

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
 24.09.2003 Bulletin 2003/39

(51) Int Cl.7: A46B 13/00, A46B 13/02,  
 B24B 45/00, B08B 1/04

(43) Date of publication A2:  
 05.04.2000 Bulletin 2000/14

(21) Application number: 99116126.6

(22) Date of filing: 18.08.1999

<div> <div>(84) Designated Contracting States:</div> <div>AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE</div> <div>Designated Extension States:</div> <div>AL LT LV MK RO SI</div> </div> <div> <div>(30) Priority: 30.09.1998 US 163324</div> </div> <div> <div>(71) Applicant: TEK MAKER CORPORATION</div> <div>Taipei City (TW)</div> </div>	<div> <div>(72) Inventor: Lo, Teh-Liang</div> <div>Hsien-Tien City, Taipei Hsein (TW)</div> </div> <div> <div>(74) Representative: Lieck, Hans-Peter, Dipl.-Ing. et al</div> <div>Lieck &amp; Partner</div> <div>Widenmayerstrasse 36</div> <div>80538 München (DE)</div> </div>
--	--

(54)

Portable electric cleaning device

(57)

The present invention relates to a portable electric cleaning device (10, 100, 200) for cleaning various household items. The cleaning device (10, 100, 200) comprises a housing (20), a motor (30), a cleaning module (50, 120), and a battery set (60). The housing (20) has a handle (22, 130, 230) and a chassis (24, 110, 210). The motor (30) is installed in the chassis (24, 110, 210) of the housing (20) and comprises a rotating axle (32, 38). The cleaning module (50, 120) has a cleaning head (54, 300, 400, 500, 600, 700, 800, 900, 1000) for cleaning various home appliances and home environments, and a connecting end (52) installed on the rotating axle (32, 38). The battery set (60) is installed in the housing (20) for driving the motor (30) so as to rotate the cleaning module (50, 120).

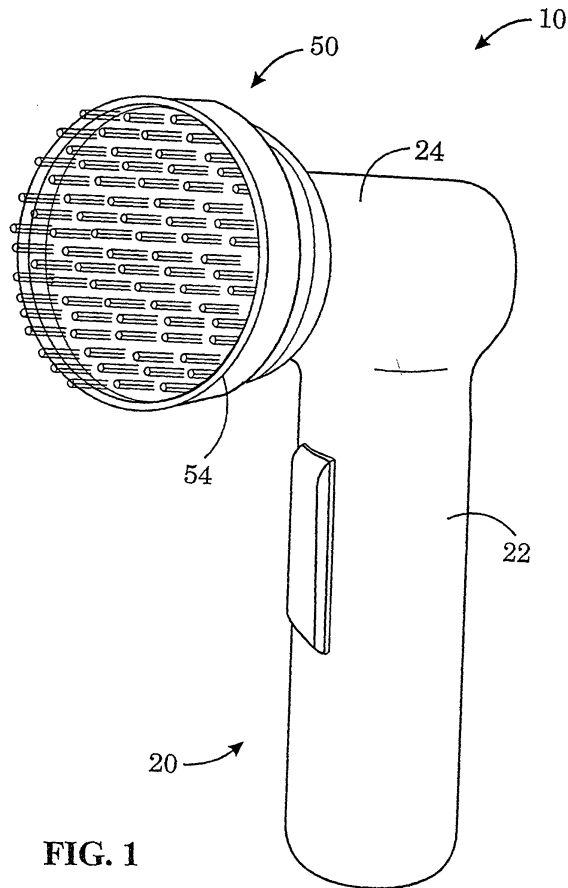


FIG. 1



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 99 11 6126

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	US 5 423 102 A (MADISON) 13 June 1995 (1995-06-13)  * column 3, line 6-20 * * column 3, line 62-68 * * column 4, line 60 - column 5, line 30; figures 1-6 *	1-4, 8, 10, 15-17, 19-21, 26, 27	A46B13/00 A46B13/02 B24B45/00 B08B1/04
Y	---	5, 11-13	
X	US 3 220 039 A (DAYTON) 30 November 1965 (1965-11-30) * column 3, line 19-32; figures 4, 7 *	1-3, 6	
X	US 3 343 192 A (GOLDSTEIN) 26 September 1967 (1967-09-26)  * figures *	1-3, 11, 17, 20-22, 26, 27	
Y	US 4 137 588 A (SANDT CLAYTON ) 6 February 1979 (1979-02-06) * column 3, line 4-17; figure 4 *	5	TECHNICAL FIELDS SEARCHED (Int.Cl.7)  A46B B24B B08B B25F E04H A47L
A	---	1-4	
Y	US 4 976 173 A (YANG) 11 December 1990 (1990-12-11) * figures 1-3 *	11-13	
The present search report has been drawn up for all claims			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>5 August 2003</b>	Examiner <b>Matzdorf, U</b>
<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>			

EPO FORM 1503 03.82 (P04C01)

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

EP 99 11 6126

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.

05-08-2003

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5423102	A	13-06-1995	NONE		
US 3220039	A	30-11-1965	NONE		
US 3343192	A	26-09-1967	NONE		
US 4137588	A	06-02-1979	NONE		
US 4976173	A	11-12-1990	EP	0280527 A2	31-08-1988

EPO FORM P0459

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