



(19) Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11)

EP 1 116 447 A3

(12)

## EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
06.11.2002 Bulletin 2002/45

(51) Int Cl.<sup>7</sup>: A41B 1/00

(43) Date of publication A2:  
18.07.2001 Bulletin 2001/29

(21) Application number: 01300283.7

(22) Date of filing: 15.01.2001

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

(30) Priority: 17.01.2000 GB 0001009

(71) Applicants:  
• Davies, Victor Owen  
Old St. Mellons, Cardiff CF3 6XG (GB)  
• Llewellyn-Jones, Adrian  
Cardiff CF5 6JH (GB)

(72) Inventors:  
• Davies, Victor Owen  
Old St. Mellons, Cardiff CF3 6XG (GB)  
• Llewellyn-Jones, Adrian  
Cardiff CF5 6JH (GB)

(74) Representative: Evans, Huw David Duncan  
Urquhart-Dykes & Lord,  
Three Trinity Court,  
21-27 Newport Road  
Cardiff CF24 0AA (GB)

### (54) Cleaning implement

(57) A one-piece toothbrush or other cleaning implement formed of plastics material by injection moulding comprises an elongate handle 10, a head 11 at one end of the handle and a group of at least thirty resiliently flexible bristles 12 of a small diameter extending from the head generally axially of the handle, the bristles 12 in the group being laterally spaced apart from each other.

The cleaning implement is a one-piece member of injection moulded plastics material and as such is cheap to manufacture from waste plastics.

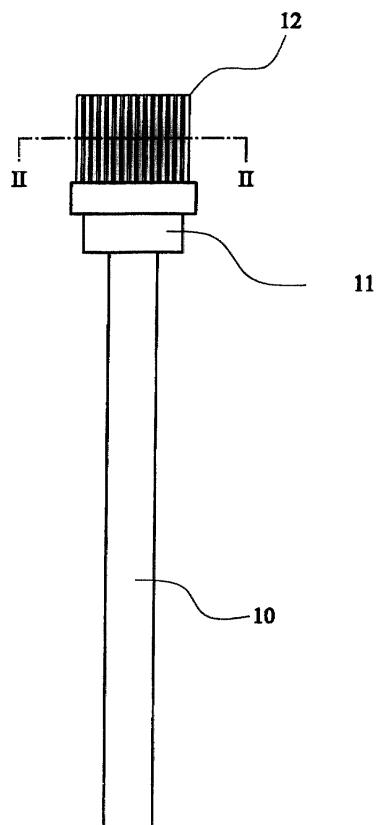


FIG. 1



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number  
EP 01 30 0283

DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)		
Category	Citation of document with indication, where appropriate, of relevant passages				
X	GB 2 159 699 A (COLE RODNEY DAVID) 11 December 1985 (1985-12-11) * the whole document *	1-9	A41B1/00		
Y	---	10,11			
Y	GB 2 297 489 A (HINDMARCH MICHAEL WILLIAM) 7 August 1996 (1996-08-07) * the whole document *	10,11			
X	US 4 712 936 A (KESSLER MILTON) 15 December 1987 (1987-12-15) * the whole document *	1-3,6			
A	US 5 758 384 A (KELLY JAMES) 2 June 1998 (1998-06-02) * the whole document *	1-11			
A	EP 0 903 115 A (CENTRIX INC) 24 March 1999 (1999-03-24) * the whole document *	1-11			
A	US 5 915 436 A (JOHNSON DAVID E ET AL) 29 June 1999 (1999-06-29) * the whole document *	1-11	<div style="border: 1px solid black; padding: 2px;">TECHNICAL FIELDS SEARCHED (Int.Cl.7)</div> <div style="border: 1px solid black; padding: 2px; text-align: center;">A46B</div>		
The present search report has been drawn up for all claims					
Place of search	Date of completion of the search	Examiner			
THE HAGUE	21 August 2002	Neill, F			
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					

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

EP 01 30 0283

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.

21-08-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
GB 2159699	A	11-12-1985	FR	2564712 A1	29-11-1985
GB 2297489	A	07-08-1996	NONE		
US 4712936	A	15-12-1987	CA	1220906 A1	28-04-1987
US 5758384	A	02-06-1998	NONE		
EP 0903115	A	24-03-1999	US	6049934 A	18-04-2000
			BR	9803496 A	09-11-1999
			EP	0903115 A2	24-03-1999
			JP	11151258 A	08-06-1999
			US	6186792 B1	13-02-2001
US 5915436	A	29-06-1999	US	5679067 A	21-10-1997
			AT	207716 T	15-11-2001
			AU	5568496 A	18-11-1996
			BR	9608221 A	01-06-1999
			CA	2218245 A1	31-10-1996
			DE	69616539 D1	06-12-2001
			DE	69616539 T2	06-06-2002
			EP	1106102 A2	13-06-2001
			EP	0822768 A1	11-02-1998
			JP	2001502185 T	20-02-2001
			NO	974971 A	29-12-1997
			TW	384213 B	11-03-2000
			WO	9633638 A1	31-10-1996
			US	6261156 B1	17-07-2001
			US	6126533 A	03-10-2000