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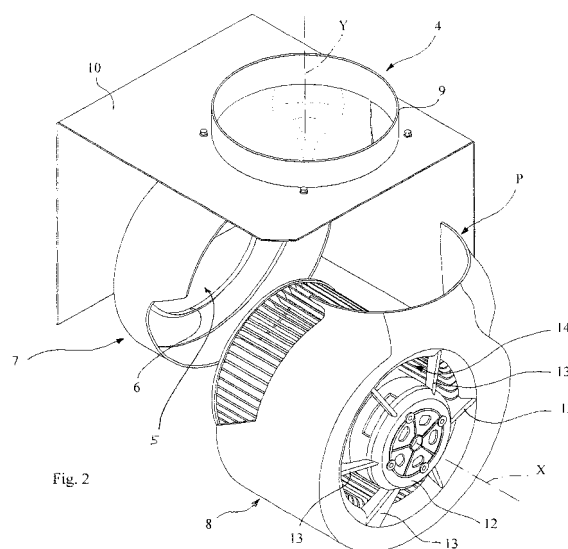
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(54) **Scroll type manifold, particularly for fans for use in extractor hoods**

(57) There is described a manifold, in particular a scroll type manifold, which is intended to constitute the housing of a radial impeller (2) of a fan, comprising a delivery cross-section (4) with a delivery flow direction (Y) which is substantially perpendicular to the axis (X) of rotation of the impeller (2) and at least an intake cross-section (5) which extends coaxially relative to the axis of rotation (X), the manifold comprising a first and a second manifold portion (7, 8) which can be connected to each other at a coupling profile (P), the delivery cross-section (4) being defined in the first manifold portion (7), the impeller being rotatably supported on the second manifold portion (8). The delivery cross-section (4) is integrally formed in the first manifold portion (7) and is developed axially over at least a portion in the delivery flow direction (Y), and the projection of the coupling profile (P) defines, in a plane (Q) which is parallel with the direction of flow and which extends through the axis of rotation (X) of the impeller, a discontinuous line (L) including, starting from the delivery cross-section (4), at least a first portion (16) which extends transversely relative to the axis (X) of the impeller as far as a location adjacent to the axis itself, and at least a second portion (18) which extends away from the axis of the impeller and transversely relative thereto, the second portion (18) being spaced apart from the first portion (16) in a direction towards the intake cross-section (4), in such a manner that the first and the second manifold portions (7, 8) are able to be mutually coupled/uncoupled, along the profile (P), with a main relative movement being brought about substantially in the axial direction of the delivery flow, even with the impeller

being held so as to be supported on the second manifold portion (8).





## EUROPEAN SEARCH REPORT

Application Number  
EP 07 12 0330

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 881 035 B1 (PAULSEN FREDERICK D [US]) 19 April 2005 (2005-04-19) * column 5, lines 23-25 * * figure 1 * * figure 2 * * figure 5 *	1-8	INV. F04D29/42 F04D29/62
A	----- EP 1 106 834 A1 (VALEO CLIMATISATION [FR] VALEO SYSTEMES THERMIQUES [FR]) 13 June 2001 (2001-06-13) * figure 3a *	1-8	
A	----- US 3 182 899 A (HAMES JR WILLIAM A ET AL) 11 May 1965 (1965-05-11) * column 5, lines 59-65 * * figure 1 * * figure 2 * * figure 5 *	1-8	
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			TECHNICAL FIELDS SEARCHED (IPC)
			F04D F25C B08B F01D F24C F24F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 March 2012	Examiner de Verbigier, L
<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>			

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

EP 07 12 0330

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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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6881035	B1	19-04-2005	NONE
-----			
EP 1106834	A1	13-06-2001	BR 0005734 A 17-07-2001
		DE 60024957 T2	17-08-2006
		EP 1106834 A1	13-06-2001
		ES 2254103 T3	16-06-2006
		FR 2801940 A1	08-06-2001
		JP 4790114 B2	12-10-2011
		JP 2001211597 A	03-08-2001
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US 3182899	A	11-05-1965	NONE
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