

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 June 2008 (26.06.2008)

PCT

(10) International Publication Number
WO 2008/075158 A3

(51) International Patent Classification:

F04D 25/06 (2006.01) H02K9/00 (2006.01)
F04D 29/10 (2006.01) F04D 25/08 (2006.01)
F04D 29/58 (2006.01) A47L 5/22 (2006.01)

(21) International Application Number:

PCT/IB2007/003874

(22) International Filing Date:

13 December 2007 (13.12.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

06/10992 18 December 2006 (18.12.2006) FR
60/875,505 18 December 2006 (18.12.2006) US
60/899,997 7 February 2007 (07.02.2007) US
07/01001 13 February 2007 (13.02.2007) FR

(71) Applicant (for all designated States except US): AIRFAN
[FR/FR]; 3 avenue Leon Foucault, F-31770 Colomiers
(FR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): GRASMUCK,
Gilbert [FR/FR]; 2 Impasse des Genets, F-31880 La
Salvetat Saint Grilles (FR).

(74) Agent: Maitre Eric JUNCA; CABINET ERIC JUNCA,
46 rue Louis Plana, F-31500 Toulouse (FR).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
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),

[Continued on next page]

(54) Title: FAN FOR AN APPARATUS FOR THE REGULATED DELIVERY OF A GAS, IN PARTICULAR OXYGEN

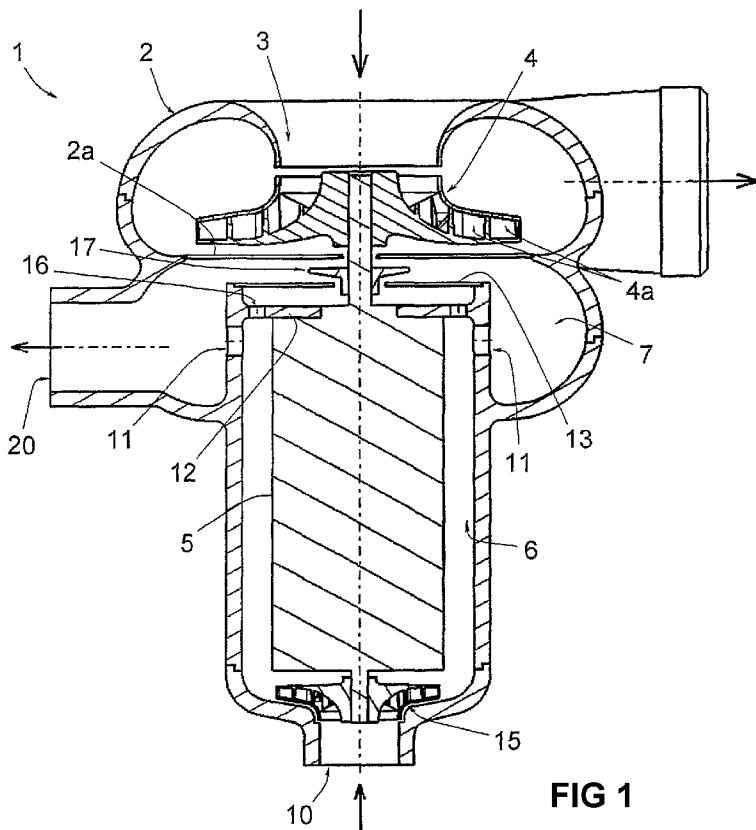


FIG 1

(57) Abstract: This fan (1) comprises a volute (2) whose inlet opening (3) is in communication with the oxygen feed line, an impeller (4) situated immediately downstream of the inlet opening (3) of the volute (2) and comprising an inlet opening connected to this inlet opening (3) and outlet orifices (4a) emerging into the volute (2), and an electric motor (5) for rotating the impeller (4). According to the invention: the fan (1) comprises: - a compartment (6) in which the motor (5) and, where appropriate, other electric elements or components belonging to the fan (1) are placed, this compartment (6) comprising an end wall (13) traversed by the shaft of the motor (5) and being supplied with pressurized air, and - a leak collection chamber (7) situated intermediately between the volute (2) and the said compartment (6), this chamber likewise being traversed by the shaft of the motor (5) and comprising a discharge orifice (20).

WO 2008/075158 A3



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, 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:

14 August 2008

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2007/003874

A CLASSIFICATION OF SUBJECT MATTER					
INV.	F04D25/06	F04D29/10	F04D29/58	H02K9/00	F04D25/08
	A47L5/22				
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) F04D H02K A47L

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 , PAJ
--

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document with indication where appropriate of the relevant passages	Relevant to claim No
X A	WO 2006/131470 A (BECKER GMBH GEB [DE]; RADERMACHER BERNHARD [DE]; DIEDRICHSEN FRANK [DE]) 14 December 2006 (2006-12-14) page 13, line 17 - page 14, line 11 page 18, line 13 - page 19, line 24; figures 6,8 -----	1, 3, 4 8, 9
X	US 4 527 960 A (DESISTO RICHARD E [US]) 9 July 1985 (1985-07-09) column 3, line 64 - column 4, line 27; figures 1,3 -----	1, 3, 4
A	FR 2 391 691 A1 (AMETEK INC [US]) 22 December 1978 (1978-12-22) page 3, line 35 - page 5, line 36; figure 1 -----	1, 3-5, 8

<input type="checkbox"/> Further documents are listed in the continuation of Box C	<input checked="" type="checkbox"/> See patent family annex
--	---

<p>* Special categories of cited documents</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L¹" 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)</p> <p>"O" document referring to an oral disclosure use exhibition or other means</p> <p>"P" document published prior to the International filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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</p> <p>"&" document member of the same patent family</p>
---	--

Date of the actual completion of the International search 27 May 2008	Date of mailing of the International search report 04/06/2008
---	--

Name and mailing address of the ISA/ European Patent Office P B 5818 Patentlaan 2 NL- 2280 HV Rijswijk Tel (+31-70) 340-2040 Tx 31 651 epo nl, Fax (+31-70) 340-3016	Authorised officer Giorgi ni , Gabriele
--	---

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2007/003874

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2006131470 A	14-12-2006	EP 1891335 A2	27-02-2008
US 4527960 A	09-07-1985	JP 60247096 A	06-12-1985
FR 2391691 A1	22-12-1978	CA 1070348 A1	22-01-1980
		CH 640126 A5	30-12-1983
		DE 2821269 A1	07-12-1978
		GB 1600463 A	14-10-1981
		IT 1095064 B	10-08-1985
		JP 1478560 C	27-01-1989
		JP 53148159 A	23-12-1978
		JP 63023772 B	18-05-1988
		SE 431156 B	23-01-1984
		SE 7805902 A	24-11-1978
		US 4088424 A	09-05-1978