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(54) Title: METHOD AND APPARATUS FOR DETERMINING THE PROXIMITY OF A TMS COIL TO A SUBJECT'S HEAD

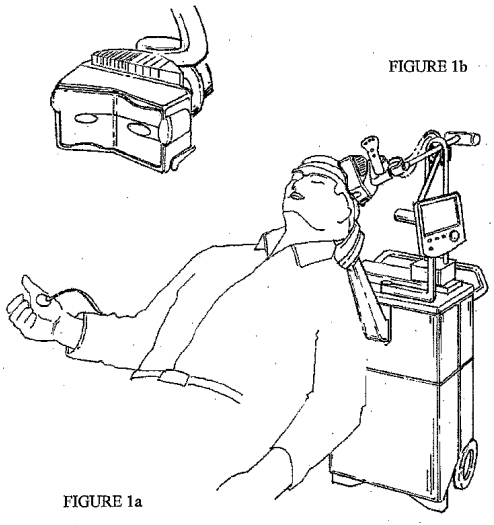

FIGURE 1b

FIGURE 1a

(57) Abstract: A proximity sensor for a transcranial magnetic stimulation (TMS) system detects the proximity of a TMS coil assembly to a position at which the coil is to receive pulses during TMS treatment and provides feedback to the operator so that the operator may adjust the TMS coil assembly as necessary to maintain optimal positioning during treatment. A flexible substrate containing a sensor or sensor array is disposed between the TMS coil assembly and theposition such that the coupling of the TMS coil assembly to the position may be detected by the sensor(s). Sensor outputs are processed by signal processing circuitry to provide an indication of whether the TMS coil assembly is properly disposed with repect to the position during TMS treatment. A display may be used to provide an indication of how to adjust the TMS coil assembly to improve the positioning of the TMS coil assembly.

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A. CLASSIFICATION OF SUBJECT MATTER
IPC: **A61N 1/00**(2006.01)

USPC: 600/13
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)
U.S. : 600/9,1 0, 11, 12, 13, 14, 15; 128/897, 898; 606/130; 607/46

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)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/0002441 A1 (BOVEJA) 31 May 2001 (31.05.2001), see entire document.	1-9, 16, 17, 27, 28, 31-34, 36, 42, 43, 52, 53, 56-58, 67
X, Y	US 2003/0050527 A1 (FOX et al) 13 March 2003 (13.03.2003), see entire document.	31, 32, 35, 56, 69
X, Y	US 2003/0004392 A1 (TANNER et al) 02 January 2003 (02.01.2003), see entire document.	59-67
A, E	US 2006/0052687 A1 (RUOHONEN) 09 March 2006 (09.03.2006), see entire document.	1-69
A, P	US 2004/0193001 A1 (MILLER) 30 September 2004 (30.09.2004), see entire document.	1-69

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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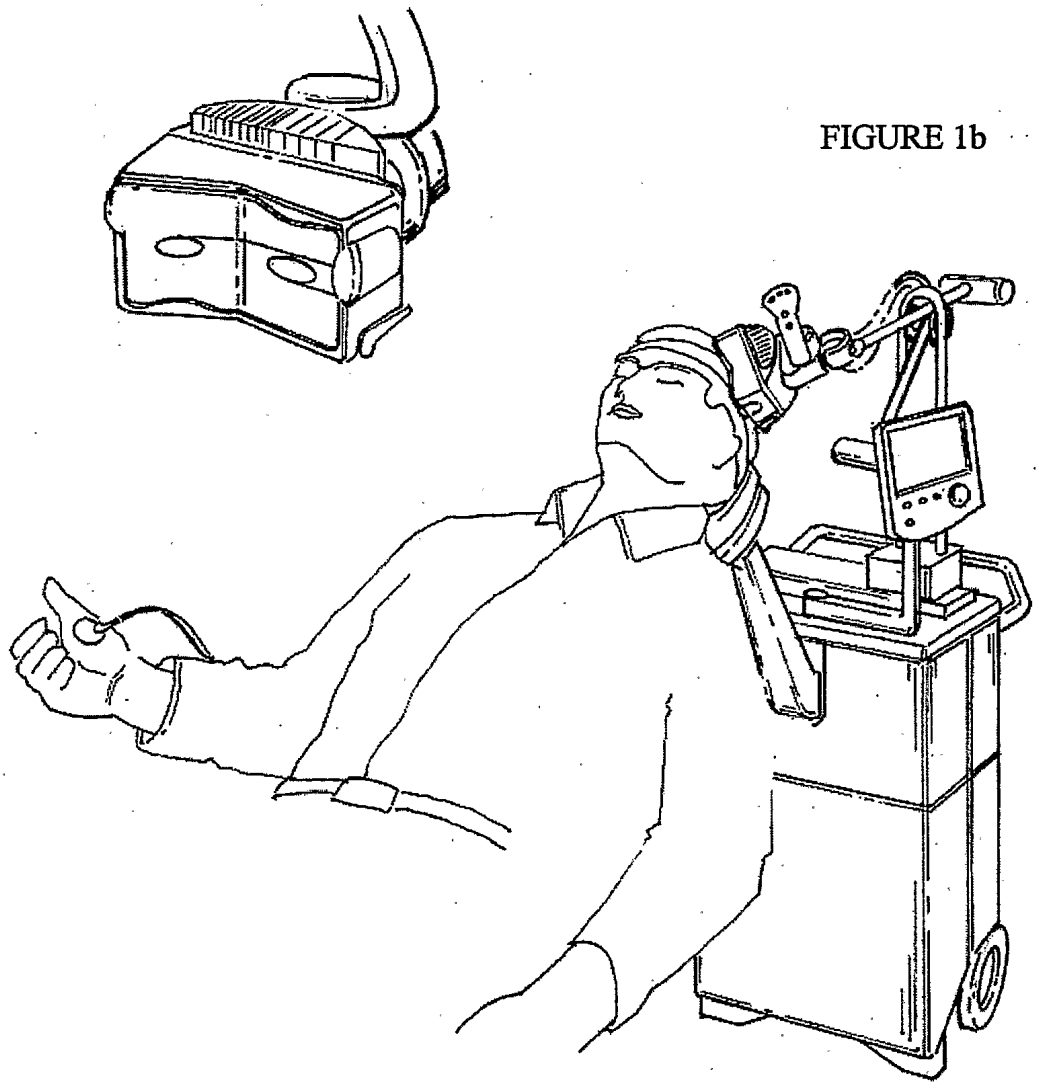

FIGURE 1b

FIGURE 1a