US007562557B2

(12) **United States Patent**
Bennett et al.

(10) **Patent No.: US 7,562,557 B2**
(45) **Date of Patent: Jul. 21, 2009**

(54) **FLEXURAL RESONATOR SENSING DEVICE AND METHOD**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 192 days.

(21) Appl. No.: **11/111,165**

(22) Filed: **Apr. 20, 2005**

(65) **Prior Publication Data**

US 2005/0262944 A1 Dec. 1, 2005

Related U.S. Application Data

(60) Provisional application No. 60/564,562, filed on Apr. 21, 2004.

(51) **Int. Cl.**
G01N 29/036 (2006.01)
G01N 29/24 (2006.01)
H01L 41/047 (2006.01)

(52) **U.S. Cl.** ..... **73/24.06**; 73/32 A; 73/64.53; 73/579; 310/320; 310/321; 310/365; 310/366; 310/370

(58) **Field of Classification Search** 73/579
See application file for complete search history.

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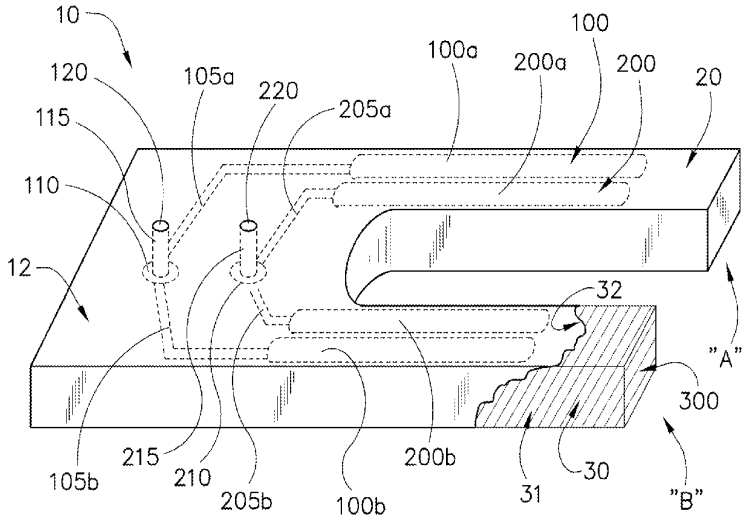
(57) **ABSTRACT**

A flexural resonator includes a piezoelectric material. At least a portion of an electrode having a first surface and a second surface is embedded in the piezoelectric material such that the piezoelectric material is disposed over and in electronic association with the first and second surfaces of the electrode.

29 Claims, 19 Drawing Sheets