

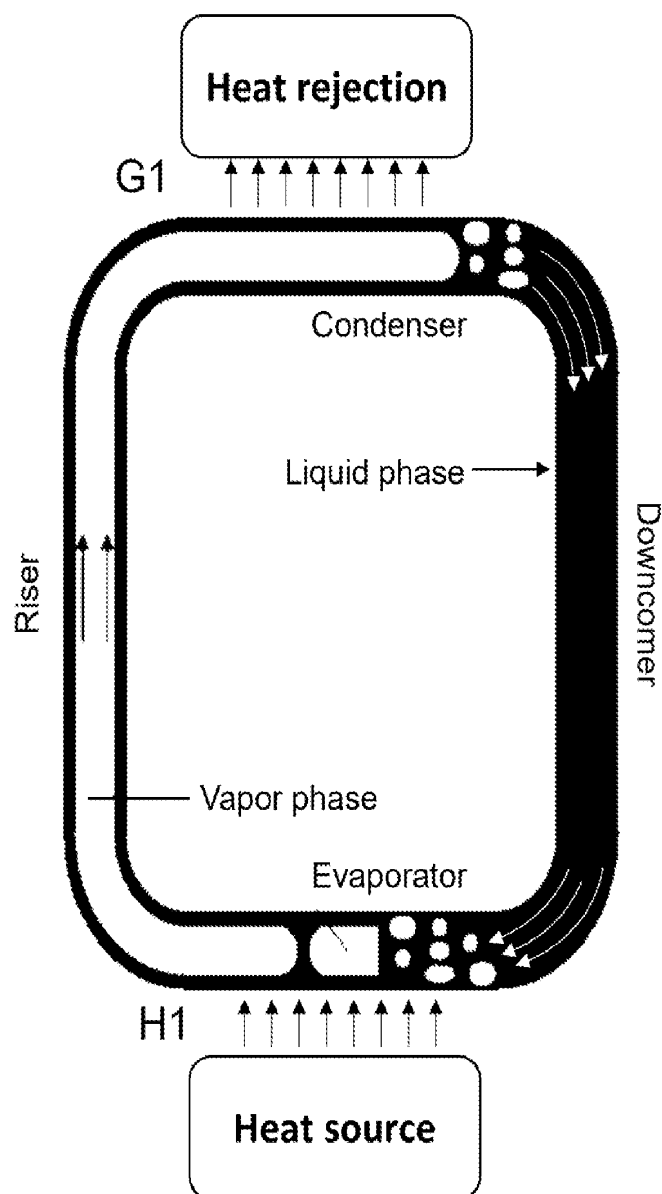


FIG. 1
(Prior Art)

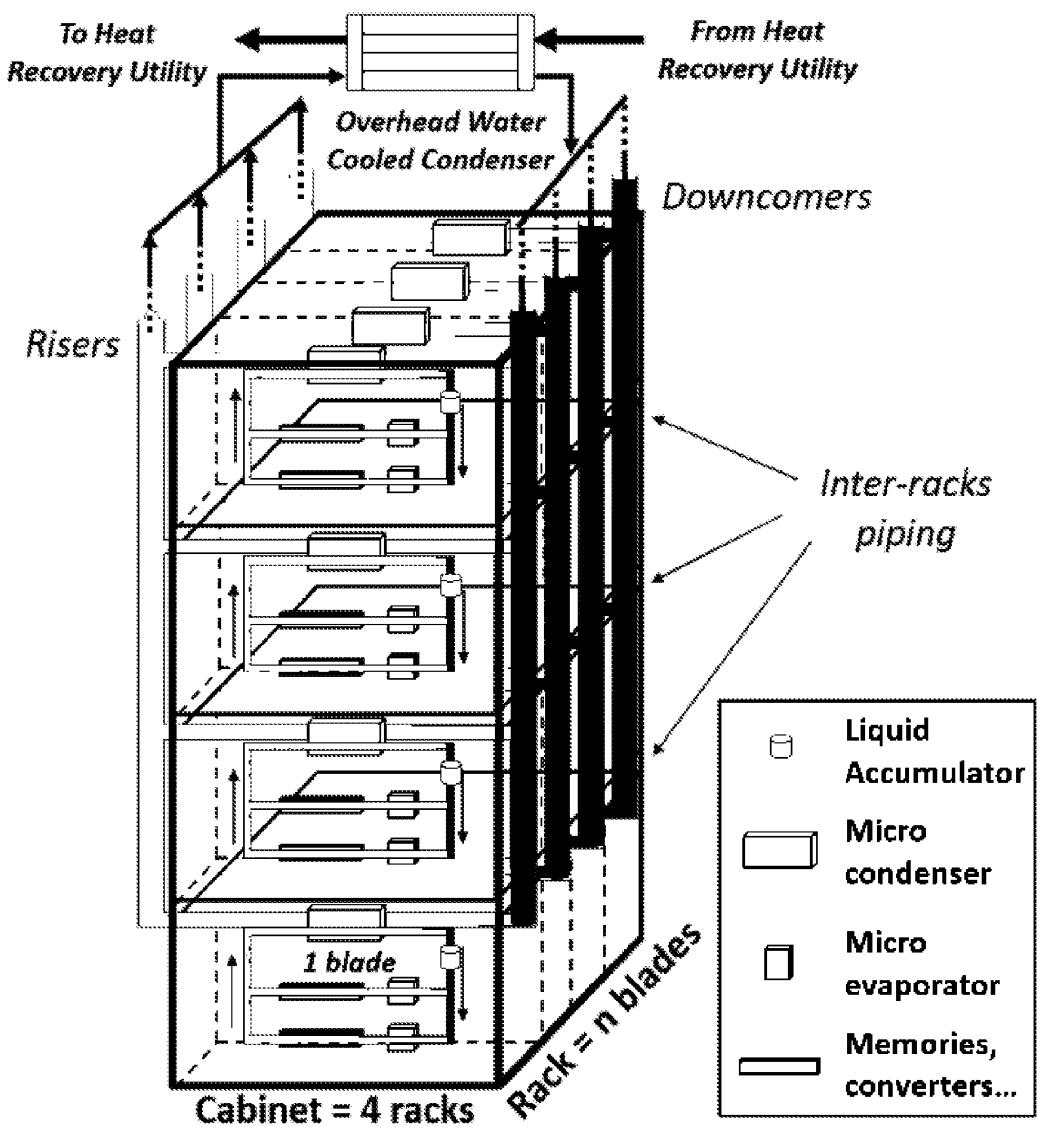


FIG. 2.
(Prior Art)

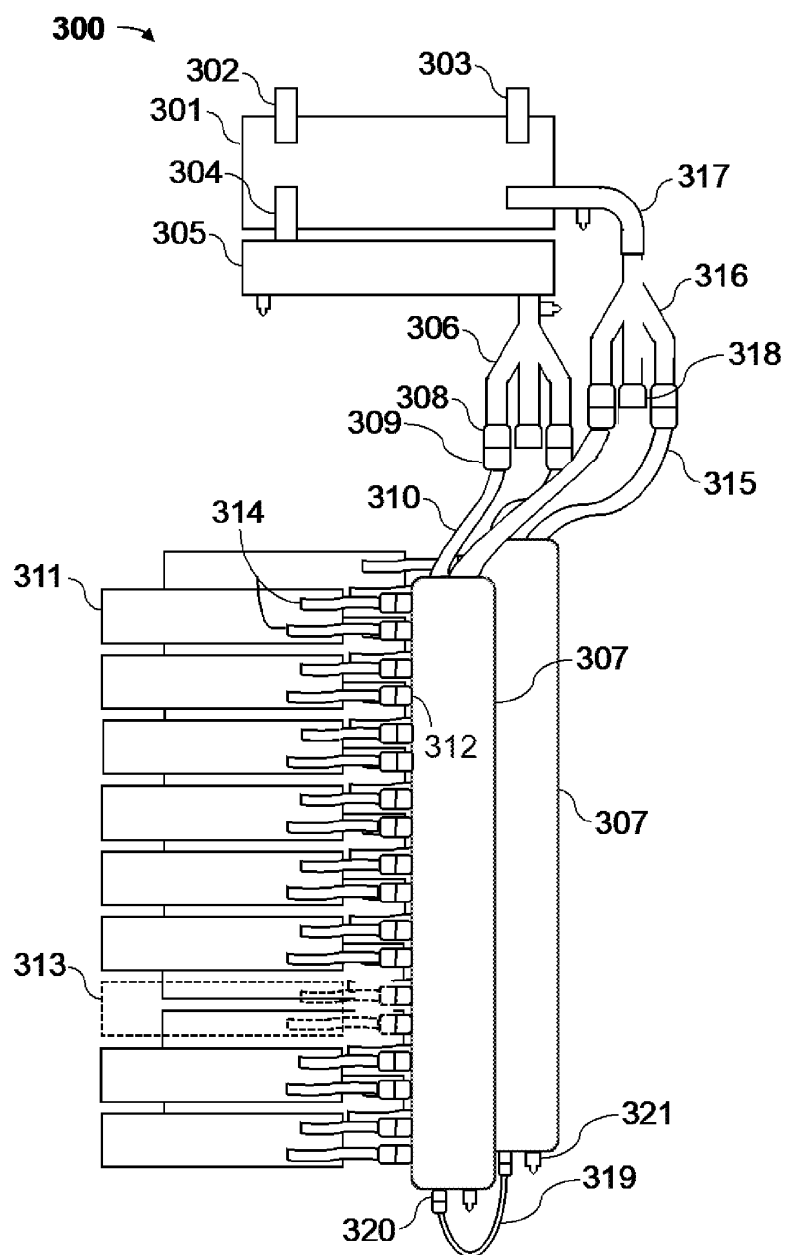


FIG. 3

(Schematic of the two-phase cooling system.)

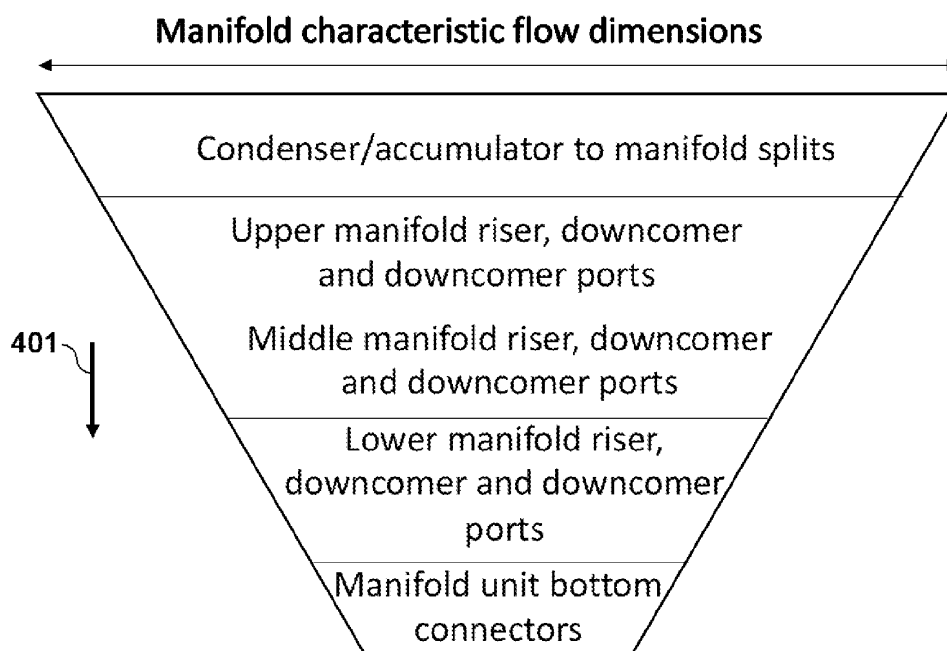


FIG. 4 (Representation of the manifold unit **307** characteristic flow dimensions)

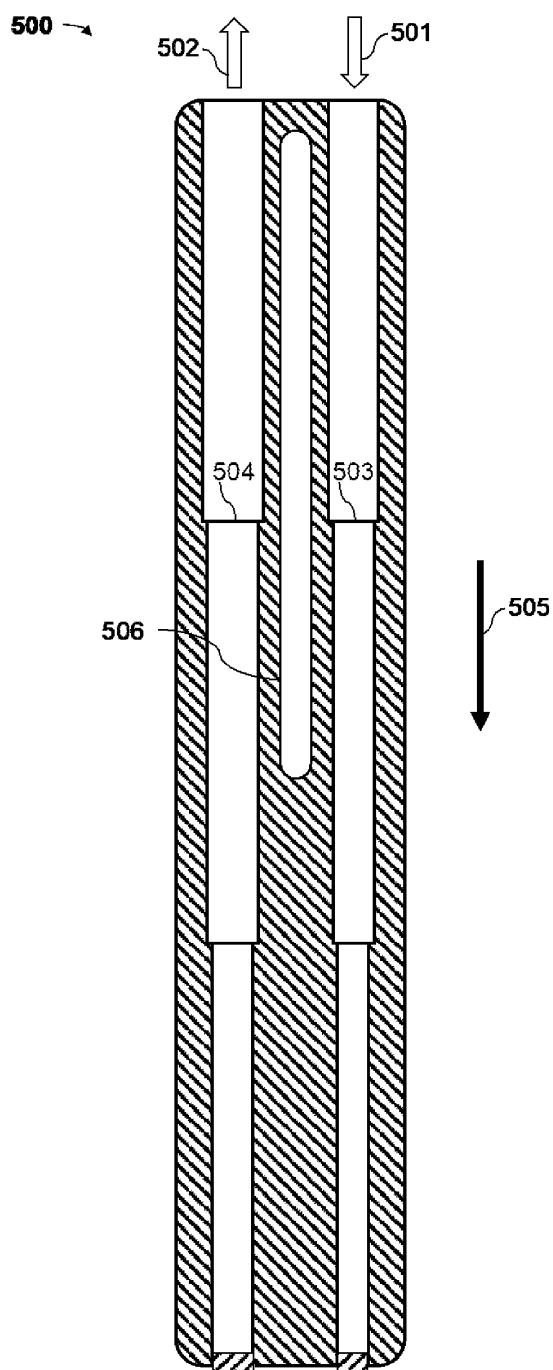


FIG. 5. (Schematic cross-section of manifold unit **307** implementation showing decreasing flow cross sectional area with decreasing elevation in the downcomer and riser and the introduction of an air gap feature to manage the flow of heat between the riser and downcomer).

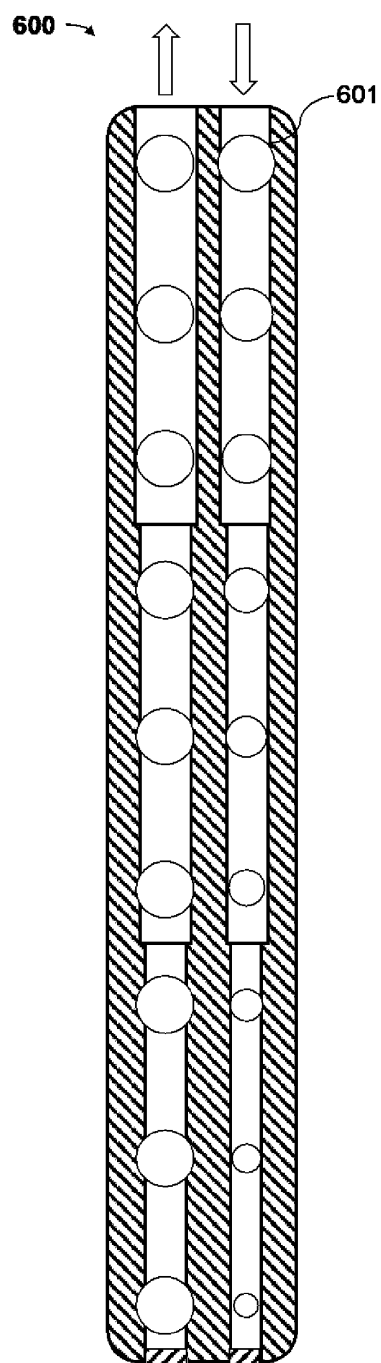


FIG 6. (Schematic cross-section of manifold (riser/downcomer))

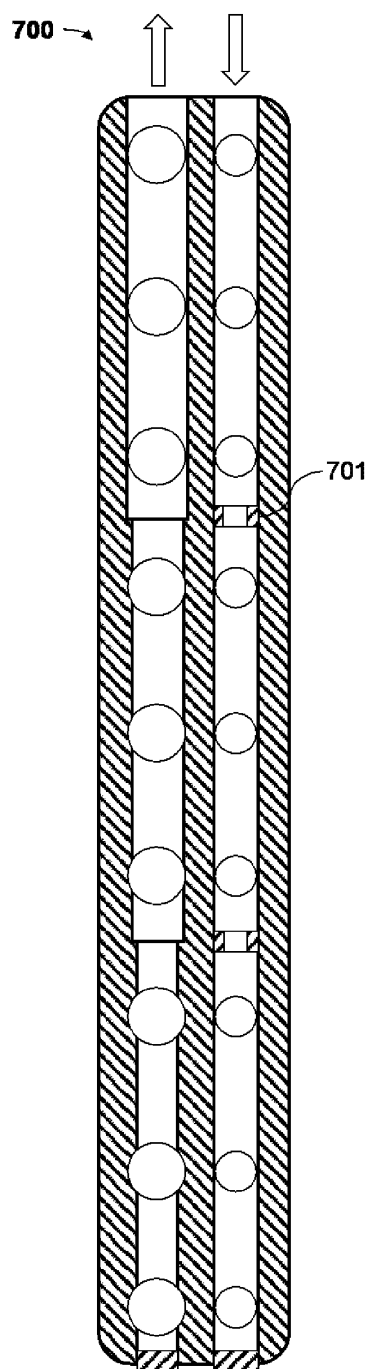


FIG 7. (Schematic cross-section of manifold (riser/downcomer) showing restrictions placed in the downcomer that manages flow distribution due to the increasing static head of the liquid in the downcomer).

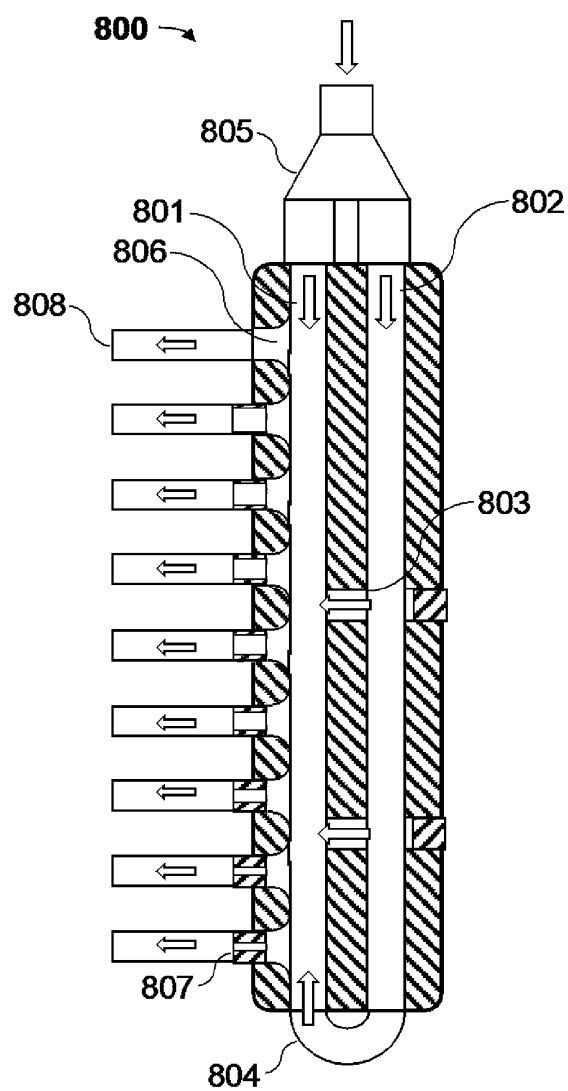


FIG.8A. (Schematic cross-section of a manifold showing a primary downcomer, a by-pass downcomer and the fluidic connectivity between the two).

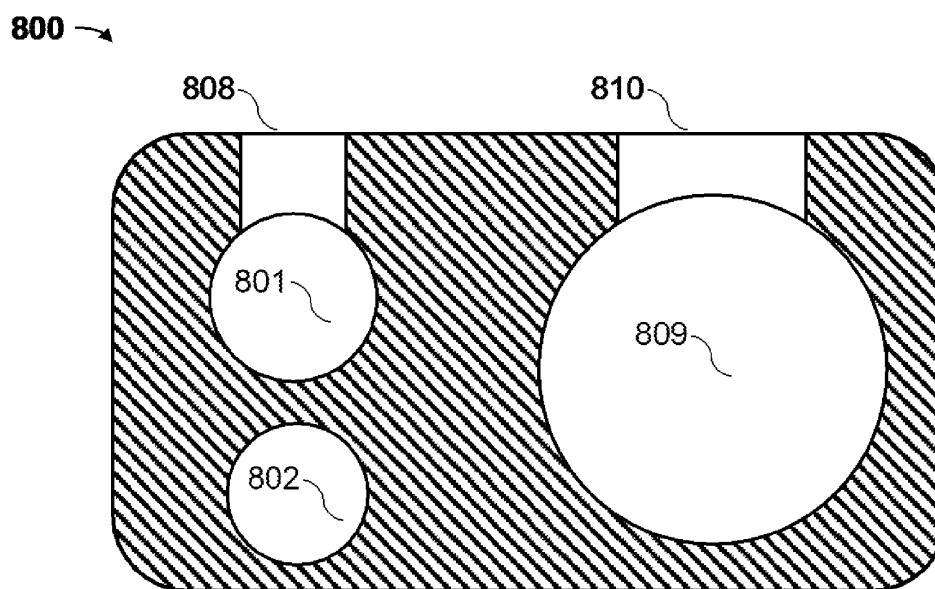


FIG. 8B (Cross-section schematic of a manifold in FIG. 9A showing the riser, primary downcomer and by-pass downcomer)

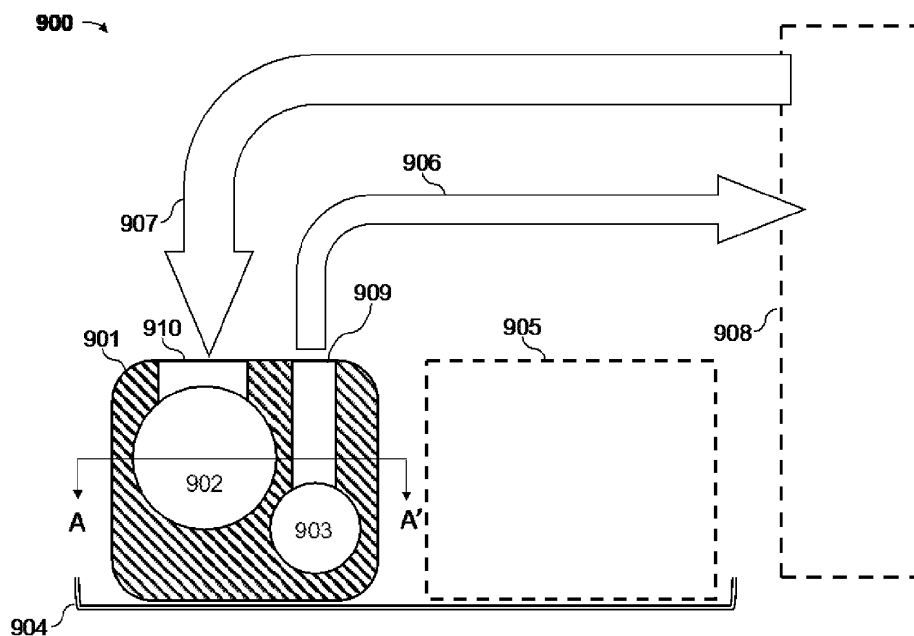


FIG. 9A. (Cross-section schematic of a manifold (view B-B' in FIG. 10B showing an asymmetric riser and downcomer configured in an offset fashion to minimize the width of the manifold when mounted on a rail to facilitate the placement of additional coolant or power distribution components or cable management.)

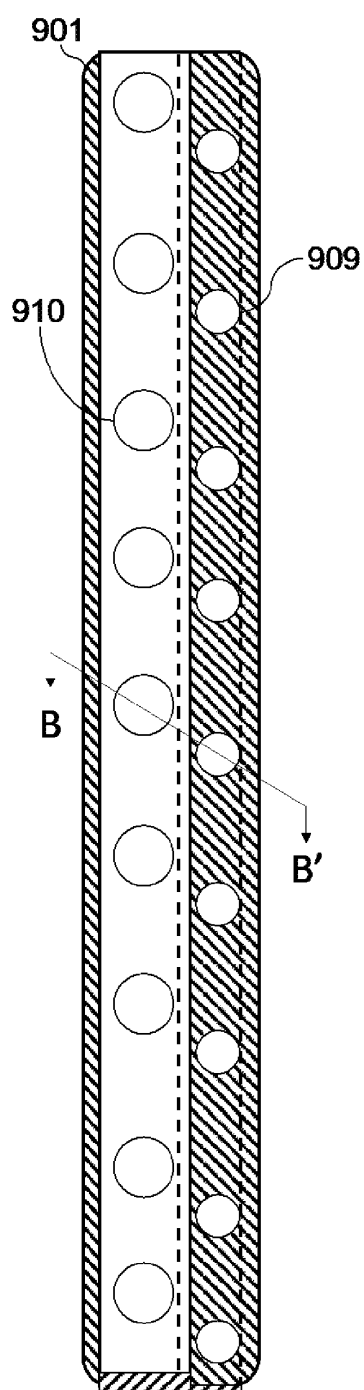


FIG. 9B (Cross-section schematic (A-A' view in FIG. 10A) of a manifold showing the vertically offset riser and downcomer ports to facilitate compact width of the manifold.)

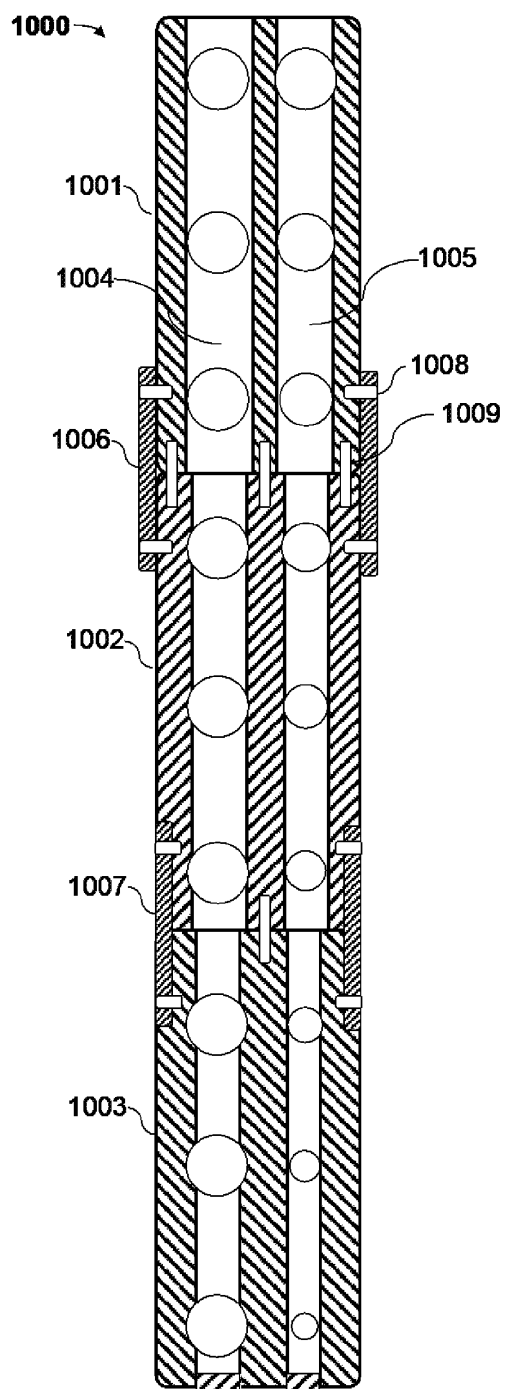


FIG. 10. (Cross-section schematic of a modular multi-section manifold showing a combination of manifold sections with differing flow dimensions.)

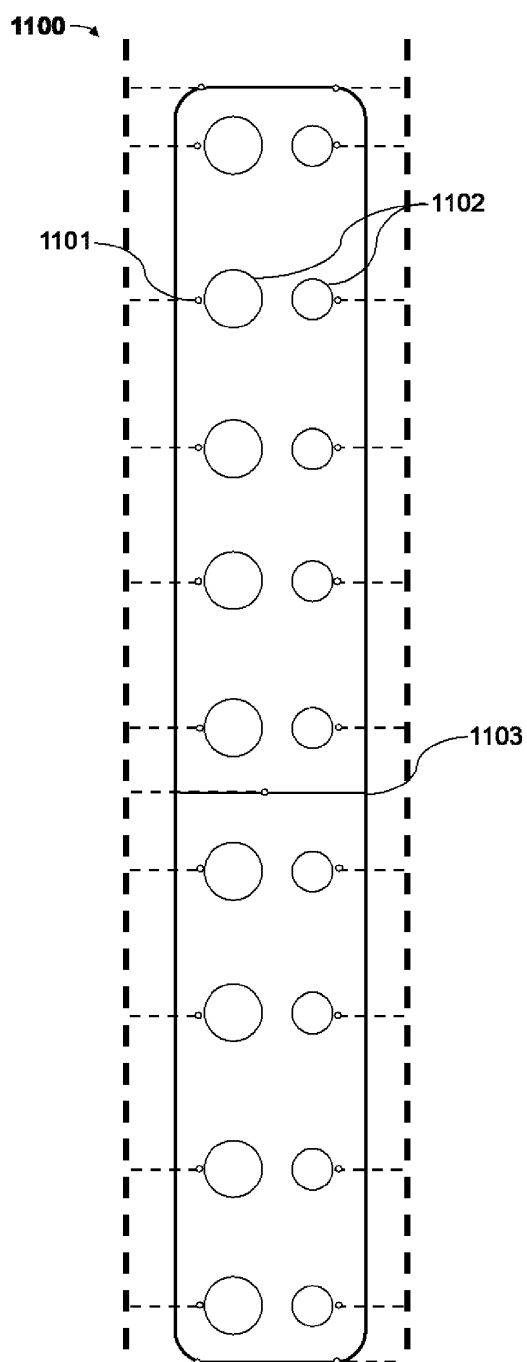


FIG. 11. (Temperature-sensor-network-based leak detection with probes located at potential weak points in the system including threaded fittings and at the joint between manifold sections in a modular deployment.)

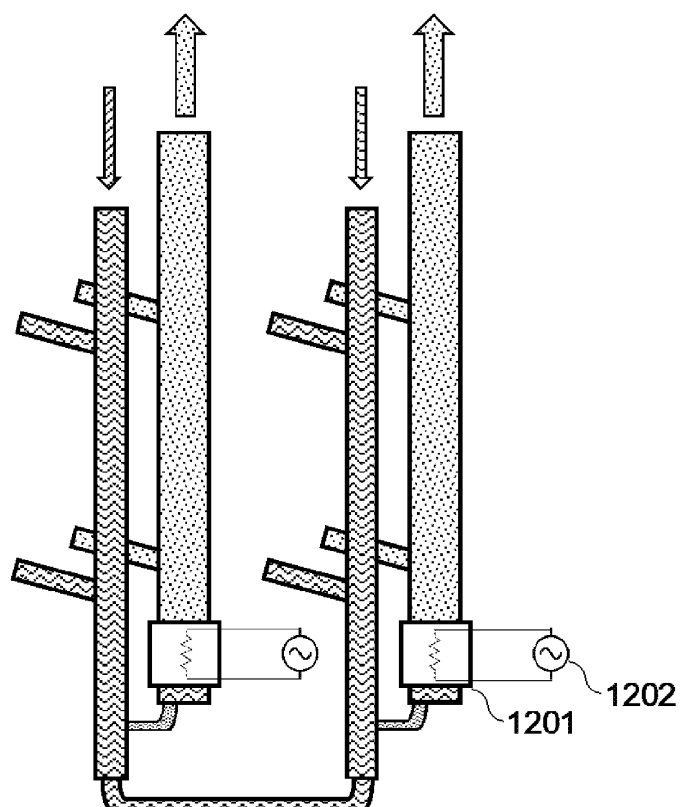


FIG. 12. (Schematic of a specific implementation where the control heaters are attached on the bottom of the manifold risers below the level of the bottommost server working fluid connections.)

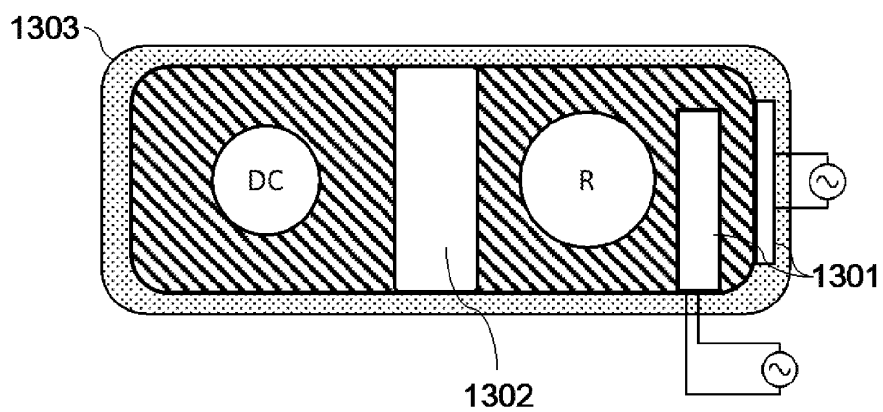


FIG 13. Schematic of a specific implementation where the control heaters are attached on the bottom of the manifold risers below the level of the bottommost server working fluid connections.