

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference WP20160003	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/KR2016/009543	International filing date ( <i>day/month/year</i> ) 27 August 2016 (27.08.2016)	Priority date ( <i>day/month/year</i> ) 28 August 2015 (28.08.2015)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant HEO, Jinwoo			

<p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report 06 March 2018 (06.03.2018)
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**PATENT COOPERATION TREATY**

**TRANSLATION**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	<b>23.12.2016</b>
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Applicant's or agent's file reference <b>WP20160003</b>	<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/KR2016/009543</b>	International filing date (day/month/year) <b>27.08.2016</b>	Priority date (day/month/year) <b>28.08.2015</b>
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International Patent Classification (IPC) or both national classification and IPC  
**A47J37/06 (2006.01) i**

Applicant  
**HEO, Jinwoo**

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/KR	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/KR2016/009543

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
  - the international application in the language in which it was filed
  - a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
  - a.  forming part of the international application as filed:
    - in the form of an Annex C/ST.25 text file.
    - on paper or in the form of an image file.
  - b.  furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
  - c.  furnished subsequent to the international filing date for the purposes of international search only:
    - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
    - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No. PCT/KR2016/009543
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<b>Box No. V</b>	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>
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1. Statement			
Novelty (N)	Claims	1-3	YES
	Claims	None	NO
Inventive step (IS)	Claims	1-3	YES
	Claims	None	NO
Industrial applicability (IA)	Claims	1-3	YES
	Claims	None	NO

2. Citations and explanations:	
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Reference is made to the following documents:

D1: KR 20-2010-0002316 U (KIM, Seon Ki) 05 March 2010

D2: KR 10-1999-0007621 A (KIM, Seon Hoi) 25 January 1999

D3: KR 20-0475939 Y1 (LEE, Young Ku) 15 January 2015

D4: KR 10-1379180 B1 (JEONG, Myeong Hun et al.) 31 March 2014

D5: KR 20-2012-0005098 U (YUN, Soon Seon) 12 July 2012

1. Novelty and Inventive Step

1.1. Claims 1 to 3

1.1.1. Independent Claim: Claim 1

In relation to claim 1, document D1 discloses a clay charcoal grilling apparatus for a barbecue, comprising: a body (10), which has an opening at a front side thereof, and includes a roasting chamber (11) and guide rails (16a, 16c) installed in the roasting chamber; grill

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

drawers (20a, 20b) each having a grill (21) coupled to the inside of a frame (22) forming a quadrangle frame; and a charcoal box mounting drawer (30), which includes a front plate (32) having a knob (33) and integrally formed on a frame (31) forming a quadrangle frame and allows a charcoal box (34) containing charcoal to be supported thereon (claims 1 and 4, and figures 1 and 5).

In relation to claim 1, document D2 discloses a charcoal grill plate comprising a foreign matter receiver, the charcoal grill plate comprising: a foreign matter receiver support (6) having a catching protrusion shape and allowing a foreign matter receiver (3) to be fitted in and engaged with the vicinity portion of the bottom edge of a grilling part (2); and the foreign matter receiver (3) which is formed to have a size fittable into the foreign matter receiver support (6) below the grilling part (2) and includes a grate (3a) having a U-shaped cross-section, so as to receive and store a foreign matter falling from meat put on the grilling part (2) (see page 2 and figure 2).

In relation to claim 1, document D3 discloses a gridiron for direct-fire grilling, comprising an discharge port formed in the outer portion thereof and capable of receiving oil, wherein a plurality of wires are formed to have a cross-section of any one of V-shaped, U-shaped, and U-shaped in order to transfer oil generated when meat is grilled on a first and a second gridiron part (see paragraphs [0008]-[0046] and figures 1-4).

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

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**Box No. V** Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Claim 1 is different from document D1 in that a charcoal grill for direct-fire grilling comprises: an oil receiving plate including storage spaces formed therein, which are partitioned from through-holes thereof by means of protrusion thresholds protruding upward from peripheries of the through-holes and are aligned with openings of a grill plate located on the same vertical line, wherein the storage spaces are configured to store water, which evaporates and provides steam heat when meat is grilled, and are formed to communicate with each other so as to allow the water stored therein or oil to be stored to maintain the same level. Further, said difference is neither disclosed in the other cited documents (D2-D5) nor would be obvious to a person skilled in the art even in light of the cited documents. Therefore, claim 1 is novel under PCT Article 33(2) and involves an inventive step under PCT Article 33(3).

1.1.2 Dependent Claims: Claims 2 and 3

Claims 2 and 3 are dependent claims directly referring to claim 1, and are thus novel under PCT Article 33(2) and involve an inventive step under PCT Article 33(3).

2. Industrial Applicability

The invention as set forth in claims 1 to 3 is industrially applicable under PCT Article 33(4).