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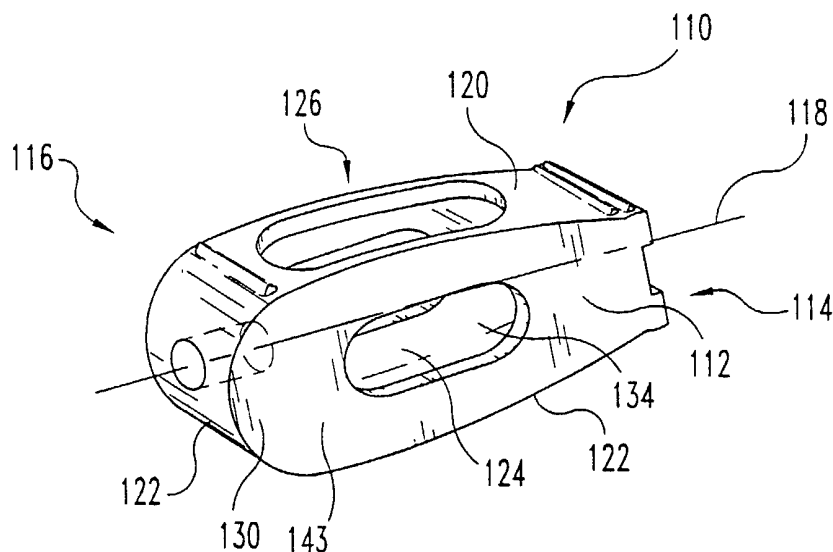
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(54) Title: SPINAL IMPLANT AND CUTTING TOOL PREPARATION ACCESSORY FOR MOUNTING THE IMPLANT



(57) Abstract: This invention relates to a spinal implant (110) for promoting fusion of adjacent vertebrae and restoration of normal disc height. The spinal implant includes an upper and lower surface (120, 122) adapted to engage cancellous bone tissue in the vertebral bodies. The spinal implant also includes at least two opposing bearing surfaces (138, 140) adapted to bear against cortical bone tissue in the endplates of adjacent vertebrae. This invention also provides an instrumentation to prepare the intervertebral space to receive the spinal implant and techniques for treating patients in need of corrective spinal surgery.



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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/US 00/41216

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61F2/44 A61B17/16

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 A61F 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	FR 2 742 044 A (MEDINOV SA) 13 June 1997 (1997-06-13) claim 1; figures 1-5 page 9, line 2 - line 6	1-3,5, 8-13,15, 16,19-21
Y		4,6,29, 30
A		14,18
X	EP 0 834 295 A (LUCET ALAIN ;MEDINOV AMP (FR); KERBOUL BERNARD (FR); PERE CHRISTIA) 8 April 1998 (1998-04-08) claims 1,8,9; figures 1-3 column 6, line 22 - line 25	11-14, 16-21
Y		4,6
A		1-3,5, 7-10
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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

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

19 July 2001

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27.07.2001

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/41216

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 697 977 A (PISHARODI MADHAVAN) 16 December 1997 (1997-12-16) figures 8,9 column 7, line 15 - line 47	1,8,9
A	---	2,11,12, 15,16, 20,21
X	WO 95 08306 A (BECKERS LOUIS FRANCOIS CHARLES ;SYNTHES AG (CH); SCHLAEPFER JOHANN) 30 March 1995 (1995-03-30) claim 40; figures 5,7,8,15-17	11,12, 16,19-21
A	---	1,2,6,8, 9,13,14, 17
Y	FR 2 760 355 A (SCHRAYER SERGE) 11 September 1998 (1998-09-11) claims 1,8	29,30
A	---	1-21
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A	---	22,23, 25,26
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A	---	22,23,26
A	EP 0 796 593 A (SURGICAL DYNAMICS INC) 24 September 1997 (1997-09-24) figures 3-5 column 7, line 38 -column 8, line 29	22,23,26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/41216

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 27, 28, 31
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 II Observations where unity of invention is lacking (Continuation of item 2 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: 1-21, 29, 30

An implant for insertion between a first and a second vertebra comprising:
a first terminal part defining two substantially planar bearing surfaces,
a second terminal part defining two bearing surfaces,
a central portion having upper and lower bearing surfaces that are arcuate along the longitudinal axis of the central portion.

2. Claims: 22-26

A tool for insertion between two vertebrae comprising:
a handle connected to a shaft,
an outer sleeve, the shaft extending through the conduit and configured to rotate relative thereto,
a cutting portion fixed to the shaft,
a non cutting portion fixed to the cutting portion and distal to the handle.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No PCT/US 00/41216

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