US 20030198465A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2003/0198465 A1

Cai (43) Pub. Date: Oct. 23, 2003

(54) DEVICE AND METHOD FOR MAKING HOT WATER OR THE LIKE

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(21) Appl. No.: **10/126,715**

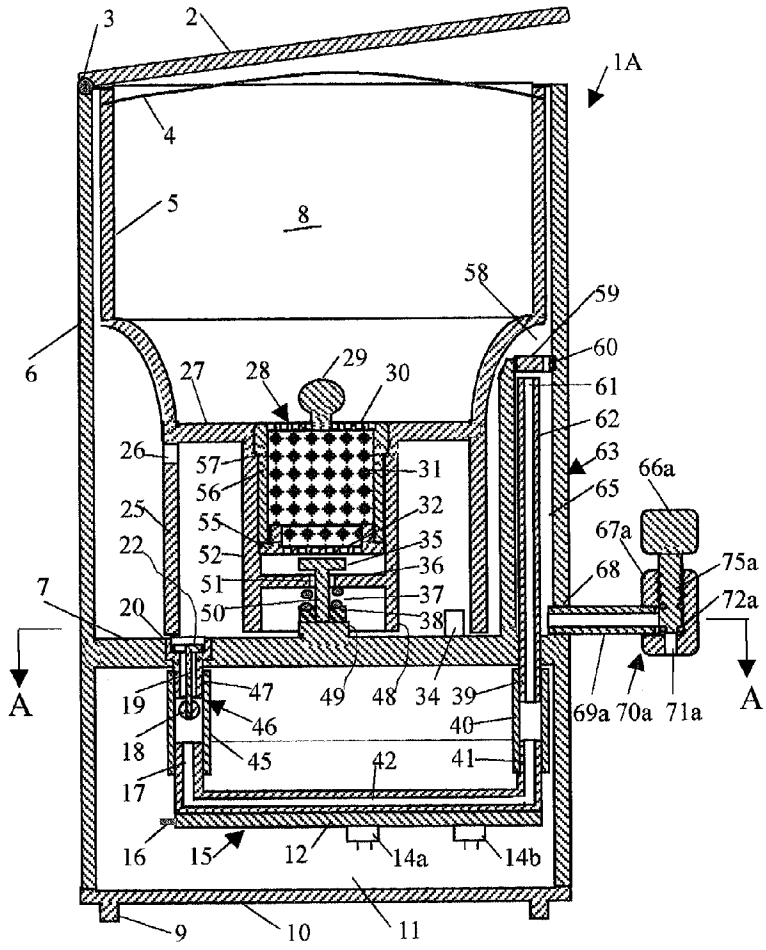
(22) Filed: **Apr. 19, 2002**

Publication Classification

(51) **Int. Cl.**[7] **F24H 1/08**
(52) **U.S. Cl.** **392/471**; 99/275; 99/323.3

(57) **ABSTRACT**

A device for making hot filtered water comprising a filter unit for filtering water, a first chamber for receiving the filtered water, a tubular heater connected to the first chamber, a hot water temperature optimizer connected to the heater outlet for ensuring the temperature of the hot water to be optimized for drinking or steeping bags, a first dispensing station connected to the optimizer for dispensing hot water therein into a cup and a second dispensing station connected to the first chamber for dispensing cold water therein into a cup. The optimizer comprises an inlet connected to the heater, a second chamber, an outlet, and a vent that is opened into the first chamber in a first embodiment of the invention or connected to a brew station for making coffee in a second embodiment. Alternatively, the optimizer comprises a closable inlet connected to the heater and a bi-metal heat activating valve for controlling the size of the closable inlet. Method for making a cup of hot filtered water without interrupting coffee brewing at the brew station includes placing a cup below the first dispensing station, opening the first dispensing station, causing at least part of the hot water to exit through the optimizer outlet and the first dispensing station into the cup when the water reaches the temperature predetermined at least partly by the optimizer and while the coffee extraction continues in the brew station, closing the dispensing station to cause the hot water to exit through the vent into the brew station again after the cup is full.



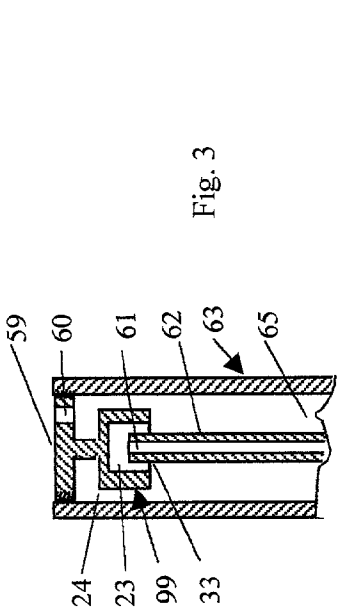


Fig. 3

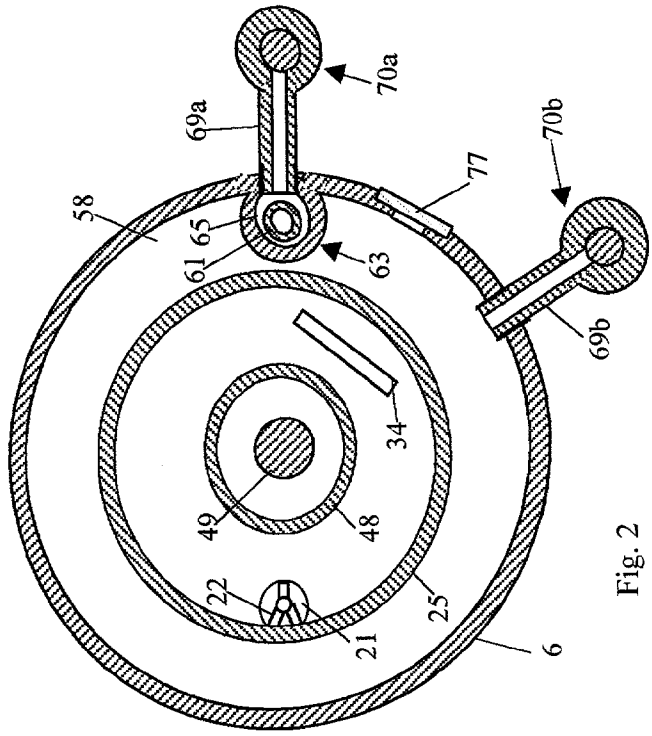


Fig. 2

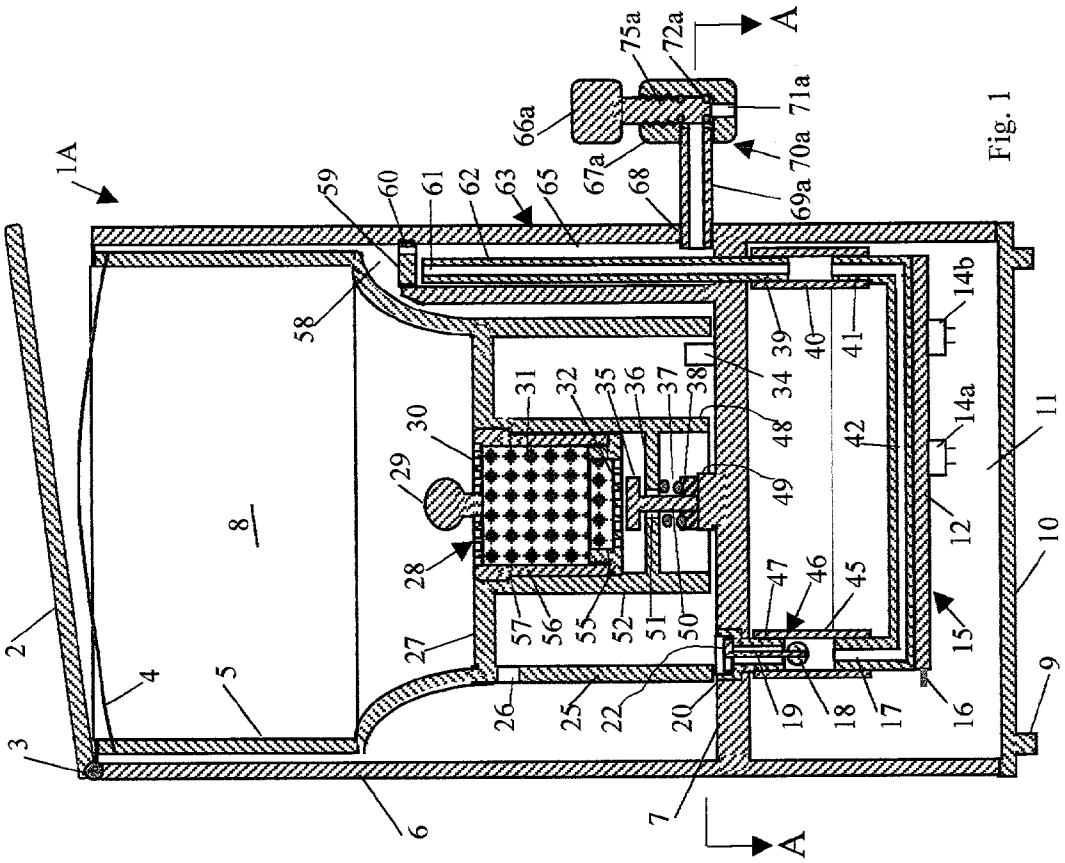


Fig. 1

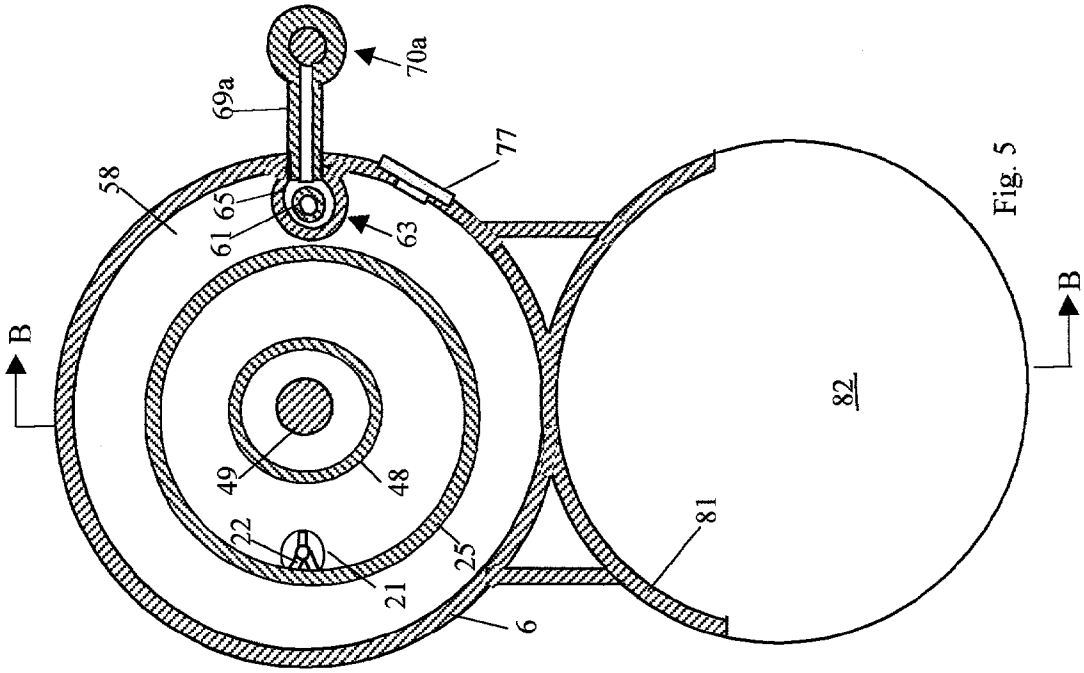

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Fig. 5

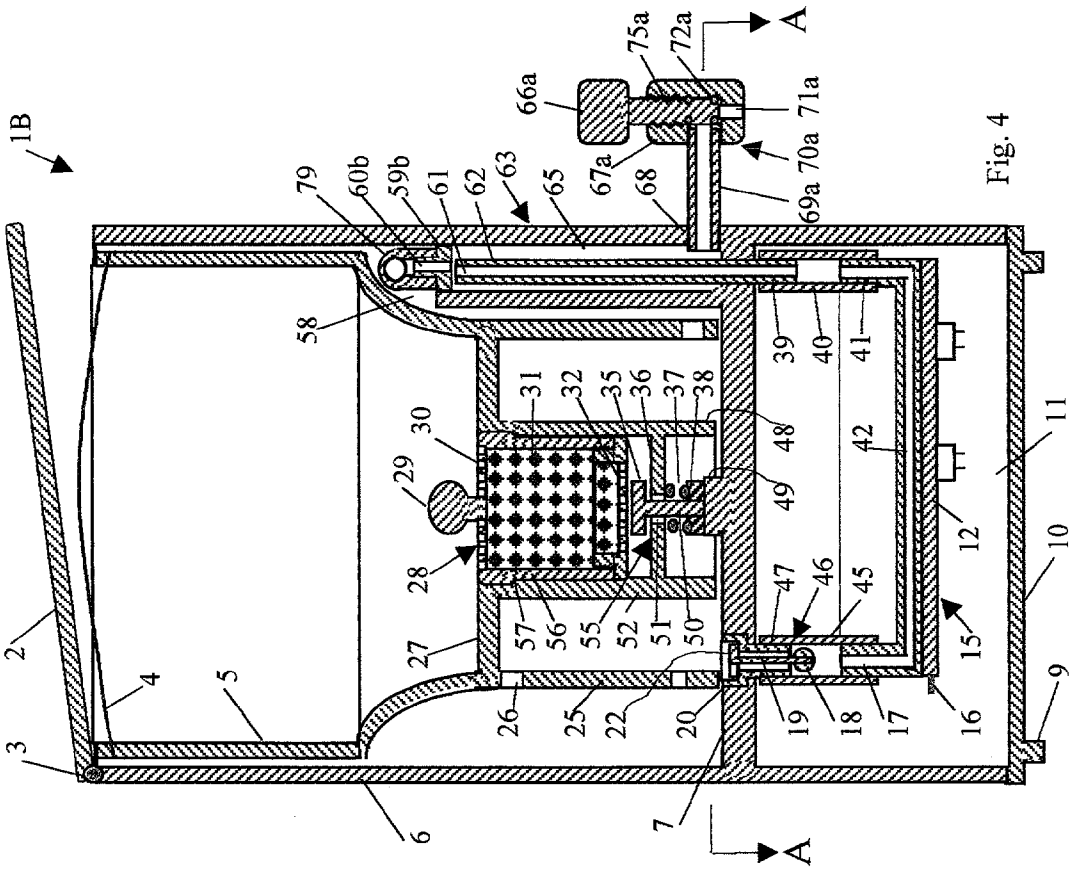
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Fig. 4

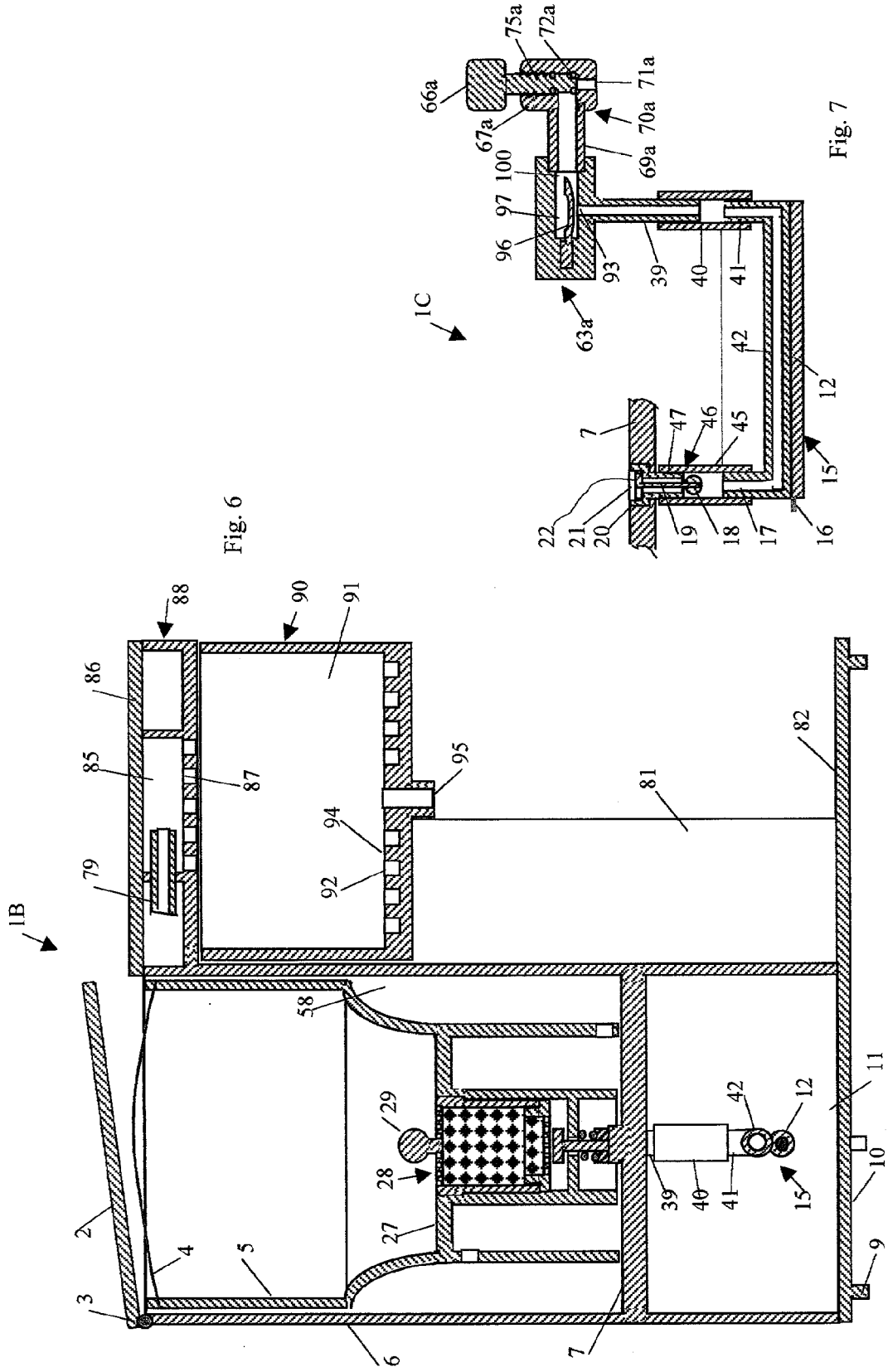
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Fig. 6

Fig. 7

DEVICE AND METHOD FOR MAKING HOT WATER OR THE LIKE

FIELD OF THE INVENTION

[0001] The present invention relates to a device and method for making hot water for direct consumption or tea or the like use. Particularly, the present invention relates to a device and method for making hot water, either filtered or unfiltered, and delivering the hot water into a cup for direct use or to flavor-containing materials for brewing beverage.

BACKGROUND OF THE INVENTION

[0002] Hot water is commonly used for direct drinking, steeping tea bags and numerous other uses at homes and in offices. The most common apparatus for use in making hot water at homes and out of homes are microwave ovens and electric or gas ranges. Although such apparatus heat and boil water in a container well, they can neither provide hot water at a predetermined temperature below water boiling point nor provide hot water in a continuous fashion. Hot water has also been provided by under-sink water heaters in which the water from a plumb system are heated and stored prior to being dispensed. Such under-sink heaters also work well, but they are difficult to install and causes energy waste due to heat loss to environment during the storage of hot water.

[0003] Hot water can also been made by automatic drip coffeemakers by heating and pumping water to the brew head and the brew basket below in which there is no coffee grounds. The hot water is received in a carafe below the brew basket. The resulting hot water, however, often has very unpleasant "burned" smell. The hot water can not be received in any other container such as a cup or bowl because the "pause and serve" feature on the brew basket works only with the carafe. The user may remove the basket from the coffeemaker to allow water to drip into her or his desired container such as a cup. Unfortunately, such desired container is most likely to be too short to receive hot water from the brew head directly. In addition, safety is a concern since the hot water is gushed out shot by shot.

[0004] Accordingly, the present invention intends to provide a device and method to provide consumers better tasting hot water at more defined temperature than existing water heating apparatus. The present invention also intends to provide consumers a very low cost and safe device to make hot water or/and related beverages. The present invention further intends to provide a device and method for minimizing energy need when making hot water.

SUMMARY OF THE INVENTION

[0005] In accordance with the present invention, there is provided a new device and method for making cold and hot filtered water. The device comprises a removable water filter unit for making filtered water, a first chamber for receiving the filtered water from the filter unit, a tubular heater connected to an opening on the bottom of the first chamber, a hot water temperature optimizer connected to the heater outlet of the tubular heater for ensuring the optimized temperature for the hot water, a first dispensing station connected to the optimizer outlet of the optimizer for dispensing hot water in the optimizer directly into a receptacle such as a cup, and a second dispensing station connected to the bottom part of the first chamber for dispensing cold water therein directly into a receptacle such as a cup. The optimizer comprises an optimizer inlet connected to the heater, a second chamber, an optimizer outlet and a vent that opens into the first chamber in a first embodiment of the invention or connected to a brew station having a brew head and a brew basket for holding a supply of coffee grounds and extracting the grounds to make coffee in a second embodiment of the invention. In a third embodiment, the optimizer comprises a housing, a closable inlet connecting the heater inlet to the housing, an housing outlet and a bi-metal plate for partially plugging the closable inlet when the temperature of water entering the housing is below the optimized temperature for drinking or steeping tea bags and fully opening the closable inlet when the temperature of water entering the housing is above the optimized temperature

[0006] Method for making hot and cold filtered water includes filling the reservoir of the removable filter unit with water from a water faucet and placing the filter unit back into the first chamber. Place a cup below the second dispensing station and opens the valve if the user wants a cup of cold filtered water or place a cup below the first dispensing station, turn on the heater and open the valve if the user want a cup of hot filtered water. After the water in the heater reaches the temperature predetermined at least partly by the hot water temperature optimizer, the hot water will be delivered to optimizer chamber through the optimizer inlet and exit through the optimizer outlet and the first dispensing station into the cup. After the cup is full, the user moves the valve shaft downward to stop the flow of cold or hot filtered water.

[0007] Method for making a cup of hot filtered water for steeping tea or for direct drinking without interrupting the coffee brewing in the basket includes placing a cup below the first dispensing station and moving the valve shaft upwards. After the water in the heater reaches the temperature predetermined at least partly by the optimizer, the hot water will exit through the optimizer outlet and the spout of the first dispensing station into the cup. After the cup is full, the user moves the valve shaft downward to close the dispensing station, causing the hot water to exit through the vent and tube into the brew basket again. It is appreciated that while the hot water is dispensed into the cup at the dispensing station, the coffee extraction in the basket continues to drip into the carafe.

[0008] It is an object of the present invention to provide a device and method for making better tasting hot water at optimized temperature for steeping tea bags for direct drinking.

[0009] It is a further object of the present invention to provide a device and method to make both cold and hot filtered water with a single device.

[0010] It is a further object of the present invention to provide a device and method to make both coffee and hot filtered water for steeping tea bags with a single device at the same time.

[0011] It is a further object of the present invention to provide a device and method to dispense hot filtered water instantly.

[0012] These and other objectives and advantages of the present invention will become apparent from the following

description of the preferred embodiments, taken together with the accompanying drawings.

DESCRIPTION OF THE DRAWING

[0013] The accompanying drawing illustrates diagramatically non-limitative embodiment of the invention, as follows:

[0014] **FIG. 1** is a sectional view of a first embodiment of the invention;

[0015] **FIG. 2** is a sectional view along line A-A of **FIG. 1**;

[0016] **FIG. 3** is a sectional view of an alternative to the hot water temperature optimizer **63** of **FIG. 1**;

[0017] **FIG. 4** is a sectional view of a second embodiment of the invention;

[0018] **FIG. 5** is a sectional view along line A-A of **FIG. 4**;

[0019] **FIG. 6** is a sectional view along line B-B of **FIG. 5**;

[0020] **FIG. 7** is a sectional view of an alternative device to those of **FIG. 1** and **4** for making hot water.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0021] **FIGS. 1 and 2** show a device **1**A for use in making and dispensing filtered cold water and filtered hot water into a cup (not shown) for uses such as steeping tea bags or direct drinking. Device **1**A comprises a removable water filter unit **8** for making filtered water, a first chamber **6** for receiving the filtered water from the filter unit, a tubular heater **15** connected to opening **20** on the bottom **7** of the first chamber **6**, a hot water temperature optimizer **63** connected to the heater outlet **41** of the tubular heater via a elastomer tube **40** for ensuring the optimized temperature for the hot water, and a dispensing station **70***a* connected to a optimizer outlet **68** of the optimizer via a hot water passageway **6** for dispensing hot water directly into a receptacle such as a cup. The chamber **6** has a lid **2** connected to the chamber by a hinge **3**.

[0022] The removable water filter unit **8** comprises a water reservoir **5** having a bottom **27**, a filter cartridge **28**, an reservoir outlet chamber **52** located below the bottom **27** for receiving the filter cartridge, a cylindrical support **25** formed around the outlet chamber and having a plurality of openings **26** for allowing air and the filtered water to pass through, an automatic valve **55** for automatically closing the reservoir outlet **52** when the filter unit is removed from the first chamber **6**, and a handle **4** for assisting the handling of the filter unit **8**. The cartridge **28** has a porous upper wall **30**, a porous bottom wall **32**, a side wall **56**, filter materials **31** such as ion-exchange resins and activated carbon enclosed by the walls, and a ball shaped handle **29** for facilitating the removal and mounting of the cartridge. The top part of the side wall is slightly thickened to engage with a step **57** on the reservoir outlet chamber **52** to prevent the cartridge from being pushed into the bottom of the outlet chamber. The porous bottom wall **32** is attached to side wall **56** by either heat welding or mechanical locking.

[0023] The automatic valve **55** comprises an opening **51** formed on the bottom **36** of the reservoir outlet **52**, a seal disc **35** for sealing the opening **51**, a keeper disc **38** connected the seal disc via a stem **50**, a spring for loaded to pull the seal disc downward to seal the opening **51**, and an actuation member **49** for pushing the keeper disc and thus the seal disc upwards when the filter unit **8** is mounted to or into the chamber **6**.

[0024] It is appreciated that all of the filter unit, except the filter cartridge **28**, can be fixed to the device. For example, the reservoir **5** can form the upper part of the first chamber **6** to receive unfiltered water while the lower part of the chamber **6** is used to receive the filtered water from the filter cartridge **26** mounted in the reservoir outlet chamber **52** (not shown). In this example, the automatic valve becomes not necessary.

[0025] The heater **15** is housed in a bottom chamber **11** sealed by a bottom plate **10** having at least three legs **9**. The heater comprises a tubular heating channel **42** having an heater inlet **17** and heater outlet **41**, a tubular heating element **12** having electric connector pins **16** in heat conducting relation to the tubular heating channel, a first and second thermostats **14***a* and **14***b* for controlling the heating element. The heater inlet is connected to opening **20** of the bottom plate **7** through a check valve **46**. The check valve has a seal ball **18** kept in place below a cylinder **47** by a keeper **22** and a stem **19** that connecting the keeper to the seal ball. A elastomer tube **45** can be used to connect the heater inlet **17** to the cylinder **47**. The first thermostat is configured to allow the water in the heater to be heated to generate steam pressure to deliver the heated water to the optimizer **63**. The second thermostat is configured to keep the water in the heater at a temperature below water boiling point when the device **1**A is not in use, thereby reducing the waiting time needed to make a cup of hot water.

[0026] It is appreciated that the heater **15** may adopt any non-tubular shape. For example, the heater may adopt a cylindrical shape in which the heater inlet **17** is formed on the top of the cylindrical heater and the heater outlet **41** at the bottom of the heater (not shown). Such an arrangement has the advantage of allowing the steam to rise and accumulate above the water in the heater for more efficient delivery of the hot water by steam pressure.

[0027] The hot water temperature optimizer **63** is located in space **58** formed between the filter unit **8** and the first chamber **6**. The optimizer comprises an inlet tube **62** having a lower end **39** connected to the heater outlet **41** through elastomer tube **40** and a upper end **61** as the optimizer inlet, an optimizer chamber **65**, a vent **60** at the top wall **59** of the optimizer chamber and an optimizer outlet **68** connected to dispensing station **70***a*. The vent **60** for the optimizer chamber **65** opens into the first chamber **6**. The exact roles of the optimizer are not well understood yet. However, it is understood that without the optimizer **63**, the temperature of the hot water varies significantly as the water level in the first chamber **6** changes. Specifically, the temperature of the hot water is unacceptably low when the water level in the chamber **6** is high, and unacceptably high when the water level in the chamber **6** is low. It is also noticed that without the optimizer, cold water runs through the dispensing station even when the heater **15** is off. It is also realized that the optimizer can help making the water flow substantially

continuous if the optimizer chamber is sufficient large and the dispensing station is adequately restrictive. It is also noticed that the first chamber **6** and even the filter unit **8** become sterilized or cleaned by hot water and/or steam when the heater **15** is turned on and the dispensing station **70***a* is closed as a result of the re-circulation of the hot water and/or steam between the heater **15** and the first chamber **6** through the vent **60**.

[**0028**] It is appreciated the vent **60** may be optional when the optimizer chamber **65** is sufficiently large. It is appreciated that the optimizer inlet **61** and outlet **68** may be located at different positions in the optimizer **63**. In one extreme, the optimizer outlet **68** may be located near the top and the optimizer inlet **61** at the bottom of the optimizer chamber **65**. In this case, the hot water passageway **69***a* needs to be relatively long and arranged relatively vertically to position the dispensing station a safe distance, preferably only slightly higher than a cup, from the countertop to reduce hot water burning to the user or children. It is also appreciated that the hot water temperature optimizer **60** may be located at other locations of the device **1**A, such as located at or near the top of the first chamber **6**.

[**0029**] The dispensing station **70***a* for the hot water comprises a body **67***a* having a spout **71***a* located at its lower end, a valve shaft **75***a* having a handle **66***a* for allowing the user to move the shaft up to open the spout and down to close the spout. An o-ring or other type of seal **72***a* may be used to achieve sufficient seal to prevent any leakage when the spout is closed.

[**0030**] The device also has a second dispensing station **70***b* (**FIG. 2**), which can be identical in design to dispensing station **70***a*, is attached to the side wall of the first chamber **6** near its bottom for dispensing cold filtered water directly to a cup for direct drink or other use. A water cooling system **34** is located near the dispensing station **70***b* for further cooling the cold water in the chamber **6** before dispensing. A water level indicator **77** is located on the side wall of the chamber **6** to indicate to the user the amount of cold filtered water available.

[**0031**] It is appreciated that the dispensing stations **70***a* and **70***b* can be any types of spigot or faucet. It is also appreciated that the dispensing station can be as simple as a spout without any valve mechanism to control the flow and as complex as a spout with a solenoid valve. It is also appreciated that the first chamber **6** or the reservoir **5** of the filter unit **8** can be connected directly to an external water source such as a plumbing system.

[**0032**] To make hot and cold filtered water, one fills the reservoir **5** of the filter unit **8** with water from a water faucet and places the filter unit back into the first chamber **6**. The user then places a cup below the dispensing station **70***b* and moves the valve shaft **66***b* upwards if he or she wants a cup of cold filtered water. If the user want a cup of hot filtered water, she or he places the cup below the dispensing station **70***a*, turns on the heater and moves the valve shaft **66***a* upwards. After the water in the heating channel **45** reaches the temperature predetermined at least partly by the hot water temperature optimizer **63**, the hot water will be delivered to optimizer chamber **65** through optimizer inlet **61** and exit through the optimizer outlet **68** and the spout **7***a* into the cup. After the cup is full, the user moves the valve shaft downward to stop the flow of cold or hot filtered water.

[**0033**] **FIG. 3** shows an alternative configuration for the hot water optimizer **63**. The alternative is substantially similar to that of **FIG. 1** except that a flow inverter **99** is formed on the top wall **59** for changing the hot water flow from the optimizer inlet **61** from the original upward direction to the downward direction, thereby reducing the loss of hot water from the vent into the first chamber **6**. The flow inverter has inverting chamber **23** for receiving the optimizer inlet **61**, a flow channel opened downward between the tube **62** and the inverting chamber **23** and a passageway **24** for communicating the optimizer chamber to the vent **60**. It is appreciated that other flow deflector may be used to change the direction of the hot water into the optimizer chamber **65**. It is also appreciated that the flow direction of the hot water from the optimizer inlet can be changed by angling or bending the tube **62**.

[**0034**] FIGS. **4-6** show an alternative device **1**B for making hot water. The alternative is substantially similar to that of **FIG. 1** except that the vent **60***b* is connected to an elastomer tube **79** (**FIG. 4**) to a brew head **88** (**FIG. 6**). The brew head **88** has a hot water distributor **87** for distributing the hot water from the tube **79** to the flavor-containing materials (not shown) in a brew basket **90**, a receiving station **85** for the hot water from the tube **79**, and a cover **86**. The brew basket **90** has a chamber **91** for receiving a filter and flavor-containing materials, an extraction discharging spout **95**, and filter support bottom **94** having numerous channels **92** for leading the extraction from the filter to discharging spout **95**. The brew head is permanently connected to the top of a half-cylindrical wall **81** while the brew basket is removably connected to the half-cylindrical wall. It is appreciated that the optimizer **63** can be located at or in the brew head or the brew basket. It was found that if the water distributor is made restrictive the brew head itself could also be made to function as the optimizer. In this case the receiving station also functions as the second chamber and the optimizer outlet and vent are added to the brew head. When the dispensing station is open, at least a substantial amount of hot water reaching the second chamber or the receiving station will exit through the optimizer outlet and dispensing station due to the restrictive nature of the water distributor.

[**0035**] The method of making hot filtered water with this device **1**B is similar that with the device **1**A. To make coffee, the user places a filter paper into the brew basket **90**, put the desired amount of grounds on the filter and place a carafe (not shown) below the extraction discharging spout **95**. Make sure the dispensing station is closed and turn on the heater **15**. Water will be delivered from the heater through the vent **60***b* of the optimizer **63**, the tube **79**, distributor **87** and to the flavor-containing materials in the basket. A head of water will develop in the basket to facilitate the seeping of the hot water through the grounds and into the carafe below the discharging spout **95**. If the user decides to make a cup of hot filtered water for steeping tea bags or for drinking directly essentially without interrupting the coffee extraction in the basket, he or she simply places a cup below the dispensing station **70***a* and moves the valve shaft **66***a* upwards. After the water in the heating channel **45** reaches the temperature predetermined at least partly by the hot water temperature optimizer **63**, the hot water will exit through the optimizer outlet **68** and the spout **71***a* into the cup. After the cup is full, the user moves the valve shaft downward to close the dispensing station, causing the hot

water to exit through the vent **60***b* and tube **79** into the brew basket again. It is appreciated that while the hot water is dispensed into the cup at the dispensing station **71***a*, the coffee extraction in the basket **90** continue to drip into the carafe below the discharging spout **95**.

[**0036**] **FIG. 7** shows another alternative device **1**C for making hot and cold filtered water. The alternative is substantially similar to that of **FIG. 1** except the hot water temperature optimizer **63***a*. The optimizer **63***a* comprises a closable inlet **93**, a housing **97**, a thermal-mechanical device **96** above the closable inlet and mounted to the hosing, and an outlet **100** connected to the dispensing station **71***a* via hot water passageway **69***a*. The thermal-mechanical device is adapted to change its shape or dimension to plug or partially plug the closable inlet when the temperature of the water entering the housing **97** is below a predetermined temperature and to fully open the closable inlet when the water temperature is above the predetermined temperature. The device may comprise a bi-metal plate or coil or wire that has two metals or other materials which are attached to each other but have different thermal expansion properties.

[**0037**] The scope of the invention is obviously not restricted to the embodiments described by way of examples and depicted in the drawings, there being numerous changes, modifications, additions, and applications thereof imaginable within the purview of the claims.

What is claimed is:

1. A beverage maker for making hot water or the like comprising:

a first chamber for receiving water, said first chamber having a chamber outlet;

a check valve located in or downstream said chamber outlet to allow water to flow out of said chamber but prevent reverse flow;

a heater for heating and pumping water, said heater having a heater inlet for receiving water from said chamber outlet, a heating element, a water heating section for conducting heat from said heating element to the water therein, and a heater outlet, said heater be configured to work with said check valve to allow the steam generated in said heating section to force the heated water out of said heater outlet;

a dispensing station comprising a spout in communication with said heater outlet for dispensing the hot water directly into a receptacle such as a cup; and

a hot water temperature optimizer located downstream said heater outlet for achieving an optimized temperature for the hot water, said optimizer comprising a second chamber for containing an amount of hot water, an optimizer inlet for the hot water to enter said second chamber from said heater outlet, and an optimizer outlet for leading the hot water in said second chamber to said dispensing station.

2. A device as defined in claim 1 wherein said dispensing station is a spigot or faucet.

3. A device as defined in claim 1 wherein said optimizer inlet is so located that it is normally above the water level in said first chamber, thereby preventing the cold water in said first chamber from entering said second chamber.

4. A device as defined in claim 3 wherein said dispensing station is adapted to be below the water level in said first chamber to reduce the distance the hot water falls before reaching the receptacle such as a cup, thereby reducing the danger of the user or child being burned by the hot water during the dispensing.

5. A device as defined in claim 1 wherein said optimizer further comprises a vent for said second chamber to prevent the formation of any substantial pressure or vacuum therein.

6. A device as defined in claim 5 wherein said second chamber is adapted to hold an sufficient amount of hot water to enable flow out of said dispensing station while said heater is still heating and preparing for delivery the next pulse of hot water in said heating section, thereby making the hot water flow out of said dispensing station substantially continuous.

7. A device as defined in claim 5 wherein said optimizer inlet is adapted to prevent the hot water coming from said heater from shooting towards or into said vent, thereby preventing or reducing loss of hot water from said vent.

8. A device as defined in claim 5 wherein said optimizer further comprises a flow director for changing the flow direction of the hot water from said optimizer inlet in said second chamber.

9. A device as defined in claim 8 wherein said flow director comprises a deflector located a certain distance from said optimizer inlet for substantially thwarting the flow momentum of the hot water from said optimizer inlet.

10. A device as defined in claim 8 wherein said flow director comprises a section of bent tube for directing the hot water away from said vent.

11. A device as defined in claim 5 wherein said vent is adapted to vent into said first chamber.

12. A device as defined in claim 11 wherein said vent is adapted to allow steam and/or hot water to flow into said first chamber from said second chamber when the dispensing station is closed, thereby causing said first chamber to be sterilized or at least partially sterilized.

13. A device as defined in claim 5 further comprising a brew station having a filter or basket for receiving flavor-containing materials such as coffee and a brew head for introducing hot water to the flavor-containing materials, said brew head being connected to said vent to allow the hot water in said second chamber to reach said filter or basket when said dispensing station is closed.

14. A device as defined in claim 5 wherein at least one of said optimizer inlet and said optimizer outlet is normally located above the water level in said first chamber.

15. A device as defined in claim 1 wherein said optimizer outlet and said dispensing station are so located that said second chamber can be substantially drained through said dispensing station, thereby avoiding the accumulation of stale water in said optimizer.

16. A device as defined in claim 1 wherein said heater further comprises a first thermostat configured to allow said heating element to heat the water therein and to generate steam pressure to deliver the heated water to said second chamber and a second thermostat configured to allow said heating element to keep the water in said heater at a temperature below water boiling point when said device is not in use, thereby reducing the time needed to make a cup of hot water.

17. A device as defined in claim 1 wherein said heating section adapts an elongated tubular shape.

18. A device as defined in claim 1 wherein said heating section comprises a heating chamber for containing all or substantially all the water for said heater, said heating chamber being configured to have said heater outlet to be at or near its bottom and to allow steam to accumulate above the water therein, thereby allowing hot water to be delivered to said second chamber before steam.

19. A device as defined in claim 1 further comprising a filter unit for allowing said device to make filtered hot water.

20. A device as defined in claim 19 further comprising a second dispensing station located at or near the bottom part of said first chamber for dispensing cold filtered water into a receptacle such as a cup.

21. A device as defined in claim 20 further comprising a water cooling unit for cooling the filtered water before it is dispensed at said second dispensing station.

22. A device as defined in claim 19 wherein said filter unit is adapted to be removably mounted to or in said first chamber and comprises a water reservoir, an reservoir outlet in communication with said first chamber and a filter cartridge in said reservoir outlet for filtering the water.

23. A device as defined in claim 22 wherein said filter unit further comprises a valve for closing said reservoir outlet, said valve being adapted to engage with a actuation member at or in said first chamber to automatically open said reservoir outlet when said filter unit is mounted to or in said first chamber.

24. A device as defined in claim 1 wherein said first chamber is adapted to receive water from an external water source such as a water filter or a plumbing system.

25. A device as defined in claim 1 further comprising a brew station for making beverage such as coffee, said brew station comprising a filter or basket for receiving flavor-containing materials and a water distributor in communication with said second chamber for introducing the hot water to the flavor-containing materials.

26. A device as defined in claim 25 wherein said water distributor is located sufficiently higher than said optimizer outlet so that the hot water will preferably exit through said dispensing station when said dispensing station is open.

27. A device as defined in claim 25 wherein said water distributor is restrictive so that at least a substantial amount of hot water reaching said second chamber exits through said dispensing station when said dispensing station is open.

28. A device as defined in claim 25 further comprising a hot water passageway for connecting said dispensing station to said optimizer outlet, said hot water passageway being adapted to have sufficient length and/or height to allow said dispensing station to be a predetermined height above countertop, said predetermined height being preferably about the height of a drink cup.

29. A beverage maker for making hot water or the like comprising:

a first chamber for receiving water, said first chamber having a chamber outlet;

a check valve for said chamber outlet to allow water to flow out of said chamber but prevent the return flow;

a heater for heating and pumping water, said heater having a heater inlet for receiving water from said chamber outlet, a heating element, a water heating section for conducting heat from said heating element to the water therein, and a heater outlet, said heater being configured to work with said check valve to allow the steam generated in said heating section to force the heated water out of said heater outlet;

a hot water temperature optimizer located downstream said heater outlet for achieving an optimized temperature for the hot water, said optimizer comprising a second chamber for containing an amount of hot water, an optimizer inlet for the hot water to enter said second chamber from said heater outlet, and an optimizer outlet;

a brew station having a filter or basket for a supply of flavor-containing materials such as coffee and a water distributor in communication with said second chamber for introducing the hot water therein to the flavor-containing materials; and

a dispensing station such as a spigot or faucet connected to said optimizer outlet for dispensing the hot water directly into a receptacle such as a cup.

30. A device as defined in claim 29 wherein said optimizer further comprises a second optimizer outlet in communication with said water distributor and located a predetermined distance above said optimizer outlet to allow a water head to build up in said second chamber to cause the hot water therein to prefer to flow out of said optimizer outlet when said dispensing station such as a spigot or faucet is open.

31. A device as defined in claim 29 wherein said water distributor is restrictive to allow at least part of the hot water in said second chamber to exit through said optimizer outlet, therefore through said dispensing station, when said dispensing station such as a spigot or faucet is open.

32. A device as defined in claim 29 further comprising a filter unit for allowing said device to make filtered hot water.

33. A device as defined in claim 32 further comprising a second dispensing station located at or near the bottom part of said first chamber for dispensing cold filtered water into a receptacle such as a cup.

34. A device as defined in claim 32 wherein said filter unit is adapted to be removably mounted to or in said first chamber and comprises a water reservoir, an reservoir outlet in communication with said first chamber and a filter cartridge in said reservoir outlet for filtered the water.

35. A device as defined in claim 34 wherein said filter unit further comprises a valve for closing said reservoir outlet, said valve being adapted to engage with a actuation member at or in said first chamber to automatically opening said reservoir outlet when said filter unit is mounted to or in said first chamber.

36. A method for using a device in claim 29 comprising a step of filling said heater with water from said first chamber, a step of heating and delivering the heated water to said optimizer, a step of introducing the hot water from said optimizer to said filter or basket to extract the flavor-containing materials therein, a step for the hot water to seep through the flavor-containing materials and drip into a carafe, and a step of opening said dispensing station to dispense the hot water into a cup while the hot water already in said filter or basket continues to seep through the flavor-containing materials and dripping into said carafe.

37. A method for making hot water and brewing coffee substantially simultaneously comprising:

a step of filling a heater with water from a first chamber;

a step of heating and delivering the heated water to a second chamber;

a step of introducing the hot water from the second chamber said to a filter or basket to extract the flavor-containing materials;

a step for the hot water to seep through the flavor-containing materials and drip into a carafe;

a step of opening a dispensing station such as a spigot or faucet connected to the second chamber to dispense the hot water into a cup without substantially interrupting said step for the hot water to seep through the flavor-containing materials and drip into a carafe since there is normally sufficient amount of hot water accumulated in the filter or basket due to the slow nature of the seeping process; and

a step of closing the dispensing station such as a spigot or faucet when the cup is full, which causes to all the hot water in the second chamber to be introduced to the filter or basket.

38. A beverage maker for making hot water or the like comprising:

a chamber for receiving water, said first chamber having a chamber outlet;

a check valve for said chamber outlet to allow water to flow out of said chamber but prevent the return flow;

a heater for heating and pumping water, said beater having a heater inlet for receiving water from said chamber outlet, a heating element, a water heating section for conducting heat from said heating element to the water therein, and a heater outlet, said heater being configured to work with said check valve to allow the steam generated in said heating section to force the heated water out of said heater outlet;

a hot water temperature optimizer located downstream said heater outlet for achieving an optimized temperature for the hot water, said optimizer comprising an optimizer inlet for the hot water to enter said second chamber from said heater outlet, an optimizer outlet and a thermal mechanical device for controlling the size of said optimizer inlet, said thermal mechanical device being adapted to fully or substantially fully open said optimizer inlet when the hot water is above a predetermined temperature and to at least partially close said optimizer inlet when is above said predetermined temperature; and

a dispensing station such as a spout connected to said optimizer outlet for dispensing the hot water directly into a receptacle such as a cup.

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