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(54) Title: FOOD PREPARATION TABLE

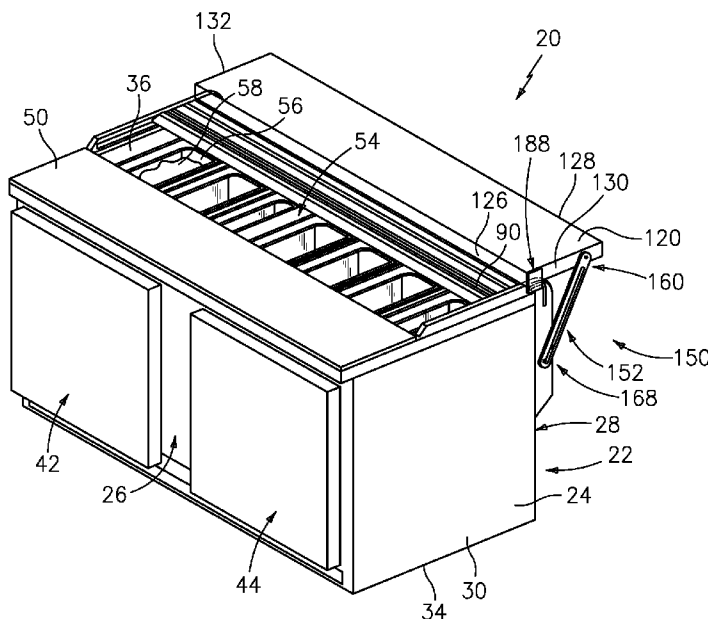


FIG. 1

(57) Abstract: A food preparation table (20) has a cabinet (22). A temperature-controlled food storage compartment (86) opens topward from the cabinet relatively near a rear of the cabinet. A front food preparation surface (50) is along a top (26) of the cabinet. A rear food preparation surface (120) is shiftable between a stowed condition and an upward-facing deployed condition.

FOOD PREPARATION TABLE

BACKGROUND

[0001] The disclosure relates to food preparation. More particularly, the disclosure relates to food preparation tables having temperature-controlled compartments.

- 5 [0002] A variety of food preparation tables are known. Exemplary food preparation tables have a food preparation counter surface and a top-opening, temperature-controlled, food storage compartment readily accessible by a user preparing food on the counter surface. The temperature control typically involves cooling. An exemplary food storage compartment comprises a plurality of pans or bins. International Application PCT/US2007/006173 (the
10 disclosure of which is incorporated by reference in its entirety herein as if set forth at length) discloses a system where the pans protrude into a main refrigerated compartment within a cabinet portion of the food preparation table. The main refrigerated compartment may be accessed by doors along the front.

SUMMARY

- 15 [0003] One aspect of the disclosure involves a food preparation table having a cabinet. A temperature-controlled food storage compartment opens topward from the cabinet relatively near a rear of the cabinet. A front food preparation surface is along a top of the cabinet. A rear food preparation surface is shiftable between a stowed condition and an upward-facing deployed condition.
- 20 [0004] Such a table may be operated in a low volume mode wherein a user stands to the front of the food preparation surface and uses the front food preparation surface to prepare food from the food storage compartment. In low volume mode, the rear food preparation surface is in the stowed condition. The rear food preparation surface may be shifted to the deployed condition for a high volume mode. In the high volume mode, a second user
25 prepares food on the rear food preparation surface from the food storage compartment.
- [0005] The details of one or more embodiments are set forth in the accompanying drawings and the description below. Other features, objects, and advantages will be apparent from the description and drawings, and from the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

- 30 [0006] FIG. 1 is a view of a food preparation table with an auxiliary food preparation surface in a deployed condition.
- [0007] FIG. 2 is a second view of the food preparation table of FIG. 1.
- [0008] FIG. 3 is a sectional view of the table of FIG. 1.

[0009] FIG. 4 is a view of the food preparation table of FIG. 5 with the auxiliary food preparation surface in a stowed condition.

[0010] FIG. 5 is a partial side view of the food preparation table of FIG. 4.

[0011] Like reference numbers and designations in the various drawings indicate like

5 elements.

DETAILED DESCRIPTION

[0012] FIG. 1 shows food preparation table 20. The illustrated food preparation table 20 is based upon the table shown in PCT/US2007/006173. However, other existing or yet-developed food preparation table configurations may be used. The exemplary table 20 includes a cabinet 22. The exemplary cabinet 22 includes a housing 24 defining a front 26, a back/rear 28, a left side 30 (from the point of view of the cabinet rather than a user facing the front of the cabinet) and a right side 32 (FIG. 2). The exemplary cabinet/housing also has a bottom 34 and a top 36. As is discussed further below, the housing 24 has a temperature-controlled main compartment 38 (FIG. 3). Along the front 26, a pair of openings 40 provide access to the compartment 38 and may be closed by doors 42 and 44 (e.g., hinged doors with magnetic seals). At the top 36, extending adjacent the front 26 from side-to-side, is a front food preparation surface 50. The exemplary surface 50 is a flat top surface of a counter 52 (FIG. 3). Behind the counter 52, the housing 24 has an opening 54 in the top 36. A plurality of bins or pans 56 may be held along the opening and may protrude into the main compartment 38 to be cooled. The pans 56 may contain food product 58. The various pans 56 may each contain different food product. For cooling the compartment 38 and the pans 56, the cabinet 22 may contain a refrigeration system 70. An exemplary system 70 includes components such as a compressor 72, condenser 74, and condenser fan 76 located within a bay 78 of the housing 24 separated from the compartment 38. Within the compartment 38, the refrigeration system 70 may include an evaporator 80 and evaporator fan 82.

[0013] The interiors 84 of the pans 56 define, individually or in combination, a food storage compartment 86. In the exemplary embodiment, the pans 56 separate the compartment 86 from the main compartment 38. The exemplary food storage compartment 86 is top-opening and may have removable or shiftable covers. The exemplary table provides a shiftable cover 90 (FIG. 2) guided by tracks 92 within track members 94 at either side of the table. The exemplary cover 90 is flexible/articulatable (e.g., hinged) to allow sliding between an open condition of FIG. 1 and a closed condition of FIG. 4. Other covers are, however, possible. A user 300 can prepare food 88 on the surface 50 using the food 58 from the pans 56. For example, the pans 56 may contain various ingredients for sandwiches, salads, pizza, and the like to be prepared on the surface 50. In an exemplary low volume situation, a single user or multiple users may prepare such food on the surface 50 alone while standing in front of the unit. However, there may be higher volume situations in which an additional food preparation surface is desired. FIG. 1 thus shows a stowable/deployable rear food preparation surface 120 in a deployed condition. The exemplary surface 120 is a flat

first face of a rear counter/shelf 122 having a second face 124, a first edge 126, a second edge 128, a first end 130, and a second end 132. In the exemplary deployed position/condition, a portion 140 of the counter 22 and surface 120 near the first edge 126 vertically overlaps the cabinet/housing. A larger portion 142 protrudes rearward beyond the cabinet. In the deployed condition, one or more second users 302 may stand to the rear of the food preparation surface 120 and prepare food thereon also from the pans 56. In the low volume situation wherein the rear food preparation surface 120 is not needed, the counter 122 may be transitioned to a stowed position/condition of FIG. 4. In the stowed condition, the counter is mostly behind the rear 28 of the housing. For example, the surface 124 may face the rear of the housing nearly parallel thereto (e.g., $\pm 20^\circ$ of vertical when stowed vs. $\pm 5^\circ$ of horizontal when deployed). The edge 126 may be an upper edge and the edge 128 may be a lower edge. An exemplary depth between the edges 126 and 128 is 0.15-0.6m, more narrowly 0.25-0.5m. Exemplary width between the ends 130 and 132 is greater than the depth (e.g., 1-3.5m). The surface 50 may be approximately similar in size. To facilitate cutting, the surfaces 50 and 120 may be of cutting inserts (e.g., nylon cutting boards removeable from remainders of the respective counter 52 and shelf 122) of essentially full size (e.g., permitting a perimeter retaining wall).

[0014] A mechanism may be provided to hold the counter in the deployed condition. The mechanism may further guide movement to the stowed condition and hold the counter in the stowed condition. An exemplary such mechanism 150 includes a pair of struts/braces 152.

The exemplary braces are coupled to the counter relatively near the edge 128 in the deployed condition to support the protruding portion 142 of the counter 122. The exemplary struts are coupled to the counter by a pivot 160 (e.g., pin 162 and hole 163 (FIG. 5)) having a pivot axis 510. The pivot 160 is capable of transmitting force between the strut and the counter. The opposite end of the strut may be coupled to the cabinet. An exemplary coupling 168 includes a pin 170 of the cabinet accommodated within a slot 172. The slot 172 includes a terminal bay or stop 174 at a first end 175 of the slot which can accommodate the pin 170 and allow transmission of compressive force through the strut. A slight rotation of the strut (e.g., user-actuated) may shift the pin into a main portion 176 of the slot and allow the pin to travel toward a second end 178 of the slot to stow the counter 122.

[0015] A portion of the counter 122 near the edge 126 may be supported by and coupled to the cabinet. An exemplary coupling 188 (e.g., one at each side) includes a slot 190 in the cabinet along which a pin 192 mounted to the counter 122 may travel. In the deployed condition, the pin 192 may be in a terminal bay or stop 194 at an upper forward end 196 of

the slot 190. The shelf may be lifted slightly to disengage the pin 192 from the bay 194 and shifted toward the opposite end 198 of the slot 190 for stowing.

[0016] One or more embodiments have been described. Nevertheless, it will be understood that various modifications may be made. For example, as noted above, various
5 embodiments may be implemented in the context of modifications of various existing or yet-developed food preparation tables. Additionally, various alternative mechanisms may be provided for supporting the auxiliary food preparation surface, guiding its movement, and/or holding it stowed. Accordingly, other embodiments are within the scope of the following claims.

CLAIMS

What is claimed is:

1. A food preparation table (20) comprising:

a cabinet (22);

5 a temperature-controlled food storage compartment (86) opening topward from the cabinet relatively near a rear of the cabinet;

a front food preparation surface (50) along a top (26) of the cabinet; and

a rear food preparation surface (120) shiftable between:

a stowed condition; and

10 an upward-facing deployed condition.

2. The table of claim 1 wherein:

the rear food preparation surface (120) is on a hinged shelf (122) hinged for rotation between the stowed condition and the deployed condition.

3. The table of claim 2 further comprising:

a pair of braces (152) coupling the cabinet to the rear food preparation surface in at least the deployed condition to support the rear food preparation surface in at least the deployed condition.

4. The table of claim 3 further comprising:

a user-movable cover (90) over the food storage compartment.

5. The table of claim 4 wherein:

25 there is no mechanism for guiding movement of the front food preparation surface to a stowed condition.

6. The table of claim 5 wherein:

30 in the deployed condition, a majority of the rear food preparation surface protrudes beyond the cabinet.

7. The table of claim 6 wherein:

in the stowed condition, the rear food preparation surface is within 20° of vertically extending.

8. The table of claim 7 wherein:
the compartment comprises a plurality of pans (56).
- 5 9. The table of claim 8 wherein:
the plurality of pans (56) protrude into a refrigerated main compartment (38)
accessible via one or more doors (42,44).
10. The table of claim 9 wherein:
10 the front food preparation surface (50) has a depth of 0.15-0.6m and a width of
1-3.5m; and
the rear food preparation surface (120) has a depth of 0.15-0.6m and a width of
1-3.5m.
- 15 11. The table of claim 1 wherein:
the front food preparation surface (50) has a depth of 0.15-0.6m and a width of
1-3.5m; and
the rear food preparation surface (120) has a depth of 0.15-0.6m and a width of
20 1-3.5m.
12. The table of claim 1 wherein:
the compartment comprises a plurality of pans (56).
- 25 13. The table of claim 12 wherein:
the plurality of pans (56) protrude into a refrigerated main compartment (38)
accessible via one or more doors (42,44).
14. The table of claim 1 wherein:
30 there is no mechanism for guiding movement of the front food preparation surface to
a stowed condition.
15. The table of claim 1 further comprising:
a user-movable cover (90) over the food storage compartment.

16. The table of claim 1 wherein:

in the deployed condition, a majority of the rear food preparation surface protrudes beyond the cabinet.

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17. The table of claim 16 wherein:

in the stowed condition, the rear food preparation surface is within 20° of vertically extending.

10 18. The table of claim 1 further comprising:

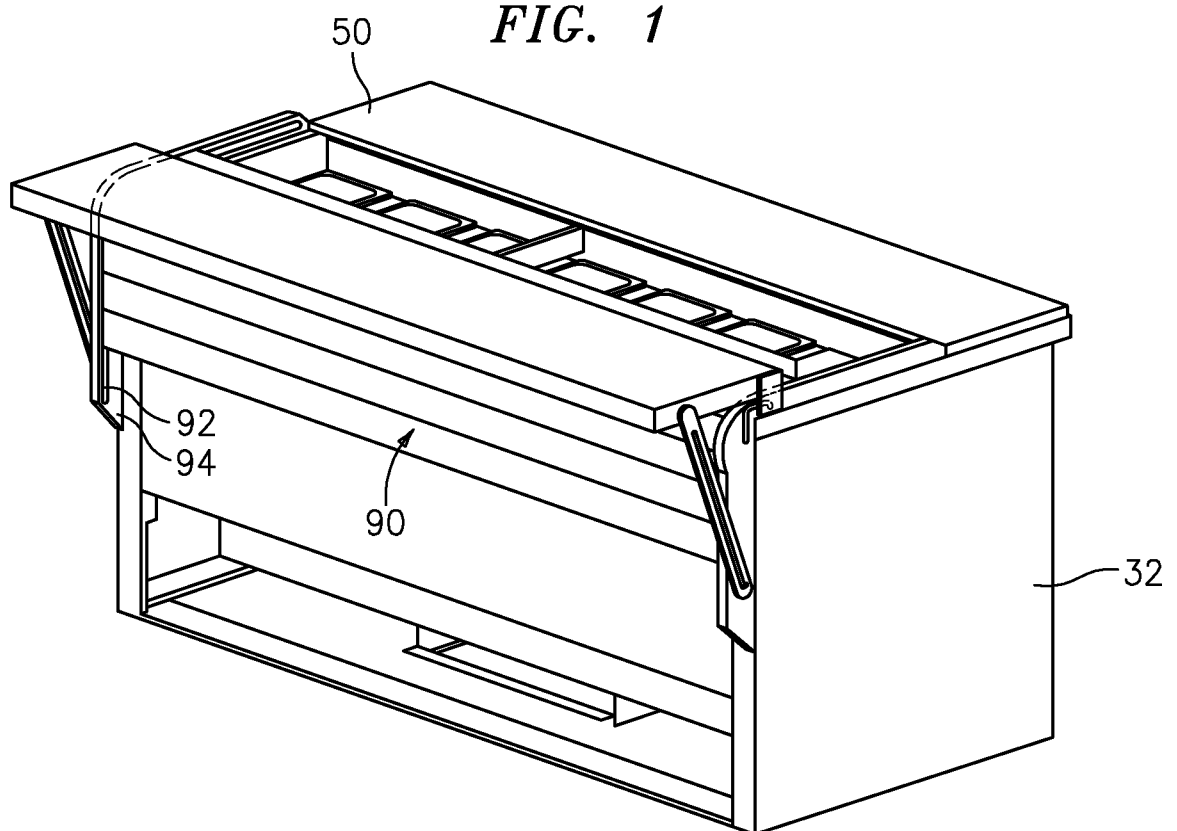
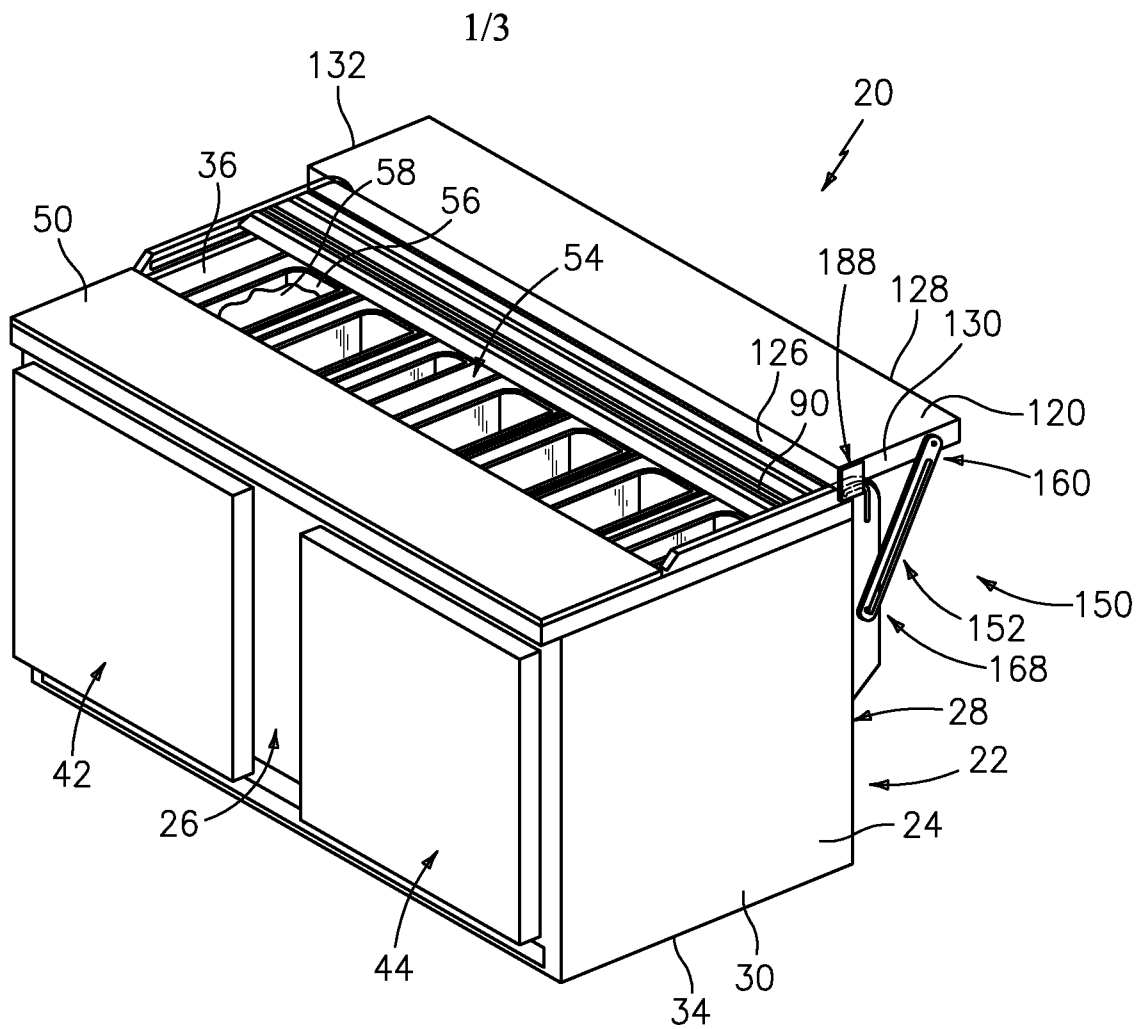
a pair of braces (152) coupling the cabinet to the rear food preparation surface in at least the deployed condition to support the rear food preparation surface in at least the deployed condition.

15 19. A method for using the food preparation table (20) of claim 1 comprising:
operating in a low volume mode wherein:

a user standing to the front of the front food preparation surface uses the front food preparation surface to prepare food from the food storage compartment; and
the rear food preparation surface is in the stowed condition;

20 shifting the rear food preparation surface to the deployed condition for a high volume mode; and

in said high volume mode, a second user preparing food on the rear food preparation surface from said food storage compartment.



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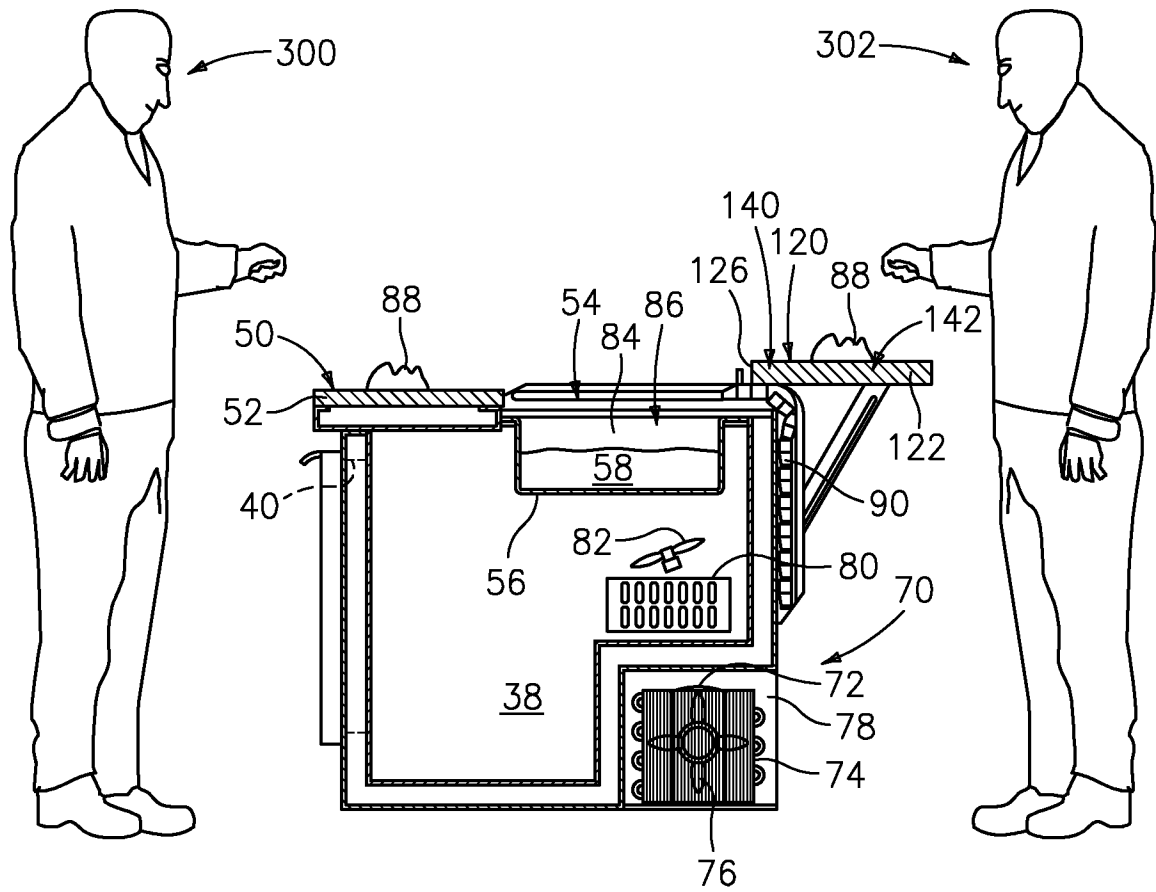


FIG. 3

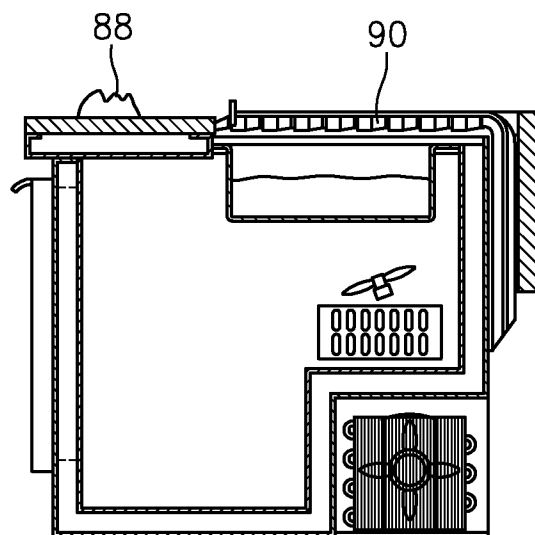
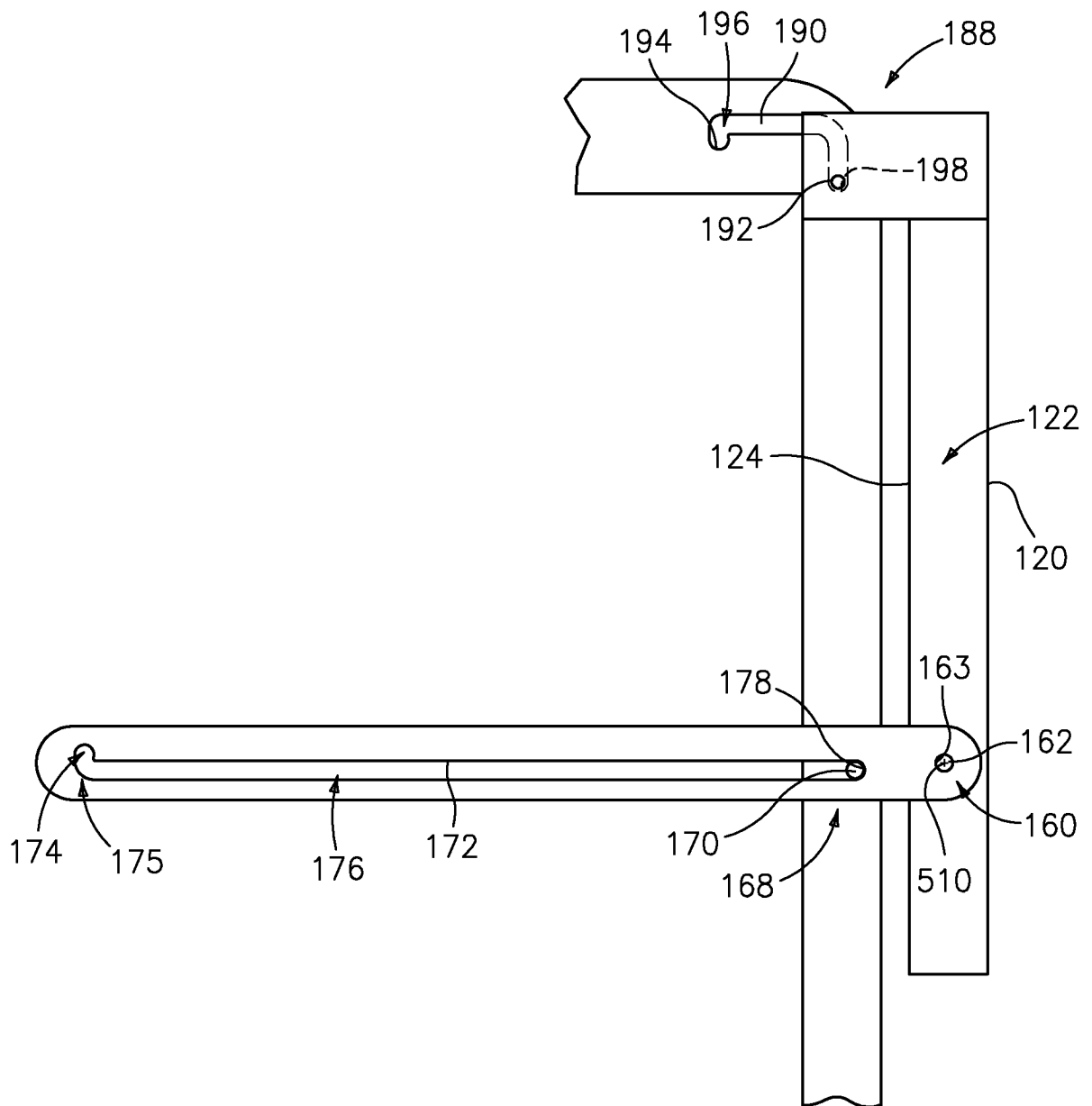


FIG. 4

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*FIG. 5*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2007/083731

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A47F 3/04 (2008.04)

USPC - 62/258

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) - A47F 3/04; F25D 23/12, 31/00 (2008.04)

USPC - 62/249, 258, 331, 338, 382, 390, 458; 312/140.1, 236; 622/580

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)

PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2,786,337 A (SPRING) 26 March 1957 (26.03.1957) entire document	1-2, 11-14, 16
Y		3-6, 15, 18
Y	US 7,284,393 B1 (MACMILLAN) 23 October 2007 (23.10.2007) entire document	3-6, 15, 18
A	US 5,182,923 A (TRULASKE SR) 02 February 1993 (02.02.1993) entire document	1-19
A	US 2003/0041611 A1 (WANG et al) 06 March 2003 (06.03.2003) entire document	1-19
A	US 5,117,649 A (MANGINI et al) 02 June 1992 (02.06.1992) entire document	1-19
A	US 2,886,395 A (CAHN) 12 May 1959 (12.05.1959) entire document	1-19
A	US 2,381,667 A (JENSEN et al) 07 August 1945 (07.08.1945) entire document	1-19

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"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

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Date of the actual completion of the international search

30 April 2008

Date of mailing of the international search report

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