



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
06.03.2019 Bulletin 2019/10

(51) Int Cl.:
H05B 1/02 (2006.01) **H05B 3/74 (2006.01)**
F24C 7/08 (2006.01)

(43) Date of publication A2:
10.10.2018 Bulletin 2018/41

(21) Application number: **18181419.5**

(22) Date of filing: **03.07.2018**

(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
Designated Validation States:
KH MA MD TN

• **Bai, Yun**
Beijing (CN)

(72) Inventors:
• **Bai, Yun**
Beijing (CN)
• **Shen, Chunlei**
Jiaxing City, Zhejiang Province 314312 (CN)

(30) Priority: **17.11.2017 US 201762587838 P**

(74) Representative: **Loo, Chi Ching et al**
Albright IP Limited
County House
Bayshill Road
Cheltenham, Gloucestershire GL50 3BA (GB)

(71) Applicants:
• **Zhejiang Jiu Kang Electric Appliances Co., Ltd.**
314312 Jiaxing City, Zhejiang Province (CN)

(54) **A GLASS-CERAMIC COOKING APPARATUS AND A METHOD RELATING TO TEMPERATURE LIMITING CONTROL FOR PREVENTING COOKING OIL IGNITION**

(57) A glass-ceramic cooking apparatus and a method relating to temperature limiting control of the glass heating area for preventing cooking oil ignition is disclosed. The apparatus comprises at least one glass surface (201), at least one heat source (103) under the glass to create a heating area (202) on the glass, one temperature sensor (303) and one control unit (302) for each heat source (103), wherein the sensor (303) measures the temperature on the underside the glass heating area (202), and the control unit is electrically connected with the heat source (103), compares the measured glass temperature with predetermined upper and lower temperature limits that are based on a corresponding relationship between the heating area temperature and the cooking oil temperature within the cooking vessel, and then reduces or increases the output power of the heating source (103), so that the maximum temperature of the cooking oil in the cooking vessel can be limited in a range that is below the cooking oil ignition point while a minimum temperature can still be maintained for a desired cooking performance.

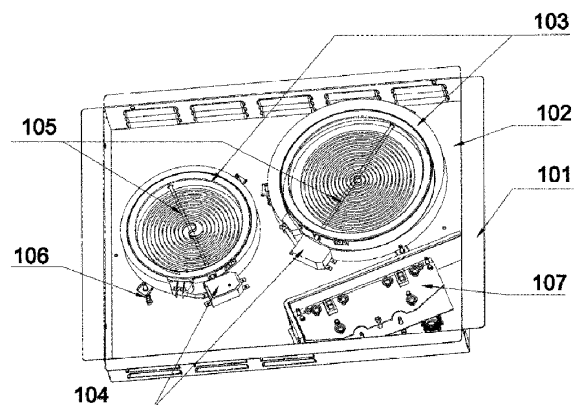


Fig. 1



EUROPEAN SEARCH REPORT

Application Number
EP 18 18 1419

5

10

15

20

25

30

35

40

45

50

55

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	US 2014/048293 A1 (LUONGO WADE [US] ET AL) 20 February 2014 (2014-02-20) * paragraph [0022] - paragraph [0026]; figures 1,6,9,10,13 *	1-25	INV. H05B1/02 H05B3/74 F24C7/08
X	GB 2 325 533 A (CERAMASPEED LTD [GB]) 25 November 1998 (1998-11-25) * page 2, line 18 - page 3, line 9; figure 3 * * page 8, line 16 - page 9, line 6 *	1-25	
A	DE 203 09 503 U1 (CERAMASPEED LTD [GB]) 2 October 2003 (2003-10-02) * paragraph [0033]; figures 1-2 *	4	
A	US 2003/192873 A1 (LERNER WILLIAM S [US]) 16 October 2003 (2003-10-16) * figure 1 *	20	
A	US 5 628 242 A (HIGLEY JOHN E [US]) 13 May 1997 (1997-05-13) * page 7, lines 43-53 * * abstract *	21	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			H05B F24C
Place of search		Date of completion of the search	Examiner
Munich		25 January 2019	Pierron, Christophe
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 18 18 1419

5 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.

25-01-2019

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2014048293 A1	20-02-2014	EP 2885583 A1	24-06-2015
		US 2014048293 A1	20-02-2014
		US 2016076775 A1	17-03-2016
		WO 2014028359 A1	20-02-2014

GB 2325533 A	25-11-1998	AT 310371 T	15-12-2005
		DE 69832329 T2	13-07-2006
		EP 0886459 A2	23-12-1998
		ES 2252814 T3	16-05-2006
		GB 2325533 A	25-11-1998
		US 5961867 A	05-10-1999

DE 20309503 U1	02-10-2003	NONE	

US 2003192873 A1	16-10-2003	NONE	

US 5628242 A	13-05-1997	NONE	
