloa FK10 2HU (GB).
- (72) Inventors: **MCERLEAN, Eamon**; 3 Forrester Lodge, Inglewood, Alloa FH10 2HU (GB). **BEALE, Gary**; 3 Forrester Lodge, Inglewood, Alloa FK10 2HU (GB).
- (74) Agent: **HARGREAVES, Timothy, Edward**; Marks & Clerk LLP, Atholl Exchange, 6 Canning Street, Edinburgh EH3 8EG (GB).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

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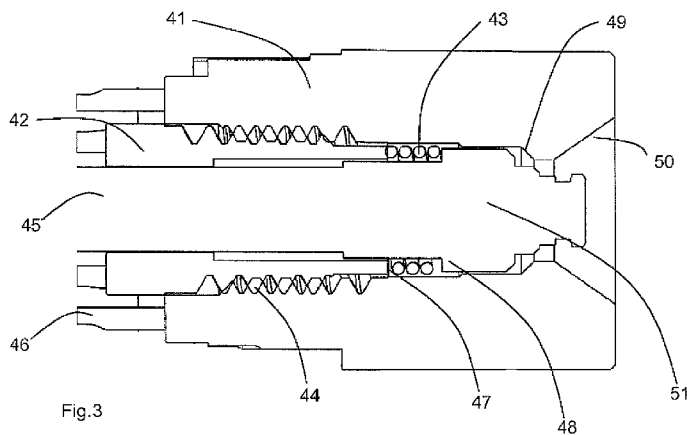
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20 March 2014

(54) Title: A CABLE ASSEMBLY, CONNECTOR APPARATUS AND METHOD



(57) Abstract: A connector apparatus for connecting to a cable assembly that comprises coaxial cable and at least one wire and/or fluid conduit and/or further layer, wherein the connector apparatus comprises a housing that houses a connector and at least one further connector, wherein the connector is configured to electrically connect to the coaxial cable when the connector apparatus and the cable assembly are in an engaged state, the at least one further connector is configured to connect to the at least one wire and/or fluid conduit and/or further layer when the connector apparatus and the cable assembly are in the engaged state, the connector is configured to allow free rotation relative to the connector of the coaxial cable around an axis when the coaxial cable is electrically connected to the connector in the engaged state.



INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2013/051442

A. CLASSIFICATION OF SUBJECT MATTER
INV. H01R9/05 H01R13/00
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
A61B A61N H01R H01P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 846 714 A (WELSBY SCOTT D [US] ET AL) 11 July 1989 (1989-07-11) column 1, line 10 - column 3, line 35; figures 7A-E; compounds 1,4,6,8 -----	1-11,14, 15
X	US 6 468 100 B1 (MEYER DANIEL B [US] ET AL) 22 October 2002 (2002-10-22) column 1, line 1 - column 2, line 16; figure 1 -----	1-9,11, 12,14,15
X	US 2011/201232 A1 (ISLAM NAHID [US]) 18 August 2011 (2011-08-18) paragraphs [0035] - [0039], [0044]; figure 2 -----	1-11,14, 15
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 30 September 2013	Date of mailing of the international search report 31/01/2014
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Link, Tatiana
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2013/051442

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-15

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15

A connector assembly comprising a housing that houses a connector and at least one further connector, wherein the connector is configured to electrically connect to a coaxial cable; wherein the at least one further connector is configured to connect to at least one wire and/or fluid conduit and/or further layer of a cable assembly comprising the coaxial line; wherein the connector is configured to allow free rotation relative to the connector of the coaxial cable in the engaged state

2. claims: 16-35

A cable assembly comprising a coaxial cable, comprising a conducting shield around the inner conductor; and a further conducting shield around the coaxial cable, wherein the further conducting shield is configured to be connected to an electrical potential different to the electrical potential of the conducting shield of the coaxial cable (i. e. both conducting shields are isolated); and the corresponding method

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2013/051442

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 370 676 A (SOZANSKI JEAN-PIERRE [FR] ET AL) 6 December 1994 (1994-12-06) column 4, line 6 - column 6, line 58; figures 2a-c, 3a-c -----	1-3,7, 14,15
X	US 2009/270737 A1 (THORNTON PETER [US]) 29 October 2009 (2009-10-29) paragraphs [0027] - [0039]; figures 5-9A -----	1-4,7,15
X	JP H09 308634 A (TOSHIBA CORP) 2 December 1997 (1997-12-02) paragraphs [0012] - [0022], [0024], [0029]; figures 2-4 -----	1-3,7, 12-15
X	US 2007/167827 A1 (MASTERS DONALD [US]) 19 July 2007 (2007-07-19) paragraphs [0027] - [0031]; figures 3-5 -----	1-3,7, 14,15
X	US 2009/275838 A1 (MARSHALL JOHN D [US] ET AL) 5 November 2009 (2009-11-05) paragraphs [0023], [0024], [0038] - [0043]; figures 2,3,4B -----	1-3,12, 13,15
X	US 6 612 849 B1 (SCOTT CHARLES HOWARD [US]) 2 September 2003 (2003-09-02) column 3, line 8 - column 7, line 25; figure 2 -----	1-3,7, 14,15
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/GB2013/051442

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