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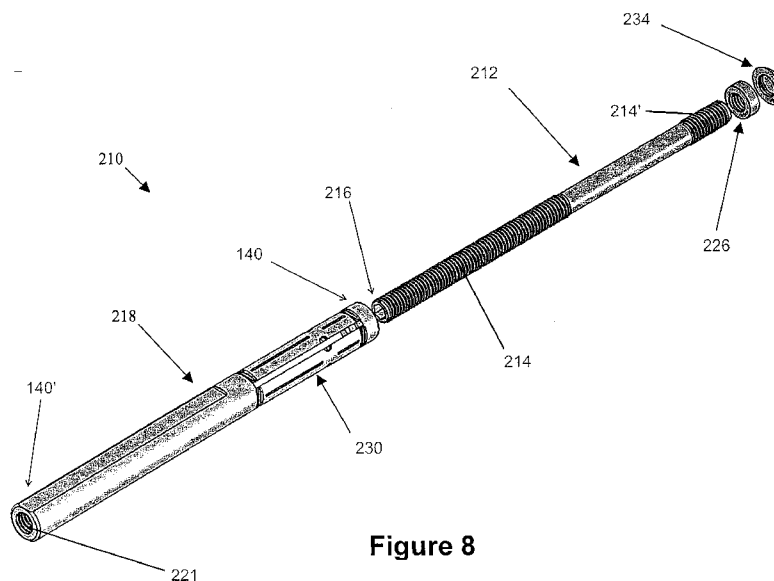


Figure 8

(57) Abstract: The invention provides a bolt apparatus for fixation of bones, the bolt apparatus comprising an expandable section having respective ends, the expandable section being operable between a contracted position and an expanded position; and expanding means in operable association with the expandable section, to displace the expandable section between the contracted position and the expanded position by simultaneously applying force to the respective ends of the expandable section, such that each of the respective ends of the expandable section are advanced toward the opposing respective end. The invention also provides a method for fixation of bones. The method comprises the steps of reducing the fracture; providing a channel across the fracture; inserting a bolt apparatus of the invention; and fixing the bolt apparatus in the channel. Preferably, the method also comprises providing a plate in operative association with the bolt.



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INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61B17/86 A61B17/74

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/058575 A (DAVIES JOHN BRUCE CLAYFIELD [GB]) 1 August 2002 (2002-08-01) page 17, line 17 - page 26, line 24; figures 1a-12b	1-5, 8-15, 17-20, 22,23, 27,28,30
X	WO 2007/046691 A (NIJENBANNING GERT [NL]) 26 April 2007 (2007-04-26) the whole document	1,10-14, 17-20, 22-25, 28-30

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
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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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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA 990 003 A1 (FISCHER ARTUR; MUELLER JEAN NICOLAS) 1 June 1976 (1976-06-01) page 9, line 16 - page 10, line 21; figures 1,2 -----	1, 10-12, 17-19, 21-26, 28, 29
X	US 2003/078581 A1 (FREI RETO [CH] ET AL) 24 April 2003 (2003-04-24) paragraphs [0018] - [0021]; figures 1-5 -----	1, 10, 11, 17-20, 22-26
X	WO 97/18769 A (CARRUZZO PIERRE ALAIN [CH]; SAILLANT GERARD [FR]; GODEFROY JEAN [FR]) 29 May 1997 (1997-05-29) page 5, line 20 - page 10, line 4; figures 1-11 -----	1-4, 8-13, 19, 20, 30

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IE2008/000073

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.: 31-34
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 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 allsearchable 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

Information on patent family members

International application No

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