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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: TERMINATION OF A SHIELD WITHIN AN IMPLANTABLE MEDICAL LEAD

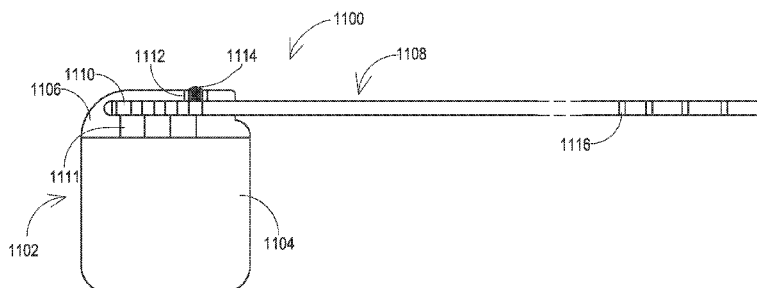


FIG. 1

(57) Abstract: A shield located within an implantable medical lead may be terminated in various ways at a metal connector. The shield may be terminated by various joints including butt, scarf, lap, or other joints between insulation layers surrounding the lead and an insulation extension. The shield may terminate with a physical and electrical connection to a single metal connector. The shield may terminate with a physical and electrical connection by passing between an overlapping pair of inner and outer metal connectors. The metal connectors may include features such as teeth or threads that penetrate the insulation layers of the lead. The shield may terminate with a physical and electrical connection by exiting a jacket of a lead adjacent to a metal connector and lapping onto the metal connector.

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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))* — *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2010/032526

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61N1/05

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)
A61N

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 practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 141 593 A (PATAG ALFREDO E [US]) 31 October 2000 (2000-10-31)	1-3,5,7, 9,11,16, 17, 21-23, 25,27, 29,34,35
A	abstract; figures 1,2, 8 column 4, lines 13,14,26-33 column 7, line 66 - column 8, line 2 ----- -/--	4,13,24, 31

Further documents are listed in the continuation of Box C. See patent family annex.

- * Special categories of cited documents :
- *A* document defining the general state of the art which is not considered to be of particular relevance
 - *E* earlier document but published on or after the international filing date
 - *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)
 - *O* document referring to an oral disclosure, use, exhibition or other means
 - *P* document published prior to the international filing date but later than the priority date claimed
 - *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
 - *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
 - *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.
 - *&* document member of the same patent family

Date of the actual completion of the international search 26 July 2010	Date of mailing of the international search report 02/12/2010
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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 Pfeiffer, Uwe
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2010/032526

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2008/140376 A1 (ST JUDE MEDICAL [SE]; OERNBERG ANDREAS [SE]) 20 November 2008 (2008-11-20)	1, 11, 14-17, 19-21, 29, 32-35, 37, 38
A	abstract; figure 4 page 12, line 30 - page 13, line 31	4, 13, 24, 31
X	----- US 5 003 992 A (HOLLEMAN TIMOTHY W [US] ET AL) 2 April 1991 (1991-04-02)	1, 21
A	abstract; figures 3, 4	2-5, 7, 9, 11, 13-17, 19, 20, 22-25, 27, 29, 31-35, 37, 38
	column 3, line 7 - column 7, line 11	
A	----- US 4 214 804 A (LITTLE RICHARD L [US]) 29 July 1980 (1980-07-29)	1-5, 7, 9, 11, 13-17, 19-25, 27, 29, 31-35, 37, 38
	abstract; figures 2, 3 column 1, line 56 - column 3, line 37	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/032526

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.:
1-5, 7, 9, 11, 13-17, 19-25, 27, 29, 31-35, 37, 38

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: 1-5, 7, 9, 11, 13-17, 19-25, 27, 29, 31-35, 37, 38

Extension of insulation layers for a shielded implantable medical lead, wherein the replacement outer insulation layer is being bonded to an end of the outer insulation layer.

2. claims: 6, 26

Shielded implantable medical lead comprising an outer metal ring with features protruding through an insulation layer.

3. claims: 8, 28

Shielded implantable medical lead wherein the shield is beneath a ring and has a portion being folded over the ring.

4. claim: 10

Shielded implantable medical lead comprising a metal ring with threads that engages tapered layers.

5. claims: 12, 30

Shielded implantable medical lead comprising an insulation ring wrapping around a conductor lapping onto a metal ring.

6. claims: 18, 36

Extension of insulation layers for a shielded implantable medical lead, wherein the replacement outer insulation layer is positioned over the shield

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2010/032526

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6141593	A	31-10-2000	NONE
WO 2008140376	A1	20-11-2008	NONE
US 5003992	A	02-04-1991	AU 623326 B2 07-05-1992
			AU 6123790 A 28-02-1991
			CA 2023824 A1 24-02-1991
			EP 0414234 A2 27-02-1991
US 4214804	A	29-07-1980	NONE