

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
21 April 2022 (21.04.2022)



(10) International Publication Number
WO 2022/079353 A1

(51) International Patent Classification:

G02B 27/01 (2006.01) G02B 27/42 (2006.01)
G02B 6/00 (2006.01) G02B 5/18 (2006.01)
G02B 27/00 (2006.01)

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(21) International Application Number:

PCT/FI2021/050677

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(22) International Filing Date:

12 October 2021 (12.10.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20206006 14 October 2020 (14.10.2020) FI

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(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, IT, 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,

(54) Title: LIGHTGUIDE OF EYEWEAR APPARATUS, EYEWEAR APPARATUS AND OPERATIONAL AND MANUFACTURING METHOD OF LIGHTGUIDE

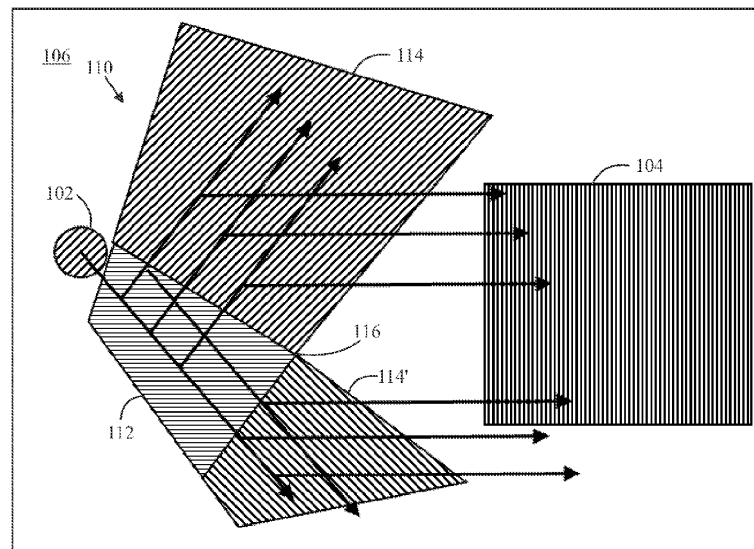


FIG. 3

(57) Abstract: A lightguide of an augmented or virtual reality eyewear apparatus (10) comprises an additional grating (110) arranged between an in-coupling grating (102) and an out-coupling grating (104). The additional grating (110) comprises grating areas (112, 112', 114, 114'), at least two of which have a common physical interface (116) and grating vectors of different directions. The grating vectors of the additional grating (110), the in-coupling grating (102) and the out-coupling grating (104) are linear combinations of two non-parallel and common base vectors, and a sum of the grating vectors of the in-coupling grating (102), the additional grating (110) and the out-coupling grating (104) is zero separately for each optical path, which guides light from the in-coupling grating (102) via the additional grating (110) to the out-coupling grating (104) and allows the light to be coupled out from the out-coupling grating (104).

[Continued on next page]

SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, 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).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

— *with international search report (Art. 21(3))*
— *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*