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(54) Title: INTERCHANGEABLE HIGH INTENSITY FOCUSED ULTRASOUND TRANSDUCER

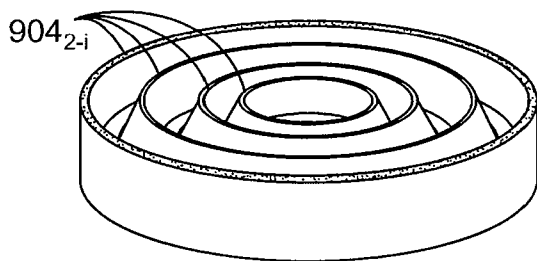


FIG. 9D

(57) Abstract: An interchangeable transducer for use with an ultrasound medical system having a keyless adaptor and capable of operating in a wet environment. The interchangeable transducer has an adaptor for engaging a medical system, an ultrasound transducer and additional electronics to provide a self-contained insert for easy replacement and usage in a variety of medical applications. A slip ring spacer is also disclosed, the slip ring spacer for use with a pancake slip ring having a base and flange configuration to form one or more channels around each contact ring of the pancake slip ring. The channels provide fluid isolation around each connector to help reduce electronic cross talk and contact corrosion between the connector pads of the slip ring while the slip ring is immersed in a wet environment.



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## INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(8) - A61B 8/14 (2008.04) USPC - 600/459 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC(8): A61B 8/14 (2008.04) USPC: 600/459 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8): A61B 8/14 (2008.04) USPC: 600/459; 600/407, 437 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO WEST (USPT, PGPUB, EPAB, JPAB); adapter, adaptor, insert, ultrasound, housing, transducer, ultraso\$, ring, spacer, connect\$, slip, imperfect, foc\$, spring, 'PCB', disposable, aperture, electric\$, concentric, isolat\$, connector, radi\$, socket, base, ridge, cell, flange, fluid, resistant, liquid, channel Google Scholar		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7,011,520 B2 (RAHMAN, et al.) 14 March 2006 (14.03.2006), [Abstract], col 1, ln 14-17; col 1, ln 30-35; col 1, ln 66-67 to col 2, ln 1-4; col 4, ln 46-55; col 5, ln 61-67; col 6, ln 35-41; Figs. 2A, 2B, 8B, 8C	1, 4, 8, 9 ----- 2, 3, 5-7, 10-25, 36
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Y	US 6,063,035 A (SAKAMOTO, et al.) 16 May 2000 (16.05.2000), col 1, ln 16-35; col 6, ln 12-25; col 6, ln 62-67 to col 7, ln 1-2; col 7, ln 34-60; col 7, ln 48-50; col 12, ln 12-17; Figs. 1, 7, 12	2, 3, 5, 6, 10, 24, 35
Y	US 5,291,090 A (DIAS) 01 March 1994 (01.03.1994), col 3, ln 6-11	7, 22
Y	US 5,851,188 A (BULLARD, et al.) 22 December 1998 (22.12.1998), col 13, ln 40-43	11, 23
Y	US 6,775,388 B1 (POMPEI) 10 August 2004 (10.08.2004), col 4, ln 4-10; col 7, ln 18-21; Fig. 1A	12-36
Y	US 2005/0016769 A1 (WALLACE) 27 January 2005 (27.01.2005), [Abstract], para[0060]	26-33, 35, 36
Y	US 2002/0043499 A1 (HAMMEN, et al.) 18 April 2002 (18.04.2002), para[0040]	34
Y	US 2007/0167825 A1 (LEE, et al.) 19 July 2007 (19.07.2007), para[0033], [0044], [0045], [0089], [0131]	10, 12-25
Y	US 5,928,194 A (MAGET) 27 July 1999 (27.07.1999), col 6, ln 66-67 to col 7, ln 1-14; Figs. 3, 4	28-33
Y	US 5,840,572 A (COPELAND, et al.) 24 November 1998 (24.11.1998), col 6, ln 38-44	15
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