

SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 16 74 3621

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2014/210626 A1 (KRESSER DAVID [US] ET AL) 31 July 2014 (2014-07-31) * paragraphs [0029], [0031], [0032], [0065], [0080] *	1-8	INV. A61B5/00 A61M21/02 A61B5/0205 A61B5/11 A61B5/08 A61B5/024
X	US 4 420 001 A (HEARNE KEITH M T [GB]) 13 December 1983 (1983-12-13) * column 2, line 48 - column 3, line 3 *	1,6	ADD. A61B5/01
X	US 2008/071152 A1 (MORIYA AKIHISA [JP] ET AL) 20 March 2008 (2008-03-20) * paragraphs [0006], [0027], [0028], [0072] - [0080] *	1,6	
X	GB 2 447 640 A (AXON SLEEP RES LAB INC [US]) 24 September 2008 (2008-09-24) * page 3, lines 5-16 *	1,6	
X	WO 2014/068537 A2 (KONINKL PHILIPS NV [NL]) 8 May 2014 (2014-05-08) * abstract * * page 4, line 27 - page 5, line 11 *	1,6	
			TECHNICAL FIELDS SEARCHED (IPC)
			A61B
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.			
Claims searched completely :			
Claims searched incompletely :			
Claims not searched :			
Reason for the limitation of the search: see sheet C			
Place of search The Hague		Date of completion of the search 9 April 2018	Examiner Kowalczyk, Szczepan
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

Claim(s) completely searchable:
1-8

Claim(s) not searched:
9-15

Reason for the limitation of the search:

In his letter of 21-02-2018 the applicant argued that independent method claims 1 and 9 and independent apparatus claims 6, 11 and 15 are allowable under Rule 43(2) EPC. However, the applicants argumentation cannot be followed. In particular, although lying in the same technical area of sleep improvement, claims 6 and 11 relate to different problems than claims 1 and 8. Claims 1 and 6 relate to a first and second wake-up time, whereas claims 9 and 11 relate to determining an alarm condition corresponding to a sleep depth. This could be for example a soft or louder alarm, to wake up a deeper sleeper, i.e., rather directed at efficiency of waking a person up on time for his or her daily tasks instead of improving sleep quality. Claims 1 and 6 however only relate to adjusting a wake-up time based on a sleep stage to improve sleep quality in the final parts of the sleeping period. Finally, claim 15 is directed to a method of controlling ambient noise and a relationship with improving sleep quality is not apparent. In fact, having an additional audio output device seems to even possibly worsen the sleeping conditions. Thus, the search report has been drawn up on the basis of the first independent claim of each category (Rule 62a(1) EPC), following the second auxiliary request of the applicant, that is, claims 1-8. The applicant's attention is drawn to the fact that the application will be further prosecuted on the basis of subject-matter for which a search has been carried out and that the claims should be limited to that subject-matter at a later stage of the proceedings (Rule 62a(2) EPC).

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

09-04-2018

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2014210626	A1	31-07-2014	NONE	

US 4420001	A	13-12-1983	NONE	

US 2008071152	A1	20-03-2008	JP 2008093416 A	24-04-2008
			US 2008071152 A1	20-03-2008

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			EP 2914162 A2	09-09-2015
			JP 6276776 B2	07-02-2018
			JP 2016501565 A	21-01-2016
			RU 2015120732 A	27-12-2016
			US 2015302722 A1	22-10-2015
			WO 2014068537 A2	08-05-2014

专利名称(译)	用于改善和监测睡眠的方法和设备		
公开(公告)号	EP3250110A4	公开(公告)日	2018-05-16
申请号	EP2016743621	申请日	2016-01-13
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	SAMSUNG ELECTRONICS CO. , LTD.		
当前申请(专利权)人(译)	SAMSUNG ELECTRONICS CO. , LTD.		
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发明人	YOON, BOO-KEUN HAN, JONG-HEE		
IPC分类号	A61B5/00 A61M21/02		
CPC分类号	A61B5/4812 A61B5/01 A61B5/02055 A61B5/024 A61B5/0816 A61B5/1123 A61B5/4818 A61B5/6891		
优先权	1020150028588 2015-02-27 KR 1020150013902 2015-01-28 KR		
其他公开文献	EP3250110A1		
外部链接	Espacenet		

摘要(译)

由用于引起声音睡眠以引起正在睡觉的对象的声音睡眠的装置执行的方法包括：基于对象的日程信息确定对象的第一苏醒时间;接收物体的生物信息;根据对象的生物信息确定对象的睡眠状态;通过考虑物体的睡眠状态将第一个唤醒时间改变为第二个唤醒时间;并在第二个唤醒时间输出唤醒警报信号。

DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2014/210626 A1 (KRESSER DAVID [US] ET AL) 31 July 2014 (2014-07-31) paragraphs [0025], [0031], [0032], [0055], [0060] *	1-8	INV. A61B5/00 A61M21/02 A61B5/0205 A61B5/11 A61B5/08 A61B5/024
X	US 4 420 001 A (HEARNE KEITH M T [GB]) 13 December 1983 (1983-12-13) * column 2, line 48 - column 3, line 3 *	1,6	ADD. A61B5/01
X	US 2008/071152 A1 (MORIYA AKIHISA [JP] ET AL) 20 March 2008 (2008-03-20) paragraphs [0006], [0027], [0028], [0072] - [0080] *	1,6	
X	GB 2 447 640 A (AXON SLEEP RES LAB INC [UK]) 24 September 2008 (2008-09-24) * page 3, lines 5-15	1,6	
X	WO 2014/068537 A2 (KONINKL PHILIPS NV [NL]) 3 May 2014 (2014-05-08) * abstract *	1,6	
The undersigned, the EPO, has been based on the last set of claims valid for the application. INCOMPLETE SEARCH For reasons of brevity, the present application, or part or parts of it, may not comply with the EPC so that only a partial search (E 62a, 62b) has been carried out. Claims searched completely : Claims not searched : Reason for the limitation of the search: see sheet C			
Place of search The Hague		Date of completion of the search 9 April 2018	Examiner Kowalczyk, Szczepan
CATEGORY OF CITED DOCUMENTS Q: particularly relevant if shown above D: document of interest to the applicant A: document of the prior art R: document of the same patent family, corresponding document			