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61/170,542 17 April 2009 (17.04.2009) US(71) Applicant (for all designated States except US): **SI-WARE SYSTEMS** [EG/US]; 555 California Street, San Francisco, CA 94104 (US).

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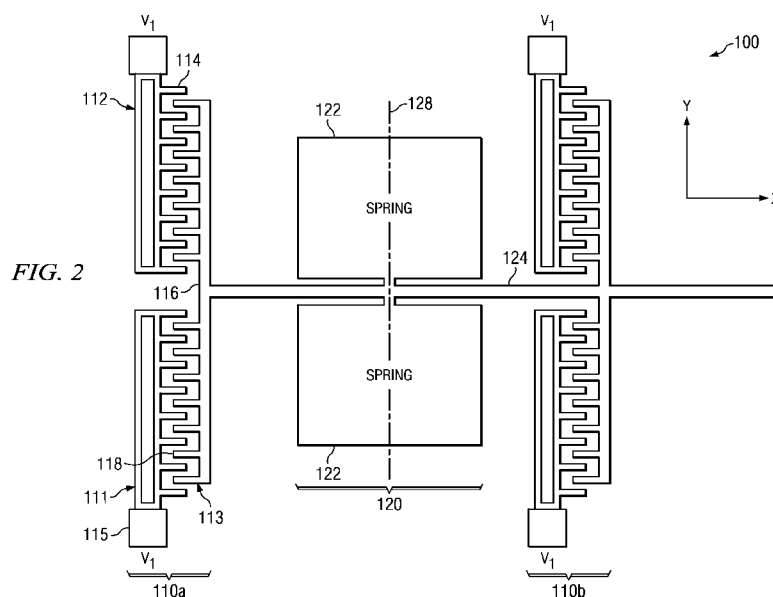
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(54) Title: LONG TRAVEL RANGE MEMS ACTUATOR



(57) Abstract: An electrostatic comb drive actuator for a MEMS device includes a flexure spring assembly and first and second comb drive assemblies, each coupled to the flexure spring assembly on opposing sides thereof. Each of the first and second comb drive assemblies includes fixed comb drive fingers and moveable comb drive fingers coupled to the flexure spring assembly and extending towards the fixed comb drive fingers. The comb drive fingers are divided equally between the first and second comb drive assemblies and placed symmetrically about a symmetry axis of the flexure spring assembly. When electrically energized, the moveable comb drive fingers of both the first and second comb drive assemblies simultaneously move towards the fixed comb drive fingers of the first and second comb drive assemblies.

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