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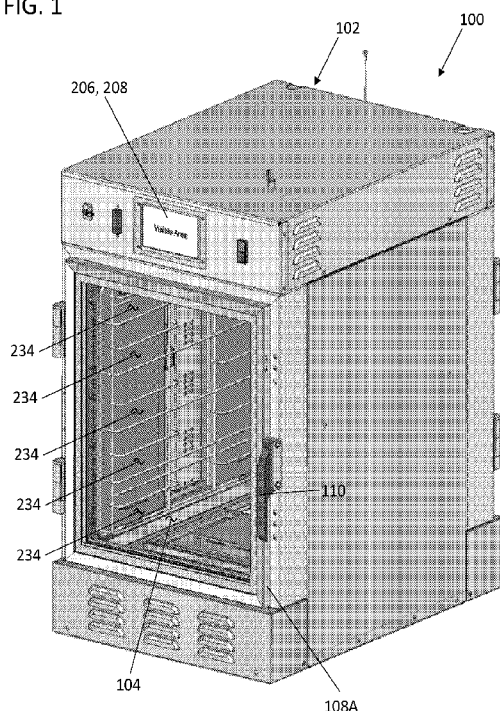
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DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
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KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA,
NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,
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SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: FOOD HOLDING CABINET

FIG. 1



(57) Abstract: Food preparation apparatus and associated components and methods. The food holding cabinet may be configured to hold various types of food according to different recipes. The food holding cabinet includes at least one conditioning element (e.g., heater) to condition a food holding cavity of the apparatus. The food preparation apparatus may include a humidity sensor configured to be easily removed for maintenance or replacement.

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*

(88) Date of publication of the international search report:

15 May 2025 (15.05.2025)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 24/33293

A. CLASSIFICATION OF SUBJECT MATTER

IPC - INV. A47J 39/02, A47J 36/24, A21B 1/40 (2024.01)

ADD. A21B 3/04, A21B 3/00, A47J 36/32 (2024.01)

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ADD. A21B 3/00, A47J 39/003, A47F 3/001, A47J 36/32, A47J 36/2483

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)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2020/0146504 A1 (Cleveland Range, LLC), 14 May 2020 (14.05.2020), entire document, especially Figs 1-16	1-8
Y	US 2014/0083309 A1 (Duke Manufacturing Co), 27 March 2014 (27.03.2014), entire document, especially Figs 1-89	1-8
A	US 2018/0220841 A1 (Enodis Corporation), 09 August 2018 (09.08.2018), entire document, especially Figs 1-13	1-8
A	US 2020/0323222 A1 (Duke Manufacturing Co), 15 October 2020 (15.10.2020), entire document, especially Figs 1-30	1-8
A	US 2011/0278278 A1 (Emerich et al), 17 November 2011 (17.11.2011), entire document	1-8
A	US 2017/0065117 A1 (Duke Manufacturing Co), 09 March 2017 (09.03.2017), entire document	1-8
A	US 2021/0307563 A1 (Marmon Foodservice Technologies, Inc), 07 October 2021 (07.10.2021), entire document.	1-8

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"D" document cited by the applicant in the international application

"E" earlier application or patent but published on or after the international filing date

"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)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 24/33293

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:

Lack of Unity:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I: Claims 1-8 directed to a food holding cabinet with a housing, heating system, exhaust, and control system.

Group II: Claims 9-15 directed to a food preparation apparatus comprising a housing, a humidity sensor, and a shield overlying the sensor.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

****see extra 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 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.:
1-8

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.

****Box No. III******SPECIAL TECHNICAL FEATURES**

The invention of Group I includes the special technical feature of a food holding cabinet comprising: a housing having a door, the housing having tray supports, the tray supports defining a plurality of holding locations in the cavity; a heating system; a humid air exhaust; a control system, the control system programmable to execute food holding recipes for different types of food simultaneously held in the cavity, the control system including a user interface having a display, the display configured to show a plurality of holding location displays, each holding location display corresponding to one of the holding locations, the holding location displays arranged in an array matching the arrangement of the corresponding holding locations in the cavity, not required by the claims of Group II.

The invention of Group II includes the special technical feature of a food preparation apparatus comprising: a humidity sensor having a sensor head in fluid communication with the food conditioning cavity; and a shield overlying the sensor head to shield the sensor head from being contacted from inside the food conditioning cavity, the shield being configured to permit air from the food conditioning cavity to flow around the shield to the sensor head, not required by the claims of Group I.

COMMON TECHNICAL FEATURES

Groups I and II share the common technical features of a housing defining a food conditioning cavity.

However, this shared technical feature does not represent a contribution over prior art as being anticipated by US 2008/0245783 A1 to Aoyama et al (hereinafter 'Aoyama'), which discloses a housing defining a food conditioning cavity (housing 4, Fig 2, with inner cavity, abstract: 'A food heating warmer includes a placing section divided into a plurality of divided sub-sections in a warming compartment so that food is placed on the placing section').

As the common technical features were known in the art at the time of the invention, these cannot be considered special technical feature that would otherwise unify the groups.

Therefore, Groups I-II lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.