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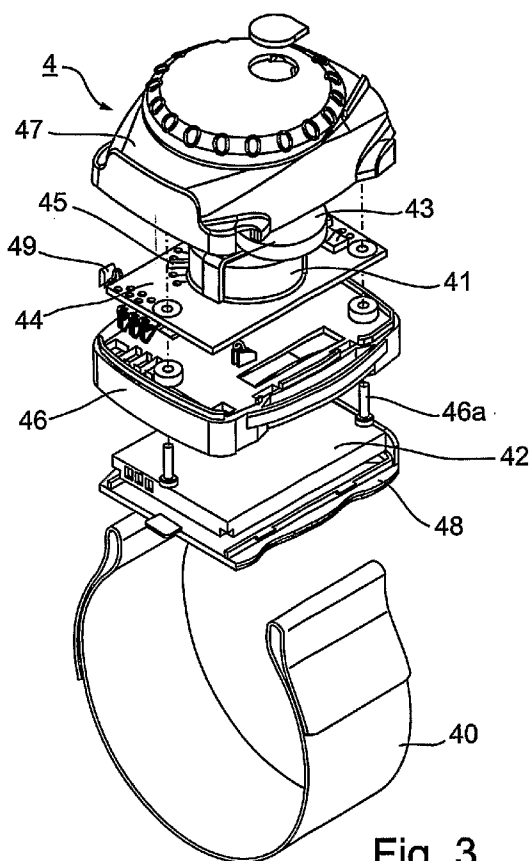
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- (71) Applicant (for all designated States except US): NEX-ENSE LTD. [IL/IL]; Manhattan Building, 2nd Floor, 1 HaKishon Street, P.O. Box 13078, 81220 Yavne (IL).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ARIAV, Arie [IL/IL]; 122 Kochav Michael, 79304 Doar-na Hof Ashkelon (IL). RAVITCH, Vladimir [IL/IL]; 27/24 Ort Street, 78360 Ashkelon (IL).
- (74) Agents: G. E. EHRLICH (1995) LTD. et al.; 11 Menachem Begin Street, 52521 Ramat Gan (IL).
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(54) Title: APPARATUS FOR USE IN DETECTING AND/OR CONTROLLING VARIOUS SLEEP EVENTS, AND SENSOR UNIT PARTICULARLY USEFUL THEREIN



(57) Abstract: Apparatus for use in controlling a sleep event, such as snoring or sleep apnea, includes: a sensor system for sensing the sleep event by a person while sleeping, and a stimulus device effective, when actuated by the sensor system, to apply a stimulus to the person for producing a response tending to interrupt the sleep event. The stimulus device includes a vibrator and a band for enclosing a body part of the person and for applying a vibration to the body part. Also described is a force or displacement sensor, which includes a housing filled with a liquid having high transmissivity and low attenuation properties with respect to acoustical waves, and an acoustical transmitter and an acoustical receiver carried by opposed walls of the housing spaced from each other to define between them an acoustical transmission channel of the liquid. The housing is deformable by a force such as to change the length of the acoustical transmission channel in accordance with the applied force. A measuring system measures the transit time of an acoustical wave through the acoustical transmission channel to provide a measurement of the applied force.

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,057,767 A (Barnoach) 02 May 2000 (02.05.2000) Whole document	1-8
Y		9-32
Y	US 6,468,234 B1 (Van der Loos et al.) 22 October 2002 (22.10.2002) column 3 lines 24-30	9-12
Y	US 2006/0059999 A1 (Feller) 23 March 2006 (23.03.2006) paragraph 0010	13-32
Y	US 4,741,214 A(Vidmantas) 03 May, 1988 (03.05.1988) Column 3 lines 35-44	14-16 and 24-26

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

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"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"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
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
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Authorized officer: Patricia Bialicek, Telephone No. 571-272-3700