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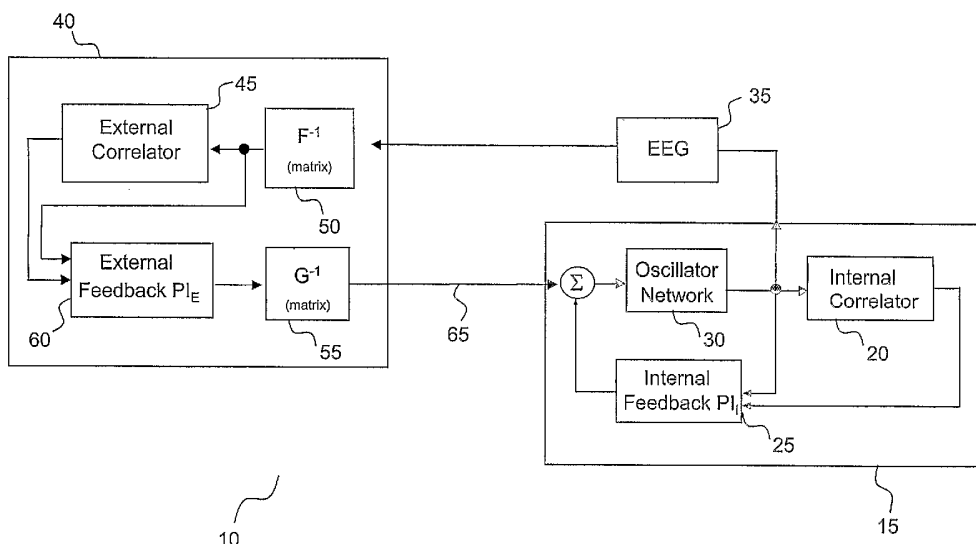
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(54) Title: PACEMAKER FOR TREATING PHYSIOLOGICAL SYSTEM DYSFUNCTION



(57) Abstract: Disclosed is a device and method for preventing seizures due to physiological system dysfunction. The method is based on a conjectural model of the brain wherein each brain site is modeled as a chaotic oscillator; a normal brain generates an internal feedback signal to prevent long-term entrainment among the oscillators; and a pathological brain fails to provide this feedback signal. The device of the present invention measures and characterizes the brain sites to determine if entrainment is occurring among the oscillators, derives an appropriate feedback signal to counteract the entrainment, and applies the feedback signal to the critical brain sites. The feedback signal generated by the device supplements or takes the place of the feedback signal that would otherwise be generated by the normal brain.

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| B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 607/45, 1, 2, 62 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 practicable, search terms used) | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y,E | US 2005/0240242 A1 (DILORENZO) 27 October 2005 (27.10.2005), paragraph 386, 393, 399, 401 | 1,2,13-15,22,25-28 |
| Y | US 6,304,775 B1 (IASEMIDIS et al) 16 Oct 2001 (16.10.2001), Col. 4, lines 23-39, Col. 7, line23 - Col. 14, line 11. | 1-4, 14-17 |
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