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(54) **CENTRALLY ANCHORED MEMS-BASED ACTIVE COOLING SYSTEMS**

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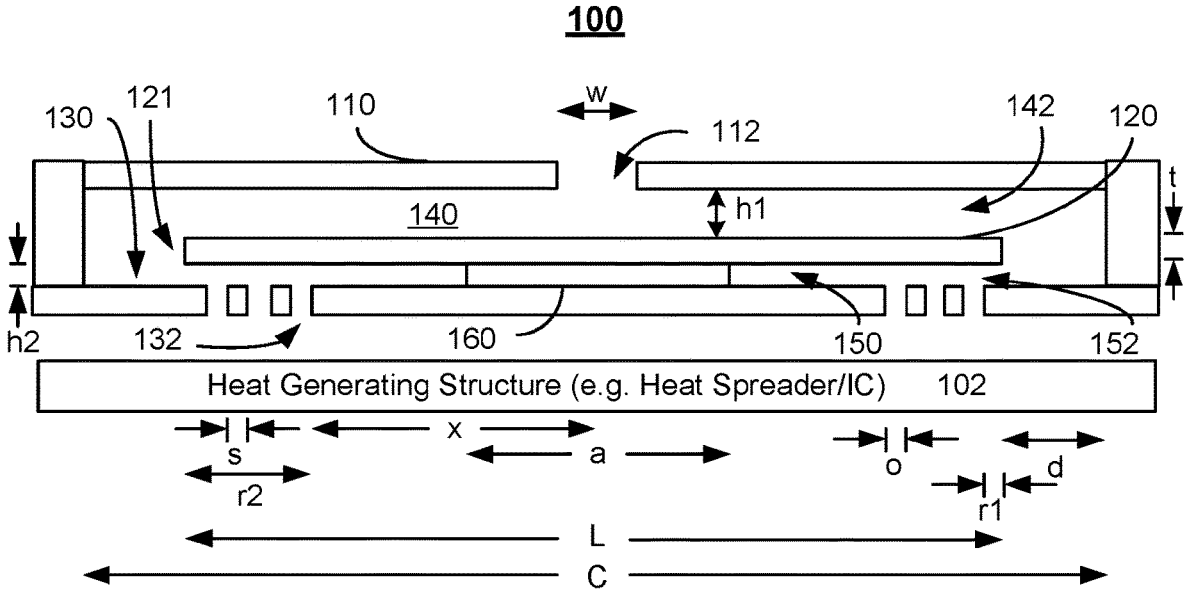
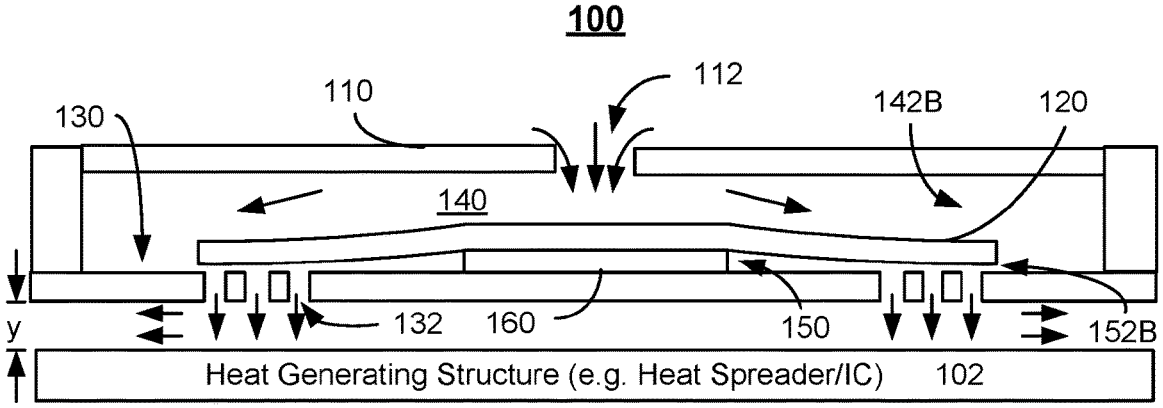
(57) **ABSTRACT**

A cooling system is described. The cooling system includes a cooling element having a central region and a perimeter. The cooling element is anchored at the central region. At least a portion of the perimeter is unpinned. The cooling element is in communication with a fluid. The cooling element is actuated to induce vibrational motion to drive the fluid toward a heat-generating structure.