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[Continued on next page]

(54) **Title:** SPINE FIXATION SYSTEM

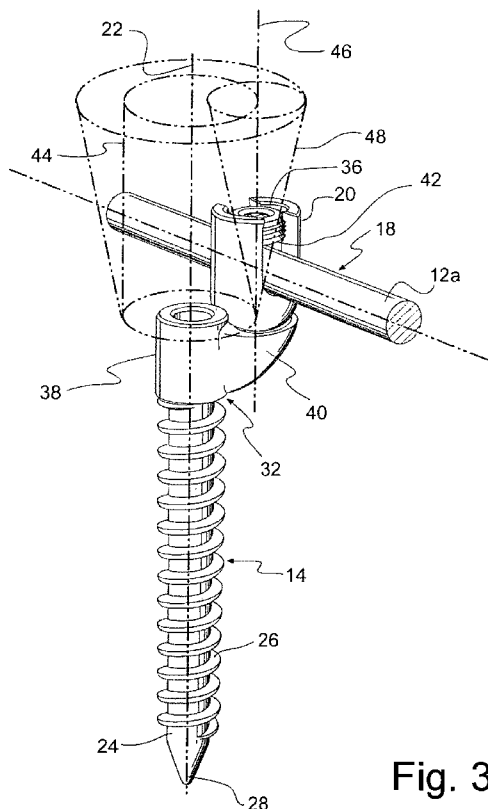


Fig. 3

(57) **Abstract:** A spine fixation system (10) comprises a rod (12a, 12b), which is configured to extend over a portion of the spine, a plurality of fasteners (14) and a plurality of connectors (18). Each fastener has a longitudinal axis (22) and is configured to be secured to a vertebra (V1, V2, V3) to be treated. Each connector (18) is connected to, or is capable of being connected to, one of the fasteners (14) and has a seat member (20) for receiving and fixing the rod (12a, 12b). The seat member (20) is capable of being fixed in different rotational positions with regard to a rotational axis (46) that extends, or is capable of being positioned such that it extends, parallel to but not coinciding with the longitudinal axis (22) of the fastener (14) to which the respective connector (18) is connected.



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— *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
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A. CLASSIFICATION OF SUBJECT MATTER INV. A61B17/70		
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		
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 2007/288004 A1 (ALVAREZ LUIS MARQUEZ [ES]) 13 December 2007 (2007-12-13)	1-3,6-9
Y	figures 19-21	1,4,5
X	EP 1 210 914 A1 (TRAIBER S A [ES]) 5 June 2002 (2002-06-05) figure 6	1-3,6-9
X	US 2006/036252 A1 (BAYNHAM BRET O [US] ET AL BAYNHAM BRET O [US] ET AL) 16 February 2006 (2006-02-16) figure 3	1-3,6-9
X	WO 2006/065666 A2 (RSB SPINE LLC [US]) 22 June 2006 (2006-06-22) figure 2	1-9
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 1 July 2010		Date of mailing of the international search report 20/09/2010
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 Fernández Arillo, J

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International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006/235389 A1 (ALBERT TODD J [US] ET AL) 19 October 2006 (2006-10-19) figure 26 -----	1,4,5

INTERNATIONAL SEARCH REPORT

International application No.
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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.: 14
because they relate to subject matter not required to be searched by this Authority, namely:
Pursuant to Rule 39.1(iv) PCT, the subject-matter of claim 14 has not been searched, since it is directed to a method for treatment of the human body by surgery.
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.:

1-9

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: 1-9

A system according to claim 1, wherein the rotational axis is capable of being fixed in different tilting positions at least within a cone of tilting angles (claim 4), thereby solving the problem of further enhancing/simplifying the implantation of the system.

2. claims: 10, 11

A system according to claim 9, wherein the clamp mechanism is configured such that operation of the clamp mechanism fixes the rod to the seat member and simultaneously the seat member to the head member (claim 10), thereby solving the problem of allowing the components of the system to be more easily locked to one another.

3. claims: 12, 13

A system according to claim 1, wherein the head member further comprises a first head portion and a second head portion capable of being fixed to the first head portion in different rotational positions with regard to a further rotational axis arranged non-parallel to the longitudinal axis of the fastener (claim 12), thereby solving the problem of allowing the system to be implanted in more complicated spinal operations, that require the system to be more flexible during implantation.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2010/001811

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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