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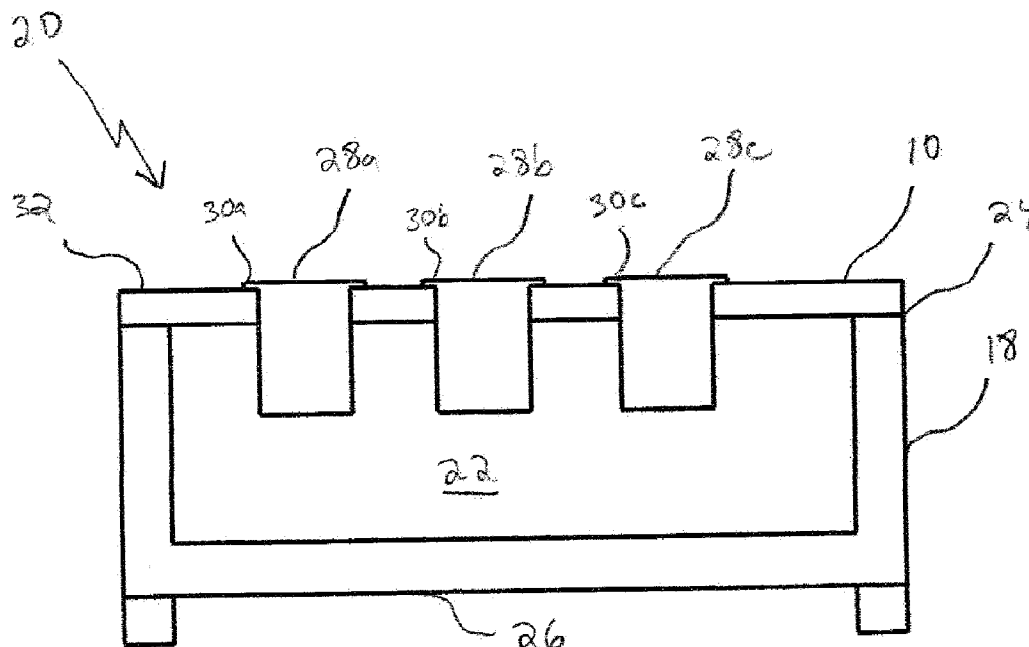
(19) **United States**(12) **Patent Application Publication**
Elstad(10) **Pub. No.: US 2014/0069304 A1**(43) **Pub. Date: Mar. 13, 2014**(54) **LOCKING INSERT FOR USE WITH SERVICE TABLES****Publication Classification**(71) Applicant: **Richard Elstad**, Las Vegas, NV (US)(72) Inventor: **Richard Elstad**, Las Vegas, NV (US)(51) **Int. Cl.****A47B 13/16** (2006.01)(52) **U.S. Cl.**CPC **A47B 13/16** (2013.01)USPC **108/26**(21) Appl. No.: **14/025,780**(22) Filed: **Sep. 12, 2013****Related U.S. Application Data**

(60) Provisional application No. 61/700,325, filed on Sep. 12, 2012.

(57)

ABSTRACT

A system and an apparatus are provided to secure serving containers when used with a serving table having a basin. A locking insert is provided to cover a serving table and is formed with a plurality of openings, with each opening being configured to receive a respective serving container. When the serving container is placed into its respective opening, movement of the serving container in any direction is prevented. By preventing the movement of the serving container, food cannot fall into the basin of the serving table, and energy cannot escape from the serving table.



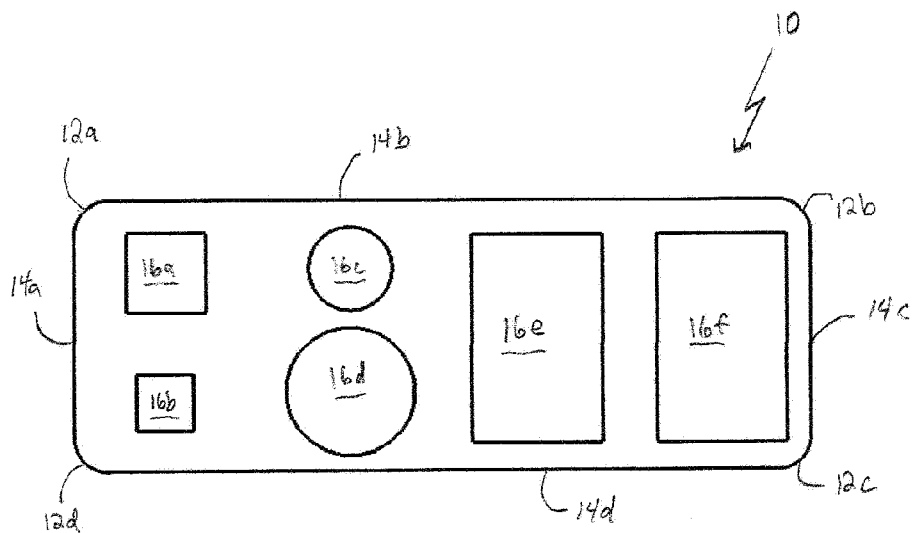


Fig. 1

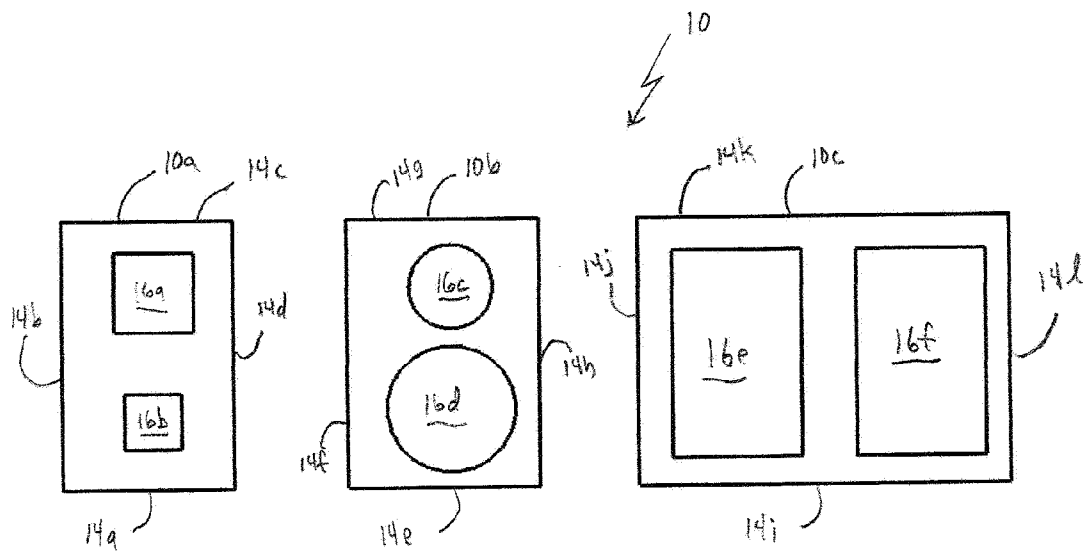


Fig. 2

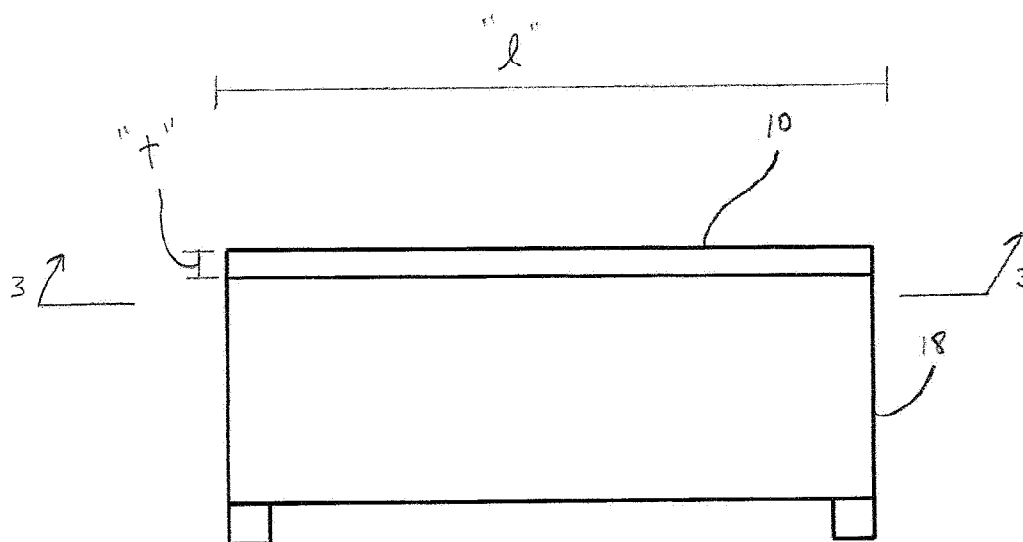


Fig. 3A

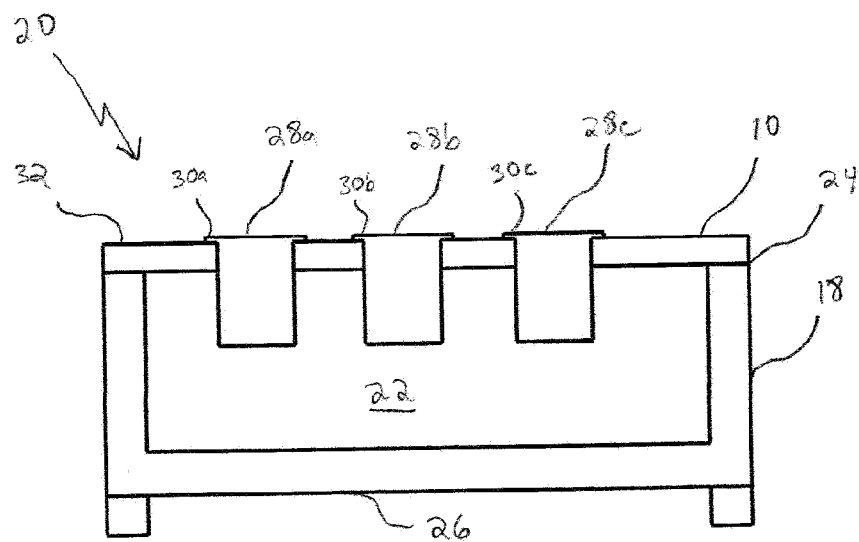


Fig. 3B

LOCKING INSERT FOR USE WITH SERVICE TABLES

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 61/700,325 filed on Sep. 12, 2012.

TECHNICAL FIELD

[0002] The technical field pertains to apparatuses and methods for preparing food for consumption, and more particularly pertains to apparatuses and methods for securing food service containers when inserted into a serving table.

BACKGROUND

[0003] In the restaurant industry, a variety of tables are available for both the preparation and serving of food. In the trade, these tables are commonly referred to as serving tables, with examples such as various types of sandwich tables and various types of pizza tables. Most often, these tables are found in areas where a food preparer or a food server interacts directly with a customer. They are commonly seen by customers in fast food type restaurants, such as pizza restaurants and establishments that serve sandwiches to the customer. In restaurants, serving tables are commonly used in the kitchens where food is prepared. In the type of establishment where the preparer interacts directly with the customer, the customer will order directly from the food preparer who then prepares the food to the customer's specifications. Another way these types of serving tables can be used is for allowing customers to serve themselves food at a buffet-style restaurant.

[0004] When this type of system is employed, the serving table is constructed with an elongated basin that forms a tub-like area in the serving table. Narrow bars, known as adapter bars in the pertinent art, are placed across this basin, and food serving containers are inserted into the basin and are supported by the adapter bars. Most of the time, the food in the food serving containers needs to be either heated or cooled, so the serving table will either be refrigerated or heated. When using the adapter bars, the serving containers can often slide in any direction because they are not securely fastened to prevent movement in all directions, and the adapter bars may also shift suddenly and unexpectedly. This presents a problem during food preparation because food can fall between any openings created when the adapter bars and serving containers shift or move. Another problem that arises when using these adapter bars is that heat and cool air can easily escape because of the gaps that are present when the containers are placed into the table and do not fit snugly against the adjacent container or adapter bar. A further disadvantage to using the adapter bars with serving containers is that the bars may slide laterally and cause containers to fall into the tub part of the table. Furthermore, the gaps between containers can allow food to fall into the basin, which causes difficulties when cleaning the table after use. Moreover, the containers are usually in contact with one another, so removing one container often means having to remove multiple containers, which is inefficient because any gaps created allow hot air or cold air to escape.

[0005] In light of the above, it is desirable to provide an apparatus to prevent any movement of food service containers when used with a serving table. It is also desirable to provide a more energy-efficient method of using a serving table. Fur-

thermore, it is desirable to provide an insert that secures food service containers in place to prevent spillage of contents into the basin of a serving table.

SUMMARY

[0006] Structurally and in accordance with an exemplary embodiment, an insert is placed on top of a serving table and extends from one end of a serving table to the other end of the serving table. The serving table is formed with a basin that extends from the surface of the serving table in a downward direction. This basin is commonly formed with the same length and width dimensions as the serving table, but the basin can be any size. The depth of the basin can also vary, but the depth must be great enough to receive serving containers. In other words, the basin must be deeper than the serving containers.

[0007] The insert is customized and formed with a plurality of openings that are cut to the exact size of any food container that may be used with a serving table. In many cases, the insert is dimensioned to the standard sizes for food containers that are commonly used in the trade. But, it is noted that the insert can be customized to hold any type of container in any shape and in any size.

[0008] An exemplary type of container used for food preparation is formed with an inner perimeter and an outer perimeter. The outer perimeter is formed as a flattened edge that extends from the inner perimeter in a direction away from the container. When an insert is customized, the opening for a particular container will be dimensioned to be nearly equal to the inner perimeter to allow the serving container to slide into the insert. The purpose of the flattened edge is to make contact with the insert to allow the container to be secured in place by contacting the surface of the locking insert. Because the edge makes contact with the insert at all points on its outer perimeter, all movement of the container in any direction is prevented, and the container is secured into place. To further secure the containers into place, the openings in the insert may be formed with a rubber lining. Not only will the use of rubber serve to secure the containers into place, further energy efficiency will also be gained by using an insulating material such as rubber in this way.

[0009] The exemplary embodiment can be a single piece as described above, or the insert can be a modular system that can be taken apart and rearranged in other configurations. When a modular system is provided, any number of pieces can be envisioned depending on the size of the serving table. As most serving tables are standard sizes, a modular system with five or six pieces is the most likely configuration, but large inserts can be provided with as many as fifteen or more pieces. One advantage of the modular system is ease in transportation of the insert. By breaking the pieces down, transport in a confined space, like a car trunk, is possible. To allow multiple configurations, each piece of the modular insert system will be formed with some type of connecting mechanism. This mechanism can be a series of quick-release latches, magnets, or any other type of suitable connecting mechanism used to secure an object to another object.

[0010] As envisioned for the exemplary embodiment, the insert will be made of polyethylene-type plastic. This type of plastic is rugged, is simple to customize, and is also simple to clean up. Furthermore, the insert can also be constructed with features or materials that make the insert anti-bacterial and anti-microbial. While plastic is the preferred embodiment, any other suitable material can be used to construct the insert.

In particular, a metal insert can also be envisioned for use. If metal is used, the insert can be formed with magnetic properties that attract the containers, or magnets secured to the containers, to help hold the containers securely in place.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is an exemplary embodiment of a locking insert;

[0012] FIG. 2 is an exemplary embodiment of a modular locking insert;

[0013] FIG. 3A is a view of the locking insert in an operational environment; and

[0014] FIG. 3B is a cross-section of the locking insert in an operational environment along line 3-3 in FIG. 3A.

DETAILED DESCRIPTION

[0015] Referring initially to FIG. 1, a locking insert in accordance with an embodiment is shown and is generally designated 10. As shown, the locking insert 10 is generally rectangular in shape and has four rounded corners 12a-d and four sides 14a-d. It should be appreciated that the rectangular shape and the rounded corners 12a-d are exemplary, and the locking insert 10 can be other shapes and the corners do not have to be rounded corners 12a-d. Instead, the corners may be at right angles where the sides 14a-d meet. The other prominent feature of the locking insert 10 is the plurality of openings 16a-f. As shown, openings 16a and 16b are squares, openings 16c and 16d are circular in shape, and openings 16e and 16f are rectangular in shape. Again, these shapes for the openings 16a-f are exemplary and other shapes and combinations of shapes can be constructed for the locking insert 10. Furthermore, the number of openings 16a-f is also exemplary and can be customized to fit the requirements of a customer. As an additional feature, the area of the locking insert 10 surrounding the opening may include some type of insulating material, such as rubber.

[0016] In FIG. 2, a plurality of locking inserts 10a-c are provided that form a modular system that is essentially a locking insert 10 that can be disassembled and rearranged. As seen in FIG. 2, each of the locking inserts 10a-c is formed with a plurality of openings 16a-f, with openings 16a and 16b on locking insert 10a, openings 16c and 16d formed on locking insert 10b, and openings 16e and 16f formed on locking insert 10c. Each locking insert 10a-c has four sides 14a-14d. The three locking inserts 10a-c shown can be arranged in any manner. For instance, side 14d of locking insert 10a can be connected to locking insert 10b at side 14f, or side 14d of locking insert 10a can be connected to side 14j of locking insert 10c. In order to join the locking inserts 10a-c to one another, any type of connecting device can be used. Examples of connecting devices could be magnets (not shown) or some type of latch (not shown).

[0017] Referring now to FIG. 3A, a locking insert 10 is shown in an operational environment. Specifically, the locking insert 10 is shown in contact with a serving table 18. It can be seen that the locking insert 10 has a thickness “t” and a length “l” that is equal to the length of the serving table 18.

[0018] In FIG. 3B, a cross section of the locking insert 10 in its operational environment is shown along line 3-3 in FIG. 3A. In this Figure, the other components of a serving station 20 are more clearly illustrated. It can be seen that the serving table 18 is formed with a basin 22. This basin 22 is a large opening that extends from the upper surface 24 of the serving

table 18 towards the lower surface 26 of the serving table 18. As seen in FIG. 3B, three serving containers 28a-c are also shown. These serving containers 28a-c are formed with a lip 30a-c that comes into contact with the locking insert 10. The serving containers 28a-c also extend into the basin 22 of the serving table 18. In doing so, the contents within the serving containers 28a-c can be either warmed or cooled by the serving table 18. At the point where the lip 30a-c comes into contact with the locking insert 10, a snug fit between the serving containers 28a-c and the locking insert 10 can be provided with either a rubber coating on the underside of the lip 30a-c or on the surface 32 of the locking insert 10. Or, the locking insert 10 can be made of metal and be constructed with magnets that attract the metal serving containers 28a-c. The purpose of the snug fit is to ensure energy does not escape from the basin 22 and also to ensure that food does not fall into the basin 22.

[0019] While at least one exemplary embodiment has been presented in the foregoing detailed description, it should be appreciated that a vast number of variations exist. It should also be appreciated that the exemplary embodiment or exemplary embodiments are only examples, and are not intended to limit the scope, applicability, or configuration of the claimed subject matter in any way. Various changes may be made in the function and arrangement of elements described in an exemplary embodiment without departing from the scope set forth in the appended claims.

What is claimed is:

1. A locking insert, wherein the locking insert is configured with a plurality of openings having a respective perimeter to receive a plurality of containers, wherein each container is received by a respective opening of the locking insert to secure each container in a location to prevent movement of each container in any direction.

2. A locking insert as recited in claim 1 wherein the locking insert is formed with plastic.

3. A locking insert as recited in claim 1 wherein the locking insert is formed with metal.

4. A locking insert as recited in claim 1 wherein each opening is provided with a rubber lining, wherein the rubber lining extends around the perimeter of each opening.

5. A locking insert as recited in claim 1 wherein each opening is rectangular in shape and is positioned on top of a serving table.

6. A locking insert as recited in claim 1 wherein each opening is circular in shape.

7. A locking insert as recited in claim 1 wherein each opening is square in shape.

8. A locking insert as recited in claim 1 wherein the each opening is chosen from a group comprising a circle, a rectangle, and a square.

9. A locking insert as recited in claim 1 formed with four corners, wherein each corner is curved.

10. An apparatus for securing a plurality of containers, wherein the apparatus comprises:

a first locking insert configured with a first opening to receive a first container, wherein the first locking insert is formed with four sides, wherein the first and second sides are parallel and the third and fourth sides are parallel, wherein the first locking insert secures the container in a first location to prevent movement of the first container in any direction;

a second locking insert configured with a second opening to receive a second container, wherein the second lock-

- ing insert is formed with four sides, wherein the first and second sides are parallel and the third and fourth sides are parallel, wherein the second locking insert secures the container in a second location to prevent movement of the second container in any direction; and
- a third locking insert configured with a third opening to receive a third container, wherein the third locking insert is formed with four sides, wherein the first and second sides are parallel and the third and fourth sides are parallel, wherein the third locking insert secures the container in a third location to prevent movement of the third container in any direction.
11. An apparatus as recited in claim 10 wherein the first locking insert is secured to the second locking insert.
12. An apparatus as recited in claim 11 wherein the second locking insert is secured to the third locking insert.
13. An apparatus as recited in claim 12 wherein the first locking insert is secured to the second locking insert with a first plurality of magnets, and wherein the second locking insert is secured to the third locking insert with a second plurality of magnets.
14. An apparatus as recited in claim 12 wherein the first locking insert is secured to the second locking insert with a first quick release latch, and wherein the second locking insert is secured to the third locking insert with a second quick release latch.

15. A serving station comprising:
- a serving table having an upper surface and a lower surface, wherein the serving table is formed with a basin extending from the upper surface in the direction of the lower surface and having a depth “d,” and wherein the upper surface is the basin surrounded by a border;
- a locking insert formed to fit onto the border of the upper surface, wherein the locking insert is configured with a plurality of openings; and
- a plurality of containers, wherein each container is received by a respective opening of the locking insert to prevent movement of each container in any direction.
16. A serving station as recited in claim 15, wherein the locking insert is formed with plastic and has a thickness “t.”
17. A serving station as recited in claim 15, wherein the locking insert is formed with metal and has a thickness “t.”
18. A serving station as recited in claim 15 wherein each opening is lined with rubber on all sides of the opening to produce a snug fit between the container and the opening.
19. A serving station as recited in claim 15 wherein the depth “d” is greater than a depth the depth of each container.
20. A serving station as recited in claim 15, wherein each container is of a different size and shape.

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