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(54) Title: MODULAR FOOD CARTRIDGES FOR USE IN A COOKING DEVICE

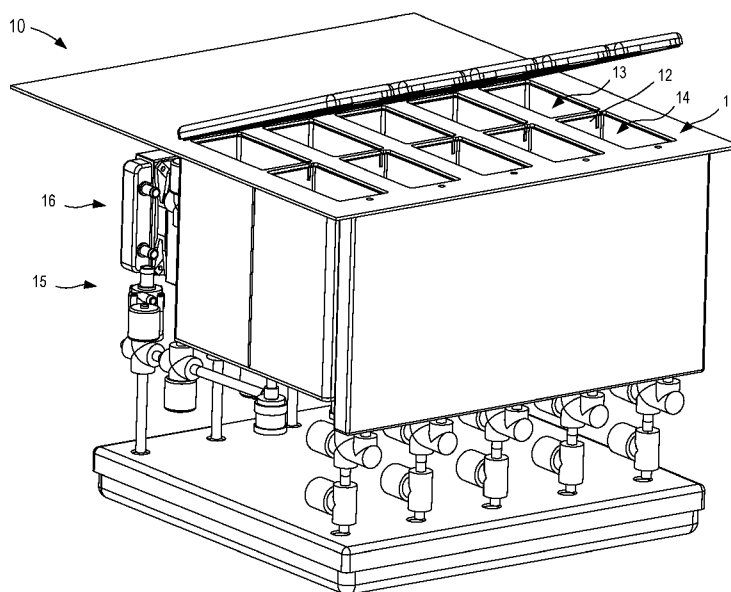


FIG. 2

(57) Abstract: A system includes a first food compartment and a second food compartment configured to be disposed in a first portion and a second portion, respectively, of a fluid immersion device. The first food compartment defines an inner volume and is configured to fluidically isolate a first food item in the inner volume and to transfer thermal energy between a fluid in the first portion of the fluid immersion device and the first food item. The second food compartment is configured to receive a second food item and is at least temporarily coupled to a carrier configured to be disposed in the second food compartment. At least a portion of the second food compartment is fluid permeable and is configured to receive a flow of fluid from the second portion of the fluid immersion device to transfer thermal energy from the fluid to the second food item.





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— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 17/18312

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B65D 81/34 (2017.01)

CPC - B65D 81/3415

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.
X	US 2008/0069485 A1 (FRANCE et al) 20 March 2008 (20.03.2008) entire document	1-4, 9, 12, 13
A		5-8, 10, 11
A	DE 2 211 659 A1 (R. MELZER OHG MASCHINENBAU UND METALLVERARBEITUNG) 20 September 1973 (20.09.1973) entire document	1-13
A	FR 2 978 957 A1 (BACOT LEONORE ESTHER et al) 15 February 2013 (15.02.2013) entire document	1-13
A	US 4,013,798 A (GOLTSOS) 22 March 1977 (22.03.1977) entire document	1-13
A	US 3,608,770 A (VINCENT et al) 28 September 1971 (28.09.1971) entire document	1-13

☐ 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

"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

10 April 2017

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 17/18312

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 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.:
1-13

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.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 17/18312

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

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 examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-13, directed to a system for at least one of storing food items or cooking food items in a fluid immersion device including a first food compartment configured to fluidically isolate, a second food compartment configured to be fluid permeable, and a carrier.

Group II: Claims 14-22 a system for at least one of storing food items or cooking food items in a fluid immersion device including a first food compartment configured to fluidically isolate, a second food compartment configured to be fluid permeable, a third food compartment being fluid permeable, and all food compartments including identifiers associated with the food items.

Group III: Claims 23-30 directed to a method for providing food items for use in a fluid immersion device including providing data to the fluid immersion device and isolating portions of the fluid immersion device.

The inventions listed as Groups I-III 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:

SPECIAL TECHNICAL FEATURES

The invention of Group I includes the special technical feature of
a carrier configured to be disposed in the second portion of the fluid immersion device, the carrier having a coupling portion configured to receive the second food compartment to at least temporarily couple the second food compartment to the carrier;
not required by the claims of Group II.

The invention of Group I includes the special technical feature of
the first food compartment configured to fluidically isolate the first food item and transfer thermal energy;
the second food compartment configured to be fluid permeable and configured to receive a flow of fluid flowing through the second portion of the fluid immersion device operable in transferring thermal energy from the fluid to the second food item;
not required by the claims of Group III.

The invention of Group II includes the special technical feature of
the first food compartment including an identifier associated with the first food item;
the second food compartment including an identifier associated with the second food item,
a third food compartment configured to receive a third food item and including an identifier associated with the third food item, the third food compartment configured to be disposed in the second portion of the fluid immersion device, at least a portion of the third food compartment being fluid permeable and configured to receive a volume of fluid from the second portion of the fluid immersion device operable in transferring thermal energy from the fluid to the third food item;
not required by the claims of Groups I and III.

The invention of Group II includes the special technical feature of
the first food compartment configured to fluidically isolate the first food item therein, the first food compartment configured to allow thermal energy to be transferred between the first food item and a volume of fluid in the first portion of the fluid immersion device;
at least a portion of the second food compartment being fluid permeable and configured to receive a volume of fluid from the second portion of the fluid immersion device operable in transferring thermal energy from the fluid to the second food item;
not required by the claims of Group III.

The invention of Group III includes the special technical feature of
providing data associated with the first food item to the fluid immersion device when the first food compartment is disposed in the first portion of the fluid immersion device;
the second portion of the fluid immersion device being isolated from the first portion of the fluid immersion device;
providing data associated with the second food item to the fluid immersion device when the carrier is disposed in the second portion of the fluid immersion device;
not required by the claims of Groups I and II.

-*- Continued on next extra sheet -*-

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 17/18312

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

COMMON TECHNICAL FEATURES

Groups I-III share the common technical features of a system for at least one of storing food items or cooking food items in a fluid immersion device, the system comprising:

- a first food compartment in a first portion of the fluid immersion device configured to receive a first food item; and
- a second food compartment in a second portion of the fluid immersion device configured to receive a second food item.

However, this shared technical feature does not represent a contribution over prior art as being anticipated by US 2008/0069485 A1 to France et al. (hereinafter referred to as France), which discloses a system (Fig. 10B) for at least one of storing food items or cooking food items (102) in a fluid immersion device (pot 112; Abstract and Paras. [0020]-[0021]; Fig. 1; wherein the device is immersed in steam), the system comprising:

- a first food compartment (packet 118) in a first portion of the fluid immersion device configured to receive a first food item (sauce 120; Para. [0035]); and
- a second food compartment (container 103 or bag 122) in a second portion of the fluid immersion device configured to receive a second food item (123; Paras. [0024]-[0026] and [0038]-[0039]).

Groups I and II share the common technical features of

- the first food compartment configured to fluidically isolate the first food item therein, and to allow thermal energy to be transferred between the first food item and a volume of fluid in the first portion of the fluid immersion device (Para. [0035]); and
- at least a portion of the second food compartment being fluid permeable and configured to receive a volume of fluid from the second portion of the fluid immersion device operable in transferring thermal energy from the fluid to the second food item (Paras. [0024]-[0026] and [0038]-[0039]).

Groups I and III share the common technical features of

- a carrier (basket 110; Fig. 10A) configured to be disposed in the second portion of the fluid immersion device, the carrier having a coupling portion configured to receive the second food compartment to at least temporarily couple the second food compartment to the carrier (Para. [0053]; Fig. 10B).

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-III lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.