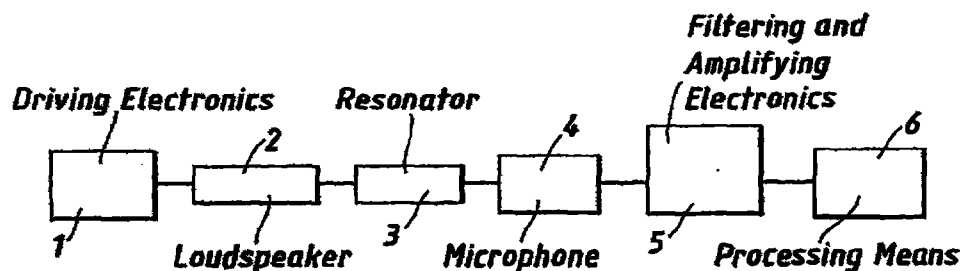




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(54) Title: METHOD AND APPARATUS FOR DETERMINING A FREQUENCY AT WHICH A RESONATOR RESONATES

**(57) Abstract**

Determining a frequency at which a resonator resonates comprising: driving an acoustic transmitter for applying an acoustic signal to the interior of a resonator by scanning through a first range of frequencies in substantially equidistant steps of a first size; detecting a signal from an acoustic receiver arranged to detect the amplitude of an acoustic signal within the resonator produced by driving the acoustic transmitter over the first range of frequencies; determining a frequency at which a maximum occurs in the detected signal for the first range of frequencies; driving the acoustic transmitter by scanning through a second range of frequencies containing the determined frequency from the first range of frequencies, the second range being smaller than the first range, and scanning through the second range of frequencies in substantially equidistant steps of a second size which is smaller than the steps of the first size; detecting a signal from the acoustic receiver produced by driving the acoustic transmitter over the second range of frequencies and determining a frequency at which a maximum occurs in the detected signal for the second range of frequencies.