

EXHIBIT 1015

ON DEMAND FUNCTIONAL BEVERAGE DISPENSER

Field of Invention

The present invention relates to a beverage dispenser and more
5 particularly to system for controlling a beverage dispenser by adding flavored
products and functional products to a liquid.

Summary

In a general embodiment, the present disclosure provides an on demand
10 functional beverage dispenser that outputs an enhanced flavored mixture by
combining a liquid with a flavored product and a functional product including a
dietary supplement.

While a number of features are described herein with respect to
embodiments of the invention; features described with respect to a given
15 embodiment also may be employed in connection with other embodiments. The
following description and the annexed drawings set forth certain illustrative
embodiments of the invention. These embodiments are indicative, however, of
but a few of the various ways in which the principles of the invention may be
employed. Other objects, advantages and novel features according to aspects of
20 the invention will become apparent from the following detailed description when
considered in conjunction with the drawings.

Brief Description of the Drawings

The annexed drawings, which are not necessarily to scale, show various
25 aspects of the invention in which similar reference numerals are used to indicate
the same or similar parts in the various views.

FIG. 1 is a photograph of an exemplary embodiment of a beverage
dispenser.

FIG. 2 is an exemplary embodiment of a user interface of the beverage
30 dispenser for selecting a flavor and function.

FIG. 3 is an exemplary embodiment of a user interface of the beverage
dispenser for selecting a water type.

FIG. 4 is a schematic drawing showing an exemplary embodiment of a beverage dispenser and a control system.

FIG. 5 is a schematic drawing showing the beverage dispenser and the control system of FIG. 4 according to another exemplary embodiment including a liquid additive supply.

FIG. 6 is a schematic drawing showing the control system of FIG. 5.

FIG. 7 is a schematic drawing showing the beverage dispenser of FIG. 4 according to another exemplary embodiment in which a liquid supply line and an additive product supply are cooled.

FIG. 8 is a schematic drawing showing the beverage dispenser of FIG. 4 according to another exemplary embodiment in which the liquid supply line and the additive product supply are cooled and pumped to a mixing receptacle of the beverage dispenser.

FIG. 9 is a schematic drawing showing the beverage dispenser of FIG. 4 according to another exemplary embodiment in which the liquid supply is carbonated.

FIG. 10 is a schematic drawing showing another exemplary control system for controlling a beverage dispenser.

FIG. 11 is a schematic drawing showing a flowchart for a method of controlling an amount of a flavored product in a flavored mixture of the flavored product and a liquid that is dispensed from a beverage dispenser.

The present invention is described below in detail with reference to the drawings. In the drawings, each element with a reference number is similar to other elements with the same reference number independent of any letter designation following the reference number. In the text, a reference number with a specific letter designation following the reference number refers to the specific element with the number and letter designation and a reference number without a specific letter designation refers to all elements with the same reference number independent of any letter designation following the reference number in the drawings.

Detailed Description

The principles described herein may be used in beverage dispensing applications. Exemplary applications include beverage dispensing machines for providing an on demand functional beverage. The principles described herein
5 may be sized down for use in home beverage dispensers or sized up for use in industrial beverage dispensers. Many different flavors and liquids may be suitable for use with the beverage dispensing machine and control system described herein. Exemplary beverages (also referred to as flavored mixtures) include any suitable combinations of water, carbonated water, alkaline water,
10 syrup, soda, other carbonated beverages, tea, coffee, and powders or solutions of flavored products and functional products.

The beverage dispensers, systems, and methods described herein are advantageous in producing a functional flavored beverage mixture/solution based on user instructions.

15 Turning to FIG. 1, an exemplary beverage dispenser 22 having a display 25 is shown. In FIG. 2 and 3, an exemplary user interface 23 for controlling the beverage dispenser 22 is shown. Referring first to FIG. 4, a beverage dispensing system 20 including a beverage dispenser 22 and a control system 24 is schematically shown.

20 In one embodiment, the beverage dispenser 22 includes a mixing receptacle 26 in which an enhanced flavored mixture is formed and a mixture outlet 28 from which the enhanced flavored mixture is dispensed out of the beverage dispenser 22. As used herein, the term “mixture” is not limited to liquid mixtures in which substances are not completely dissolved. Likewise, “solution”
25 is not limited to liquid mixtures in which substances are completely dissolved. For example, the enhanced flavored mixture may be dispensed into any suitable container 30 for consumption by a user.

The mixing receptacle 26 is fluidly connected to a liquid enclosure 32 containing a supply of liquid and a product enclosure 34 containing a supply of
30 flavored product. The liquid from the liquid enclosure 32 and the additive product(s) from the product enclosure 34 (also referred to as additive product supply) are supplied to the mixing receptacle 26 where the materials, or ingredients, are mixed to produce the enhanced flavored mixture. The mixing

receptacle 26 may include any suitable components for blending, emulsifying, homogenizing, or otherwise mixing materials into a single substance. Exemplary components include paddles, blades, or beaters that are motorized.

Alternatively, mixing may be accomplished by controlled injection of the
5 flavored product while dispensing the supply of liquid. The amount of injected additive product (e.g., functional product and flavor product), amount of liquid supply, and the flow of the liquid supply may dictate the manner and rate at which the additive product are injected.

The product enclosure 34 is arranged in the beverage dispenser 22 and
10 may be configured to receive, retain, and supply any suitable additive product to the mixing receptacle 26. In the embodiment shown in FIG. 4, the product enclosure 34 includes multiple selectable reservoirs 35. Each of the reservoirs 35 contain one of the additive products separately from the liquid. The additive products include both flavored products and functional products. For example,
15 the product enclosure (also referred to as the additive product supply) may contain a plurality of flavored products and a plurality of functional products. In an exemplary embodiment, the beverage dispenser 22 includes a total of ten additive products. For example, there may be six flavored products and four functional products or seven flavored products and three functional products.
20 Each of the additive products may be stored in a separate selectable reservoir 35.

The product enclosure 34 also includes an additive control valve 54 that is configured to control release of the additive products from the multiple reservoirs 35. The additive control valve 54 is fluidly connected to the mixing receptacle 26
25 for mixing at least one of the additive products with the liquid to form an enhanced flavored mixture that is dispensed from the mixture outlet 28 and the mixture control valve 42.

In the embodiment shown in FIG. 2, the circuitry 48 of the control system 24 causes the display 25 to display the user interface 23. The user interface 23
30 has a flavor selection area 27 and a function selection area 29. The flavor selection area 27 includes multiple selectable flavors 31. The function selection area 29 includes multiple selectable functions 33. (While the function and flavor selection areas 27, 29 are shown as being separated in FIG. 2, the function and

flavor selection areas may overlap.) A user inputs a requested flavor (i.e., the selected flavor) and a requested function (i.e., the selected function). The circuitry 48 receives the selected flavor and the selected function from the display 25. The circuitry 48 then chooses from the multiple selectable reservoirs 35 a flavor reservoir based on the selected flavor. The circuitry 48 also chooses from the multiple selectable reservoirs 35 a function reservoir based on the selected function. For example, each of the selectable flavors 31 and each of the selectable functions 33 may be associated with one of the multiple selectable reservoirs 35. Consequently, when a selected flavor is received, the circuitry 48 may choose as the flavor reservoir the reservoir 35 that is associated with the selected flavor (e.g., using a lookup table). Similarly, when a selected function is received, the circuitry 48 may choose as the function reservoir the reservoir 35 that is associated with the selected function.

While each of the selectable flavors 31 and selectable functions 33 are described above as associated with one of the multiple reservoirs, any of the selectable flavors 31 or selectable functions 33 may be associated with two or more of the selectable reservoirs 35. Consequently, the function reservoir (and/or the flavor reservoir) may be a combination of two or more of the reservoirs 35.

Different flavored products (e.g., syrups) may be suitable, including flavors such as cola, diet cola, root beer, ginger ale, lemon lime, orange, ginger beer, black cherry, raspberry, grapefruit, strawberry, etc. Similarly, different functions may be suitable. For example, the selectable functions 33 may include at least one of relax, energize, immunize, or muscle. In the embodiment shown in FIG. 2, the functions include relax, energize, and immunize.

The selectable functions may result in the additional of different dietary supplements being added to the liquid. In an embodiment, adding the selectable function to the liquid results in dietary supplements being added to the liquid that are understood to be associated with the selected function. For example, when the selected function is relax, the circuitry 48 may choose as the function reservoir one of the multiple selectable reservoirs 35 including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava. Similarly, when the selected function is energize,

the circuitry 48 may choose as the function reservoir one of the multiple selectable reservoirs 35 including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha. When the selected function is immunity, the circuitry 48 may choose as the
5 function reservoir one of the multiple selectable reservoirs 35 including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea. When the selected function is muscle, the circuitry 48 may choose as the function reservoir one of the multiple selectable reservoirs 35 including at least one of protein, amino acids, or
10 creatine.

In some embodiments, the flavored products may also include the dietary supplement included in the functional products. For example, the functional product for immunize may include vitamin C. Similarly, a flavored product for orange may similarly include vitamin C. However, the concentration of vitamin C
15 in the functional product may be larger than the concentration of vitamin C in the flavored product. For example, the concentration of the dietary supplement included in the selected function that is included in the enhanced flavored mixture may be at least five times larger or at least ten times larger than a concentration of the dietary supplement included in the selected flavor that is
20 included in the enhanced flavored mixture. In this example, the amount of vitamin C added by the selected function to the liquid may be at least five or ten times larger than the amount of vitamin C added by the selected flavor.

In another embodiment, the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than
25 or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement. In other embodiments, the selected function may include at least 100%, at least 200% or at least 500% of the daily RDA for the dietary supplement.

The circuitry 48 causes the beverage dispenser 22 to generate an
30 enhanced flavored mixture by adding to a liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir. The circuitry 48 then causes the beverage dispenser to dispense the enhanced flavored mixture.

The enclosure 34 may be configured to store the additive products (i.e., flavored products and functional products) until use and the enclosure 34 may have any suitable shape and capacity, which may be dependent on the application and the type of flavored. The product enclosure 34 may have any
5 suitable inlet for receiving the powder or liquid comprising the additive products and a supply line 36 may be fluidly connected between the product enclosure 34 and the mixing receptacle 26.

Other devices may be provided to transport the additive products to the mixing receptacle 26 and the devices used may be dependent on whether the
10 product is in powder form or liquid form. Various pumps, valves, motors, and/or pneumatic devices may be arranged along the supply line 36 to move the flavored product along the supply line 36 toward the mixing receptacle 26. The mixing receptacle 26 may be oriented substantially vertically with the supply line 36 and the product enclosure 34 arranged at an upper end 38 of the mixing
15 receptacle 26 such that the flavored product may be assisted by gravity in entering the mixing receptacle 26.

Similarly, the liquid enclosure 32 may also arranged in the beverage dispenser 22 and may also be arranged at the upper end 38 of the mixing receptacle 26 for receiving, retaining, and supplying the liquid to the mixing
20 receptacle 26. The liquid enclosure 32 may be arranged independently from the product enclosure 34 to store or hold the liquid and the additive product separately prior to mixing. Separately containing the materials is advantageous in that the shelf life of the products may be longer prior to mixing. Still another advantage is that the bulk of the materials is separated and the materials may be
25 incrementally mixed to ensure a precise mixture and avoid undesired ratios of flavored to liquid.

A supply line 40 may be fluidly connected between the liquid enclosure 32 and arranged at the upper end 38 of the mixing receptacle 26 such that gravity assists in moving the liquid to the mixing receptacle 26 for mixing with the
30 additive product. The supply lines 36, 40 used in the beverage dispenser 22 may include any suitable hoses, tubing, and fluid connectors configured for fluid transport. In other embodiments, various pumps, valves, motors, and/or pneumatic devices may be arranged along the supply line 40 to move the liquid

toward the mixing receptacle 26. Any suitable liquid may be used and examples of suitable liquids include water, alkaline water, carbonated water, and/or carbonated water that is made with alkaline water. In addition, the liquid may be carbonated at the mixing receptacle, and may have a separate carbonation supply and supply line (not shown) to the mixing receptacle.

In the embodiment shown in FIG. 3, the display 23 displays a water selection user interface 80 for selecting the liquid. The water selection user interface 80 includes multiple selectable water types 82. The water selection user interface 80 may be displayed after the user selects a flavor and a function (e.g., using the user interface 25 displayed in FIG. 2). The selectable water types 82 may include sparkling water and still water as shown in FIG. 3.

The control system 23 may control the liquid control valve 52 and the additive control valve 54 to modulate an amount of the selected flavor from the flavor reservoir and the selected function from the function reservoir in the dispensed flavored mixture based on the received beverage selections.

During mixing of the liquid and the additive products, the control system 24 controls the amount of the selected flavor and the amount of the selected function that is mixed in the liquid. The control system 24 may advantageously provide more precise control of amount of the flavored product that is mixed to ensure desired ratios of the flavored product(s) to the liquid. The control system 24 is communicatively coupled with a mixture control valve 42 that is arranged in the mixture outlet 28 of the mixing receptacle 26. The mixture control valve 42 may be opened, closed, or partially opened or closed by the control system 24 to meter the flavored product being mixed into the liquid prior to dispensing the formed enhanced flavored mixture from the mixture outlet 28. The control system 24 may also be communicatively coupled with the supply lines 36, 40 to control the supply of the liquid and the flavored product supply into the mixing receptacle 26. For example, additional control valves may be arranged along the supply lines 36, 40.

Any suitable electronic lines, wiring, cables, harnesses, etc. may be used to connect the control system 24 with the corresponding components of the beverage dispenser 22 and the control system 24 may be automated. Automating the operation enables the control system 24 to maintain a

predetermined amount of the flavored product in the dispensed enhanced flavored mixture during continuous operation. The predetermined amount may be dependent on the desired beverage product and the solubility of the flavored product within the liquid.

5 Referring in addition to FIG. 5, another exemplary embodiment of the beverage dispensing system 20a is shown in which the beverage dispenser 22a further includes a liquid additive enclosure 44 that is fluidly connected to the mixing receptacle 26, such as via a supply line 46, for supplying a liquid additive that is mixed with the liquid and the flavored product to form the enhanced
10 flavored mixture. The liquid additive enclosure 44 is configured to receive, contain, and supply the liquid additive separately from the product enclosure 34 and the liquid enclosure 32. Like the product enclosure 34 and the liquid enclosure 32, the liquid additive enclosure 44 and supply line 46 may be arranged at the upper end 38 of the mixing receptacle 26. The mixture outlet is
15 arranged at the bottom of the mixing receptacle 26 opposite the supply lines 36, 40, 46.

Using the liquid additive is advantageous in that further variations of beverage products may be produced by the beverage dispenser 22a. The control system 24 of the beverage dispensing system 20a may also be
20 communicatively coupled to the supply line 46 for controlling the amount of liquid additive added to the enhanced flavored mixture. A control valve may be arranged along the supply line 46 and communicatively coupled with the control system 24. Accordingly, all of the supply lines 36, 40, 46 may be independently controlled by the control system 24 to achieve a desired enhanced flavored
25 mixture. In an exemplary embodiment, the control system 24 may be used to close the supply line 46 for the liquid additive such that the beverage dispenser 22a may operate using only the liquid enclosure 32 and the product enclosure 34 as in the beverage dispenser 22 shown in FIG. 4.

Any suitable liquid additive may be used in the beverage dispensing
30 system 20a. Exemplary liquid additives include syrup, soda, vitamin infused liquids, and combinations thereof. The beverage dispensing systems 20, 20a may be capable of outputting enhanced flavored mixtures that include alkaline water, carbonated water made with alkaline water, carbonated water made with

alkaline water and vitamin infused soda or sparkling water, and variations thereof. The vitamin infused soda or flavored sparkling water may include a complex vitamin B and C. Liquid additives may include sweeteners such as sucralose or organic cane sugar. Still many other enhanced flavored mixtures may be suitable.

In an exemplary embodiment, the product enclosure 34 may include a bag-in-box type configuration in which each of the flavored product(s) is pre-mixed with a fluid prior to being supplied to the mixing receptacle 26 for mixing with the liquid. The flavored product may be a syrup or any suitable fluid.

Referring now to FIG. 6, an exemplary embodiment of the control system 24 for the beverage dispenser 22a is shown. As described above, the control system 24 includes circuitry 48 (e.g., a processor) and a controller 50 communicatively coupled to the circuitry 48. The control system 24 may include any suitable electronic control mechanism, such as, for example, a central processing unit (CPU), a microprocessor, control circuitry, and other suitable components. The controller 50 may be communicatively coupled between the circuitry 48 and control valves 52, 54, 56 that correspond to the liquid enclosure 32, the product enclosure 34, and the liquid additive enclosure 44, respectively. The control valves 42, 52, 54, 56 may have any suitable configuration or components to directly control the flow rate. The control valves may be rotary, having balls, butterfly or plug type closures, or linear, having globe, diaphragm or pinch type closures. Any suitable type of actuator may be used for the valves, such as a piston or diaphragm that is pneumatic, electric, or a combination thereof. Electromechanically operated valves including solenoid valves may also be suitable. Many other types of control valves may be suitable.

The circuitry 48 is configured to provide instructions to the controller 50 to adjust the control valves 52, 54, 56 for controlling amounts of the liquid, flavored product(s), and liquid additive during mixing. As described above, the beverage dispenser 22 receives user input from the display 23. The display may be any suitable device for displaying information and receiving user input (e.g., a touch-screen). The processor 48 may be configured to operate the controller 50 and the control valves 42, 52, 54, 56 based on the user input 58. For example, the

user input 58 may be used to selectively add the liquid additive and/or flavored product based on the user's preference.

As opposed to receiving instructions from the display 23, the control system 24 may be configured to also receive instructions from a mobile device via a communication interface. The communication interface may be connected to the mobile device via a wireless connection and receives instructions from the mobile device. The received instructions may include the selected flavor and the selected function.

The communication interface may be communicatively coupled to the control system and identify the selected flavor and the selected function. The communication interface may receive instructions from a mobile device. In particular, the communication interface may be in wireless communication with a network interface of the mobile device. The communication interface may comprise a wireless network adaptor, an Ethernet network card, a near field communication (NFC) antenna, or any suitable device that provides an interface between the communication interface of the beverage dispenser and the network interface of the mobile device. The communication interface may additionally communicate with a server via a network such as the internet, such that the communication interface is able to send data stored on a computer readable medium of the beverage dispenser across the network and store received data on the computer readable medium (e.g., data based on the instructions received from the mobile device). As described above, the communication interface is also communicatively coupled to the control system such that the control system is able to control operation of the beverage dispenser based on instructions received by the communication interface. The communication interface, computer readable medium, and circuitry may be communicatively coupled through a system bus, mother board, or using any other suitable manner as will be understood by one of ordinary skill in the art.

The beverage dispenser 22 and the mobile device may communicate using a wireless signal having a limited effective distance. For example, the beverage dispenser 22 and the mobile device may communicate using a protocol having a maximum effective distance of two feet or less (e.g., NFC) such that a user does not mistakenly cause a beverage dispenser 22 to

dispense a beverage when the user is across the room from the beverage dispenser 22.

The beverage dispenser 22 may include a volume sensor configured to measure a volume of fluid dispensed by the beverage dispenser 22. The volume
5 sensor may be any suitable sensor for determining a dispensed volume of fluid. For example, the volume sensor may be a flow sensor and the output of the flow sensor may be used to determine a dispensed volume over a period of time. As another example, the volume sensor may be implemented by the processor and may estimate the dispensed volume based on the time that fluid was dispensed
10 by the beverage dispenser 22 based on a known flow rate of the beverage dispenser 22.

The beverage dispenser 22 may be configured to communicate with a server via the communication interface. For example, the beverage dispenser 22 may communicate with the server over a network such as the internet. The
15 beverage dispenser 22 may communicate to the server 25 the user ID and at least one of the measured volume or the at least one selected flavor. For example, when a user selects flavors (or no flavors) and a type of water to be dispensed and causes the selected beverage to be dispensed, the beverage dispenser 22 may inform the server of the user ID of the user, the selected
20 flavors, the type of water, and the volume of the beverage that was dispensed. The beverage dispenser 22 may also provide to the server 25 a cost of the flavor mixture that was dispensed per unit of volume.

Upon receiving this information, the server may generate a bill against a user's account that is associated with the received user ID. In this way, the
25 beverage dispenser 22 may allow a user to purchase a beverage from a beverage dispenser 22 without touching anything except their mobile device 22 (e.g., a mobile phone or tablet) and the container that the requested beverage is dispensed into.

The beverage dispenser system allows a company to bill users
30 automatically and to provide reports detailing usage of the beverage dispenser(s). For example, a university may have a meal plan that allows students to purchase a certain dollar amount of beverages each month and the university may have multiple beverage dispensers 22 spread across the

university. A student may use any one of the beverage dispensers 22 via their mobile phone and the beverage dispenser system 20 may track student usage and provide notifications when the student approaches their dollar allotment for a given time period.

5 The server may also provide a report to users detailing the beverages, volumes of fluid, and optionally nutritional information of the beverages consumed. This report may be provided to a service that the user is a member of (e.g., Fitbit, Apple Health, etc.).

10 The control system 24 may further include at least one sensor 60 that is communicatively coupled with the processor 48 for automatically controlling the levels of the liquid, the flavored product, and the liquid additive. More than one sensor may be used and at least one sensor 60 may be arranged in the mixture outlet 28 of the mixing receptacle 26. Any suitable type of sensor 60 may be used including fluid level, pressure, temperature or thermometer, potentiometer,
15 conductivity, biosensors, and optical sensors. Other types of sensors may be suitable such as any sensor that is configured to measure temperature, pH, acidity, water activity, or other conditions such as those that control or prevent undesirable microorganisms in the beverage product.

20 Arranging the sensor 60 in the mixture outlet 28 ensures that the enhanced flavored mixture to be dispensed has the desired amount of ingredients and the control system 24 may be configured to adjust the amounts based on the conditions detected by the sensor 60. In exemplary embodiments, the mixture control valve 42 may be opened, closed, or partially opened or closed during adjustment. In other exemplary embodiments, a recirculation line
25 may be provided such that if the sensor 60 detects that a enhanced flavored mixture in the mixture outlet 28 does not satisfy a predetermined threshold for a particular condition, the enhanced flavored mixture may be rerouted back to the mixing receptacle 26 for further mixing. The recirculation line may include any valving, pumps, or fluid lines for recirculating the undesirable enhanced flavored
30 mixture.

Referring now to FIG. 7, another exemplary embodiment of the beverage dispensing system 20b is shown in which the beverage dispenser 22b is configured to use at least one of a cooled liquid or a cooled flavored product

supply. The beverage dispensing system 20b may include at least one cooling device 62 which includes a single cooling device or two separate cooling devices for the liquid and the flavored product(s). In an exemplary embodiment, the cooling device 62 may be fluidly connected to the supply line 40 for cooling the liquid as the liquid travels from the liquid enclosure 32 to the mixing receptacle 26. The cooling device 62 may be configured to cool the liquid, such as water, to a temperature that is between 1 and 8 degrees Celsius (between 35 and 45 degrees Fahrenheit). The cooling temperature may be dependent on the liquid and the temperature may be dependent on whether the liquid is being stored or moving toward the mixing receptacle 26. To maintain cool temperatures, a supply line may be thermally insulated.

The same cooling device 62 (or a second cooling device) may also be provided for the flavored product. The cooling device 62 may also be fluidly connected to the product enclosure 34 or to the supply line 36. The cooling devices 62 may be configured to maintain a predetermined temperature of the liquid and/or the flavored product during storage and during operation. In exemplary embodiments, only the cooling device 62 for the liquid may be provided such that only the liquid is cooled. Any suitable cooling device or components may be used to cool the liquid or the flavored product, including heat exchangers, desiccants, insulators, evaporators, condensers, compressors, expansion valves, cooling fans, etc.

Referring in addition to FIG. 8, still another embodiment of the beverage dispensing system 20c is shown in which the beverage dispenser 22c further includes pumps 66, 68 for pumping the materials from the liquid enclosure 32 and the product enclosure 34 to the mixing receptacle 26. As shown in the exemplary embodiment of FIG. 8, the cooling device 62a for the liquid may be fluidly connected to the liquid enclosure 34 rather than the supply line 40. In still other exemplary embodiments, cooling devices may be fluidly connected to both the enclosures and the supply lines for the liquid and/or the flavored product.

Referring now to FIG. 9, still another embodiment of the beverage dispensing system 20d is shown in which the beverage dispenser 22d further includes a carbonator 70 for carbonating the liquid from the liquid enclosure 32. The carbonator 70 is fluidly connected to a carbon dioxide supply 72 and the

liquid enclosure 32 such that the carbonator 70 is configured to receive the liquid from the liquid enclosure 32. The supply line 40 is fluidly connected to the carbonator 70 for transferring the carbonated liquid to the mixing receptacle 26 for mixing with the flavored product received from the product enclosure 34. In
5 exemplary embodiments, liquid additive may also be mixed in. The carbonator 70 may include any suitable valves or control lines and a control system for the beverage dispenser 22d may also be configured to operate the carbonator 70.

Referring in addition to FIG. 10, an exemplary control system 24a is shown in a beverage dispenser 22e that includes the carbonator 70 having a
10 control valve 74 and a sensor 76, the liquid enclosure 32 including the liquid control valve 52 and the cooling device 62, the product enclosure 34 including the control valve 54, and the mixture control valve 42 arranged in the mixing receptacle 26. The control system 24a operates similarly to the control system 24 of FIG. 6 and the configurations shown in Figs. 3 and 7 are merely
15 exemplary. More or fewer components of the beverage dispenser may be included and the components may depend on the application. For example, the carbonator 70 may be provided without one or any of the cooling devices and/or the liquid additive enclosure 44 shown in the control system 24 of FIG. 6 may be provided. The control system 24a includes the processor 48, the user input 58,
20 and the controller 50 that is communicatively coupled with the carbonator 70, the liquid enclosure components 52, 62, and the flavored product components 54.

The control system 24a is configured to control the control valves 42, 52, 54, 74 and the cooling device 62. The sensors 60, 76 may be used to detect certain conditions and the processor 48 may be used to operate the controller 50
25 based on the detected conditions. The control system 24a may be configured for automatic operation and/or may also receive manual inputs from the user input 58. A memory 78 may also be provided in the control system 24a for containing stored data pertaining to recipes for particular enhanced beverage flavored mixtures. The stored data may also pertain to predetermined conditions
30 or thresholds for the sensors. Examples of predetermined conditions or thresholds may include fluid levels, pressure, temperature, viscosity, etc. The processor 48 is communicatively coupled to the memory 78 and may provide

instructions to the control valves and/or other components based on comparing the detected data and the stored data.

Referring now to FIG. 11, a flow chart shows a method 100 of controlling an amount of a flavored product and a functional product in an enhanced
5 flavored mixture. The method 100 may include using the beverage dispenser 22, 22a, 22b, 22c, 22d, 22e shown in Figs. 4-10. A first step 102 of the method 100 includes receiving user input including a selected flavor and a selected function.

A second step 104 of the method 100 includes choosing from multiple
10 selectable reservoirs a flavor reservoir based on the selected flavor. Similarly, in a third step 106, a function reservoir is chosen from the multiple selectable reservoirs based on the selected function. A fourth step 108 of the method 100 includes supplying the liquid to the mixing receptacle by using the circuitry to control the liquid control valve based on the received user input. Similarly, in the
15 fifth step 110, the selected flavor from the flavor reservoir and the selected function from the function reservoir are supplied to the mixing receptacle to be dissolved in the liquid and to form an enhanced flavored mixture by using the circuitry to control a mixture control valve based on the received user input.

In the sixth step 106 of the method 100, an amount of the selected flavor
20 and the selected function that is dissolved in the liquid is modulated to maintain a predetermined solution of the enhanced flavored mixture that is dispensed from the beverage dispenser by using the circuitry to control a control valve based on the received user input.

Step 108 may include cooling the liquid such as by using the cooling
25 device 62, 62a shown in Figs. 4 and 5. Step 108 may further include carbonating the liquid and supplying the carbonated liquid to the mixing receptacle 26, such as by using the carbonator 70 shown in FIG. 9.

Steps 108 and 110 may include storing the liquid and the additive product, and using supply lines, pumps, etc. to transfer the material to the mixing
30 receptacle 26. Supplying the additive product may include supplying a powder material, a liquid, or a solution thereof and supplying the liquid may include supplying at least one of water, carbonated water, syrup, soda, tea, coffee, or a combination thereof.

Step 112 of the method 100 may include controlling an amount of the additive product that is dissolved in the liquid. Step 112 may include using the control system 24, 24a shown in Figs. 6 and 10. For example, control valves, such as the control valves 42, 52, 54, 74 shown in FIG. 10 may be operated
5 based on sensed conditions to achieve a specific beverage enhanced flavored mixture. In exemplary embodiment in which the liquid additive enclosure 44 of FIG. 5 is provided, step 116 may include controlling an amount of the liquid additive that is added to the enhanced flavored mixture. Controlling the liquid additive may include using the control valve 56 shown in FIG. 6. When the
10 enhanced flavored mixture has the desired solution, step 112 of the method 100 includes dispensing the enhanced flavored mixture. For example, the enhanced flavored mixture may be dispensed into the consumption container 30 shown in FIG. 4.

Step 112 of the method 100 includes optionally maintaining a
15 predetermined solution of the enhanced flavored mixture. The control system 24, 24a may be configured to automatically maintain the solution by determining a level of the flavored product in the mixing receptacle 26 using a product level sensor 60, as shown in Figs. 3 and 7, and controlling the control valves 42, 52, 54, 74 based on the determined level. Maintaining the solution may include
20 maintaining the solution to have between 15 and 25 milligrams of the flavored product per 240 milliliters of the enhanced flavored mixture. Other solutions may also be suitable and are dependent on the beverage product.

Using the beverage dispenser, system, and method described herein is advantageous in both producing a beverage enhanced flavored mixture using a
25 separate mobile device that does not require a user to physically touch the beverage dispenser.

Although the invention has been shown and described with respect to a certain embodiment or embodiments, it is obvious that equivalent alterations and modifications will occur to others skilled in the art upon the reading and
30 understanding of this specification and the annexed drawings. In particular regard to the various functions performed by the above described elements (components, assemblies, devices, compositions, etc.), the terms (including a reference to a "means") used to describe such elements are intended to

correspond, unless otherwise indicated, to any element which performs the specified function of the described element (i.e., that is functionally equivalent), even though not structurally equivalent to the disclosed structure which performs the function in the herein illustrated exemplary embodiment or embodiments of the invention. In addition, while a particular feature of the invention may have been described above with respect to only one or more of several illustrated embodiments, such feature may be combined with one or more other features of the other embodiments, as may be desired and advantageous for any given or particular application.

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Claims

1. A control system for a beverage dispenser for dispensing a flavored beverage and having a display and multiple selectable reservoirs, wherein the control system comprises circuitry configured to:

5 cause the display to display a user interface having a flavor selection area and a function selection area, wherein:

the flavor selection area includes multiple selectable flavors; and

the function selection area includes multiple selectable functions;

10 receive user input identifying a selected flavor from the flavor selection area of the user interface;

receive user input identifying a selected function from the function selection area of the user interface;

choosing from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

15 choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

cause the beverage dispenser to generate enhanced flavored mixture by adding to a liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir; and

20 causing the beverage dispenser to dispense the enhanced flavored mixture.

2. The control system of claim 1, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

25

3. The control system of claim 2, wherein:

when the selected function is relax, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine,
30 ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs

including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs

5 including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein, amino acids, or creatine.

10

4. The control system of claim 2 or 3, wherein the selectable functions include relax, energize, and immunize.

5. The control system of any one of the preceding claims, wherein a
15 concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

20 6. The control system of any one of the preceding claims, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

25 7. The control system of any one of the preceding claims, wherein the circuitry is further configured to cause the display to display a water selection user interface for selecting the liquid, wherein the water selection user interface includes multiple selectable water types.

30 8. The control system of claim 7, wherein the water selection user interface is displayed after the circuitry receives the selected flavor and the selected function.

9. The control system of claim 7 or 8, wherein the selectable water types of the water selection user interface include sparkling water and still water.

10. A beverage dispenser comprising:

5 a liquid enclosure that includes a liquid control valve and that is configured to contain a liquid;

a mixing receptacle that is fluidly connected with the liquid control valve and includes a mixture outlet and a mixture control valve;

10 a product enclosure for storing multiple additive products, the product enclosure including multiple reservoirs each containing one of the additive products separately from the liquid and an additive control valve configured to control release of the additive products from the multiple reservoirs, wherein the additive control valve is fluidly connected to the mixing receptacle for mixing at least one of the additive products with the liquid to form an enhanced flavored
15 mixture that is dispensed from the mixture outlet and the mixture control valve;

a display including a user interface for receiving beverage selections from a user, wherein:

the user interface includes a flavor selection area and a function selection area;

20 the flavor selection area includes multiple selectable flavors, each of the selectable flavors being associated with one of the multiple reservoirs; and

the function selection area includes multiple selectable functions, each of the selectable functions being associated with one of the multiple reservoirs; and

25 a control system including circuitry configured to:

receive the beverage selections from the display including a selected flavor from the flavor selection area of the user interface and a selected function from the function selection area of the user interface;

30 choosing from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function; and

control the liquid control valve and the additive control valve to modulate an amount of the selected flavor from the flavor reservoir and the selected function from the function reservoir in the dispensed flavored mixture based on the received beverage selections.

5

11. The beverage dispenser of claim 10, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

12. The beverage dispenser of claim 11, wherein:

10 when the selected function is relax, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

15 when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

20 when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein, amino acids, or creatine.

25

13. The beverage dispenser of claim 11 or 12, wherein the selectable functions include relax, energize, and immunize.

30 14. The beverage dispenser of any one of claims 10-13, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

15. The beverage dispenser any one of claims 10-14, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily
5 Recommended Dietary Allowances (RDA) for the dietary supplement.

16. A method of controlling an amount of a flavored product and a functional product in an enhanced flavored mixture of the flavored product, the functional product, and a liquid that is dispensed from a beverage dispenser, the
10 method comprising:

receiving user input from a display of a beverage dispenser including a user interface, the user input identifying a selected flavor and a selected function, wherein the user input is received by a control system including circuitry;

15 choosing from multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

20 supplying a liquid to a mixing receptacle by using the circuitry to control a liquid control valve based on the received user input;

supplying the selected flavor from the flavor reservoir and the selected function from the function reservoir to the mixing receptacle to be dissolved in the liquid and form an enhanced flavored mixture by using the circuitry to control a mixture control valve based on the received user input; and

25 modulating an amount of the selected flavor and the selected function that is dissolved in the liquid to maintain a predetermined solution of the enhanced flavored mixture that is dispensed from the beverage dispenser by using the circuitry to control a control valve based on the received user input.

30 17. The method of claim 16, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

18. The method of claim 17, wherein:

when the selected function is relax, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-

5 theanine, B vitamins, or kava;

when the selected function is energize, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

10 when the selected function is immunity, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, using the circuitry to choose as the
15 function reservoir one of the multiple selectable reservoirs including at least one of protein, amino acids, or creatine.

19. The method of any one of claims 16-18, wherein a concentration of a dietary supplement included in the selected function that is included in the
20 enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

20. The method of any one of claims 16-19, wherein the selected
25 function includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

Abstract

An on demand functional beverage dispenser is provided that outputs an enhanced flavored mixture by combining a liquid with a flavored product and a functional product including a dietary supplement.



FIG. 1

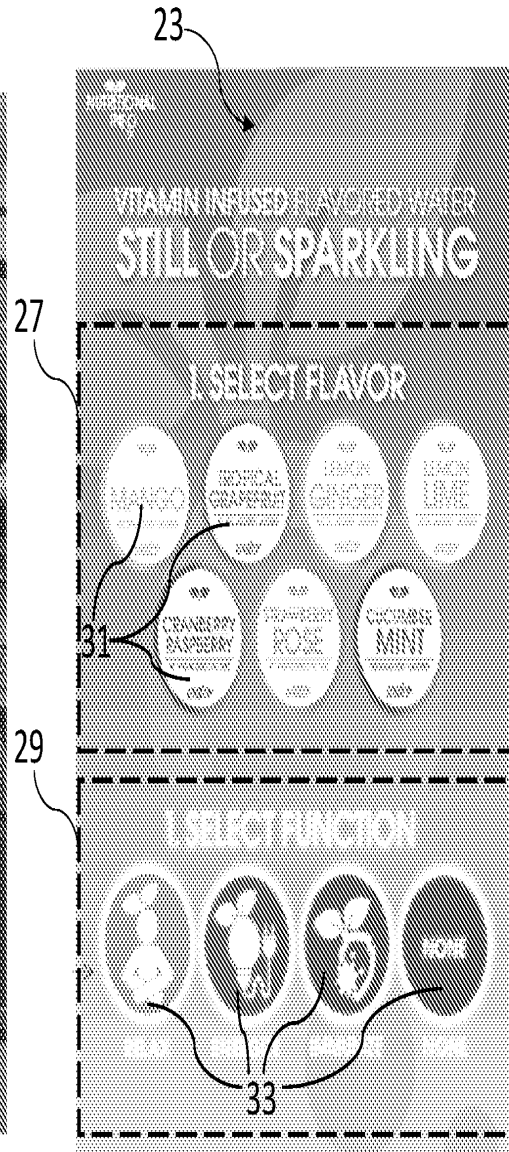


FIG. 2

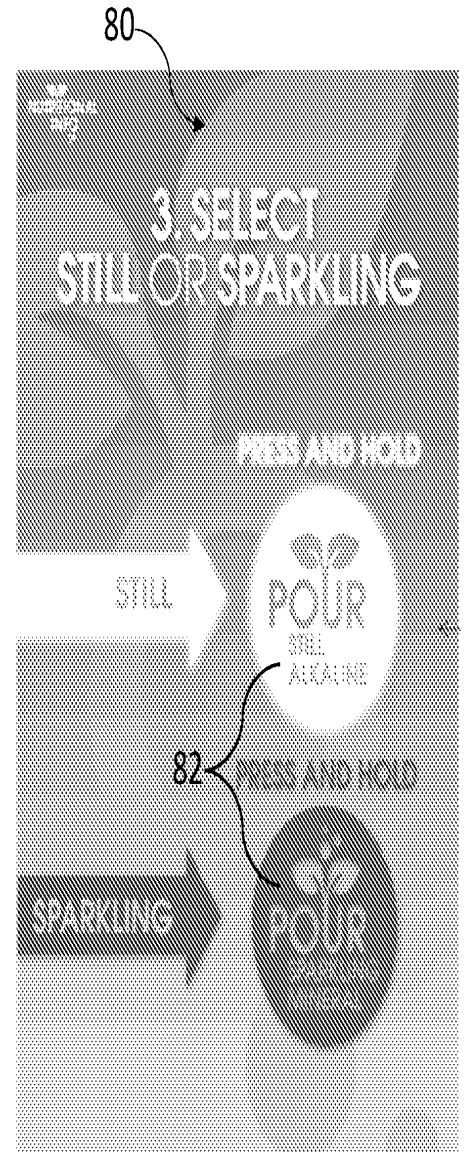


FIG. 3

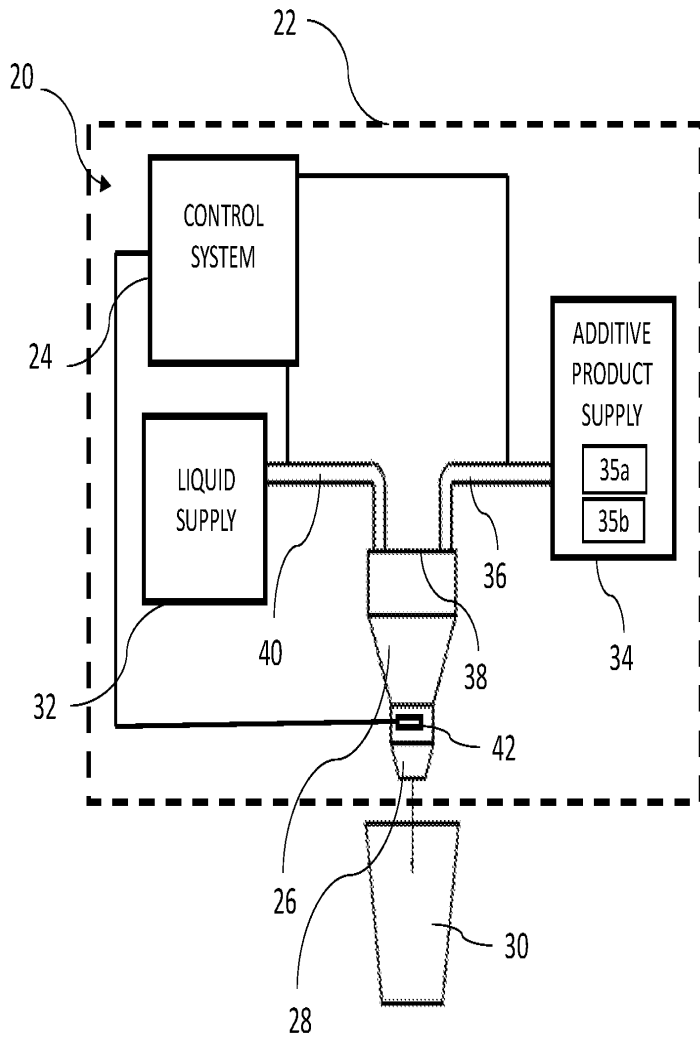


FIG. 4

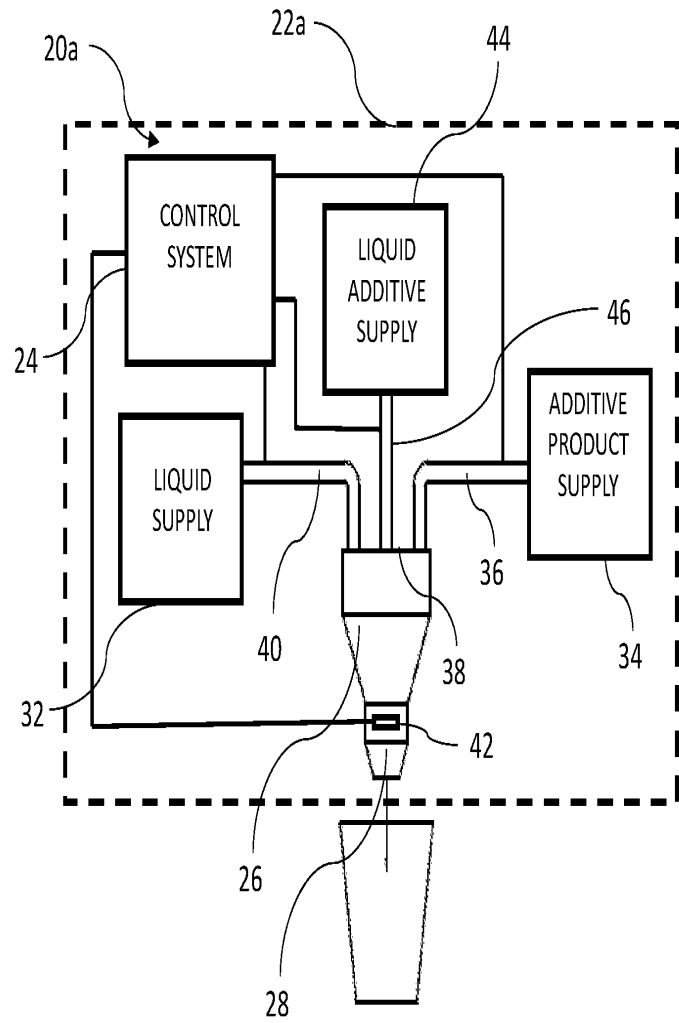


FIG. 5

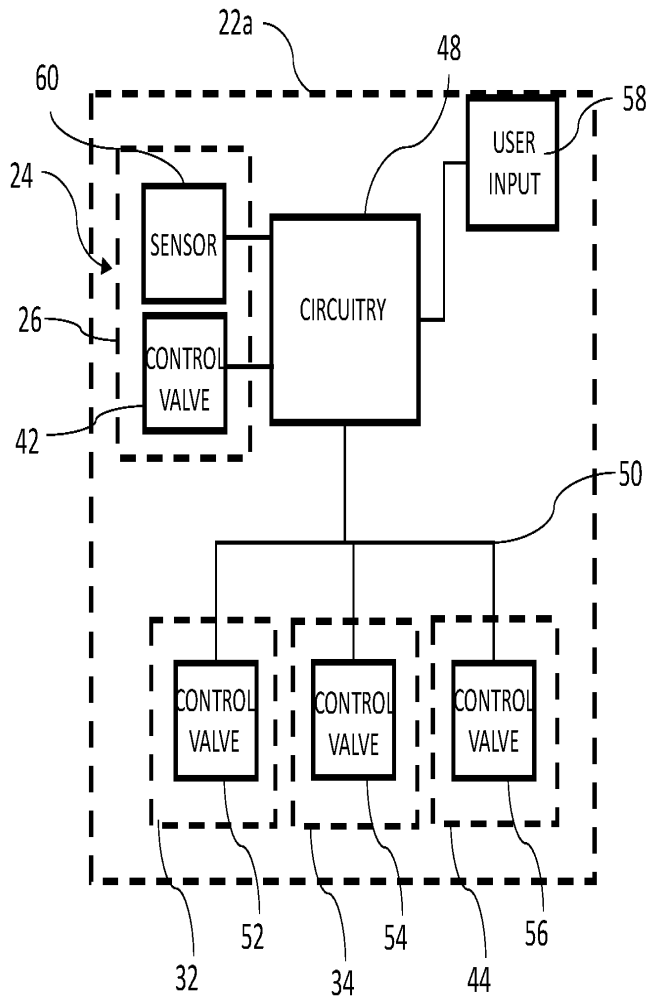


FIG. 6

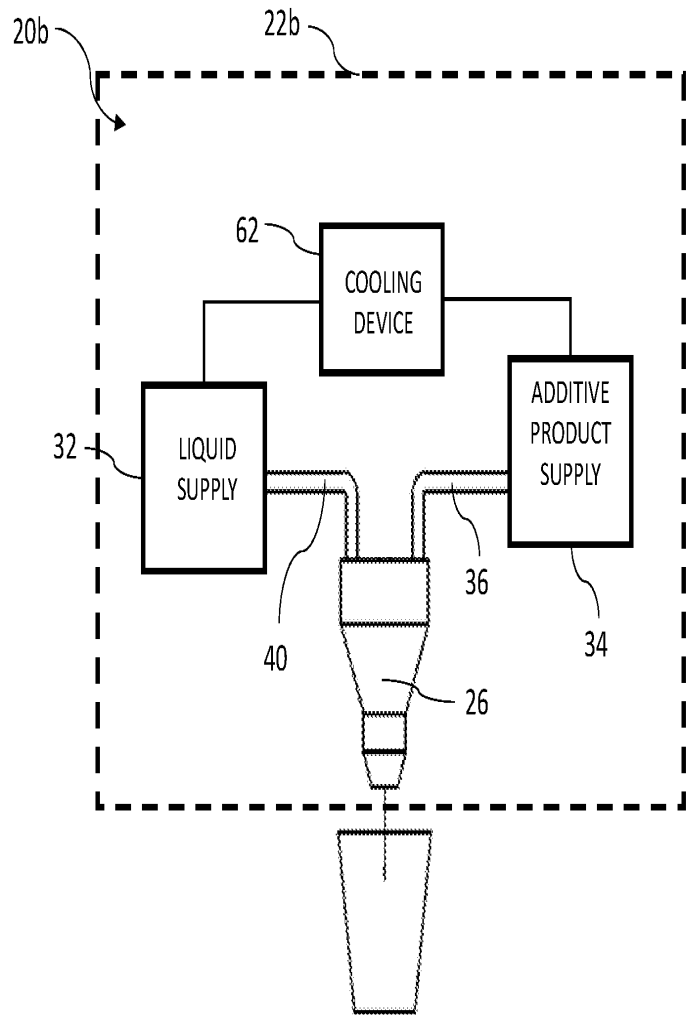


FIG. 7

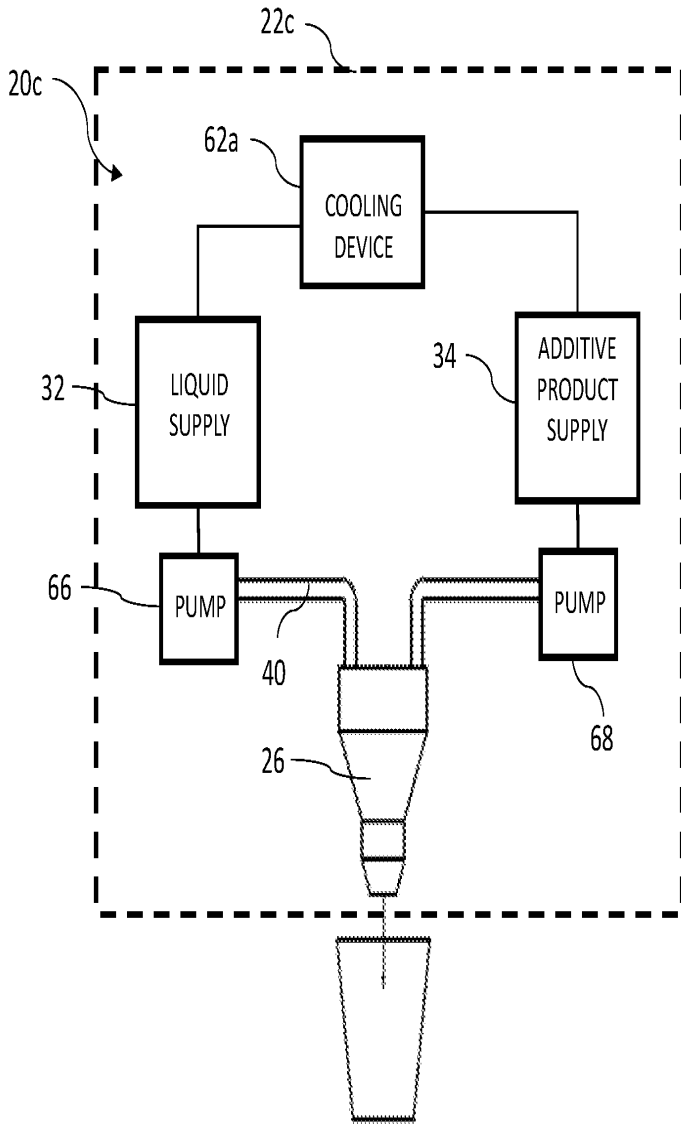


FIG. 8

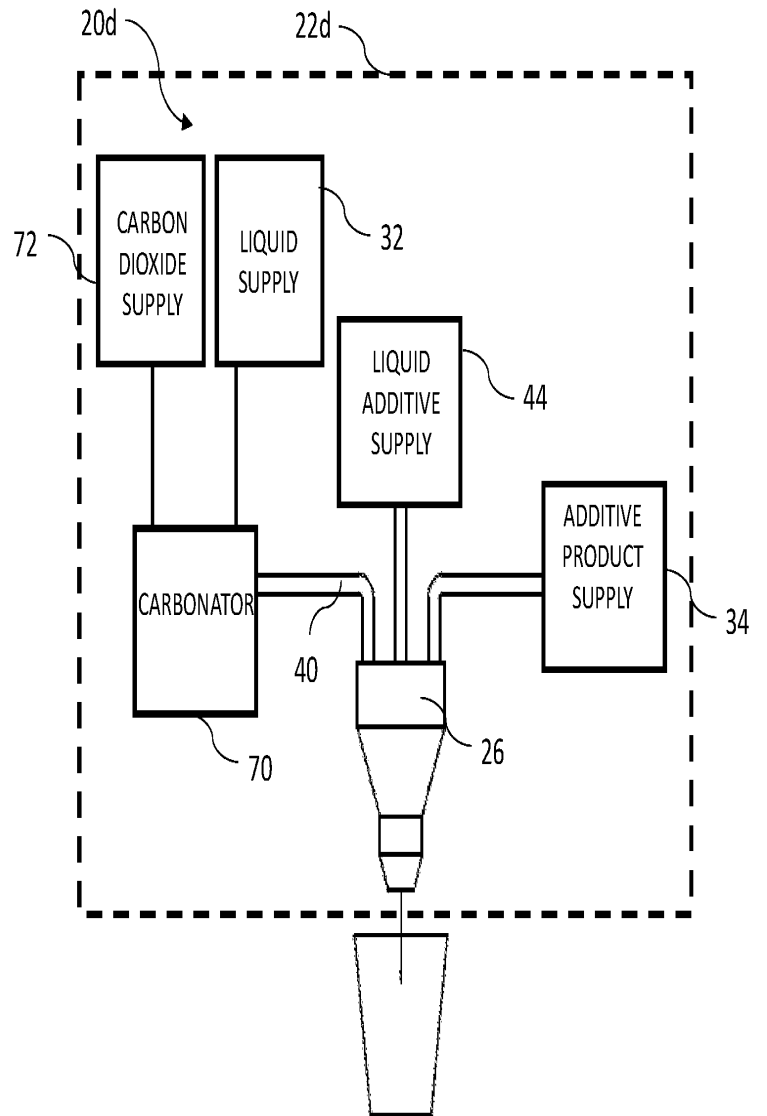


FIG. 9

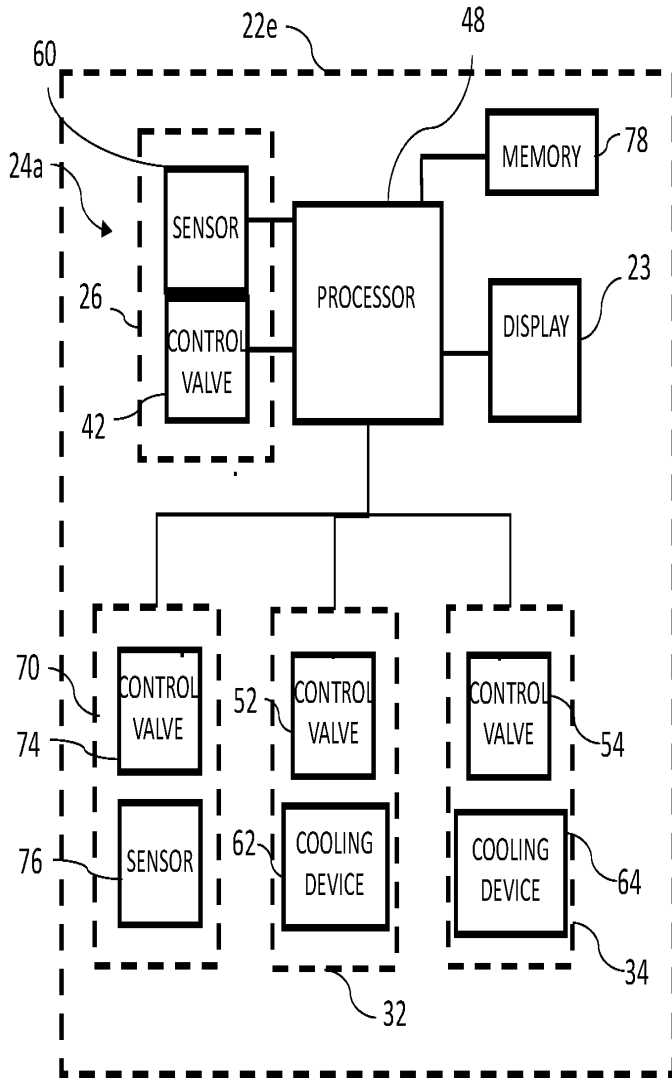


FIG. 10

100

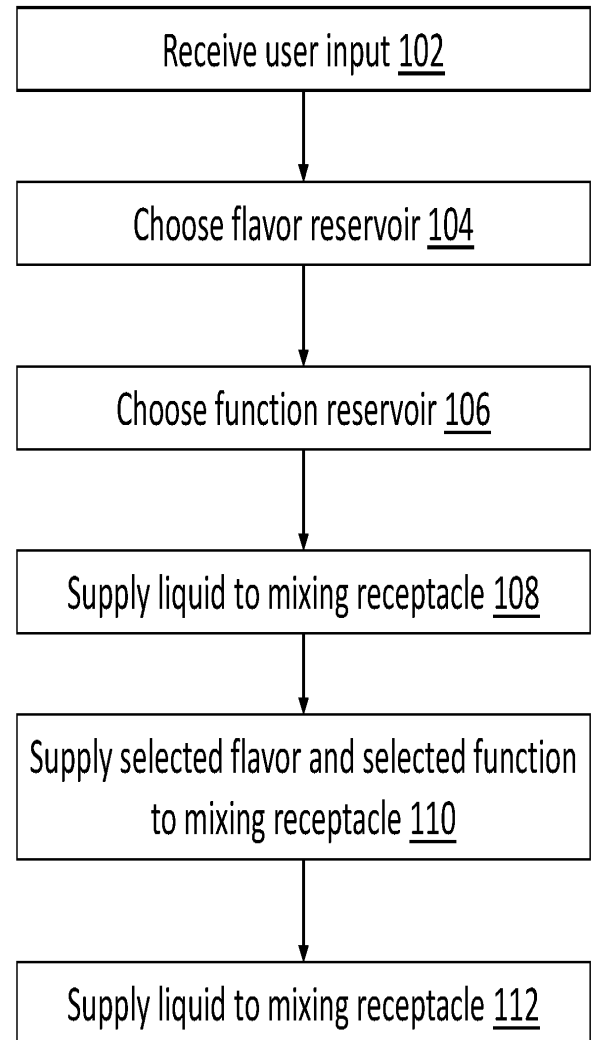


FIG. 11

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Applicant: Smart Soda Holdings Inc.

Application No.: Herewith

Filing Date: Herewith

Title: **ON DEMAND FUNCTIONAL BEVERAGE DISPENSER**

Attorney Docket No. SSHI3PUS01

PRELIMINARY AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Please amend the application in accordance with the following appended parts:

Amendments to the Claims

Remarks

In the event any fee or additional fee is due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 (under the above Docket Number). In the event an extension of time is needed to make the filing of this paper timely and no separate petition is attached, please consider this a petition for the requisite extension and charge the fee to our Deposit Account No. 18-0988 (under the above Docket Number).

Amendments to the Claims

1. (original) A control system for a beverage dispenser for dispensing a flavored beverage and having a display and multiple selectable reservoirs, wherein the control system comprises circuitry configured to:

cause the display to display a user interface having a flavor selection area and a function selection area, wherein:

the flavor selection area includes multiple selectable flavors; and

the function selection area includes multiple selectable functions;

receive user input identifying a selected flavor from the flavor selection area of the user interface;

receive user input identifying a selected function from the function selection area of the user interface;

choosing from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

cause the beverage dispenser to generate enhanced flavored mixture by adding to a liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir; and

causing the beverage dispenser to dispense the enhanced flavored mixture.

2. (original) The control system of claim 1, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

3. (original) The control system of claim 2, wherein:

when the selected function is relax, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

4. (currently amended) The control system of claim 2-or-3, wherein the selectable functions include relax, energize, and immunize.

5. (currently amended) The control system of ~~claim 1~~any one of the preceding claims, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

6. (currently amended) The control system of ~~claim 1~~any one of the preceding claims, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

7. (currently amended) The control system of ~~claim 1~~any one of the preceding claims, wherein the circuitry is further configured to cause the display to display a water selection user interface for selecting the liquid, wherein the water selection user interface includes multiple selectable water types.

8. (original) The control system of claim 7, wherein the water selection user interface is displayed after the circuitry receives the selected flavor and the selected function.

9. (currently amended) The control system of claim 7-~~or 8~~, wherein the selectable water types of the water selection user interface include sparkling water and still water.

10. (original) A beverage dispenser comprising:

- a liquid enclosure that includes a liquid control valve and that is configured to contain a liquid;
- a mixing receptacle that is fluidly connected with the liquid control valve and includes a mixture outlet and a mixture control valve;
- a product enclosure for storing multiple additive products, the product enclosure including multiple reservoirs each containing one of the additive products separately from the liquid and an additive control valve configured to control release of the additive products from the multiple reservoirs, wherein the additive control valve is fluidly connected to the mixing receptacle for mixing at least one of the additive products with the liquid to form an enhanced flavored mixture that is dispensed from the mixture outlet and the mixture control valve;
- a display including a user interface for receiving beverage selections from a user, wherein:
 - the user interface includes a flavor selection area and a function selection area;
 - the flavor selection area includes multiple selectable flavors, each of the selectable flavors being associated with one of the multiple reservoirs; and
 - the function selection area includes multiple selectable functions, each of the selectable functions being associated with one of the multiple reservoirs;
- a control system including circuitry configured to:

receive the beverage selections from the display including a selected flavor from the flavor selection area of the user interface and a selected function from the function selection area of the user interface;

choosing from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

control the liquid control valve and the additive control valve to modulate an amount of the selected flavor from the flavor reservoir and the selected function from the function reservoir in the dispensed flavored mixture based on the received beverage selections.

11. (original) The beverage dispenser of claim 10, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

12. (original) The beverage dispenser of claim 11, wherein:

when the selected function is relax, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

13. (currently amended) The beverage dispenser of claim 11 ~~or 12~~, wherein the selectable functions include relax, energize, and immunize.

14. (currently amended) The beverage dispenser of ~~claim 10~~ ~~any one of claims 10-13~~, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

15. (currently amended) The beverage dispenser ~~of claim 10~~ ~~any one of claims 10-14~~, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

16. (original) A method of controlling an amount of a flavored product and a functional product in a flavored mixture of the flavored product, the functional product, and a liquid that is dispensed from a beverage dispenser, the method comprising:

receiving user input from a display of a beverage dispenser including a user interface, the user input identifying a selected flavor and a selected function, wherein the user input is received by a control system including circuitry;

choosing from multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

supplying a liquid to a mixing receptacle by using the circuitry to control a liquid control valve based on the received user input;

supplying the selected flavor from the flavor reservoir and the selected function from the function reservoir to the mixing receptacle to be dissolved in the liquid and form an enhanced flavored mixture by using the circuitry to control a mixture control valve based on the received user input; and

modulating an amount of the selected flavor and the selected function that is dissolved in the liquid to maintain a predetermined solution of the enhanced flavored mixture that is dispensed from the beverage dispenser by using the circuitry to control a control valve based on the received user input.

17. (original) The method of claim 16, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

18. (original) The method of claim 17, wherein:

when the selected function is relax, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

19. (currently amended) The method of ~~claim 16~~ ~~any one of claims 16-18~~, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

20. (currently amended) The method of ~~claim 16~~ ~~any one of claims 16-19~~, wherein the selected function includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

Remarks

The claims have been amended to delete multiple dependencies. In the event there still remains a claim that depends from more than one claim, the Office is hereby authorized to amend such claim to depend from the first mentioned of the multiple claims from which it depends.

Respectfully submitted,

/Grant J. Steyer/

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/190,665	03/03/2021	Lior Shafir	SSH13PUS01	1010
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RENNER OTTO BOISSELLE & SKLAR, LLP			EXAMINER	
1621 EUCLID AVENUE			NICOLAS, FREDERICK C	
NINETEENTH FLOOR				
CLEVELAND, OH 44115				
			ART UNIT	PAPER NUMBER
			3754	
			NOTIFICATION DATE	DELIVERY MODE
			05/07/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocket@rennerotto.com

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Preliminary Amendment

2. The preliminary amendment filed on 3/3/2021 has been entered.

Election/Restrictions

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-9, drawn to a control system, classified in G06F3/048.
 - II. Claims 10-15, drawn to a beverage dispenser, classified in B67D1/0021.
 - III. Claims 16-20, drawn to a method of controlling an amount of a flavored product, classified in B67D1/0034.

The inventions are independent or distinct, each from the other because:

4. Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the subcombination does not require the use of a liquid enclosure, a mixing receptacle and a product enclosure. The subcombination has separate utility such as controlling a device. Further, claim 1 is silent to the specifics of the dispenser.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

5. Inventions III and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice in a materially different process that does not require modulating.

6. Inventions II and III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed does not require a product enclosure and a liquid enclosure as required by the product.

Restriction for examination purposes as indicated is proper because all the inventions listed in this action are independent or distinct for the reasons given above

and there would be a serious search and/or examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after

the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103 or pre-AIA 35 U.S.C. 103(a) of the other invention.

The examiner has required restriction between product or apparatus claims and process claims. Where applicant elects claims directed to the product/apparatus, and all product/apparatus claims are subsequently found allowable, withdrawn process claims that include all the limitations of the allowable product/apparatus claims should be considered for rejoinder. All claims directed to a nonelected process invention must include all the limitations of an allowable product/apparatus claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product/apparatus claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product/apparatus are found allowable, an otherwise proper restriction requirement between product/apparatus claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an

allowable product/apparatus claim will not be rejoined. See MPEP § 821.04.

Additionally, in order for rejoinder to occur, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product/apparatus claims. **Failure to do so may result in no rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FREDERICK C NICOLAS whose telephone number is (571)272-4931. The examiner can normally be reached on Monday-Thursday 8:00 AM -4:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul R. Durand can be reached on 571-272-4459. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/FREDERICK C NICOLAS/
Primary Examiner, Art Unit 3754

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT application of:

Applicant(s)	Smart Soda Holdings, Inc.
Application No	17/190,665
Filing Date	March 3, 2021
Title	ON DEMAND FUNCTIONAL BEVERAGE DISPENSER
Examiner	Frederick C. Nicolas
Art Unit	3754
Confirmation No.	1010
Docket No.	SSH13PUS01

REPLY TO OFFICE ACTION DATED MAY 7, 2021

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Please amend the application in accordance with the following appended parts:

Amendments to the Claims

Remarks

In the event any fee or additional fee is due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 (under the above Docket Number). In the event an extension of time is needed to make the filing of this paper timely and no separate petition is attached, please consider this a petition for the requisite extension and charge the fee to our Deposit Account No. 18-0988 (under the above Docket Number).

Amendments to the Claims

1. (original) A control system for a beverage dispenser for dispensing a flavored beverage and having a display and multiple selectable reservoirs, wherein the control system comprises circuitry configured to:

cause the display to display a user interface having a flavor selection area and a function selection area, wherein:

the flavor selection area includes multiple selectable flavors; and

the function selection area includes multiple selectable functions;

receive user input identifying a selected flavor from the flavor selection area of the user interface;

receive user input identifying a selected function from the function selection area of the user interface;

choosing from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

cause the beverage dispenser to generate enhanced flavored mixture by adding to a liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir; and

causing the beverage dispenser to dispense the enhanced flavored mixture.

2. (original) The control system of claim 1, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

3. (original) The control system of claim 2, wherein:

when the selected function is relax, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of

caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

4. (previously presented) The control system of claim 2, wherein the selectable functions include relax, energize, and immunize.

5. (previously presented) The control system of claim 1, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

6. (previously presented) The control system of claim 1, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

7. (previously presented) The control system of claim 1, wherein the circuitry is further configured to cause the display to display a water selection user interface for selecting the liquid, wherein the water selection user interface includes multiple selectable water types.

8. (original) The control system of claim 7, wherein the water selection user interface is displayed after the circuitry receives the selected flavor and the selected function.

9. (previously presented) The control system of claim 7, wherein the selectable water types of the water selection user interface include sparkling water and still water.

10. (currently amended) A beverage dispenser comprising:

- a liquid enclosure that includes a liquid control valve and that is configured to contain a liquid;
- a mixing receptacle that is fluidly connected with the liquid control valve and includes a mixture outlet and a mixture control valve;
- a product enclosure for storing multiple additive products, the product enclosure including multiple reservoirs each containing one of the additive products separately from the liquid and an additive control valve configured to control release of the additive products from the multiple reservoirs, wherein the additive control valve is fluidly connected to the mixing receptacle for mixing at least one of the additive products with the liquid to form an enhanced flavored mixture that is dispensed from the mixture outlet and the mixture control valve;
- a display including a user interface for receiving beverage selections from a user, wherein:
 - the user interface includes a flavor selection area and a function selection area;
 - the flavor selection area includes multiple selectable flavors, each of the selectable flavors being associated with one of the multiple reservoirs; and
 - the function selection area includes multiple selectable functions, each of the selectable functions being associated with one of the multiple reservoirs; and

a the control system according to claim 1, including circuitry the control system being configured to:

- ~~receive the beverage selections from the display including a selected flavor from the flavor selection area of the user interface and a selected function from the function selection area of the user interface;~~
- ~~choosing from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;~~
- ~~choosing from the multiple selectable reservoirs a function reservoir based on the selected function;~~

control the liquid control valve and the additive control valve to modulate an amount of the selected flavor from the flavor reservoir and the selected function from the function reservoir in the dispensed flavored mixture based on the received beverage selections.

11. (original) The beverage dispenser of claim 10, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

12. (original) The beverage dispenser of claim 11, wherein:
when the selected function is relax, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

13. (previously presented) The beverage dispenser of claim 11, wherein the selectable functions include relax, energize, and immunize.

14. (previously presented) The beverage dispenser of claim 10, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

15. (previously presented) The beverage dispenser of claim 10, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

16. (withdrawn) A method of controlling an amount of a flavored product and a functional product in a flavored mixture of the flavored product, the functional product, and a liquid that is dispensed from a beverage dispenser, the method comprising:

receiving user input from a display of a beverage dispenser including a user interface, the user input identifying a selected flavor and a selected function, wherein the user input is received by a control system including circuitry;

choosing from multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

supplying a liquid to a mixing receptacle by using the circuitry to control a liquid control valve based on the received user input;

supplying the selected flavor from the flavor reservoir and the selected function from the function reservoir to the mixing receptacle to be dissolved in the liquid and form an enhanced flavored mixture by using the circuitry to control a mixture control valve based on the received user input; and

modulating an amount of the selected flavor and the selected function that is dissolved in the liquid to maintain a predetermined solution of the enhanced flavored mixture that is dispensed from the beverage dispenser by using the circuitry to control a control valve based on the received user input.

17. (withdrawn) The method of claim 16, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

18. (withdrawn) The method of claim 17, wherein:

when the selected function is relax, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol

(CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

19. (withdrawn) The method of claim 16, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

20. (withdrawn) The method of claim 16, wherein the selected function includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

Remarks

In response to the Restriction Requirement, Applicant elects Group 1: Claims 1-9, drawn to a control system. Claims 10-15 are being amended to depend from claim 1, such that examination of claims 10-15 is requested. Claims 16-20 are being withdrawn.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

/Bonnie M. Smith/

By _____
Bonnie M. Smith, Reg. No. 70,081

1621 Euclid Ave. - 19th Floor
Cleveland, Ohio 44115
(216) 621-1113

<i>Notice of References Cited</i>	Application/Control No. 17/190,665		Applicant(s)/Patent Under Reexamination Shafir, Lior	
	Examiner FREDERICK C NICOLAS		Art Unit 3754	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-8434642-B2	05-2013	Rudick; Arthur G.	B67D1/0888	222/1
*	B	US-8162176-B2	04-2012	Rudick; Arthur G.	B67D1/0888	222/1
*	C	US-7648050-B1	01-2010	Ehlers; Stacey	G07F13/06	222/129.4
*	D	US-20130292407-A1	11-2013	Beavis; Russell H.	F04B13/00	222/1
*	E	US-20090069933-A1	03-2009	Rudick; Arthur G.	B67D1/0877	700/239
*	F	US-20150014357-A1	01-2015	Beavis; Russell H.	B67D1/0888	222/129.1
*	G	US-20170233234-A1	08-2017	Hecht; Thomas R.	B67D1/0021	222/129.1
*	H	US-20160092931-A1	03-2016	Cuppari; Scott	G06Q30/0269	705/14.66
*	I	US-20150191341-A1	07-2015	Martindale; Richard A.	B67D1/0888	222/1
*	J	US-20110315711-A1	12-2011	Hecht; Thomas R.	A47J31/52	222/129.1
*	K	US-20140326754-A1	11-2014	Hecht; Thomas R.	G06F3/041	222/192
*	L	US-20080054837-A1	03-2008	BEAVIS; RUSSELL HERBERT	F04B49/065	318/696
*	M	US-20120055954-A1	03-2012	Hecht; Thomas R.	B67D1/0043	222/129.1

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Notice of References Cited</i>	Application/Control No. 17/190,665		Applicant(s)/Patent Under Reexamination Shafir, Lior	
	Examiner FREDERICK C NICOLAS		Art Unit 3754	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20090159612-A1	06-2009	Beavis; Russell	A47J31/36	222/52
*	B	US-10301583-B2	05-2019	Schuh; Christian	A23L2/56	1/1
*	C	US-10631558-B2	04-2020	White; Newton	A23L2/52	1/1
*	D	US-9051162-B2	06-2015	Peters; Dan	B67D1/0888	1/1
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
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	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/190,665	03/03/2021	Lior Shafir	SSH13PUS01	1010
23908	7590	09/22/2021		
RENNER OTTO BOISSELLE & SKLAR, LLP			EXAMINER	
1621 EUCLID AVENUE			NICOLAS, FREDERICK C	
NINETEENTH FLOOR				
CLEVELAND, OH 44115				
			ART UNIT	PAPER NUMBER
			3754	
			NOTIFICATION DATE	DELIVERY MODE
			09/22/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocket@rennerotto.com

Office Action Summary	Application No. 17/190,665	Applicant(s) Shafir, Lior	
	Examiner FREDERICK C NICOLAS	Art Unit 3754	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 9/7/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2a) ☐ This action is **FINAL**.

2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) 16-20 is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1-4 and 6-9 is/are rejected.

8) ☒ Claim(s) 5 and 10-15 is/are objected to.

9) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

3) ☐ Interview Summary (PTO-413)

Paper No(s)/Mail Date ____.

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)

4) ☐ Other: ____.

Paper No(s)/Mail Date ____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Election/Restrictions

2. Applicant's election without traverse of Group I: claims 1-15 in the reply filed on 9/7/2021 is acknowledged.

3. Claims 16-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 9/7/2021.

Claim Objections

4. Claim 10 is objected to because of the following informalities: claim 10, "a beverage dispenser" (line 1), "a liquid" (line 3), "a display" (line 13) are positively recited for a second time. Applicant should restructure the claimed language to prevent double inclusion throughout the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.

7. Claims 1-4, 7-9 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Beavis et al. 2013/0292407.

Beavis et al. disclose a control system (14) for a beverage dispenser for dispensing a flavored beverage and having a display (22) and multiple selectable reservoirs (col. 6, para. [0121]), wherein the control system comprises circuitry configured to: cause the display to display a user interface having a flavor selection area and a function selection area, wherein the flavor selection area includes multiple selectable flavors; and the function selection area includes multiple selectable functions (cols. 4-5, para. [0108-0111]); receive user input identifying a selected flavor from the flavor selection area of the user interface; receive user input identifying a selected function from the function selection area of the user interface; choosing from the multiple selectable reservoirs a flavor reservoir based on the selected flavor; choosing from the multiple selectable reservoirs a function reservoir based on the selected function; cause the beverage dispenser to generate enhanced flavored mixture by adding to a liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir; and causing the beverage dispenser to dispense the enhanced flavored mixture (cols. 4-5, para. [0108-0111] and col. 17, para. [0225-0227]); wherein the selectable functions include at least one of relax, energize, immunize, or muscle (cols. 4-5, para. [0105-0110]); wherein the water selection user interface is

displayed after the circuitry receives the selected flavor and the selected function (cols. 17-18, para. [0229-0236]), a dietary supplement (col. 5, para. [0110]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 6 is rejected under 35 U.S.C. 103 as being unpatentable over Beavis et al. 2013/0292407.

Beavis et al. have taught all the features of the claim invention except that wherein the selected function included in the enhanced flavored mixture includes the dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement. It would have been an obvious matter of design choice to a person of ordinary skill in the art to have the selected function included in the enhanced flavored mixture to include the dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement because applicant has not disclosed that having the selected function included in the enhanced flavored mixture to include the dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected the system of Beavis et al., and

applicant's invention, to perform equally well with either the selected function included in the enhanced flavored mixture to include the dietary supplement taught by Beavis et al. or the claimed the selected function included in the enhanced flavored mixture to include the dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement because both dietary supplement percentage would perform the same function of providing energy or immunize. Therefore, it would have been prima facie obvious to modify Beavis et al. to obtain the invention as specified in claim 6 because such a modification would have been considered a mere design consideration which fails to patentably distinguish over the prior art of Beavis et al.

Allowable Subject Matter

10. Claims 5, 10-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FREDERICK C NICOLAS whose telephone number is (571)272-4931. The examiner can normally be reached on Monday-Thursday 8:00 AM -:4:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an

interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul R. Durand can be reached on 571-272-4459. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/FREDERICK C NICOLAS/
Primary Examiner, Art Unit 3754

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent application of:

Inventor(s): Lior Shafir
Application No.: 17/190,665
Filing Date: 03 March 2021
Title: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER
Examiner: Frederick C. Nicolas
Art Unit: 3754
Conf. No.: 1010
Docket No.: SSHI3PUS01

MS Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION DATED SEPTEMBER 22, 2021

Dear Commissioner:

Applicant respectfully requests further and favorable consideration of the above-referenced application in view of this reply.

In the event any fee or additional fee is due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 (under the above Docket Number). If an extension of time is needed to make the filing of this paper timely and no separate petition is attached, please consider this a petition for the requisite extension, and charge the fee to our Deposit Account No. 18-0988 (under the above Docket Number).

Amendments to the Claims

1. (Currently amended) A control system for a beverage dispenser for dispensing a flavored beverage and having a display and multiple selectable reservoirs, wherein the control system comprises circuitry configured to:

cause the display to display a user interface having a flavor selection area and a function selection area, wherein:

the flavor selection area includes multiple selectable flavors; and

the function selection area includes multiple selectable functions;

receive user input identifying a selected flavor from the flavor selection area of the user interface;

receive user input identifying a selected function from the function selection area of the user interface;

~~choosing~~ choose from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

~~choosing~~ choose from the multiple selectable reservoirs a function reservoir based on the selected function;

cause the beverage dispenser to generate an enhanced flavored mixture by adding to a liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir; wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture; and

~~causing~~ cause the beverage dispenser to dispense the enhanced flavored mixture.

2. (Original) The control system of claim 1, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

3. (Original) The control system of claim 2, wherein:

when the selected function is relax, the circuitry is configured to choose as the

function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

4. (Previously presented) The control system of claim 2, wherein the selectable functions include relax, energize, and immunize.

5. (Canceled)

6. (Previously presented) The control system of claim 1, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

7. (Previously presented) The control system of claim 1, wherein the circuitry is further configured to cause the display to display a water selection user interface for selecting the liquid, wherein the water selection user interface includes multiple selectable water types.

8. (Original) The control system of claim 7, wherein the water selection user

interface is displayed after the circuitry receives the selected flavor and the selected function.

9. (Previously presented) The control system of claim 7, wherein the selectable water types of the water selection user interface include sparkling water and still water.

10. (Currently amended) A control system for a beverage dispenser for dispensing a flavored beverage. ~~[[A]]~~ the beverage dispenser~~[[,]]~~ comprising:

a liquid enclosure that includes a liquid control valve and that is configured to contain a liquid;

a mixing receptacle that is fluidly connected with the liquid control valve and includes a mixture outlet and a mixture control valve;

a product enclosure for storing multiple additive products including at least multiple selectable flavors and multiple selectable functions, the product enclosure including multiple selectable reservoirs each containing one of the additive products separately from the liquid and an additive control valve configured to control release of the additive products from the multiple selectable reservoirs, wherein the additive control valve is fluidly connected to the mixing receptacle for mixing at least one of the additive products with the liquid to form an enhanced flavored mixture that is dispensed from the mixture outlet and the mixture control valve; and

a display including a user interface for receiving beverage selections from a user, wherein:

the user interface includes a flavor selection area and a function selection area;

the flavor selection area includes multiple selectable flavors, each of the multiple selectable flavors being associated with one of the multiple selectable reservoirs; and

the function selection area includes multiple selectable functions, each of the multiple selectable functions being associated with one of the multiple selectable

reservoirs; and wherein:

the control system according to claim 1, the control system being comprises
circuitry configured to:

cause the display to display the user interface having the flavor selection
area and the function selection area;

receive user input identifying a selected flavor from the flavor selection
area of the user interface;

receive user input identifying a selected function from the function
selection area of the user interface;

choose from the multiple selectable reservoirs a flavor reservoir based on
the selected flavor;

choose from the multiple selectable reservoirs a function reservoir based
on the selected function;

cause the beverage dispenser to generate an enhanced flavored mixture
by adding to the liquid the selected flavor from the flavor reservoir and the selected
function from the function reservoir;

cause the beverage dispenser to dispense the enhanced flavored mixture;
and

control the liquid control valve and the additive control valve to modulate
an amount of the selected flavor from the flavor reservoir and the selected
function from the function reservoir in the dispensed flavored mixture based on
the received beverage selections.

11. (Original) The beverage dispenser of claim 10, wherein the selectable
functions include at least one of relax, energize, immunize, or muscle.

12. (Original) The beverage dispenser of claim 11, wherein:
when the selected function is relax, the circuitry is configured to choose as the
function reservoir one of the multiple selectable reservoirs including at least one of
cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B
vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

13. (Previously presented) The beverage dispenser of claim 11, wherein the selectable functions include relax, energize, and immunize.

14. (Previously presented) The beverage dispenser of claim 10, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

15. (Previously presented) The beverage dispenser of claim 10, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

16. (Withdrawn— currently amended) A method of controlling an amount of a flavored product and a functional product in a flavored mixture of the flavored product, the functional product, and a liquid that is dispensed from a beverage dispenser, the method comprising:

receiving user input from a display of ~~the~~ the beverage dispenser including a

user interface, the user input identifying a selected flavor and a selected function, wherein the user input is received by a control system including circuitry configured to display the user interface; wherein the user interface has a flavor selection area and a function selection area; wherein the flavor selection area includes multiple selectable flavors and the function selection area includes multiple selectable functions;

choosing from multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

supplying a liquid to a mixing receptacle by using the circuitry to control a liquid control valve based on the received user input;

supplying the selected flavor from the flavor reservoir and the selected function from the function reservoir to the mixing receptacle to be dissolved in the liquid and form an enhanced flavored mixture by using the circuitry to control a mixture control valve based on the received user input; wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture; and

modulating an amount of the selected flavor and the selected function that is dissolved in the liquid to maintain a predetermined solution of the enhanced flavored mixture that is dispensed from the beverage dispenser by using the circuitry to control a control valve based on the received user input.

17. (Withdrawn) The method of claim 16, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

18. (Withdrawn) The method of claim 17, wherein:

when the selected function is relax, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

19. (Withdrawn) The method of claim 16, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

20. (Withdrawn) The method of claim 16, wherein the selected function includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

I. STATUS OF CLAIMS

Claims 1, 10, and 15-16 have been amended. Claims 2-3, 8, and 11-12 are original. Claims 4, 6-7, 9, and 13-15 have been previously presented. Claim 5 has been canceled. Claims 16-20 are currently withdrawn. Accordingly, claims 1-4 and 6-20 are pending in this application.

II. ALLOWABLE SUBJECT MATTER

Applicant appreciates the Examiner's acknowledgment that claims 5 and 10-15 are allowable. Applicant has amended claim 1 to incorporate the allowable subject matter of claim 5. As suggested by the Examiner, the Applicant has restructured the claimed language of claim 10. More particularly, Applicant has incorporated the subject matter of claim 1 (before being amended) into claim 10. As such, claim 1, as amended, and claim 10, as amended, should now be in condition for allowance.

Claims 2-4 and 6-9 depend, either directly or indirectly, on amended claim 1, and, therefore, should now be in condition for allowance.

Claims 11-15 depend, either directly or indirectly, on amended claim 10, and, therefore, should now be in condition for allowance.

III. CLAIM OBJECTIONS

Claim 10 stands objected to by the Examiner based on informalities. As suggested by the Examiner, the Applicant has restructured the claimed language of claim 10 to prevent double inclusion throughout the claim. More particularly, Applicant has incorporated the subject matter of claim 1 (before being amended) into claim 10 and removed all instances of double inclusion. As such, Applicant respectfully requests withdrawal of the objection to claim 10.

IV. CLAIM REJECTIONS - 35 U.S.C. § 102

Claims 1-4 and 7-9 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent Application Publication No. 2013/0292407 (Beavis).

As stated above, claim 1 has been amended to incorporate the allowable subject matter of claim 5. As such, claim 1 should now be in condition for allowance.

Claims 2-4 depend, and 7-9 depend, either directly or indirectly, on amended claim 1, and, therefore, should now be in condition for allowance.

As such, Applicant respectfully requests withdrawal of the rejections.

V. CLAIM REJECTIONS - 35 U.S.C. § 103

Claim 6 stands rejected under 35 U.S.C. § 103 as being unpatentable over Beavis.

Claim 6 depends directly on claim 1, as amended, and, therefore, should now be in condition for allowance.

As such, Applicant respectfully requests withdrawal of the rejection.

VI. REQUEST FOR REJOINDER

In the restriction requirement dated May 7, 2021, the Examiner stated the following:

The examiner has required restriction between product or apparatus claims and process claims. Where applicant elects claims directed to the product/apparatus, and all product/apparatus claims are subsequently found allowable, withdrawn process claims that include all the limitations of the allowable product/apparatus claims should be considered for rejoinder. All claims directed to a nonelected process invention must include all the limitations of an allowable product/apparatus claim for that process invention to be rejoined.

Further, in the restriction requirement, the Examiner indicated that claims 1 and 16 (and their associated dependent claims) were related as process and apparatus for its practice and that claims 10 and 16 (and their associated dependent claims) were

related as process and apparatus for its practice and that claims. Applicant has amended claim 16 to include at least all the limitations of the allowable claim 1, as amended. Claims 17-20 depend, either directly or indirectly, on claim 16, as amended.

As such, Applicant respectfully requests rejoinder of claims 16-20 such that the requirement for restriction between the product/apparatus claims and the rejoined process claims is withdrawn.

VII. CONCLUSION

In view of the foregoing, Applicant requests issuance of a notice of allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the undersigned invites the Examiner to contact the undersigned at the telephone number provided below.

The absence in this reply of any comments on any contentions set forth in the Office Action should not be construed to be an acquiescence therein. Rather, no comment is needed since the rejections should be withdrawn for at least the foregoing reasons.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By / Nicholas A. Mihalic /
Nicholas A. Mihalic, Reg. No. 69,678

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/190,665	03/03/2021	Lior Shafir	SSH13PUS01	1010
23908	7590	02/02/2022		
RENNER OTTO BOISSELLE & SKLAR, LLP			EXAMINER	
1621 EUCLID AVENUE			NICOLAS, FREDERICK C	
NINETEENTH FLOOR				
CLEVELAND, OH 44115				
			ART UNIT	PAPER NUMBER
			3754	
			NOTIFICATION DATE	DELIVERY MODE
			02/02/2022	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocket@rennerotto.com

Office Action Summary

Application No.

17/190,665

Applicant(s)

Shafir, Lior

Examiner

FREDERICK C NICOLAS

Art Unit

3754

AIA (FITF) Status

Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 1/24/2022.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-4 and 6-20 is/are pending in the application.
5a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 6) ☒ Claim(s) 1-4 and 6-15 is/are allowed.
- 7) ☐ Claim(s) ____ is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☒ Claim(s) 1-4 and 6-20 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 3/3/2021 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____.
- 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 4) ☐ Other: ____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Quayle Action

2. This application is in condition for allowance except for the following formal matters:

Drawings

I- Color photographs and color drawings are not accepted in utility applications unless a petition filed under 37 CFR 1.84(a)(2) is granted. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), one set of color drawings or color photographs, as appropriate, if submitted via EFS-Web or three sets of color drawings or color photographs, as appropriate, if not submitted via EFS-Web, and, unless already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings and black and white photographs have been satisfied. See 37 CFR 1.84(b)(2).

See photograph Figures 1-3.

II- The drawings are objected to under 37 CFR 1.83(a) because they fail to show element **35** as described in the specification. Any structural detail that is essential for a

proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

III- The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: element **35a** and **35b**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the

filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO (2) MONTHS** from the mailing date of this letter. Extensions of time may be granted under 37 CFR 1.136 but in no case can any extension carry the date for reply to this Office action beyond the maximum period of SIX MONTHS set by statute (35 U.S.C. 133).

Allowable Subject Matter

3. Claims 1-4, 6-15 are allowed.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FREDERICK C NICOLAS whose telephone number is (571)272-4931. The examiner can normally be reached Monday-Thursday 8:00 AM - :4:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul R. Durand can be reached on 571-272-4459. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/FREDERICK C NICOLAS/
Primary Examiner, Art Unit 3754

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent application of:

Inventor(s): Lior Shafir
Application No.: 17/190,665
Filing Date: 03 March 2021
Title: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER
Examiner: Frederick C. Nicolas
Art Unit: 3754
Conf. No.: 1010
Docket No.: SSHI3PUS01

MS Amendment

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO QUAYLE ACTION DATED FEBRUARY 2, 2022

Dear Commissioner:

Applicant requests further and favorable consideration of the above-referenced application in view of this reply.

In the event any fee or additional fee is due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 (under the above Docket Number). If an extension of time is needed to make the filing of this paper timely and no separate petition is attached, please consider this a petition for the requisite extension, and charge the fee to our Deposit Account No. 18-0988 (under the above Docket Number).

Amendment to the Specification

Please replace the paragraph beginning at page 1, line 27, which starts with “FIG. 1 is a photograph” with the following amended paragraph:

FIG. 1 is a photograph of an exemplary embodiment of a beverage dispenser.

Amendments to the Drawings

The attached two replacement sheets amend FIG. 1 through FIG. 4. No new matter is added.

Amendments to the Claims

1. (Previously presented) A control system for a beverage dispenser for dispensing a flavored beverage and having a display and multiple selectable reservoirs, wherein the control system comprises circuitry configured to:

cause the display to display a user interface having a flavor selection area and a function selection area, wherein:

the flavor selection area includes multiple selectable flavors; and

the function selection area includes multiple selectable functions;

receive user input identifying a selected flavor from the flavor selection area of the user interface;

receive user input identifying a selected function from the function selection area of the user interface;

choose from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choose from the multiple selectable reservoirs a function reservoir based on the selected function;

cause the beverage dispenser to generate an enhanced flavored mixture by adding to a liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir; wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture; and

cause the beverage dispenser to dispense the enhanced flavored mixture.

2. (Original) The control system of claim 1, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

3. (Original) The control system of claim 2, wherein:

when the selected function is relax, the circuitry is configured to choose as the

function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

4. (Previously presented) The control system of claim 2, wherein the selectable functions include relax, energize, and immunize.

5. (Canceled)

6. (Previously presented) The control system of claim 1, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

7. (Previously presented) The control system of claim 1, wherein the circuitry is further configured to cause the display to display a water selection user interface for selecting the liquid, wherein the water selection user interface includes multiple selectable water types.

8. (Original) The control system of claim 7, wherein the water selection user

interface is displayed after the circuitry receives the selected flavor and the selected function.

9. (Previously presented) The control system of claim 7, wherein the selectable water types of the water selection user interface include sparkling water and still water.

10. (Previously presented) A control system for a beverage dispenser for dispensing a flavored beverage, the beverage dispenser comprising:

- a liquid enclosure that includes a liquid control valve and that is configured to contain a liquid;

- a mixing receptacle that is fluidly connected with the liquid control valve and includes a mixture outlet and a mixture control valve;

- a product enclosure for storing multiple additive products including at least multiple selectable flavors and multiple selectable functions, the product enclosure including multiple selectable reservoirs each containing one of the additive products separately from the liquid and an additive control valve configured to control release of the additive products from the multiple selectable reservoirs, wherein the additive control valve is fluidly connected to the mixing receptacle for mixing at least one of the additive products with the liquid to form an enhanced flavored mixture that is dispensed from the mixture outlet and the mixture control valve; and

- a display including a user interface for receiving beverage selections from a user, wherein:

 - the user interface includes a flavor selection area and a function selection area;

 - the flavor selection area includes multiple selectable flavors, each of the multiple selectable flavors being associated with one of the multiple selectable reservoirs; and

 - the function selection area includes multiple selectable functions, each of the multiple selectable functions being associated with one of the multiple selectable

reservoirs; and wherein:

the control system comprises circuitry configured to:

cause the display to display the user interface having the flavor selection area and the function selection area;

receive user input identifying a selected flavor from the flavor selection area of the user interface;

receive user input identifying a selected function from the function selection area of the user interface;

choose from the multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choose from the multiple selectable reservoirs a function reservoir based on the selected function;

cause the beverage dispenser to generate an enhanced flavored mixture by adding to the liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir;

cause the beverage dispenser to dispense the enhanced flavored mixture; and

control the liquid control valve and the additive control valve to modulate an amount of the selected flavor from the flavor reservoir and the selected function from the function reservoir in the dispensed flavored mixture based on the received beverage selections.

11. (Original) The beverage dispenser of claim 10, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

12. (Original) The beverage dispenser of claim 11, wherein:

when the selected function is relax, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, the circuitry is configured to choose as

the function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, the circuitry is configured to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

13. (Previously presented) The beverage dispenser of claim 11, wherein the selectable functions include relax, energize, and immunize.

14. (Previously presented) The beverage dispenser of claim 10, wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture.

15. (Previously presented) The beverage dispenser of claim 10, wherein the selected function included in the enhanced flavored mixture includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

16. (Withdrawn— currently amended) A method of controlling an amount of a flavored product and a functional product in a flavored mixture of the flavored product, the functional product, and a liquid that is dispensed from a beverage dispenser, the method comprising:

receiving user input from a display of the beverage dispenser including a user interface, the user input identifying a selected flavor and a selected function,

wherein the user input is received by a control system including circuitry configured to display the user interface; wherein the user interface has a flavor selection area and a function selection area; wherein the flavor selection area includes multiple selectable flavors and the function selection area includes multiple selectable functions;

choosing from multiple selectable reservoirs a flavor reservoir based on the selected flavor;

choosing from the multiple selectable reservoirs a function reservoir based on the selected function;

supplying a liquid to a mixing receptacle by using the circuitry to control a liquid control valve based on the received user input;

supplying the selected flavor from the flavor reservoir and the selected function from the function reservoir to the mixing receptacle to be dissolved in the liquid and form an enhanced flavored mixture by using the circuitry to control a mixture control valve based on the received user input; wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture; and

modulating an amount of the selected flavor and the selected function that is dissolved in the liquid to maintain a predetermined solution of the enhanced flavored mixture that is dispensed from the beverage dispenser by using the circuitry to control a control valve based on the received user input.

17. (Withdrawn) The method of claim 16, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

18. (Withdrawn) The method of claim 17, wherein:

when the selected function is relax, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of cannabidiol (CBD), rhodiola rosea, melatonin, glycine, ashwagandha, L-theanine, B vitamins, or kava;

when the selected function is energize, using the circuitry to choose as the

function reservoir one of the multiple selectable reservoirs including at least one of caffeine, coenzyme Q10 (CoQ10), B vitamins, iron, creatine, citrulline, rhodiola rosea, or ashwagandha;

when the selected function is immunity, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of vitamin C, B vitamins, vitamin E, vitamin A, vitamin D, folate, folic acid, iron, selenium, zinc, elderberry, echinacea; and

when the selected function is muscle, using the circuitry to choose as the function reservoir one of the multiple selectable reservoirs including at least one of protein or creatine.

19. (Canceled)

20. (Withdrawn) The method of claim 16, wherein the selected function includes a dietary supplement in a quantity that is greater than or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement.

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

I. STATUS OF CLAIMS

Claims 1-4 and 6-15 are allowed. Claim 16 is withdrawn— currently amended. Claims 17-18 and 20 are withdrawn. Claim 19 is canceled. Accordingly, claims 1-4, 6-18, and 20 are pending in this application.

II. QUAYLE ACTION

Applicant appreciates the Examiner's acknowledgment that the present application is in condition for allowance except for formal matters, which are corrected as discussed below. Applicant requests issuance of a notice of allowance.

III. REQUEST FOR REJOINDER

In the restriction requirement dated May 7, 2021, the Examiner stated the following:

The examiner has required restriction between product or apparatus claims and process claims. Where applicant elects claims directed to the product/apparatus, and all product/apparatus claims are subsequently found allowable, withdrawn process claims that include all the limitations of the allowable product/apparatus claims should be considered for rejoinder. All claims directed to a nonelected process invention must include all the limitations of an allowable product/apparatus claim for that process invention to be rejoined.

Further, in the restriction requirement, the Examiner indicated that claims 1 and 16 (and their associated dependent claims) were related as process and apparatus for its practice and that claims 10 and 16 (and their associated dependent claims) were related as process and apparatus for its practice and that claims.

Applicant has amended claim 16 to include the limitations of allowed claim 1. Claims 17-18 and 20 depend, either directly or indirectly, on claim 16, as amended. Accordingly, Applicant requests rejoinder of claims 16-18 and 20.

IV. AMENDMENTS TO THE SPECIFICATION

The specification has been amended to replace the paragraph beginning at page 1, line 27, which starts with “FIG. 1 is a photograph,” with the following amended paragraph: “FIG. 1 is a ~~photograph~~ of an exemplary embodiment of a beverage dispenser.” Applicant submits that no new matter has been added by way of the present amendment.

V. DRAWINGS OBJECTIONS

The drawings currently stand objected to by the Examiner. The Examiner asserts that color photographs and color drawings are not accepted in utility applications unless a petition filed under 37 CFR 1.84(a)(2) is granted and refers Applicant to “photograph Figures 1-3.” The Examiner further asserts that the drawings include the “following reference character(s) not mentioned in the description: element 35a and 35b.”

To facilitate prosecution of the present application, Applicant provides two replacement sheets including changes to FIG. 1 through FIG. 4. In particular, replacement sheet 1/5 changes FIG. 1 through FIG. 3 to diagrammatic representations of the previous FIG. 1 through FIG. 3, and replacement sheet 2/5 changes FIG. 4 by changing the reference numeral “35a” to “35” and the reference numeral “35b” to “35” to overcome the objections. Applicant submits that no new matter has been added by way of the present amendment. The drawing objections, therefore, should be withdrawn.

VI. CONCLUSION

In view of the foregoing, Applicant requests issuance of a notice of allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the undersigned invites the Examiner to contact the undersigned at the telephone number provided below.

The absence in this reply of any comments on any contentions set forth in the Office Action should not be construed to be an acquiescence therein. Rather, no

comment is needed since the rejections should be withdrawn for at least the foregoing reasons.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By / Nicholas A. Mihalic /
Nicholas A. Mihalic, Reg. No. 69,678

1621 Euclid Avenue, 19th Floor
Cleveland, Ohio 44115
(216) 621-1113

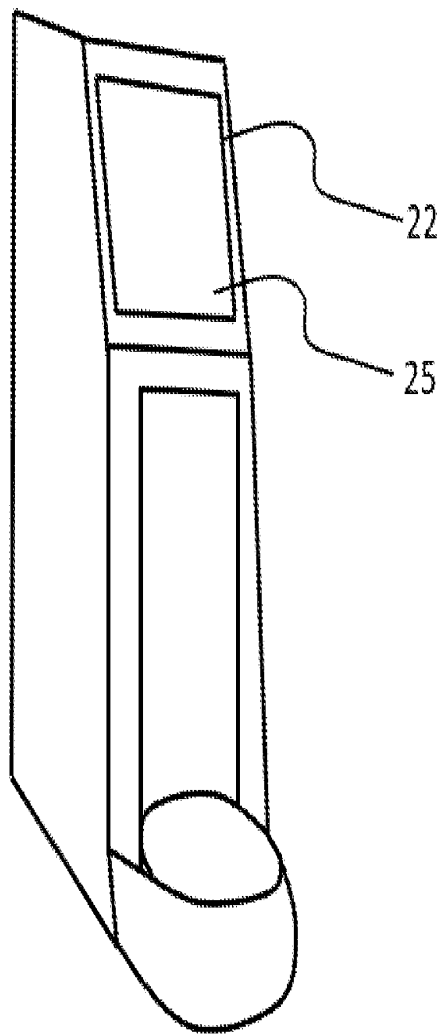


FIG. 1

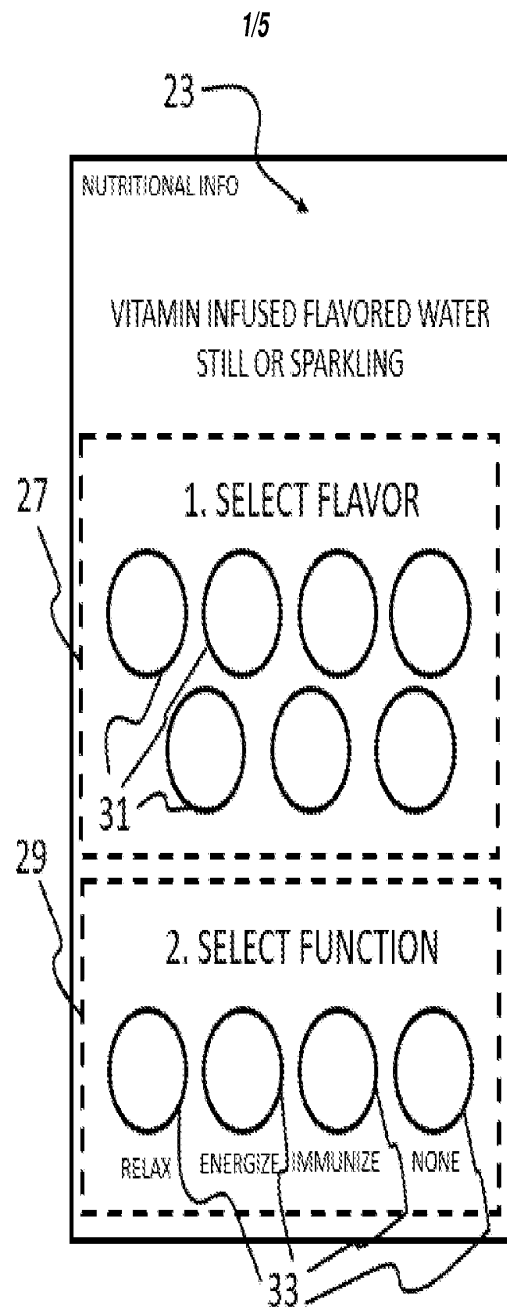


FIG. 2

REPLACEMENT SHEET

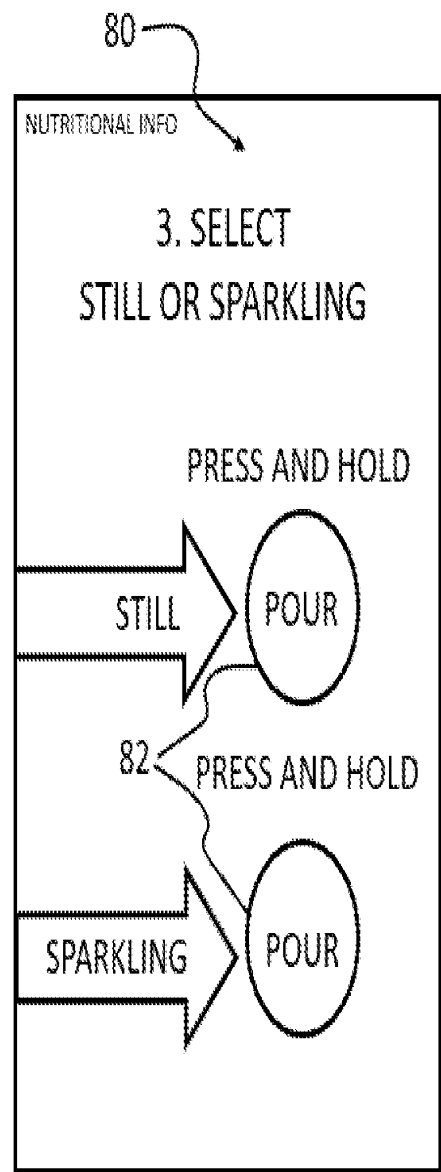


FIG. 3

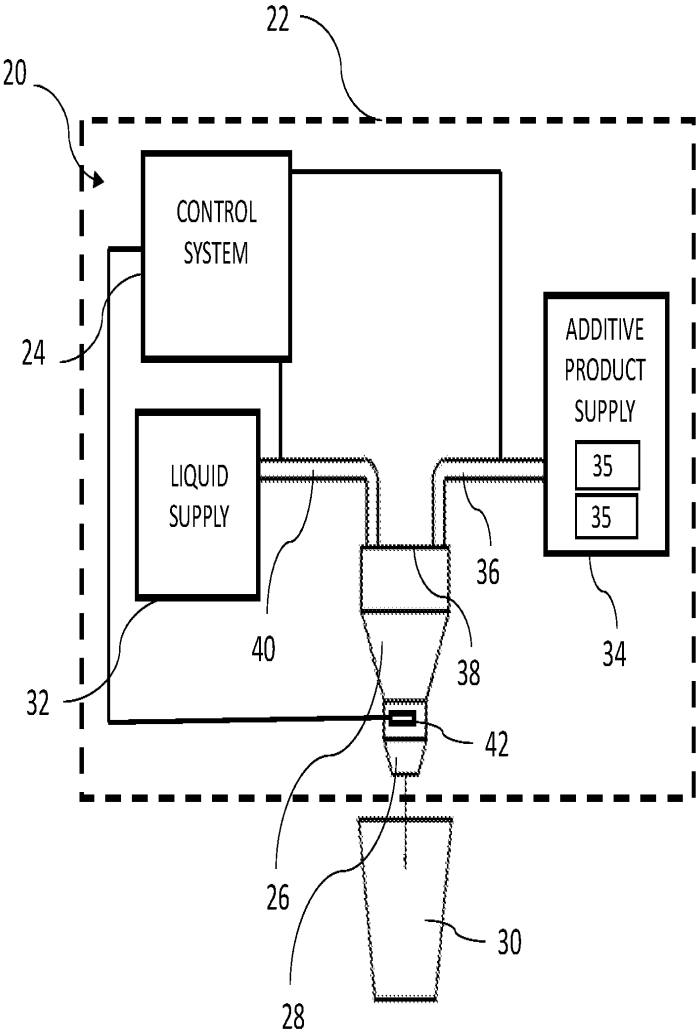


FIG. 4

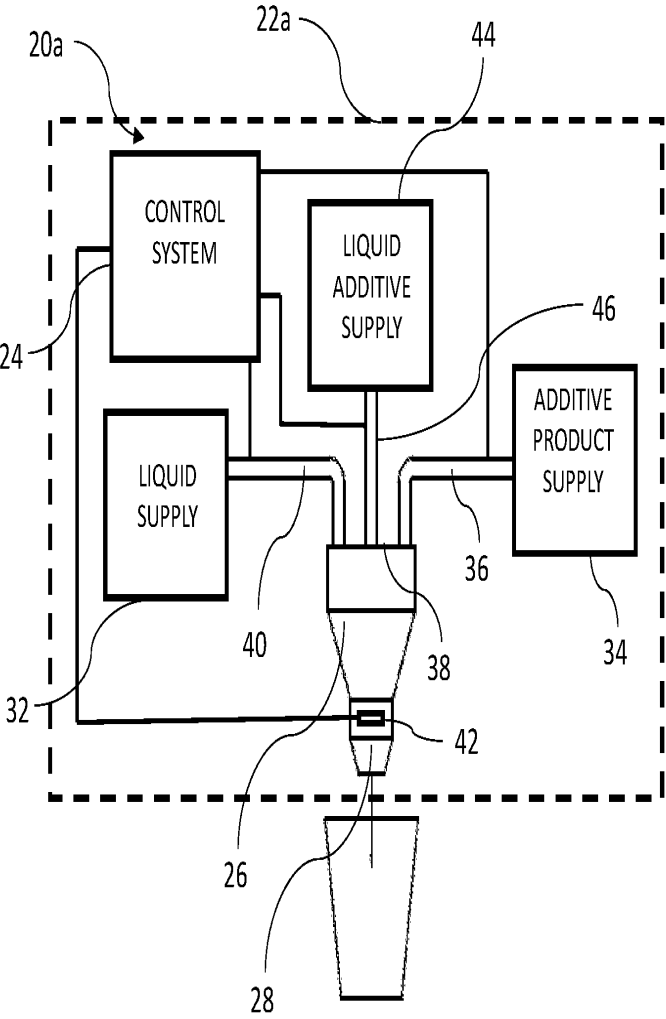


FIG. 5



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

23908 7590 04/05/2022
RENNER OTTO BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
NINETEENTH FLOOR
CLEVELAND, OH 44115

EXAMINER	
NICOLAS, FREDERICK C	
ART UNIT	PAPER NUMBER
3754	

DATE MAILED: 04/05/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/190,665	03/03/2021	Lior Shafir	SSH3PUS01	1010

TITLE OF INVENTION: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	07/05/2022

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

23908 7590 04/05/2022
RENNER OTTO BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
NINETEENTH FLOOR
CLEVELAND, OH 44115

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

	(Typed or printed name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/190,665	03/03/2021	Lior Shafir	SSH13PUS01	1010

TITLE OF INVENTION: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$600	\$0.00	\$0.00	\$600	07/05/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
NICOLAS, FREDERICK C	3754	222-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/190,665	03/03/2021	Lior Shafir	SSH13PUS01	1010
23908	7590	04/05/2022	EXAMINER	
RENNER OTTO BOISSELLE & SKLAR, LLP			NICOLAS, FREDERICK C	
1621 EUCLID AVENUE			ART UNIT	
NINETEENTH FLOOR			PAPER NUMBER	
CLEVELAND, OH 44115			3754	

DATE MAILED: 04/05/2022

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 17/190,665	Applicant(s) Shafir, Lior	
	Examiner FREDERICK C NICOLAS	Art Unit 3754	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 3/11/2022.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-4,6-18 and 20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. ____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892) 2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____. 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material ____. 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.	5. ☒ Examiner's Amendment/Comment 6. ☒ Examiner's Statement of Reasons for Allowance 7. ☐ Other _____.
---	---

/FREDERICK C NICOLAS/
Primary Examiner, Art Unit 3754

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Election/Restrictions

2. Claims 1-4, 6-18 and 20 are allowable. The restriction requirement between groups I to III, as set forth in the Office action mailed on 5/7/2021, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.**

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Allowable Subject Matter

3. Claims 1-4, 6-18 and 20 are allowed.

4. The following is an examiner's statement of reasons for allowance: the prior art of record fails to teach the details of the applicant's invention as cited in claims 1 and 16 as a whole. There is no motivation to combine the art of record in order to render the invention obvious. The combination of the references would either destroy one

reference for combination with the other or would result in an impermissible hindsight.

The following limitations, when considered in context, make claims 1 and 16 inventive:

wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is at least five times larger than a concentration of the dietary supplement included in the selected flavor that is included in the enhanced flavored mixture; and cause the beverage dispenser to dispense the enhanced flavored mixture.

The prior art of record fails to teach the details of the applicant's invention as cited in claim 10 as a whole. There is no motivation to combine the art of record in order to render the invention obvious. The combination of the references would either destroy one reference for combination with the other or would result in an impermissible hindsight. The following limitations, when considered in context, make claim 10 inventive: cause the beverage dispenser to generate an enhanced flavored mixture by adding to the liquid the selected flavor from the flavor reservoir and the selected function from the function reservoir; cause the beverage dispenser to dispense the enhanced flavored mixture; and control the liquid control valve and the additive control valve to modulate an amount of the selected flavor from the flavor reservoir and the selected function from the function reservoir in the dispensed flavored mixture based on the received beverage selections.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FREDERICK C NICOLAS whose telephone number is (571)272-4931. The examiner can normally be reached Monday-Thursday 8:00 AM - :4:00 PM.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul R. Durand can be reached on 571-272-4459. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/FREDERICK C NICOLAS/
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ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

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