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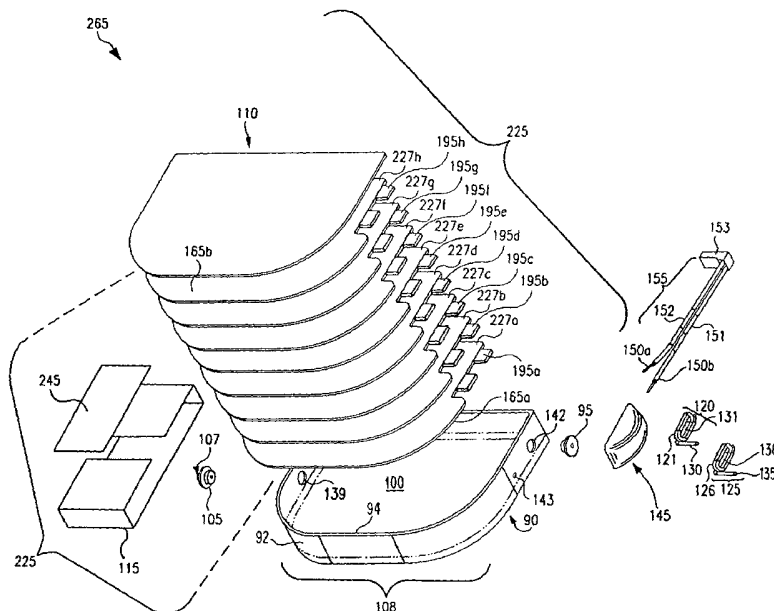
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(54) Title: IMPLANTABLE MEDICAL DEVICE HAVING FLAT ELECTROLYTIC CAPACITOR WITH CATHODE/CASE
ELECTRICAL CONNECTIONS



(57) Abstract: Flat electrolytic capacitors particularly for use in implantable medical devices having stacked cathode and anode layers particular electrical connections of the capacitor anode and cathode layers with a capacitor connector assembly. Anode terminal means extend through the capacitor case side wall for electrically connecting a plurality of the anode tabs to one another and providing an anode connection terminal at the exterior of the case that is electrically insulated from the case. A cathode terminal extends through or to an encapsulation area of the capacitor case side wall via a cathode terminal passageway for electrically connecting a plurality of the cathode tabs to one another and providing a cathode connection terminal at the exterior of the case. The connector assembly is electrically attached to the anode connection terminal for making electrical connection with the anode tabs and to the cathode connection

terminal for making electrical connection with the cathode tabs. The cathode terminal passageway comprises a cathode opening extending through the case wall, and the cathode terminal comprises a cathode wire or feedthrough pin extending from the gathered cathode tabs into or through the cathode opening providing the cathode connection terminal electrically connected with the case. Alternatively, the terminal passageway comprises a portion of an interior ledge of the side wall upper opening edge having a width and depth depressed below the upper opening edge and a cover edge portion overlying the ledge to trap the cathode terminal when the cover is welded to the crimped upper edge. The cathode terminal comprises a cathode tab extension foil attached to the gathered cathode tabs or an extension of one, a plurality or all of the cathode tabs.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 51302 A (MEDTRONIC INC) 14 October 1999 (1999-10-14) the whole document ----	1-31
A	EP 0 464 605 A (SANYO ELECTRIC CO) 8 January 1992 (1992-01-08) page 3, line 8 - line 53; figure 4 ----	1-31
A	EP 0 475 092 A (SIEMENS AG) 18 March 1992 (1992-03-18) the whole document -----	1-31



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Patent family members are listed in annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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