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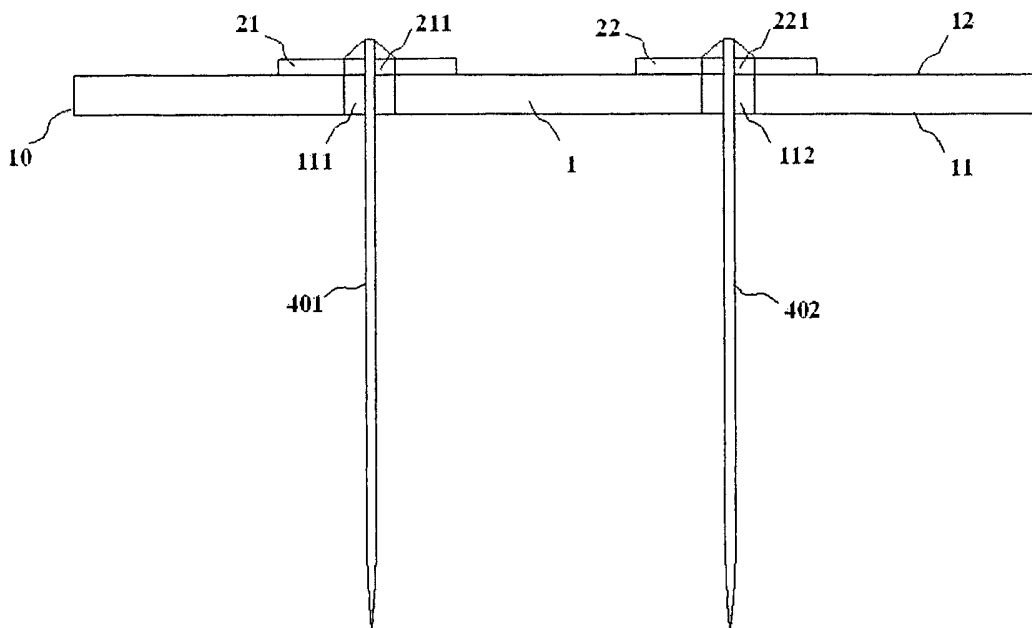
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[Continued on next page]

(54) Title: CATHETER-FREE IMPLANTABLE NEEDLE BIOSENSOR



(57) Abstract: Electrochemical biosensors consisting of two or more needle-shaped electrodes for monitoring of molecules such as glucose in the subcutaneous tissue are provided. The two electrodes are parallel to each other, and are fixed perpendicularly to the planar side of a sensor base which provides skin fixation and electric connection. The needle electrodes are made of rigid conducting materials, capable of inserting into the skin without the need of catheters. One electrode is the sensing electrode and the other, the reference electrode. A compound sensing membrane is attached onto the sensing electrode surface to detect analyzed molecules.

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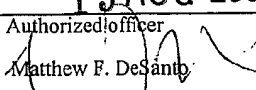
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<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) U.S. : 604/20,890.1; 600/345,347,365</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)</p>																						
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <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>Y</td> <td>US 5,807,375A (Gross et al.) 15 September 1998 (15.09.1998), abstract, figure 3, 5.</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>US 6,360,888 B1 (McIvor et al.) 26 March 2002 (26.03.2002), figure 2, 6.</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>US 6,091,975A (Daddona et al.) 18 July 2000 (18.09.2000), figures 1, 2, 4.</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>US 2004/0167458 A1 (Draghia-Akli et al.) 26 August 2004 (26.08.2004), figures 3, 4.</td> <td>1-20</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	Y	US 5,807,375A (Gross et al.) 15 September 1998 (15.09.1998), abstract, figure 3, 5.	1-20	Y	US 6,360,888 B1 (McIvor et al.) 26 March 2002 (26.03.2002), figure 2, 6.	1-20	Y	US 6,091,975A (Daddona et al.) 18 July 2000 (18.09.2000), figures 1, 2, 4.	1-20	Y	US 2004/0167458 A1 (Draghia-Akli et al.) 26 August 2004 (26.08.2004), figures 3, 4.	1-20					
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<p>Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201</p>		<p>Authorized officer  Matthew F. DeSanto Telephone No. 1-703-308-0858</p>																				