

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 May 2006 (26.05.2006)

PCT

(10) International Publication Number
WO 2006/055210 A3

(51) International Patent Classification:

E01F 13/00 (2006.01) *E01F 13/06* (2006.01)
E01F 13/02 (2006.01) *E01F 13/12* (2006.01)
E01F 13/04 (2006.01)

(21) International Application Number:

PCT/US2005/038875

(22) International Filing Date: 27 October 2005 (27.10.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10/991,030 17 November 2004 (17.11.2004) US

(71) Applicant (for all designated States except US): **UNIVERSAL SAFETY RESPONSE, INC.** [US/US]; Hinden & Sievers, LLP, Suite 3115, 350 Fifth Avenue, New York, NY 10118 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GELFAND, Matthew** [US/US]; Suite 3115, 350 Fifth Avenue, New York, NY 10118 (US). **HUGGHINS, Joel, F.** [US/US]; 3508 Carter Creek Parkway, Bryan, TX 77802 (US).

(74) Agent: **BRUNO, Frank, A.**; Milbank, Tweed, Hadley & McCloy LLP, 1 Chase Manhattan Plaza, New York, NY 10005-1413 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

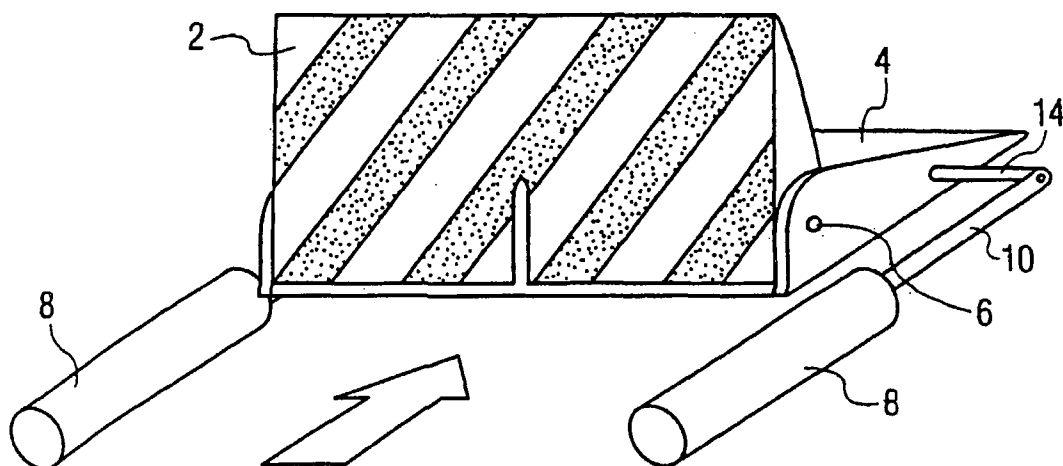
— with international search report

(88) Date of publication of the international search report:

22 February 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RETRACTABLE ENERGY ABSORBING SYSTEM



(57) Abstract: An energy absorbing system includes a supporting member (4), a barrier (2) mechanically connected to the supporting member. The barrier being pivotable between a horizontal position and a predetermined angle. An energy absorber (8) mechanically coupled to the supporting member such that impact energy is absorbed when the barrier is impacted by a vehicle (20), thereby causing the supporting member to travel from a first position to a second position.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/38875

A. CLASSIFICATION OF SUBJECT MATTER

IPC: E01F 13/00(2006.01),13/02(2006.01),13/04(2006.01),13/06(2006.01),13/12(2006.01)

USPC: 404/6,9

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)

U.S. : 404/6, 9

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

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

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 2,440,574 A (COTTON) 27 April 1948, in its entirety	1-3, 5, 6, 11, 12, 14, 15, 28-30, 39, 42, 43 ----- 40
X --- Y	US 2,675,197 A (HOSPERS) 13 April 1954, in its entirety	1, 3, 5, 6, 8, 10, 12-15, 19-21, 28-31, 38, 40, 43 ----- 40
X --- Y	US 3,838,391 A (MINTZ) 24 September 1974, in its entirety.	1, 3-8, 10, 14, 19, 21, 22, 25, 28-31, 37-39, 41-43 ----- 40



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	"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
"E"	earlier application or patent published on or after the international filing date	"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
"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)	"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
"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	"&" document member of the same patent family

Date of the actual completion of the international search

20 August 2006 (20.08.2006)

Date of mailing of the international search report

23 OCT 2006

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

Raymond W. Addie

Telephone No. 571 272-6576

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/38875

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 4,627,763 A (ROEMER ET AL.) 9 December 1986, in its entirety	1-6, 8, 10, 12-14, 18, 25, 28-31, 36-39, 41- 43 ----- 40
X --- Y	US 5,228,237 A (NASATKA) 20 July 1993, in its entirety, 2 embodiments.	1-9, 11-14, 18-21, 25, 28, 29, 35-43 ----- 22,
Y	US 4,828,424 A (CRISP, Sr.) 9 May 1989, in its entirety.	1, 8-10, 14, 18, 28-33, 35-41, 43
Y	US 4,775,261 A (FLADUNG) 4 October 1988, in its entirety	1-15, 18,
X	US 6,554,529 B2 (STEPHENS et al.) 29 April 2003, Figs. 1-3, 5, 20a-20d; Cols. 2-7.	1, 19-21, 25, 42
Y	US 6,536,985 B2 (ALBRITTON) 25 March 2003, in its entirety	19,20, 23-27, 42
Y	US 3,880,404 A (FITCH) 29 April 1975, Fig. 1; col. 3.	32
A	US 7,040,836 B2 (ROGERS et al.) 9 May 2006 Figs. 1-3; cols. 2-4.	