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(71) Applicant: LITTON SYSTEM, INC. [US/US]; 21240 Burbank Boulevard, Woodland Hills, CA 91367-6675 (US).

(72) Inventor: STEWART, Robert, E.; 21847 Ybarra Road, Woodland Hills, CA 91364 (US).

(74) Agent: KRAMSKY, Elliott, N.; Suite 400, 5850 Canoga Avenue, Woodland Hills, CA 91367 (US).

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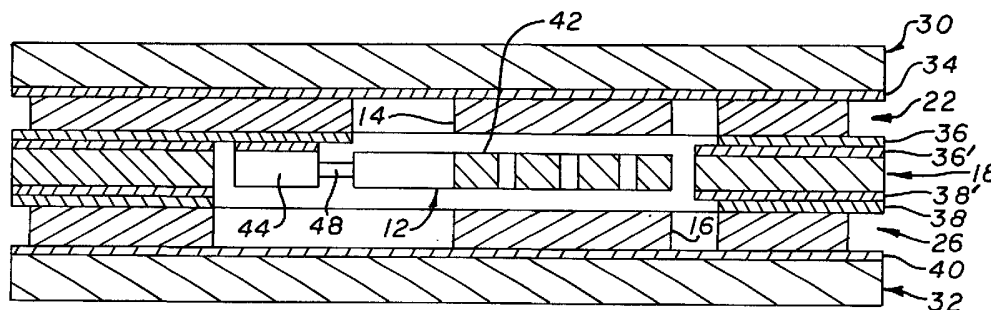
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(54) Title: MICRO-MECHANICAL INERTIAL SENSORS



(57) Abstract: Micromechanical inertial sensors are formed of a plurality of substantially-planar semiconductor wafers (18, 22, 26, 30, 32) interspersed with oxide layers (34, 36, 36', 38, 38', 40). The sensitive element (42) is located within an internal aperture (20) of a wafer (18) of the device and is separate therefrom. It is connected to an overlying oxide layer at pedestals (44, 46) that minimize contact area to thereby reduce stray capacitance. Portions of side edges of the various wafers (18, 22, 26, 30, 32) are successively recessed to create topside-exposed wafer sections that permit the grounding of all exposed portions of the device as operational potentials are applied to internal electrodes (14, 16) and sensitive elements.

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**INTERNATIONAL SEARCH REPORT**

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**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 G01P15/08 G01P15/125

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 623 824 A (LITEF GMBH) 9 November 1994 (1994-11-09)	1, 3, 5-12, 14, 16-22
Y	column 5, line 56 - column 8, line 7; claims 1-3; figures 1, 2	2, 4, 13, 15
Y	WO 94/01782 A (BOSCH GMBH ROBERT ; MAREK JIRI (DE); WILLMANN MARTIN (DE); BANTIEN FRA) 20 January 1994 (1994-01-20) page 7, paragraph 2 - page 8, paragraph 3; figures 6a, 6b, 7-9	2, 13
Y	WO 96/34255 A (KEARFOTT GUIDANCE & NAVIGATION) 31 October 1996 (1996-10-31) page 5, line 18 - page 6, line 23; figures 1A, 1B	4, 15
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Patent family members are listed in annex.

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

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International Application No  
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