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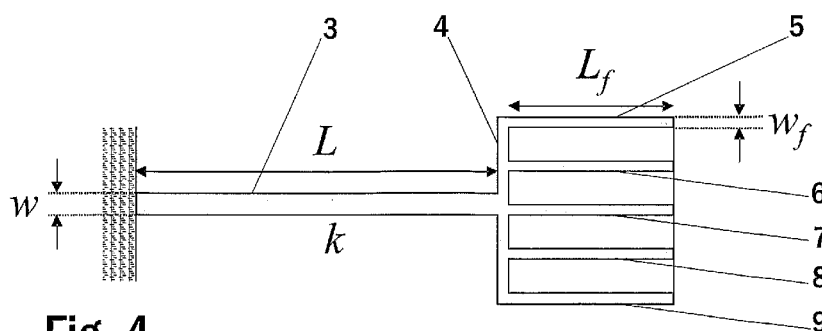


Fig. 4

(57) Abstract: The invention relates to design of micromechanical resonators and, more precisely, to the design of microelectromechanical systems (MEMS) resonators. The invention provides an improved design structure for a microelectromechanical systems (MEMS) resonator in which the width of the spring elements (3), (23-24), (27-30) is greater than the width of the electrode fingers (5-9), (25-26), (31-34), said widths specifically dimensioned so that the sensitivity of the resonant frequency change with respect to dimensional manufacturing variations Formula approaches zero. The improved structure is frequency robust to manufacturing variations and enables reliable frequency referencing with good performance, particularly in small size solutions.