



(19)

Europäisches Patentamt
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(11)

EP 1 221 570 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
05.02.2003 Bulletin 2003/06

(51) Int Cl. 7: **F22B 1/28**

(43) Date of publication A2:
10.07.2002 Bulletin 2002/28

(21) Application number: **01129045.9**

(22) Date of filing: **07.12.2001**

(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: **15.12.2000 IT PD000279**
06.02.2001 IT PD010028

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(54) Steam generator with automatic water loading system

(57) The present invention concerns an automatic system for loading water into a steam generating boiler normally used in appliances which use steam for carrying out their domestic or industrial functions, such as machines for domestic and industrial cleaning, ironing systems, pressure cleaners, extraction hydrojets, combined extractors etc. The components of the system comprise: cold water tank (1), level gauge for the water

in the cold water tank (2), acoustic indicator (3), motor pump (4), priming and vacuum valve (5), boiler (6), main heating resistance (7), fuse (8), pressure switch (9), solenoid valve (10), safety valve (11), pilot resistance (12), motor pump control thermostat (13), remote control button (14), area for controlling the water level in the boiler (15). There may be a water level probe comprising a thermoconductive body, an electric heating resistance and a thermostat.

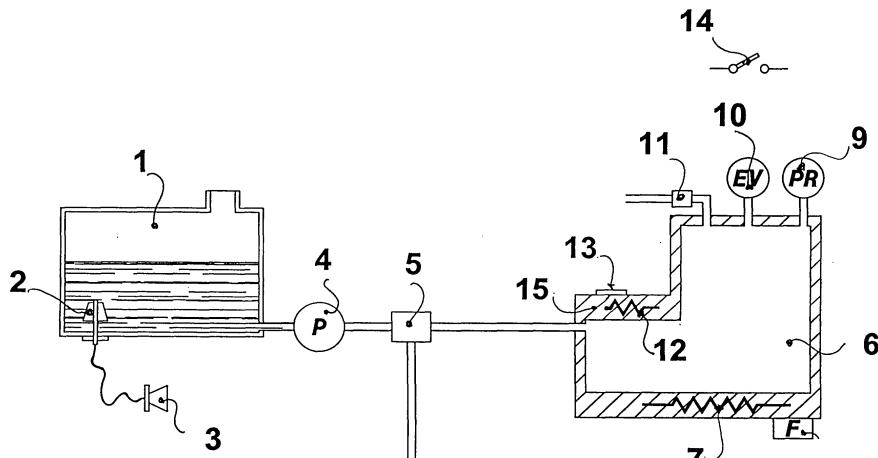


Fig. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 01 12 9045

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	WO 97 21057 A (FRANCHINI GIULIANO) 12 June 1997 (1997-06-12) * page 6, line 9 - page 9, line 4; figures 2,3,5 *	1,2	F22B1/28
X	EP 0 193 863 A (EGO ITALIANA) 10 September 1986 (1986-09-10) * page 4, line 1 - page 6, line 33; figure 1 *	1	
A	EP 0 877 200 A (IMETEC SPA) 11 November 1998 (1998-11-11) * the whole document *	1-7	
A	EP 0 887 588 A (HOT LINE S R L) 30 December 1998 (1998-12-30) * the whole document *	1-7	
A	US 4 480 173 A (BUTTERFIELD BRIAN J) 30 October 1984 (1984-10-30) * the whole document *	1-7	<p>TECHNICAL FIELDS SEARCHED (Int.Cl.7)</p> <p>F22B</p>
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
MUNICH	11 December 2002	Zerf, G	
CATEGORY OF CITED DOCUMENTS		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	
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			

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ON EUROPEAN PATENT APPLICATION NO.**

EP 01 12 9045

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The members are as contained in the European Patent Office EDP file on
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11-12-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9721057	A	12-06-1997	IT AU WO	VR950097 A1 1096397 A 9721057 A1	09-06-1997 27-06-1997 12-06-1997
EP 0193863	A	10-09-1986	IT AT DE EP	1185051 B 58216 T 3675407 D1 0193863 A2	04-11-1987 15-11-1990 13-12-1990 10-09-1986
EP 0877200	A	11-11-1998	IT EP US	BG970020 A1 0877200 A1 6067403 A	06-11-1998 11-11-1998 23-05-2000
EP 0887588	A	30-12-1998	IT EP	TE970005 A1 0887588 A2	07-12-1998 30-12-1998
US 4480173	A	30-10-1984	GB DE	2079908 A 3124321 A1	27-01-1982 01-04-1982