



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**20.12.2000 Bulletin 2000/51**

(51) Int Cl.7: **F23L 1/02, F23L 9/00**

(43) Date of publication A2:  
**14.06.2000 Bulletin 2000/24**

(21) Application number: **99660185.2**

(22) Date of filing: **03.12.1999**

(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**

(72) Inventor: **Lehikoinen, Juhani**  
**83940 Nunnanlahti (FI)**

(74) Representative: **Helino, Timo Kalervo et al**  
**Papula Rein Lahtela Oy,**  
**P.O. Box 981**  
**00101 Helsinki (FI)**

(30) Priority: **11.12.1998 FI 982692**

(71) Applicant: **Nunnanlahden Uuni Oy**  
**83940 Nunnanlahti (FI)**

(54) **Method for the regulation of combustion air and a corresponding regulation arrangement**

(57) A method for the regulation of combustion air when wood is burned in a heat-storing fireplace in which all combustion air (1) is supplied from below a grate (2) into a firebox. When a wood charge (4) is being ignited, a substantial proportion of the combustion air (1) is supplied as auxiliary primary air (5) through the middle area of the grate (2) under the wood charge and some of the

combustion air is supplied into the firebox as secondary air (6). After the wood charge has been kindled or when more wood (7) is added on top of glowing embers (8), the amount of auxiliary primary air is limited, some of the combustion air is directed as main primary air (9) under the wood charge mainly to the edge areas of the wood charge while most of the combustion air is supplied as secondary air (10) into the firebox.

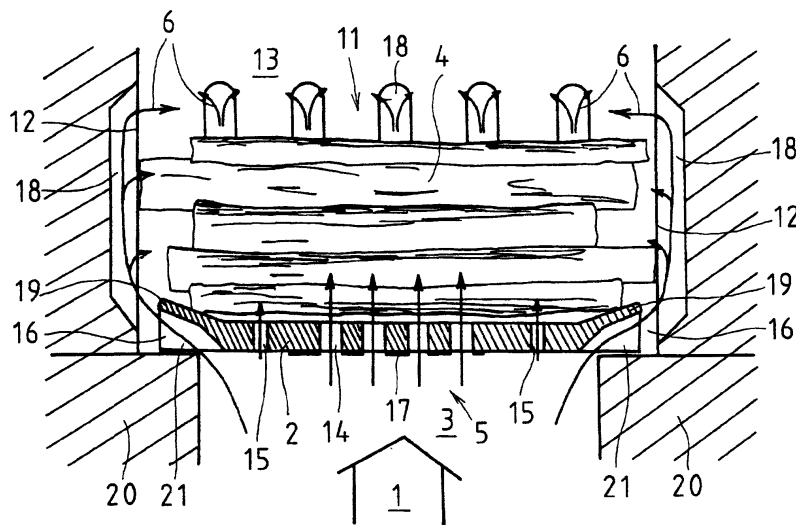


Fig 1



European Patent  
Office

EUROPEAN SEARCH REPORT

Application Number  
EP 99 66 0185

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	NL 8 303 987 A (HAARAS B V) 17 June 1985 (1985-06-17)	9-11,13	F23L1/02 F23L9/00
Y	* the whole document *	1-8	
X	CH 661 581 A (WALTER SPIESS OFEN & KOCHHERDF) 31 July 1987 (1987-07-31) * the whole document *	9-11,13	
X	FR 1 100 380 A (SOC. DES ATELIERS ET CHANTIERS DE FRANCE) 20 September 1955 (1955-09-20) * the whole document *	9-11,13	
Y	DE 39 03 739 A (RIKA METALLWAREN) 17 August 1989 (1989-08-17) * column 1, line 1 - line 24 *	1-8	
Y	US 5 263 471 A (SHIMEK DANIEL C ET AL) 23 November 1993 (1993-11-23) * column 8, line 8 - line 46 *	1-8	
A	US 4 469 085 A (DRIESMANS JEAN) 4 September 1984 (1984-09-04)		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7) F23L
Place of search	Date of completion of the search	Examiner	
MUNICH	25 October 2000	Theis, 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			

EPO FORM 1503 03.02 (F04C01)

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

EP 99 66 0185

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.

25-10-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
NL 8303987 A	17-06-1985	NONE	
CH 661581 A	31-07-1987	NONE	
FR 1100380 A	20-09-1955	NONE	
DE 3903739 A	17-08-1989	AT 399572 B AT 26988 A	26-06-1995 15-10-1994
US 5263471 A	23-11-1993	NONE	
US 4469085 A	04-09-1984	BE 893199 A AT 34448 T CA 1203733 A DE 3278512 D DK 217483 A EP 0094455 A FI 831682 A NO 831756 A SE 8302634 A	16-09-1982 15-06-1988 29-04-1986 23-06-1988 18-11-1983 23-11-1983 18-11-1983 18-11-1983 18-11-1983