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(54) Title: THERMOELECTRIC WATER COOLER

(57) Abstract

A water cooler (10) is provided with a thermoelectric heat transfer module (12) for chilling water within a cooler reservoir (14). The water cooler includes a sensor (120, 222, 320-322, 420) mounted in a position to detect build-up of an ice bank (21) within the cooler reservoir, and to provide a signal to a controller which regulates the thermoelectric module to prevent excessive ice bank growth. The water cooler further includes an air filter (104) for filtering air drawn by a fan to circulate over a heat sink (62) associated with the thermoelectric module, wherein the air filter is adapted for quick and easy access and removal for periodic cleaning or replacement. The thermoelectric module and air filter are included as part of a chiller subassembly adapted for quick and easy assembly with a water cooler housing for use in chilling water within the reservoir, and also for quick and easy disassembly from the water cooler housing for service or replacement, if required.

