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(54) **Power saving and energy storage device for electric fan**

(57) A power saving and energy storage device for an electric fan comprises an electric fan having a DC motor; at least one power generator module; and at least one electric storage unit. A shaft penetrates the DC motor, is connected with blades at one end and has an installation member at another end. The DC motor drives the shaft to rotate the blades. The power generator module is arranged in the installation member and includes a three-phase electric generation coil penetrated by the installation member and attached to the sidewall of the DC motor and a magnet ring arranged in the shaft and surrounds the three-phase electric generation coil. The rotating shaft drives the magnet ring to induce an alternating electromotive force in the three-phase electric generation coil. The electric storage unit receives and stores the alternating electromotive force. Thereby is recycled mechanical energy of the electric fan.

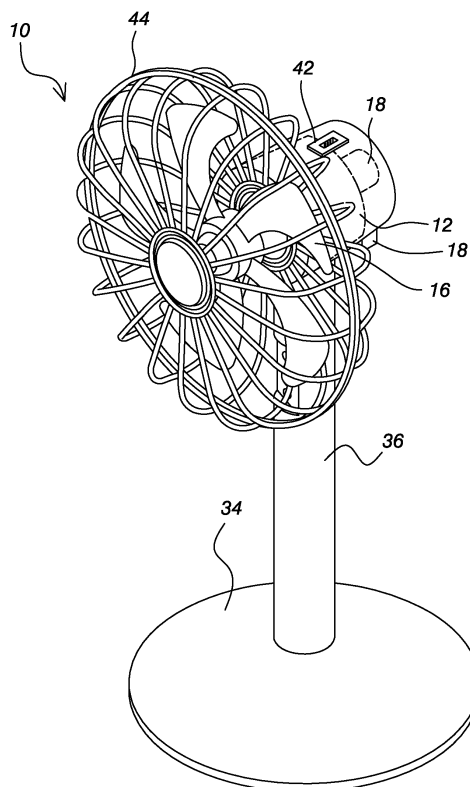


Fig. 1



EUROPEAN SEARCH REPORT

Application Number
EP 14 17 5291

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 2013/093379 A1 (LIN YU-SHENG [TW]) 18 April 2013 (2013-04-18) * the whole document * * paragraph [0014] * -----	1-10	INV. F04D19/00 F03D1/00 F04D25/06
A	US 2007/109787 A1 (WU CHIN-PING [CN]) 17 May 2007 (2007-05-17) * the whole document * * paragraphs [0012], [0014] * -----	1	
A	WO 00/35701 A1 (BITRON SPA [IT]; DEL FAVERO ANGELO [IT]; FILIPPIS PIETRO DE [IT]) 22 June 2000 (2000-06-22) * the whole document * * claim 1 * -----	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			F04D F03D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 April 2015	Examiner Ingelbrecht, Peter
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			

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

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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
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28-04-2015

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2013093379 A1	18-04-2013	TW M431496 U US 2013093379 A1	11-06-2012 18-04-2013
US 2007109787 A1	17-05-2007	NONE	
WO 0035701 A1	22-06-2000	BR 9908029 A CA 2318149 A1 EP 1056613 A1 IT 1303604 B1 JP 2002533046 A WO 0035701 A1	31-10-2000 22-06-2000 06-12-2000 14-11-2000 02-10-2002 22-06-2000

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