



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**28.11.2007 Bulletin 2007/48**

(51) Int Cl.:  
**A47L 9/02 (2006.01)** **A47L 9/00 (2006.01)**  
**A47L 9/04 (2006.01)**

(43) Date of publication A2:  
**03.10.2007 Bulletin 2007/40**

(21) Application number: **07006705.3**

(22) Date of filing: **30.03.2007**

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

(72) Inventor: **Tsuchiya, Norihiro**  
**c/o Matsushita Electric Industrial Co., Ltd.**  
**Shiromi 1-chome**  
**Chuo-ku**  
**Osaka-shi**  
**Osaka 540-6319 (JP)**

(30) Priority: **31.03.2006 JP 2006098840**

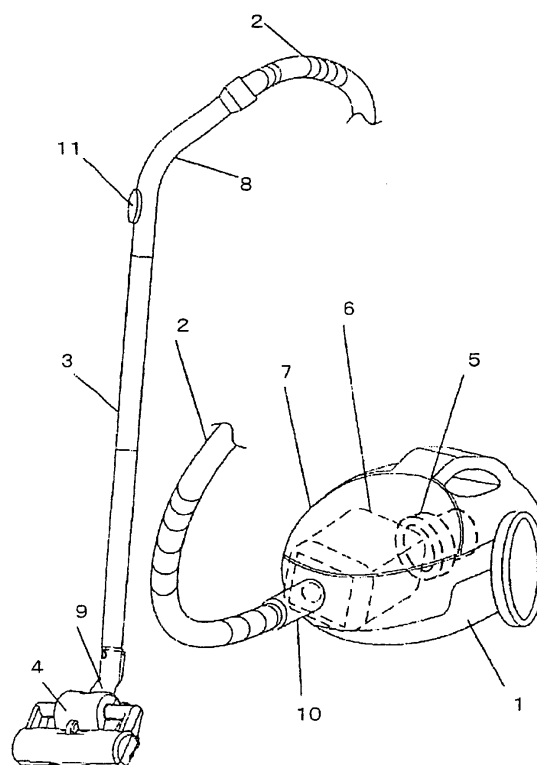
(74) Representative: **Samson & Partner**  
**Widenmayerstrasse 5**  
**80538 München (DE)**

(71) Applicant: **MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.**  
**Osaka 571-8501 (JP)**

(54) **Vacuum cleaner suction unit and electric vacuum cleaner equipped with same**

(57) A vacuum cleaner suction unit (14) includes an outer case (12-13); and an opening portion (14a,14b) passed through in a vertical direction, the opening portion formed by the outer case. Further, a direction of a longer side in the opening portions corresponds to a direction of a width of the suction unit. The vacuum cleaner suction unit further includes a guard member (91) made of a flexible material provided at an inner periphery of the opening portion. In addition, a vacuum cleaner suction unit includes an outer case; an opening portion formed by the outer case; and a recess portion provided at the opening portion by forming a closed surface (91) at the opening portion.

**FIG. 1**





European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number  
EP 07 00 6705

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	DE 16 28 562 A1 (DETERMANN HERMANN DR ING) 18 February 1971 (1971-02-18) * page 1, lines 13-16 * * figure 1 *	1,10	INV. A47L9/02 A47L9/00 A47L9/04
X	US 5 765 259 A (CIKA CHRISTINA L [US]) 16 June 1998 (1998-06-16) * column 5, lines 46-54 * * figures 1,2,7 *	1-3,10	
Y		9	
Y,D	JP 07 116095 A (HITACHI LTD) 9 May 1995 (1995-05-09) * abstract * * figures 1,2 *	9	
X	WO 84/03429 A (TJULANDER JAN HARRY RUDOLF [SE]) 13 September 1984 (1984-09-13) * figures 1,2 * * page 1, line 30 - page 2, line 20 *	1,10	
X	DE 93 10 120 U1 (BAEHR MANFRED [DE]) 23 September 1993 (1993-09-23) * page 4, lines 11-21 * * figures 3,4 *	1,10	TECHNICAL FIELDS SEARCHED (IPC) A47L
X	US 2004/034963 A1 (ROGERS WILLIE E [US] ET AL) 26 February 2004 (2004-02-26) * figures 1,4 *	1,10	
X	FR 1 434 272 A (PARIS & DU RHONE) 8 April 1966 (1966-04-08) * page 1, left-hand column, lines 14-25 * * figures 1,2 *	1,10	
		-/--	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 October 2007	Examiner Özsoy, Sevda
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			

13

EPO FORM 1503 03.82 (P04C01)



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 07 00 6705

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	DE 89 02 313 U1 (SIEMENS AG, 1000 BERLIN UND 8000 MUENCHEN, DE) 28 June 1990 (1990-06-28) * page 2, lines 21-30 * * page 3, lines 6-12 * * figures 1,2 *	1,4,5,10	
Y	-----	6-8	
Y	GB 2 415 610 A (SAMSUNG KWANGJU ELECTRONICS CO [KR]) 4 January 2006 (2006-01-04) * page 6, line 21 - page 7, line 7 * * figures 2,3 *	6-8	
X	GB 2 320 179 A (DAE WOO ELECTRONICS CO LTD [KR]) 17 June 1998 (1998-06-17) * page 4, line 21 - page 5, line 2 * * figure 1 *	4,10	
X	WO 02/26097 A (DYSON LTD [GB]; BAGWELL MARTIN PAUL [GB]) 4 April 2002 (2002-04-04) * figures 1,5 *	4,10	
X	WO 91/11954 A (NUMATIC INT LTD [GB]) 22 August 1991 (1991-08-22) * figures 1,2,4 *	4,10	TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 October 2007	Examiner Özsoy, Sevda
<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 &amp; : member of the same patent family, corresponding document</p>			

13

EPO FORM 1503 03.82 (P04C01)

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing more than ten claims.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-3, 9,10

A vacuum cleaner suction unit having a through-opening and a vacuum cleaner employing the same.

---

2. claims: 4-8

A vacuum cleaner suction unit having a recess portion which is in communication with the suction port.

---

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

EP 07 00 6705

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.

18-10-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 1628562	A1	18-02-1971	NONE
US 5765259	A	16-06-1998	NONE
JP 7116095	A	09-05-1995	NONE
WO 8403429	A	13-09-1984	SE 442814 B 03-02-1986 SE 8105443 A 18-04-1983
DE 9310120	U1	23-09-1993	NONE
US 2004034963	A1	26-02-2004	NONE
FR 1434272	A	08-04-1966	NONE
DE 8902313	U1	28-06-1990	NONE
GB 2415610	A	04-01-2006	CN 1714731 A 04-01-2006 DE 102005001136 A1 02-02-2006 FR 2872402 A1 06-01-2006 JP 2006015113 A 19-01-2006 US 2006000054 A1 05-01-2006
GB 2320179	A	17-06-1998	US 5826299 A 27-10-1998
WO 0226097	A	04-04-2002	AT 355006 T 15-03-2006 AU 8787201 A 08-04-2002 CN 1466432 A 07-01-2004 EP 1320317 A1 25-06-2003 ES 2281442 T3 01-10-2007 JP 2004509684 T 02-04-2004 US 2003163889 A1 04-09-2003
WO 9111954	A	22-08-1991	AU 7229691 A 03-09-1991 IE 910391 A1 14-08-1991 PT 96680 A 31-12-1992

EPO FORM P0459

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