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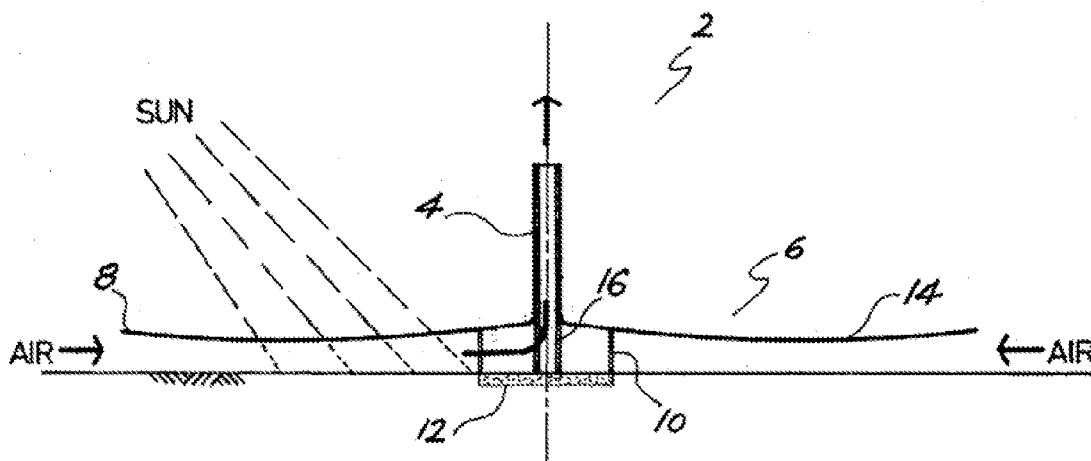
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(54) Title: SOLAR ATMOSPHERIC WATER HARVESTER



(57) Abstract: The atmospheric water harvester (2) shown in fig. (1) comprises a centrally located flue in the form of a tower 4 and a surrounding heating enclosure (6) for collecting incident solar energy to heat air which enters its periphery (8). With heating of the air in the heating enclosure (6), an updraught is created within tower (4) as the air from the heating enclosure (6) returns to the atmosphere from the open end of the tower. A base structure (10) housing a plurality of wind turbines is provided around the base of the tower. As the heated air flows from the heating enclosure (6) into the tower it is harnessed to rotate the wind turbines. Each wind turbine (20) is provided with associated water collection apparatus (94) comprising a refrigeration system for cooling condensation surfaces to, or below, the dew point of the air to effect the condensation of water from the air onto condensation surfaces of the water collection apparatus for collection. The refrigeration system comprises a compressor (46) for compressing a refrigerant vapour for the cooling of the condensation surfaces and which is driven by the wind turbine (20).

WO 2007/025344 A1