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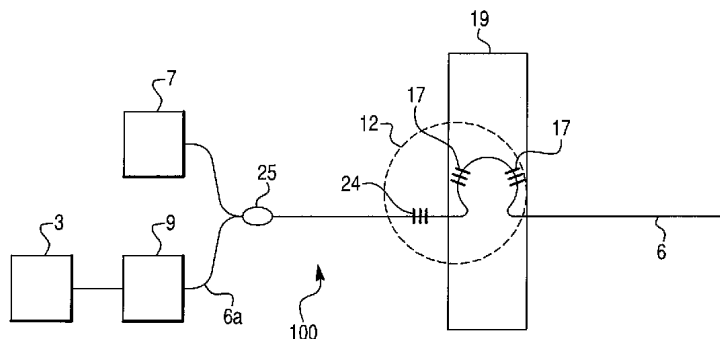
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(54) Title: FIBER OPTIC TRACKING SYSTEM

Fig. 1



(57) Abstract: A fiber optic tracking system (100) for tracking substantially rigid object (s) is described. The fiber optic tracking system includes a light source (7), an optical fiber (6,6') having a sensing component (12, 12a, 12b) configured to modify optical signals from the light source, the optical fiber being configured to attach to the substantially rigid object (19, 19', 19''), a detection unit (9) arranged to receive the modified optical signals from the sensing component, and a calculation unit (3) configured to determine a pose of the substantially rigid object in six degrees of freedom based on the modified optical signals.

WO 2009/155325 A3

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER INV. A61B19/00 G02B6/02 A61M25/01				
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 G02B A61M				
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,P	WO 2008/097540 A2 (HANSEN MEDICAL INC [US]; MOLL FREDERIC H [US]; GOLDENBERG ALEX [US]) 14 August 2008 (2008-08-14) page 8, line 20 - page 25, line 11; figures -----	1-11, 15, 18, 21, 28-31		
X,P	WO 2009/023801 A1 (HANSEN MEDICAL INC [US]; RAMAMURTHY BHASKAR S [US]; TANNER NEAL A [US]) 19 February 2009 (2009-02-19) the whole document -----	1-11, 15, 18, 21, 28-31		
X	US 2007/156019 A1 (LARKIN DAVID Q [US] ET AL) 5 July 2007 (2007-07-05) paragraph [0008] - paragraph [0019] paragraph [0034] - paragraph [0115]; figures ----- -/--	1-15, 18-21, 28-31		
<table style="width:100%; border:none;"> <tr> <td style="width:50%; border:none;"> <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. </td> <td style="width:50%; border:none;"> <input checked="" type="checkbox"/> See patent family annex. </td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.
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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. *Z* document member of the same patent family			
Date of the actual completion of the international search <p align="center">25 November 2009</p>	Date of mailing of the international search report <p align="center">08/12/2009</p>			
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 <p align="center">Nistor, Loredana</p>			

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/047624

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.: 22-27
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
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:

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.:

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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2009/047624

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 2002/052546 A1 (FRANTZ DONALD DIETER [CA] ET AL) 2 May 2002 (2002-05-02) paragraph [0026] - paragraph [0042]; figures -----	1-21, 28-31
X	US 2001/021843 A1 (BOSSELMANN THOMAS [DE] ET AL) 13 September 2001 (2001-09-13) paragraph [0007] - paragraph [0018] paragraph [0023] - paragraph [0039]; figures -----	1-21, 28-31
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2009/047624

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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			US 2008195081 A1
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US H2180	H1	06-02-2007	NONE
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