

Claims

What is claimed is:

1. A beverage apparatus comprising:

a supply line receiving a source of fluid;

a dosing line;

a main flow line coupled to each of the supply line and the dosing line and having a beverage outlet;

a valve comprising a chamber having an opening for receiving a fitting associated with a cartridge containing an additive, a fluid inlet coupled to the supply line, an outlet coupled to the dosing line, and a dosing ball disposed within the chamber and between the opening, the fluid inlet, and the outlet and configured to rotate from a first position to a second position, the dosing ball comprising a tubular port substantially perpendicular to the axis of rotation of the dosing ball, wherein in the first position the port permits fluid to flow from the fluid inlet to the outlet and in the second position the dosing ball permits additive to flow from the fitting to the outlet.
2. The apparatus of claim 1, wherein in the first position, upon exiting the port, fluid flows across a surface of the fitting exposed in the opening thereby cleansing the exposed surface of any additive disposed on it.
3. The apparatus of claim 2, wherein the fluid is purified water.
4. The apparatus of claim 2, further comprising a dosing pump coupled to the dosing line and a controller, the controller configurable to control fluid flow through the supply line to supply a predetermined amount of fluid to the main flow line for a beverage and to actuate the

valve into the second position while actuating the dosing pump to dispense a predetermined amount of additive through said dosing line to the main supply line, and to actuate the valve into the first position while actuating the dosing pump to flush a predetermined amount of fluid through the dosing line and to the main supply line.

5. The apparatus of claim 4, wherein said predetermined amount of fluid flushed through the dosing line is dispensed into a beverage, thereby cleansing said valve, dosing line, and main line without a drain.

6. The apparatus of claim 1, wherein the fitting for receiving the cartridge is positioned above the valve to permit gravity flow of the additive from the cartridge into the valve.

7. The apparatus of claim 6, wherein the fitting is adapted for a removable cartridge.

8. The apparatus of claim 1, further comprising at least a second valve associated with a second cartridge.

9. The apparatus of claim 2, further comprising a fluid purification system in line with the supply line for purifying the fluid received from the source.

10. The apparatus of claim 1, further comprising a cooling system in line with the supply line, comprising a removable storage tank with a cap, wherein the cap comprises an integrated heat exchanger and a cooling core extending into the storage tank.

11. A beverage apparatus comprising:

a supply line receiving a source of fluid and coupled to a dispensing valve for regulating the flow of the fluid through the supply line;

a dosing line coupled to a dosing valve for alternatively receiving fluid from the supply line or from a source of additive and coupled to a dosing pump for metering the flow of the fluid or additive through the dosing line;

a main flow line in fluid communication with each of the supply line and the dosing line and having a beverage outlet;

a controller operatively coupled to the dispensing valve, the dosing valve, and the dosing pump, the controller configurable to actuate the dispensing valve to supply a predetermined amount of fluid to the main flow line for a beverage, to actuate the dosing valve and dosing pump to dispense a predetermined amount of additive through the dosing line to the main supply line, and to actuate the dosing valve and dosing pump to flush a predetermined amount of fluid through the dosing line and to the main supply line for dispensation into a beverage container, such that the dosing valve, dosing line, and main supply line may be cleansed during the preparation of a beverage without the need for a drain.

12. The beverage apparatus of claim 11, wherein said dosing valve comprises a chamber having an opening for receiving a fitting associated with a cartridge containing the additive, a fluid inlet coupled to the supply line, an outlet coupled to the dosing line, and a dosing ball disposed within the chamber and between the opening, the fluid inlet, and the outlet and configured to rotate from a first position to a second position in response to the controller, the dosing ball comprising a tubular port substantially perpendicular to the axis of rotation of the dosing ball, wherein in the first position the port permits fluid to flow from the fluid inlet to the outlet and in the second position the dosing ball permits additive to flow from the fitting to the outlet.

13. The apparatus of claim 12, wherein in the first position, upon exiting the port, fluid flows across a surface of the fitting exposed in the opening thereby cleansing the exposed surface of any additive disposed on it.
14. The apparatus of claim 13, wherein the fitting for receiving the cartridge is positioned above the dosing valve to permit gravity flow of the additive from the cartridge into the valve.
15. The apparatus of claim 11, wherein the fitting is adapted for a removable cartridge.
16. The apparatus of claim 11, further comprising at least a second dosing valve associated with a second cartridge.
17. The apparatus of claim 12, further comprising a fluid purification system in line with the supply line for purifying the fluid received from the source.
18. The apparatus of claim 11, further comprising a cooling system in line with the supply line, comprising a removable storage tank with a cap, wherein the cap comprises an integrated heat exchanger and a cooling core extending into the storage tank.
19. A beverage system comprising
- a beverage apparatus configurable to dispense a beverage prepared in response to a selection of settings; and
- a container comprising a wireless communications device from which the beverage apparatus may receive information associated with at least one set of selected settings.
20. The system of claim 19, wherein the information is indicative of a user profile, the user profile comprising at least one set of selected settings.

21. The system of claim 20, wherein user profile is stored on the beverage apparatus.
22. The system of claim 20, wherein the user profile is stored remotely from the beverage apparatus on a communications network to which the beverage apparatus is capable of being operatively connected.
23. The system of claim 20, wherein the beverage apparatus comprises
- a supply line receiving a source of fluid;
- a dosing line;
- a main flow line coupled to each of the supply line and the dosing line and having a beverage outlet;
- a valve comprising a chamber having an opening for receiving a fitting associated with a cartridge containing an additive, a fluid inlet coupled to the supply line, an outlet coupled to the dosing line, and a dosing ball disposed within the chamber and between the opening, the fluid inlet, and the outlet and configured to rotate from a first position to a second position, the dosing ball comprising a tubular port substantially perpendicular to the axis of rotation of the dosing ball, wherein in the first position the port permits fluid to flow from the fluid inlet to the outlet and in the second position the dosing ball permits additive to flow from the fitting to the outlet.