

EXHIBIT 1014

ON DEMAND FUNCTIONAL BEVERAGE DISPENSER

Related Application

This application is a continuation of U.S. Patent Application No.
5 17/190,665 filed March 3, 2021, the entire disclosure of which is hereby
incorporated herein by reference in its entirety.

Field of Invention

The present invention relates to a beverage dispenser and more
10 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
15 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
20 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
25 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
30 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 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.

5 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.

10 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.

15 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.

20 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.

25 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.

30 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

5 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 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
10 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, syrup, soda, other carbonated beverages, tea, coffee, and powders or solutions of flavored products and functional products.

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

 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
20 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.

 In one embodiment, the beverage dispenser 22 includes a mixing receptacle 26 in which an enhanced flavored mixture is formed and a mixture
25 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” is not limited to liquid mixtures in which substances are completely dissolved. For example, the enhanced flavored mixture may be dispensed into any suitable
30 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 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 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 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, 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. 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 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 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 be 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
5 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 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,
10 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 creatine.

In some embodiments, the flavored products may also include the dietary
15 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 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
20 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 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
25 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 or equal to 50% of a daily Recommended Dietary Allowances (RDA) for the dietary supplement. In other embodiments, the selected function may include at
30 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 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.

5 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 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
10 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 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
15 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 receptacle 26 such that the flavored product may be assisted by gravity in entering the mixing receptacle 26.

20 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 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
25 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 incrementally mixed to ensure a precise mixture and avoid undesired ratios of flavored to liquid.

30 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 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

5 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.

Referring in addition to FIG. 5, another exemplary embodiment of the
10 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 flavored mixture. The liquid additive enclosure 44 is configured to receive,
15 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 arranged at the bottom of the mixing receptacle 26 opposite the supply lines 36,
20 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 communicatively coupled to the supply line 46 for controlling the amount of liquid
25 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 mixture. In an exemplary embodiment, the control system 24 may be used to
30 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 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
5 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
10 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.

15 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
20 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
25 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
30 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 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 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 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 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 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 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.

10 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.).

15 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, 20 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.

25 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 30 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 mixture.

Referring now to FIG. 7, another exemplary embodiment of the beverage dispensing system 20b is shown in which the beverage dispenser 22b is
5 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
10 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
15 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
20 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
25 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
30 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 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 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 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, 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 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 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 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 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 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 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 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 receptacle 26. Supplying the additive product may include supplying a powder material, a liquid, or a solution thereof and supplying the liquid may include
5 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,
10 such as the control valves 42, 52, 54, 74 shown in FIG. 10 may be operated 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
15 additive may include using the control valve 56 shown in FIG. 6. When the 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.

20 Step 112 of the method 100 includes optionally maintaining a 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,
25 54, 74 based on the determined level. Maintaining the solution may include 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
30 advantageous in both producing a beverage enhanced flavored mixture using a 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 understanding of this specification and the annexed drawings. In particular

5 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),

10 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

15 the other embodiments, as may be desired and advantageous for any given or particular application.

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;

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

15 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
20 supplement included in the selected function that is included in the enhanced flavored mixture is 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.

25 2. The control system of claim 1, wherein a concentration of the dietary supplement included in the selected flavor is zero.

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

30

 4. The control system of claim 3, 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

5 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,

10 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.

15 5. The control system of claim 3, wherein the selectable functions include relax, energize, and immunize.

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

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

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

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

10. 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 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.

11. The method of claim 10, wherein a concentration of the dietary supplement included in the selected flavor is zero.

12. The method of claim 10, wherein the selectable functions include at least one of relax, energize, immunize, or muscle.

13. The method of claim 12, 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.

14. The method of claim 12, wherein the selectable functions include relax, energize, and immunize.

15. The method of claim 10, 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.

30

16. The method of claim 10, further comprising:

cooling the liquid by using the circuitry to control a cooling device.

17. The method of claim 10, further comprising:
carbonating the liquid by using the circuitry to control a carbonator.

5 18. The method of claim 17, further comprising:
supplying the carbonated liquid to the mixing receptacle using the circuitry
to control the liquid control valve.

19. The method of claim 10, further comprising:
10 determining a level of the selected flavor and the selected function using a
product level sensor; and wherein the modulating the amount of the selected
flavor and the selected function that is dissolved in the liquid to maintain the
predetermined solution of the enhanced flavored mixture that is dispensed from
the beverage dispenser by using the circuitry to control the control valve is based
15 on determined level of the selected flavor and the selected function.

20. The method of claim 19, further comprising:
maintain the level of the selected flavor and the selected function between
fifteen and twenty-five milligrams.

20

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.

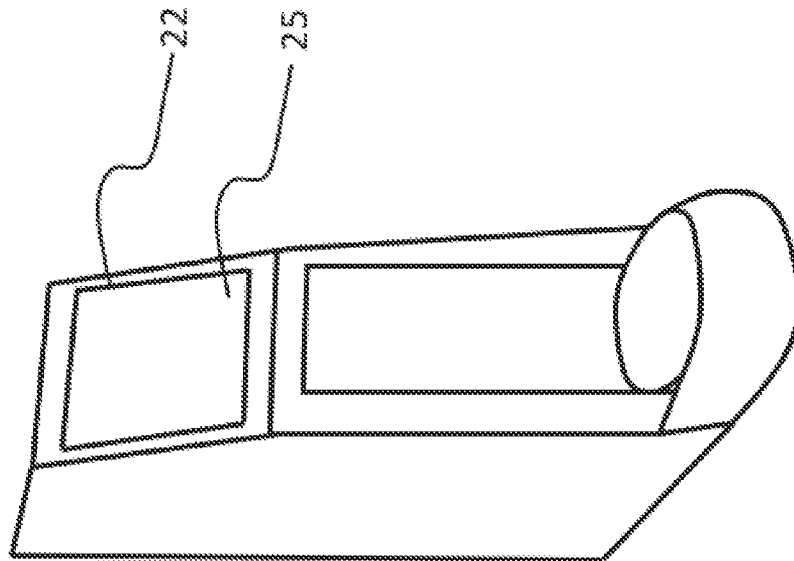


FIG. 1

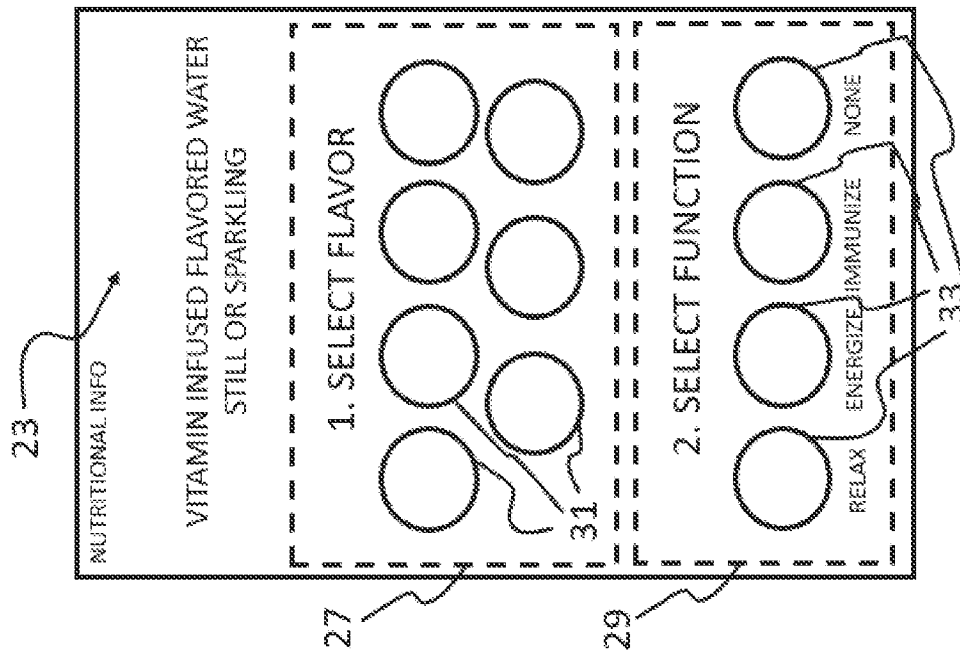


FIG. 2

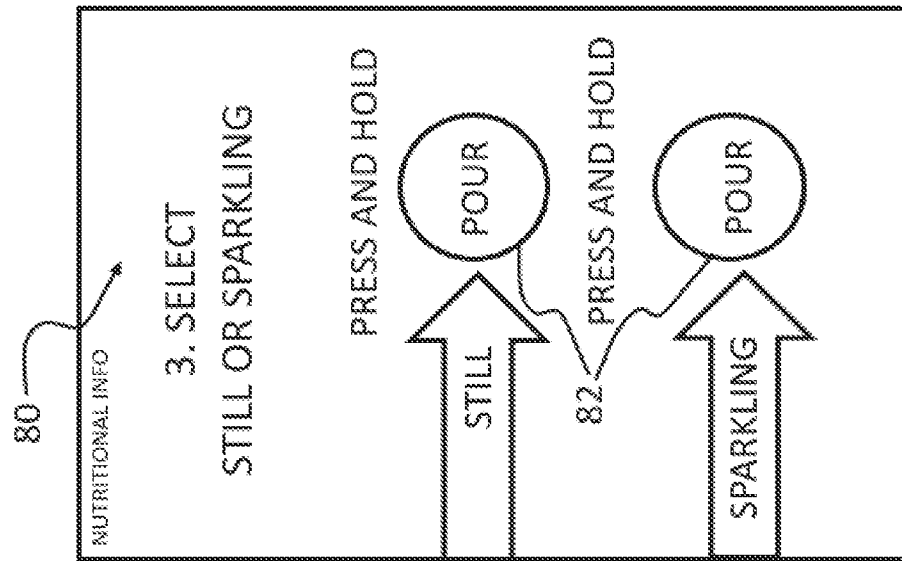


FIG. 3

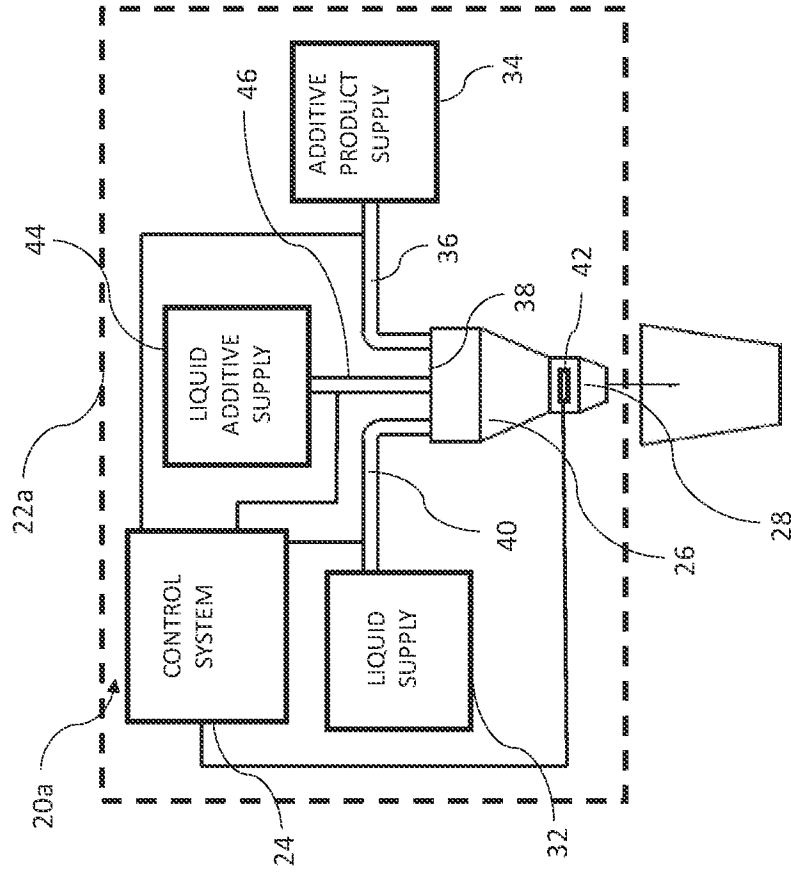


FIG. 5

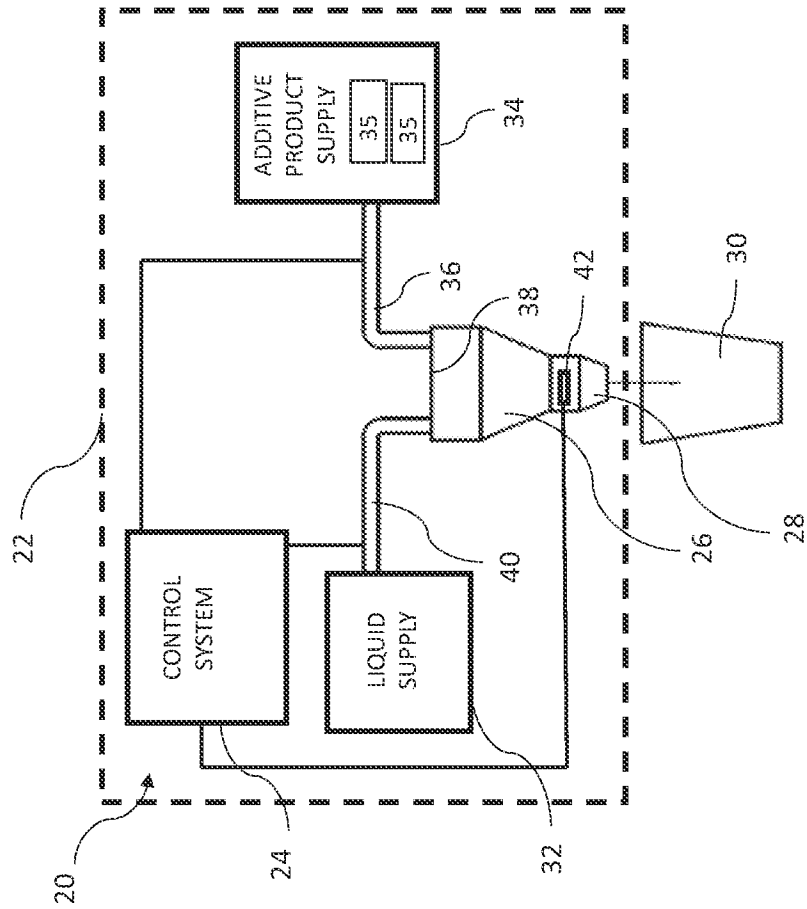


FIG. 4

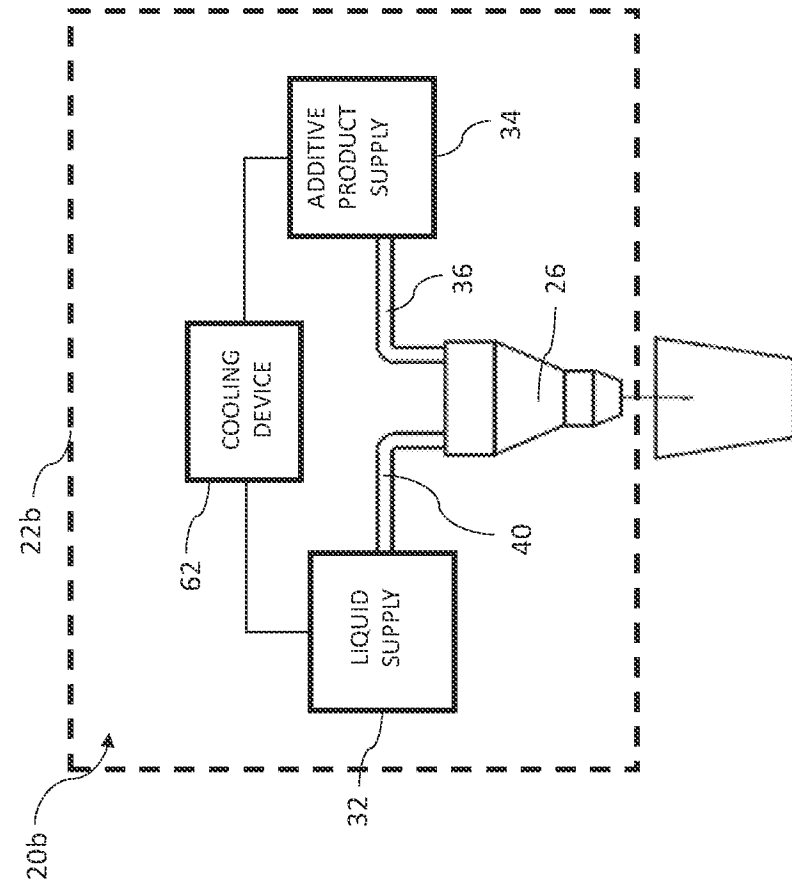


FIG. 7

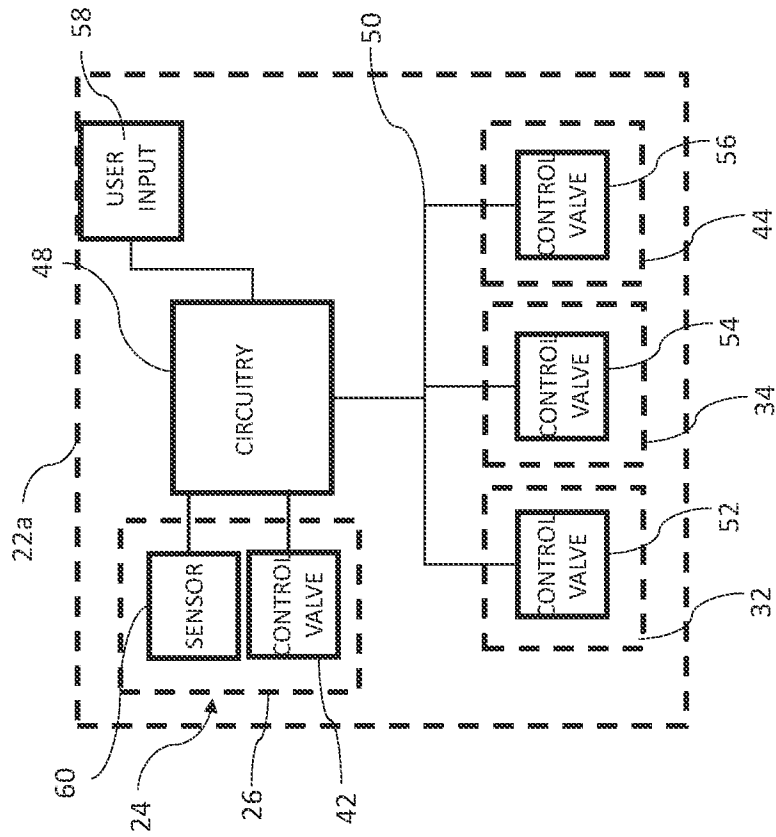


FIG. 6

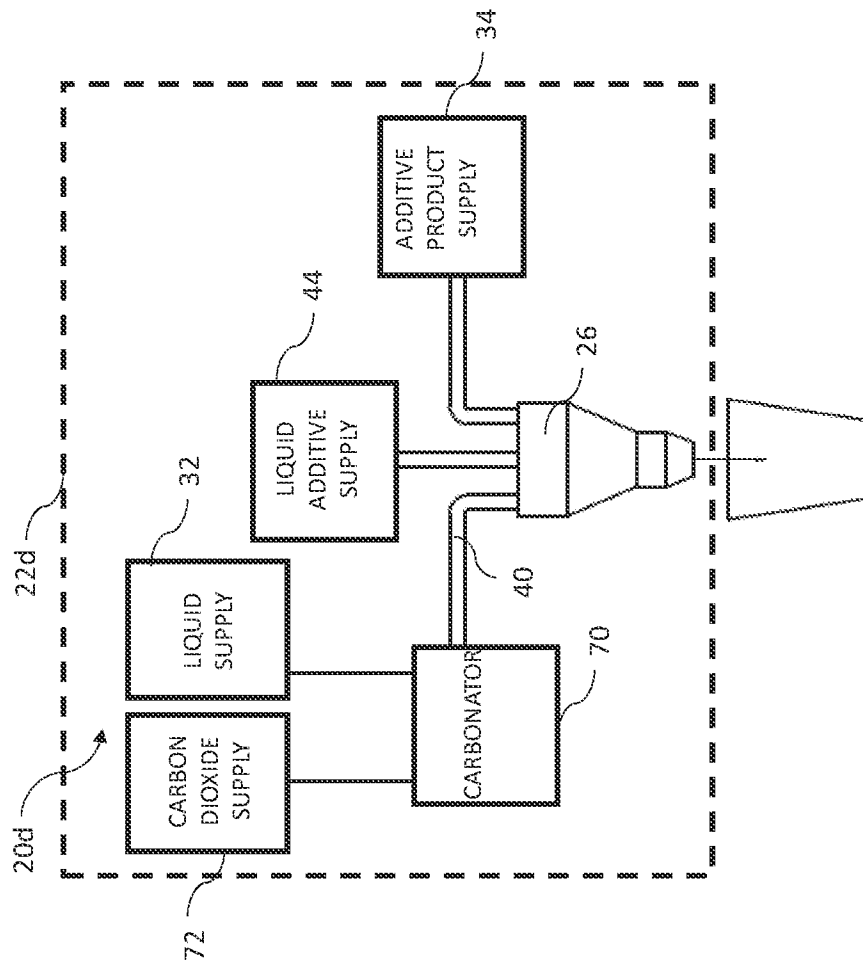


FIG. 9

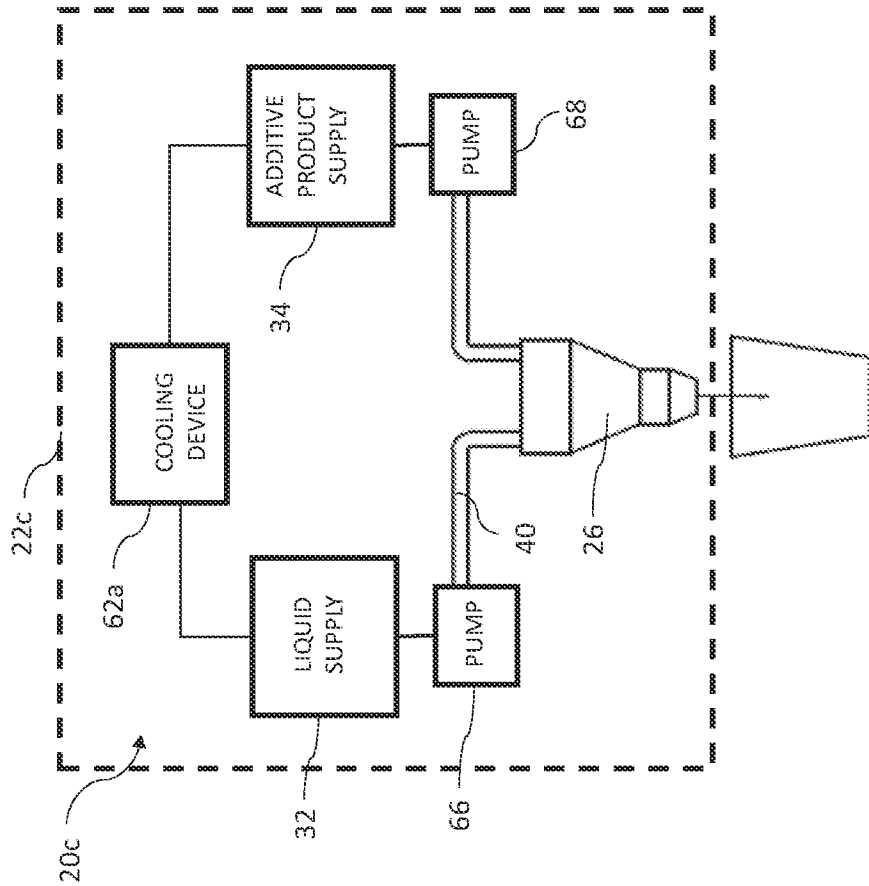


FIG. 8

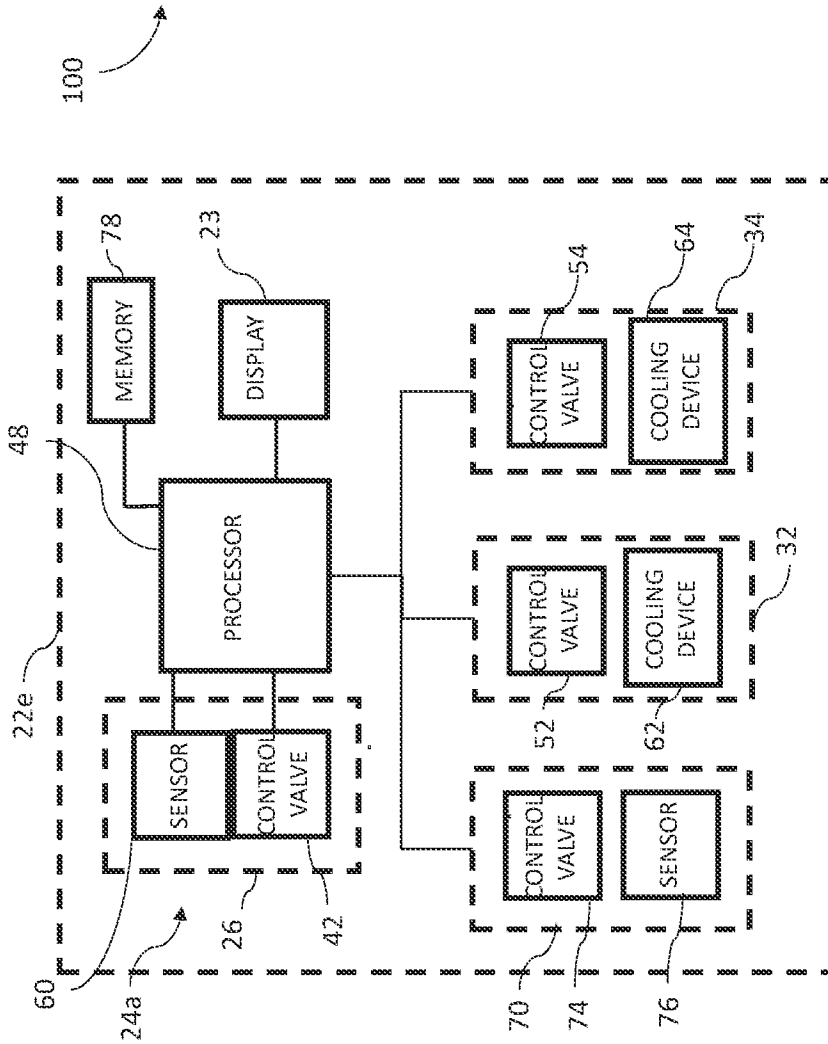


FIG. 10

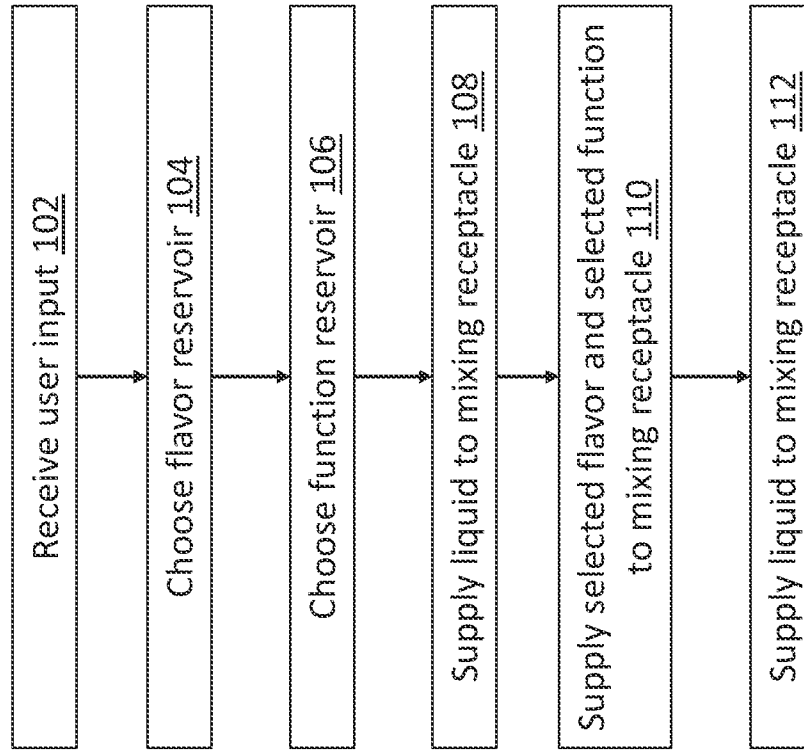


FIG. 11

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	Filing Date		
	First Named Inventor	Lior Shafir	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	SSH13PUS02CON	

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Application Number		
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(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Lior Shafir
Art Unit	
Examiner Name	
Attorney Docket Number	SSH13PUS02CON

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Nicholas A. Mihalic/	Date (YYYY-MM-DD)	2022-08-09
Name/Print	Nicholas A. Mihalic	Registration Number	69,678

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/884,074	08/09/2022	Lior Shafir	SSHI3PUS02CON

CONFIRMATION NO. 5352

FORMALITIES LETTER



OC000000136001898

23908
RENNER OTTO BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
NINETEENTH FLOOR
CLEVELAND, OH 44115

Date Mailed: 08/24/2022

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given **TWO MONTHS** from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
 - The drawings are not in compliance with 37 CFR 1.84 because figures ALL contain figure or view numbers that have incorrect orientation. Reference characters, sheet numbers, and view numbers must be oriented in the same direction as the view. See 37 CFR 1.84(p)(1).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

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- A separate document having the document description, "**Applicant response to Pre-Exam Formalities Notice**"; and

- the item(s) for which a reply period is set forth above.

For more information about electronic filing, contact the Patent Electronic Business Center (EBC) at 1-866-217-9197 or visit at <https://www.uspto.gov/ebc>.

NOTE: If the reply is not being submitted electronically, a copy of this notice must be included.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/ldvan/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Applicant: Smart Soda Holdings, Inc.
Application No.: 17/884,074
Filing Date: August 9, 2022
Confirmation No.: 5352
Title: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER
Attorney Docket No. SSHI3PUS02CON

**RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS DATED
AUGUST 24, 2022**

MS Missing Parts
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P.O. Box 1450
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Commissioner:

In response to the Notice to File Corrected Application Papers mailed August 24, 2022, replacement drawings are being submitted herewith along.

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).

Respectfully submitted,

/Mark C. Johnson/

Mark C. Johnson, Reg. No. 51,854
RENNER, OTTO, BOISSELLE & SKLAR, LLP
1621 Euclid Avenue - Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

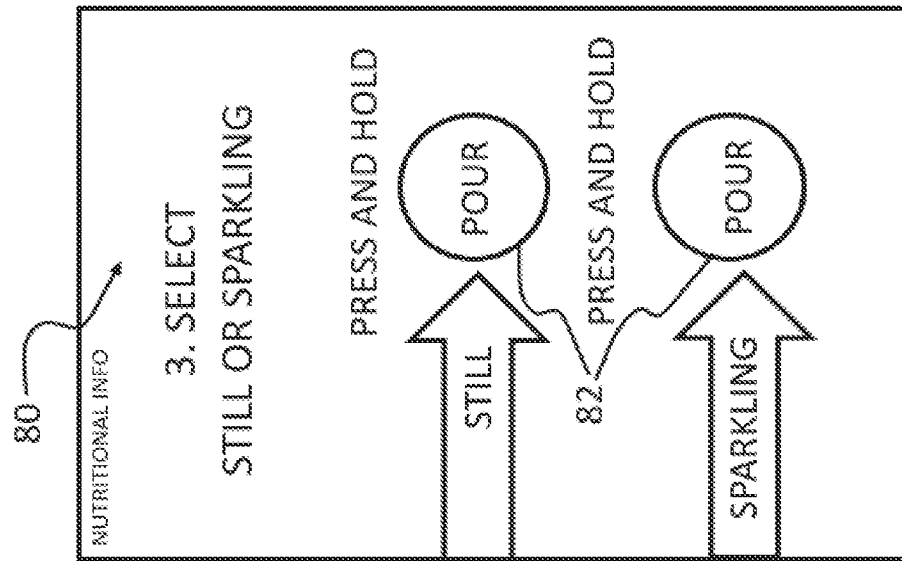


FIG. 3

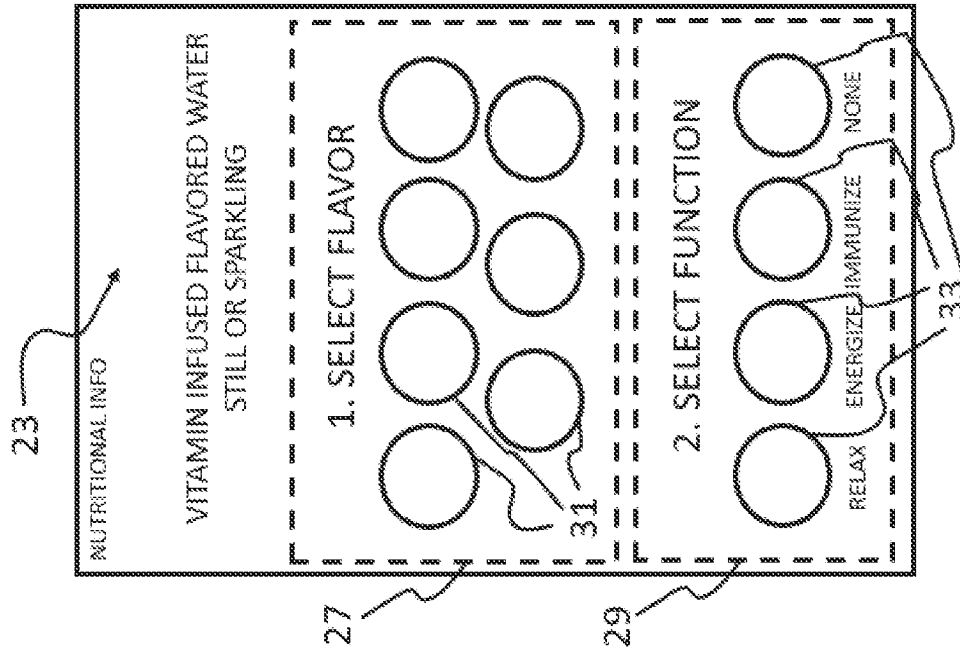


FIG. 2

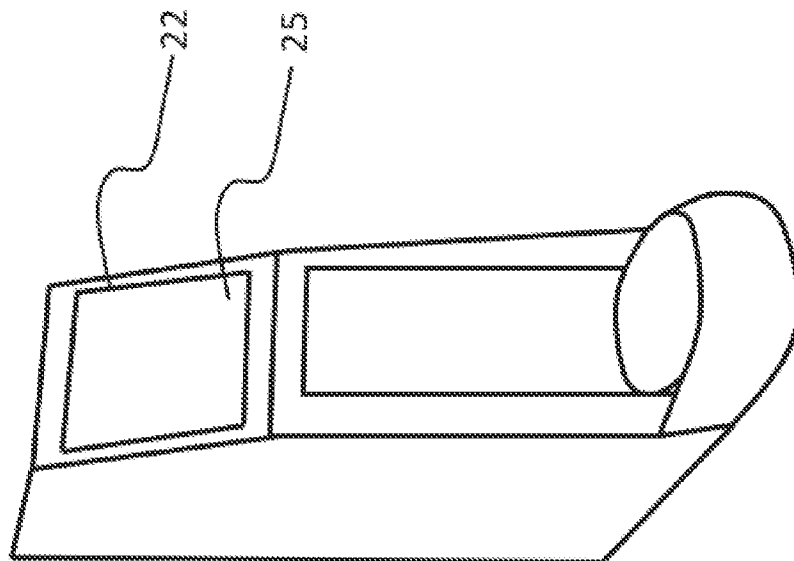


FIG. 1

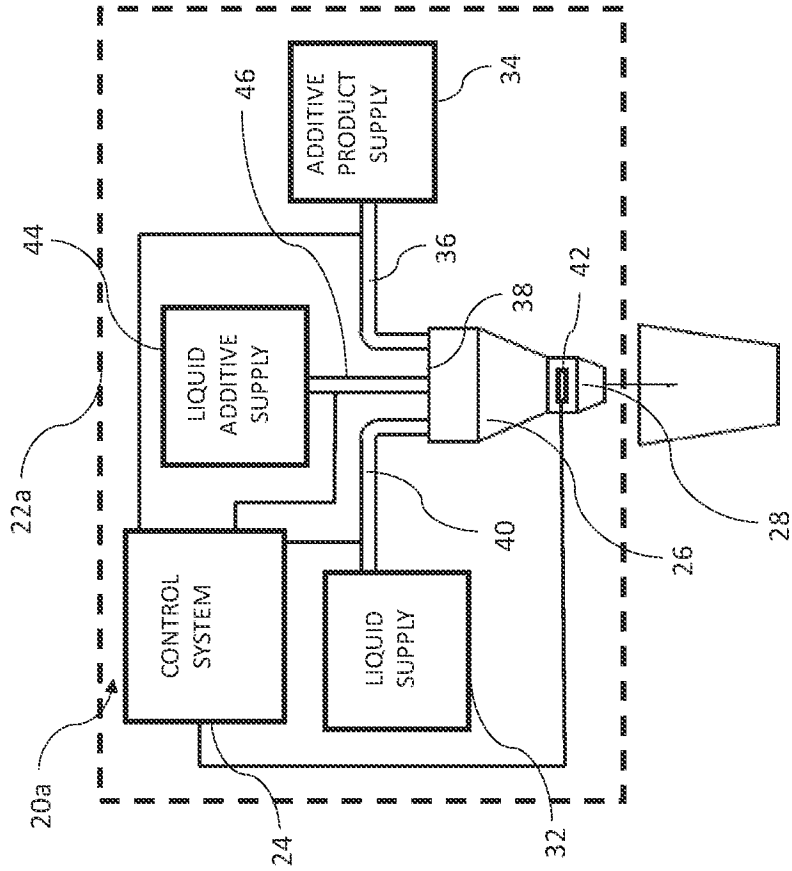


FIG. 5

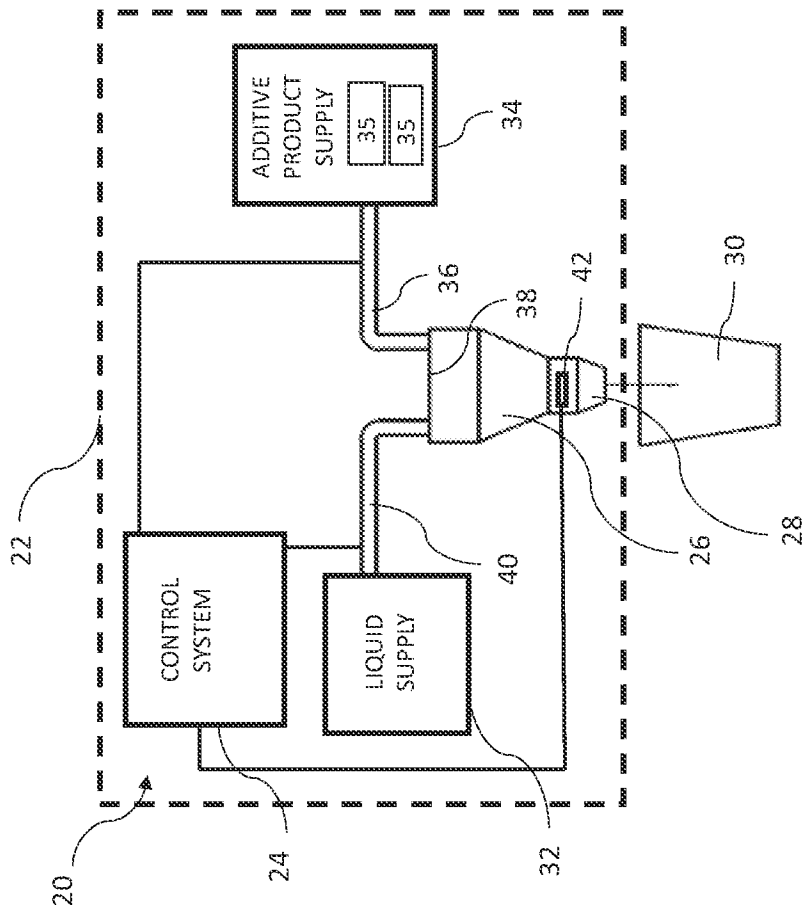


FIG. 4

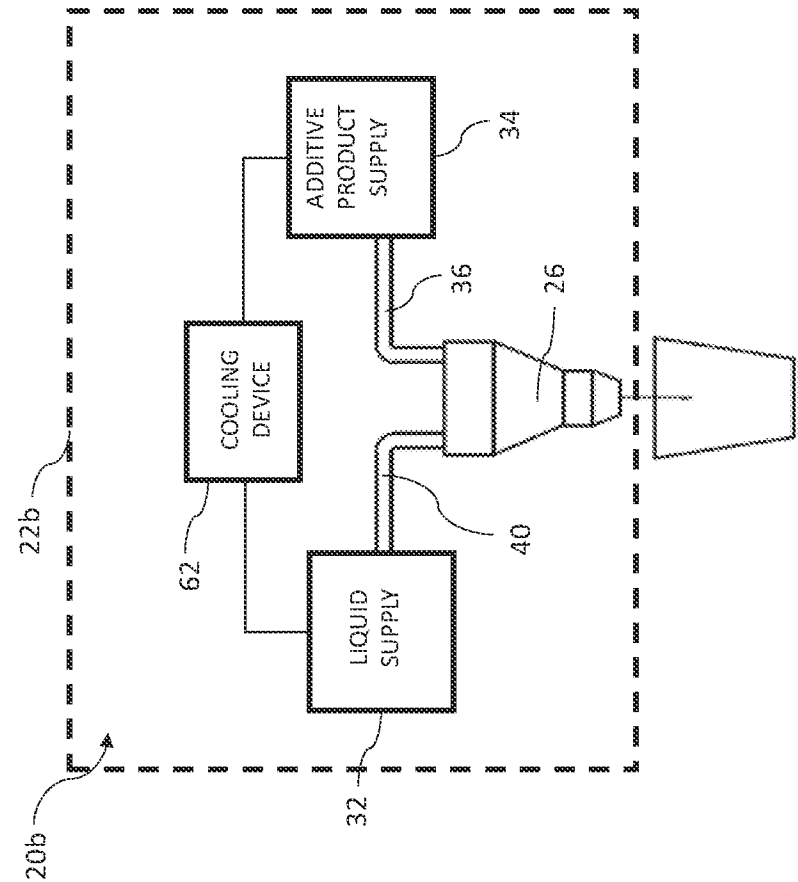


FIG. 7

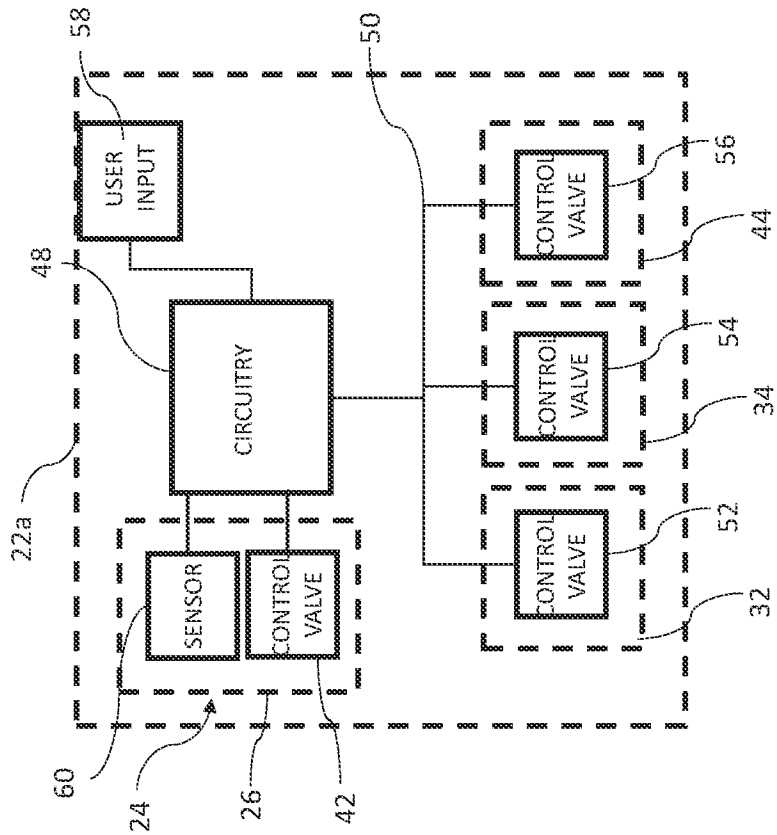


FIG. 6

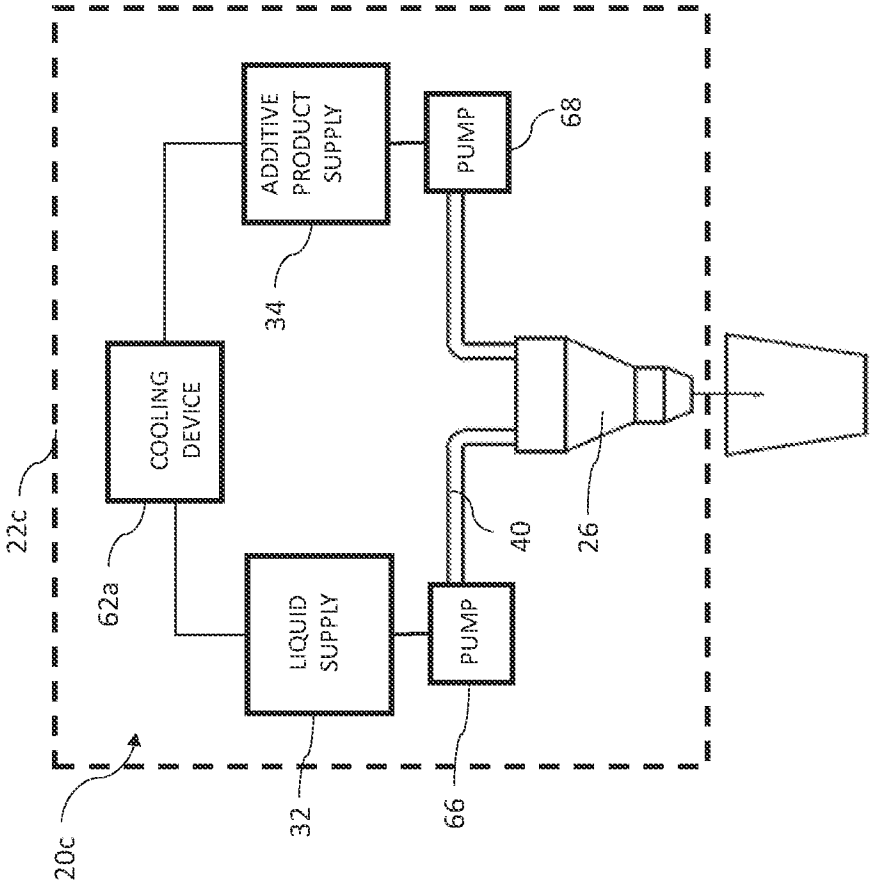


FIG. 8

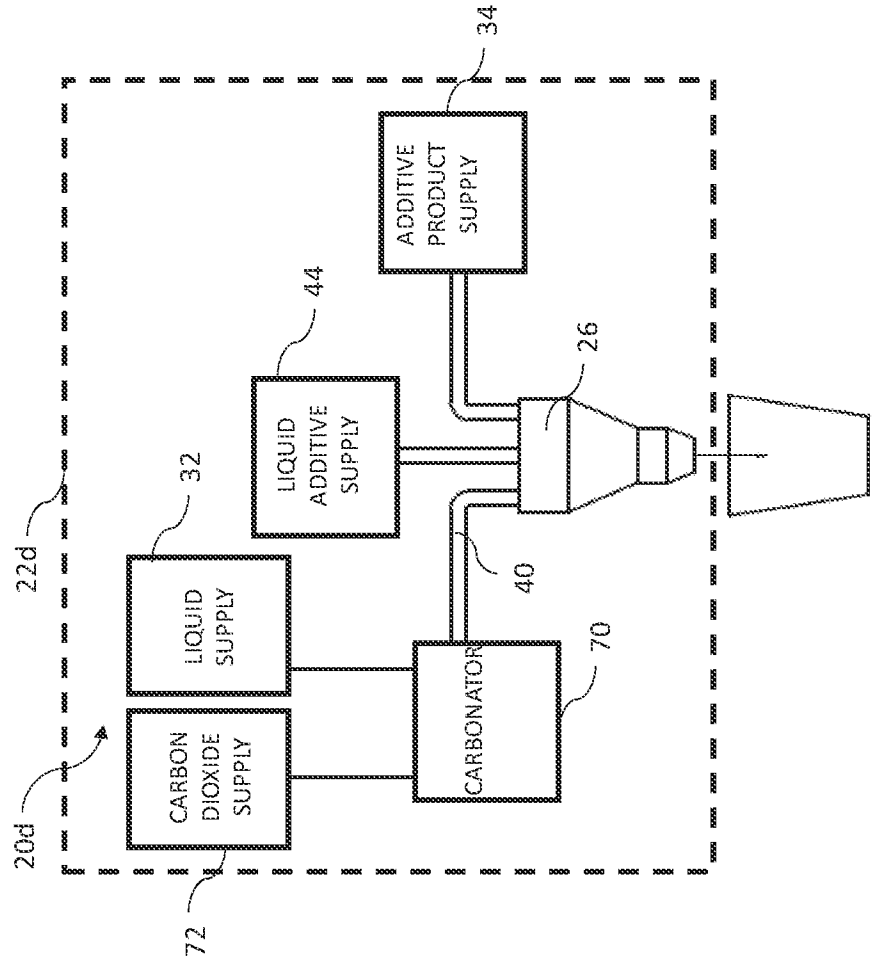


FIG. 9

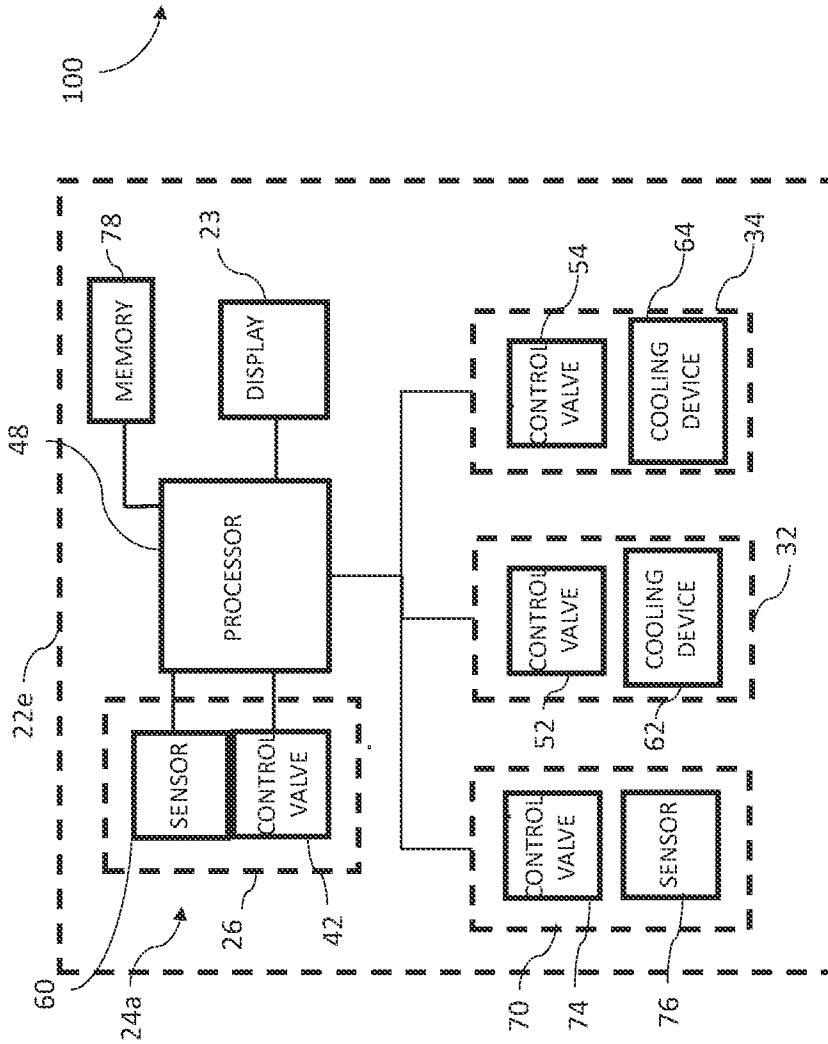


FIG. 10

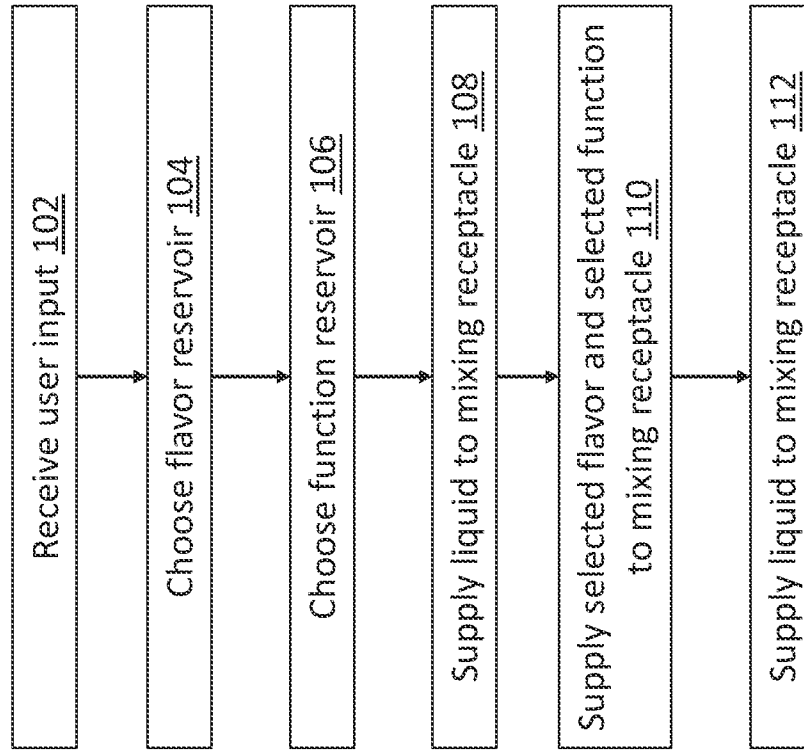


FIG. 11

Doc code: IDS

PTO/SB/08a (02-18)

Doc description: Information Disclosure Statement (IDS) Filed

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	Filing Date		
	First Named Inventor	Lior Shafir	
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	Examiner Name		
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First Named Inventor	Lior Shafir	
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

<i>Notice of References Cited</i>	Application/Control No. 17/884,074		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-11407630-B1	08-2022	Shafir; Lior	B67D1/0036	1/1
*	B	US-10631558-B2	04-2020	White; Newton	B67D1/0021	1/1
*	C	US-10301583-B2	05-2019	Schuh; Christian	A23L2/56	1/1
*	D	US-20170233234-A1	08-2017	Hecht; Thomas R.	B67D1/0021	222/129.1
*	E	US-20160092931-A1	03-2016	Cuppari; Scott	G06Q30/0269	705/14.66
*	F	US-9051162-B2	06-2015	Peters; Dan	G07F9/001	1/1
*	G	US-8162176-B2	04-2012	Rudick; Arthur G.	B67D1/0888	222/145.5
*	H	US-7648050-B1	01-2010	Ehlers; Stacey	G07F13/02	222/144.5
*	I	US-8434642-B2	05-2013	Rudick; Arthur G.	B67D1/0021	222/145.5
*	J	US-20150191341-A1	07-2015	Martindale; Richard A.	B67D1/0882	345/173
*	K	US-20140326754-A1	11-2014	Hecht; Thomas R.	A47J31/521	345/173
*	L	US-20120055954-A1	03-2012	Hecht; Thomas R.	B67D1/0841	222/129.1
*	M	US-20110315711-A1	12-2011	Hecht; Thomas R.	B67D1/0895	222/144.5

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. 17/884,074		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	A47J31/40	222/145.5
*	B	US-20090069933-A1	03-2009	Rudick; Arthur G.	B67D1/0877	222/25
*	C	US-20080054837-A1	03-2008	BEAVIS; RUSSELL HERBERT	B67D1/122	318/696
*	D	US-9527716-B2	12-2016	Kline; Michael J.	B67D1/0888	1/1
*	E	US-20100030355-A1	02-2010	Insolia; Gerard E.	G06Q30/0603	700/285
*	F	US-9908767-B2	03-2018	Martindale; Richard A.	B67D1/0888	1/1
	G					
	H					
	I					
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	K					
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FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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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.
17/884,074	08/09/2022	Lior Shafir	SSHI3PUS02CON	5352
23908	7590	12/22/2022	EXAMINER	
RENNER OTTO BOISSELLE & SKLAR, LLP			NICOLAS, FREDERICK C	
1621 EUCLID AVENUE			ART UNIT	PAPER NUMBER
NINETEENTH FLOOR			3754	
CLEVELAND, OH 44115			NOTIFICATION DATE	DELIVERY MODE
			12/22/2022	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.

17/884,074

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 09 August 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) 1-20 is/are pending in the application.

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

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1-18 is/are rejected.

8) ☒ Claim(s) 19-20 is/are objected to.

9) ☐ Claim(s) ____ 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.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file

provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

3. Claims 1, 3-10, 12-15 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-8, 15-18 of U.S. Patent No. 11,407,630. Although the claims at issue are not identical, they are not patentably distinct from each other because claims 1-8, 15-18 of Patent No. 11,407,630 encompass all the limitations of the above noted claims. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are merely different combinations of the same elements. Further, the inventive concept is the same.

4. Claims 2 and 11 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 10 of U.S. Patent No. 11,407,630 in view of Kline et al. 9,527,716.

Shafir discloses in U.S. Patent No. 11,407,630 all the claimed subject matter except that a concentration of the dietary supplement included in the selected flavor is

zero. Kline et al. teach the use a beverage machine (210) with a display (215), where a user has the option of selecting a zero concentration of a product (col.10, ll. 26-47).

It would have been obvious to one having ordinary skill in the art before the effective filing date of the application to utilize the teaching of Kline et al. onto Shafir's dispenser to have the option of zero concentration of a product, in order to provide the user with option of creating a custom beverage depending of a desired calories in the beverage.

5. Claims 16-18 are rejected on the ground of nonstatutory double patenting as being unpatentable over claim 10 of U.S. Patent No. 11,407,630 in view of Martindale et al. 9,908,767.

Shafir discloses in U.S. Patent No. 11,407,630 all the claimed subject matter except that a cooling device for cooling the liquid, a carbonator for carbonating the liquid. Martindale et al. teach the use of a cooling device (42) for cooling a liquid and a carbonator (40) for carbonating the liquid, a mixer (34) for mixing the beverage.

It would have been obvious to one having ordinary skill in the art before the effective filing date of the application to provide the cooling device and the carbonator of Martindale et al. onto Shafir's dispenser, in order to provide a dispenser capable of dispensing a cool beverage and a carbonated beverage.

Allowable Subject Matter

6. Claims 19-20 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

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

8. 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.: 17/884,074
Filing Date: August 9, 2022
Title: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER
Examiner: Frederick C NICOLAS
Art Unit: 3754
Conf. No.: 5352
Docket No.: SSHI3PUS02CON

MS Amendment

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

RESPONSE TO OFFICE ACTION DATED DECEMBER 22, 2022

Dear Commissioner:

Applicant requests further and favorable consideration of the above-referenced application in view of this reply. A response is herein being concurrently filed. 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. (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;

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 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 a concentration of the dietary supplement included in the selected flavor is zero.

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

4. (Original) The control system of claim 3, 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.

5. (Original) The control system of claim 3, wherein the selectable functions include relax, energize, and immunize.

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

10. (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 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 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.

11. (Original) The method of claim 10, wherein a concentration of the dietary supplement included in the selected flavor is zero.

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

13. (Original) The method of claim 12, 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.

14. (Original) The method of claim 12, wherein the selectable functions include relax, energize, and immunize.

15. (Original) The method of claim 10, 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.

16. (Original) The method of claim 10, further comprising:
cooling the liquid by using the circuitry to control a cooling device.

17. (Original) The method of claim 10, further comprising:
carbonating the liquid by using the circuitry to control a carbonator.

18. (Original) The method of claim 17, further comprising:
supplying the carbonated liquid to the mixing receptacle using the circuitry to control the liquid control valve.

19. (Original) The method of claim 10, further comprising:
determining a level of the selected flavor and the selected function using a product level sensor; and wherein the modulating the amount of the selected flavor and the selected function that is dissolved in the liquid to maintain the predetermined solution of the enhanced flavored mixture that is dispensed from the beverage dispenser by using the circuitry to control the control valve is based on determined level of the selected flavor and the selected function.

20. (Original) The method of claim 19, further comprising:
maintain the level of the selected flavor and the selected function between fifteen and twenty-five milligrams.

Remarks

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

I. STATUS OF CLAIMS

Claims 1-18 are rejected. Claims 19 and 20 contain allowable subject matter. Accordingly, claims 1- 20 are pending in this application.

II. ALLOWABLE SUBJECT MATTER

Claims 19 and 20 were considered allowable if rewritten in independent form including the subject matter of their base claim and any intervening claims. Applicant thanks the Examiner for this acknowledgement of allowable subject matter.

III. DOUBLE PATENTING

A. Claims 1-18

Claims 1, 3-10 and 12-15 stand rejected on the grounds of non-statutory double patenting over US 11,407,630 ("Shafir").

Claims 2 and 11 stand rejected on the grounds of non-statutory double patenting over Shafir in view of US 9,527,716 ("Kline").

Claims 16-18 stand rejected on the grounds of non-statutory double patenting over Shafir in view of US 9,908,767 ("Martindale").

A terminal disclaimer disclaiming any portion of the statutory term of the present innovation which would extend beyond the statutory term of U.S. 11,407,630 is attached. The terminal disclaimer obviates the offered double patenting rejections. Reconsideration and withdrawal of the associated rejections are respectfully requested.

IV. 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 / Mark C. Johnson/
Mark C. Johnson, Reg. No. 51,854
DeMarcus E. Levy, Reg. No. 76,980
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Cleveland, Ohio 44115
(216) 621-1113

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.

**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**Docket Number (Optional)
SSH3PUS02CON

In re Application of: Smart Soda Holdings, Inc.

Application No.: 17/884,074

Filed: August 9, 2022

For: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER

The owner*, Smart Soda Holdings, Inc., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 11,407,630 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 51,854

/Mark C. Johnson/

Signature

March 20, 2023

Date

Mark C. Johnson

Typed or printed name

216-621-1113

Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. 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 1.11 and 1.14. This collection is estimated to take 12 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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.

Application Number * 17/884,074 *	Application/Control No. 17/884,074	Applicant(s)/Patent under Reexamination Shafir, Lior	
	Examiner NICOLAS, FREDERICK C	Art Unit 3754	
Document Code - DISQ		Internal Document - DO NOT MAIL	

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed: <u>20 March 2023</u>	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
/LAWANA R HIXON/ Technology Center: <u>OPLC</u> Telephone: <u>(571)272-6074</u> _____



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

23908 7590 04/03/2023
RENNER, OTTO, BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
NINETEENTH FLOOR
CLEVELAND, OH 44115

EXAMINER	
NICOLAS, FREDERICK C	
ART UNIT	PAPER NUMBER

3754

DATE MAILED: 04/03/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/884,074	08/09/2022	Lior Shafir	SSH13PUS02CON	5352

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	\$480	\$0.00	\$0.00	\$480	07/03/2023

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 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted 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 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. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

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 04/03/2023
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.
17/884,074	08/09/2022	Lior Shafir	SSH3PUS02CON	5352

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	\$480	\$0.00	\$0.00	\$480	07/03/2023

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)

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

☐ Electronic Payment via Patent Center or 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. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/884,074	08/09/2022	Lior Shafir	SSH3PUS02CON	5352
23908	7590	04/03/2023	EXAMINER	
RENNER, OTTO, BOISSELLE & SKLAR, LLP			NICOLAS, FREDERICK C	
1621 EUCLID AVENUE			ART UNIT	
NINETEENTH FLOOR			PAPER NUMBER	
CLEVELAND, OH 44115			3754	

DATE MAILED: 04/03/2023

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) 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. 17/884,074	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 3/20/2023.
☐ 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 1-20. 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.

Allowable Subject Matter

2. Claims 1-20 are allowed.

3. 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 claim 1 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 1 inventive: wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is 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: wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is 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.

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

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

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)

Application Number	17/884,074	Filing Date	2022-08-09	Docket Number (if applicable)	SSH13PUS02CON	Art Unit	3754
First Named Inventor	Lior Shafir			Examiner Name	Frederick C. Nicolas		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☐ Amendment/Reply

☒ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
Deposit Account No 180988

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature
Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	Matthew C. Moldovanyi/	Date (YYYY-MM-DD)	2023-05-18
Name	Matthew C. Moldovanyi	Registration Number	76968

This collection of information is required by 37 CFR 1.114. 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 1.11 and 1.14. This collection is estimated to take 12 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, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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 the Freedom of Information Act requires disclosure of these records.
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 inspections 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17884074
	Filing Date	2022-08-09
	First Named Inventor	Lior Shafir
	Art Unit	3754
	Examiner Name	Frederick C. Nicolas
	Attorney Docket Number	SSHI3PUS02CON

U.S.PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1	11148927	B2	2021-10-19	Wing, et al.			
	2	11634313	B2	2023-04-25	De Boeck			
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1	20180251358	A1	2018-09-06	Wing, et al.			
If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	17884074
Filing Date	2022-08-09
First Named Inventor	Lior Shafir
Art Unit	3754
Examiner Name	Frederick C. Nicolas
Attorney Docket Number	SSH13PUS02CON

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	17884074
Filing Date	2022-08-09
First Named Inventor	Lior Shafir
Art Unit	3754
Examiner Name	Frederick C. Nicolas
Attorney Docket Number	SSHI3PUS02CON

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew C. Moldovanyi/	Date (YYYY-MM-DD)	2023-05-18
Name/Print	Matthew C. Moldovanyi	Registration Number	76968

This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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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.

**CERTIFICATION AND REQUEST FOR CONSIDERATION OF AN INFORMATION DISCLOSURE
STATEMENT FILED AFTER PAYMENT OF THE ISSUE FEE UNDER THE QPIDS PILOT PROGRAM**

Non-Provisional Application Number: 17884074	Filing Date: 9-Aug-2022
First Named Inventor: Lior Shafir	Title of Invention: ON DEMAND FUNCTIONAL BEVERAGE DISPENSER

**THE UNDERSIGNED HEREBY CERTIFIES AND REQUESTS THE FOLLOWING FOR THE ABOVE-
IDENTIFIED APPLICATION.**

- Consideration is requested of the information disclosure statement (IDS) submitted herewith, which is being filed after payment of the issue fee.
- Check the box next to the appropriate selection:
☐ Each item of information contained in the IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(1).
OR
☒ No item of information contained in the IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(2).
OR
☐ See attached certification statement in compliance with 37 CFR 1.97(e).
- Please charge the IDS fee set forth in 37 CFR 1.17(p) to Deposit Account No. _____.
- A Petition to Withdraw from Issue After Payment of the Issue Fee (37 CFR 1.313(c)(2)), including the petition fee set forth in 37 CFR 1.17(h), is submitted herewith as a **Web-based ePetition**.
WARNING: Do not submit the petition as a follow-on paper via EFS-Web. Submit the petition as a Web-based ePetition by signing on to EFS-Web as a registered user, selecting the radio button next to "Existing application/patent," and then selecting the radio button next to "ePetition (for automatic processing and immediate grant, if all petitions requirements are met)." Failure to use the Web-based ePetition interface will result in automatic entry of the RCE.
- A request for continued examination (RCE) under 37 CFR 1.114 and the RCE fee under 37 CFR 1.17(e) are submitted herewith.
- The RCE will be treated as a "conditional" RCE. In the event the examiner determines that any item of information contained in the IDS necessitates the reopening of prosecution in the application, the undersigned understands that (i) the RCE will be processed and treated as an RCE under 37 CFR 1.114 and therefore (ii) the IDS fee under 37 CFR 1.17(p) will be returned in accordance with 37 CFR 1.97(b)(4). In the event that no item of information in the IDS necessitates reopening prosecution, the undersigned understands that the RCE will not be processed and the RCE fee under 37 CFR 1.17(e) will be returned.
- This certification and request is being filed as a **Web-based ePetition** and is not accompanied by an amendment to the application. Inclusion of an amendment will result in automatic entry of the RCE.

Signature /Matthew C. Moldovanyi/	Date 18-May-2023
Name (Print/Typed) Matthew C. Moldovanyi	Practitioner Registration Number (If applicable) 76968
<u>Note:</u> Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below.*	
☐ *Total of _____ forms are submitted.	

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.

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Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17884074
	Filing Date	2022-08-09
	First Named Inventor	Lior Shafir
	Art Unit	3754
	Examiner Name	Frederick C. Nicolas
	Attorney Docket Number	SSHI3PUS02CON

U.S.PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
/F.C.N/	1	11148927	B2	2021-10-19	Wing, et al.			
/F.C.N/	2	11634313	B2	2023-04-25	De Boeck			
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
/F.C.N/	1	20180251358	A1	2018-09-06	Wing, et al.			
If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)

Application Number	17884074
Filing Date	2022-08-09
First Named Inventor	Lior Shafir
Art Unit	3754
Examiner Name	Frederick C. Nicolas
Attorney Docket Number	SSH13PUS02CON

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/FREDERICK C NICOLAS/	Date Considered	06/09/2023
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.



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Address: COMMISSIONER FOR PATENTS
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NOTICE OF ALLOWANCE AND FEE(S) DUE

23908 7590 06/21/2023
RENNER, OTTO, BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
NINETEENTH FLOOR
CLEVELAND, OH 44115

EXAMINER	
NICOLAS, FREDERICK C	
ART UNIT	PAPER NUMBER

3754

DATE MAILED: 06/21/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/884,074	08/09/2022	Lior Shafir	SSH13PUS02CON	5352

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	\$480	\$0.00	\$480.00	\$0	09/21/2023

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 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted 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 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. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

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 06/21/2023
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.
17/884,074	08/09/2022	Lior Shafir	SSH3PUS02CON	5352

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	\$480	\$0.00	\$480.00	\$0	09/21/2023

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)

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

☐ Electronic Payment via Patent Center or 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.
17/884,074	08/09/2022	Lior Shafir	SSH3PUS02CON	5352
23908	7590	06/21/2023	EXAMINER	
RENNER, OTTO, BOISSELLE & SKLAR, LLP			NICOLAS, FREDERICK C	
1621 EUCLID AVENUE			ART UNIT	
NINETEENTH FLOOR			PAPER NUMBER	
CLEVELAND, OH 44115			3754	

DATE MAILED: 06/21/2023

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) 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. 17/884,074	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 RCE filed on 5/18/2023.
☐ 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 1-20. 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 _____.
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/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.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 5/18/2023 has been entered.

Allowable Subject Matter

3. Claims 1-20 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 claim 1 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 1 inventive: wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is 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: wherein a concentration of a dietary supplement included in the selected function that is included in the enhanced flavored mixture is 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.

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

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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



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/884,074	08/09/2022	Lior Shafir	SSHI3PUS02CON	5352
23908	7590	08/15/2023	EXAMINER	
RENNER, OTTO, BOISSELLE & SKLAR, LLP			NICOLAS, FREDERICK C	
1621 EUCLID AVENUE			ART UNIT	PAPER NUMBER
NINETEENTH FLOOR			3754	
CLEVELAND, OH 44115			NOTIFICATION DATE	DELIVERY MODE
			08/15/2023	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



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APPLICATION NO.	ISSUE DATE	PATENT NO.
17/884,074	15-Aug-2023	11724927

RENNER, OTTO, BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
CLEVELAND, OH 44115

EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at <https://patentcenter.uspto.gov>

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit <https://www.uspto.gov/electronicgrants>