



- (51) International Patent Classification:  
G09F 19/00 (2006.01) G01J 5/02 (2006.01)
- (21) International Application Number:  
PCT/US2012/040387
- (22) International Filing Date:  
1 June 2012 (01.06.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
61/491,997 1 June 2011 (01.06.2011) US
- (72) Inventor; and
- (71) Applicant : MINERA, Eduardo [US/US]; 373 92nd Street, Apt# B27, Brooklyn, NY 11209 (US).
- (74) Agent: NESBITT, Daniel, F.; Hasse & Nesbitt LLC, 8837 Chapel Square Drive, Suite C, Cincinnati, OH 45249 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

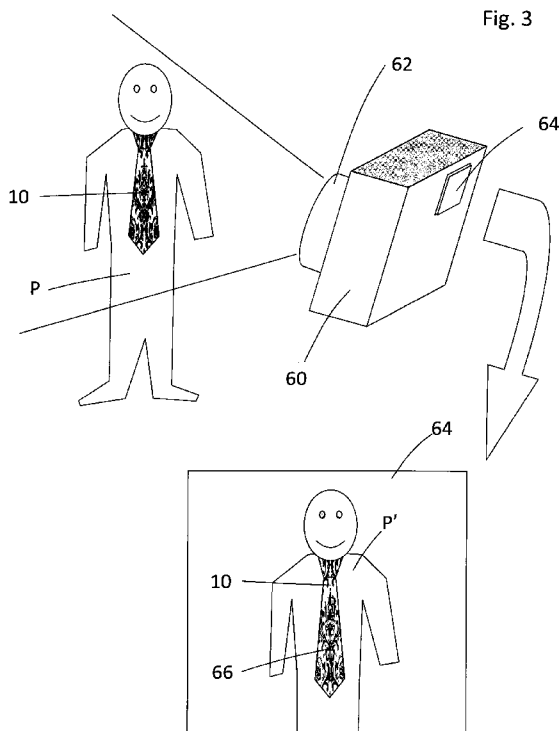
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, 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, 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))

[Continued on next page]

(54) Title: ARTICLE OF APPAREL AND METHOD FOR DISPLAYING A MESSAGE



(57) Abstract: An article of apparel such as a necktie, hat, cap, eyeglasses, or a pendant, that has battery- powered infrared (IR) light emitter(s) such as IR-emitting LEDs, in a pattern so that the light emitted when the IR emitters are energized is not visible to the naked eye, yet displays a message that can be electronically seen by an IR detecting and display device, such as a digital camera and smart phone. The arrangement of the IR emitters can form a pattern of a text character, a sign, a mark, an image, or other message, the selection of which can be controlled by a microprocessor.

WO 2012/167026 A3



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— *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:**  
24 January 2013

## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2012/040387****A. CLASSIFICATION OF SUBJECT MATTER****G09F 19/00(2006.01)i, G01J 5/02(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)

G09F 19/00; G08B 5/22; G08B 1/00; F21V 21/08; G09G 3/14; A61B 5/00

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) &amp; Keywords: infrared, apparel, visible, light

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6336730 B1 (HONG; KYUNG-SOO) 08 January 2002 See abstract, column 1, lines 14-60, fig. 1, claim 1	1-8, 13-16, 18-20
Y	US 05414405A A (HOGG; ROBIN I. T. et al.) 09 May 1995 See abstract, column 3, lines 9-12, fig. 2	1-8, 13-16, 18-20
Y	US 2011-0102304 A1 (NELSON ANDERS KRISTOFER) 05 May 2011 See figs. 6-7	3
A	WO 2006-082565 A1 (KONINKLIJKE PHILIPS ELECTRONICS N.V. et al.) 10 August 2006 See abstract, fig. 1	1-20

 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

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"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

05 DECEMBER 2012 (05.12.2012)

Date of mailing of the international search report

**06 DECEMBER 2012 (06.12.2012)**

Name and mailing address of the ISA/KR

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

Facsimile No. 82-42-472-7140

Authorized officer

JANG, GI JEONG

Telephone No. 82-42-481-5498



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2012/040387**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6336730 B1	08.01.2002	None	
US 05414405A A	09.05.1995	EP 0560470 A1 US 05414405A A	15.09.1993 09.05.1995
US 2011-0102304 A1	05.05.2011	None	
WO 2006-082565 A1	10.08.2006	CN 101115438 A CN 101115438 B EP 1848324 A1 JP 04-871298 B2 JP 2008-529576 A JP 2008-529576 T JP 2008-529576 T US 2008-0171914 A1	30.01.2008 16.06.2010 31.10.2007 25.11.2011 07.08.2008 07.08.2008 07.08.2008 17.07.2008