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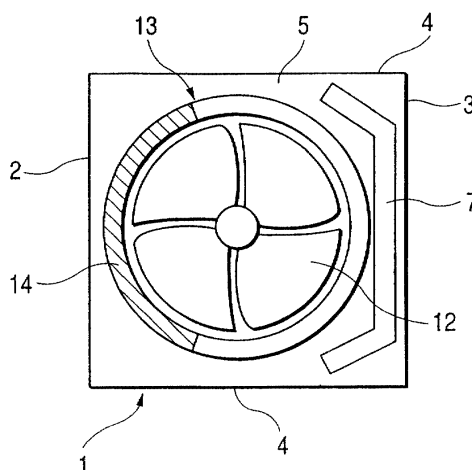
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(54) **An outdoor unit of an air-conditioning system**

(57) To provide an outdoor unit of an air-conditioning system characterized in that the outdoor unit has a reduced bodily size. The outdoor unit is characterized in that said bell mouth 13 is provided with a damping por-

tion 14 which extends in an upstream direction from part of the circumference of said bell mouth 13, said part 4 of the circumference located on a side opposite to said heat exchanger 7 where said propeller fan 12 and a side panel 4 are positioned close to each other.

**FIG. 2**





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## EUROPEAN SEARCH REPORT

Application Number  
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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 (Int.Cl.6)
X	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 10, 30 November 1995 (1995-11-30) -& JP 07 174363 A (MATSUSHITA REFRIG CO LTD), 14 July 1995 (1995-07-14)	1-4	F24F1/00 F24F13/24
A	* abstract * * figures 1,2 *	5,6	
A,D	--- PATENT ABSTRACTS OF JAPAN vol. 016, no. 057 (M-1210), 13 February 1992 (1992-02-13) -& JP 03 255829 A (HITACHI LTD), 14 November 1991 (1991-11-14) * abstract *		
A	--- PATENT ABSTRACTS OF JAPAN vol. 1997, no. 09, 30 September 1997 (1997-09-30) -& JP 09 137970 A (MATSUSHITA REFRIG CO LTD), 27 May 1997 (1997-05-27) * abstract *		
A	--- GB 2 240 588 A (TOKYO SHIBAURA ELECTRIC CO) 7 August 1991 (1991-08-07) -----		
The present search report has been drawn up for all claims			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>27 April 2001</b>	Examiner <b>De Graaf, J.D.</b>
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.**

EP 98 12 2718

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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27-04-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 07174363 A	14-07-1995	NONE	
JP 03255829 A	14-11-1991	JP 2810196 B	15-10-1998
JP 09137970 A	27-05-1997	NONE	
GB 2240588 A	07-08-1991	NONE	

EPC FORM P0459

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