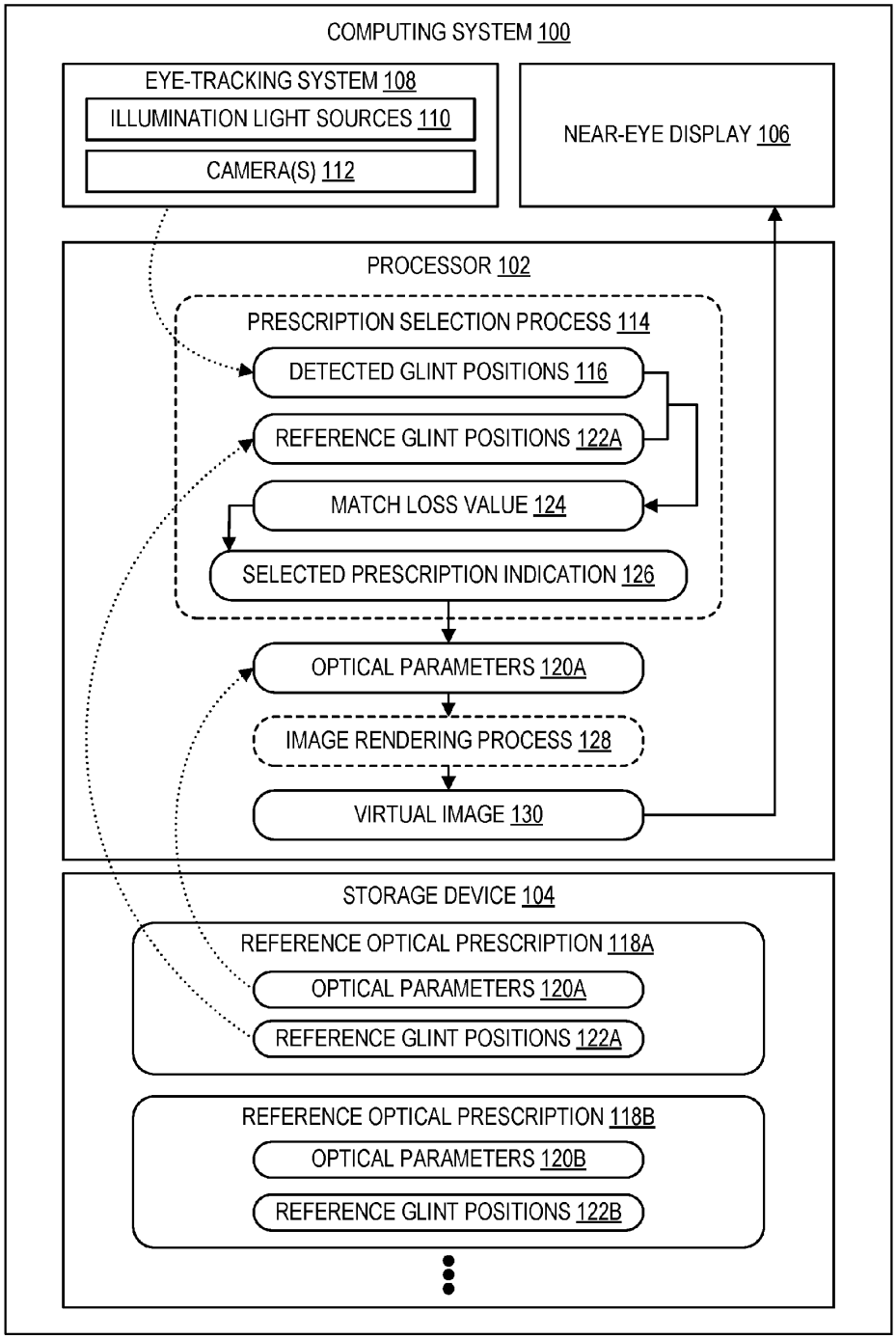
COMPUTING SYSTEM 100
EYE-TRACKING SYSTEM 108
ILLUMINATION LIGHT SOURCES 110
CAMERA(S) 112
NEAR-EYE DISPLAY 106
PROCESSOR 102
PRESCRIPTION SELECTION PROCESS 114
DETECTED GLINT POSITIONS 116
REFERENCE GLINT POSITIONS 122A
MATCH LOSS VALUE 124
SELECTED PRESCRIPTION INDICATION 126
OPTICAL PARAMETERS 120A
IMAGE RENDERING PROCESS 128
VIRTUAL IMAGE 130
STORAGE DEVICE 104
REFERENCE OPTICAL PRESCRIPTION 118A
OPTICAL PARAMETERS 120A
REFERENCE GLINT POSITIONS 122A
REFERENCE OPTICAL PRESCRIPTION 118B
OPTICAL PARAMETERS 120B
REFERENCE GLINT POSITIONS 122B

FIG. 1

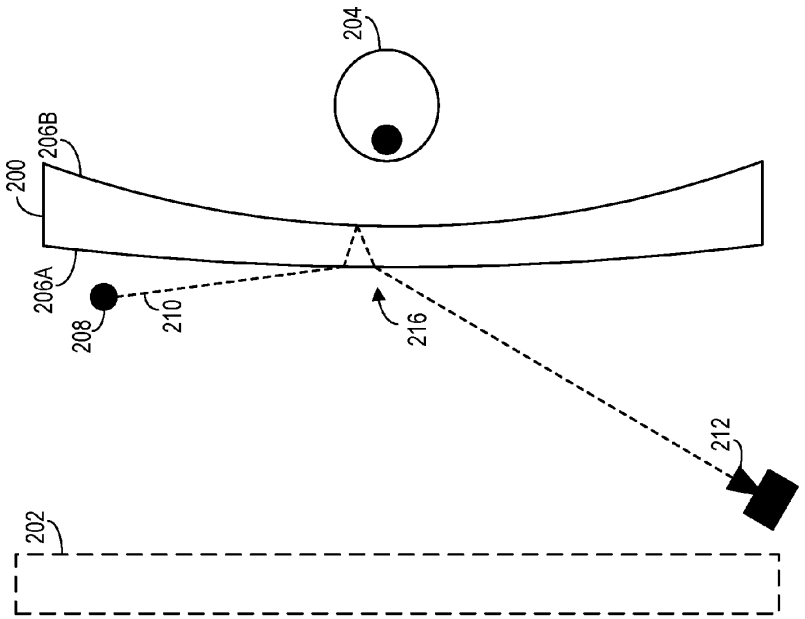
204
206B
200
206A
208
210
216
212
202

FIG. 2B

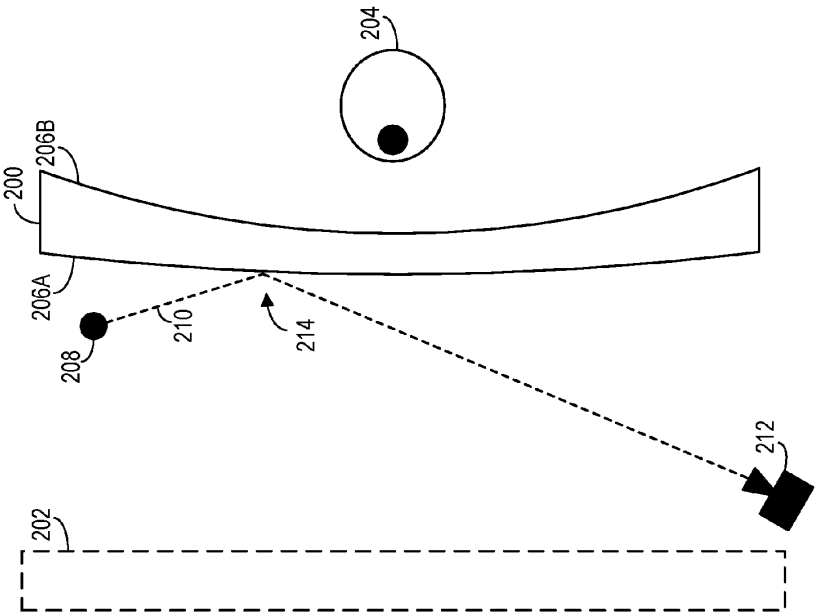
204
206B
200
206A
208
210
214
212
202

FIG. 2A

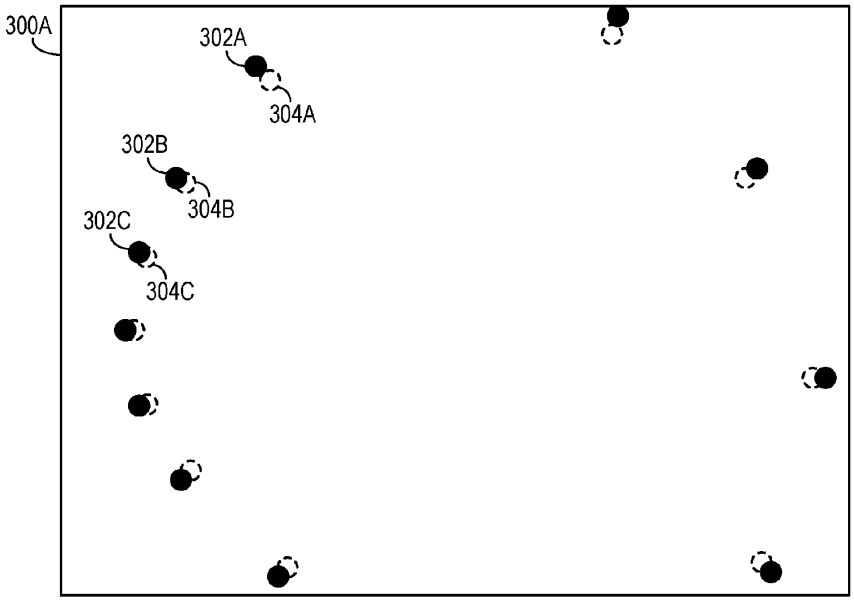
300A
302A
304A
302B
304B
302C
304C

FIG. 3A

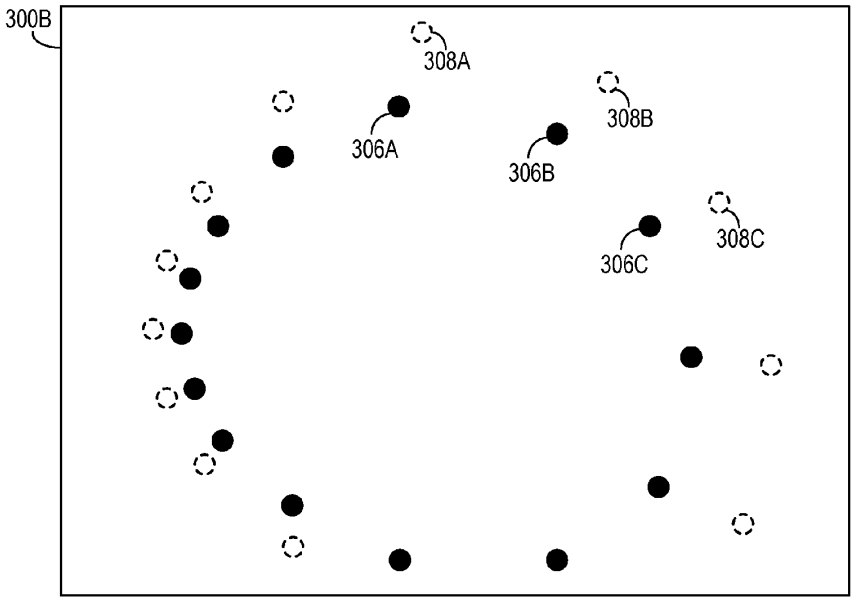
300B
308A
306A
308B
306B
308C
306C

FIG. 3B

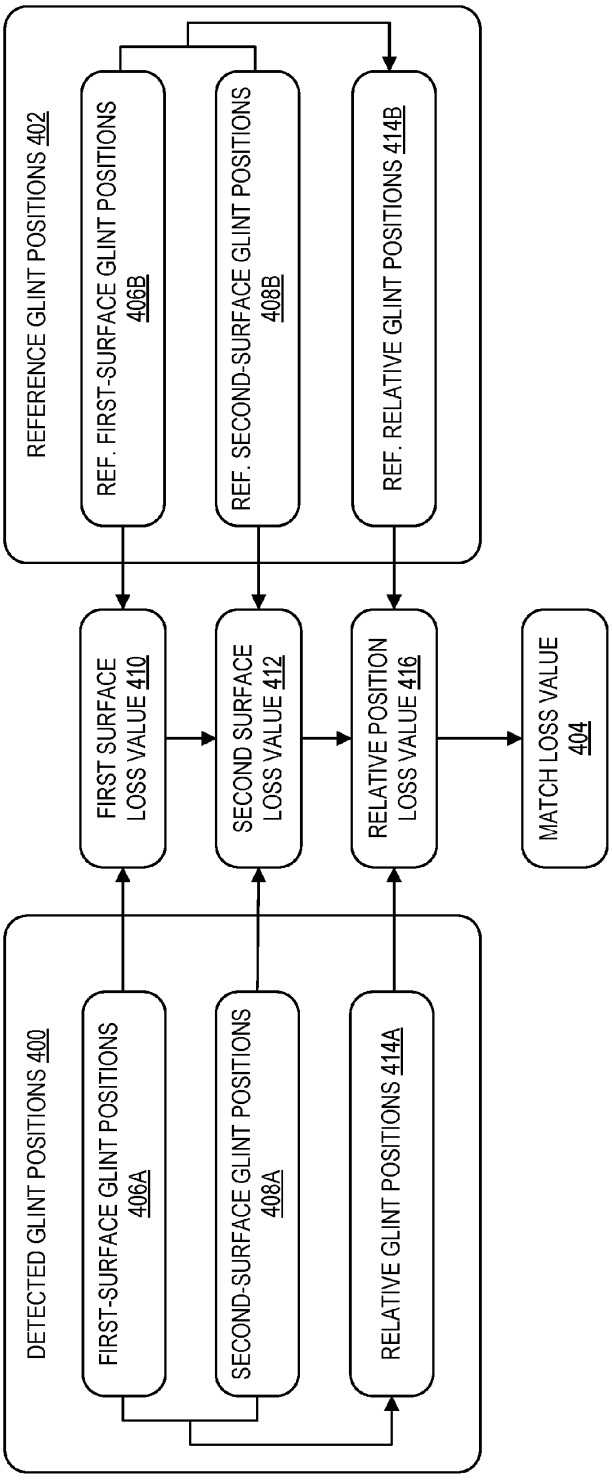
REFERENCE GLINT POSITIONS 402
REF. FIRST-SURFACE GLINT POSITIONS 406B
REF. SECOND-SURFACE GLINT POSITIONS 408B
REF. RELATIVE GLINT POSITIONS 414B
FIRST SURFACE LOSS VALUE 410
SECOND SURFACE LOSS VALUE 412
RELATIVE POSITION LOSS VALUE 416
MATCH LOSS VALUE 404
DETECTED GLINT POSITIONS 400
FIRST-SURFACE GLINT POSITIONS 406A
SECOND-SURFACE GLINT POSITIONS 408A
RELATIVE GLINT POSITIONS 414A

FIG. 4

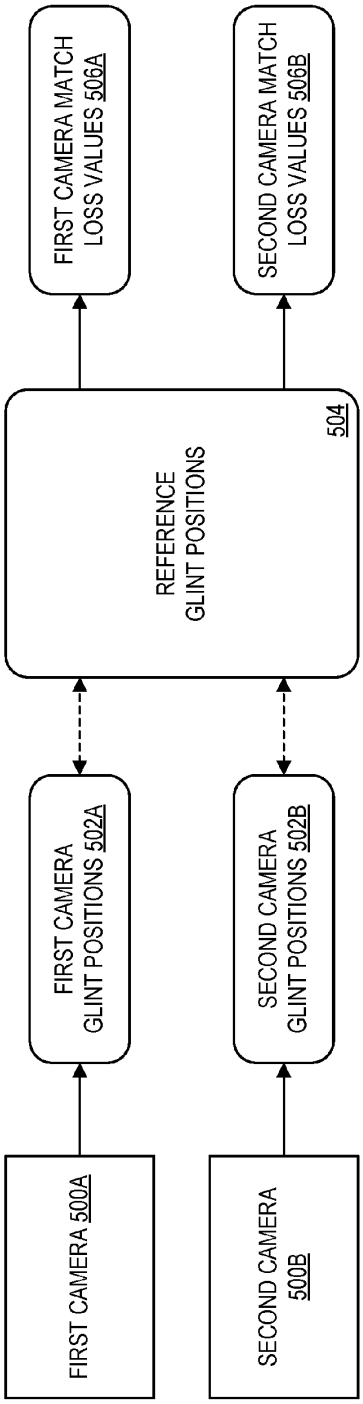
FIRST CAMERA MATCH LOSS VALUES 506A
SECOND CAMERA MATCH LOSS VALUES 506B
REFERENCE GLINT POSITIONS
504
FIRST CAMERA GLINT POSITIONS 502A
SECOND CAMERA GLINT POSITIONS 502B
FIRST CAMERA 500A
SECOND CAMERA 500B

FIG. 5

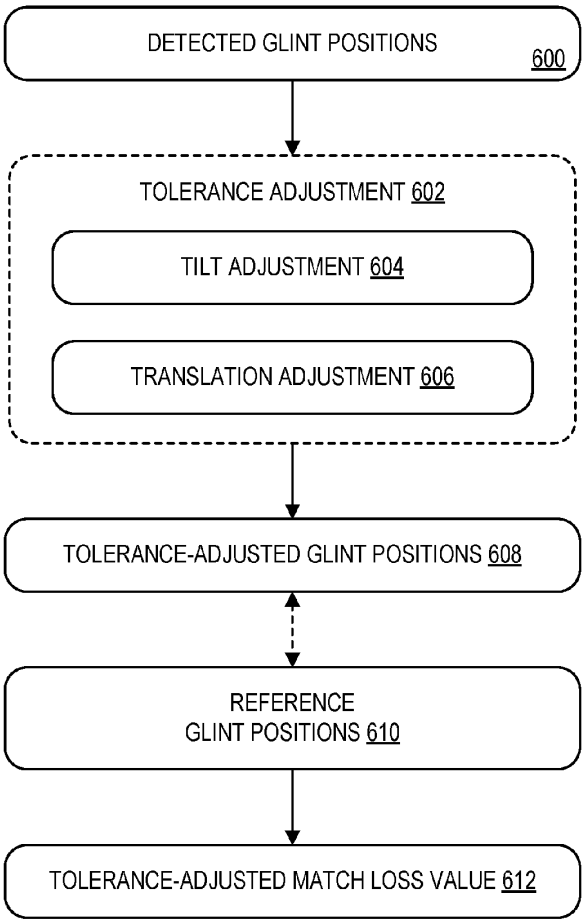
DETECTED GLINT POSITIONS 600
TOLERANCE ADJUSTMENT 602
TILT ADJUSTMENT 604
TRANSLATION ADJUSTMENT 606
TOLERANCE-ADJUSTED GLINT POSITIONS 608
REFERENCE GLINT POSITIONS 610
TOLERANCE-ADJUSTED MATCH LOSS VALUE 612

FIG. 6

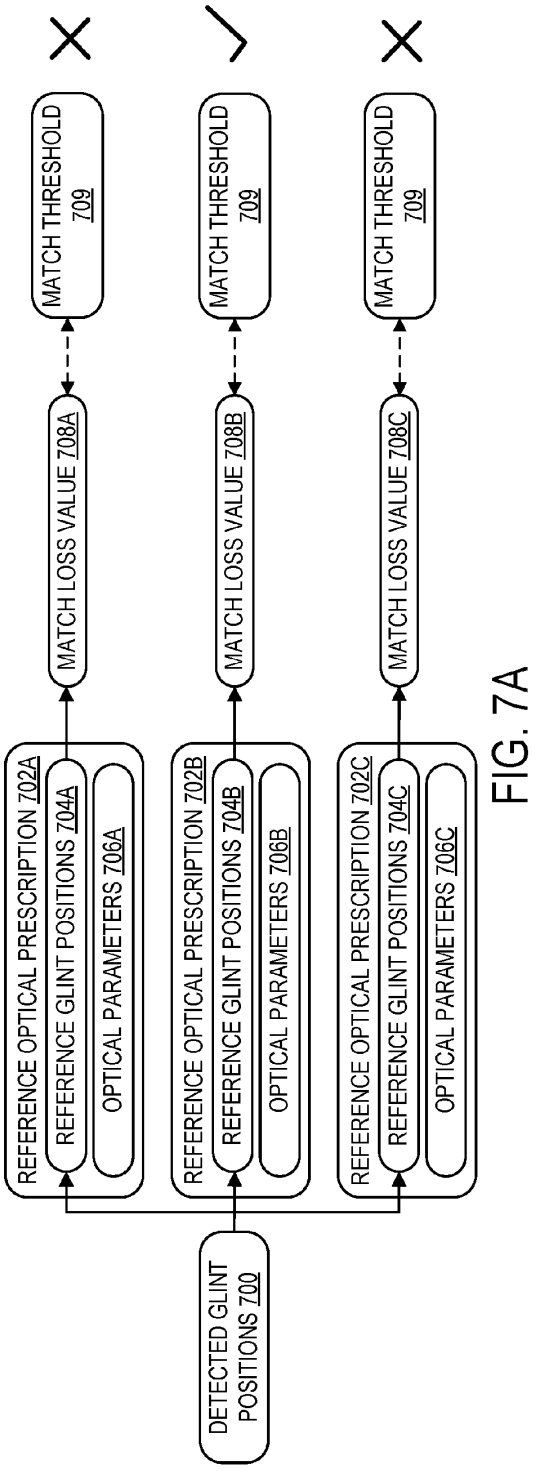
DETECTED GLINT POSITIONS 700
REFERENCE OPTICAL PRESCRIPTION 702A
REFERENCE GLINT POSITIONS 704A
OPTICAL PARAMETERS 706A
MATCH LOSS VALUE 708A
MATCH THRESHOLD 709
REFERENCE OPTICAL PRESCRIPTION 702B
REFERENCE GLINT POSITIONS 704B
OPTICAL PARAMETERS 706B
MATCH LOSS VALUE 708B
MATCH THRESHOLD 709
REFERENCE OPTICAL PRESCRIPTION 702C
REFERENCE GLINT POSITIONS 704C
OPTICAL PARAMETERS 706C
MATCH LOSS VALUE 708C
MATCH THRESHOLD 709

FIG. 7A

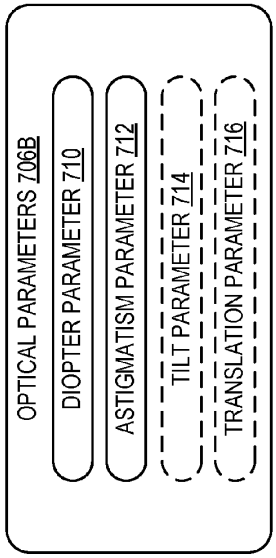
OPTICAL PARAMETERS 706B
DIOPTER PARAMETER 710
ASTIGMATISM PARAMETER 712
TILT PARAMETER 714
TRANSLATION PARAMETER 716

FIG. 7B

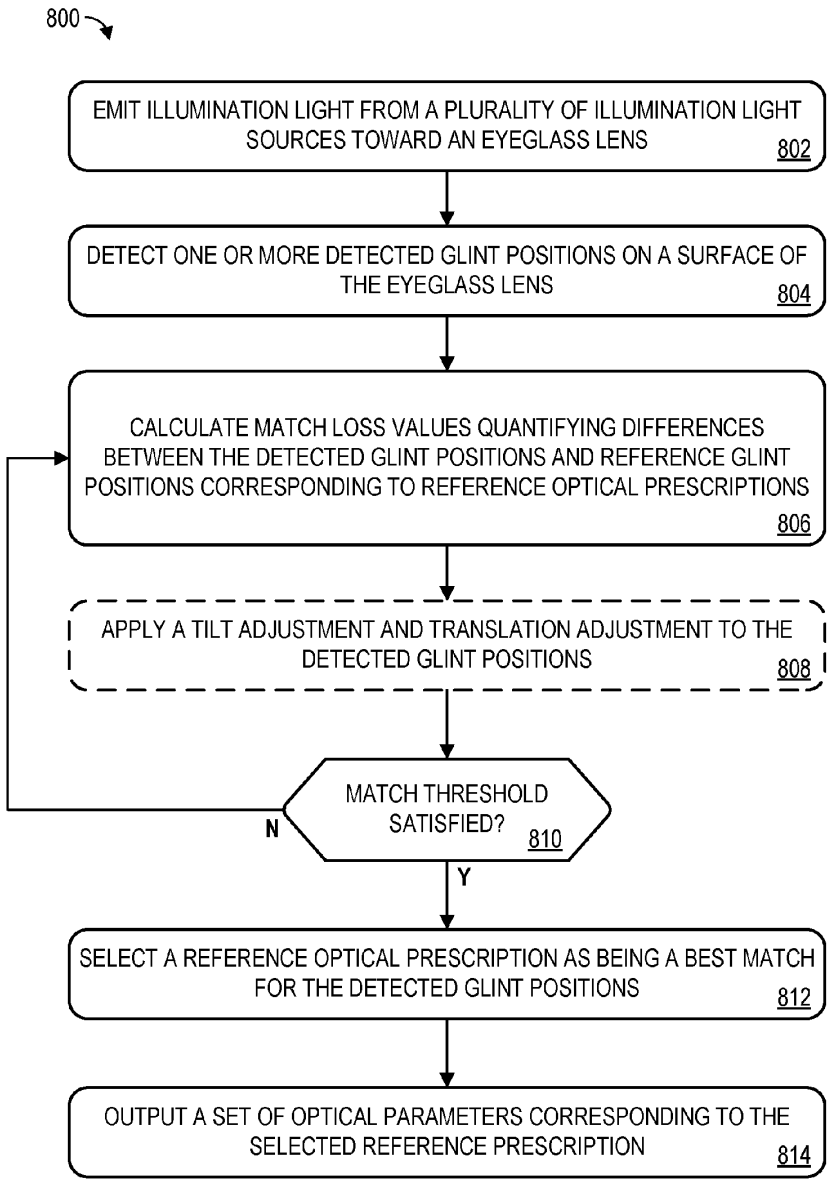
800
EMIT ILLUMINATION LIGHT FROM A PLURALITY OF ILLUMINATION LIGHT SOURCES TOWARD AN EYEGLASS LENS
802
DETECT ONE OR MORE DETECTED GLINT POSITIONS ON A SURFACE OF THE EYEGLASS LENS
804
CALCULATE MATCH LOSS VALUES QUANTIFYING DIFFERENCES BETWEEN THE DETECTED GLINT POSITIONS AND REFERENCE GLINT POSITIONS CORRESPONDING TO REFERENCE OPTICAL PRESCRIPTIONS
806
APPLY A TILT ADJUSTMENT AND TRANSLATION ADJUSTMENT TO THE DETECTED GLINT POSITIONS
808
MATCH THRESHOLD SATISFIED?
810
N
Y
SELECT A REFERENCE OPTICAL PRESCRIPTION AS BEING A BEST MATCH FOR THE DETECTED GLINT POSITIONS
812
OUTPUT A SET OF OPTICAL PARAMETERS CORRESPONDING TO THE SELECTED REFERENCE PRESCRIPTION
814

FIG. 8

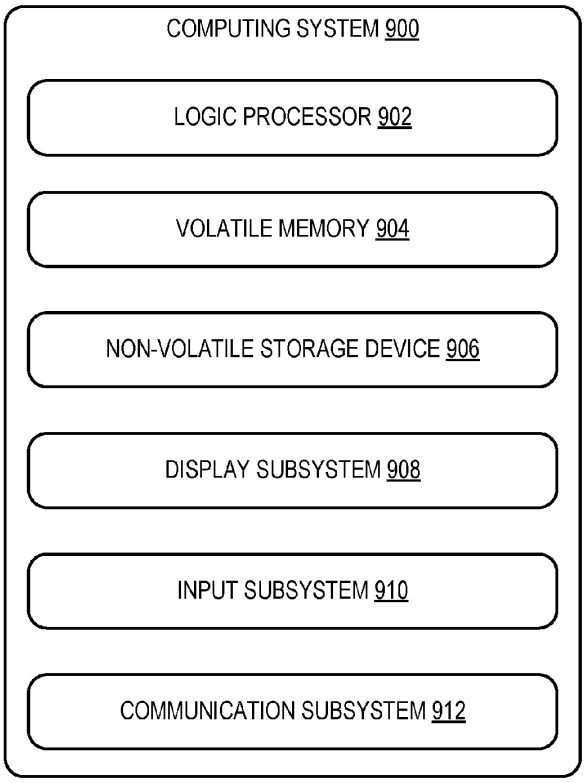
COMPUTING SYSTEM 900
LOGIC PROCESSOR 902
VOLATILE MEMORY 904
NON-VOLATILE STORAGE DEVICE 906
DISPLAY SUBSYSTEM 908
INPUT SUBSYSTEM 910
COMMUNICATION SUBSYSTEM 912

FIG. 9