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- 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))

(54) Title: WARMING STAND

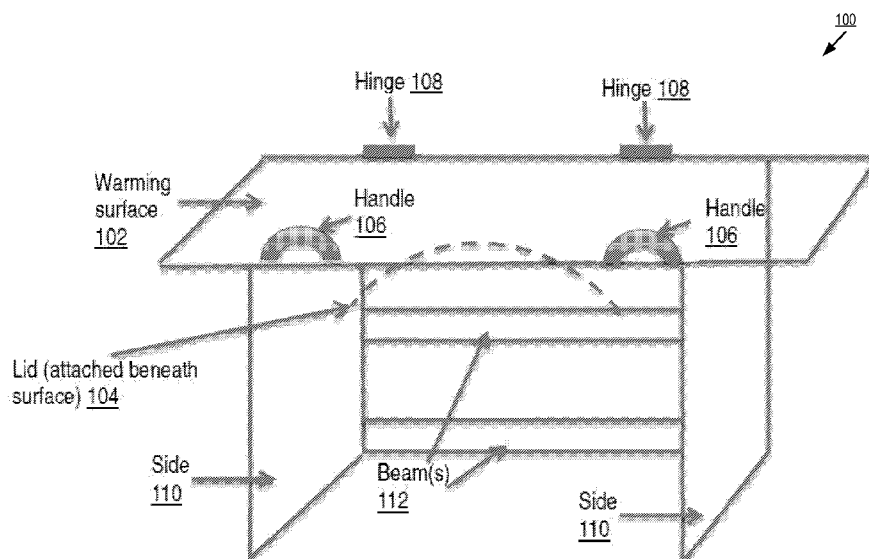


FIG. 1

(57) Abstract: A warming stand is described which may include two sides arranged parallel to one another, one or more beams arranged to join the two sides to one another, a surface connected via one or more hinges to at least one of the one or more beams, and a lid affixed to the underside of the surface. The surface, when lowered along the hinges, is positioned perpendicular to the two sides and positions the lid in a manner that distributes heat received at the lid across the surface. The disclosed warming stand can enable users to maintain a slow cooker while also warming trays of food (which may be positioned on top of the surface of the warming stand) without needing a second heat source.



## WARMING STAND

### CROSS-REFERENCE TO RELATED APPLICATIONS

[001] This application is related to and claims the benefit of U.S. Patent Application No. 62/092,152, filed December 15, 2014 which is incorporated herein by reference in its entirety.

### TECHNICAL FIELD

[002] Aspects and implementations of the present disclosure relate to a warming stand.

### BACKGROUND

[003] Orthodox Jewish law prohibits cooking and the use of fire on the Sabbath, a weekly observance beginning Friday at sundown. Accordingly, many members of the Orthodox Jewish community arrange slow cooker devices and other means to enable them to enjoy warm food during the Sabbath.

SUMMARY

[004] The following presents a simplified summary of various aspects of this disclosure in order to provide a basic understanding of such aspects. This summary is not an extensive overview of all contemplated aspects, and is intended to neither identify key or critical elements nor delineate the scope of such aspects. Its purpose is to present some concepts of this disclosure in a simplified form as a prelude to the more detailed description that is presented later.

[005] In one aspect of the present disclosure, a warming stand may include two sides arranged parallel to one another, one or more beams arranged to join the two sides to one another, a surface connected via one or more hinges to at least one of the one or more beams, and a lid affixed to the underside of the surface. The surface, when lowered along the hinges, is positioned perpendicular to the two sides and positions the lid in a manner that distributes heat received at the lid across the surface.

[006] In another aspect of the present disclosure, a warming stand may include a surface, a lid affixed to the underside of the surface, and a plurality of adjustable legs affixed to the surface, and wherein the legs, when expanded, raise the lid.

[007] In another aspect of the present disclosure, an apparatus can include a frame which can include a plurality of sides, a surface attached to the frame, and a lid attached to the underside of the surface, wherein the surface distributes heat emanating from a heating source upon which the lid is positioned

**BRIEF DESCRIPTION OF THE DRAWINGS**

**[008]** Aspects and implementations of the present disclosure will be understood more fully from the detailed description given below and from the accompanying drawings of various aspects and implementations of the disclosure, which, however, should not be taken to limit the disclosure to the specific aspects or implementations, but are for explanation and understanding only.

**[009]** Figure 1 depicts an exemplary warming surface in accordance with one implementation of the present disclosure.

**[0010]** Figure 2A depicts an exemplary warming surface in accordance with one implementation of the present disclosure.

**[0011]** Figure 2B depicts an exemplary warming surface in accordance with one implementation of the present disclosure.

**[0012]** Figure 2C depicts an exemplary warming surface in accordance with one implementation of the present disclosure.

**[0013]** Figure 2D depicts an exemplary warming surface in accordance with one implementation of the present disclosure.

**[0014]** Figure 3A depicts an exemplary warming surface in accordance with one implementation of the present disclosure.

**[0015]** Figure 3B depicts an exemplary warming surface in accordance with one implementation of the present disclosure.

DETAILED DESCRIPTION

[0016] Aspects and implementations of the described technologies related to a warming stand having a surface that can be positioned/oriented above an existing cooking device (e.g., a slow cooker) in order to warm other foods arranged on the upper side/surface of the warming surface.

[0017] Described herein is an apparatus configured to serve as a flat surface that can be arranged or oriented above a cooking/heating device such as a slow cooker (and/or any other such source of heat) in order to utilize the heat emanating/radiating from the cooking/heating device, such as in order to warm foods arranged on top of the surface.

[0018] As described and illustrated herein, in certain implementations, the described warming stand can incorporate an alternate lid for a slow cooker (e.g., a Crock-Pot ®) (that is, the described warming stand may incorporate elements that can be positioned above a slow cooker in lieu of the original cover or lid that accompanied the slow cooker). Additionally, in certain implementations the surface of the referenced warming stand may be large enough to support one 9 inch x 13 inch pan or 2 smaller foil pans, though it should be understood that such dimensions are merely exemplary and that the described apparatus can be arranged/configured in relation to any number of additional dimensions, configurations, etc. (e.g., larger or smaller sizes, different shapes, such as circular, oval shaped, etc.).

[0019] It should be understood that the described warming stand/surface may have particular utility to members of the Orthodox Jewish community who adhere to specific laws related to cooking on the Sabbath. Orthodox Jewish law prohibits cooking and use of fire on the Sabbath, which begins Friday at sundown. Therefore, in order to prepare food for Sabbath, many Jewish households set up a slow cooker (e.g., a Crock-Pot ®) before the Sabbath to slow cook food within the 24 hour period so that a hot meal (e.g., stew, such as ‘*cholent*,’ a traditional Jewish stew) can be served in the afternoon. In addition to such a

slow cooker, many families also use another hot plate surface or a metal sheet which can cover over a lit burner (known as a “*blech*”) so they have a surface on which to warm pans of food. As such, it can be appreciated that considerable inconveniences and/or inefficiencies can result from the need for a separate slow cooker (in which to prepare stew) and a hot plate (on which to warm pans/platters of food). For example, considerable heat can be generated by such devices, which can create warm/uncomfortable conditions, e.g., during summer months. By way of further example, the use of separate warming devices can entail increased energy usage/costs. Moreover, the use of separate devices requires considerable counter space, which can be difficult to find in small kitchens. Additionally, the use of separate hot plate devices can result in unsafe conditions (e.g., burn risk, fire risk, etc.). It should also be understood that the described warming surface may have applicability and/or utility in any number of other settings, context, etc.

[0020] The described warming surface/stand can be warmed using heat originating from the slow cooker (and/or any other such cooking device or heat source above/around which it is positioned). As such, the warming surface can serve as a heating surface even without its own source of electricity (though it should be understood that, in certain implementations, the warming surface may also incorporate its own heating element/source, such as in order to supplement the heat originating from the crockpot, more evenly distribute the heat across the entire surface, maintain a minimum and/or specific temperature, etc.). The warming surface also serves to save counter space by removing the need for an additional/separate hotplate, and it saves energy, again, by removing the need for another electrical hotplate. For those who usually cover a burner with a “*blech*” (as referenced above), utilizing the described warming surface above the slow cooker is a safer alternative, reducing risk of fire. It can also be used where a *blech* is impractical such as where there is no gas stove top.

[0021] Existing products do not create/provide a flat surface for warming food above a slow cooker. For example, existing slow cookers have lids that are concave and have a knob or handle in the middle and are thus inadequate for warming trays of food upon them.

[0022] In certain implementations, the described product can provide a flat heating surface (though it should be understood that such an arrangement is exemplary and that other arrangements are also contemplated, including but not limited to contoured surfaces).

[0023] Figure 1 depicts an exemplary warming stand 100 in accordance with one embodiment. As depicted in Figure 1, the described warming stand can include a frame which can be made up of heat resistant sides 110 that can be joined or connected by one or more horizontal beams 112. As depicted in Figure 1, the warming stand 100 can also include a warming surface 102 (which can be supported by the referenced sides) which can further include or otherwise incorporate a concave lid 104 which can be affixed or otherwise attached to the underside of the warming surface 102. Such a lid can be constructed of a material that readily conducts heat, such as stainless steel.

[0024] In certain implementations, such as are depicted in Figure 2C, a receiving mechanism, element, etc. 210 may be attached to the underside of the warming surface. Such a receiving element 210 (e.g., a hook, clasp, etc.) may be configured to enable the attachment of an existing slow cooker lid 212 (e.g., the original lid that slow cooker 200 was manufactured/sold with) to the underside of the warming surface, such as is shown in Figure 2C.

[0025] Additionally, as shown in Figure 1, handle(s) 106 (which may be heat resistant) can be positioned at the edge of the warming surface. Such handles can allow the user to place/position the warming surface and to lift the lid easily. Moreover, as depicted in Figure 1, the warming surface can be attached to the stand (and, specifically, one of the beams that

connect the two sides, such as the topmost beam) by one or more hinges 108 placed along the back side of the surface (e.g., opposite then handles).

**[0026]** Figure 2A depicts the described warming stand (e.g., warming stand 100 as depicted in Figure 1) as oriented/arranged in conjunction with a slow cooker 200 and having food 202 (which should be understood to represent/correspond to a tray or platter of food, etc.) placed on the top side of the warming surface 102. As shown in Figure 2A, warming surface 102 can be positioned such that lid 104 is oriented directly on top of the slow cooker (which may be plugged into a power outlet, as shown, in order to power its heating element). Accordingly, while the slow cooker is cooking (and generating heat), the heat emanating from the slow cooker can warm surface 102 (and thus can be used to warm up food 202 positioned on the top side of surface 102).

**[0027]** Figure 2B depicts the described warming stand (e.g., warming stand 100 as depicted in Figure 1 and Figure 2A) with warming surface 102 raised. As described, hinge(s) 108 can enable warming surface 102 to pivot and be raised or lowered (e.g., by grasping handle(s) 106 and raising/lowering the surface). By raising surface 102, a user of the described warming stand can properly position slow cooker 200, can stir the slow cooker, spoon out from the slow cooker, etc., and then can replace the warming surface by lowering it back down.

**[0028]** In certain implementations the referenced lid may be detachable from the underside of the warming surface. For example, multiple types of lids may be provided for attachment under the warming surface, such as one lid to fit a round crockpot of a particular size, one lid to fit an oval shaped crockpot of a particular size, etc. Moreover, in certain implementations the referenced lid may be shaped, contoured, or flared differently, such as in a manner that more evenly distributes the heat across the entire surface. For example, Figure 2D depicts a Y-shaped lid 204 which enables the heat emanating from the crockpot to distribute across a

greater portion of the warming surface). It should be understood that such an arrangement is exemplary and that, as noted, the referenced lid may also be configured on other shapes as well.

**[0029]** Figure 3A depicts another embodiment of the described warming stand. As shown in Figure 3A, the described warming stand 300 can include a warming surface 102 (such as is described herein) that can be supported by one or more legs 302 (e.g., four legs, positioned at the four corners of the surface, as shown). In certain implementations, the described legs can be configured to be adjustable, e.g., as telescoping legs. For example, the described legs can be composed of multiple elements (e.g., 304A and 304B, as shown) which can nest within one another. Thus, when compacted, one element (e.g., 304B) can insert into another element (e.g., 304A), thereby reducing the overall length of the leg 302. Accordingly, by adjusting the length of the described telescoping legs (e.g., by expanding and/or contracting them) warming surface 102 and lid 104 can be positioned at an appropriate height (e.g., in relation to slow cooker 200, as shown). It should be understood that any number of mechanisms (e.g., pressure/tension mechanisms, screws, stoppers, selector pins, etc.) can be used to maintain the position of the telescoping legs (e.g., once the surface of the warming stand is positioned at the desired height).

**[0030]** Figure 3B depicts the described warming stand 300 (e.g., as shown in Figure 3A) in a state in which its legs 302 have been expanded in order to raise warming surface 102 and lid 104. As shown in Figure 3B, by expanding telescopic legs 302, element 304C (which was previously enclosed within/concealed by elements 302A and/or 302B) is revealed. By raising surface 102, a user of the described warming stand can properly position slow cooker 200, can stir the slow cooker, spoon out from the slow cooker, etc. (e.g., even while maintaining food, etc., on top of the warming surface), and then can replace the warming surface by lowering it back down.

[0031] It should be understood that the described elements, as well as their assembled combination, may be configured to be modular and/or foldable/collapsible, such that, for example, when not in use, the lid can be detached and the stand can be folded for storage.

[0032] It should also be understood that the various embodiments and implementations described herein (and/or elements, features, etc., thereof) may be further combined. For example, in certain implementations the warming stand having telescopic legs (e.g., as depicted in Figures 3A and 3B) may further incorporate a hinged warming surface (e.g., as depicted in Figures 1 and 2A-2D). Doing so can, for example, enable a user to more effectively position the warming stand, access the slow cooker, etc.

[0033] Among the advantages and benefits provided by the described apparatus are:

[0034] The described warming stand conveniently creates additional warming surface(s).

[0035] The described warming stand is fully compliant with religious cooking restrictions on Shabbat.

[0036] The described warming stand saves space.

[0037] The described warming stand does not need electricity (as uses heat generated from the slow cooker) – thereby saving energy.

[0038] The described warming stand reduces risk of fire (versus metal sheet over burner, “blech,” or electrical hot plate).

[0039] It should also be understood that the components referenced herein can be combined together or separated into further components, according to a particular implementation. Additionally, in some implementations, various components of a particular element may be distributed across multiple elements.

[0040] It should also be noted that while the technologies described herein are illustrated primarily with respect to warming food, the described technologies can also be implemented

in any number of additional or alternative settings or contexts and towards any number of additional objectives.

**[0041]** It is to be understood that the above description is intended to be illustrative, and not restrictive. Many other embodiments will be apparent to those of skill in the art upon reading and understanding the above description. The scope of the disclosure should, therefore, be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled.

**CLAIMS****What is claimed is:**

1. A warming stand comprising:
  - two sides arranged parallel to one another;
  - one or more beams arranged to join the two sides to one another;
  - a surface connected via one or more hinges to at least one of the one or more beams; and
  - a lid affixed to the underside of the surface;
  - wherein the surface, when lowered along the hinges, is positioned perpendicular to the two sides; and
  - wherein the surface, when lowered, positions the lid in a manner that distributes heat received at the lid across the surface.
2. The warming stand of claim 1, further comprising one or more handles affixed to the ventral edge of the surface.
3. The warming stand of claim 1, wherein the one or more hinges are affixed to the ventral edge of the surface.
4. The warming stand of claim 1, wherein the lid comprises a concave lid.
5. The warming stand of claim 1, wherein the surface comprises a heat-conducting surface.
6. The warming stand of claim 1, wherein the one or more beams join the two sides to one another at the respective dorsal edges of the two sides.
7. A warming stand comprising:
  - a surface;
  - a lid affixed to the underside of the surface; and
  - a plurality of adjustable legs affixed to the surface;

wherein the legs, when expanded, raise the lid.

8. The warming stand of claim 7, wherein the legs comprise telescopic legs.
9. The warming stand of claim 7, wherein the surface is connected to at least one of the adjustable legs via one or more hinges.
10. The warming stand of claim 9, wherein the surface, when lowered along the hinges, is positioned perpendicular to the plurality of adjustable legs; and
11. The warming stand of claim 7, wherein the surface, when lowered, positions the lid in a manner that distributes heat received at the lid across the surface.
12. An apparatus comprising:
  - a frame comprising a plurality of sides;
  - a surface, attached to the frame; and
  - a lid attached to the underside of the surface;wherein the surface distributes heat emanating from a heating source upon which the lid is positioned.

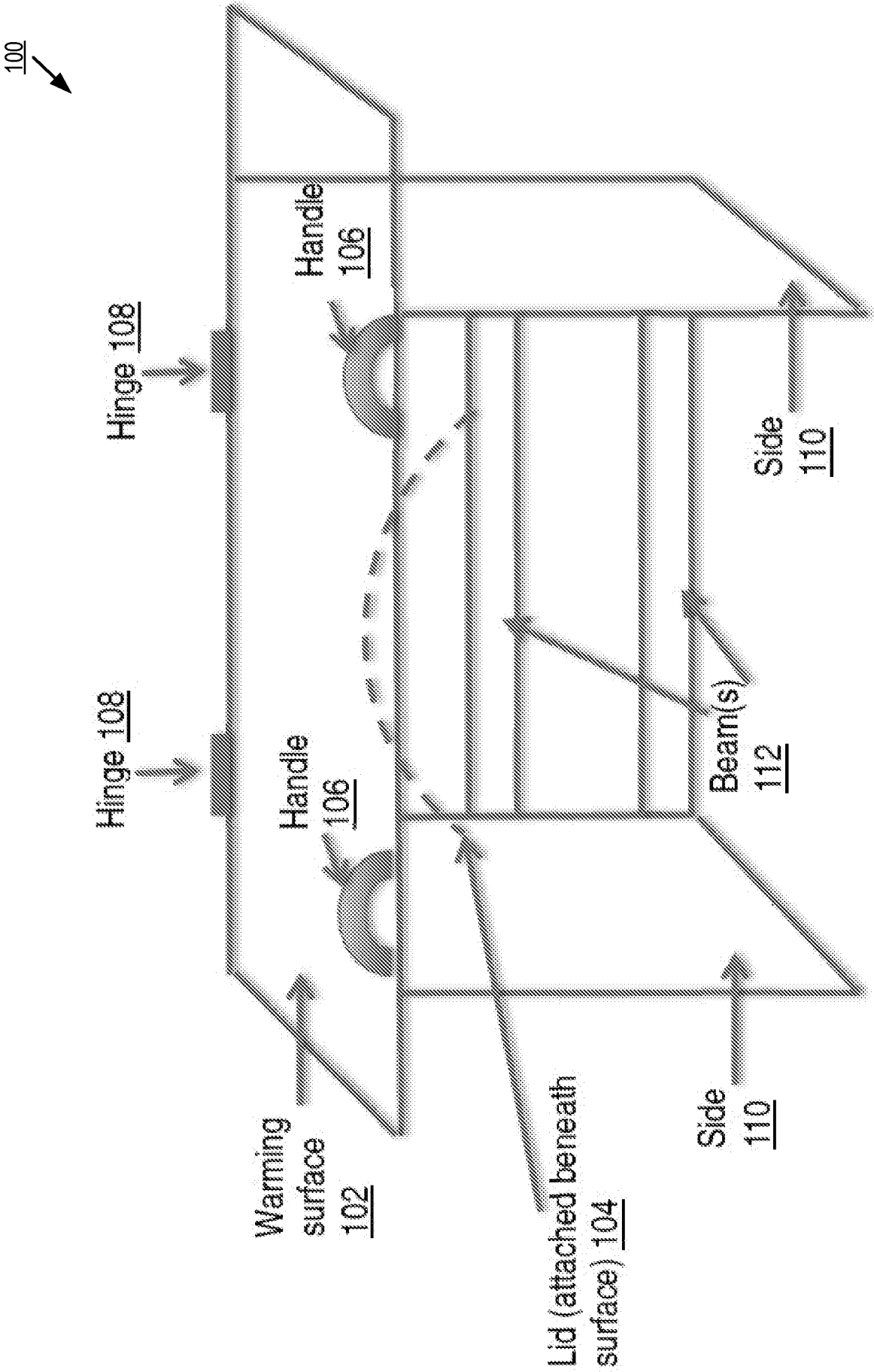


FIG. 1

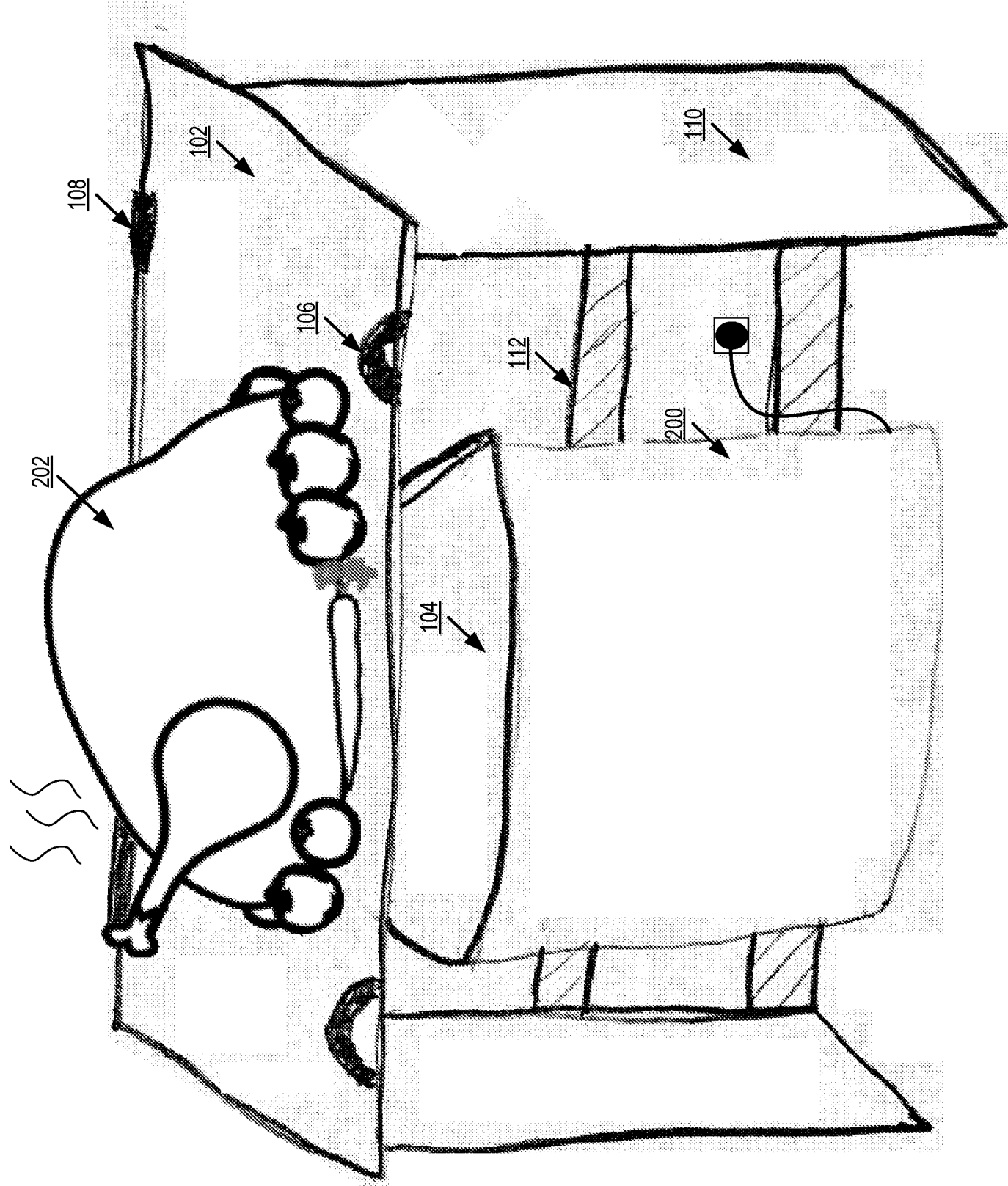


FIG. 2A

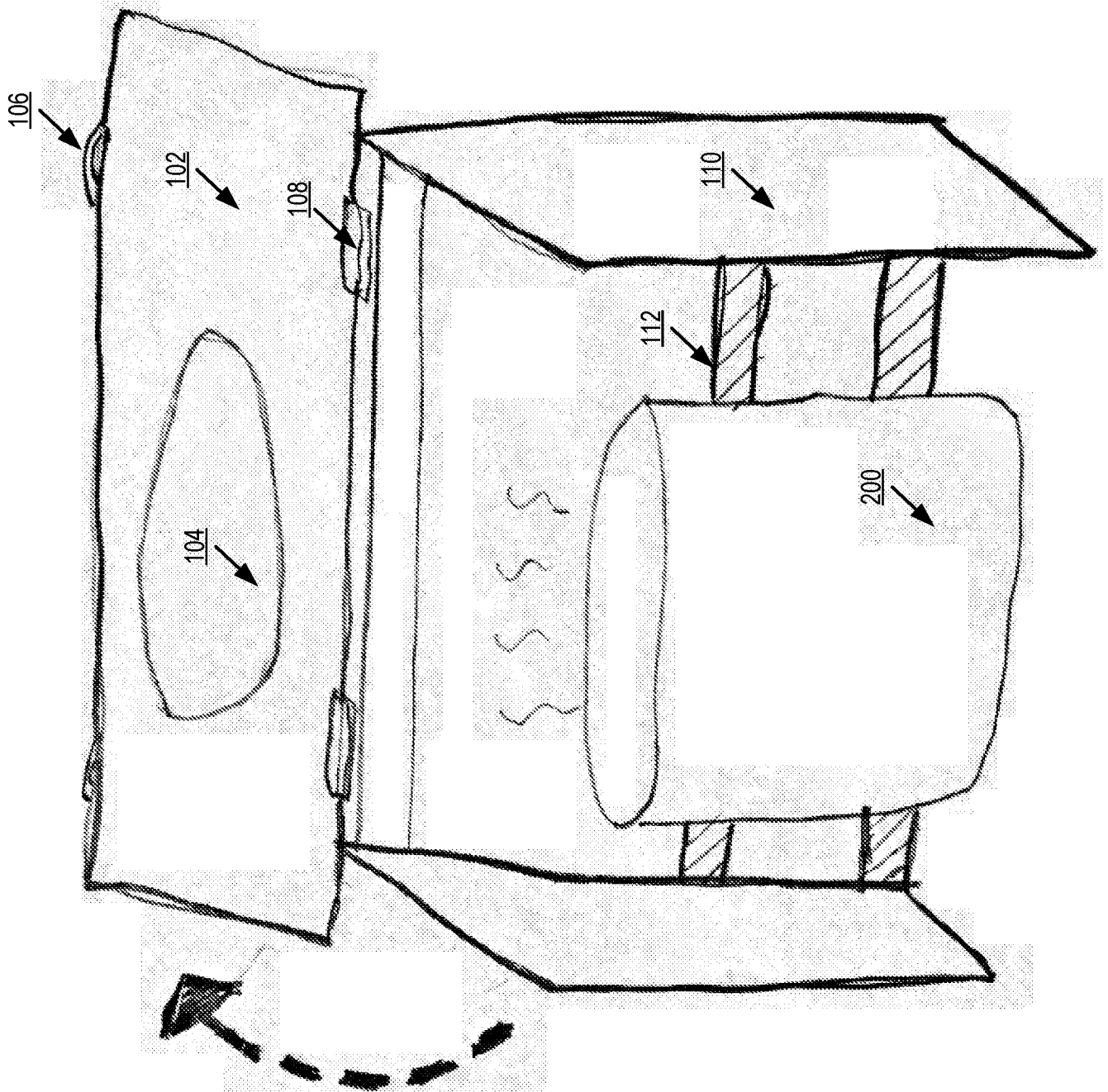


FIG. 2B

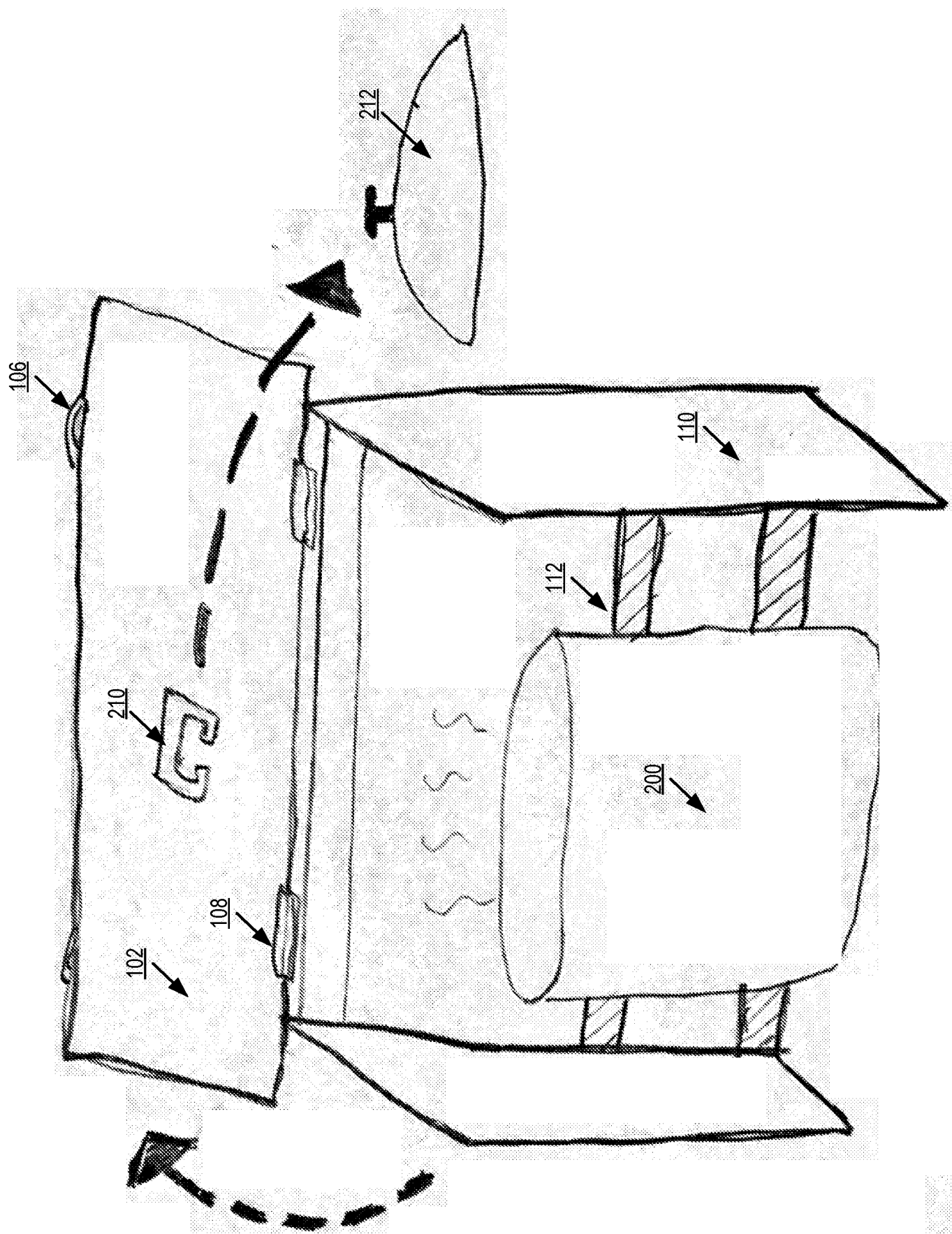


FIG. 2C

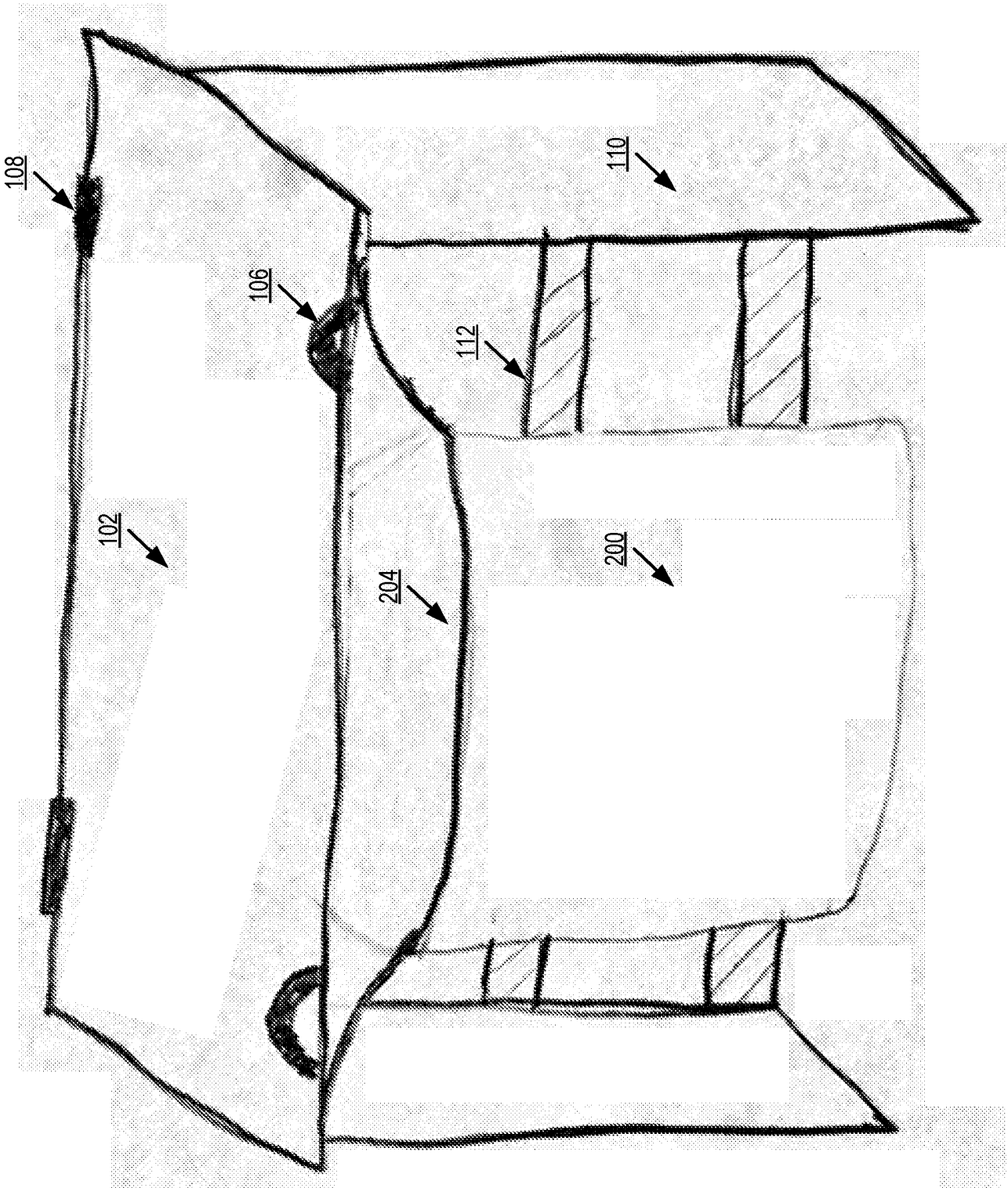


FIG. 2D

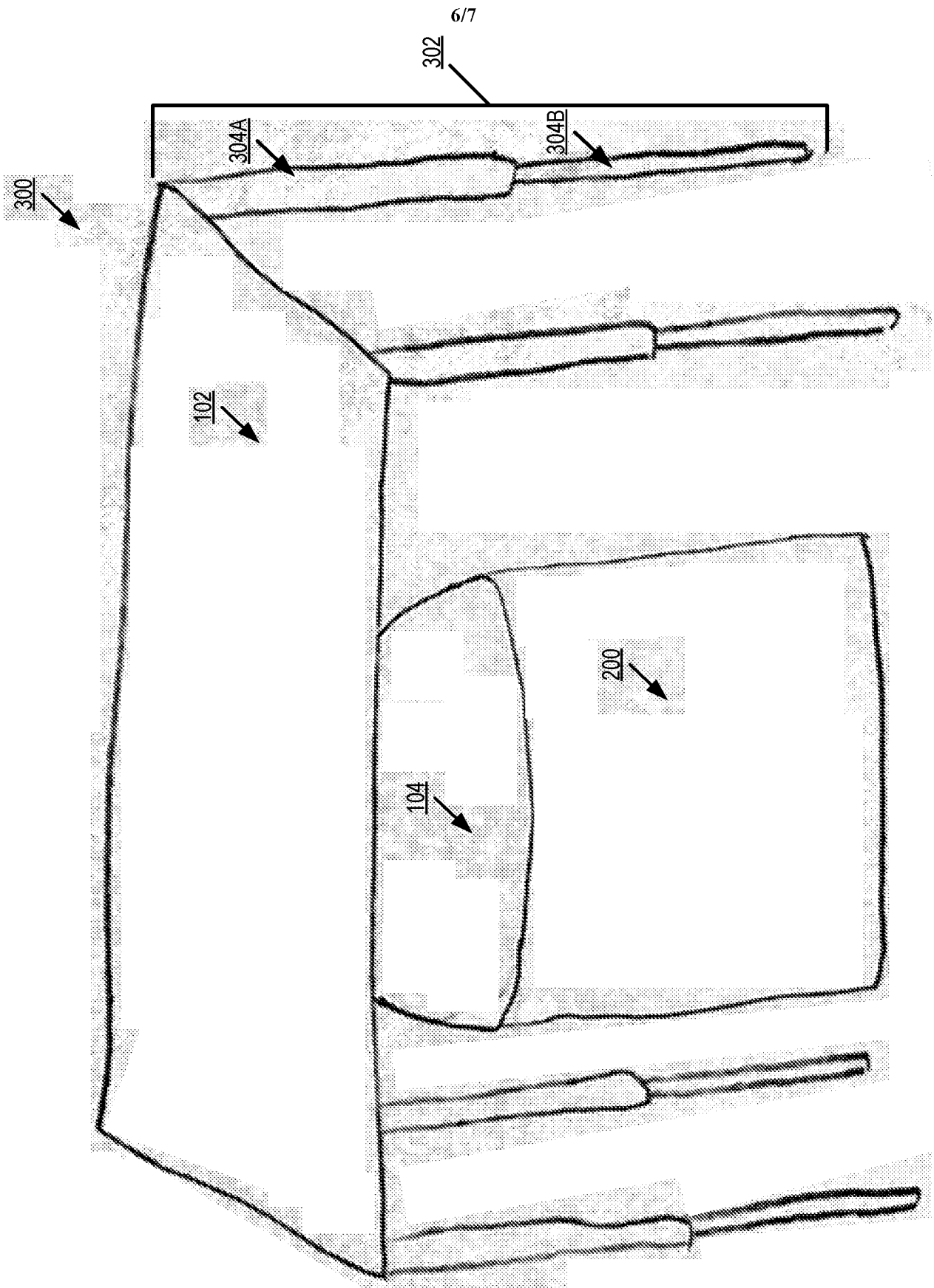


FIG. 3A

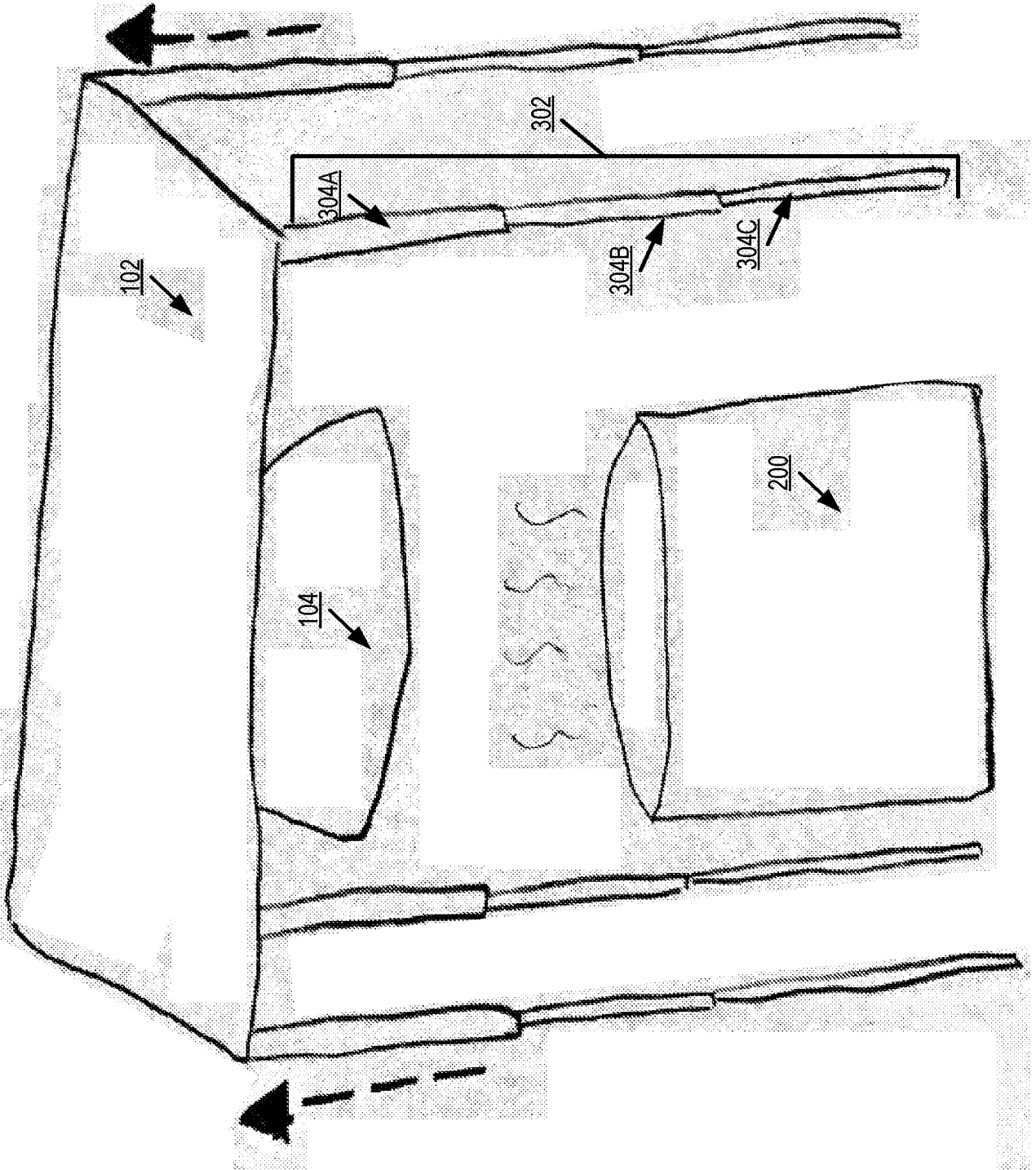


FIG. 3B

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2015/065917

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - F24H 9/06 (2016.01)

CPC - F24H 9/06 (2016.02)

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)

IPC(8) - A01G 13/06; E01C 11/26; E04H 15/12; F24C 1/08, 1/14; F24H 9/06 (2016.01)

CPC - A01G 13/06; E01C 11/265; E04H 15/12; F24C 1/08, 1/14, 7/06; F24D 13/024; F24H 9/06; H05B 1/0275 (2016.02)

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

USPC - 219/209, 213; 392/347, 407, 436 (keyword delimited)

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

PatBase, Google Patents, Google, YouTube

Search terms used: warming stand, sides, wall, frame, beam, parallel, heat, distribute, hinge, surface, lid, cover

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|------------------------------------------------------------------------------------|-----------------------|
| X<br>---  | US 5,133,248 A (FARNSWORTH et al) 28 July 1992 (28.07.1992) entire document        | 1, 3, 6               |
| Y         |                                                                                    | 2, 4, 5               |
| X<br>---  | US 3,870,031 A (KRUPER) 11 March 1975 (11.03.1975) entire document                 | 12                    |
| Y         |                                                                                    | 4, 5                  |
| Y         | US 2,439,133 A (JENKINS) 06 April 1948 (06.04.1948) entire document                | 2                     |
| A         | US 5,642,658 A (LIEBERMANN) 01 July 1997 (01.07.1997) entire document              | 1-6, 12               |
| A         | US 2,668,527 A (CHAMBERS) 09 February 1954 (09.02.1954) entire document            | 1-6, 12               |
| A         | US 4,688,542 A (ISELL) 25 August 1987 (25.08.1987) entire document                 | 1-6, 12               |

☐

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

"I" 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

22 March 2016

Date of mailing of the international search report

19 APR 2016

Name and mailing address of the ISA/

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents  
P.O. Box 1450, Alexandria, VA 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2015/065917

## 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 supplemental page

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.:  
1-6, 12

### 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/US2015/065917

Continued from Box No. III Observations where unity of invention is lacking

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 need to be paid.

Group I, claims 1-6, 12 are drawn to a warming stand comprising sides.

Group II, claims 7-11 are drawn to a warming stand comprising a plurality of adjustable legs.

The inventions listed in 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:

The special technical features of Group I, a warming stand comprising a plurality of sides, and wherein a surface positions the lid in a manner that distributes heat received at the lid across the surface, are not present in Group II; and, the special technical features of Group II, a warming stand comprising a plurality of adjustable legs affixed to a surface, wherein the legs, when expanded, raise the lid, are not present in Group I.

Groups I and II share the technical features of a warming stand comprising a surface and a lid affixed to an underside of the surface. However, these shared technical features do not represent a contribution over the prior art. Specifically, US 6,026,647 A to Coffee et al. teaches of a warming stand (Abstract regarding a container useful for keeping food or beverages warm or cold) comprising a surface (tray 56, Fig. 1, 4) and a lid (lid 54, Fig. 1, 4) affixed to an underside of the surface (lid 54 affixed to an underside of tray 56, Fig. 1, 4).

Since none of the special technical features of the Groups I-II inventions are found in more than one of the inventions, unity is lacking.