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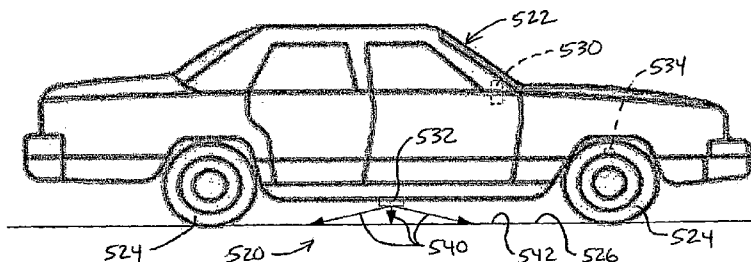
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3 July 2008

(54) Title: SYSTEMS AND METHODS FOR SIMULATING MOTION WITH SOUND



(57) Abstract: A movement warning system for notifying a proximal entity of the approach of a vehicle comprising a sensor system, a controlling mobile device, and a signal generator system. The sensor system generates motion data indicative of movement of the vehicle. The controlling mobile device generates at least one warning signal based on the motion data. The signal generator system generates at least one warning based on the at least one warning signal. The signal generator generates the warning such that the proximal entity perceives the warning.



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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/18505

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G08G 1/00 (2008.01)

USPC - 340/904

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)

USPC: 340/904

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC: 340/901-903 (see terms below)

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

PubWEST(PGPB,USPT,USOC,EPAB,JPAB), GOOGLE SCHOLAR

terms: moving or motion or movement, vehicle or car or automobile, sensor or detect, low noise or quiet, warning or alert or alarm, laser, wheel, disk, axle, magnet, poles or polarities, accelerometer, cellular or cell or mobile phone, remote control, sound or audio.

## 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 2005/0175186 A1 (Yasushi et al.) 11 August 2005 (11.08.2005), fig. 1 and 5, [0034]-[0094] and [0111]-[0127].	1-2, 4-5, 10-18 ----- 3, 6-9, 19-24
Y	US 2006/0085635 A1 (Park) 20 April 2006 (20.04.2006), [0103].	3
Y	US 5,736,923 A (Saab) 07 April 1998 (07.04.1998), fig.1, col 3, ln 23 - col 4, ln 52.	6-7
Y	US 6,416,020 B1 (Gronskov) 09 July 2002 (09.07.2002), fig. 1, col 3, ln 34-58.	8 and 22-24
Y	US 3,916,234 A (Stigall et al.) 28 October 1975 (28.10.1975), fig. 1 and 4, col 2, ln 45 - col 5, ln 68.	9 and 19-21

 Further documents are listed in the continuation of Box C.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

16 March 2008 (16.03.2008)

Date of mailing of the international search report

**10 APR 2008**

Name and mailing address of the ISA/US

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/18505

**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

- Group I: Claims 1-24, movement warning system
- Group II: Claims 25-27, magnetic field sensor
- Group III: Claims 28-30, laser sensor

The Group I claims, Claims 1-24 have a special technical feature of a movement warning system comprising a sensor, a controller, and a signal generator. The Group II claims, Claims 25-27, have a special technical feature of a motion sensor comprising a magnet and a magnetic field sensor. The Group III claims, Claims 28-30, have a special technical feature of a motion sensor comprising a laser and a laser sensor. Groups I, II, and III do not share a special technical feature, since Group I does not recite relevant structure for its sensor and since the sensors of Groups II and III share no common technical features.

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:  
Claims 1-24
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

- Remark on Protest**
- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
  - The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
  - No protest accompanied the payment of additional search fees.