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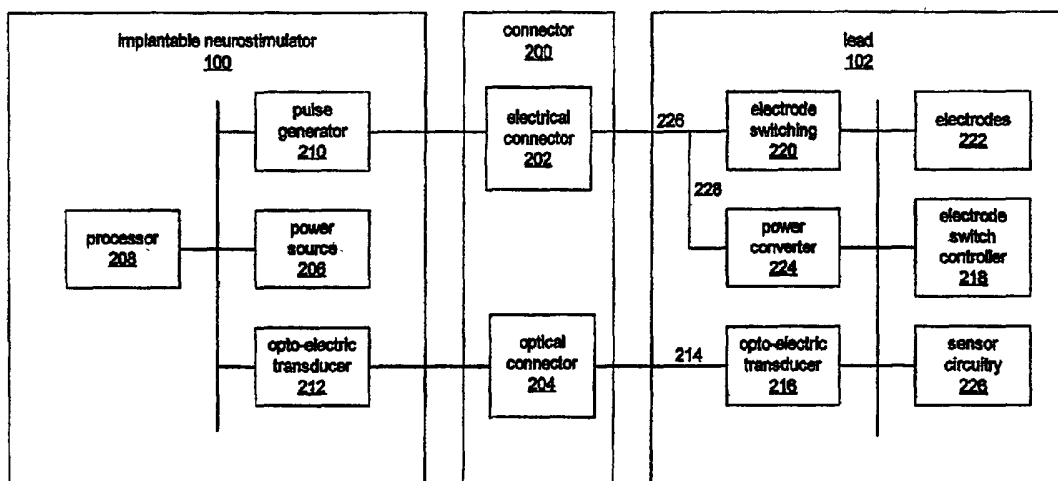
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[Continued on next page]

(54) Title: OPTICAL COPMMUNICATION OF NEUROSTIMULATION-SYSTEM INFORMATION



(57) Abstract: A neurostimulation lead (102) includes fiber optic cable (214). A human-implantable neurostimulator (100) and neurostimulation lead (102) each include an opto-electric transducer (212, 216). The opto-electric transducers (212, 216) can be an optical transmitter, an optical receiver, or an optical transducer, that converts: electrical energy to optical energy; optical energy to electrical energy; or both electrical energy to optical energy and optical energy to electrical energy. Neurostimulation-lead electrodes (222) can be activated, and/or lead-status information can be transmitted, over the fiber optic cable (214), between the neurostimulator (100) and the neurostimulation lead (102). A neurostimulation-lead power converter (224) may be coupled to a pulse generator (210) of the neurostimulator (100) such that the power converter (224) derives and stores power for the lead (102) from stimulation pulses received from the stimulation-pulse generator (210).



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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)

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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.
A	US 5 370 672 A (FOWLER KIM R ET AL) 6 December 1994 (1994-12-06) the whole document	1-20
A	----- EP 1 181 947 A (BORKAN WILLIAM N) 27 February 2002 (2002-02-27) the whole document	1-20
A	----- EP 1 181 948 A (BORKAN WILLIAM N) 27 February 2002 (2002-02-27) the whole document	1-20

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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