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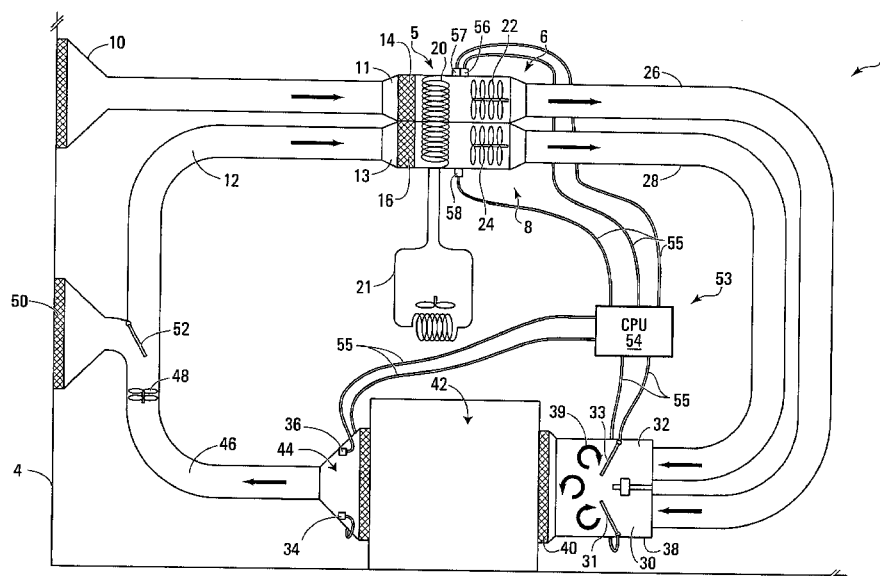
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(54) Title: SINGLE-COIL TWIN-FAN VARIABLE-AIR VOLUME (VAV) SYSTEM FOR ENERGY-EFFICIENT CONDITIONING OF INDEPENDENT FRESH AND RETURN AIR STREAMS



(57) Abstract: An HVAC system (2) has two variable-air-volume (VAV) systems (6),(8), a first VAV system (6) for moving fresh air and a second VAV system (8) for moving recycled air. Both the fresh air and recycled air are cooled and dehumidified by a single heat-exchanging coil (20). The fresh and recycled air streams travel independently in separate ducts (26),(28) until the air streams reach a remotely located mixing box (38) where the air streams mix and ventilate into a room or zone of a building. The HVAC system uses carbon dioxide (34) and temperature (36) sensors in order to regulate the flow of fresh and recycled air to various mixing boxes throughout the building.

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