



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 995 844 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
11.04.2001 Bulletin 2001/15

(51) Int. Cl.⁷: **E03C 1/23**

(43) Date of publication A2:
26.04.2000 Bulletin 2000/17

(21) Application number: **99121144.2**

(22) Date of filing: **22.10.1999**

(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

(30) Priority: **23.10.1998 IT MI980693 U**

(71) Applicant: **Silfra S.P.A.**
28060 Cureggio (Novara) (IT)

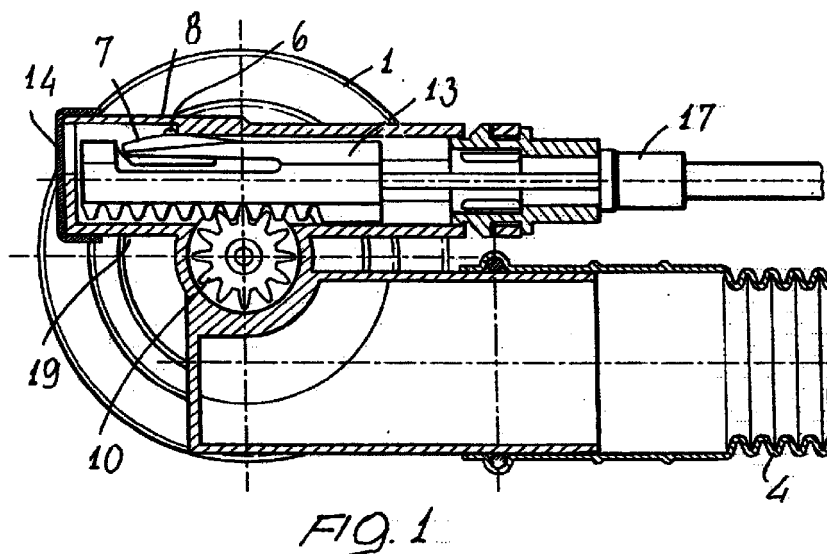
(72) Inventor: **Christina, Riccardo**
28024 Gozzano (Novara) (IT)

(74) Representative: **Cicogna, Franco**
Ufficio Internazionale Brevetti
Dott.Prof. Franco Cicogna
Via Visconti di Modrone, 14/A
20122 Milano (IT)

(54) **Device for blocking the plug of a bath-tub**

(57) The invention relates to a device for blocking the water discharging plug of bath-tubs, of a type operatively associated with a handle (1) for opening and closing the water discharging plug, wherein the handle is provided with a pinion-rack system (9) for converting the rotary movement thereof into a translatory move-

ment adapted to open and close the plug, characterized in that the device comprises a resilient element (7), associated with the rack, and including a tooth (6) engaging with a corresponding fixed housing (8).



EP 0 995 844 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 12 1144

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)
A	DE 44 14 887 A (GROHE KG HANS) 9 November 1995 (1995-11-09) * column 3, line 21 - line 54; figures 1,2 *	1-6, 11-13, 15-17	E03C1/23
A	GB 1 504 268 A (VIEGENER II F) 15 March 1978 (1978-03-15) * the whole document *	1,17,18	
A	FR 2 164 018 A (BERMEC) 27 July 1973 (1973-07-27) * page 2, line 3 - line 18; figures 2,3 *	1	
A	FR 2 641 298 A (PIAT MOISE) 6 July 1990 (1990-07-06) * page 2, line 30 - page 3, line 19; figure *	1	
A	FR 2 643 097 A (PIAT MOISE) 17 August 1990 (1990-08-17) * page 2, line 16 - line 20; figure *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	GB 2 010 086 A (GROHE KG HANS) 27 June 1979 (1979-06-27) * page 3, line 106 - line 120 *	1,8	E03C
A	US 5 363 518 A (MOWERY RICHARD W) 15 November 1994 (1994-11-15) * column 2, line 50 - line 66 *	8	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 20 February 2001	Examiner Ellis, D
<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 03.02 (P04001)

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

EP 99 12 1144

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.

20-02-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4414887 A	09-11-1995	NONE	
GB 1504268 A	15-03-1978	DE 2549723 A	18-05-1977
		AT 344107 B	10-07-1978
		AT 736276 A	15-10-1977
		BE 847689 A	14-02-1977
		CH 610967 A	15-05-1979
		ES 453027 A	01-11-1977
		FR 2330814 A	03-06-1977
		IT 1069388 B	25-03-1985
		NL 7611789 A	10-05-1977
FR 2164018 A	27-07-1973	NONE	
FR 2641298 A	06-07-1990	FR 2643097 A	17-08-1990
FR 2643097 A	17-08-1990	FR 2641298 A	06-07-1990
GB 2010086 A	27-06-1979	DE 2755414 B	05-04-1979
		AT 366444 B	13-04-1982
		AT 879578 A	15-08-1981
		BE 872563 A	30-03-1979
		DK 551978 A	14-06-1979
		ES 245591 Y	16-06-1980
		FR 2411926 A	13-07-1979
		NL 7811776 A	15-06-1979
US 5363518 A	15-11-1994	CA 2088540 A	29-08-1993
		DE 4305404 A	16-09-1993
		IT 1264338 B	23-09-1996

EPO FORM P0489

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