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(54) Title: COMPRESSORLESS AIR CONDITIONING SYSTEM

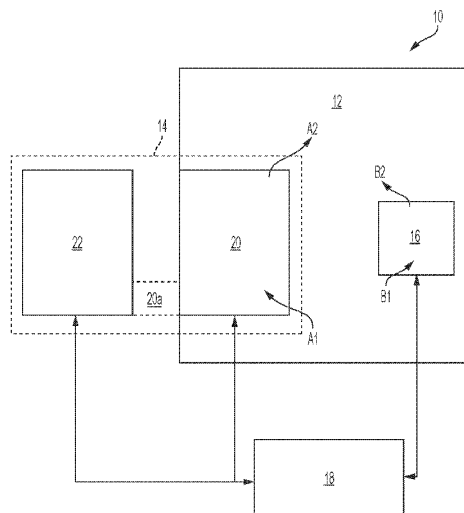


FIG. 1

(57) Abstract: According to various aspects, the present disclosure provides an air conditioning system. The air conditioning system can be a compressorless air conditioning system. According to at least one aspect, the air conditioning system can include a heat-to-mass extractor and a mass-to-heat converter. The heat-to-mass extractor can be configured to extract moisture from air in a conditioned space without increasing the temperature of the air. The heat-to-mass extractor can include a liquid desiccant, a collector, and a regenerator. The regenerator and the collector can be fluidically coupled via the liquid desiccant. The mass-to-heat converter can be configured to reduce a temperature of the air in the conditioned space via evaporation of water, and can be physically disconnected from the heat-to-mass extractor.

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