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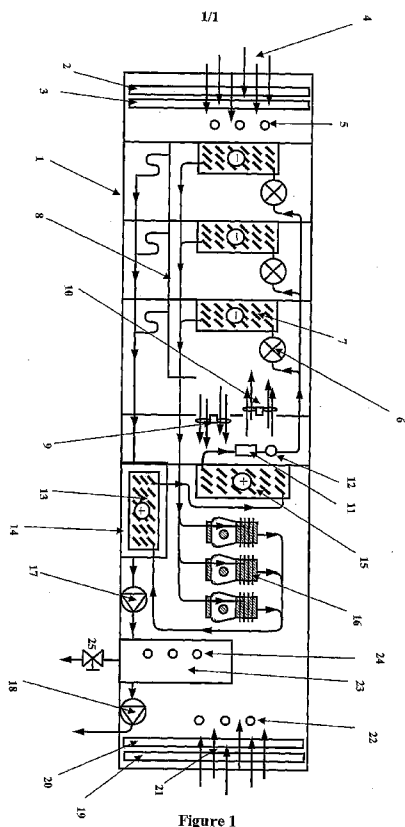


Figure 1

(57) Abstract: An atmospheric dehumidifier air handling unit producing condensation water from moisture in the atmospheric suitable for water generator and drinking purposes. A Method and apparatus to produce pure condensation water from moisture in the atmosphere using energy saving and environmentally friendly atmospheric dehumidifier of a condensing unit comprising: In warm climates, filtered and sterilized fresh atmospheric air is passed through several evaporator cooling coils to condense the moisture in the atmospheric air. The condensed water is then collected on a drip pan and into a discharge line cooler. To reduce the power consumption, the cold air after passing the evaporator cooling coils is then passed to the condenser of the condensing unit of the air handling unit. A refrigerant discharge line coming out from the compressor is dipped through the discharge line cooler of cold condensation drip of the water to gain further energy saving. In cool climates, filtered and sterilized cold fresh atmospheric air is passed to a condenser of the condensing unit of the air handling unit. The fresh heated air is then passed to several evaporator cooling coils to condense the moisture in the atmospheric air. The condensed water is then collected on a drip pan. The refrigerant discharge line coming out from the compressor is also dipped through the discharge line cooler of cold condensation drip of the water. The system is retrofitted with an alternative environmentally friendly refrigerant to further reduce power consumption.