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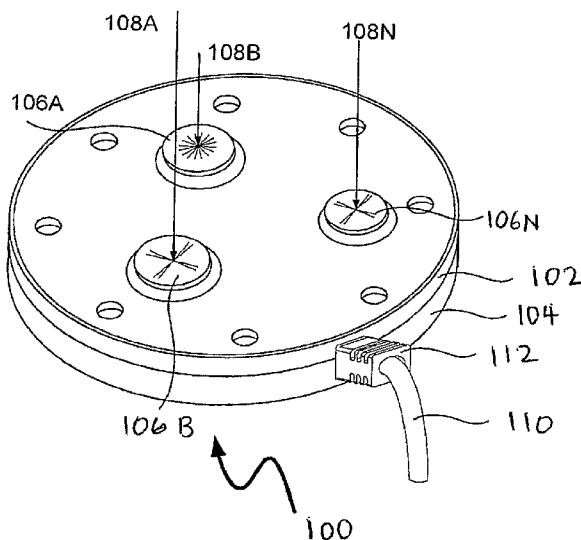
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(54) **Title:** MULTI-ZONE CAPACITIVE FORCE SENSING DEVICE AND METHOD



(57) **Abstract:** A multi-zone capacitive force sensing apparatus/method is disclosed. In one embodiment, an apparatus includes one or more capacitors each having an upper conductive surface and a lower conductive surface substantially parallel to the upper conductive surface, a housing with a top plate and a bottom plate to encompass the capacitors, and a sensor in the housing to generate a measurement based on a change in a distance between the upper conductive surface and the lower conductive surface of each of the capacitors when a contact zone of the top plate associated with the each of the plurality of capacitors is deflected by a force applied on the contact zone. The apparatus may also include a comparison module associated with the sensor to generate a signal indicating unevenness of a force applied on the top plate when there is any significant difference between measurements of the capacitors.

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INTERNATIONAL SEARCH REPORT

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A CLASSIFICATION OF SUBJECT MATTER

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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
USPC 73/718, 862 625, 862 626,

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST(USPT,PGPB,EPAB,JPAB), Google, Google Scholar

Search Terms Used capacitS, threshold, level, parallel, plateS, measures, sensorS, forceS, alarm, alert, balances, deflects, frequencS,

C DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X ----- Y	US 5,150,759 A (Borchard) 29 September 1992 (29 09 1992), Figs 1 and 2, col 3, ln 61 to col 4, ln 27, col 1, ln 25-46	1, 7, 9, 12, 13, 15, 17 ----- 2-6, 8, 10, 11, 14, 16, 18-20
Y	US 2006/0065973 A1 (Dallenbach et al) 30 March 2006 (30 03 2006), para[0008, 0025, 0028, 0046, 0048]	2-6, 10, 11, 14, 18-20
Y	US 6,087,926 A (Hajianpour) 11 July 2000 (11 07 2000), Abstract	8, 16

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