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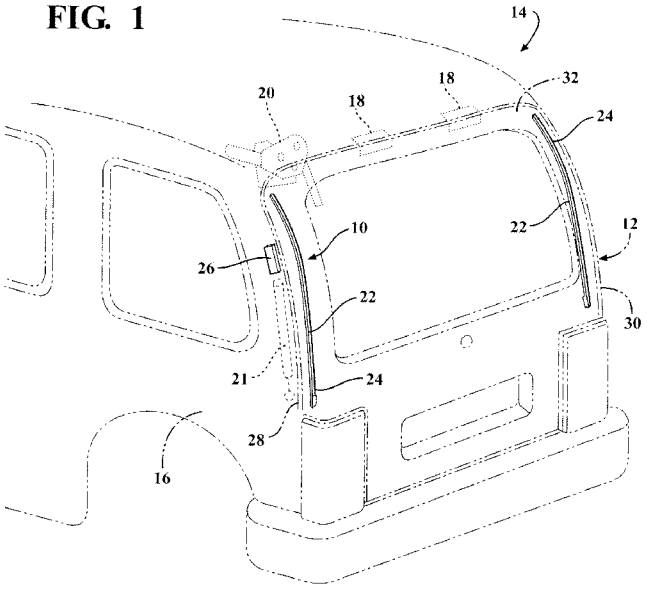
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*[Continued on next page]*

(54) Title: COMBINATION CAPACITIVE AND RESISTIVE OBSTACLE SENSOR

FIG. 1




(57) Abstract: An obstacle sensor for a closure panel of a vehicle includes an elongate non-conductive case which encloses a first, second, and third elongate conductive electrodes. The first and second electrodes are separated by a portion of the case, with a capacitance between the first and second electrodes changing when an obstacle approaches the first electrode. The changed capacitance of the obstacle sensor provides a proximity indication of the obstacle to the obstacle sensor. The second and third electrodes are separated by an air gap formed in the case, with a resistance between the second and third electrodes changing when the second and third electrodes come into contact upon compression of the case by the obstacle. The changed resistance of the obstacle sensor provides a contact indication of the obstacle with the obstacle sensor.

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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 database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)
Questel-Orbit (PlusPat, FamPat) (Keywords: sensor, obstacle, contact, capacit+, resist+, gate, door, proximity)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | | | Relevant to claim No. |
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| A | WO 2011038514 A1<br>*entire document* | PRIBISIC ET AL. | 07 April 2010 (07-04-2010) | 1 – 15 |
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☑ See patent family annex.

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