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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CAS MODULAR BONE REFERENCE AND LIMB POSITION MEASUREMENT SYSTEM

(57) Abstract: A surgical bone reference assembly for communication with a CAS system, comprises a bone anchor fastenable to a bone element, an adjustable support and a trackable member that is located and tracked in three dimensional space by the CAS system. The support is removably fastenable to the bone anchor member and permits variable positioning relative to the bone anchor member. The support is intra-operatively detachable from and re-fastenable to the bone anchor member. A method of using a CT-free CAS system for determining a change in position of an un-tracked target limb is also provided. The method comprises engaging a trackable bone reference member to another bone element, locating and digitizing a landmark on the target limb, digitizing the landmark again following joint reduction, and determining at least one of a post-joint reduction limb length discrepancy and a target limb medio-lateral offset.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B19/00

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)
IPC 7 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. |
|------------|--|-----------------------|
| Y | US 2002/068942 A1 (IMMERZ MARTIN ET AL) 6 June 2002 (2002-06-06) page 3, paragraph 33 - paragraph 34; figures 7A,7B | 1-18,24, 25 |
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
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"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
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"&" document member of the same patent family

Date of the actual completion of the international search

29 September 2004

Date of mailing of the international search report

- 4. 10. 2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2004/000159

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.: 19-23, 26-35, 42
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
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.:

Remark on Protest

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

☒ 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: 1-18,24,25

Surgical bone reference assembly comprising bone anchor, trackable member and adjustable support member and method of use on model or cadaver.

2. claims: 36-41,43,44

Computer assisted surgery system comprising bone reference member, means for locating said member, a trackable digitizer; means for determining pre-joint dislocation digitization coordinates and post-joint reduction digitization coordinates and means for determining a post-joint reduction limb length discrepancy value and method of use on a model or cadaver.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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