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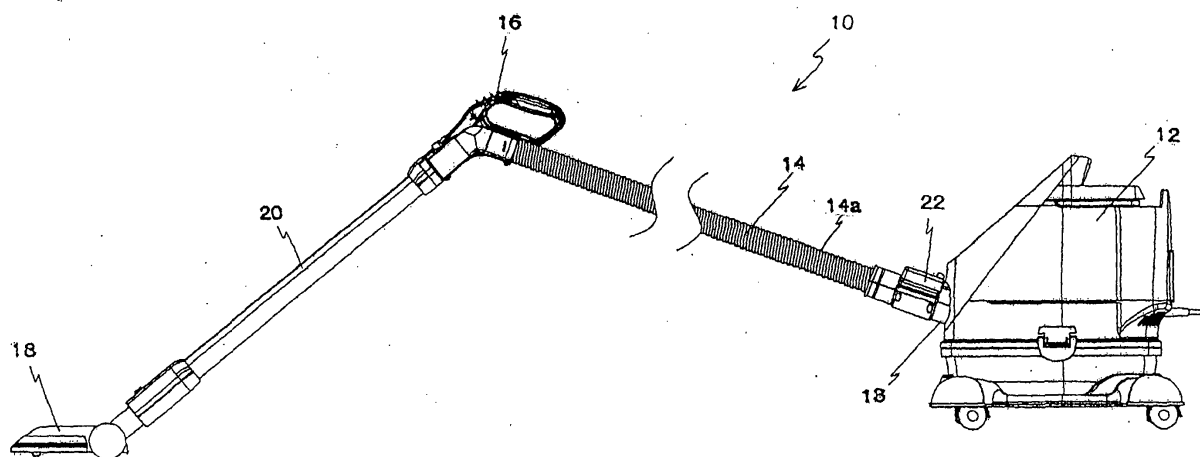
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(54) **Electric vacuum cleaner**

(57) An electric vacuum cleaner including a cleaner main body having a suction mechanism, a guide hose connected to the suction port of the cleaner main body and has a conductive wire disposed from one end to another end thereof, and a suction pipe which is connected to the guide hose and has an operating switch and suction head; and the guide hose is connected to the clean-

er main body in a rotatable manner via a connecting assembly that is formed of an inner tube and an outer tube which is fitted over the inner tube, the inner tube has metal rings on its outer circumferential portion, the outer tube has, on its inner circumferential portion, contacts which are in contact with the metal rings, and the operating switch and the suction mechanism are electrically connected constantly via the connecting assembly.



**FIG. 1**

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# EUROPEAN SEARCH REPORT

Application Number  
EP 03 25 7086

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	DE 86 25 098 U1 (PLASTIFLEX EUROPE N.V., HERENTALS, BE) 30 October 1986 (1986-10-30) * page 6, paragraph 4 - page 12, paragraph 2; figures *	1-5	A47L9/24
X	WO 96/25083 A (PHILIPS ELECTRONICS N.V.; PHILIPS NORDEN AB) 22 August 1996 (1996-08-22) * page 4, line 31 - page 9, line 4; figures 1-3 *	1-5	
X	EP 0 288 742 A (LICENTIA PATENT-VERWALTUNGS-GMBH) 2 November 1988 (1988-11-02) * column 2, line 40 - column 4, line 3; claim 1; figures *	1	
X	WO 99/13761 A (NUMATIC INTERNATIONAL LIMITED; DUNCAN, CHRISTOPHER, ROBERT; GAILES, MI) 25 March 1999 (1999-03-25) * claims 6,7,9; figures 1,5 *	3	
Y,D	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 06, 31 July 1995 (1995-07-31) & JP 07 067817 A (TEC CORP), 14 March 1995 (1995-03-14) * abstract; figures *	1-5	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Y	US 4 557 535 A (KEANE ET AL) 10 December 1985 (1985-12-10) * column 3, line 47 - column 4, line 47; figures 2,4 *	1-5	A47L
A	US 4 550 958 A (SMITH ET AL) 5 November 1985 (1985-11-05) * the whole document *	1-5	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 5 July 2005	Examiner Lodato, A
<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>			

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

EP 03 25 7086

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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05-07-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 8625098	U1	30-10-1986	NONE	
WO 9625083	A	22-08-1996	EP 0756469 A1	05-02-1997
			WO 9625083 A1	22-08-1996
			JP 9512197 T	09-12-1997
EP 0288742	A	02-11-1988	DE 3713885 A1	17-11-1988
			EP 0288742 A2	02-11-1988
WO 9913761	A	25-03-1999	AU 9085598 A	05-04-1999
			WO 9913761 A1	25-03-1999
JP 07067817	A	14-03-1995	JP 2942110 B2	30-08-1999
US 4557535	A	10-12-1985	CA 1244501 A1	08-11-1988
US 4550958	A	05-11-1985	CA 1248714 A1	17-01-1989