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English

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[Continued on next page]

(54) Title: MEDICAL DEVICE FOR THERAPEUTIC STIMULATION OF THE VESTIBULAR SYSTEM

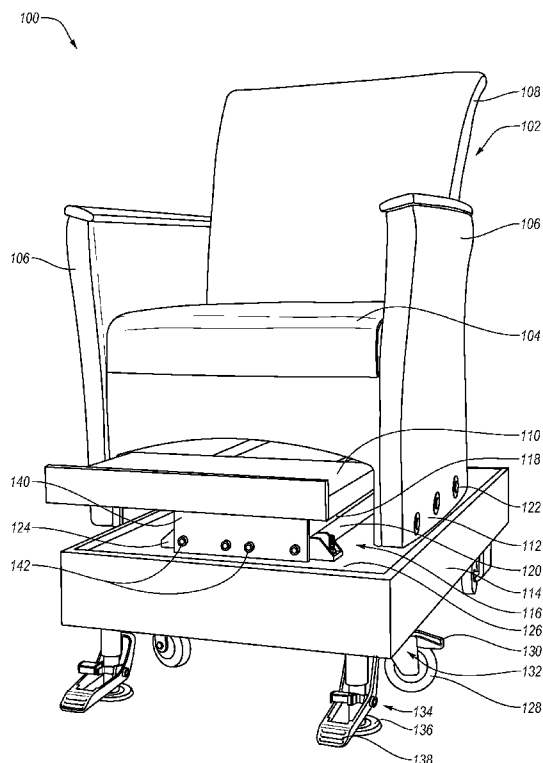


Fig. 1

(57) Abstract: A method for providing vestibular stimulation includes: providing an infant in a vestibular stimulation device; associating sensors to the infant; moving the vestibular stimulation device to provide vestibular stimulation treatment; and obtaining sensor data during the treatment. The vestibular stimulation device includes a holder member; a platform; a mechanical system coupling the holder member to the platform; sensors configured to detect one or more parameters of the infant; and a computing system having a user input and/or output interface operably coupled to the mechanical system and the sensors to provide mechanical data to the mechanical system in order to control movement of the holder member relative to the platform and to collect the one or more parameters of the living subject from the sensors.



DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE,
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/034238

A. CLASSIFICATION OF SUBJECT MATTER

A61J 17/00(2006.01)i, A61F 11/00(2006.01)i, A61M 37/00(2006.01)i, A61M 16/00(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)

A61J 17/00; A61K 9/14; B62B 9/22; A61B 5/03; A61H 1/00; A61B 8/14; A61K 35/74; A47D 9/02; B62B 9/00

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: vestibular, stimulation, holder, mechanical sysetm, platform, move, sensor, parameter, infant, pacifier, accelerometer, nipple, longitudinal, horizontal, axis, position.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2007-113871 A1 (TITON, IGOR) 11 October 2007 See page 2, lines 22-23; page 6, lines 9 and 20-22; page 8, lines 22-24; page 9, lines 10-17; page 12, lines 3-10;	1-7
A	claims 2-3, 6, and 9; and figures 2-5.	8-11
Y	WO 98-39996 A1 (NIMS, INC.) 17 September 1998 See page 1, lines 27-33; page 4, lines 30-41; page 5, lines 1-5; page 7, line 36 - page 8, line 36; page 9, line 16 - page 10, line 12; page 10, lines 24-41; page 11, lines 4-12 and 21-29; page 15, lines 3-6; claims 1, 3-6, 8-9, 12, 19-22, and 25-29; and figures 1-2C and 4.	1-7
A	US 4,947,832 A (BLITZER, AVRUM H.) 14 August 1990 See col. 4, lines 25-27; col. 4, line 63 - col. 5, line 13; col. 5, lines 43-46 and 59-62; col. 6, lines 4-63; claims 1-2; and figures 1-2.	1-11
A	US 4,934,997 A (SKAKAS, PAULINE V.) 19 June 1990 See col. 4, lines 25-42; col. 6, lines 10-50; claims 1-2; and figures 6-8.	1-11

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

23 NOVEMBER 2012 (23.11.2012)

Date of mailing of the international search report

26 NOVEMBER 2012 (26.11.2012)

Name and mailing address of the ISA/KR



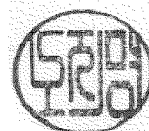
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/034238

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 14-20
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 14-20 pertain to a method for treatment of the human body by therapy and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of the PCT and Rule 39.1(iv) of the Regulations under the PCT, to search.
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2012/034238

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,853,005 A (SCANLON, MICHAEL V.) 29 December 1998 See col. 1, line 66 – col. 2, line 5; col. 21, lines 40–47; claim 51; and figure 35.	8–13
A	EP 2092882 A2 (UNIVERSITY OF KANSAS) 26 August 2009 See paragraphs [0004], [0040], [0043]–[0044], and [0066]–[0068]; claims 9 and 14; and figures 5B and 21A–21B.	8–13
A	US 2011-0045079 A1 (EDWARDS, DAVID A.) 24 February 2011 See paragraphs [0194]–[0198]; and figures 18 and 24–25.	8–13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/034238

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