



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.7: **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

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

(30) Priority: **17.01.2000 GB 0001009**

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

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

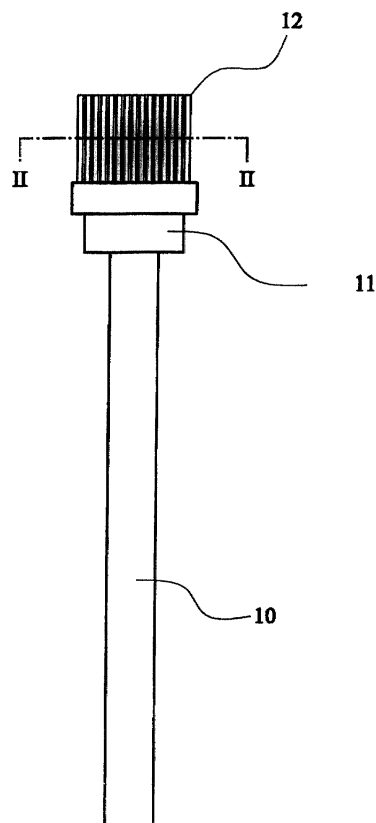


FIG. 1

EP 1 116 447 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 30 0283

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	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	TECHNICAL FIELDS SEARCHED (Int.Cl.7) A46B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 21 August 2002	Examiner Neiller, 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			

EPO FORM 1503 03/82 (P04C01)

**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