



(51) International Patent Classification:

G09F 13/12 (2006.01) G09F 13/00 (2006.01)
G09F 9/30 (2006.01) G09F 27/00 (2006.01)
G09F 19/22 (2006.01)

(21) International Application Number:

PCT/IB2019/050086

(22) International Filing Date:

06 January 2019 (06.01.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/614,409 06 January 2018 (06.01.2018) US

(71) Applicant: **KAERTECH** [FR/FR]; 1 rue Garnier, 92200 Neuilly sur Seine (FR).

(72) Inventors: **MOUIZINA, Ali**; 289 Rue Lecourbe, 75015 Paris (FR). **SERVAL, Thomas**; c/o Kaertech, 1 rue Garnier, 92200 Neuilly sur Seine (FR).

(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, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, ST, SZ, TZ,

(54) Title: SMART MIRROR SYSTEM AND METHODS OF USE THEREOF

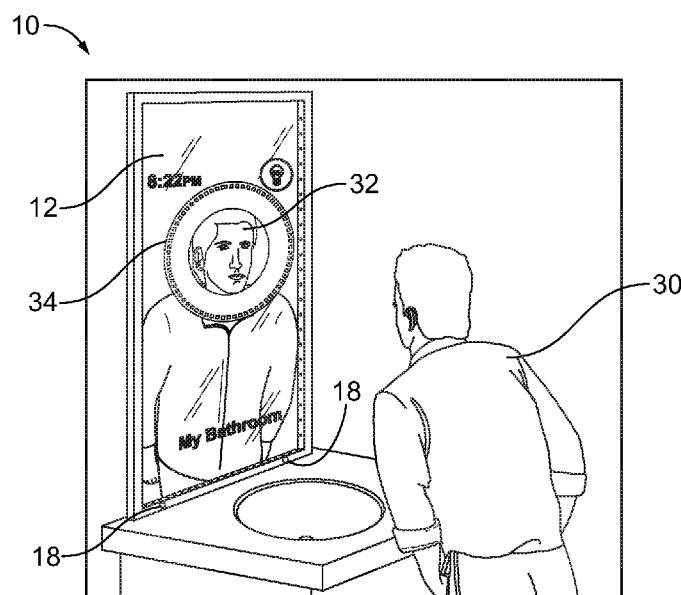


FIG. 4B

(57) Abstract: A system comprising a mirror having a first side and second side, the mirror permitting a first portion of light incident on the first side to transmit therethrough and permitting a second portion of the incident light to reflect therefrom; an electronic display positioned adjacent to the second side of the mirror such that the electronic display is at least partially visible through the first side of the mirror responsive to the electronic display being at least partially activated; one or more sensors positioned generally about a periphery of the mirror configured to detect a presence and relative location of an object positioned adjacent to the first side of the mirror; a light source configured to emit light and at least partially aid in illuminating the object responsive to the object being adjacent to the first side of the mirror; and a camera configured to detect the object.



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, KM, 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:

22 August 2019 (22.08.2019)

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2019/050086

A. CLASSIFICATION OF SUBJECT MATTER

INV. G09F13/12 G09F9/30 G09F19/22 G09F13/00
ADD. G09F27/00

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 A47G G06T G06F

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2018/005884 A1 (EYESMATCH LTD [US]) 4 January 2018 (2018-01-04) paragraph [0002] paragraph [0014] paragraph [0024] - paragraph [0048] paragraph [0073] - paragraph [0100] figures 1-5 -----	1-30,49
X	WO 2018/004615 A1 (HEWLETT PACKARD DEVELOPMENT CO [US]) 4 January 2018 (2018-01-04) paragraph [0001] paragraph [0017] - paragraph [0054] figures 1-11 ----- -/-	1,3-10, 12-30,49



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 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

"&" document member of the same patent family

Date of the actual completion of the international search

3 May 2019

Date of mailing of the international search report

08/07/2019

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Pantoja Conde, Ana

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2019/050086

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2013/145272 A1 (BOGGIE MATTHEW T [US] ET AL) 6 June 2013 (2013-06-06) paragraph [0014] - paragraph [0023] paragraph [0030] - paragraph [0042] paragraph [0052] - paragraph [0067] figures 1-9 -----	1,3, 9-12, 20-30,49
X	US 2002/196333 A1 (GORISCHEK IGNAZ M [US]) 26 December 2002 (2002-12-26) the whole document -----	1,3,20

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2019/050086

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:

see additional sheet

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 an 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.:
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.:

1-30, 49

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-30, 49

directed to an illuminating system and method that detects objects in front of a mirror.

2. claims: 31-39

directed to a system for detecting and illuminating the face of an user.

3. claims: 40-48

directed to a display system and method for compensating ambient light conditions

4. claims: 50-67

directed to a camera view field obstruction system

5. claims: 68-102

directed to a system for providing real time video tutorials on a mirror.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2019/050086

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2018005884	A1	04-01-2018	NONE	
WO 2018004615	A1	04-01-2018	CN 109313291 A	05-02-2019
			EP 3436855 A1	06-02-2019
			US 2019146128 A1	16-05-2019
			WO 2018004615 A1	04-01-2018
US 2013145272	A1	06-06-2013	US 2013145272 A1	06-06-2013
			WO 2013075082 A1	23-05-2013
US 2002196333	A1	26-12-2002	CA 2420787 A1	27-08-2004
			US 2002196333 A1	26-12-2002