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(54) INTEGRATED MICRO-ELECTRO-MECHANICAL SYSTEMS (MEMS) SENSOR DEVICE

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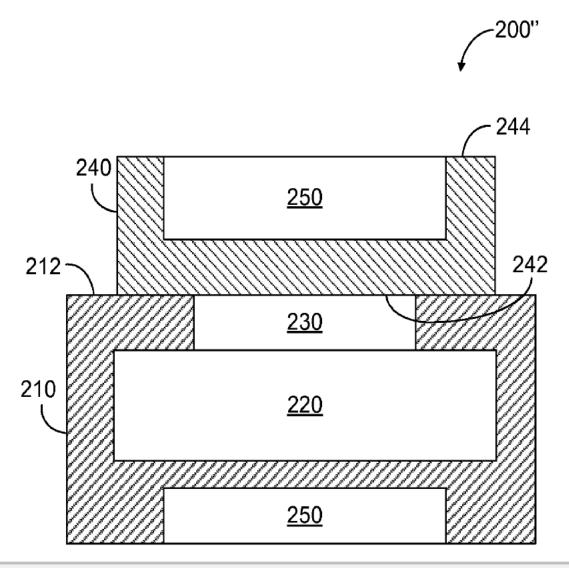
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257/E21.499

#### (57)ABSTRACT

An integrated sensor device is provided. The integrated sensor device comprises a first substrate including a surface portion and a second substrate coupled to the surface portion of the first substrate in a stacked configuration, wherein a cavity is defined between the first substrate and the second substrate. The integrated sensor device also comprises one or more micro-electro-mechanical systems (MEMS) sensors located at least partially in the first substrate, wherein the MEMS sensor communicates with the cavity. The integrated sensor device further comprises one or more additional sen-





PROCESSOR
110

DISPLAY
140

INTEGRAGED MEMS
AND MAGNETIC
SENSOR
130

NAVIGATION AND
ORIENTATION
ROUTINE
120

FIG. 1

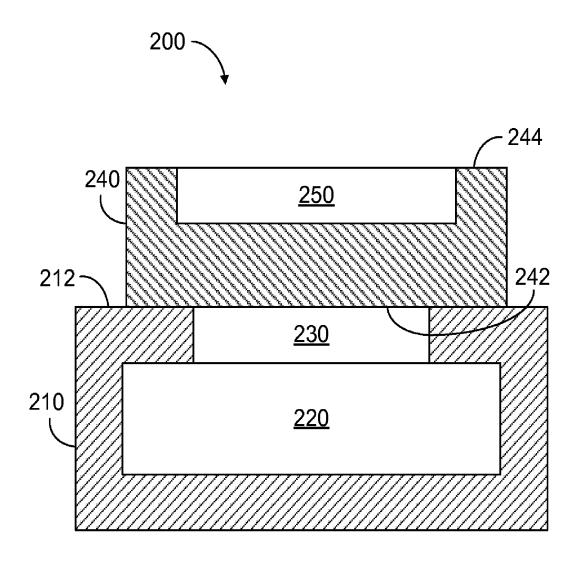


FIG. 2A

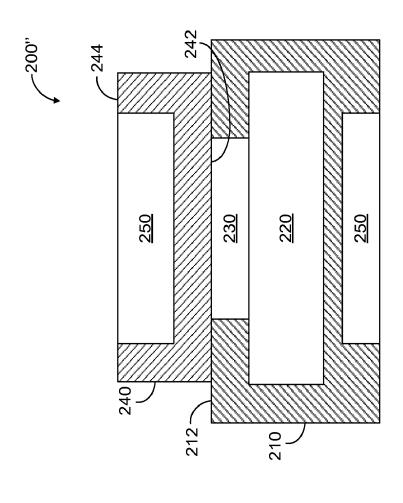


FIG. 2C

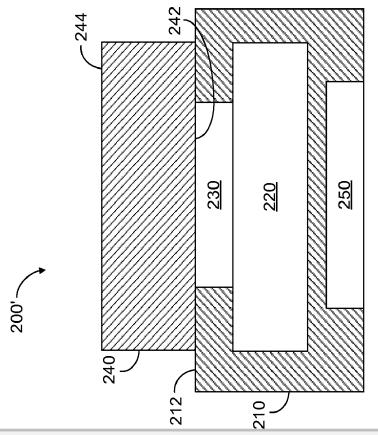


FIG. 2B

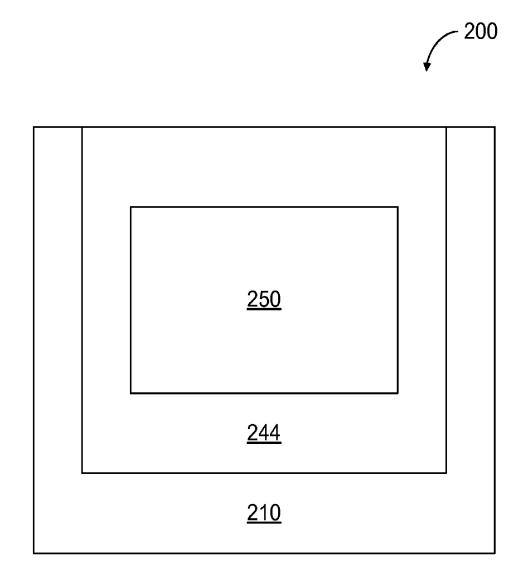


FIG. 2D

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