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(54) Title: METHOD AND APPARATUS FOR TREATING A PATIENT'S HEART USING HEMODYNAMICS

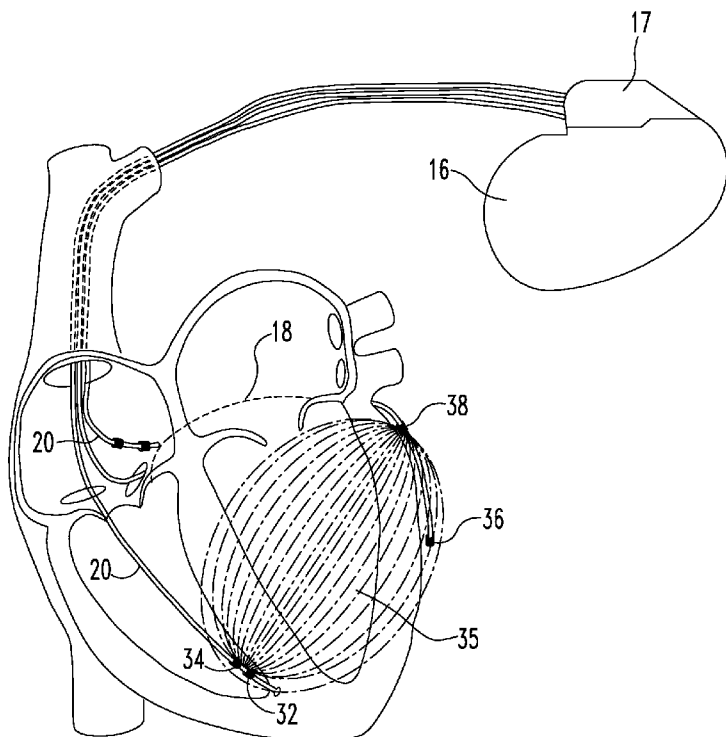


FIG. 1

(57) Abstract: An apparatus for treating a patient's heart includes a sensor for measuring hemodynamics of the heart. The apparatus includes a processing unit which receives the hemodynamics from the sensor and uses the hemodynamics to determine whether to shock the heart. A method for treating a patient's heart. The method includes the steps of measuring hemodynamics of the heart with a sensor. There is the step of receiving the hemodynamics from the sensor at a processing unit which uses the hemodynamics to determine whether to shock the heart.





KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(8) - A61N 1/365 (2012.01)

USPC - 607/17

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)

IPC: A61N 1/365 (2012.01)

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

IPC: A61N 1/00, 1/02, 1/08, 1/36, 1/37, 1/365; A61B 5/04, 5/0402, 5/0452, 5/0468, 5/0472 (2012.01)

USPC: 600/508, 509, 510, 513, 515, 516, 517; 607/1, 2, 9, 11, 17, 18, 24, 25

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (PGPB,USPT,EPAB,JPAB), DialogWeb (348: European Patents Fulltext; 349: WIPO/PCT Patents Fulltext; 652: U.S. Patents Fulltext (1971-1975); 654: U.S. Patents Fulltext (1976-present)), Google (Patents, Scholar); Keywords: sens\$4, hemodynamic\$4, processor, processing, cpu, computer\$4, shock\$4, pace, paces, paced, pacing, imaginary, impedance, my

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 2010/0121397 A1 (Cholette) 13 May 2010 (13.05.2010) para [0030], [0041]-[0046], [0050], [0082]-[0084], [0088], [0090]; Fig. 1, 12	1, 2, 8, 9 ----- 3-7, 10-15
Y	US 2003/0199779 A1 (Muhlenberg et al.) 23 October 2003 (23.10.2003) para [0034], [0037], [0041], [0101], [0118], [0123]	3-7, 10-15
A	US 2010/0286739 A1 (Yost et al.) 11 November 2010 (11.11.2010) Entire document	1-15
A	US 6,975,903 B1 (Min et al.) 13 December 2005 (13.12.2005) Entire document	1-15
A	US 6,494,832 B1 (Feldman et al.) 17 December 2002 (17.12.2002) Entire document	1-15
A	US 5,480,412 A (Mouchawar et al) 02 January 1996 (02.01.1996) Entire document	1-15
A	US 5,156,147 A (Warren et al.) 20 October 1992 (20.10.1992) Entire document	1-15

Further documents are listed in the continuation of Box C.

\* 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 application or patent but published on or after the international filing date

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“&” document member of the same patent family

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