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(71) Applicants and

(72) Inventors: ROSEN, Clifford, N. [US/US]; 101 Harbor
Drive, Hampton, VA 23661-3301 (US). EAST, Willie, Joe
[US/US]; 700 Corporate Drive, Newport News, VA 23602
(US).(74) Agent: ROSEN, Clifford, N.; 101 Harbor Drive, Hamp-
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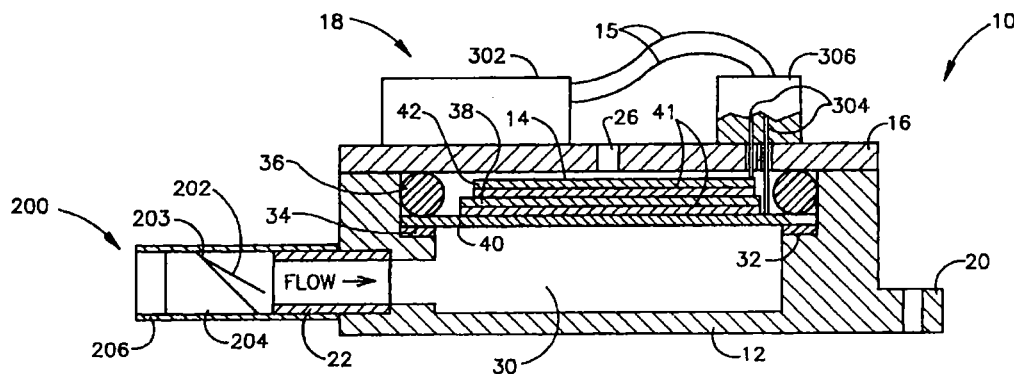
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(54) Title: PIEZOELECTRIC ACTUATOR AND PUMP USING SAME



(57) Abstract: A method of manufacturing piezoelectric actuators (14) is disclosed along with a miniature diaphragm pump (10) using the actuators. The object was an actuator which could be used in miniature diaphragm pumps and other applications and which would be smaller in size and simpler to manufacture than prior art actuators, yet would provide forces and displacements an order of magnitude higher than any previously known devices of similar size. The pump (10) incorporates the new actuator along with a novel one-way valve (200) and a small driver circuit (18). The pump is of direct application in the liquid cooling systems of small computers, and in other fluid systems.

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