



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
18.12.2002 Bulletin 2002/51

(51) Int Cl.7: **A47L 15/42, F24H 1/10**

(43) Date of publication A2:
22.11.2000 Bulletin 2000/47

(21) Application number: **00830126.9**

(22) Date of filing: **22.02.2000**

(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: **Bertazzoni, Roberto**
42016 Guastalla RE (IT)

(74) Representative: **Concone, Emanuele et al**
Società Italiana Brevetti S.p.A.
Via Carducci 8
20123 Milano (IT)

(30) Priority: **23.02.1999 IT MI990365**

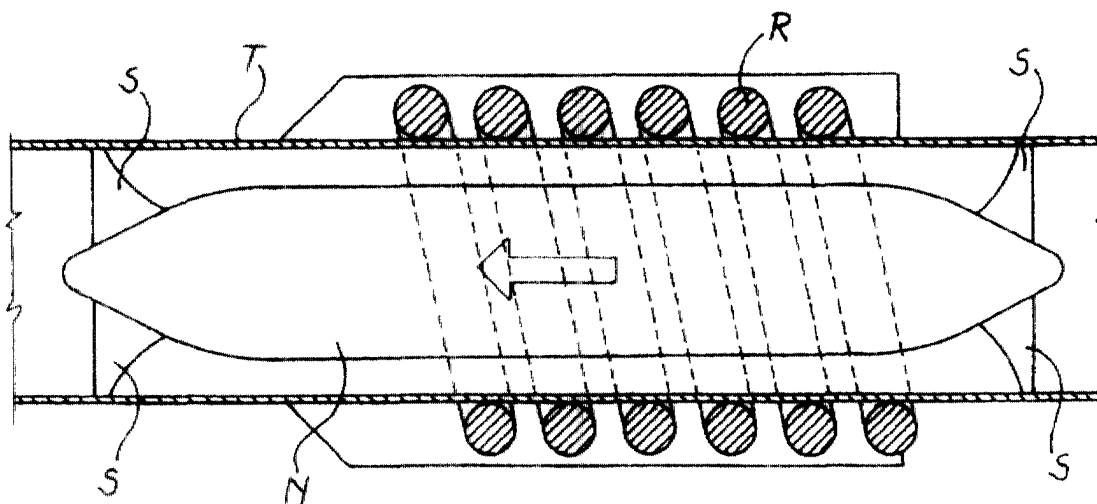
(71) Applicant: **SMEG S.p.A.**
I-42016 Guastalla (IT)

(54) **Device for heating water, in particular in a dishwasher**

(57) A device for heating water includes a metallic tube (T) on which there is wound a resistor (R), as well as a tapered body (N) mounted inside the tube (T) by means of a plurality of supports (S). In this way, thanks to the reduction of the free cross-section, an increase in the speed of the water flow is achieved without decreas-

ing the heat exchange area while maintaining the same overall size. The subsequent higher rate of heat exchange allows to reduce the activation time and/or the power of the resistor, and thus ultimately to reduce the power consumption and/or limit the peak power absorbed by the machine.

Fig. 2





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 83 0126

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	JP 59 225033 A (MATSUSHITA ELECTRIC IND CO LTD) 18 December 1984 (1984-12-18)	1-8	A47L15/42 F24H1/10
Y	* figures *	9	
X	--- PATENT ABSTRACTS OF JAPAN vol. 006, no. 033 (M-114), 27 February 1982 (1982-02-27) & JP 56 149542 A (MATSUSHITA ELECTRIC IND CO LTD), 19 November 1981 (1981-11-19)	1-8	
Y	* abstract *	9	
Y	--- FR 1 374 218 A (SIEMENS ELECTROGERATE AG) 2 October 1964 (1964-10-02) * figure * -----	9	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7) A47L D06F F24H
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 24 October 2002	Examiner Cagnoli, M
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 00 83 0126

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.

24-10-2002

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 59225033 A	18-12-1984	JP 1030491 B	20-06-1989
		JP 1548589 C	09-03-1990
JP 56149542 A	19-11-1981	NONE	
FR 1374218 A	02-10-1964	AT 240003 B	10-05-1965
		CH 404889 A	31-12-1965
		GB 1038837 A	10-08-1966

EPO FORM P0459

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