



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**11.09.2013 Bulletin 2013/37**

(51) Int Cl.:  
**F24C 15/32 (2006.01)**

(43) Date of publication A2:  
**26.06.2013 Bulletin 2013/26**

(21) Application number: **12199111.1**

(22) Date of filing: **21.12.2012**

(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**

(30) Priority: **22.12.2011 IT TO20111195**  
**22.12.2011 IT TO20110149 U**

(71) Applicant: **Indesit Company S.p.A.**  
**60044 Fabriano (AN) (IT)**

(72) Inventor: **Colozzo, Vincenzo Giuseppe**  
**I-06023 Gualdo Tadino (PG) (IT)**

(74) Representative: **Camolese, Marco et al**  
**Metroconsult S.r.l.**  
**Via Sestriere 100**  
**10060 None (TO) (IT)**

(54) **Fan oven, in particular for domestic use**

(57) The present invention relates to an oven (1) of the ventilated type, in particular for domestic use, comprising:

- a muffle (10) defining a cooking compartment (10V) where food to be cooked is placed, said muffle (10) comprising a bottom wall (11), a top wall (12), a back wall (13), a front wall (14) opposite to said back wall (13), and two mutually opposite side walls (15);
- heating means (20) associated with the muffle (10) for heating air in said muffle (10) and causing said food to be cooked;
- a fan (30) for circulating air in said muffle (10), the fan (30) being located in a cavity (40) associated with the back wall (13) of the muffle (10) via a bulkhead (41);
- inlet means (50) allowing said cavity (40) to be in fluidic communication with the compartment (10V) of the muffle (10), so as to allow the air contained in said cavity (40) and moved by the fan (30) to flow into the compartment (10V) of the muffle (10), said inlet means (50) comprising at least one opening (51) in said bulkhead (41);
- return means (60) allowing the compartment (10V) of the muffle (10) to be in fluidic communication with the cavity (40), so as to allow the air contained in said compartment (10V) to be sucked in by the fan (30) and return into the cavity (40), said return means (60) comprising at least one passage (61) in said bulkhead (41).

The invention is characterized in that said return means (60) comprise a channel (62) comprising a first end (62A) associated with said at least one passage (61) and a second end (62B) situated in the proximity of the front wall (14), so as to draw air near the front wall (14)

of the muffle (10) and convey it towards the fan (30) through said at least one passage (61).

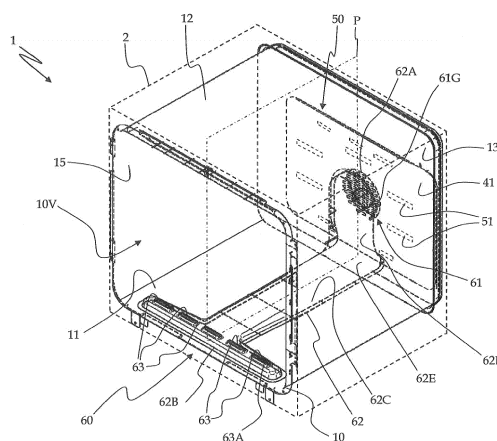


Fig. 2



## EUROPEAN SEARCH REPORT

Application Number  
EP 12 19 9111

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 1 804 001 A2 (LG ELECTRONICS INC [KR]) 4 July 2007 (2007-07-04) * paragraph [0026] - paragraph [0058]; figures 1,4,5 *	1,2,11	INV. F24C15/32
Y	US 6 376 817 B1 (MCFADDEN DAVID H [US] ET AL) 23 April 2002 (2002-04-23) * column 6, line 10 - column 10, line 6; figures 1-2 *	1-11	
Y	EP 1 674 796 A2 (SAMSUNG ELECTRONICS CO LTD [KR]) 28 June 2006 (2006-06-28) * paragraph [0017] - paragraph [0036]; figures 1-2 *	1-11	
Y	EP 1 712 846 A1 (LG ELECTRONICS INC [KR]) 18 October 2006 (2006-10-18) * the whole document *	9	
A	US 6 060 701 A (MCKEE PHILIP R [US] ET AL) 9 May 2000 (2000-05-09) * the whole document *	1-15	
<p><del>The present search report has been drawn up for all claims</del></p>			<p>TECHNICAL FIELDS SEARCHED (IPC)</p> <p>F24C</p>
Place of search		Date of completion of the search	Examiner
The Hague		21 March 2013	Makúch, Milan
<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 ..... &amp; : member of the same patent family, corresponding document</p>			

1  
EPO FORM 1503 03/82 (F04C01)



Application Number

EP 12 19 9111

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-11

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
EP 12 19 9111

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-11

Oven comprising a muffle, heating means, a fan, a cavity, a bulkhead, inlet means and return means, wherein the return means comprise a channel so as to draw air near the front wall of the muffle and convey it towards the fan through a passage.

---

2. claims: 12-15

Oven comprising a muffle, heating means, a fan, a cavity, a bulkhead and inlet means, wherein portion of the bulkhead have smooth corners to prevent the air from stagnating within the cavity.

---

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

EP 12 19 9111

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.

21-03-2013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1804001 A2	04-07-2007	CA 2572115 A1	28-06-2007
		CN 1989888 A	04-07-2007
		EP 1804001 A2	04-07-2007
		US 2007145033 A1	28-06-2007
-----			
US 6376817 B1	23-04-2002	AT 471061 T	15-06-2010
		AU 1139502 A	06-05-2002
		EP 1334644 A1	13-08-2003
		ES 2347319 T3	28-10-2010
		US 6376817 B1	23-04-2002
		WO 0235888 A1	02-05-2002
-----			
EP 1674796 A2	28-06-2006	EP 1674796 A2	28-06-2006
		KR 20060070910 A	26-06-2006
		US 2006131298 A1	22-06-2006
-----			
EP 1712846 A1	18-10-2006	EP 1712846 A1	18-10-2006
		KR 20060108022 A	17-10-2006
		US 2006225727 A1	12-10-2006
-----			
US 6060701 A	09-05-2000	US 6060701 A	09-05-2000
		US 6262406 B1	17-07-2001
-----			