



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 938 863 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
18.04.2001 Bulletin 2001/16

(51) Int Cl.7: **A47L 13/256, A47L 13/20**

(43) Date of publication A2:
01.09.1999 Bulletin 1999/35

(21) Application number: **99660038.3**

(22) Date of filing: **25.02.1999**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(72) Inventor: **Heinonen, Aaro**
25470 Kisko (FI)

(74) Representative: **Ruuskanen, Juha-Pekka et al**
Borenus & Co Oy Ab,
Kansakoulukuja 3
00100 Helsinki (FI)

(30) Priority: **27.02.1998 FI 980453**

(71) Applicant: **Heinonen, Aaro**
25470 Kisko (FI)

(54) Cleaning device, cleaning cloth and method of cleaning

(57) The present invention relates to a cleaning device comprising a stem portion (1) and an elongated support portion (6 or 8) connected to the stem portion for supporting a cleaning cloth, the direction of the elongation being normal to the direction of the main cleaning movement. The cleaning cloth (9) forms an endless

cleaning cloth loop arranged to be threaded to surround the elongated portion (6 or 8) through an end opening thereof. The cleaning cloth loop (9) is also arranged rotatably around the elongated portion (6 or 8) in a direction of rotation normal to the direction of the elongation. The invention relates further to a cleaning cloth and method of cleaning.

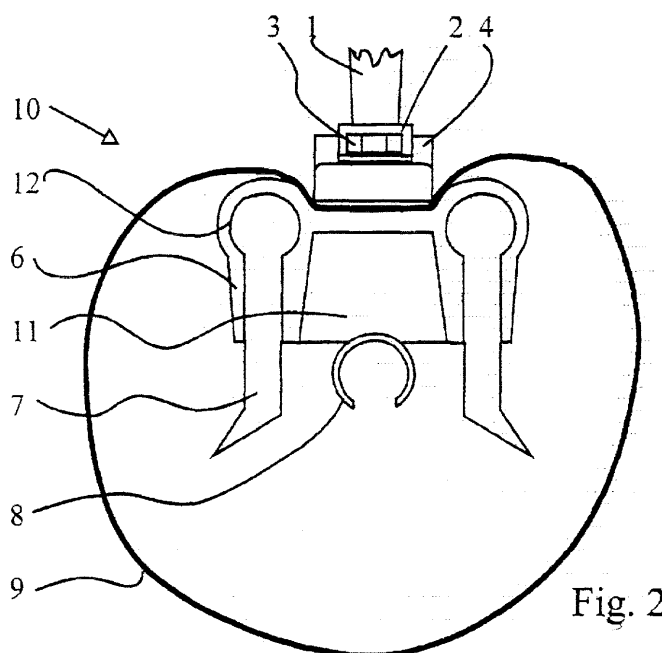


Fig. 2

EP 0 938 863 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 66 0038

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.6)
X	US 1 946 321 A (HUNTER H. W.) 6 February 1934 (1934-02-06) * page 1, line 55 - page 2, line 137; figures 1-7 *	1-3, 10, 11	A47L13/256 A47L13/20
A	US 5 477 582 A (YAMASHITA SHUSUKE) 26 December 1995 (1995-12-26) * the whole document *	1	
X	DE 17 03 505 A (CEMSTO N. V.) 25 February 1971 (1971-02-25) * page 4, line 3-10; figure 1 *	9	
A	CH 263 480 A (ROSENBERGER FREI ANNA) 31 August 1949 (1949-08-31)		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A47L
Place of search MUNICH		Date of completion of the search 19 February 2001	Examiner Laue, F
<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 & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03 82 (P04001)

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

EP 99 66 0038

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.

19-02-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 1946321 A	06-02-1934	DE 629276 C	
US 5477582 A	26-12-1995	GB 2289211 A,B	15-11-1995
		JP 8024191 A	30-01-1996
		KR 9708978 B	03-06-1997
DE 1703505 A	25-02-1971	NL 6708504 A	20-12-1968
		BE 725528 A	29-07-1969
		NL 131763 C	
CH 263480 A	31-08-1949	CH 255674 A	15-07-1948