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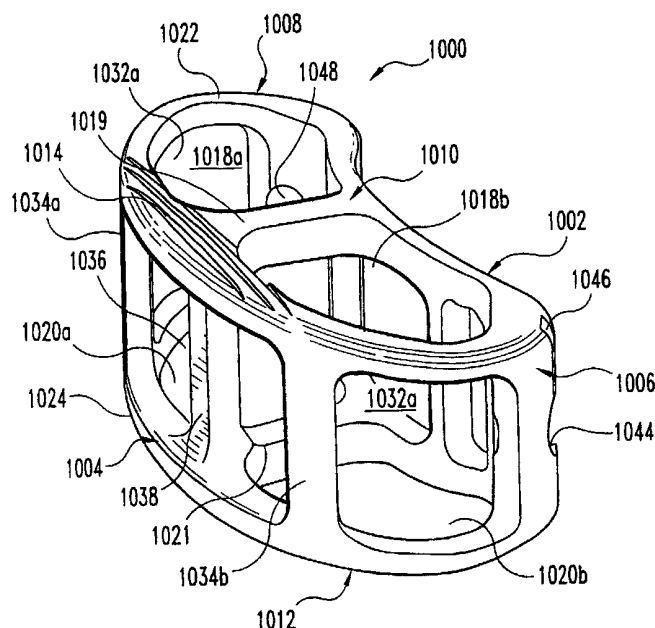
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60/160,667 21 October 1999 (21.10.1999) US
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- Published:
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[Continued on next page]

(54) Title: DEVICES AND TECHNIQUES FOR A POSTERIOR LATERAL DISC SPACE APPROACH



(57) Abstract: This invention relates to methods and instruments for performing disc space preparation and implant insertion from a unilateral approach to the spine through a posterior lateral opening to the disc space. The instruments include spreaders, distractors, reamers, scrapers, cutters, chisels, pushers and implant inserters. A surgical procedure is provided that allows bilateral support of the adjacent vertebrae with at least one interbody fusion device inserted into the disc space via a unilateral approach. Implants for insertion into the disc space are also provided.



(88) Date of publication of the international search report:
3 January 2002

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 00/41433

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61F2/44 A61B17/16 A61B17/02 A61F2/46

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	EP 0 916 323 A (SCHAEFER MICOMED GMBH) 19 May 1999 (1999-05-19) claims 1,4,6,7,10-15; figures 1-3,5	1,3-5,7, 15,18,19
Y		8,9,12, 16
A		6,10
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A		1-7, 17-19
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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.

Z document member of the same patent family

Date of the actual completion of the international search

13 July 2001

Date of mailing of the international search report

20. 07 2001

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INTERNATIONAL SEARCH REPORT

International Application No

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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.
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INTERNATIONAL SEARCH REPORT

International Application No

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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.
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/41433

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.: 39-49
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: 1-19

A spinal implant adapted for non-linear insertion comprising:
a leading end wall,
a posterior end wall having an insertion tool engaging portion,
a posterior wall.

(problem: Restore the height of the intervertebral space)

2. Claims: 20-26

An assembly for non-linear insertion of a spinal implant comprising:
an implant having an insertion tool engaging portion;
an inserter connectable to that implant including:
a shaft, a handle and a connector;
a pusher engageable to said impaction tool.

(Problem: insertion of an implant in a disc space)

3. Claims: 27-31

A laminar spreader comprising:
a first and a second arm pivotally connected to each other, whereby a proximal portion of each arm can be rotated with respect to said distal portion of said arm to a second position.

(Problem: spreading a laminar)

4. Claims: 32-38

A surgical instrument for performing a surgical procedure through a posterior lateral opening in the disc space, comprising:
a proximal portion residing outside the disc space,
a distal portion having a distal working portion insertable in the disc space.

(Problem: Increasing temporarily the space between two vertebrae)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/41433

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