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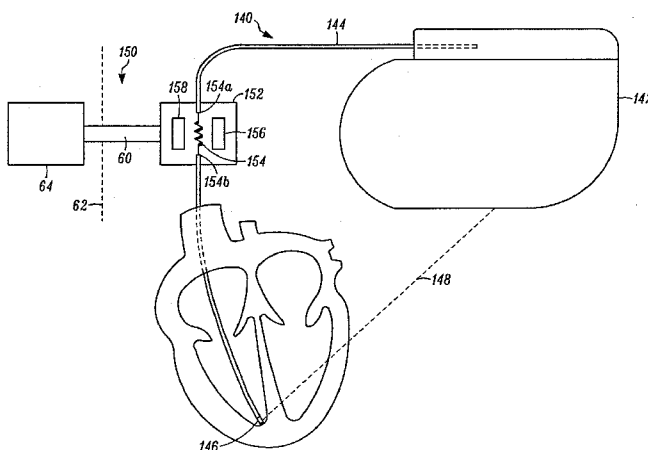


FIG. 5

(57) Abstract: In an embodiment, the invention includes a measurement system for measuring induced currents within an implantable medical device undergoing magnetic resonance imaging. The measurement system can include a resistor connected in series with a conductive loop and electronic circuitry configured to generate a signal representative of a voltage differential across the resistor. In some embodiments, the measurement system includes a fiber optic cable configured to transmit the signal away from the area subject to magnetic resonance imaging. In some embodiments, the measurement system includes a transmitter to wirelessly transmit the signal away from the area subject to magnetic resonance imaging. In an embodiment, the invention can include an implantable medical device including a measurement system for measuring induced currents. In an embodiment, the invention can include a method of measuring an induced current in an implantable medical device undergoing magnetic resonance imaging. Other embodiments are described herein.

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## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
A61N

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)

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/088012 A1 (KROLL MARK W [US] ET AL) 6 May 2004 (2004-05-06) paragraphs [0001], [0049], [0062], [0081] - [0086] figures 2,3a-3c	1-22
A	US 6 198 972 B1 (HARTLAUB JEROME T [US] ET AL) 6 March 2001 (2001-03-06) the whole document	1-22
A	US 2002/163333 A1 (SCHLICKER DARRELL E [US] ET AL) 7 November 2002 (2002-11-07) the whole document	1-22
A	WO 03/037429 A (MEDTRONIC INC [US]) 8 May 2003 (2003-05-08) the whole document	1-22

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

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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