## (19) World Intellectual Property Organization

International Bureau





#### (43) International Publication Date 4 January 2007 (04.01.2007)

PCT

# (10) International Publication Number WO 2007/001885 A3

(51) International Patent Classification: H01Q 1/32 (2006.01) B60Q 1/26 (2006.01)

(21) International Application Number:

PCT/US2006/023359

(22) International Filing Date: 14 June 2006 (14.06.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/168,118 27 June 2005 (27.06.2005) US

- (71) Applicant (for all designated States except US): K.W. MUTH COMPANY, INC. [US/US]; Box 418, Sheboygan, WI 53082 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): TODD, Daniel, R. [US/US]; 417 Clement Avenue, Sheboygan, WI 53083 (US). MATHIEU, Daniel, J. [US/US]; 161 Summer Street, Shelboygan Falls, WI 53085 (US). BUKOSKY, Allen, A. [US/US]; 3710 S. 13th Street, Sheboygan, WI 53081 (US).
- (74) Agents: GRIGEL, George, G. et al.; WELLS ST. JOHN P.S., 601 W. First Avenue, Suite 1300, Spokane, WA 99201 (US).

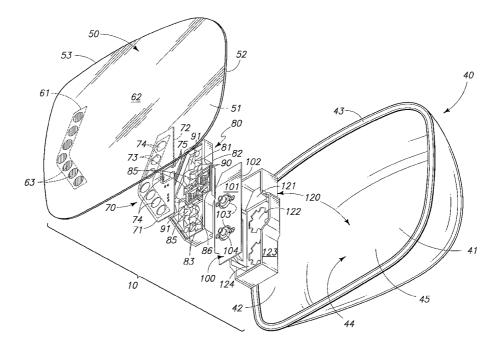
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, 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, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, 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, 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).

#### Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

[Continued on next page]

#### (54) Title: ELECTROMAGNETIC RADIATION ASSEMBLY



(57) Abstract: An electromagnetic radiation assembly (10) is described and which includes a reflector (80) having discrete first and second surfaces (81, 82); a first electromagnetic radiation emitter positioned adjacent to the first surface; and a second electromagnetic radiation emitter positioned adjacent to the second surface, and wherein, when energized, the first and second electromagnetic radiation emitters emit visibly discernible electromagnetic radiation which is reflector by the reflector in a fashion so as to be visible at locations forward of the surface.

# WO 2007/001885 A3



Published:

with international search report

 $\textbf{(88)} \ \ \textbf{Date of publication of the international search report:}$ 

30 April 2009

### INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/23359

A. CLASSIFICATION OF SUBJECT MATTER						
IPC: <b>H01Q 1/32(</b> 2006.01); <b>B60Q 1/26(</b> 2006.01)						
USPC: 343/712,713;340/475;362/492,494						
According to	International Patent Classification (IPC) or to both nat	ional classi	fication and IPC			
B. FIELDS SEARCHED						
Minimum documentation searched (classification system followed by classification symbols) U.S.: 343/712, 713; 340/475; 362/492,494						
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)						
C. DOCUMENTS CONSIDERED TO BE RELEVANT						
Category *	Citation of document, with indication, where a	ppropriate,	of the relevant passages	Relevant to claim No.		
A	US 6,918,685 B2 (Bukosky et al) 19 July 2005 (19/0	7/2005) wh	ole document.	1-10		
Α	US 7,008,091 B2 (Mathieu et al) 07 March 2006 (07/03/2006), whole document.		1-10			
Α	US 7,104,676 B2 (Bukosky et al) 12 September 2006 (12/09/2006), Figs. 3-10; cols. 4-6.		1-10			
Α	US 7,241,037 B2 (Mathieu et al) 10 July 2007 (10/07/2007), Figs. 8-13; cols. 7-10.			1-10		
				1		
Further	documents are listed in the continuation of Box C.		See patent family annex.			
Special categories of cited documents:		"T"	later document published after the intern date and not in conflict with the applica			
	defining the general state of the art which is not considered to be of relevance		principle or theory underlying the inven	tion		
"E" earlier ap	plication or patent published on or after the international filing date	"X"	document of particular relevance; the cl considered novel or cannot be considered 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)  "O" document referring to an oral disclosure, use, exhibition or other means		"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 document obvious to a person skilled in the art		, such combination being		
"P" document published prior to the international filing date but later than the priority date claimed		"&"	document member of the same patent fa	umily		
Date of the actual completion of the international search			ailing of the international searc	h report		
26 February 2008 (26.02.2008)			MAR ZUUB			
Name and mailing address of the ISA/US  Mail Stop PCT, Attn: ISA/US			Trinh Vo Dink Yplew lw Por			
Commissioner for Patents P.O. Box 1450						
7.0. Box 1430 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Telephone No. (571) 272-1821				

Form PCT/ISA/210 (second sheet) (April 2007)

## INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/23359

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)				
	onal Searching Authority found multiple inventions in this international application, as follows: ontinuation Sheet			
1.	As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.  As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.  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.:			
4. Remark on l	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.: 1-10  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.			

Form PCT/ISA/210 (continuation of first sheet(2)) (April 2007)

	International application No.	
INTERNATIONAL SEARCH REPORT	PCT/US06/23359	
BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING This application contains claims directed to more than one species of the generic invention.	NG	
invention because they are not so linked as to form a single general inventive concept	under PCT Rule 13.1.	
In order for more than one species to be examined, the appropriate additional examin	ation fees must be paid. The species are as follows:	
Species 1: Claims 1-10.	•	
Species 2: Claims 11-19.		
Species 3: Claims 20-24.		
Species 2: Claims 25-29.		

Form PCT/ISA/210 (extra sheet) (April 2007)