

[54] ANGULAR RATE SENSOR APPARATUS

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Related U.S. Application Data

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[58] Field of Search ..... 73/505; 74/5 R; 310/25

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[57] ABSTRACT

An angular rate sensor structure displaying high immunity to noise and feedback vibration is disclosed. Mounting elements (15) support a pair of matched vibratory piezoelectric bender elements (10) in symmetrical opposed alignment about a nodal axis (20). Each vibratory element includes a drive element (10A) and sense element (10B) connected to and for operative movement with the drive element. Resonance drive element (30) moves the vibratory elements (10) in a first mode of movement, in direct opposition to one another about the nodal axis. The sensing members (10B) detect movement of the vibratory elements in directions other than in the first mode of movement resulting from application of external angular rate forces applied to the vibratory elements.

28 Claims, 8 Drawing Figures

