AUTOMATED SYSTEM THAT DISPENSES A DRINK IN ASSOCIATION WITH A GAME

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] None.

BACKGROUND

[0002] The embodiments herein relate generally to drink dispensers.

[0003] In some social games, drinking a beverage is a component of the game rules. Each participant manually pours their own drink or another person pours for them. Pouring a drink manually can be tedious, lead to a break in the action, or in some cases, manipulation/cheating by participants.

[0004] Automated drink dispensing systems include for example, electronic taps that pour a pre-defined volume of spirit into a cup. Generally speaking, these are stand-alone systems that are activated manually by an end user.

SUMMARY

[0005] According to one embodiment of the subject technology, an automated drink dispensing system is disclosed that includes a drink dispenser apparatus and an app. The drink dispenser apparatus may be controlled to pour one or more fluids for a drink. The app may control the operation of the drink dispenser apparatus. The app may include one or more games that end users can play. Events/actions in the game may trigger automatic dispensing of a drink by the drink dispenser apparatus. Some embodiments include a network of connected drink dispenser apparatuses that allow users to participate in games remotely from one another through a mobile computing device.

BRIEF DESCRIPTION OF THE FIGURES

[0006] The detailed description of some embodiments of the present invention is made below with reference to the accompanying figures, wherein like numerals represent corresponding parts of the figures.

[0007] Figure 1 is a top, perspective view of a photograph of an automated drink dispensing system in accordance with an exemplary embodiment of the subject technology.

[0008] Figure 2 is a side perspective view of the system of Figure 1.

[0009] Figure 3 is a front end view of the system of Figure 1.

[0010] Figure 4 is a block diagram of a networked computing system using multiple instances of the automated drink dispensing system in accordance with an exemplary embodiment of the subject technology.

DETAILED DESCRIPTION OF CERTAIN EMBODIMENTS

[0011] The word "exemplary" is used herein to mean "serving as an example or illustration." Any aspect or design described herein as "exemplary" is not necessarily to be construed as preferred or advantageous over other aspects or designs.

[0012] In general, exemplary embodiments disclose an automated drink dispensing system that includes a drink dispenser apparatus and an electronic software application (referred to in general herein as the “app”) that remotely controls the drink dispenser apparatus. In some embodiments, the subject technology provides a programmable and remotely controlled drink dispenser apparatus that includes tanks that can be filled with fluids. The app may indicate what

fluids are in each tank. The app may control the apparatus to dispense and mix fluids to generate cocktails based on the contents of the tanks.

[0013] In some embodiments, the drink dispenser apparatus may be operated in conjunction with the app to trigger dispensing of a drink in response to a game action. The system allows for a fair and controlled way of distributing drinks or beverages based on for example, the outcome (win/loss) of a game interface. The single apparatus or multiple interfaced devices will distribute a controlled amount of liquid, intended for human consumption, into a glass, shot glass, mug, paper or plastic cup, or other such drinking vessel(s). As will be appreciated, the apparatus will allow for the gamification of drinking one or more beverages for a single person or for multiple people across multiple connected apparatuses simultaneously, whether the participants of the game are in either local or remote locations.

[0014] The app may include one or more programmed games wherein an event in the game triggers the drink dispenser apparatus to pour the drink. Participants may interact with the app through a single computing device or from respective computing devices (for example, smart phones or similar). As shown in Figure 4, end users may participate in a game from locations remote from each other that each have an instance of the drink dispenser apparatus. Signals from respective computing devices may be received by the different computing devices and the respective drink dispenser apparatuses through the network so that dispensing of drinks and/or game action is coordinated at each location.

[0015] Referring now to Figures 1-3, a drink dispensing apparatus is shown according to an embodiment. In one example embodiment, the drink dispensing apparatus includes a control device (microcontroller) (1) that is capable of controlling one or more motors, lights, and switches with connectivity via local wireless or remote-based computing systems. Firmware (2) is

updatable by direct wire connection or over the air updates. Multiple liquid dispensing pumps (3) allow for fast and precision dispensing of a controlled amount of liquid into one or more drinking vessels. A delivery device (4) allows for the travel of a controlled amount of liquid from one or more holding containers through pumps to the dispensing system. Vessels (or tanks) (5) contain the liquids to be dispensed. These can be part of the device or an external apparatus that connects to existing bottles. These vessels or apparatus can contain an optional sensor to detect if liquid is available to dispense. Drink vessels (6), for example, glasses, shot glasses, mugs, paper/plastic/glass cups, or other such drinking vessels receive the dispensed liquids but are not necessarily part of the apparatus or system. Some embodiments include a human interaction device (HID) or interface (7) that allows for local control of the apparatus. The interface (7) may include a screen with a user input device (for example, a rotary switch, touch interface, or buttons).

[0016] A local gaming module (8) may be coupled to the microcontroller 1 and/or firmware (2). In some embodiments, the local gaming module (8) may be an interactive device that is operated based on users providing input to the gaming module (8). In some embodiments, the local gaming module (8) may have features that end users respond to as part of a game. In the example, shown, the local gaming module (8) includes a set of colored light buttons. End users may play games that require contacting the lights (for example, a reflex touch or pressing the lights in an order). A failed or passed attempt may trigger dispensing of a drink. When one or more end users fail an attempt, the system may register the event to other participants through the app. In some embodiments, the buttons may be used to identify a participant in a game.

[0017] Some embodiments include a mounting system (10) that allows for holding one or more drinking vessels that includes an optional sensor to detect whether the vessel is present. Other elements include a power supply (11) (electrical outlet or battery operated) and circuit

boards, wiring, and components (12) for connectivity. In one embodiment, the remote computing environment (9) includes computing device interfaces for games, monitoring actions and liquid levels, and APIs for remote access. The user interacts with this environment using a device such as a mobile computing device, web browser or a third party application.

[0018] In one example of operation, the control device (1) is connected to the pumps (3) and to the local gaming module (8). The control device is loaded with firmware (2) to control the device. The human-machine interface (7) is connected to the control device (1) for human interaction with the device. The control device (1) may log into the remote computing system (9) when the system is turned on. All electrical and physical connectivity is done using the components (12). The pumps (3) dispense liquids from the tanks (5) via the delivery device (4) to dispense liquids into the drinking vessel (6) positioned in or on the mounting device (10). The system is powered by a power supply (11).

[0019] In one example of setting up use of the system, a user provides liquids to be used in the drinks into the tanks (5). The hoses may be primed so that dispensing is ready once the activity associated with pouting begins. A glass(es) are placed below the pouring spout(s) of the drink dispensing apparatus. There are multiple ways for the apparatus to be triggered to pour a drink. One method is to review a list of available recipes and select one. Once the recipe is selected the user may engage in a game for game triggered pouring or by direct command for a drink using their remotely connected device. Another way to pour a drink is using a socially interactive game, for example, a trivia game where the winning user triggers a pour of a drink. In this interface, the type of drink being poured is selected as a preference by the user either at the time of pouring or before playing the game. Other games could be virtual beer pong, card games, and classic arcade games.

[0020] As will be appreciated by one skilled in the art, aspects of the disclosed invention may be embodied as an apparatus, a system, a method or process, a circuit, a module, or a computer program product. Accordingly, aspects of the disclosed invention may take the form of an entirely hardware embodiment, an entirely software embodiment (including firmware, resident software, micro-code, etc.) or an embodiment combining software and hardware aspects that may all generally be referred to herein as a "module", “circuit”, or "system." For example, some of the elements disclosed above were referred to as a “controller” which may take the form of a circuit of various electronic elements, an integrated circuit, a system on a chip (SoC), a standalone processor, microchip, or microcontroller unit or any combination of the aforementioned. Furthermore, aspects of the disclosed invention may take the form of a computer program product embodied in one or more computer readable media having computer readable program code embodied thereon. The computer system readable media may be performed on a computing device (not shown). The system memory for a computing device may include at least one program product having a set of program modules that are configured to carry out the functions and/or methodologies of embodiments of the invention as described above.

[0021] Persons of ordinary skill in the art may appreciate that numerous design configurations may be possible to enjoy the functional benefits of the inventive systems. Thus, given the wide variety of configurations and arrangements of embodiments of the present invention the scope of the present invention is reflected by the breadth of the claims below rather than narrowed by the embodiments described above.

[0022] Terms such as “top,” “bottom,” “front,” “rear,” “above,” “below” and the like as used in this disclosure should be understood as referring to an arbitrary frame of reference, rather than to the ordinary gravitational frame of reference. Thus, a top surface, a bottom surface, a front

surface, and a rear surface may extend upwardly, downwardly, diagonally, or horizontally in a gravitational frame of reference. Similarly, an item disposed above another item may be located above or below the other item along a vertical, horizontal or diagonal direction; and an item disposed below another item may be located below or above the other item along a vertical, horizontal or diagonal direction.

CLAIMS

What is claimed is:

1. An automated drink dispensing system comprising a drink dispenser apparatus and an app as disclosed herein.

2. A software app that controls automatic dispensing of a drink in response to a pre-defined event in the software app.

ABSTRACT

An automated drink dispensing system is disclosed that includes a drink dispenser apparatus and an app. The drink dispenser apparatus may be controlled to pour one or more fluids for a drink. The app may control the operation of the drink dispenser apparatus. The app may include one or more games that end users can play. Events/actions in the game may trigger automatic dispensing of a drink by the drink dispenser apparatus. Some embodiments include a network of connected drink dispenser apparatuses that allow users to participate in games remotely from one another through a mobile computing device.