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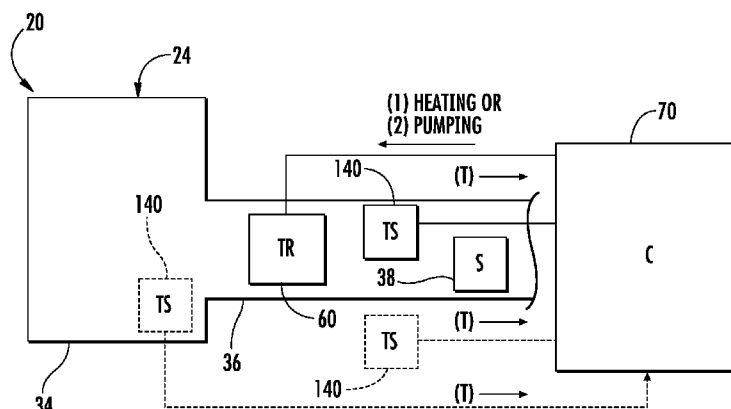


FIG. 3

(57) Abstract: Fluid may be pumped within a microfluidic channel across a cell/particle sensor using a microscopic resistor. The microscopic resistor may be selectively actuated so as to heat the fluid within the microfluidic channel to a temperature below a nucleation energy of the fluid so as to regulate a temperature of the fluid for at least when the cell/particle sensor is sensing the fluid.

