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(54) Title: INSTRUMENTAL IMPLANTABLE STENTS, VASCULAR GRAFTS AND OTHER MEDICAL DEVICES

(57) Abstract: Several different smart stent structures are described for placement in vessel of a mammal. The stents can be advantageously used to perform measurements of the conditions in the vessel and transmit the measurements wireless out from the patient. In some embodiments, the stent performs therapy within the vessel and may be controlled with a microprocessor, which may or may not communicate wirelessly. Some implantable devices comprise a drug delivery system based, for example, on either a microelectromechanical structure or a cover that opens upon application of an electrical current. Smart devices can be used, for example, the detect deposits in a vessel, aneurysms in the vessel or other modifications of flow in the vessel.
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

**IPC:** A61B 5/00(2007.01)

**USPC:** 600/300

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)

U.S.: 600/300, 345, 505, 547: 424/422

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category *</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6,442,413 B1 (Silver) 27 August 2002 (27.08.2002), see entire document</td>
<td>1-18, 25-38, 41-50</td>
</tr>
<tr>
<td>X</td>
<td>US 2003/0125017 A1 (Greene et al.) 03 July 2003 (03.07.2003), see entire document</td>
<td>51-53</td>
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* Further documents are listed in the continuation of Box C.

**Date of mailing of the international search report:** 25 JAN 2007

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