

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US 23/18446

International filing date (day/month/year)

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CPC - INV. C02F 1/008, C02F 9/20, B67D 1/12

ADD. C02F 2301/043, F25D 23/126, B01D 35/157, B01D 35/1573

Applicant QUENCH USA, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US
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Date of completion of this opinion

13 June 2023 (13.06.2023)

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Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(b)).
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13ter.1(a)),
☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-19	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-19	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-19 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not disclose or fairly suggest the subject matter claimed.

The prior art is exemplified by US 2022/0024748 A1 to PepsiCo, Inc. (hereinafter "PepsiCo"), US 2013/0313191 A1 to Omni Water Solutions, Inc. (hereinafter "Omni"), and US 2019/0161334 A1 to Natural Choice Corporation (hereinafter "Natural").

Regarding claim 1:

PepsiCo discloses a water-dispensing device ([abstract]- A beverage dispenser...The high-ratio concentrate is pre-mixed with an alkaline water) comprising:

a source water intake (200, 134) (Fig. 5A, para [0038]- beverage dispenser 1 receives a source of still water from a water supply 200. Water supply 200 is supplied by an external connection through water inlet 134 of FIG. 4);

a spigot (210) arranged downstream from the source water intake (Fig. 2 and 5A, para [0033] dispensing elements... valves; para [0034]- A nozzle 210 is disposed on front wall 101 in the dispensing zone 120; para [0045]- The water flowing through ambient water path 304 to nozzle 210 is not chilled from the ambient temperature of the water received at water supply 200);

a first filter (203) arranged between the source water intake and the spigot (Fig. 5A, para [0039]- Immediately downstream of water supply valve 201 the flow of water from water supply 200 splits into two paths. A first main path 202 leads to a water filter 203, the first filter including a first inlet (202) (Fig. 5A, para [0039]- A first main path 202 leads to a water filter 203) and a first outlet (304) (para [0042]- after flowing through water filter 203, water is routed to a pump 301. Water is pumped from pump 301 and is split into a first chilling path 303 and an ambient water path 304), at least the first inlet (202) including a first electrically controlled valve (201) for selectively placing the first filter in fluid communication with the source water intake (Fig. 5A, para [0039]- Immediately downstream of water supply valve 201 the flow of water from water supply 200 splits into two paths. A first main path 202 leads to a water filter 203; para [0038]- The fluid control valves used in beverage dispenser 1, including a main water supply valve 201, may be any suitable type of electronically controlled valve); and a controller (1000) (Fig. 11, para [0097]- Controller 1000 is the central control system) configured to:

(i) receive a water selection from a user (para [0115]- An example of a simplified user interface 2000 is shown in FIG. 14... beverage group 2010 includes selectable beverages that include alkaline water button 2011, still water button 2012, sparkling water button 2013, hot water button 2014, a first stored beverage button 2015, and a second stored beverage button 2016).

PepsiCo does not disclose a second filter arranged between the source water intake and the spigot, the second filter including a second inlet and a second outlet, at least the second inlet including a second electrically controlled valve for selectively placing the second filter in fluid communication with the source water intake; and (ii) configure the first valve and the second valve based on the received water selection such that water flowing from the source water intake toward the spigot will enter any of the first filter and second filter corresponding to the received water selection and bypass any of the first filter and second filter that do not correspond to the received water selection.

Omni discloses a water-dispensing device (para [0015]- When clean drinking water is needed...mobile recycling units of the current embodiment can be deployed quickly) comprising:

a source water intake (14) (Fig. 1, para [0050]- water from a raw water source is received into the inlet 14 of a conduit subsystem 16 of the treatment system 10);

a first filter (40) (Fig. 1, para [0057]- the water flow can be directed by the controller 12 through a mixed media filtration subsystem 40), the first filter including a first inlet and a first outlet (note: a first inlet and a first outlet are inherently included, para [0057]- the water flow can be directed by the controller 12 through a mixed media filtration subsystem 40...Treated water exiting the filtration subsystem 40), at least the first inlet including a first electrically controlled valve (41) for selectively placing the first filter in fluid communication with the source water intake (para [0057]- The partially treated water pumped from the feed pump 36 can be directed by the controller 12 through a suitable valve 41 to the first of one or more filtration subsystems...the water flow can be directed by the controller 12 through a mixed media filtration subsystem 40);

a second filter (42) (Fig. 1, para [0058]- The controller 12 may next direct the treated water to a membrane filtration system 42), the second filter including a second inlet and a second outlet (note: a second inlet and a second outlet are inherently included, para [0058]- The controller 12 may next direct the treated water to a membrane filtration system 42...Treated water exiting the subsystem 42), at least the second inlet including a second electrically controlled valve (45) for selectively placing the second filter in fluid communication with the source water intake (Fig. 1, para [0058]- The controller 12 may next direct the treated water to a membrane filtration system 42 through a suitable valve 45); and a controller (12) (para [0050]- The treatment system 10 is under the control of a conventional programmable controller 12). Omni otherwise fails to overcome deficiencies of PepsiCo.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

---Continuation of Box No. V---

Natural discloses a water-dispensing device ([abstract]- Water dispensing apparatus) comprising:

a source water intake (para [0072]- Water may flow into the system of the present invention via an inlet valve 151);

a spigot (21) arranged downstream from the source water intake (Fig. 4, para [0072]- The water may then flow to an ambient valve 155 for dispensing as ambient water through faucet 21);

a first filter (152) arranged between the source water intake and the spigot (21) (Fig. 4, para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152...The filtered water may then flow from primary filter 152 to an optional booster pump 154 that may increase the water pressure for fulfilling the water demand of each component of the system described herein. The water may then flow to an ambient valve 155 for dispensing as ambient water through faucet 21), the first filter including a first inlet and a first outlet (note: a first inlet and a first outlet are inherently included, para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152...The filtered water may then flow from primary filter 152 to an optional booster pump 154), at least the first inlet including a first electrically controlled valve (151) for selectively placing the first filter in fluid communication with the source water intake (para [0069]- the processor may control various internal elements of the water dispenser 10...valves; para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152);

a second filter (153) arranged between the source water intake and the spigot (21) (para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152 and, optionally, an optional pre-filter 153...The water may then flow to an ambient valve 155 for dispensing as ambient water through faucet 21), the second filter including a second inlet and a second outlet (note: a second inlet and a second outlet are inherently included), and

a controller (para [0069]- the processor may control various internal elements of the water dispenser 10) configured to: (i) receive a water selection from a user (para [0069]- The processor may control the touch-screen control panel and provide functionality to a user thereof, such as providing the user the ability to select different types of water dispensed therefrom, namely hot still water, cold still water, cold carbonated water, and ambient water). Natural otherwise fails to overcome deficiencies of Pepsico.

Therefore the prior art of record does not disclose or fairly suggest the subject matter claimed. Specifically, none of the prior art, alone or in combination, discloses or fairly suggests a water dispensing device comprising configuring the first valve and the second valve based on the received water selection such that water flowing from the source water intake toward the spigot will enter any of the first filter and second filter corresponding to the received water selection and bypass any of the first filter and second filter that do not correspond to the received water selection. Further, the prior art whether taken alone or combination, fails to disclose or suggest the particular arrangement of these parts as required by claim 1, therefore claim 1 meets the criteria set out in PCT Article 33(2)-(3).

Claims 2-14 meet the criteria set out in PCT Article 33(2)-(3) as depending from claim 1.

Regarding claim 15:

Pepsico discloses a method for operating a water-dispensing device ([abstract]- A beverage dispenser...The high-ratio concentrate is pre-mixed with an alkaline water) having a controller (Fig. 11, para [0097]- Controller 1000 is the central control system) and first filter (203) arranged between a source water intake (134, 200) and a downstream spigot (210) (Fig. 2 and 5A, para [0033]-[0034]- A nozzle 210 is disposed on front wall 101 in the dispensing zone 120; para [0038]- beverage dispenser 1 receives a source of still water from a water supply 200. Water supply 200 is supplied by an external connection through water inlet 134 of FIG. 4; para [0039]- Immediately downstream of water supply valve 201 the flow of water from water supply 200 splits into two paths. A first main path 202 leads to a water filter 203), the first filter having a first inlet (202) (Fig. 5A, para [0039]- A first main path 202 leads to a water filter 203) and a first outlet (304) (para [0042]- after flowing through water filter 203, water is routed to a pump 301. Water is pumped from pump 301 and is split into a first chilling path 303 and an ambient water path 304), at least the first inlet (202) including a first electrically controlled valve (201) (Fig. 5A, para [0039]- Immediately downstream of water supply valve 201 the flow of water from water supply 200 splits into two paths. A first main path 202 leads to a water filter 203; para [0038]- The fluid control valves used in beverage dispenser 1, including a main water supply valve 201, may be any suitable type of electronically controlled valve), the method comprising:

receiving, by the controller (1000) (Fig. 11, para [0097]- Controller 1000 is the central control system), a water selection from a user (para [0115]- An example of a simplified user interface 2000 is shown in FIG. 14... beverage group 2010 includes selectable beverages that include alkaline water button 2011, still water button 2012, sparkling water button 2013, hot water button 2014, a first stored beverage button 2015, and a second stored beverage button 2016); and initiating, by the controller (1000) (Fig. 11, para [0097]- Controller 1000 is the central control system for beverage dispenser 1), water flow from the source water intake (para [0116]- the second step is selection of the pour button 2040. Selection of pour button 2040 begins dispensing of the beverage).

Pepsico does not disclose a second filter, the second filter having a second inlet and a second outlet, at least the second inlet including a second electrically controlled valve, configuring the first valve and the second valve based on the received water selection such that water flowing from the source water intake toward the spigot will enter any of the first filter and second filter corresponding to the received water selection and bypass any of the first filter and second filter that do not correspond to the received water selection.

Omni discloses a method for operating a water-dispensing device (para [0015]- When clean drinking water is needed...mobile recycling units of the current embodiment can be deployed quickly) having a controller (12) (Fig. 1, para [0050]- The treatment system 10 is under the control of a conventional programmable controller 12) and first and second filters (40, 42, 44) arranged between a source water intake (14) and a downstream (para [0050]- water from a raw water source is received into the inlet 14 of a conduit subsystem 16 of the treatment system 10. The conduit subsystem 16 provides a water flow path through the treatment system 10 to an outlet 18 for potable water. The treatment system 10 may include a variety of different water treatments subsystems, including an optional debris strainer 20, a particulate strainer 22, an optional oil-water separator 24, a primary oxidation subsystem 30, a series of filtration subsystems 40, 42, and 44, a reverse osmosis subsystem 50, and a final oxidation subsystem 60), (claim 15 continued)

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In case the space in any of the preceding boxes is not sufficient.

Continuation of:

---Continuation of Box No. V---

(claim 15 continued) the first filter having a first inlet and a first outlet (note: a first inlet and a first outlet are inherently included, para [0057] - the water flow can be directed by the controller 12 through a mixed media filtration subsystem 40...Treated water exiting the filtration subsystem 40), at least the first inlet including a first electrically controlled valve (41) (para [0057]- The partially treated water pumped from the feed pump 36 can be directed by the controller 12 through a suitable valve 41 to the first of one or more filtration subsystems...the water flow can be directed by the controller 12 through a mixed media filtration subsystem 40), the second filter having a second inlet and a second outlet (note: a second inlet and a second outlet are inherently included, para [0058]- The controller 12 may next direct the treated water to a membrane filtration system 42...Treated water exiting the subsystem 42), at least the second inlet including a second electrically controlled valve (45) (Fig. 1, para [0058]- The controller 12 may next direct the treated water to a membrane filtration system 42 through a suitable valve 45), and initiating, by the controller (12), water flow from the source water intake (para [0050]- The treatment system 10 is under the control of a conventional programmable controller 12...water from a raw water source is received into the inlet 14 of a conduit subsystem 16 of the treatment system 10. The conduit subsystem 16 provides a water flow path through the treatment system 10 to an outlet 18 for potable water). Omni otherwise fails to overcome deficiencies of Pepsico.

Natural discloses a method for operating a water-dispensing device ([abstract]- Water dispensing apparatus) having a controller and first and second filters (152, 153) arranged between a source water intake and a downstream spigot (21) (Fig. 4, para [0069]- the processor may control various internal elements of the water dispenser 10; para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152 and, optionally, an optional pre-filter 153...The water may then flow to an ambient valve 155 for dispensing as ambient water through faucet 21), the first filter having a first inlet and a first outlet (note: a first inlet and a first outlet are inherently included, para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152...The filtered water may then flow from primary filter 152 to an optional booster pump 154), at least the first inlet including a first electrically controlled valve (151) (para [0069]- the processor may control various internal elements of the water dispenser 10...valves; para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152), the second filter having a second inlet and a second outlet (note: a second inlet and a second outlet are inherently included), the method comprising: receiving, by the controller, a water selection from a user (para [0069]- The processor may control the touch-screen control panel and provide functionality to a user thereof, such as providing the user the ability to select different types of water dispensed therefrom, namely hot still water, cold still water, cold carbonated water, and ambient water); and initiating, by the controller (para [0069]- the processor may control various internal elements of the water dispenser 10), water flow from the source water intake (para [0072]- Water may flow into the system of the present invention via an inlet valve 151 and travel to a primary filter 152...The filtered water may then flow from primary filter 152 to an optional booster pump 154 that may increase the water pressure for fulfilling the water demand of each component of the system described herein. The water may then flow to an ambient valve 155 for dispensing as ambient water through faucet 21). Natural otherwise fails to overcome deficiencies of Pepsico.

Therefore the prior art of record does not disclose or fairly suggest the subject matter claimed. Specifically, none of the prior art, alone or in combination, discloses or fairly suggests a water dispensing device comprising configuring the first valve and the second valve based on the received water selection such that water flowing from the source water intake toward the spigot will enter any of the first filter and second filter corresponding to the received water selection and bypass any of the first filter and second filter that do not correspond to the received water selection. Further, the prior art whether taken alone or combination, fails to disclose or suggest the particular arrangement of these parts as required by claim 15, therefore claim 15 meets the criteria set out in PCT Article 33(2)-(3).

Claims 16-19 meet the criteria set out in PCT Article 33(2)-(3) as depending from claim 15.

Claims 1-19 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in the industry.