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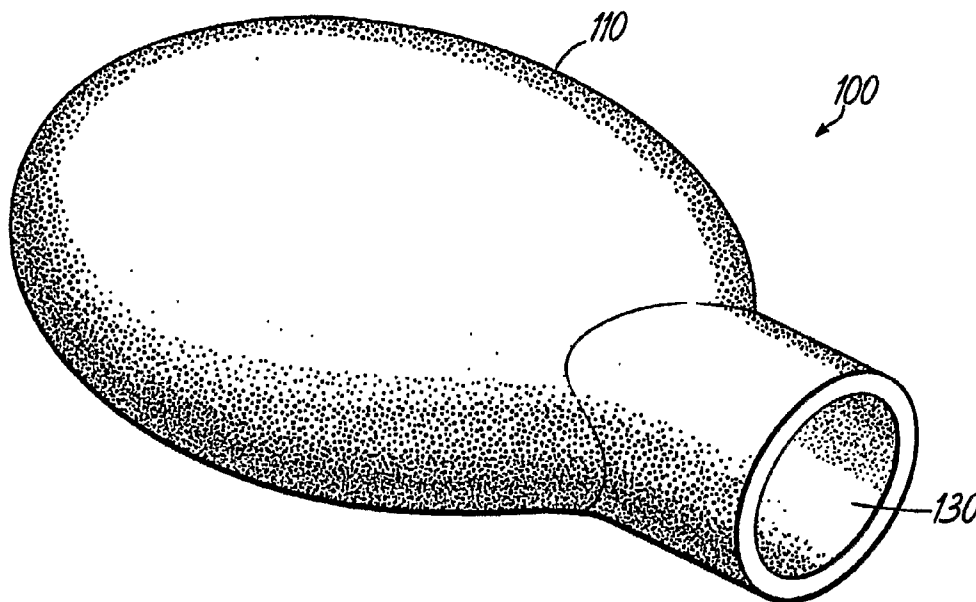
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[Continued on next page]

(54) Title: DEVICES AND METHODS FOR DISC NUCLEUS REPLACEMENT



(57) Abstract: The present disclosure concerns implants (300) to at least partially replace the nucleus (250) of a spinal disc (230). In one embodiment, a prosthetic structure is provided which includes a bag (100) operable to contain at least one internal implant (300) within the bag (100). In another embodiment, a sinusoidal-shaped structure (305) made of a flexible material is provided with various unique configurations to act as the internal implant (300) and once released from a stretched or compressed configuration resumes nearly its original shape. In one embodiment, for delivery, a sinusoidal-shaped structure (305) may be in a reduced amplitude state. In another embodiment, a sinusoidal-shaped structure (305) is alternately woven from one end to the other with a second sinusoidal-shaped structure (305).

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/030785A. CLASSIFICATION OF SUBJECT MATTER
INV. A61F2/44

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)
A61F

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

* Special categories of cited documents :

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- *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
- *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

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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/US2006/030785

Box 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.: 45-51
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 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 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.:
1-17, 37-44
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: 1-17

Intervertebral prosthetic structure for replacement of at least a portion of an intervertebral disc nucleus, comprising a bag structure made of flexible material and comprising an opening to allow an interior implant structure to be placed into a cavity of the bag.

2. claims: 18-36

A prosthetic implant structure comprising a device formed of a plurality of periodic portions of flexible material, each periodic portion intersecting a longitudinal axis at two points.

3. claims: 37-44

Intervertebral prosthetic structure comprising a bag having a cavity and an opening providing access to the cavity, and an interior implant structure located in the cavity and comprising a plurality of periodic portions each intersecting a longitudinal axis at two points, wherein an amplitude of a periodic portion in an unstretched position has a size which prevents the structure from exiting the opening in the bag.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/030785

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