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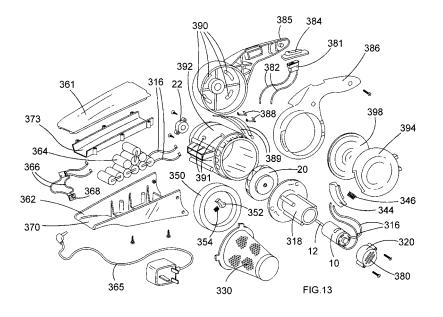
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(54) Motor, fan and filter arrangement for a vacuum cleaner

(57) The present invention provides a vacuum cleaner (200,300) comprising a motor, fan and filter arrangement, wherein said arrangement comprises: a motor (10); a fan (20) connected to an output shaft (12) of said motor (10) and having an axial intake (24); and a filter (30,230,330); wherein the fan (20) is arranged with its

axial intake (24) facing said motor (10); and the motor (10) is housed within said filter (30,230,330); characterised in that: the vacuum cleaner (200,300) is a handholdable vacuum cleaner comprising a main body portion (260,360), a handle (280,380) and a dust collection chamber (292,392) oriented orthogonally to the longitudinal axis of said main body portion.





EUROPEAN SEARCH REPORT

Application Number EP 10 16 3809

Category		ndication, where appropriate,	Relevant	CLASSIFICATION OF THE	
	of relevant passa	ages	to claim	APPLICATION (IPC)	
Υ	DE 26 27 560 A1 (LI		1-10,15	INV.	
	29 December 1977 (1	.977-12-29)		A47L5/24	
	* page 4, line 1 -	page 8, line 23 *		A47L5/26 A47L7/00	
γ	US 2002/189048 A1 (MARUYAMA KANAME [JP] ET	1-10.15	A47L9/00	
	AL) 19 December 200	2 (2002-12-19)		A47L9/20	
	* paragraphs [0006]	- [0014] *		A47L9/22	
Α	ED 1 522 016 A2 (DI	.ACK & DECKER INC [US])	1-15	A47L9/32 A47L9/12	
Α	20 April 2005 (2005		1-13	A47L9/12	
	* paragraphs [0065]				
	29,30 *				
,	ED 705 /66 A /CICME		1 15		
A	FR 705 466 A (SIEME 8 June 1931 (1931-0	1NS AU) 16-08)	1-15		
	* the whole documen	it *			
Λ.	CA 0 FE0 410 A1 /5:		1 15		
A	11 February 2007 (2	ACK & DECKER INC [US])	1-15		
	* page 2, line 25 -	page 9, line 3 *			
				TECHNICAL FIELDS SEARCHED (IPC)	
Α	DE 200 03 759 U1 (H		1-15	, ,	
	4 May 2000 (2000-05 * page 1, line 1 -			A47L	
	page 1, Tille 1				
	The present search report has I	oeen drawn up for all claims			
	Place of search	Date of completion of the search		Examiner	
	Munich	6 February 2013	Martin Gonzalez, G		
C	ATEGORY OF CITED DOCUMENTS	T : theory or principle E : earlier patent doc			
	icularly relevant if taken alone icularly relevant if combined with anotl	after the filing date	• · ·	on, or	
docu	ment of the same category	L : document cited fo	r other reasons		
A : tech	nological background -written disclosure	& : member of the sa			

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

EP 10 16 3809

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.

06-02-2013

cite	Patent document cited in search report		Publication date	Patent family member(s)		Publicatio date
DE	2627560	A1	29-12-1977	NONE	Ξ	
US	2002189048	A1	19-12-2002	JP JP US	3674031 B2 2003000497 A 2002189048 A1	20-07-2 07-01-2 19-12-2
EP	1523916	A2	20-04-2005	AT AU CA CN CN EP NZ US US	437599 T 2004220716 A1 2011201938 A1 2484587 A1 1626025 A 101822506 A 1523916 A2 1958560 A1 535942 A 2005081321 A1 2009144931 A1 2011030164 A1	15-08-2 05-05-2 19-05-2 15-04-2 15-06-2 08-09-2 20-04-2 20-08-2 30-11-2 21-04-2 11-06-2
FR	705466	Α	08-06-1931	FR NL NL NL	705466 A 33036 C 33856 C 38019 C	08-06-1 06-02-2 06-02-2 06-02-2
CA	2553412	A1	11-02-2007	AT AU CA CN EP NZ US US	446040 T 2006203113 A1 2553412 A1 1911151 A 1752076 A1 549034 A RE42873 E1 RE43804 E1 2007033765 A1	15-11-2 01-03-2 11-02-2 14-02-2 14-02-2 30-03-2 01-11-2 20-11-2 15-02-2
DE	20003759	U1	04-05-2000	NONE		