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

(11) EP 1 408 164 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
26.01.2005 Bulletin 2005/04

(43) Date of publication A2:
14.04.2004 Bulletin 2004/16

(21) Application number: **02080447.2**

(22) Date of filing: **19.12.2002**

(51) Int Cl.[7]: **E03D 9/03**

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

(30) Priority: **11.10.2002 IT MI20022155**

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(54) Automatic dispenser device for liquids or gels in toilet bowls

(57) A dispenser device comprising at least one cartridge (4, 48, 480) containing at least one liquid or gel (8) and a support body (1, 110) for the cartridge (4, 48, 480) which is provided with a bottom mouth (9, 56, 62) for the outflow of liquid or gel (8), at least one first valve (17, 170, 65) urged to close a first section (18, 256, 162) of the mouth (9, 56, 62) from the outside and control means (3, 39, 60) responsive to each water flow (19) to open said first valve (17, 170, 65). The dispenser device comprises at least one second valve (25, 250, 55, 65) for closing a second section (29, 156, 262) of said mouth (9, 56, 62) during each water flow (19). The at least one second valve (25, 250, 55, 65) is spaced from said at least one first valve (17, 170, 65) so as define between said first (18, 256, 162) and second (29, 156, 262) sections of the mouth (9, 56, 62) a quantity of said liquid or gel (8) which is delivered by the dispenser device upon each water flow (19). There are provided valve connecting means (26, 47, 54) for causing said at least one second valve (25, 250, 55, 65) to open said second section (29, 156, 262) of the mouth (9, 56, 62) when said at least one first valve (17, 170, 65) is closed and to close said second section (29, 156, 262) of the mouth (9, 56, 62) when at least one first valve (17, 170, 65) is open.

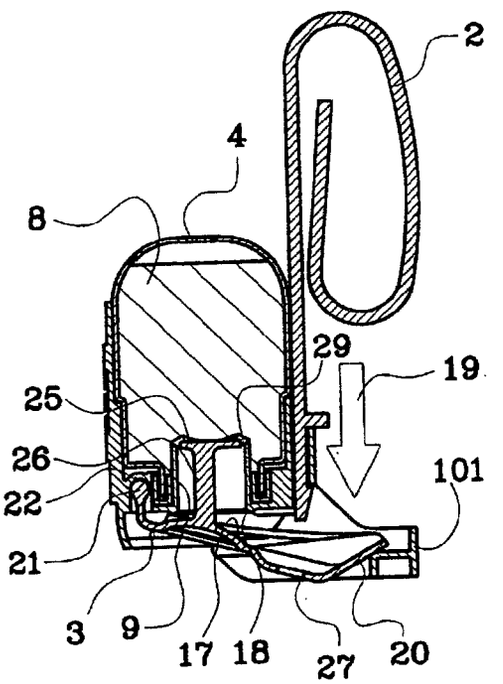


Fig.9

EP 1 408 164 A3

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EUROPEAN SEARCH REPORT

Application Number
EP 02 08 0447

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 100 25 972 A (HENKEL KGAA) 6 December 2001 (2001-12-06) * figure 2 * * paragraph [0022] - paragraph [0024] * * column 8, line 2 - line 66 *	1,2,9, 10,12,24	E03D9/03
A		11,16	
Y	US 3 946 448 A (SIOUFY TAMIM EL) 30 March 1976 (1976-03-30) * column 3, line 23 - column 4, line 36; figure 3 *	1-5,7,9, 10,12, 16-21	
Y	WO 01/04428 A (GAZZANIGA GIANCARLO ; DEOFLOR S P A (IT); GUENZI GIAN LUCA (IT)) 18 January 2001 (2001-01-18) * figures 1-4 *	1-5,7,9, 10,12, 16-21	
A	DE 102 05 299 A (ALPLA WERKE) 12 September 2002 (2002-09-12) * paragraph [0105] * * paragraph [0124] *	22,23	
A	WO 02/40787 A (GRAESSER LUTZ ; HENKEL KGAA (DE); LEHMANN DETLEF (DE); MENKE RONALD (D) 23 May 2002 (2002-05-23) * figure 2 *	23	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

E03D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	1 December 2004	Isailovski, M

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 02 08 0447

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The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

01-12-2004

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 10025972 A	06-12-2001	DE 10025972 A1	06-12-2001
US 3946448 A	30-03-1976	DE 2355054 A1	22-05-1975
		DE 2450197 A1	22-04-1976
		BE 821834 A1	03-03-1975
		FR 2250001 A1	30-05-1975
		IT 1030072 B	30-03-1979
		NL 7414282 A	07-05-1975
WO 0104428 A	18-01-2001	WO 0104428 A1	18-01-2001
		AU 4649099 A	30-01-2001
		AU 766247 B2	09-10-2003
		AU 6154600 A	05-02-2001
		CA 2388233 A1	25-01-2001
		WO 0106067 A2	25-01-2001
		EP 1218602 A2	03-07-2002
		EP 1260577 A2	27-11-2002
		HU 0201883 A2	28-09-2002
		PL 353036 A1	06-10-2003
		TR 200200046 T2	21-08-2002
DE 10205299 A	12-09-2002	DE 10205299 A1	12-09-2002
		BR 0207748 A	01-06-2004
		CA 2446752 A1	10-10-2002
		WO 02079583 A1	10-10-2002
		EP 1364091 A1	26-11-2003
		HU 0302861 A2	29-12-2003
		US 2004088781 A1	13-05-2004
WO 0240787 A	23-05-2002	DE 10113036 A1	06-06-2002
		DE 20116963 U1	28-03-2002
		AU 1701302 A	27-05-2002
		AU 7754701 A	27-05-2002
		CN 1474901 T	11-02-2004
		CZ 20031361 A3	17-03-2004
		WO 0240791 A1	23-05-2002
		WO 0240787 A1	23-05-2002
		EP 1334239 A1	13-08-2003
		EP 1334243 A1	13-08-2003
		ES 2206080 T1	16-05-2004
		JP 2004520498 T	08-07-2004
		JP 2004526075 T	26-08-2004
		PL 361188 A1	20-09-2004
		SI 21141 A	31-08-2003
		SK 5812003 A3	08-06-2004
		TR 200301652 T3	21-11-2003

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 02 08 0447

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The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

01-12-2004

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0240787 A		US 2004107484 A1	10-06-2004
		US 2004068782 A1	15-04-2004

EPO FORM P0459

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