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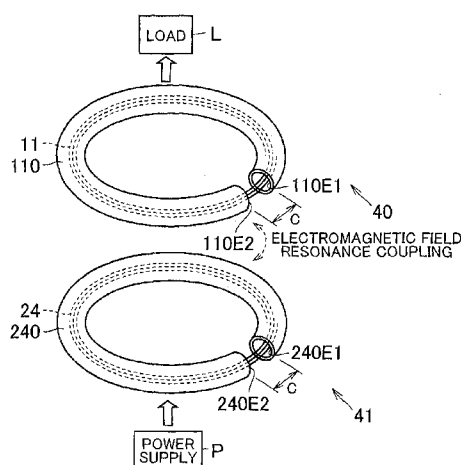
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(54) Title: POWER TRANSMITTING DEVICE, POWER RECEIVING DEVICE AND POWER TRANSFER SYSTEM

FIG. 14



(57) Abstract: A power transmitting device includes a power transmitting portion that contactlessly transmits electric power to a power receiving portion. The power transmitting portion has a resonance coil (24) and a tubular member (240) that faces the resonance coil (24). At least one portion of the tubular member (240) is electrically cut off.

INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

INV. B60L11/18 H01F27/36 H02J5/00 H02J7/02 H01F38/14
ADD.

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)

H01F H02J B60L

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)

EP0-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	JP 2011 045189 A (FUJITSU LTD) 3 March 2011 (2011-03-03) cited in the application	1,6-9, 14,19-22
Y	paragraph [0075]; figure 12	2-5, 10-13, 15-18, 23-26
Y	----- GB 1 383 208 A (SOLARTRON ELECTRONIC GROUP) 5 February 1975 (1975-02-05) the whole document	2,3,10, 11,15, 16,23,24
Y	----- US 5 684 380 A (WOODY GEORGE R [US] ET AL) 4 November 1997 (1997-11-04) the whole document -----	4,5,12, 13,17, 18,25,26



Further documents are listed in the continuation of Box C.



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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2011045189 A	03-03-2011	NONE	

GB 1383208 A	05-02-1975	FR 2148514 A1	23-03-1973
		GB 1383208 A	05-02-1975

US 5684380 A	04-11-1997	DE 69701022 D1	03-02-2000
		DE 69701022 T2	25-05-2000
		EP 0821376 A1	28-01-1998
		JP 2955541 B2	04-10-1999
		JP H10191572 A	21-07-1998
		TW 395071 B	21-06-2000
		US 5684380 A	04-11-1997
