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(54) Title: PORTABLE/POTABLE WATER RECOVERY AND DISPENSING APPARATUS

(57) Abstract

A portable, potable water generator for producing high-purity liquid water by condensation of dew from ambient air is described. The generator employs filtration subsystems (38) to remove particulates and aerosols from the incoming air. An enclosed heat absorber (22) cools the filtered air below its dew point and collects (25) droplets of condensate into a closed system (26). The collected liquid dew is further continually treated in a bacteriostat loop (29, 31) to destroy adventitious living organisms and to filter out undesirable and dangerous contaminants. All the subsystems are failsafe-interlocked to disable the generator immediately and prevent delivery of water if any one of them stops functioning within predetermined safe limits. Hybrid embodiments of the water generator attached to or integrated with refrigeration-type appliances such as water coolers, refrigerators, freezers, icemakers and air-conditioners are illustrated.

