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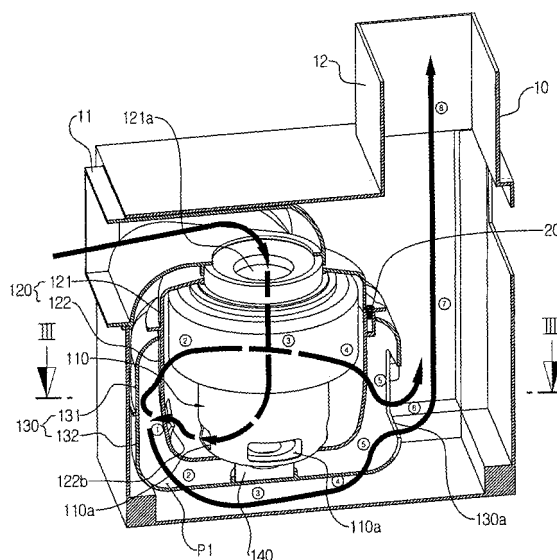
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(54) **Motor assembly and vacuum cleaner having the same**

(57) A motor assembly (100) includes: a suction motor (110); at least one inner casing (120) adapted to enclose at least a part of the suction motor (110); and at least one outer casing (130) configured to enclose at least

a part of the at least one inner casing (120), wherein a diffusion passage (P1) is formed between the at least one inner casing (120) and the at least one outer casing (130) and has an average cross-section that gradually increases to allow air to diffuse therein.

FIG. 2





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	GB 2 074 648 A (SHOP VAC CORP) 4 November 1981 (1981-11-04) * page 1, lines 45-50,106-128; figures 1-4 * * page 4, lines 51-80 * -----	1-16	INV. A47L9/00 A47L9/22
X	DE 34 02 603 A1 (SCHOETTLE KG ELECTROSTAR [DE]) 1 August 1985 (1985-08-01) * page 7, last line - page 8, paragraph 1 * * pages 12-13; figures * -----	1-16	
X	EP 0 453 163 A1 (HITACHI LTD [JP]) 23 October 1991 (1991-10-23) * column 5, last paragraph - column 6, paragraph 1; figures * -----	1-16	
X	EP 1 344 482 A (MATSUSHITA ELECTRIC IND CO LTD [JP]) 17 September 2003 (2003-09-17) * paragraphs [0022], [0066] - [0072]; figures 22,23 * -----	10-16	
X	EP 0 636 336 A1 (SAMSUNG ELECTRONICS CO LTD [KR]) 1 February 1995 (1995-02-01) * claims; figure 6 * -----	10-16	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) A47L
Place of search Munich		Date of completion of the search 17 September 2007	Examiner Lopez Vega, Javier
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 06 29 0763

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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17-09-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2074648	A	04-11-1981	AT 383486 B	10-07-1987
			AT 173281 A	15-12-1986
			CA 1175613 A1	09-10-1984
			CH 653234 A5	31-12-1985
			DE 3023630 A1	22-10-1981
			FR 2480589 A1	23-10-1981
			IT 1174687 B	01-07-1987
			JP 57020236 A	02-02-1982
			NL 8101846 A	16-11-1981
			NO 811251 A	19-10-1981
			SE 449557 B	11-05-1987
			SE 8004303 A	19-10-1981
			US 4330899 A	25-05-1982

DE 3402603	A1	01-08-1985	NONE	

EP 0453163	A1	23-10-1991	CN 1055869 A	06-11-1991
			DE 69102675 D1	04-08-1994
			DE 69102675 T2	15-12-1994
			JP 3047984 B2	05-06-2000
			JP 3297431 A	27-12-1991
			US 5365633 A	22-11-1994

EP 1344482	A	17-09-2003	CN 1443508 A	24-09-2003
			JP 2003260012 A	16-09-2003
			US 2003172490 A1	18-09-2003

EP 0636336	A1	01-02-1995	CA 2128176 A1	20-01-1995
			DE 69409172 D1	30-04-1998
			DE 69409172 T2	20-08-1998
			JP 2971741 B2	08-11-1999
			JP 7067813 A	14-03-1995
			JP 10117974 A	12-05-1998
			US 5513417 A	07-05-1996
