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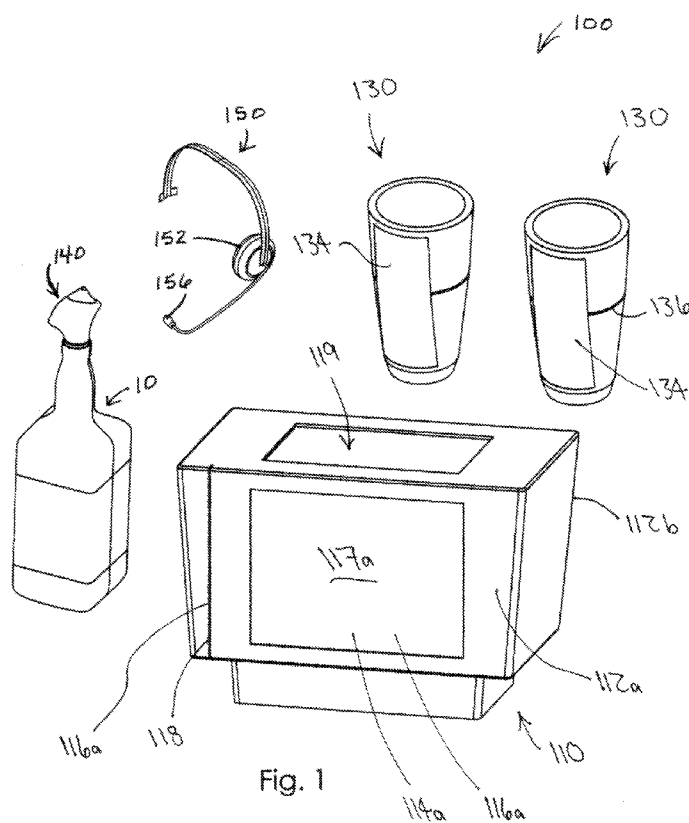


Fig. 1

(57) Abstract: A restaurant system includes an electronic kiosk having opposed first and second sides. A first display is situated on the first side for use by the customer and a second display is situated on the second side for use by a bartender. The kiosk includes a first input device for use by the customer. A processor is in data communication with the displays and the first input device to retrieve data from the first input device, such as a drink order, and actuate the first and second displays. A user may select between inputting ordering options, watching television/video, or allowing advertisements to be displayed on the first display. Drink recipes may be displayed on the second display to aid a bartender in mixing drinks. The system may include a remote headset for audibly assisting bartender with drink orders and may include an electronic mixing tin and lighted pour spout.



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RESTAURANT SYSTEM

BACKGROUND OF THE INVENTION

This invention relates generally to restaurant ordering systems and, more particularly, to a restaurant system that incorporates innovative media and advertising components, mixed drink preparation devices, and a wireless headset component.

Most restaurants share several common goals, such as providing accurate and efficient service as well as providing an enjoyable dining experience. When either goal is not met, the customers may be dissatisfied and may not return to the restaurant with any frequency or, worse yet, may not return at all. Some restaurants are successful with efficiency or with providing a friendly and enjoyable dining experience but few satisfy both goals fully or regularly. Other restaurants, particularly bars and casinos provide bartending with so-called “flair” techniques, e.g. tossing or spinning liquor containers prior to or in the process of preparing mixed drinks.

Various electronic devices have been proposed in the art for either improving the efficiency of ordering or order fulfillment, such as by increasing speed or accuracy or both. Although assumably effective for their intended purposes, the existing devices do not maximize the entertainment value to customers while simultaneously assisting bartenders, kitchen staff, waiters, etc. with accurately and quickly preparing mixed beverages or food items.

Therefore, it would be desirable to have a restaurant system having an electronic kiosk that may operate as a napkin dispenser or other condiment dispenser as well as an electronic display device. Further, it would be desirable to have a restaurant system having a database of drink recipes and one or more audio or visual means of communicating the recipes to a bartender. In addition, it would be desirable to have a restaurant system having innovative electronic mixing tins or pour spout devices for entertaining restaurant patrons while mixing beverages.

SUMMARY OF THE INVENTION

Accordingly, a restaurant system according to the present invention includes an electronic kiosk having generally opposed first and second sides. A first display may be situated on the first side of the kiosk for use by the customer and a second display may be situated on the second side of the kiosk for use by a bartender. The electronic kiosk includes a first input device for use by the customer. A processor is in data communication with the first and second displays and with the first input device to retrieve data from the first input device and to actuate the first and second displays. As the first input device may be a touch screen display interface, a restaurant patron may select from food or drink ordering options, may choose to watch television or other special programming, or just allow advertisements to be displayed. The first input device may also include a card reader for receiving payment.

The kiosk defines a storage area that is configured to contain napkins or condiments. The kiosk may include a second input device for use by a bartender, such as a touch screen. The second display may be in communication with a processor for displaying selected drink recipes. Thus, a user selects a desired drink using the first display, the corresponding drink recipe may be displayed on the second display to aid the bartender in fulfilling the order. In another aspect of the invention, the bartender may wear a headset remote from the processor to which the drink recipe may be transmitted and audibly recited into the bartender's ears to assist in preparing the drink.

The system may also include an innovative electronic mixing tin for providing a bartender with instant access to drink recipes while also increasing the ambiance of the bar and entertainment value of watching a bartender mix drinks. Specifically, the mixing tin may include an LCD screen on its exterior by which to display drink recipes or even advertisements and lighting displays.

Another aspect of the restaurant system includes a pour spout for attachment to liquor bottles that may be lit up with LED's. This component of the system would be especially effective when used with "flair" bartending techniques but also provides enhanced ambiance to any bar environment.

Therefore, a general object of this invention is to provide a restaurant system for improving order and order fulfillment efficiency as well as improving a restaurant's ambiance and entertainment value.

Another object of this invention is to provide a restaurant system, as
5 aforesaid, that provides an interactive media and ordering component to a restaurant patron and an order fulfillment component to a restaurant employee.

Still another object of this invention is to provide a restaurant system, as aforesaid, in which a napkin or condiment dispenser includes one or more electronic displays.

10 Yet another object of this invention is to provide a restaurant system, as aforesaid, that includes a remote headset for audibly reciting mixed drink recipe instructions to a bartender.

A further object of this invention is to provide a restaurant system, as aforesaid, having electronic mixing tin and pour spout devices for enhancing the
15 ambiance and entertainment value of a bar or restaurant environment.

A still further object of this invention is to provide a restaurant system, as aforesaid, that provides new and exciting opportunities for options for presenting advertising messages, food/drink specials, schedules, etc. to patrons of a restaurant.

20 Other objects and advantages of the present invention will become apparent from the following description taken in connection with the accompanying drawings, wherein is set forth by way of illustration and example, embodiments of this invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a restaurant system according to a preferred embodiment of the present invention;

Fig. 2 is an isolated perspective view of a kiosk as in Fig. 1;

5 Fig. 3a is an isolated perspective view of a mixing tin as in Fig. 1;

Fig. 3b is a top view of the mixing tin as in Fig. 3b;

Fig. 3c is a sectional view taken along line 3c-3c of Fig. 3b;

Fig. 4a is a perspective view on an enlarged scale of a lighted pour spout device as in Fig. 1;

10 Fig. 4b is a top view of the pour spout device as in Fig. 4a;

Fig. 5a is a sectional view taken along line 5a-5a of Fig. 4b;

Fig. 5b is an isolated portion on an enlarged scale of the pour spout device taken from Fig. 5a;

15 Fig. 5c is another isolated portion on an enlarged scale of the pour spout device taken from Fig. 5a and illustrating a valve in a closed configuration;

Fig. 5d is another isolated view as in Fig. 5c illustrating the valve in an open configuration;

Fig. 6 is a block diagram of the electronic components according to the preferred embodiment of the restaurant system;

20 Fig. 7a is a block diagram illustrating the display options provided by the touch screen bartender display;

Fig. 7b is a block diagram illustrating the display options provided by the touch screen customer display;

25 Fig. 8 is a flowchart illustrating one exemplary method for using the restaurant system according to the present invention; and

Fig. 9 is a flowchart illustrating another exemplary method for using the restaurant system according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A restaurant system 100 according to the present invention will now be described in detail with reference to Figs. 1 through 9 of the accompanying drawings. More particularly, a restaurant system 100 (which may also be referred to herein as a bar system) according to the current invention includes an electronic kiosk 110. It should be understood references to a “bartender” through this detailed description may also refer to restaurant staff other than a literal bartender, e.g. wait staff, cooks, beverage preparers, etc.

The electronic kiosk 110 has generally opposed sides 112a, 112b. A display 114a may be on the side 112a for use by a customer, and another display 114b may be on the side 112b for use by a bartender. It is understood that whenever the term “bartender” is used in this application, it also refers to a “waiter” or other wait staff. The electronic kiosk 110 may include an input device 116a for use by the customer and/or an input device 116b for use by the bartender (Fig. 6). As shown in Fig. 6, a touch screen 117a may serve as both the display 114a and the input device 116a, and a touch screen 117b may serve as both the display 114b and the input device 116b. Figs. 7a and 7b show various predetermined (and non-exclusive) input and display options 117c that may be associated with the touch screens 117a, 117b, respectively. Alternately, or additionally, at least one input device 116a, 116b may include a card reader 118 for receiving payment.

As shown in Figs. 1 and 2, the electronic kiosk 110 may define a storage area 119 configured to hold napkins or condiments (including such typical condiments as salt, pepper, and ketchup and such bar condiments as limes, olives, and straws, among others). The electronic kiosk 110 may include a kiosk transmitter 122 and/or a kiosk receiver 124 (Fig. 6). A kiosk processor 125 may be in data communication with the displays 114a, 114b, the input devices 116a, 116b, the kiosk transmitter 122, and the kiosk receiver 124 (Fig. 6). Means for introducing programming to the kiosk processor 125 may be included, such as a connection (e.g., hard wired or wireless) to a network 125a (Fig. 6) or a removable memory device, for example.

Alternatively, the electronic kiosk 110 may include only a first display 114a for use by the consumer. This embodiment may be adequately explained with reference to Fig. 1-2 and 7b. The kiosk 110 would also include the kiosk processor 125 in communication with the first display 114a for actuating the first display 114a. Preferably, the processor 125 would include programming enabling the first display 114a to display pictures or descriptions of menu items or other options as will be described later. In this embodiment, the kiosk 110 also defines a storage area 119 configured to hold napkins or condiments as described previously. It is understood that a kiosk 110 with a first display 114a and storage area 119 for customer use may be used independently or in combination with the other unique elements of a restaurant system as will be described later in greater detail.

The restaurant system 100 may include a mixing tin 130 as shown in Figs. 3a through 3c. The mixing tin 130 may include a housing with a double wall construction (i.e., two walls 131 spaced apart in a waterproof manner) that defines a mixing area 132. The mixing tin 130 may include a display 134 (e.g., a LCD display, etc.), and the display 134 may be sandwiched between the walls 131 for durability. If sandwiched between the walls 131, an outer wall 131 may include a transparent material so that the display 134 may be seen from outside the mixing area 132. The mixing tin 130 may include at least one light 136 (e.g., a LED, etc.), and a mixing tin processor 135 may be in data communication with the display 134 and the mixing tin light(s) 136 for actuating the display 134 and the light(s) 136 (Fig. 6). It is understood that various other lighting options are possible, such as means for continual or periodic “backlighting”. Means for providing data to the mixing tin processor 135 may be included. More particularly, the mixing tin 130 may include a receiver 137 (referred to as a “mixing tin receiver”) in data communication with the processor 135 for receiving data from the kiosk transmitter 122 (Fig. 6), and/or the mixing tin 130 may include a removable memory device 138, for example. In this regard, data such as drink recipes may be received and displayed on the display so as to aid a bartender in preparing

drinks for customers. It is understood that the kiosk transmitter 122 may be an RFID transmitter and the mixing tin receiver 137 may be an RFID receiver.

As shown in Figs. 4a through 6, the restaurant system 100 may include a pour spout 140 for use with a bottle 10 containing a fluid (e.g., a bottle of alcohol, mixer, cooking oil, etc.). The pour spout 140 includes a coupling portion 141 that has a configuration complementary to a configuration of the bottle 10 so that the coupling portion 141 may be selectively attached to the bottle 10. The coupling portion 141 may fit inside the bottle 10 similar to a cork, or the bottle may be threaded and the coupling portion 141 may attach to the bottle threads, for example. An interior portion 142 of the pour spout 140 is configured to extend inside the bottle 10, and the interior portion 142 and the coupling portion 141 collectively define a through opening 143 for dispensing the fluid from inside the bottle 10. A valve 144 (e.g., a push button valve, etc.) may be in communication with the through opening 143 to restrict the dispensing of the fluid from inside the bottle 10. More particularly, the push button valve may have an appropriate configuration and may be movable between a closed configuration (Fig. 5d) in which fluid is prevented from passing from the bottle 10 through opening 143 and an open configuration (Fig. 5c) in which fluid is allowed to pass. The valve 143 may be normally biased toward the closed configuration by a compression spring 144a such that the valve 143 must be actively depressed to the open configuration in order to release liquid from the spout. Further, the coupling portion 141 and interior portion 142 may also collectively define an air vent 143a to enable fluid to flow from the bottle 10 through the through opening 143 without a vapor lock.

The interior portion 142 may include at least one light 146 (e.g., a LED, etc.) and a battery 147 in electrical communication with the pour spout light(s) 146. As shown in Fig. 6, a processor 145 may be in data communication with the light(s) 146 for selectively actuating the light(s) 146. The pour spout processor 145 may include programming and related sensors (not shown) to actuate appropriate lights 146 when the interior portion 142 is returned to an upright configuration and/or when it is in a substantially horizontal/pour configuration. The interior portion 142 may include a translucent material to allow the light(s)

146 to illuminate an extended area (e.g., an area larger than would otherwise be lit), and the interior portion 142 may display advertising indicia. More particularly, the interior portion 142 may include advertising indicia 148 (e.g., printed thereon, etched thereon, formed therein, etc.), or a transparent sleeve that includes advertising indicia may be positionable about the interior portion 142. Other backlighting light configurations are also contemplated.

Means for providing data to the pour spout processor 145 may be included. More particularly, the pour spout 140 may include a receiver 147 (referred to as a “pour spout receiver”) in data communication with the pour spout processor 145 for receiving data from the kiosk transmitter 122 (Fig. 6), and/or the pour spout 140 may include a removable memory device, for example. Although not shown in the accompanying drawings, the pour spout 140 may include a display (e.g., a LCD display, etc.) in data communication with the pour spout processor 145 that may also be capable of enhancing the lighting options. Further, the pour spot 140 may include appropriate sensors (not shown) in data communication with the pour spout processor 145 and pour spout display for determining a quantity of liquid from the dispenser that was actually dispensed from the bottle 10 and for displaying that result on the display.

The restaurant system 100 may include a headset 150 as shown in Figs. 1 and 6. The headset 150 may include a headset speaker 152, a headset receiver 154 for receiving data from the kiosk transmitter 122, and a headset processor 155 in data communication with the headset speaker 152 and the headset receiver 154. A microphone 156 may be in data communication with the headset processor 155, and a headset transmitter 157 may be in data communication with the headset processor 155 (Fig. 6). The headset 150 enables drink recipes or the like to be transmitted from the kiosk transmitter 122 to the headset receiver 154 and played through the headset speakers 152, thus assisting the bartender in mixing selected/ordered drinks (Fig. 6). The headset 150 is also important in enabling a waiter to be summoned, as described below.

While the transmitters and receivers described herein may utilize active or passive RFID technology (Radio Frequency Identification), it should be

appreciated that other more traditional data transmission systems as well as those employed in the future may also be appropriate.

Fig. 8 shows one exemplary method 100a of using the restaurant system 100. At a first step S1, a customer utilizes the input device 116a to request waiter assistance. The kiosk processor 125 (or another appropriate processor) determines if the customer's table has been assigned to a waiter at step S2. If so, the method proceeds to step S3 where the kiosk processor 125 actuates the kiosk transmitter 122 to send data to the headset receiver 154 worn by the appropriate waiter. The headset processor 155 may then actuate the speaker 152 to alert the waiter. The method then ends at step S4. If the customer's table has not been assigned to a waiter, the method instead proceeds to step S5 where the kiosk processor 125 actuates the kiosk transmitter 122 to send data to the headset receiver 154 worn by the waiter closest to the table. The headset processor 155 may then actuate the speaker 152 to alert the waiter. The method then ends at step S4.

Fig. 9 shows another exemplary method 100b of using the restaurant system 100. At step S10, a customer utilizes the input device 116a to place a drink order. The method proceeds to step S11, where the kiosk processor 125 receives the data from the input device 116a and actuates the display 114b so that a bartender may see the order. The kiosk processor 125 may also actuate the display 114a so that the customer may see the order. Additionally, or alternately, the kiosk processor 125 may actuate the display 114a to provide advertising or programming chosen by the customer (as shown in Fig. 7b, for example). The method then proceeds to step S12, where the kiosk processor 125 determines if the drink the customer ordered requires special mixing instructions. If not, the method proceeds to step S13; if so, the method proceeds to step S14.

At step S13, the kiosk processor 125 actuates the kiosk transmitter 122 to transmit data about the drink order to the bartender. The data may be received by the mixing tin receiver 137, and the mixing tin processor 135 may actuate the mixing tin display 134 to convey the drink order to the bartender. Alternately, or additionally, the data may be received by the headset receiver 154, and the headset

processor 155 may actuate the headset speaker 152 to convey the drink order to the bartender. The method then ends.

At step S14, the kiosk processor 125 actuates the kiosk display 114b to display the recipe of the drink. The method then proceeds to step S15. At step
5 S15, the kiosk processor 125 actuates the kiosk transmitter 122 to transmit data corresponding to the drink recipe. The pour spout receiver 147 corresponding to the bottle needed to make the drink may receive the recipe data from the kiosk transmitter 122, and the pour spout processor 145 may actuate the pour spout light(s) 146 and/or the pour spout display. Activation of the pour spout light(s)
10 and/or the pour spout display may be considered "back-lighting", though this need not be the case. As stated above, an amount of liquid dispensed from the bottle 10 may be determined by appropriate sensors (not shown) and directed to the pour spout processor 145 and then to the display. The method then proceeds to step S16. At step S16, the kiosk processor 125 determines if the drink recipe requires a
15 mixing tin. If so, the method proceeds to step S17; if not, the method proceeds to step S18.

At step S17, the kiosk processor 125 actuates the kiosk transmitter 122 to transmit drink recipe data to the mixing tin receiver 137. The mixing tin receiver 137 may then receive the drink recipe data, and the mixing tin processor 135 may
20 actuate the mixing tin display 134 to convey the drink recipe to the bartender. Activation of the mixing tin display 134 may be considered "back-lighting", though this need not be the case. The mixing tin processor 135 may also (or alternately) actuate the mixing tin light(s) 136. The method then continues to step S18.

25 At step S18, the kiosk processor 125 determines if the bartender has chosen to receive an audio transmission of the drink recipe. If so, the method proceeds to step S19; if not, the method proceeds to step S20.

At step S19, the kiosk processor 125 actuates the kiosk transmitter 122 to transmit drink recipe data to the headset receiver 154. The headset receiver 154
30 may then receive the drink recipe data, and the headset processor 155 may actuate

the headset speaker 152 to convey the drink recipe to the bartender. The method then continues to step S20.

At step S20, the kiosk processor 125 may determine if the bartender has used the input device 116b to indicate that the drink order has been filled. If not, the method may stay at step S20; if so, the method may continue to step S21. At step S21, the kiosk processor 125 may cause the kiosk display 114a to indicate that the drink has been served. If a waiter is using the kiosk 110 instead of a customer, the kiosk display 114a may indicate to the waiter that the drink is ready to serve.

In yet another exemplary method of using the restaurant system 100, the bartender may speak into the headset microphone 156, and the headset processor 155 may actuate the headset transmitter 157 to transmit data to the kiosk receiver 124. The headset processor 155 may include instructions to recognize the data and proceed accordingly. For example, the bartender may request a recipe for a drink, the headset transmitter 157 may transmit data corresponding to that request, the kiosk receiver 124 may receive the request, and the kiosk processor 125 may understand the request and provide the instructions to the bartender.

It is understood that while certain forms of this invention have been illustrated and described, it is not limited thereto except insofar as such limitations are included in the following claims and allowable functional equivalents thereof.

CLAIMS

- 1 1. A restaurant system, comprising:
2 an electronic kiosk having:
3 generally opposed first and second sides;
4 a first display on said first side for use by a customer;
5 a kiosk processor in data communication with said first
6 display for actuating said first display;
7 wherein said kiosk defines a storage area configured to hold at least one of a
8 napkin or a condiment.
- 1 2. The restaurant system as in claim 1 further comprising a first input
2 device for use by a customer, said kiosk processor being in data communication
3 with said first input device to receive data from said first input device.
- 1 3. The restaurant system as in claim 2 wherein said first display and
2 said first input device is a touch screen.
- 1 4. The restaurant system as in claim 1 wherein said kiosk includes a
2 second display on said second side for use by a bartender or waiter, said kiosk
3 processor being in data communication with said second display for actuating said
4 second display.
- 1 5. The restaurant system as in claim 4 wherein said kiosk includes a
2 second input device for use by a bartender or waiter, said kiosk processor being in
3 data communication with said second input device for receiving data from said
4 second input device.
- 1 6. The restaurant system as in claim 5 wherein said second display and
2 said second input device is a touch screen.

1 7. The restaurant system as in claim 2, wherein said first input device
2 includes a card reader for receiving payment.

1 8. The restaurant system as in claim 2 further comprising means for
2 introducing programming to said kiosk processor.

1 9. The restaurant system as in claim 2, wherein:
2 said kiosk includes a transmitter;
3 said kiosk processor is in data communication with said kiosk transmitter
4 for actuating said kiosk transmitter to transmit data; and
5 said restaurant system further comprises a mixing tin defining a mixing area
6 and having a display, a receiver for receiving data from said kiosk
7 transmitter, and a mixing tin processor in data communication with
8 said mixing tin display and said mixing tin receiver.

1 10. The restaurant system as in claim 9, wherein:
2 said kiosk processor includes programming to actuate said kiosk transmitter
3 to transmit data corresponding to said data received from said first
4 input device;
5 said kiosk transmitter is a RFID transmitter; and
6 said mixing tin receiver is a RFID receiver.

1 11. The restaurant system as in claim 9, wherein said mixing tin includes
2 at least one LED in data communication with said mixing tin processor.

1 12. The restaurant system as in claim 9 wherein said mixing tin includes
2 a waterproof double wall construction and said mixing tin display is sandwiched
3 between said mixing tin walls.

1 13. The restaurant system as in claim 2 for use with a bottle containing a
2 fluid, said pour spout further comprising:

3 a coupling portion having a configuration complementary to a configuration
4 of the bottle for selective attachment to the bottle;

5 an interior portion configured to extend inside the bottle, said interior
6 portion and said coupling portion collectively defining a through
7 opening for dispensing the fluid from inside the bottle, said interior
8 portion including a light and a battery in electrical communication
9 with said light; and

10 a pour spout processor in data communication with said light for selectively
11 actuating said light.

1 14. The restaurant system as in claim 13, wherein said pour spout
2 includes:

3 a receiver for receiving data, said receiver being in data communication
4 with said pour spout processor;

5 wherein said interior portion includes a translucent material to allow said
6 light to illuminate an extended area; and

7 wherein said pour spout interior portion includes advertising indicia or a
8 transparent sleeve including advertising indicia is positionable about
9 said pour spout interior portion.

1 15. The restaurant system as in claim 14, wherein said pour spout
2 includes:

3 a valve in communication with said through opening for selectively
4 restricting the fluid from inside the bottle, said valve being movable
5 between a closed configuration in which fluid is prevented from
6 passing from the bottle through said through opening and an open
7 configuration in which fluid is allowed to pass through and
8 dispensed from said through opening, said valve being biased toward
9 said closed configuration.

1 16. The restaurant system as in claim 1, wherein:

2 said kiosk includes a transmitter;

3 said kiosk processor is in data communication with said kiosk transmitter
4 for actuating said kiosk transmitter to transmit data; and

5 said restaurant system further comprises a pour spout having a
6 configuration complementary to a configuration of a bottle for
7 attachment of said pour spout to the bottle, said pour spout having a
8 through opening for dispensing a fluid from inside a bottle, said pour
9 spout having a pour spout light, a pour spout receiver for receiving
10 data from said kiosk transmitter, and a pour spout processor in data
11 communication with said pour spout light and said pour spout
12 receiver.

1 17. The restaurant system as in claim 16, wherein:

2 said pour spout includes an interior portion for extending inside a bottle;

3 said interior portion includes said pour spout light and a battery in electrical
4 communication with said pour spout light; and

5 said interior portion includes a translucent material to allow said pour spout
6 light to illuminate an extended area.

1 18. The restaurant system as in claim 17, wherein said pour spout
2 interior portion includes advertising indicia or a transparent sleeve including
3 advertising indicia is positionable about said pour spout interior portion.

1 19. The restaurant system as in claim 1, wherein:
2 said kiosk includes a transmitter;
3 said kiosk processor is in data communication with said kiosk transmitter
4 for actuating said kiosk transmitter to transmit data; and
5 said restaurant system further comprises a headset having a headset speaker,
6 a headset receiver for receiving data from said kiosk transmitter, and
7 a headset processor in data communication with said headset speaker
8 and said headset receiver.

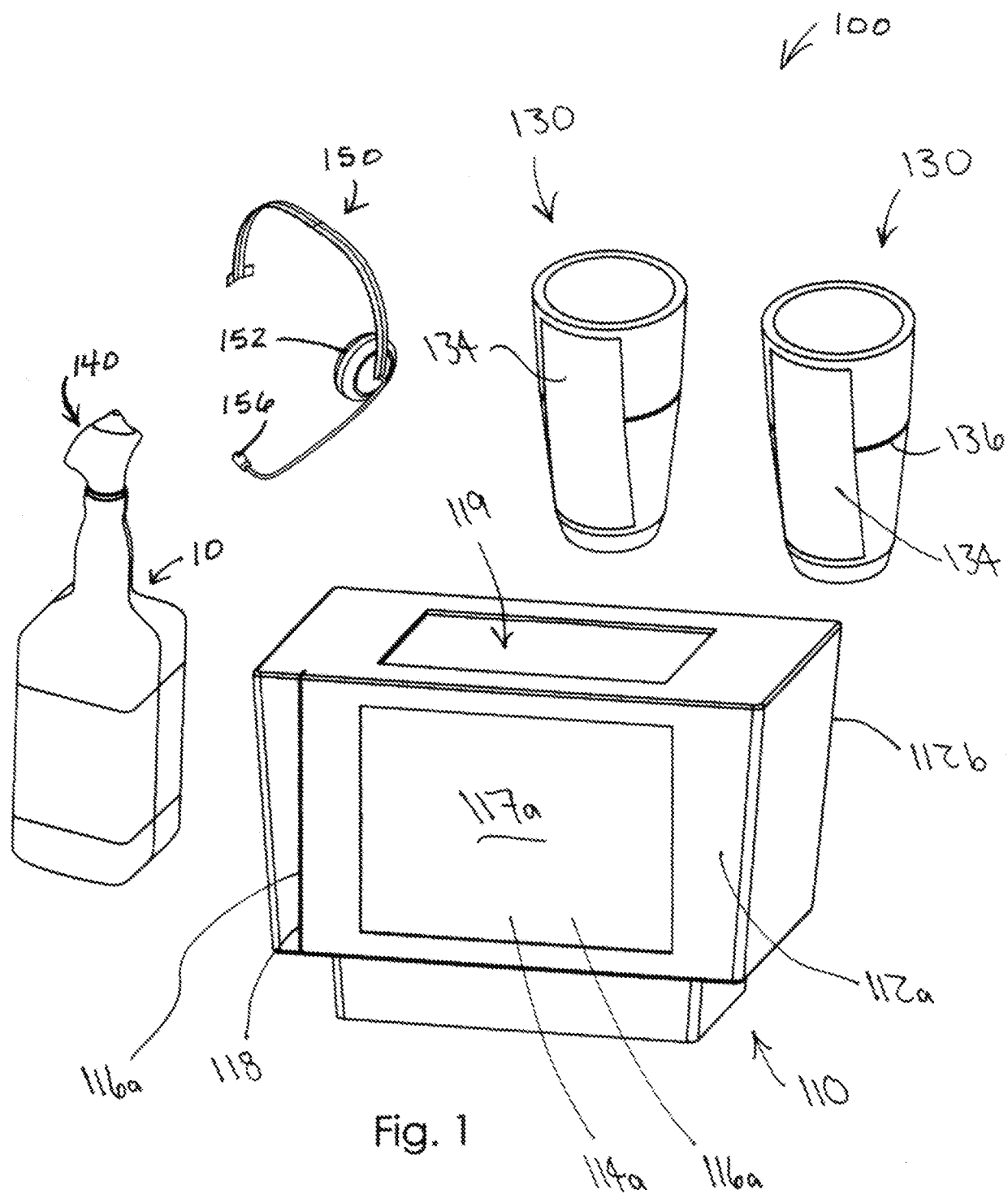
1 20. The restaurant system as in claim 19, wherein:
2 said kiosk includes a receiver in data communication with said kiosk
3 processor;
4 said headset includes a microphone in data communication with said
5 headset processor; and
6 said headset includes a headset transmitter in data communication with said
7 headset processor.

1 21. The restaurant system as in claim 4, wherein:
2 said kiosk includes a transmitter;
3 said kiosk processor is in data communication with said kiosk transmitter
4 for actuating said kiosk transmitter to transmit data; and
5 said restaurant system further comprises a pour spout having a
6 configuration complementary to a configuration of a bottle for
7 attachment of said pour spout to the bottle, said pour spout having a
8 through opening for dispensing a fluid from inside a bottle, said pour
9 spout having a pour spout light, a pour spout receiver for receiving
10 data from said kiosk transmitter, and a pour spout processor in data

11 communication with said pour spout light and said pour spout
12 receiver.

1 22. The restaurant system as in claim 21, wherein said pour spout includes:
2 means for determining a quantity of liquid that has been dispensed through
3 said through opening; and
4 means for displaying said quantity of dispensed liquid.

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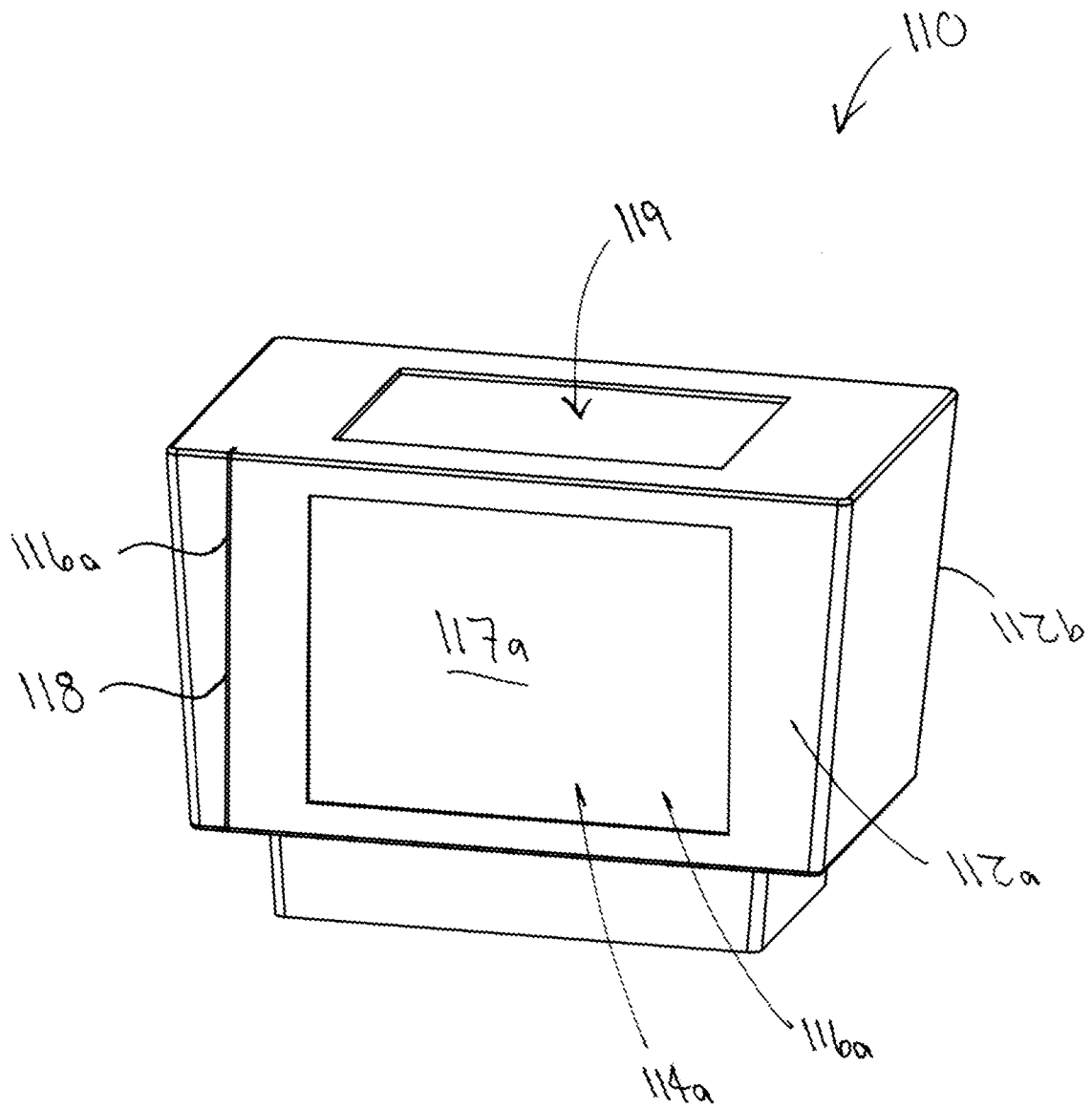


Fig. 2

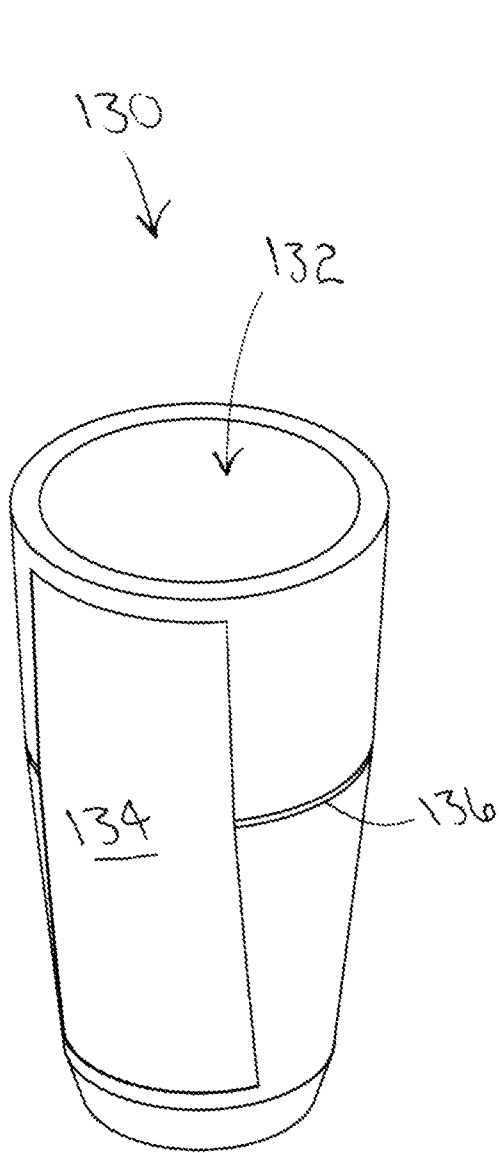


Fig. 3a

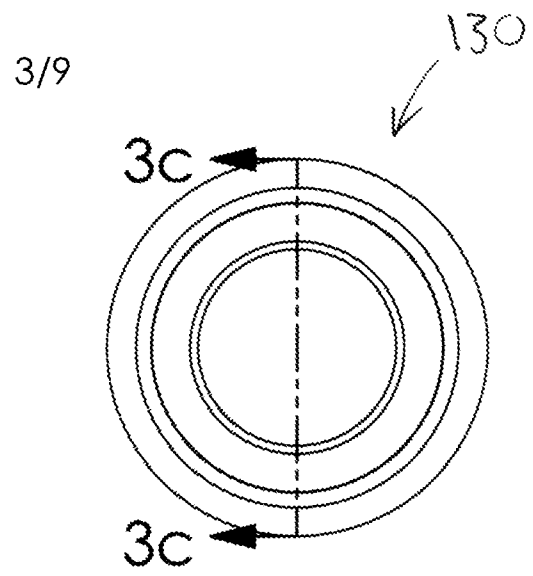


Fig. 3b

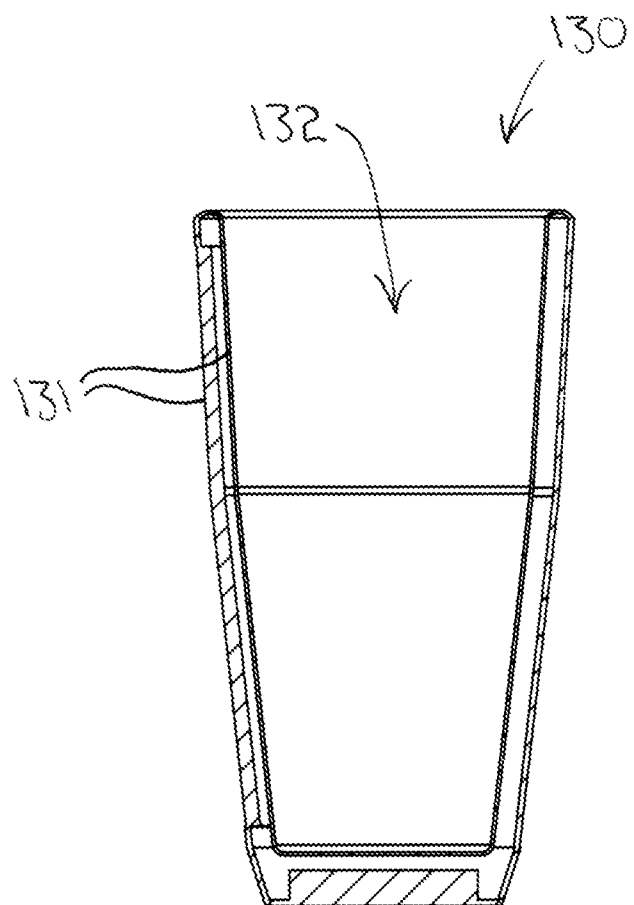


Fig. 3c

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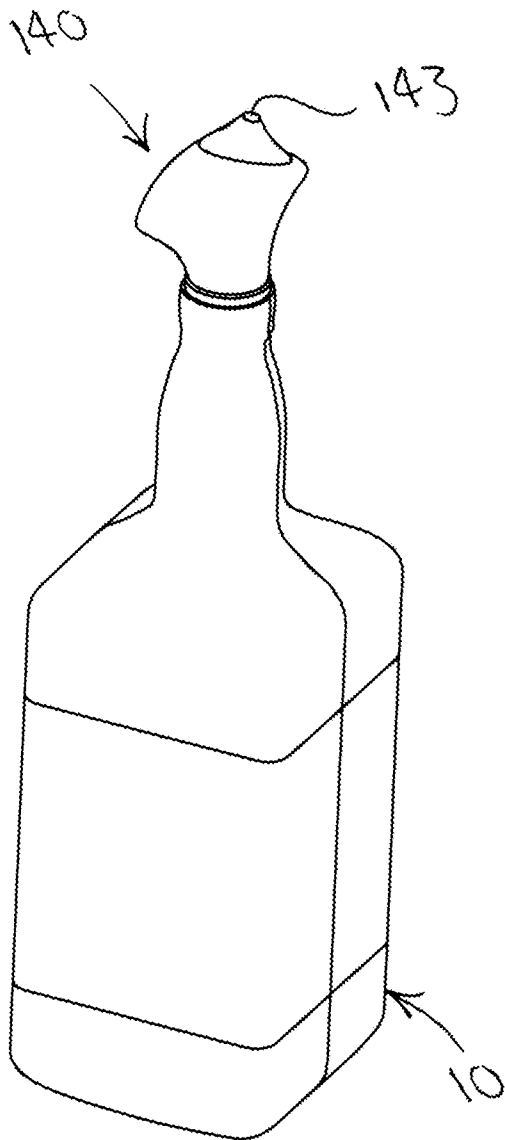


Fig. 4a

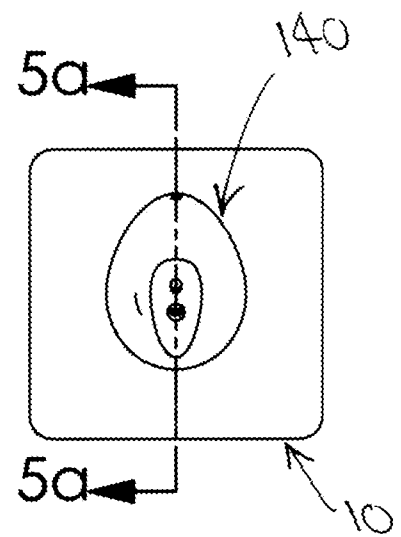


Fig. 4b

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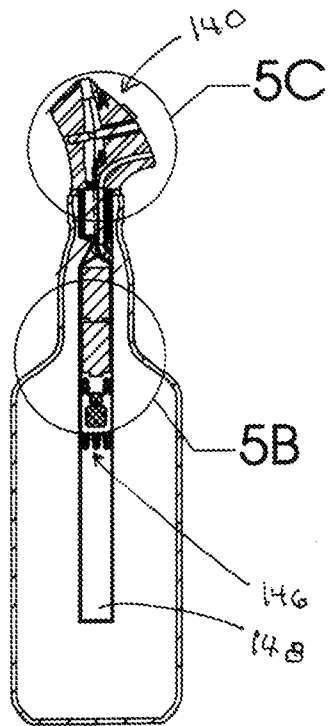


Fig. 5A

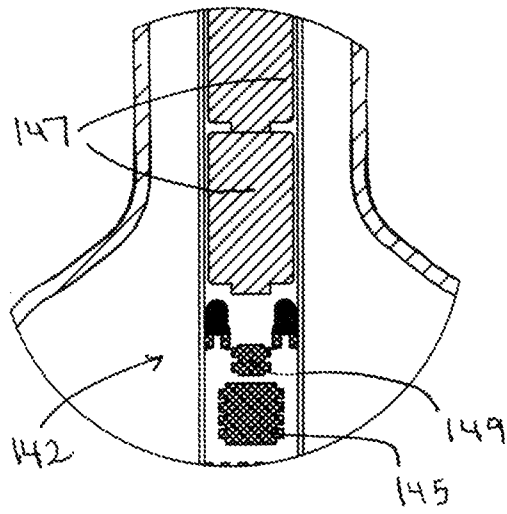


Fig. 5B

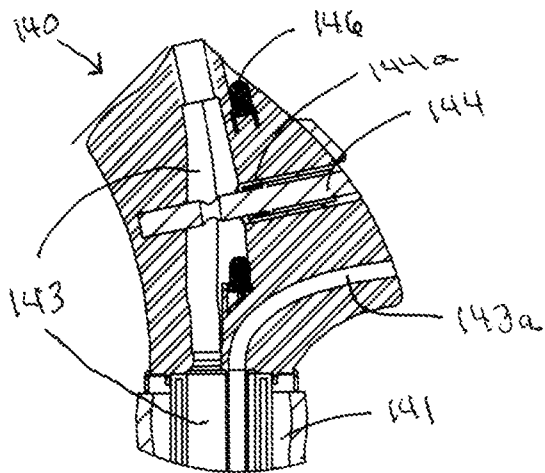


Fig. 5C

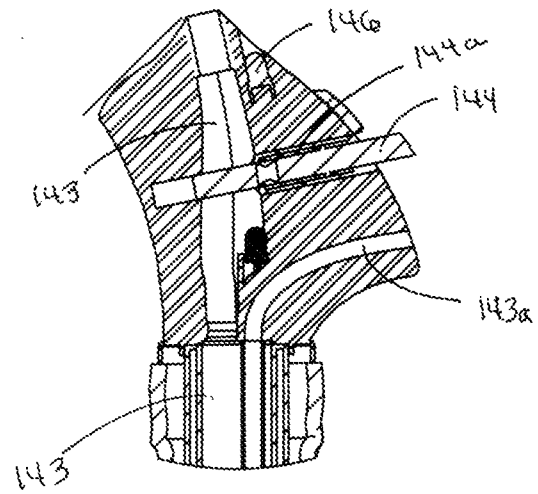


Fig. 5D

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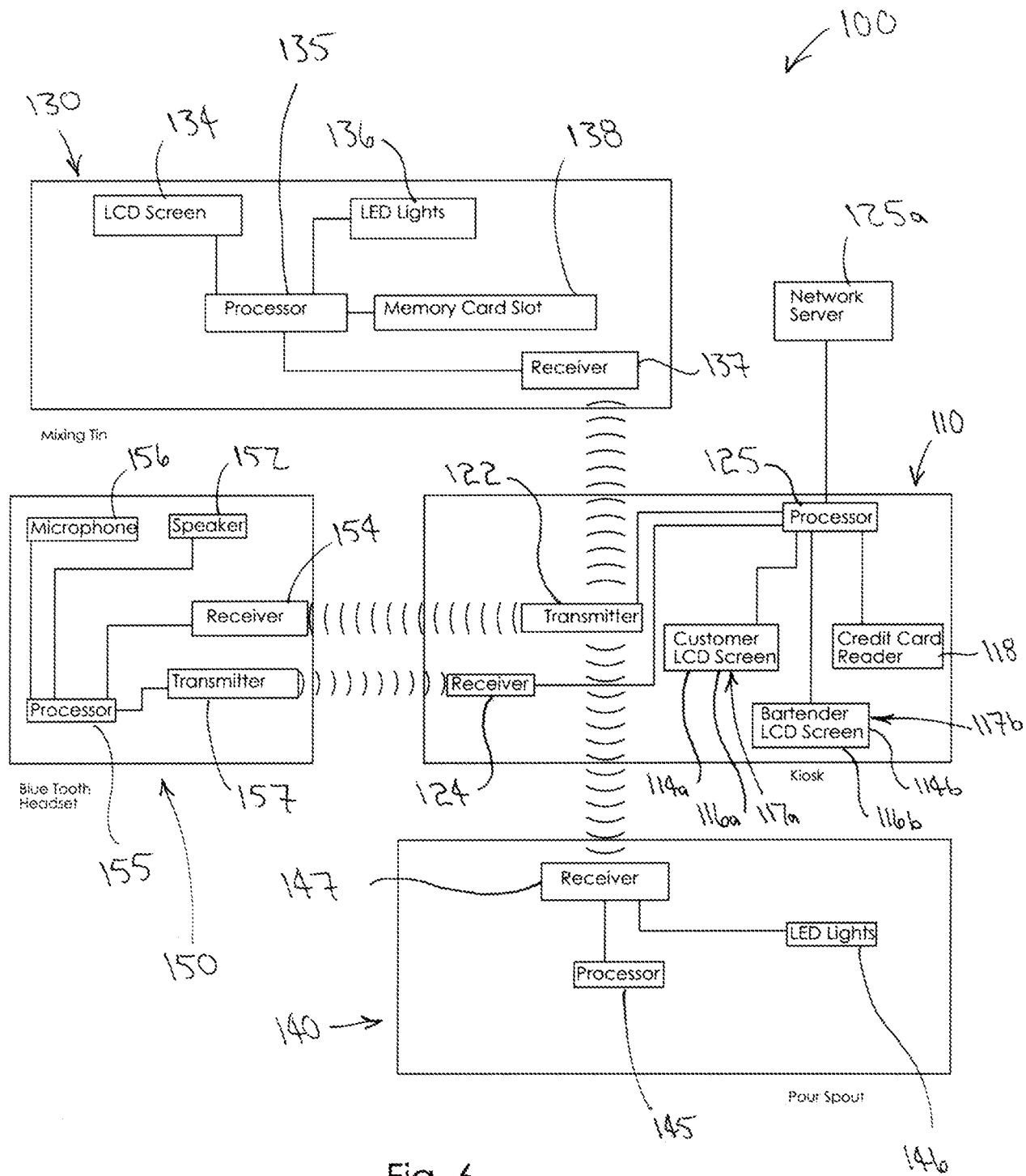


Fig. 6

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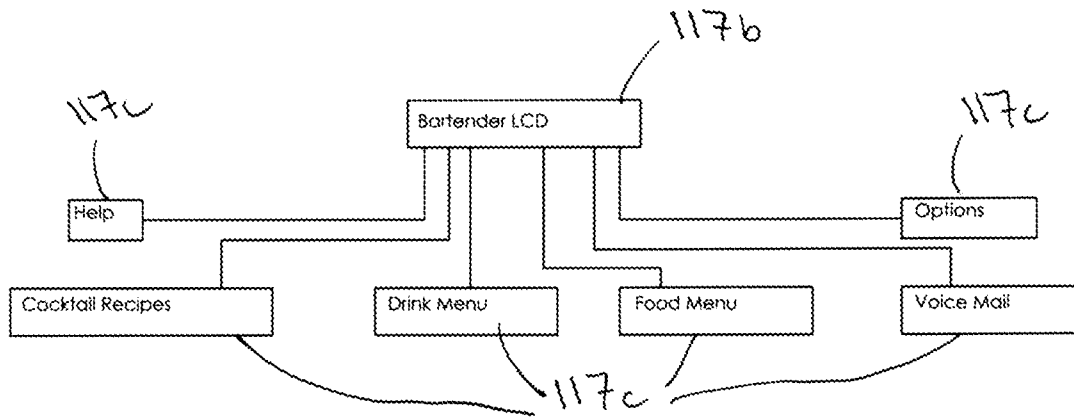


Fig. 7a

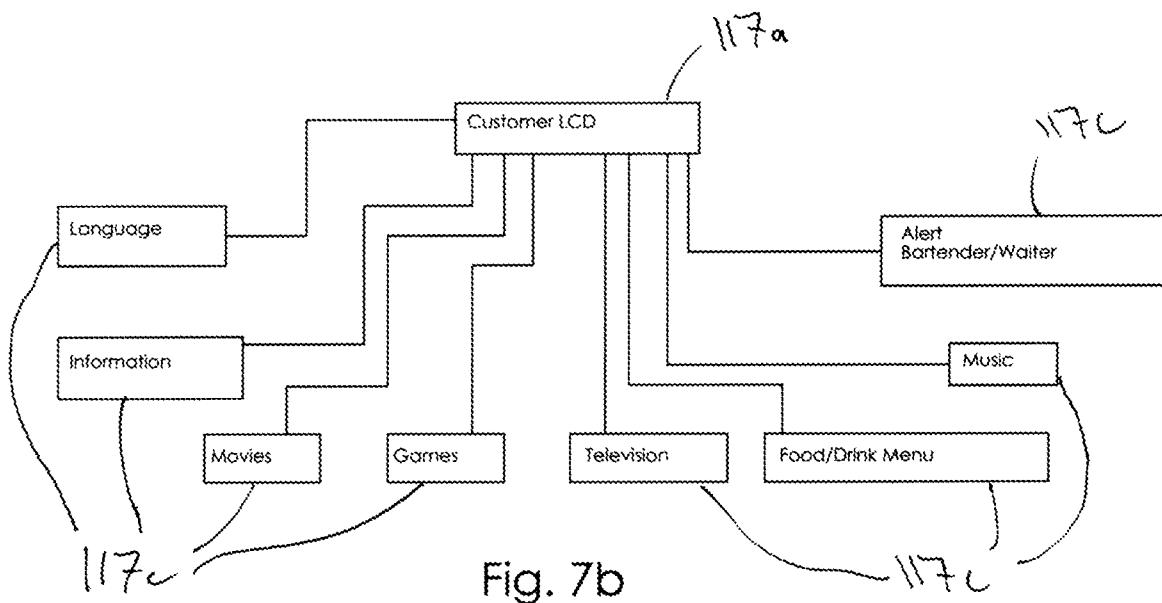


Fig. 7b

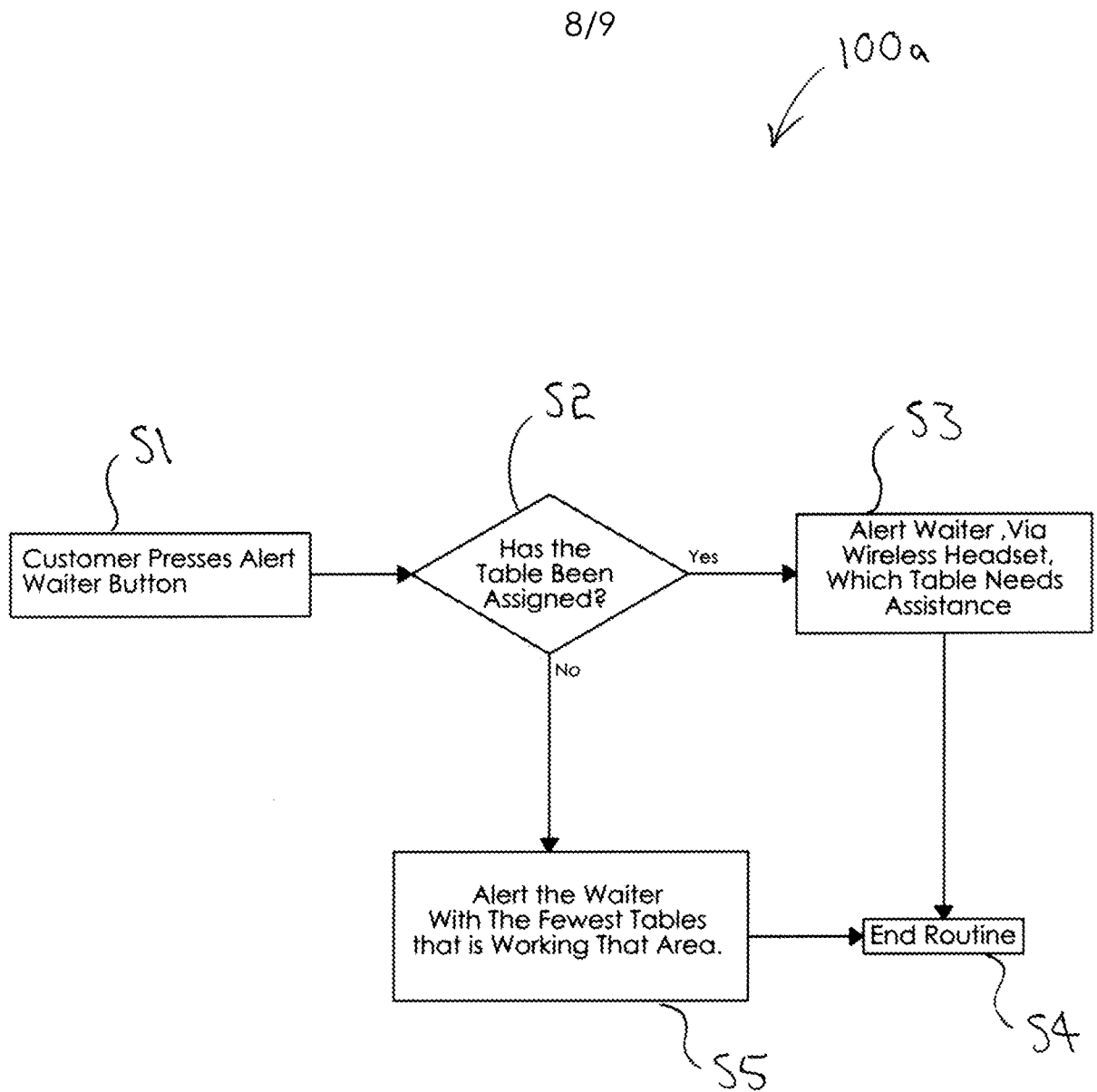
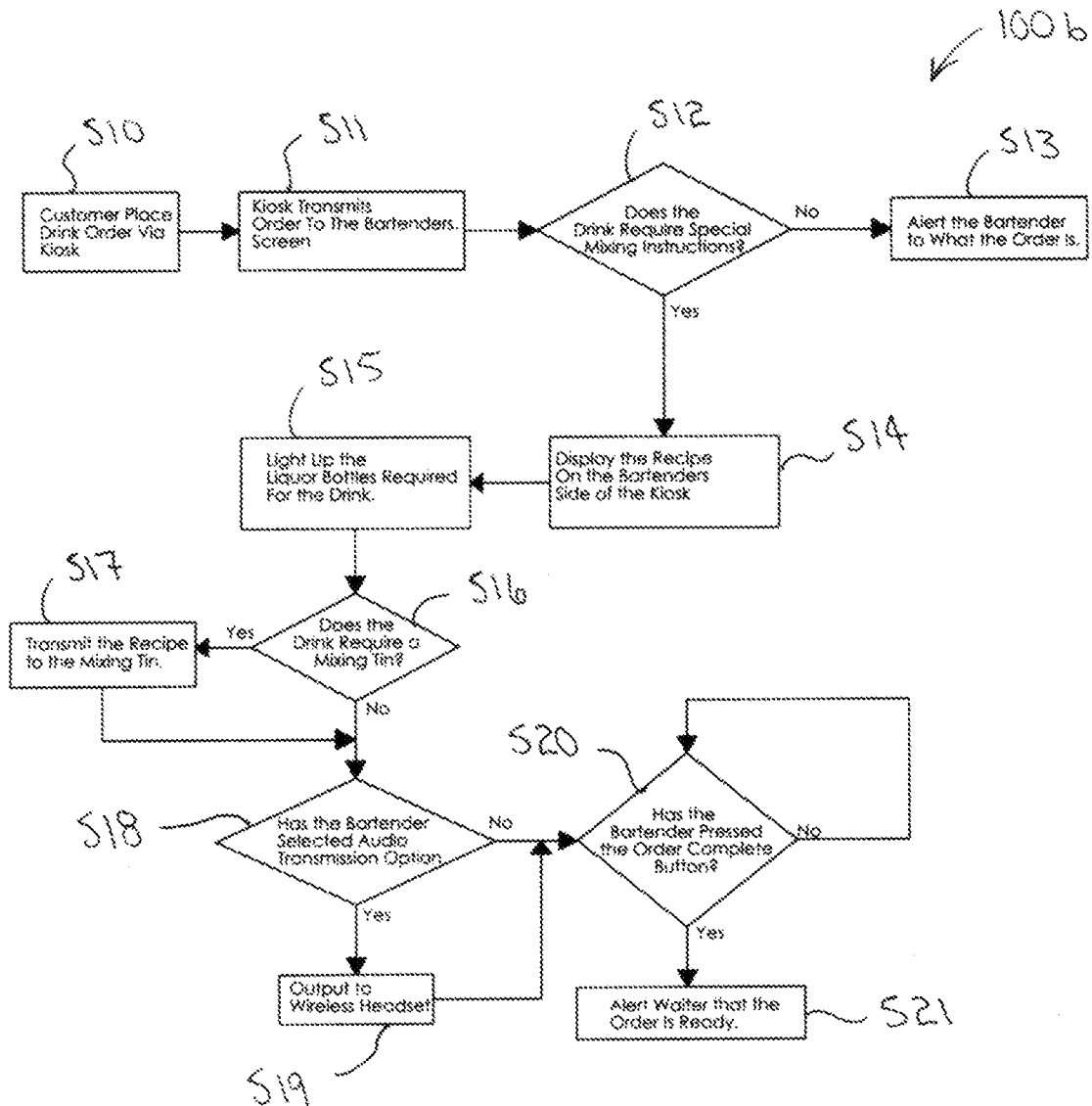


Fig. 8

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 08/62227

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06Q 30/00 (2008.04)

USPC - 705/15; D07/376

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): G06Q 30/00 (2008.04)

US: 705/15; D07/376

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
U.S.: 705/6, 16, 27, 26, 14; D07/303, 314, 316; 709/200, 245

IPC(8): G06Q 30/00 (2008.04) (View search terms below)

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

PubWEST (PGPB, USPT, USOC, EPAB, JPAB); GOOGLE; GOOGLE Patents; Search terms: restaurant, Armstrong, the kiosk, display, processor, napkin, condiment, storage, space, container, area, bar, touch, screen, bartender, mix, customer, drink.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 6,973,437 B1 (OLEWICZ et al.) 06 December 2005 (06.12.2005) entire document, especially Abstract; Fig 1-3, 4A-C, 6A-B; col 5, ln 2-19, 20-46; col 6, ln 22-39; col 7, ln 9-19, 64 to col 8, ln 59; and col 10, ln 64 to col 11, ln 25.	1-3, 7-8 ----- 4-6, 9-22
Y	US 2005/0068846 A1 (WULF et al.) 31 March 2005 (31.03.2005) entire document, especially Abstract; Fig 1, 2, 21; para [0009], [0025], [0034]-[0038], [0054]-[0055], [0099] and [0115].	4-6, 9-18, 21-22
Y	US 5,553,312 A (GATTEY et al.) 03 September 1996 (03.09.1996); col 1, ln 5-10; and col 4, ln 6-28.	19-20
Y	US 5,360,176 A (MUGGE et al.) 01 November 1994 (01.11.1994); Fig 1; and col 2, ln 11-13.	12
Y	US 2006/0250784 A1 (LANGONE) 09 November 2006 (09.11.2006); Fig 1, 2, 4; para [0009], [0025], [0030] and [0034]-[0038].	13-18, 21-22
Y	US 2006/0118581 A1 (CLARK) 08 June 2006 (08.06.2006); Fig 2, 3; para [0043], [0047] and [0052].	15, 22

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Date of the actual completion of the international search

10 November 2008 (10.11.2008)

Date of mailing of the international search report

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