



(11) **EP 1 909 043 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**18.03.2009 Bulletin 2009/12**

(51) Int Cl.:  
**F24F 1/02<sup>(2006.01)</sup> F24F 13/22<sup>(2006.01)</sup>**

(43) Date of publication A2:  
**09.04.2008 Bulletin 2008/15**

(21) Application number: **07113596.6**

(22) Date of filing: **01.08.2007**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR**  
Designated Extension States:  
**AL BA HR MK RS**

- **Zou, Xiaohui**  
The Dorimitory of Jiangsu YO-AU Electric Wujin District, Changzhou 213716, Jiangsu Province (CN)
- **Tian, Jianbin**  
The Dorimitory of Jiangsu YO-AU Electric Wujin District, Changzhou 213716, Jiangsu Province (CN)

(30) Priority: **29.09.2006 CN 200610096263**

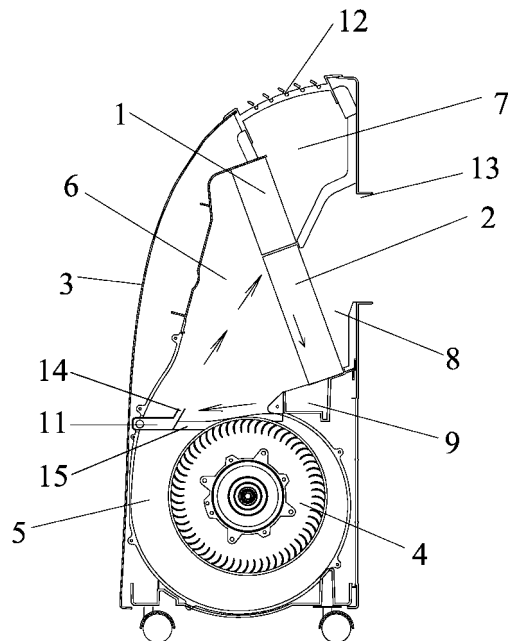
(71) Applicant: **Jiangsu YO-AU Electric Appliance Ltd. 213176 Jiangsu Province (CN)**

(74) Representative: **Hengelhaupt, Jürgen et al Gulde Hengelhaupt Ziebig & Schneider Patentanwälte - Rechtsanwälte Wallstrasse 58/59 10179 Berlin (DE)**

(72) Inventors:  
• **Chen, Yi**  
The Dorimitory of Jiangsu YO-AU Electric Wujin District, Changzhou 213716, Jiangsu Province (CN)

(54) **Mobile air conditioner**

(57) The present invention relates to a mobile air conditioner which comprises an insulated housing (3) having a cooled air outlet (12) and a heated air outlet (13), an evaporator (1) located in the said housing (3), a condenser (2), an electrical fan (4) having an air chamber (5), and a reservoir (9) for collecting condensed water formed on the evaporator (1). The evaporator (1) is located between the air chamber (5) and cooled air outlet (12); while the condenser (2) is located between the air chamber (5) and heated air outlet (13). The cavity of the said reservoir (9) is in fluid connection with a drain channel (10) which has a drain meatus located in the air-discharge passage (6) extended from the air outlet (15) of the air chamber (5) to the condenser (2). The condensed water from the reservoir (9) to the drain channel can be atomized into tiny drips by rapid air flow from the air chamber (5). The tiny drips are blown through the drain channel (10) onto the condenser (2) for being heated and onto the evaporator (1) for being cooled, then flowing into the reservoir at last. The above-described process can be repeated circularly during the air conditioner being in operation. It is much more convenient that this treatment of condensed water can keep the reservoir (9) from being filled without emptying it manually.



**Fig.1**

**EP 1 909 043 A3**



EUROPEAN SEARCH REPORT

Application Number  
EP 07 11 3596

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 4 534 179 A (STOCKING GEORGE E [US] ET AL) 13 August 1985 (1985-08-13) * column 1, line 52 - line 53 * * column 2, line 42 - column 4, line 11; figures 1,2 *	1-5	INV. F24F1/02 F24F13/22
Y	EP 0 979 977 A (BSH FABRICACION SA [ES] BSH BOSCH SIEMENS HAUSGERAETE [DE]) 16 February 2000 (2000-02-16) * figures 1,2 *	1-5	
A	US 4 375 752 A (STOCKING GEORGE E ET AL) 8 March 1983 (1983-03-08) * the whole document *	1-5	
A	US 2003/029184 A1 (OHAMA YASUNORI [JP] ET AL) 13 February 2003 (2003-02-13) * the whole document *	1-5	
			TECHNICAL FIELDS SEARCHED (IPC)
			F24F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 28 January 2009	Examiner Vuc, Arianda
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	

4  
EPO FORM 1503 03.82 (P04C01)

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

EP 07 11 3596

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.

28-01-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4534179	A	13-08-1985	NONE
-----	-----	-----	-----
EP 0979977	A	16-02-2000	AT 298411 T 15-07-2005
			DE 59912194 D1 28-07-2005
			ES 2160014 A1 16-10-2001
			ES 2244126 T3 01-12-2005
-----	-----	-----	-----
US 4375752	A	08-03-1983	NONE
-----	-----	-----	-----
US 2003029184	A1	13-02-2003	NONE
-----	-----	-----	-----

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82