(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 12 September 2008 (12.09,2008)

(10) International Publication Number WO 2008/109873 A3

(51) International Patent Classification:

A61M 16/06 (2006.01) **G01L 19/00** (2006.01)

A61M 16/20 (2006.01) **A61B 5/08** (2006.01)

(21) International Application Number:

PCT/US2008/056320

(22) International Filing Date: 7 March 2008 (07.03.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/905,850

7 March 2007 (07.03.2007) US

- (71) Applicant (for all designated States except US): VENTUS MEDICAL, INC. [US/US]; 1301 Shoreway Road, Ste. 340, Belmont, CA 94002 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SATHER, Elliot [US/US]; 1463 12th Ave., San Francisco, CA 94122 (US). MINO, Toru [US/US]; 501 W. Briar Pl., Apt. 1E, Chicago, IL 60657 (US). FERDINAND, Arthur [US/US]; 5423 Century Park Way, San Jose, CA 95111 (US). LOOMAS, Bryan [US/US]; 265 Snow Crest Road, Los Gatos, CA 95033 (US). PIERCE, Ryan, Kendall

[US/US]; 403 North Arlington Drive, Carl Junction, MO 64834 (US). **DOSHI, Rajiv** [US/US]; P.O. Box 18607, Stanford, CA 94309 (US).

- (74) Agents: SHOOP, Richard, D. et al.; Shay Glenn, LLP, 2755 Campus Drive, Suite 210, San Mateo, CA 94403 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,

[Continued on next page]

(54) Title: RESPIRATORY SENSOR ADAPTERS FOR NASAL DEVICES

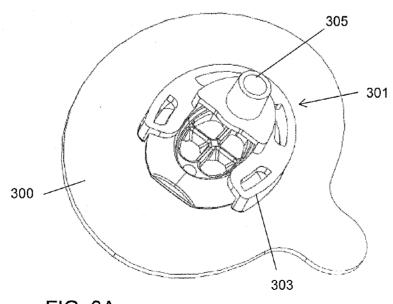


FIG. 3A

(57) Abstract: Described herein are nasal respiratory devices (300) including an attachment site for a sensors and sensor adapters (301) for securing at least a portion of a sensor to a nasal respiratory device. Sensor adapters typically have a body frame having at least two regions: an attachment region (303) for securing the sensor adapter to the nasal respiratory device; and a sensor connector region (305) for securing a sensor across from an outlet of the nasal respiratory device.

WO 2008/109873 A3



NO, PL, PT, RO, SE, SI, SK, 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 claims and to be republished in the event of receipt of amendments

Published:

with international search report

(88) Date of publication of the international search report:

7 May 2009

INTERNATIONAL SEARCH REPORT

International application No PCT/US2008/056320

A. CLASSI	FICATION OF SUBJECT MATTER		· · · · · · · · · · · · · · · · · · ·							
INV.	A61M16/06 G01L19/00 A61M16	/20 A61B5/08								
According to	D International Patent Classification (IPC) or to both national class	ification and IPC								
	SEARCHED									
	ocumentation searched (classification system followed by classifi	cation symbols)								
A61M	G01L A61B									
Documental	tion searched other than minimum documentation to the extent th	at such documents are included in the fields se	earched							
	ata base consulted during the international search (name of data	base and, where practical, search terms used	()							
EPO-In	ternal									
C. DOCUMENTS CONSIDERED TO BE RELEVANT										
Category*	Citation of document, with indication, where appropriate, of the	relevant passages	Relevant to claim No.							
		-								
X	WO 01/89381 A (OPTOVENT AB [SE] PETTERSSON HANS [SE])	!;	17-27, 33-36							
	29 November 2001 (2001-11-29)		33-30							
	the whole document									
,		N AC DUDI	17 27							
X	WO 99/03395 A (OPTOVENT AKTIEBO [SE]; PETTERSSON HANS [SE])	JLAG FUBL	17-27, 33-36							
	28 January 1999 (1999–01–28)									
	the whole document									
x	US 2004/254491 A1 (RICCIARDELL	ROBERT H	17-27,							
1	[US]) 16 December 2004 (2004-12		33-36							
	paragraphs [0022] - [0030]; fig									
		F. 7								
Furt	her documents are listed in the continuation of Box C.	X See patent family annex.								
* Special of	categories of cited documents:	"T" later document published after the inte	ernational filing date							
	ent defining the general state of the art which is not dered to be of particular relevance	or priority date and not in conflict with cited to understand the principle or th invention								
1	document but published on or after the international	"X" document of particular relevance; the	claimed invention							
"L" docume	ante of the control o	cannot be considered novel or canno involve an inventive step when the do	ocument is taken alone							
citatio	n or other special reason (as specified)	"Y" document of particular relevance; the cannot be considered to involve an in	ventive step when the							
other	ent referring to an oral disclosure, use, exhibition or means	document is combined with one or m ments, such combination being obvio in the art.								
"P" docume	ent published prior to the international filing date but han the priority date claimed	"&" document member of the same patent	family							
Date of the	actual completion of the international search	Date of mailing of the international sea	arch report							
	2 Navambara 2000	05 /00 /0000								
	2 November 2008	25/03/2009								
Name and	mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer								
	NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040,									
1	Fax: (+31-70) 340-3016	Borowski, Aleksan	der							

International application No. PCT/US2008/056320

INTERNATIONAL SEARCH REPORT

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. X Claims Nos.: 1-16 because they relate to subject matter not required to be searched by this Authority, namely:								
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy: method of monitoring treatment of a sleep disorder (of a patient), i.e. a method of treating a patient, wherein the method comprises a step of monitoring. 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:								
see additional sheet								
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 fees, this Authority did not invite payment of additional fees.								
3. As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:								
4. X 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.: 17–27, 33–36								
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.								

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 17-27, 33-36

Claims 17--27 and 33--36 essentially define a sensor adapter comprising a body frame and an attachment site;

2. claims: 28-32, 37-44

Claims 28-32 and 37-44 essentially define a passive-resistance nasal respiratory device.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2008/056320

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0189381	A	29-11-2001	AU CN EP JP TW US	5693301 A 1430485 A 1284648 A 2003533322 T 453865 B 2004015092 A	1	03-12-2001 16-07-2003 26-02-2003 11-11-2003 11-09-2001 22-01-2004
WO 9903395	A	28-01-1999	AU AU CA DE DE EP JP SE SE US	733009 B2 8371698 A 2296582 A3 69826667 D3 69826667 T2 0996359 A3 2001510062 T 513761 C2 9702756 A 6478747 B3	1 1 2 2 1	03-05-2001 10-02-1999 28-01-1999 04-11-2004 23-02-2006 03-05-2000 31-07-2001 30-10-2000 19-01-1999 12-11-2002
US 2004254491	A1	16-12-2004	NONE	~~~~~~~~~~ <u>~~~</u>		