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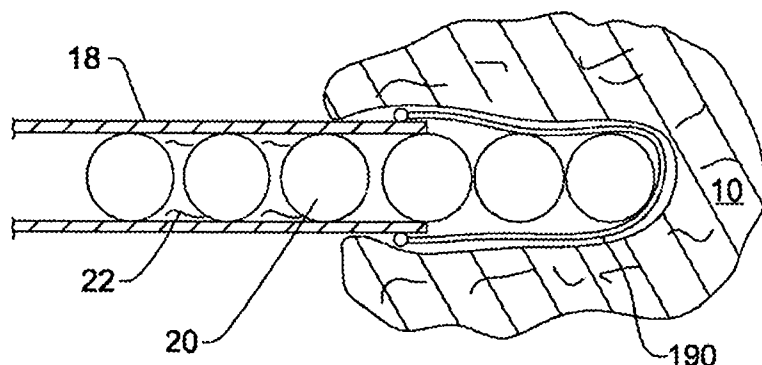
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(54) Title: SYSTEM AND METHOD FOR DELIVERING AN AGGLOMERATION OF SOLID BEADS AND CEMENT TO THE INTERIOR OF A BONE IN ORDER TO FORM AN IMPLANT WITHIN THE BONE



(57) Abstract: A system for forming an implant to stabilize an interior of a vertebral body is provided. The system includes a delivery cannula (18) in which there is an agglomeration of beads (20) and cement (22). A membrane is disposed over the open end of the cannula. When the agglomeration is discharged from the cannula it fills the membrane. The membrane thus forms the outer shell of the implant internal to the bone.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

INV. A61B17/88 A61F2/46 A61F2/44 A61K9/00
ADD. A61B17/34 A61F2/28 A61B17/70

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 A61F A61K

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	WO 02/47563 A (THE SPINEOLOGY GROUP, LLC) 20 June 2002 (2002-06-20)	1-3
Y	abstract; figures 1,3,4,10 page 3, line 10 - page 4, line 4 page 4, lines 18-23	5
X	US 5 549 679 A (KUSLICH STEPHEN D [US]) 27 August 1996 (1996-08-27) abstract; figures 17-19,34,36,51-56 column 12, lines 6-29	1-3
X	US 2002/183761 A1 (JOHNSON WES [US] ET AL) 5 December 2002 (2002-12-05) abstract; claims 13-18; figures 27,28 paragraph [0177]	1-3
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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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- *O* document referring to an oral disclosure, use, exhibition or other means
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- *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

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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.
X	US 5 755 797 A (BAUMGARTNER WALTER [CH]) 26 May 1998 (1998-05-26) abstract; figures 3,3a column 2, line 60 - column 3, line 2 column 4, lines 27-43 -----	1,2,4
X	US 2002/068974 A1 (KUSLICH STEPHEN D [US] ET AL) 6 June 2002 (2002-06-06) abstract; claims 1,7,17,19; figures 4,5,11 paragraphs [0041] - [0044] -----	1-4
Y	US 2005/131267 A1 (TALMADGE KAREN D [US]) 16 June 2005 (2005-06-16) abstract; figures 1,2A-2D paragraphs [0021] - [0023], [0033] -----	5

INTERNATIONAL SEARCH REPORT

International application No.
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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.:
because they relate to subject matter not required to be searched by this Authority, namely:

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:

see additional sheet

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.:

1-5

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5

Assembly for forming an implant in a bone with a membrane attached to the delivery cannula.

2. claims: 6-7

Assembly for forming an implant in a bone wherein the beads include elongated metal cores surrounded by plastic outer shells.

3. claims: 8-11

Assembly for forming an implant in a bone wherein the beads are encased in bags while in the cannula, each bag at least encasing two beads.

4. claims: 12-13

Assembly for forming an implant in a bone comprising a cartridge.

5. claims: 14-16

Assembly for forming an implant in a bone with a cement charge tube.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/069770

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