Title: RATCHETING FIXATION PLATE

Abstract: Devices and methods for spinal fixation employ at least first and second plates that are configured to allow progressive sliding advancement of the plate members toward one another and limit movement of the plate members away from one another after installation. A spring member associated with one bone plate may engage toothed section(s) on the other bone plate. The bone plates may each have arms that are spaced from one another and engaged by corresponding arms on the other bone plate. There may be more than two bone plates, with multiple restricted movement regions.
### A. CLASSIFICATION OF SUBJECT MATTER

INV. A61B17/00 A61B17/70

### 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, WPI Data

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
</table>

- **X**: Further documents are listed in the continuation of Box C.
- **X**: See patent family annex.

**Footnote:** 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 solilled in the art.
- **Z**: Document member of the same patent family.

#### Date of the actual completion of the international search

12 July 2006

#### Date of mailing of the international search report

06. 11. 2006

Name and mailing address of the ISA:

European Patent Office, P.O. Box 5018 Patentlaan 2 NL-2280 HW RIJSWIJK Tel. (+31-70) 340-2000, Fax: (+31-70) 340-3018

Authorized officer

Angeli, Markus
## Box 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 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 fee, this Authority did not invite payment of any additional fee.

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.:  

> 1-7,10,13,14,15

### Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-7, 10, 13, 14, 15
   A bone plate device comprising a spring directed to a visualization port for visualization.

2. claims: 8, 9, 16
   A bone plate device directed to a spring member for retaining a fastener against backing out.

3. claims: 11-12, 17
   A bone plate device directed to a third member for connecting a plurality of bone segments.

4. claims: 18-34
   A bone plate device directed to arms forming a locking mechanism for allowing progressive sliding advancement.
<table>
<thead>
<tr>
<th>Patent document cited in search report</th>
<th>Publication data</th>
<th>Patent family member(s)</th>
<th>Publication date</th>
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<tbody>
<tr>
<td>US 6051007 A</td>
<td>18-04-2000</td>
<td>NONE</td>
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Form PCT/SA/210 (patent family annex) (April 2005)