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[Continued on next page]

(54) Title: CARBOND-DIOXIDE-SENSING AIRWAY PRODUCTS AND TECHNIQUE FOR USING THE SAME

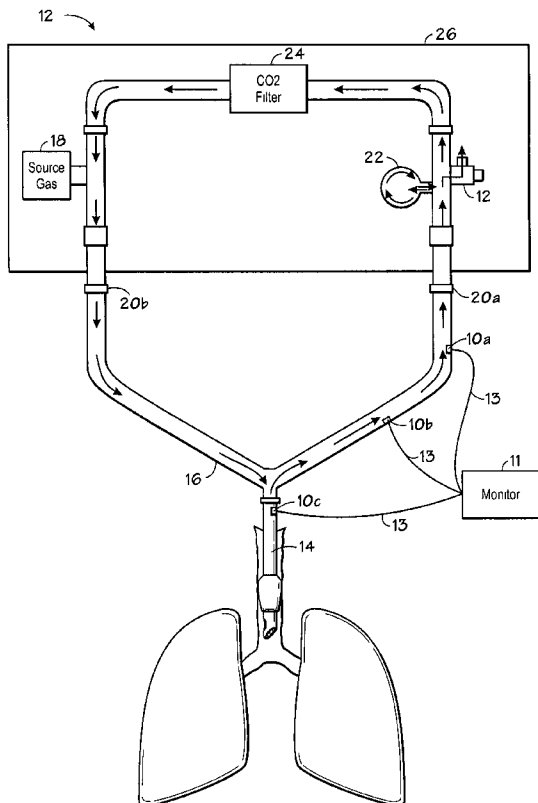


FIG. 1

(57) Abstract: An airway device is provided that may track the flow of respiratory gases through the device with sensing elements (100) at a plurality of locations along the gas flow path of the device. Such a device may be useful for assessing a variety of clinical states, for adjusting patient ventilator settings, or for determining whether or not an airway device has been properly inserted into a patient airway.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

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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)
A61M

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 102 22 176 A1 (DRAEGER MEDICAL AG [DE]) 27 November 2003 (2003-11-27) paragraph [0019]; claim 1; figure 1 -----	8-20
Y	WO 01/56454 A (HEALTHETECH INC [US]) 9 August 2001 (2001-08-09) page 4, line 25 - page 25, line 17; claims 1-11 -----	8-20
A	US 6 000 397 A (SKOG GOERAN [SE]) 14 December 1999 (1999-12-14) column 2, line 40 - column 4, line 55; figures 1-3 -----	8,14
A	US 6 397 846 B1 (SKOG GOERAN [SE] ET AL) 4 June 2002 (2002-06-04) column 3, line 10 - line 58; figures 1-3 -----	8,14
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Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

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"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

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INTERNATIONAL SEARCH REPORT

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PCT/US2007/020619

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 20,04/123867 A1 (EFRATI SHAI [IL]) 1 July 2004 (2004-07-01) paragraph [0032] - paragraph [0045]; figures -----	8,14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/020619

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.: 1-7
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
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 allsearchable 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 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

Information on patent family members

International application No PCT/US2007/020619
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Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
DE 10222176	A1	27-11-2003	NONE	
WO 0156454	A	09-08-2001	AU 3331101 A	14-08-2001
			CA 2398949 A1	09-08-2001
			EP 1251773 A2	30-10-2002
			JP 2004537328 T	16-12-2004
US 6000397	A	14-12-1999	EP 0833156 A1	01-04-1998
us 6397846	B1	04-06-2002	EP 0985422 A2	15-03-2000
			JP 2000084080 A	28-03-2000
US 2004123867	A1	01-07-2004	AU 2002241229 A2	08-10-2002
			CA 2441652 A1	03-10-2002
			CN 1535167 A	06-10-2004
			CZ 20032785 A3	14-04-2004
			EP 1418969 A2	19-05-2004
			HU 0400315 A2	30-05-2005
			WO 02076279 A2	03-10-2002
			JP 2004528887 T	24-09-2004
			MX PA03008240 A	12-11-2004