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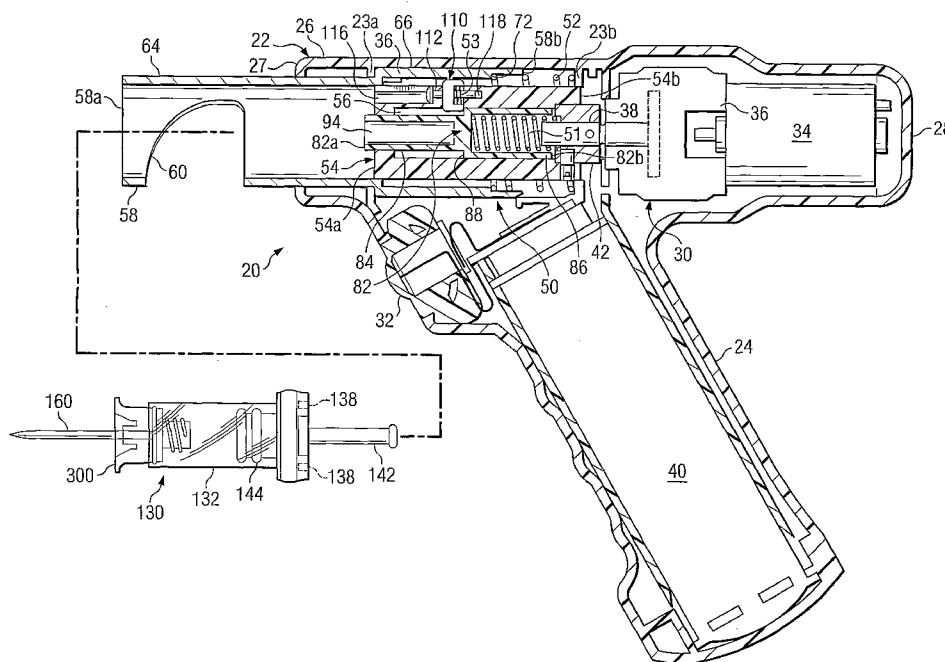
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

5 April 2007

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR INJECTIONS INTO MARROW



(57) Abstract: Apparatus for delivering a quantity of fluid to bone marrow of a bone or providing access to remove fluids from a target site is provided. The apparatus may include a driver, a plunger operating and cartridge assembly mechanism, a cartridge assembly having a fluid reservoir and a bone penetrating needle.

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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.

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/025201

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61M5/24

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 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)

EP0-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 6 183 442 B1 (ATHANASIOU K.A.ET AL.) 6 February 2001 (2001-02-06) cited in the application column 1, line 36 - line 46 column 1, line 54 - line 57 column 4, line 43 - line 62 column 7, line 37 - line 53 column 8, line 8 - line 11 figures 1,2	1,2,5-7, 10,11, 23-28
X	FR 2 457 105 A (VILLETTE A.) 19 December 1980 (1980-12-19) page 3, line 9 - line 29; figure	1,2,5-7, 10,11, 23-28
X	FR 2 516 386 A (WALTHER R.) 20 May 1983 (1983-05-20) the whole document	1,2,5-7, 10,11, 23-28

☐ 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

12 October 2006

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29 01. 2007

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/025201

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.: 18-21
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.:

see annex

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: 1-7,10-11,14-17,22-29

Apparatus for injection into marrow with spring-loaded
plunger operating and cartridge drive mechanism

2. claims: 8-9,30-31

Apparatus for injection into marrow with needle having at
least one side port

3. claims: 12-13

Apparatus for injection into marrow with cartridge assembly
engaged by magnet or ball and detent mechanism

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/025201

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6183442	B1	06-02-2001	AU 2797499 A	20-09-1999
			WO 9944657 A1	10-09-1999
			US 2001053888 A1	20-12-2001

FR 2457105	A	19-12-1980	NONE	

FR 2516386	A	20-05-1983	NONE	
