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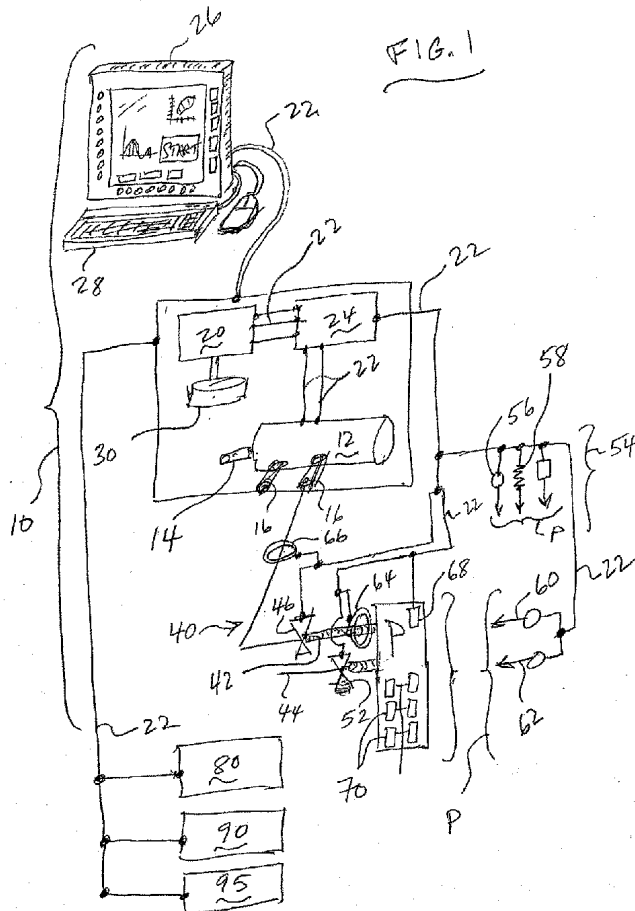
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[Continued on next page]

(54) Title: VENTILATOR APPARATUS AND SYSTEM FOR VENTILATION



(57) Abstract: A ventilator (10) for use by a clinician in supporting a patient presenting pulmonary distress. A controller module (20) with a touch-screen display (26) operates a positive or negative pressure gas source (40) that communicates with the intubated or negative pressure configured patient through valved (46) supply and exhaust ports (42, 44). A variety of peripheral, central, and or supply/exhaust port positioned sensors (54) may be included to measure pressure, volumetric flow rate, gas concentration, transducer, and chest wall breathing work. Innovative modules and routines (30) are incorporated into the controller module enabling hybrid, self-adjusting ventilation protocols and models that are compatible with nearly every conceivable known, contemplated, and prospective technique, and which establish rigorous controls configured to rapidly adapt to even small patient responses with great precision so as to maximize ventilation and recruitment while minimizing risks of injury, atelectasis, and prolonged ventilator days.

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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).

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- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
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A. CLASSIFICATION OF SUBJECT MATTER
INV. A61M16/00

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.
X	US 2005/115561 A1 (STAHMANN JEFFREY E [US] ET AL) 2 June 2005 (2005-06-02) abstract paragraph [0190] paragraph [0192] paragraph [0191] paragraph [0194] paragraph [0199] paragraph [1145] paragraph [0807] paragraph [1158] paragraph [0209] paragraph [0211] paragraph [0214] paragraph [0216] paragraph [0132] paragraph [0158] paragraph [1140] paragraph [1139]	1-23
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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 document 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 another 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

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28/01/2009

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	paragraph [1112] paragraph [1138] figure 2b table 1 figure 5b -----	
X	US 2003/111078 A1 (HABASHI NADER MAHER [US]) 19 June 2003 (2003-06-19) abstract the whole document -----	1-23
X	US 2002/110849 A1 (LEONHARDT STEFFEN [DE] ET AL) 15 August 2002 (2002-08-15) abstract paragraph [0004] paragraph [0007] paragraph [0011] paragraph [0015] paragraph [0024] paragraph [0025] paragraph [0027] paragraph [0030] paragraph [0031] paragraph [0034] paragraph [0046] paragraph [0048] paragraph [0049] paragraph [0056] paragraph [0073] paragraph [0087] paragraph [0088] paragraph [0102] paragraph [0103] figure 11 -----	1-23
X	US 2006/283450 A1 (SHISSLER ANDREW L [US] ET AL) 21 December 2006 (2006-12-21) abstract paragraph [0001] paragraph [0015] paragraph [0016] paragraph [0018] paragraph [0019] paragraph [0021] paragraph [0022] paragraph [0024] paragraph [0025] paragraph [0030] paragraph [0034] -----	1-23
X	US 5 320 093 A (RAEMER DAN [US]) 14 June 1994 (1994-06-14) the whole document -----	1-23

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2008/053094

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.: 24, 25
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.

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