



- (51) **International Patent Classification:**  
*F23D 14/04* (2006.01)    *F23N 1/00* (2006.01)  
*F23K 5/00* (2006.01)    *A47J 37/07* (2006.01)
- (21) **International Application Number:**  
PCT/US2009/046540
- (22) **International Filing Date:**  
8 June 2009 (08.06.2009)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**  
12/141,343    18 June 2008 (18.06.2008)    US
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

— of inventorship (Rule 4.17(iv))

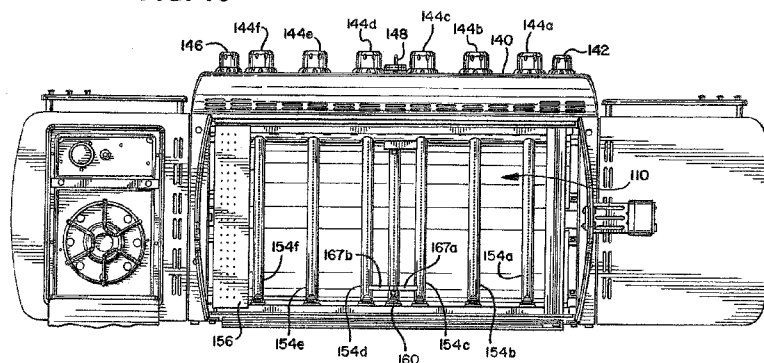
**Published:**

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

- (88) **Date of publication of the international search report:**  
21 June 2012

(54) **Title:** BARBECUE GRILL WITH SEAR SECTION

**FIG. 16**



(57) **Abstract:** Various embodiments of a gas valve and a sear-zone gas burner are described and claimed herein. One embodiment described herein relates to a control valve for regulating the flow of gas to a burner tube for a barbecue grill, wherein the control valve includes multiple flow settings, including a sear setting. At the sear setting, the valve is capable of providing additional gas flow to the gas burner to provide the intense heat needed to sear food. At the remaining settings, the valve is capable of providing an appropriate amount of gas flow for conventional cooking of food. Another embodiment of the gas valve is adapted to reduce the rotational offset between the off position and the maximum flow position as compared to the valves of the prior art. In that embodiment, the angular offset between the off position and the maximum flow position is approximately 45°. Another embodiment described herein relates to a burner tube configuration comprising a plurality of standard burner tubes and at least one supplementary sear-zone burner tube which is operable independently from the standard burner tubes. The sear-zone burner tube supplements the heat generated by the adjacent standard burner tubes to supply the intense heat needed to sear food. When the sear-zone burner tube is off, the portion of the cooking surface above the sear-zone burner tube can be used for conventional cooking of food.



INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2009/046540

A. CLASSIFICATION OF SUBJECT MATTER  
 INV. F23D14/04 F23K5/00 F23N1/00 A47J37/07  
 ADD.  
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED  
 Minimum documentation searched (classification system followed by classification symbols)  
 F23D F23K F23N A47J  
 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
 EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 299 22 811 U1 (EBERTZ UWE [DE]) 24 February 2000 (2000-02-24)  page 2, last paragraph - page 6, paragraph 1; figures 1,2  -----	1,3, 5-10,12, 14-22
X	US 2003/213484 A1 (ALDEN J MICHAEL [US] ET AL) 20 November 2003 (2003-11-20)  page 4, paragraph 54 - page 5, paragraph 60 page 5, paragraph 65 figures 6,7  -----  -/--	1,3,5,6, 9,10,12, 14-22

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&amp;" document member of the same patent family</p>
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Date of the actual completion of the international search  20 November 2009	Date of mailing of the international search report  27/04/2012
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Gavriliu, Costin

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2009/046540

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see additional sheet(s)

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-23

A barbecue grill provided with a several burners arranged under the cooking surface.

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2. claims: 24-43

A valve for controlling a gas flow rate.

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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2009/046540

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 203 17 505 U1 (LIU GEORGE C M [TW]) 12 February 2004 (2004-02-12)  page 2, paragraph 14 - page 3, paragraph 19; figures 1-5  -----	1,3,5,6, 9,10,12, 14,15, 18-22
X	US 6 102 029 A (STEPHEN ROBERT T [US] ET AL) 15 August 2000 (2000-08-15)  column 3, line 26 - column 4, line 44 figures 1-4  -----	1,3,9, 10,12, 16-18
A	US 6 067 978 A (SCHLOSSER ERICH J [US] ET AL) 30 May 2000 (2000-05-30) column 4, line 64 - column 5, line 19 figure 1  -----	1,10,19

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2009/046540
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