



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11)

**EP 1 312 872 A3**

(12)

**EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**22.11.2006 Bulletin 2006/47**

(51) Int Cl.:  
**F24F 13/06<sup>(2006.01)</sup>**

(43) Date of publication A2:  
**21.05.2003 Bulletin 2003/21**

(21) Application number: **02079416.0**

(22) Date of filing: **23.10.2002**

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

(72) Inventor: **Virtanen, Seppo**  
**37800 Toijala (FI)**

(74) Representative: **Heinänen, Pekka Antero et al**  
**Heinänen Oy,**  
**Patenttitoimisto/Patent Agency,**  
**Annankatu 31-33 C**  
**00100 Helsinki (FI)**

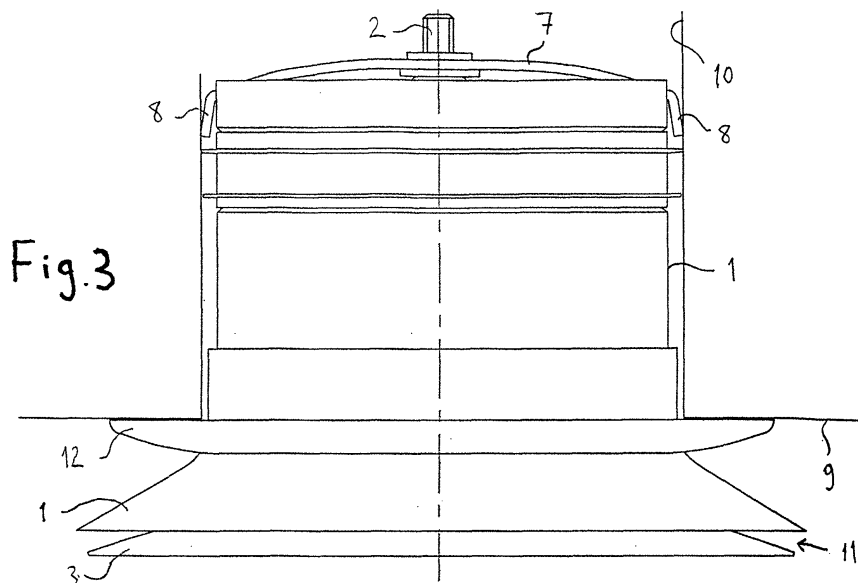
(30) Priority: **14.11.2001 FI 20012211**

(71) Applicant: **Fläkt Woods AB**  
**55184 Jönköping (SE)**

**(54) Mechanism for detachably mounting an air diffuser to an air duct**

(57) A mechanism is provided for mounting an air diffuser to the interior wall of an air duct (10), the diffuser comprising a body part (1) with a shaft (2) adjustable relative to the body part in the air flow direction and having a control disc (3) affixed to the distal end of the shaft, whereby the spacing (11) between the diffuser body part and the control disc forms an adjustable air flow gap. The invention is implemented so that the shaft (2) of the control disc (3) at the end portion of the diffuser inserted in the air duct (10) is connected to the diffuser body part (1) by means of a springed element (7) having a shape flex-

ibly yielding in the direction of the control disc shaft (7) such that the springed element (7) extends partially outside said diffuser body part in at least two substantially opposite points relative to the shaft (2), whereby an imaginary circle drawn about the distal ends (8) of the springed element (7) has a larger diameter than the outer diameter of the diffuser body part (1) at the perimeter of the diffuser portion to be inserted in the air duct (10) and that the diameter of said imaginary circle can be reduced by pressing the diffuser control disc (3) in the direction of the shaft (2) inward relative to the diffuser body part (1) toward the interior of the air duct (10).



**Fig.3**

**EP 1 312 872 A3**



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 02 07 9416

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
D,A	WO 00/77455 A (ABB FLAECT OY; HAENNINEN, HEIKKI) 21 December 2000 (2000-12-21) * abstract *	1	INV. F24F13/06
D,A	FI 59 299 B (OSTON LTD) 31 March 1981 (1981-03-31) * abstract *	1	
A	WO 00/55547 A (EUROPLAST S.P.A) 21 September 2000 (2000-09-21) * abstract *	1	
A	PATENT ABSTRACTS OF JAPAN vol. 007, no. 095 (M-209), 21 April 1983 (1983-04-21) & JP 58 018050 A (HITACHI SEISAKUSHO KK), 2 February 1983 (1983-02-02) * abstract *	1	
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 22, 9 March 2001 (2001-03-09) & JP 2001 124398 A (MATSUSHITA SEIKO CO LTD), 11 May 2001 (2001-05-11) * abstract *	1	TECHNICAL FIELDS SEARCHED (IPC)
			F24F F16B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 25 September 2006	Examiner Valenza, Davide
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p> <p>&amp; : member of the same patent family, corresponding document</p>			

3

EPO FORM 1503 03.82 (P04C01)

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

EP 02 07 9416

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.

25-09-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0077455	A	21-12-2000	AU 5081100 A	02-01-2001
			EP 1185828 A1	13-03-2002
			FI 104582 B1	29-02-2000
			NO 20015577 A	23-01-2002
-----				
FI 59299	B	31-03-1981	FI 780988 A	01-10-1979
-----				
WO 0055547	A	21-09-2000	IT B0990124 A1	18-09-2000
-----				
JP 58018050	A	02-02-1983	NONE	
-----				
JP 2001124398	A	11-05-2001	JP 3734991 B2	11-01-2006
-----				