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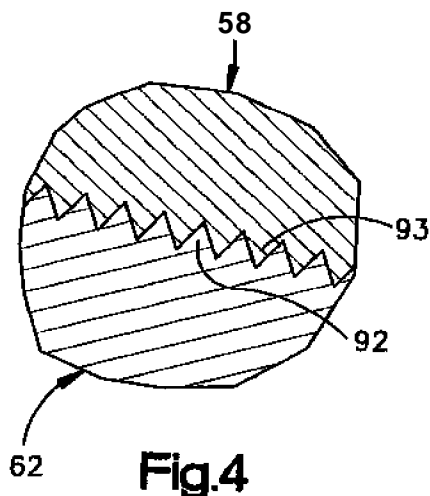
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(54) Title: FASTENER ASSEMBLY



(57) Abstract: An improved fastener apparatus includes an outer sleeve which is moved into a patient's body tissue. A distal end portion of the outer sleeve is expanded in the patient's body tissue. An inner sleeve is moved axially through the outer sleeve and a distal end of the inner sleeve is expanded in the patient's body tissue. The fastener apparatus may be provided with an external thread convolution on either or both of the inner and outer sleeves. During expansion of the distal end portion of either the inner or outer sleeve, a proximal end portion of the outer sleeve may be gripped and pulled to offset forces applied to the distal end portion of one of the sleeves. Although inner and outer sleeves may advantageously be utilized, the fastener apparatus may be constructed with only a single sleeve if desired.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/080052

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61B17/86
 ADD. A61B17/72 A61B17/78

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 2 490 364 A (LIVINGSTON HERMAN H) 6 December 1949 (1949-12-06) the whole document -----	22, 26, 27
X	US 2 699 774 A (HARRISON LIVINGSTON HERMAN) 18 January 1955 (1955-01-18) column 1 - column 3 figures 4-6 -----	22, 26
X	US 2 381 050 A (HARDINGE MERVYN G) 7 August 1945 (1945-08-07) page 3, column 1, line 35 - line 56 figures 5,6 -----	22
A	WO 03/007830 A (EXPANDING ORTHOPEDICS INC [US]) 30 January 2003 (2003-01-30) page 16, line 16 - page 22, line 32 figures 12-16 -----	22, 23

D Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

<p>'A' document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>'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)</p> <p>'O' document referring to an oral disclosure, use, exhibition or other means</p> <p>'P' document published prior to the international filing date but later than the priority date claimed</p>	<p>'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</p> <p>'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</p> <p>'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.</p> <p>'&' document member of the same patent family</p>
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Date of the actual completion of the international search 16 June 2008	Date of mailing of the international search report 24/06/2008
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 3 1 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Compos , Fabien
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/080052

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.: 1-21,28-71
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 PCT/US2007/080052

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
US 2490364	A	06-12-1949	NONE	
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