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KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
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(54) **Title:** MULTI-COIL TRANSCRANIAL MAGNETIC STIMULATION

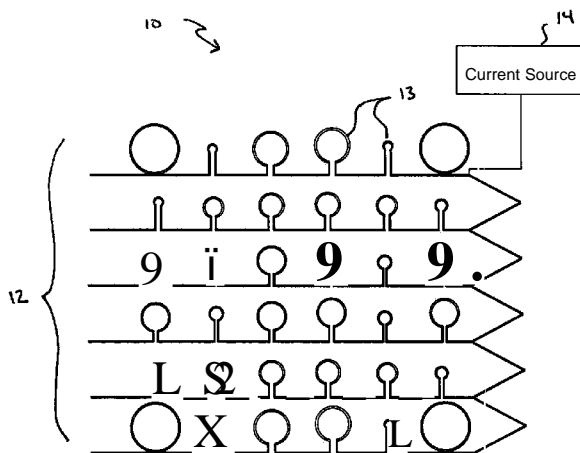


FIG. 1

(57) **Abstract:** An improved apparatus is provided for transcranial magnetic stimulation in a brain of a subject. The apparatus is comprised of: a plurality of coils electrically connected in series to each other; and a single source of current electrically coupled to one of the plurality of coils. Each coil may include one or more windings of similar dimensions although the size of the windings varies between coils. Each of the coils is further dimensioned to stimulate brain tissue at a given distance while minimizing volume of the brain tissue excited by the magnetic field. During operation, the current source injects time varying current into the coils to create a magnetic field which in turn induces electric fields and eddy-currents inside the brain tissue of the subject.



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/045499**A. CLASSIFICATION OF SUBJECT MATTER****A61N 2/02(2006.01)i, A61B 18/00(2006.01)I**

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)

A61N 2/02; G01 V 3/00; A61B 17/52; A61N 1/00; A61N 2/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: transcranial, magnetic, stimulation, brain, coil, winding, source, current, frequency

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006-0287566 A1 (ABRAHAM ZANGEN et al.) 21 December 2006 See claims 1, 16 and 17, abstract, figures 1A and 4.	1-16
A	US 5738625 A (DANIEL S. GLUCK) 14 April 1998 See claims 1, 2, 5 and 8, abstract, figures 1 and 5.	1-16
A	US 2005-0057249 A1 (BRIAN, M. DALE et al.) 17 March 2005 See claims 1, 16, 19 and 31, abstract, figures 1 and 2.	1-16
A	US 6179771 B1 (EDGAR MUELLER) 30 January 2001 See claim 1, abstract, column 3, lines 20-25.	1-16
A	US 6425852 B1 (CHARLES M. EPSTEIN et al.) 30 July 2002 See claim 1, abstract, figures 1A-4.	1-16

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

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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INTERNATIONAL SEARCH REPORT

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