



- (51) **International Patent Classification:**
B60R 21/015 (2006.01) B60R 21/01 (2006.01)
B60W 50/14 (2012.01)
- (21) **International Application Number:**
PCT/US2012/024529
- (22) **International Filing Date:**
9 February 2012 (09.02.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/441,199 9 February 2011 (09.02.2011) US
61/504,113 1 July 2011 (01.07.2011) US
61/538,647 23 September 2011 (23.09.2011) US
- (71) **Applicant (for all designated States except US):** CARS-N-KIDS LLC [US/US]; 1701 Macklind Avenue, St. Louis, Missouri 63110 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** SCHOENBERG, Gregory B [US/US]; 13300 West Watson Road, St. Louis, Missouri 63127 (US). STEFFEN, Robert S. [US/US]; 326 Salem, Four Seasons, Missouri 65049 (US).
- (74) **Agents:** DAMMAN, Kirk, A. et al.; Lewis, Rice & Fingersh, L.G, 600 Washington Avenue, Suite 2500, Box IP Department, St. Louis, Missouri 63101 (US).

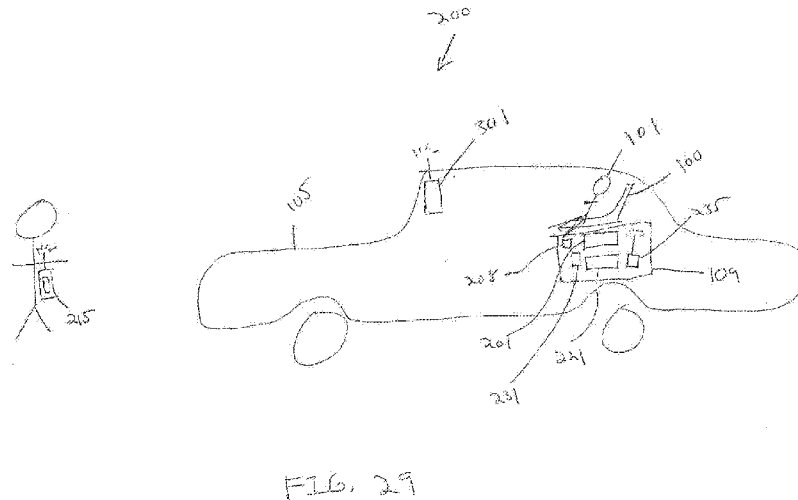
- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) **Date of publication of the international search report:**
6 December 2012

(54) **Title:** SYSTEMS AND METHODS FOR INDICATING THE PRESENCE OF A CHILD IN A VEHICLE



(57) **Abstract:** Systems and methods which provide for an alarm or notification that a child is in a car seat. The systems generally determine if a child is in the seat and that the seat, and therefore the vehicle, is not in motion. Upon detecting both situations, the notification or alarm is activated. The system will generally provide for an alarm to a smartphone or other remote notification device to improve the likelihood that the alarm will be received.

WO 2012/109472 A3

A. CLASSIFICATION OF SUBJECT MATTER***B60R 21/015(2006.01)i, B60W 50/14(2012.01)i, B60R 21/01(2006.01)i***

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)

B60R 21/015; B60Q 5/00; G08B 21/00; B60N 2/26; B60Q 1/00; A47D 1/10; G08B 23/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: child, seat, sensor, vehicle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2009-079477 A2 (CARS `N' KIDS INC. et al.) 25 June 2009 See paragraphs [027], [033], [034], [053] and figs. 1-3.	1-22
Y	US 7830270 B1 (PHILBERT, MEDALINE) 09 November 2010 See column 9, lines 10-25, column 10, lines 6-23 and fig. 7.	1-22
A	US 7325870 B2 (LAWRENCE, RODNEY A., et al.) 05 February 2008 See column 3, lines 20-67 and fig. 1.	1-22
A	US 7567181 B1 (DAVISON, ZENOBIA F.) 28 July 2009 See column 4, lines 9-39 and figs. 1-4,6.	1-22

 Further documents are listed in the continuation of Box C. See patent family annex.

* 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 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

"&" document member of the same patent family

Date of the actual completion of the international search

05 OCTOBER 2012 (05.10.2012)

Date of mailing of the international search report

08 OCTOBER 2012 (08.10.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsu-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

LIM, Hae Young

Telephone No. 82-42-481-5518



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/024529

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2009-079477 A2	25.06.2009	CA 2744541 A1 US 2009-0212955 A1 US 8212665 B2 WO 2009-079477 A3 WO 2009-079477 A3	25.06.2009 27.08.2009 03.07.2012 20.08.2009 25.06.2009
US 7830270 B1	09.11.2010	None	
US 7325870 B2	05.02.2008	US 2006-049929 A1	09.03.2006
US 7567181 B1	28.07.2009	None	