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(54) Title: A BARBEQUE GRILL ASSEMBLY

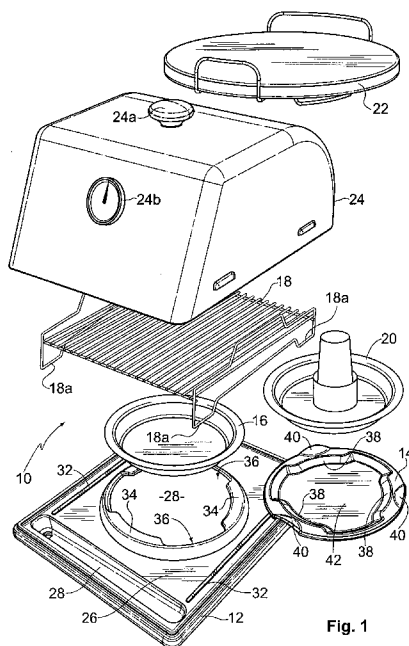


Fig. 1

(57) Abstract: A barbecue grill assembly (10) comprising a grill plate (12) and a cooking insert (14). The grill plate (12) has a substantially planar first cooking surface (26) with an opening (28) therein. The cooking insert (14) is adapted for releasable engagement with the opening (28) and has a substantially planar second cooking surface (42). The first cooking surface (26) and the second cooking surface (42) are non-parallel with respect to each other.

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A BARBEQUE GRILL ASSEMBLY

Field of the Invention

The present invention relates to a barbeque grill assembly, a barbeque grill plate and
5 a barbeque kit. The invention has been primarily developed for use with a gas barbeque
and will be described hereinafter with reference to this application.

Background of the Invention

Barbeques with grill plates that are inclined with respect to horizontal are known.
10 Such grill plates generally include a recess or drain at their lower end. During cooking,
fats and other fluids released from the food being cooked drain down the surface of the
grill plate into the drain. This provides a healthier cooked food. However, such grill
plates are unsuitable for cooking many relatively liquid foods, such as eggs or food
cooked in a sauce or marinade, as these foods slide down the grill plate towards and into
15 the drain.

It is an object of the present invention to substantially overcome, or at least
ameliorate, the above disadvantage.

Object of the Invention

20 It is the object of the present invention to substantially overcome or at least
ameliorate one or more of the above disadvantages.

Summary of the Invention

Accordingly, in a first aspect, the present invention provides a barbeque grill
25 assembly comprising:

a grill plate with a substantially planar first cooking surface having an opening
therein; and

a cooking insert adapted for releasable engagement with the opening and having a
substantially planar second cooking surface;

30 wherein the first cooking surface and the second cooking surface are non-parallel
with respect to each other.

The first and second surfaces are preferably angled with respect to each other by
about 2.5 degrees. The grill plate is preferably installed with the second cooking surface
horizontal and the first cooking surface angled away from horizontal by about 2.5

degrees. The grill plate preferably includes a recess at or near one (lower) end, the recess adapted for connection to a drainage arrangement. The grill plate is preferably cast iron.

The opening is preferably substantially circular, and most preferably bounded by a plurality of inwardly directed cooking insert support flanges that are parallel to the second
5 cooking surface.

In one form, the cooking insert is preferably a cast iron grill tray with a peripheral edge angled outwardly and away from the second cooking surface. The edge preferably includes one or more handles therein.

In another form, the cooking insert is preferably a ceramic pizza tray. The tray
10 preferably includes one or more handles thereon. In a variation of this form, a cast iron grill tray is positioned in the opening and the ceramic pizza tray is positioned on the cast iron grill tray. In a further variation, a foil tray, preferably disposable, is positioned between the cast iron grill tray and the ceramic pizza tray.

In yet another form, the cooking insert is preferably a circular stainless steel fluid or
15 wood chip tray with a peripheral edge angled outwardly and away from the second cooking surface. In this form, the barbeque grill assembly further comprises a smoker/roaster rack having an array of rack bars that are parallel to the second cooking surface.

In a yet further form, the cooking insert is preferably a stainless steel poultry tray
20 with a peripheral edge angled outwardly and away from the second cooking surface and a central poultry support formation.

In a second aspect, the present invention provides a barbeque grill plate comprising:
a substantially planar first cooking surface having an opening therein; and
one or more cooking insert support surfaces substantially adjacent the opening,
25 wherein the cooking surface and the support surfaces are non-parallel with respect to each other.

The cooking surface and the support surfaces are preferably angled with respect to each other by about 2.5 degrees. The grill plate is preferably installed with the support surfaces horizontal and the cooking surface angled from horizontal by about 2.5 degrees.
30 The grill plate preferably includes a recess at or near one end, the recess adapted for connection to a drainage arrangement.

The opening is preferably substantially circular, and the support surfaces preferably form part of a plurality of inwardly directed support flanges that are inclined with respect to the cooking surface.

In a third aspect, the present invention provides a barbeque kit comprising:
a grill plate with a substantially planar first cooking surface having an opening therein; and

5 a grill tray, a pizza tray, a fluid/wood chip tray and a poultry tray that are each adapted for releasable engagement with the opening and that each have a substantially planar second cooking surface, wherein the first cooking surface and the second cooking surface are non-parallel with respect to each other.

The first cooking surface and the second cooking surface are preferably angled with respect to each other at about 2.5 degrees. The grill plate is preferably installed with the
10 second cooking surface horizontal and the first cooking surface angled to horizontal by about 2.5 degrees. The grill plate preferably includes a recess at or near one end, the recess adapted for connection to a drainage arrangement.

The opening is preferably substantially circular, and most preferably bounded by a plurality of inwardly directed cooking insert support flanges that are parallel to the second
15 cooking surface.

Brief Description of the Drawings

Preferred embodiments of the present invention will now be described, by way of examples only, with reference to the accompanying drawings wherein:

20 Fig. 1 is an exploded perspective view of an embodiment of a grill plate, together with four embodiments of cooking inserts;

Fig. 2 is a perspective view of the grill plate shown in Fig. 1;

Fig. 3a is an exploded perspective view of the grill plate of Fig. 1 with the grill tray insert shown in Fig. 1;

25 Fig. 3b is an assembled perspective view of the components shown in Fig. 3a;

Fig. 4a is a partial perspective view of the components shown in Fig. 3b;

Fig. 4b is the side view of the components shown in Fig. 4a;

Fig. 5 is a perspective view of the grill plate shown in Fig. 1 in use with a wok;

30 Fig. 6a is an exploded perspective view of the grill plate shown in Fig. 1 and the marinating/smoking tray insert shown in Fig. 1;

Fig. 6b is an assembled perspective view of the components shown in Fig. 6a with hood removed;

Fig. 6c is perspective view of the component shown in Fig. 6b with the hood closed;

Fig. 7a is a partial perspective view of the components shown in Fig. 6b;

Fig. 7b is a side view of the components shown in Fig. 7a;

Fig. 8a is an exploded perspective view of the grill plate shown in Fig. 1 with the poultry tray insert shown in Fig. 1;

5 Fig. 8b is an assembled view of the components shown in Fig. 8a with a chicken positioned thereon;

Fig. 9a is an exploded perspective view of the grill plate shown in Fig. 1 with the pizza tray insert shown in Fig. 1; and

Fig. 9b is an underside perspective view of the pizza tray insert shown in Fig. 1.

10

Detailed Description of the Preferred Embodiments

Fig. 1 shows a barbeque grill assembly, or kit of components, 10 suitable for use with a barbeque with one or more gas burners (not shown). The assembly 10 comprises a matte vitreous cast iron grill plate 12, a matte vitreous cast iron grill tray insert 14, a steel marinating/smoking tray insert 16, a steel rack 18, a steel poultry tray insert 20, a stone pizza tray insert 22. The barbeque also includes a hood 24 with an insulated handle 24a and a thermometer 24b.

As best shown in Fig. 2, the grill plate 12 has a substantially rectangular planar first cooking surface 26, which has a generally circular opening 28 therein. The grill plate 12 also includes a recess 28, with a drain opening 30, extending substantially across its front edge. The recess 28 is angled downwardly towards the opening 30 and forms part of a fat/fluid drainage arrangement (not shown). The drainage arrangement is shown in the applicant's Australian Provisional Patent Application entitled: "Improvements in barbeques", filed 17 September 2007, the contents of which are incorporated herein by cross reference.

25 The grill plate 12 also includes a pair of grooves 32 extending adjacent and along the sides of the grill plate 12, which assist in locating feet 18a (see Fig. 1) of the rack 18.

The opening 28 is bounded by three inwardly directed cooking insert support flanges 34 which are separated by arcuate gaps 36.

30 Figs. 3a and 3b show the grill plate 12 with the grill tray insert 14 positioned within the opening 28. The grill plate 14 includes three arcuate indentations 38 which locate it with respect to the opening 28. The grill plate 14 also includes three handle portions 40 to assist in adding or removing the grill plate 14 from the grill plate 12. The central or inner part of the grill plate 12 defines a planar second cooking surface 42.

As best shown in Figs. 5a and 5b, the grill plate's first cooking surface 26 is not parallel to the grill tray's second cooking surface 42. More particularly, in use, the second cooking surface 42 is substantially horizontal and the first cooking surface 26 is angled forwardly downwardly at about 2.5 degrees from horizontal.

5 The differently angled cooking surfaces 26 and 42 are advantageous as they result in a barbecue grill plate in which the inclined first cooking surface 26 can be used to cook relatively solid foods (e.g. sausages and steaks) and the second horizontal cooking surface 42 can be used to cook relatively liquid foods (e.g. eggs and foods cooked in a sauce or marinade). Fat and other liquids released from the relatively solid foods cooked on the
10 inclined first cooking surface 26 flow downwardly into the recess 28 for removal via the drainage arrangement. This provides a healthier cooked food. Food cooked on the second horizontal cooking surface 42 is prevented from running into the recess 28 and drainage arrangement. The cooking surfaces 26 and 42 can thus be used to cook differing types of food, simultaneously if required, using a single barbecue.

15 The upper surfaces of the support flanges 34 are, in use, also horizontal. As a result, and as shown in Fig. 6, this allows the support flanges 34 to also act as a wok trivet. This allows food to be cooked on the inclined first cooking surface 26 and also within a wok 44, simultaneously if required.

Figs. 6a to 7b show the grill plate 12 with the marinating/smoking tray insert 16
20 positioned within the opening 28. The marinating/smoking tray insert 16, and tray 18, also each have a second horizontal cooking surface 42. In this configuration, food can be cooked on the smoked (e.g using woodchips) or steamed on the rack 18.

Figs. 8a and 8b show the grill plate 12 with the poultry tray insert 20 positioned
25 within the opening 28. The the poultry tray insert 20 also has a second horizontal cooking surface 42. In this configuration, food can be cooked on the first cooking surface 26 and a chicken 46, or other form of poultry, can be roasted on the poultry tray insert 20, simultaneously if required.

Figs. 9a and 9b show the grill plate 12 with the pizza tray insert 22 positioned
30 within the opening 28. The pizza tray insert 22 also has a second horizontal cooking surface 42 and a pair of handles 48 for positioning the tray 22 with respect to the opening 28 in the grill tray 12. A wire ring 50 is attached to the underside of the handles 48 that includes three arcuate portions 50a which locate the pizza tray insert 22 with respect to the flanges 34 and the gaps 36 surrounding the opening 28. In this configuration, a pizza can be cooked on the pizza tray insert 22. In a variation (not shown) of this configuration,

the cast iron grill tray 14 is positioned in the opening 28 and the pizza tray 22 is positioned on the cast iron grill tray 14. In a further variation (not shown), a disposable foil tray (e.g. holding woodchips) is positioned on the cast iron grill tray 14 beneath the ceramic pizza tray 22.

5 The barbeque grill assembly/kit 10 is thus able to easily and quickly accommodate many differing types of foods and/or cooking styles, in some cases simultaneously if required, without requiring multiple barbeques or other cooking devices.

 Although the invention has been described with reference to preferred
embodiments, it will be appreciated by those persons skilled in the art, that the invention
10 can be embodied in many other forms.

Claims:

1. A barbeque grill assembly comprising:
a grill plate with a substantially planar first cooking surface having an opening
5 therein; and
a cooking insert adapted for releasable engagement with the opening and having a substantially planar second cooking surface;
wherein the first cooking surface and the second cooking surface are non-parallel with respect to each other.
- 10 2. The barbeque grill assembly as claimed in claim 1, wherein the first and second surfaces are angled with respect to each other by about 2.5 degrees.
3. The barbeque grill assembly as claimed in claim 1 or 2, wherein the grill plate is installed with the second cooking surface horizontal and the first cooking surface angled away from horizontal by about 2.5 degrees.
- 15 4. The barbeque grill assembly as claimed in claim 1, 2 or 3, wherein the grill plate includes a recess at or near one end, the recess adapted for connection to a drainage arrangement.
5. The barbeque grill assembly as claimed in any one of claims 1 to 4, wherein the grill plate is cast iron.
- 20 6. The barbeque grill assembly as claimed in any one of claims 1 to 5, wherein the opening is substantially circular
7. The barbeque grill assembly as claimed in claim 6, wherein the opening is bounded by a plurality of inwardly directed cooking insert support flanges that are parallel to the second cooking surface.
- 25 8. The barbeque grill assembly as claimed in any one of claims 1 to 7, wherein the cooking insert is a cast iron grill tray with a peripheral edge angled outwardly and away from the second cooking surface.
9. The barbeque grill assembly as claimed in claim 8, wherein the edge preferably includes one or more handles therein.
- 30 10. The barbeque grill assembly as claimed in any one of claims 1 to 9, wherein the cooking insert is a ceramic pizza tray.
11. The barbeque grill assembly as claimed in claim 10, wherein the tray includes one or more handles thereon.

12. The barbeque grill assembly as claimed in claim 10, wherein a cast iron grill tray is positioned in the opening and the ceramic pizza tray is positioned on the cast iron grill tray.
13. The barbeque grill assembly as claimed in claim 13, wherein a foil tray is
5 positioned between the cast iron grill tray and the ceramic pizza tray.
14. The barbeque grill assembly as claimed in claim 13, wherein the foil tray is disposable.
15. The barbeque grill assembly as claimed in any one of claim 1 to 14, wherein the cooking insert is a circular stainless steel fluid or wood chip tray with a peripheral edge
10 angled outwardly and away from the second cooking surface.
16. The barbeque grill assembly as claimed in any one of claims 1 to 15, further comprising a smoker/roaster rack having an array of rack bars that are parallel to the second cooking surface.
17. The barbeque grill assembly as claimed in any one of claims 1 to 16, wherein the
15 cooking insert is a stainless steel poultry tray with a peripheral edge angled outwardly and away from the second cooking surface and a central poultry support formation.
18. A barbeque grill plate comprising:
a substantially planar first cooking surface having an opening therein; and
one or more cooking insert support surfaces substantially adjacent the opening,
20 wherein the cooking surface and the support surfaces are non-parallel with respect to each another.
19. The barbeque grill assembly as claimed in claim 18, wherein the cooking surface and the support surfaces are angled with respect to each other by about 2.5 degrees.
20. The barbeque grill assembly as claimed in claim 18 or 19, wherein the grill plate is
25 installed with the support surfaces horizontal and the cooking surface angled from horizontal by about 2.5 degrees.
21. The barbeque grill assembly as claimed in claim 20, wherein the grill plate includes a recess at or near one end, the recess adapted for connection to a drainage arrangement.
22. The barbeque grill assembly as claimed in any one of claims 18 to 21, wherein the
30 opening is substantially circular.
23. The barbeque grill assembly as claimed in any one of claims 18 to 22, wherein the support surfaces form part of a plurality of inwardly directed support flanges that are inclined with respect to the cooking surface.
24. A barbeque kit comprising:

a grill plate with a substantially planar first cooking surface having an opening therein; and

a grill tray, a pizza tray, a fluid/wood chip tray and a poultry tray that are each adapted for releasable engagement with the opening and that each have a substantially planar second cooking surface, wherein the first cooking surface and the second cooking surface are non-parallel with respect to each another.

25. The barbeque grill assembly as claimed in claim 24, wherein the first cooking surface and the second cooking surface are angled with respect to each other at about 2.5 degrees.

10 26. The barbeque grill assembly as claimed in claim 24 or 25, wherein the grill plate is installed with the second cooking surface horizontal and the first cooking surface angled to horizontal by about 2.5 degrees.

27. The barbeque grill assembly as claimed in claim 24, 25 or 26, wherein the grill plate includes a recess at or near one end, the recess adapted for connection to a drainage arrangement.

28. The barbeque grill assembly as claimed in any one of claims 24 to 27, wherein the opening is substantially circular

29. The barbeque grill assembly as claimed in claim 28, wherein the opening is bounded by a plurality of inwardly directed cooking insert support flanges that are parallel to the second cooking surface.

20

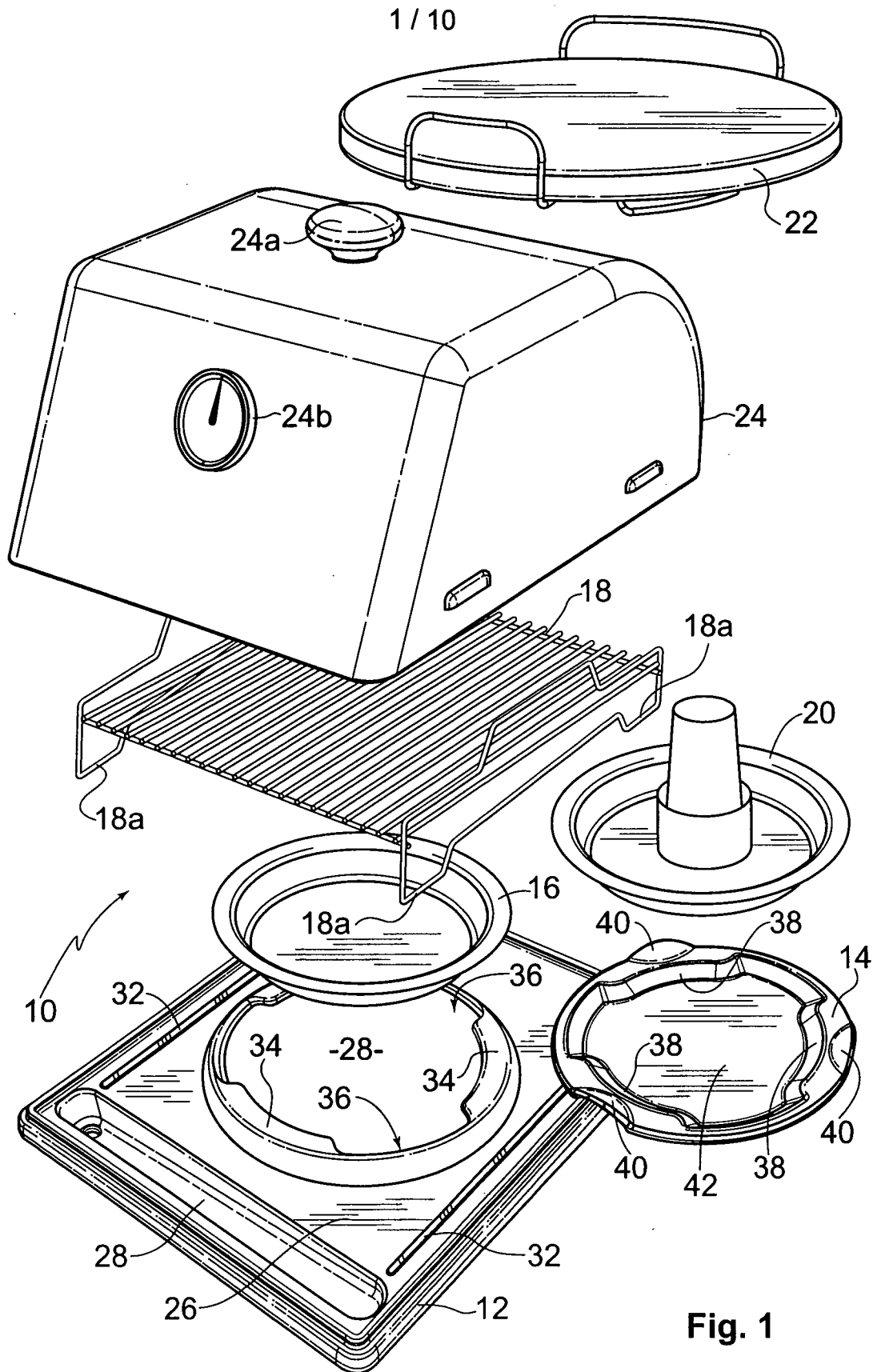


Fig. 1

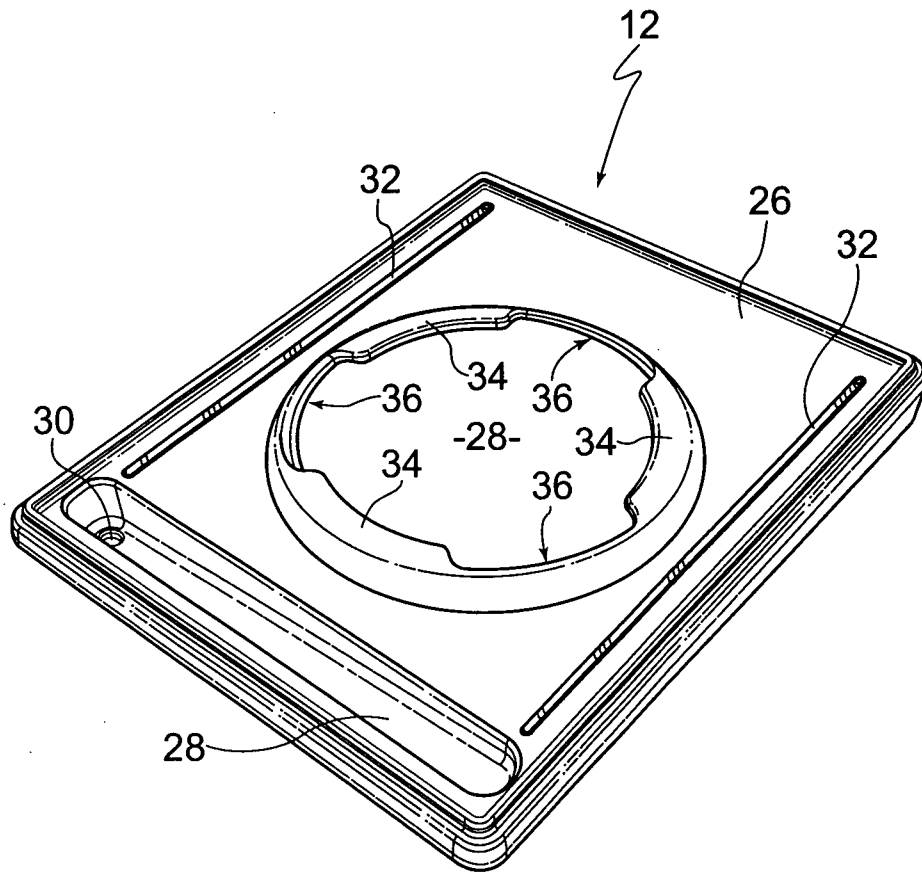


Fig. 2

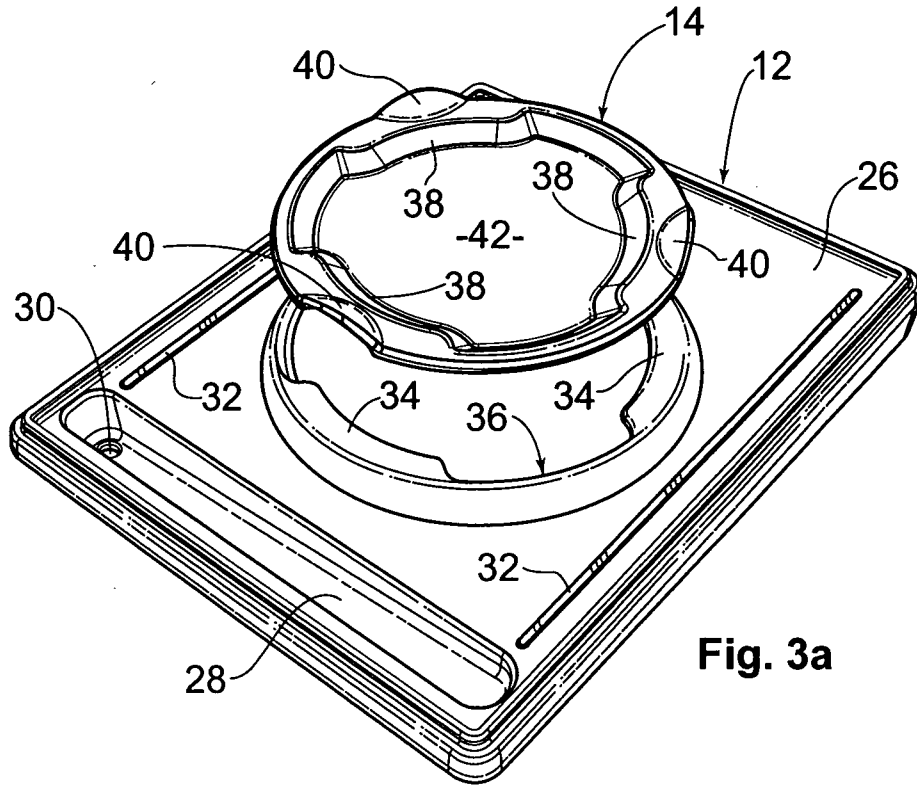


Fig. 3a

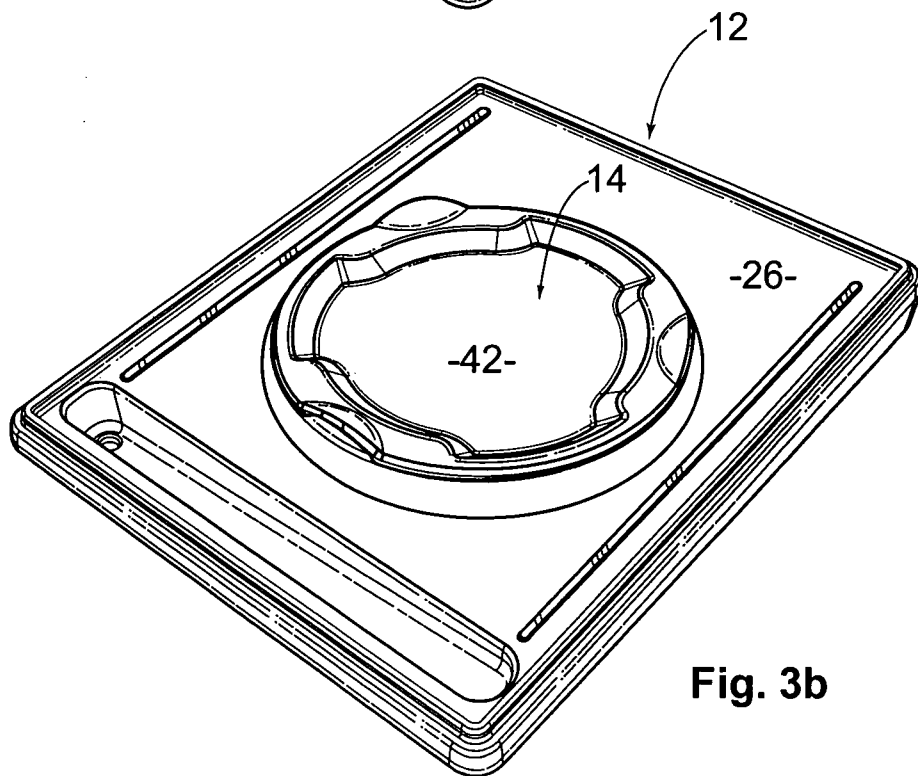
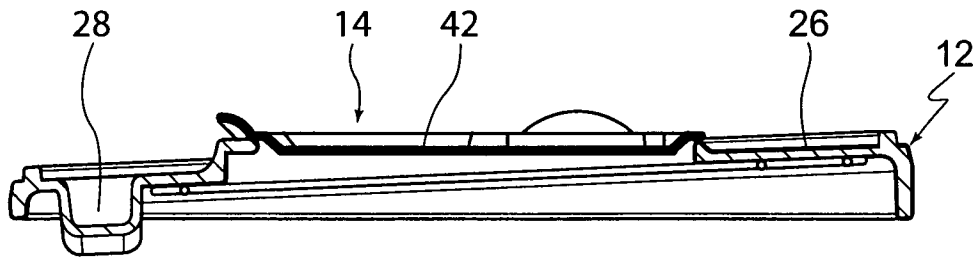
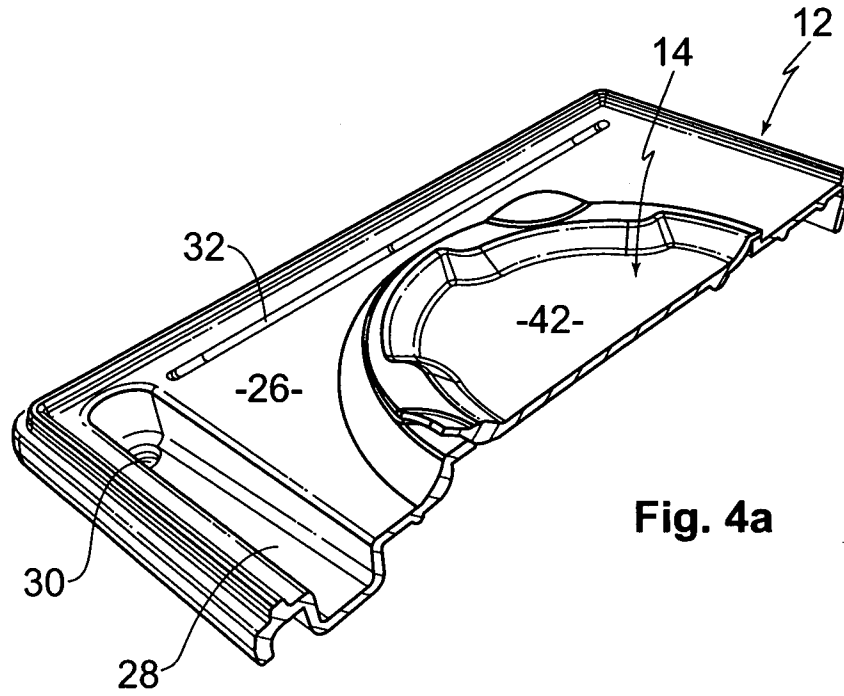


Fig. 3b



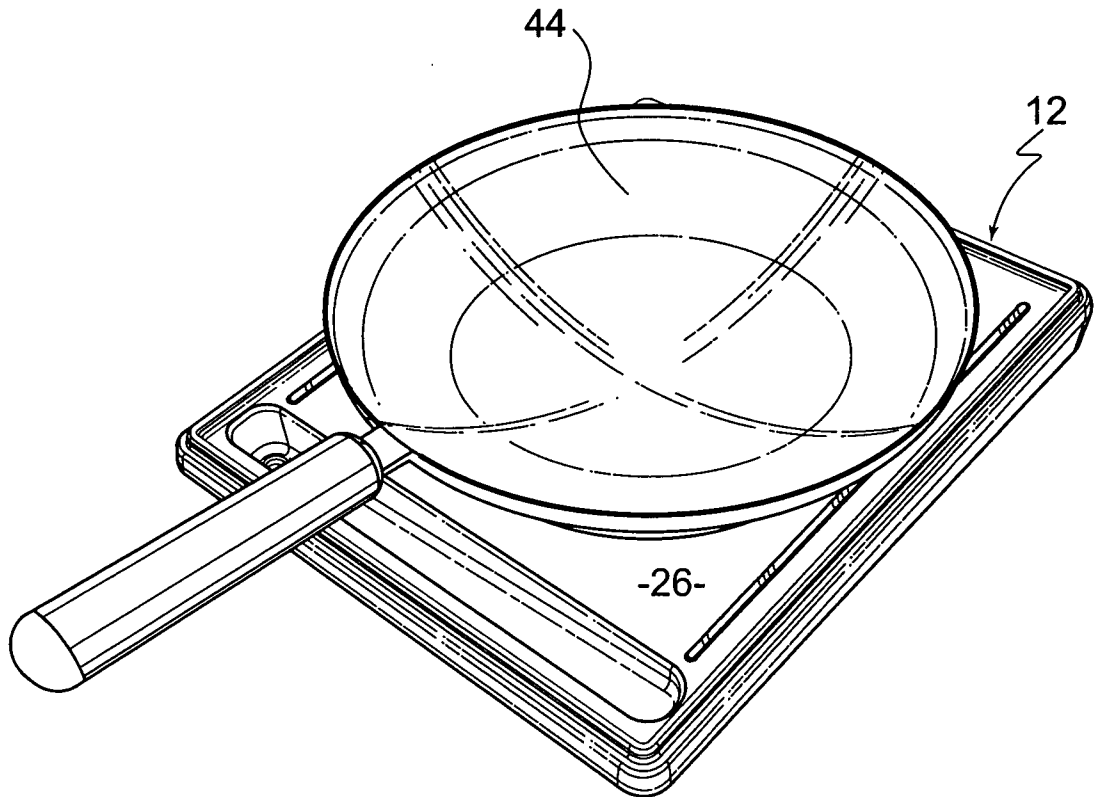


Fig. 5

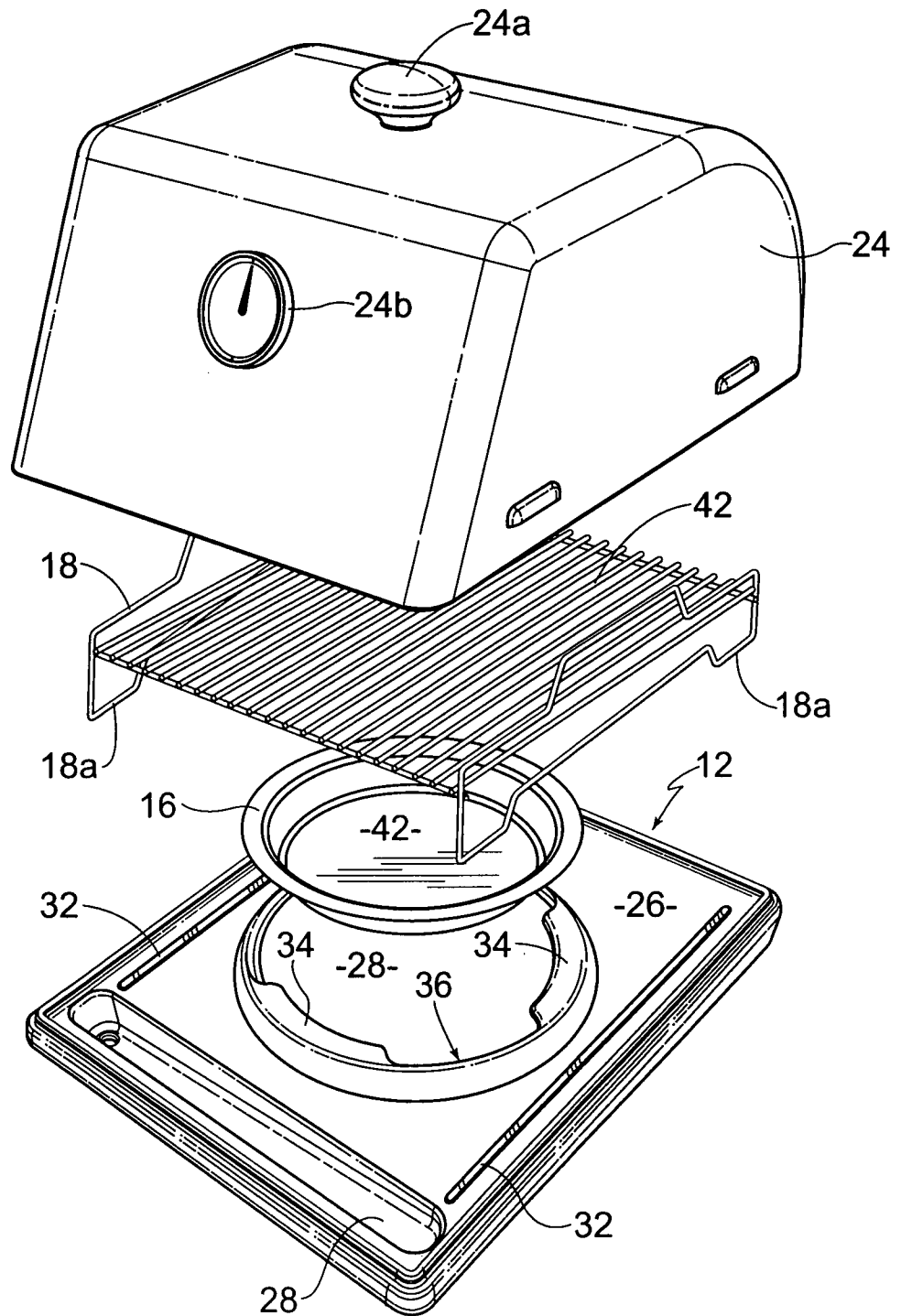


Fig. 6a

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Fig. 6b

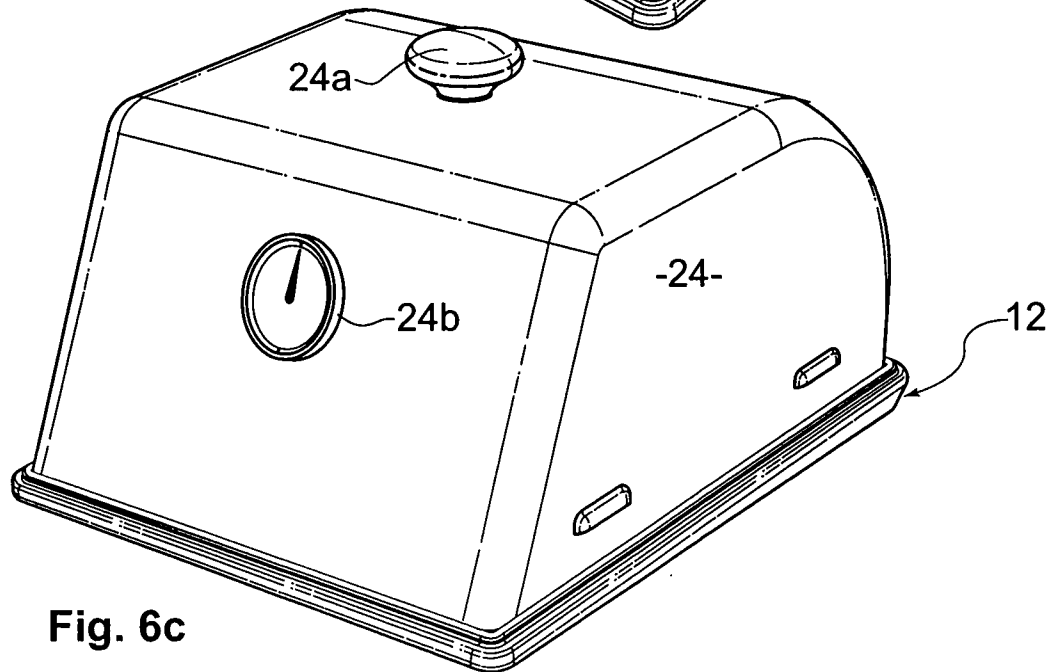
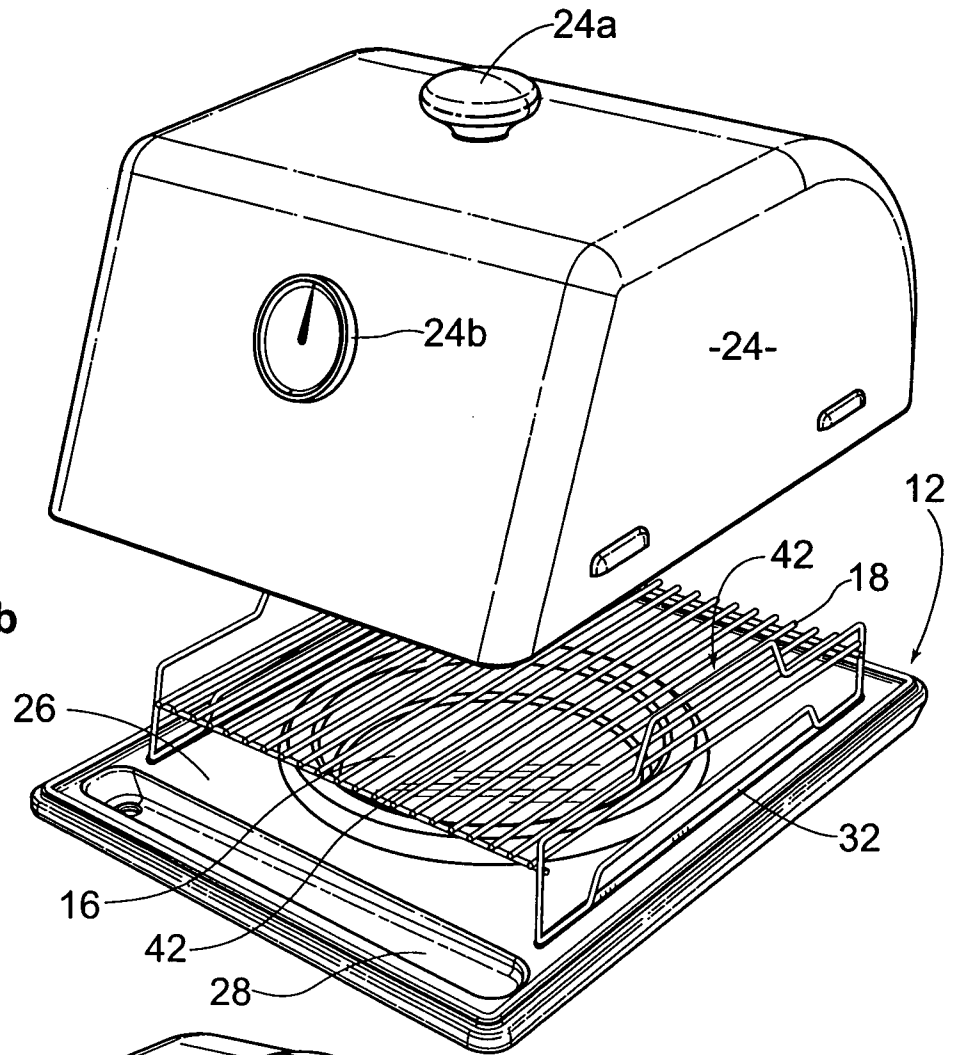


Fig. 6c

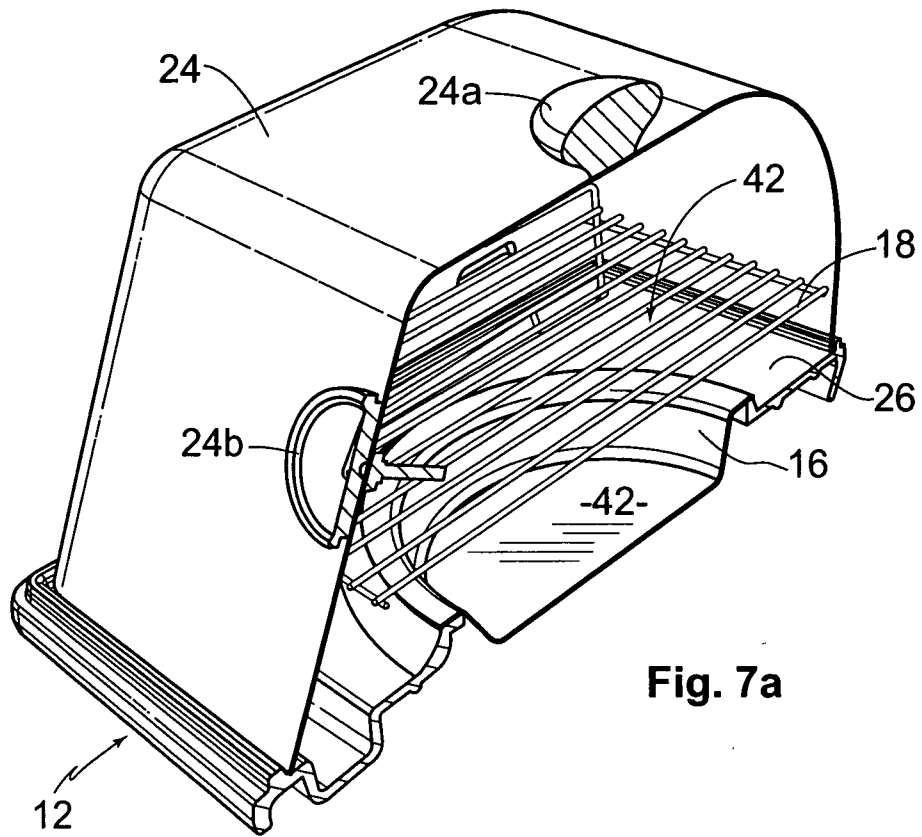


Fig. 7a

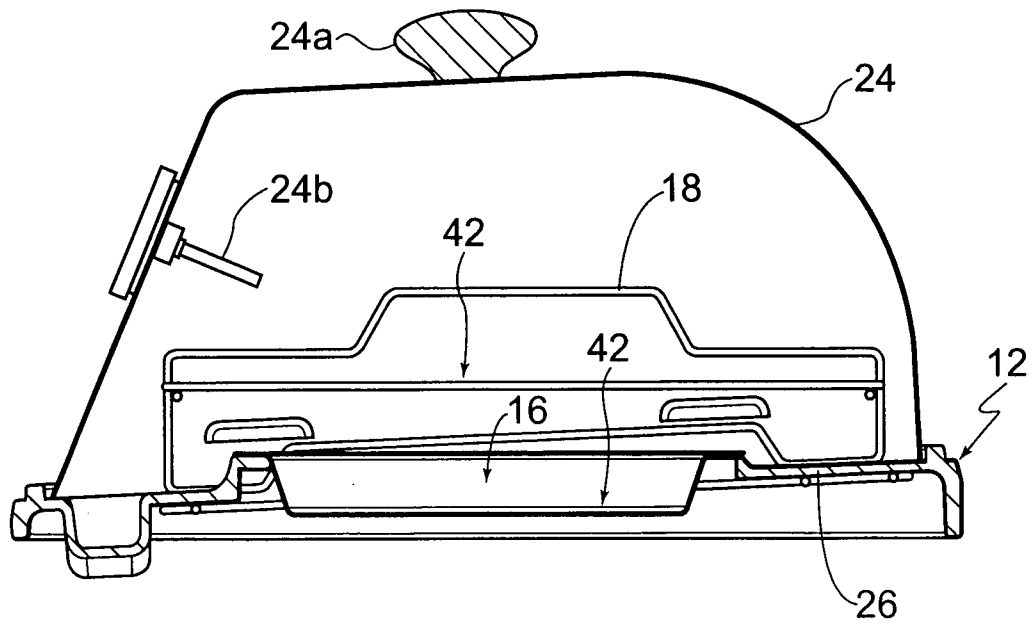
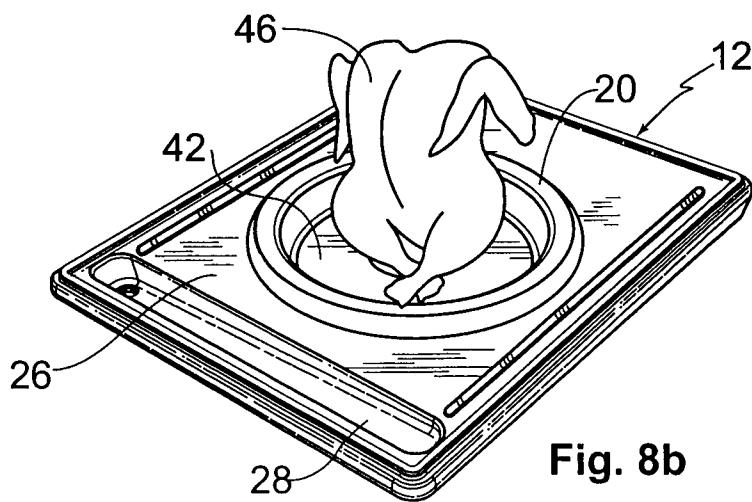
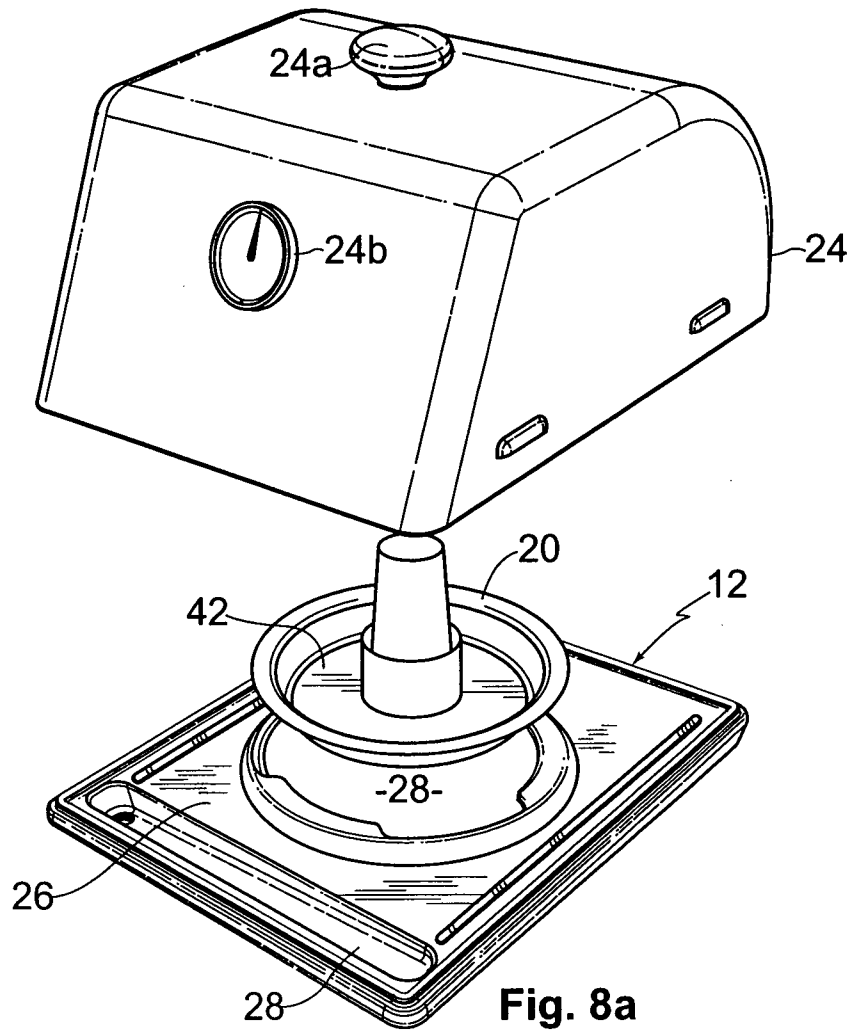


Fig. 7b



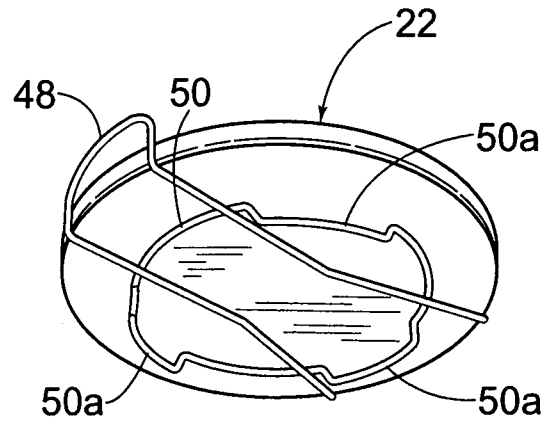


Fig. 9b

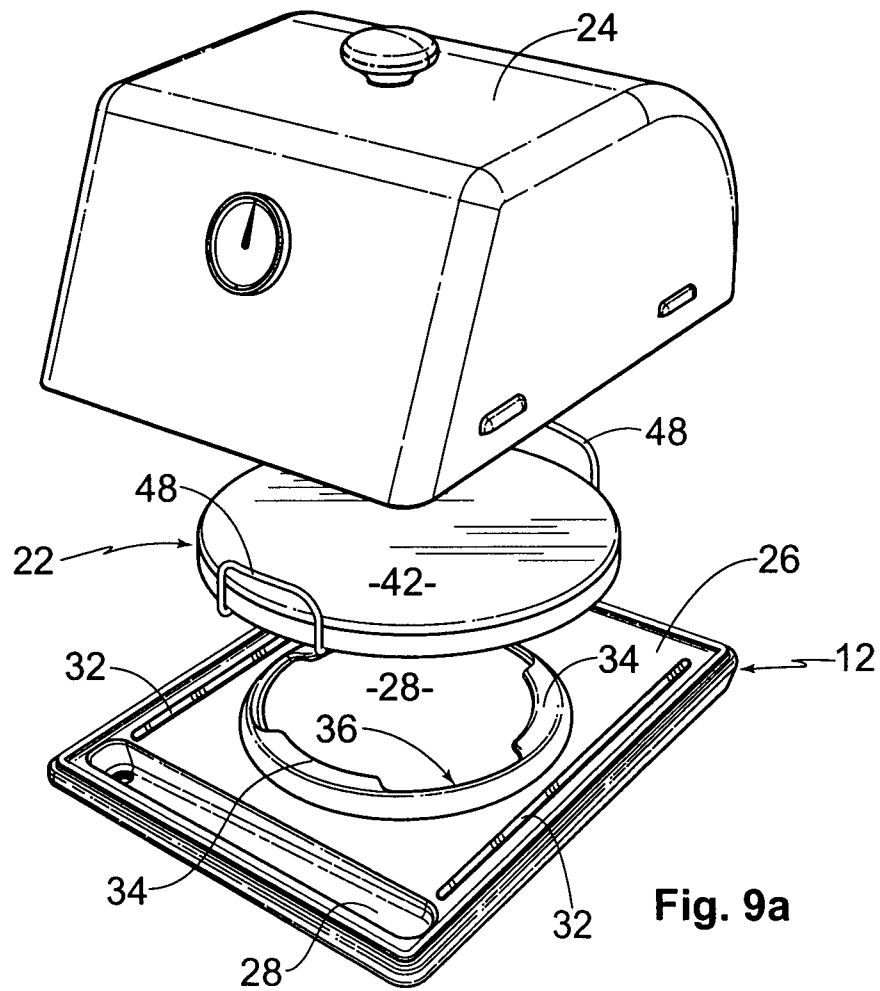


Fig. 9a

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2008/001239

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl.												
A47J 37/07 (2006.01)												
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)												
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 practicable, search terms used)												
WPI, EPODOC /IC/EC A47J 37, A47J 37/07 key words GRILL?, OPEN+, HOLE, INSERT?, TRAY?, NON_PARALLEL, ANGLE?, INCLIN+, PLAT+												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
A	US 5092311 A (RIRIE) 3 March 1992 Whole document	1-29										
A	Patent Abstract of Japan, JP 2001029239 A (SHARP CORP;) 6 February 2001 Abstract	1-29										
A	GB 844861 A (HILL C) 17 August 1960 Whole document	1-29										
A	US 2004/0211406 A (CORNFIELD) 28 October 2004 Whole document	1-29										
<input type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex												
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"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</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"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</td> </tr> <tr> <td>"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)</td> <td>"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</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"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	"E" earlier application or patent but published on or after the international filing date	"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	"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)	"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	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
"A" document defining the general state of the art which is not considered to be of particular relevance	"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											
"E" earlier application or patent but published on or after the international filing date	"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											
"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)	"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											
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family											
"P" document published prior to the international filing date but later than the priority date claimed												
Date of the actual completion of the international search 30 September 2008		Date of mailing of the international search report 13 OCT 2008										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. +61 2 6283 7999		Authorized officer SARAVANAMUTHU PONNAMPALAM AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No : (02) 6283 2070										

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2008/001239

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	5092311	NONE					
JP	2001029239	NONE					
GB	844861	NONE					
US	2004211406	CA	2523451	EP	1619983	US	7059318
		WO	2004093622				

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX