



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
04.12.2013 Bulletin 2013/49

(51) Int Cl.:
F23D 14/60 (2006.01) F23N 1/02 (2006.01)

(43) Date of publication A2:
06.11.2013 Bulletin 2013/45

(21) Application number: **13157362.8**

(22) Date of filing: **01.03.2013**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(72) Inventors:
• **Kim, Hyun Sang**
Seoul 152-888 (KR)
• **Lee, Myung Hoon**
Seoul 152-888 (KR)

(30) Priority: **30.04.2012 KR 20201203532 U**

(74) Representative: **Maillet, Alain**
Cabinet Le Guen Maillet
5, place Newquay
B.P. 70250
35802 Dinard Cedex (FR)

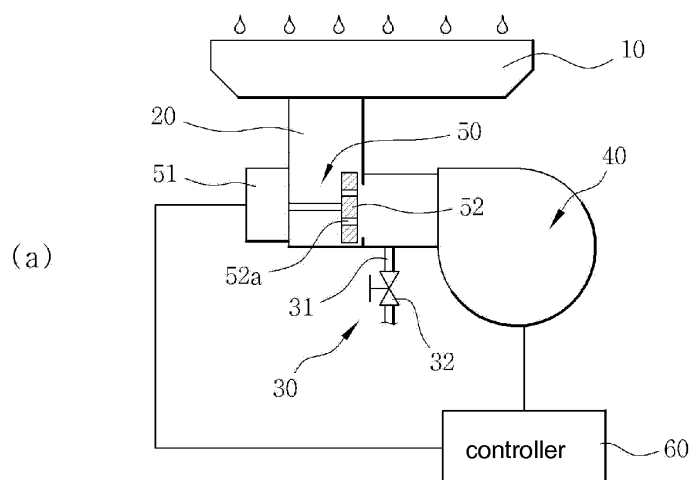
(71) Applicant: **Daesung Industrial Co., Ltd.**
Seoul 152-888 (KR)

(54) **Premix combustion device of gas burner**

(57) A premix combustion device of a gas burner applicable to a domestic gas boiler or water heater is disclosed. The premix combustion device includes a gas mixture supply pipe to supply gas mixture to the gas burner, and a gas supply means and air supply means connected with the gas mixture supply pipe. A damper is provided at a predetermined position in the gas mixture supply pipe to regulate the amount of the gas mixture to

be supplied to the gas burner, degree of opening of the damper is adjusted by an electrically operated valve controlled by a control signal from a controller, and an valve disc arranged to open and close the gas mixture supply pipe according to operation of the valve is provided with a plurality of holes. The premix combustion device extends the range of controllable combustion, ensuring supply of water at a set temperature.

Fig. 1





EUROPEAN SEARCH REPORT

Application Number
EP 13 15 7362

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 0 978 687 A1 (BOSCH GMBH ROBERT [DE]) 9 February 2000 (2000-02-09) * paragraph [0020]; figure 9 * * paragraphs [0015], [0016]; figures 4,5 * -----	1-3	INV. F23D14/60 F23N1/02
X	DE 197 28 965 A1 (VAILLANT JOH GMBH & CO [DE] VAILLANT GMBH [DE]) 15 January 1998 (1998-01-15) * figures 8,9 *	1	
X	EP 1 387 985 A1 (BEKAERT COMB TECHNOLOGY B V [NL] BEKAERT COMB TECHNOLOGY BV [BE]) 11 February 2004 (2004-02-11) * the whole document * -----	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			F23D F23N
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 22 October 2013	Examiner Christen, Jérôme
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	

1
EPO FORM 1503 03.82 (P04C01)

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

EP 13 15 7362

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.

22-10-2013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0978687 A1	09-02-2000	DE 19835692 A1 EP 0978687 A1	17-02-2000 09-02-2000
DE 19728965 A1	15-01-1998	CH 691137 A5 DE 19728965 A1 DE 29711889 U1	30-04-2001 15-01-1998 13-11-1997
EP 1387985 A1	11-02-2004	AT 445126 T EP 1387985 A1 ES 2333411 T3 WO 02095294 A1	15-10-2009 11-02-2004 22-02-2010 28-11-2002

EPO FORM P0459

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