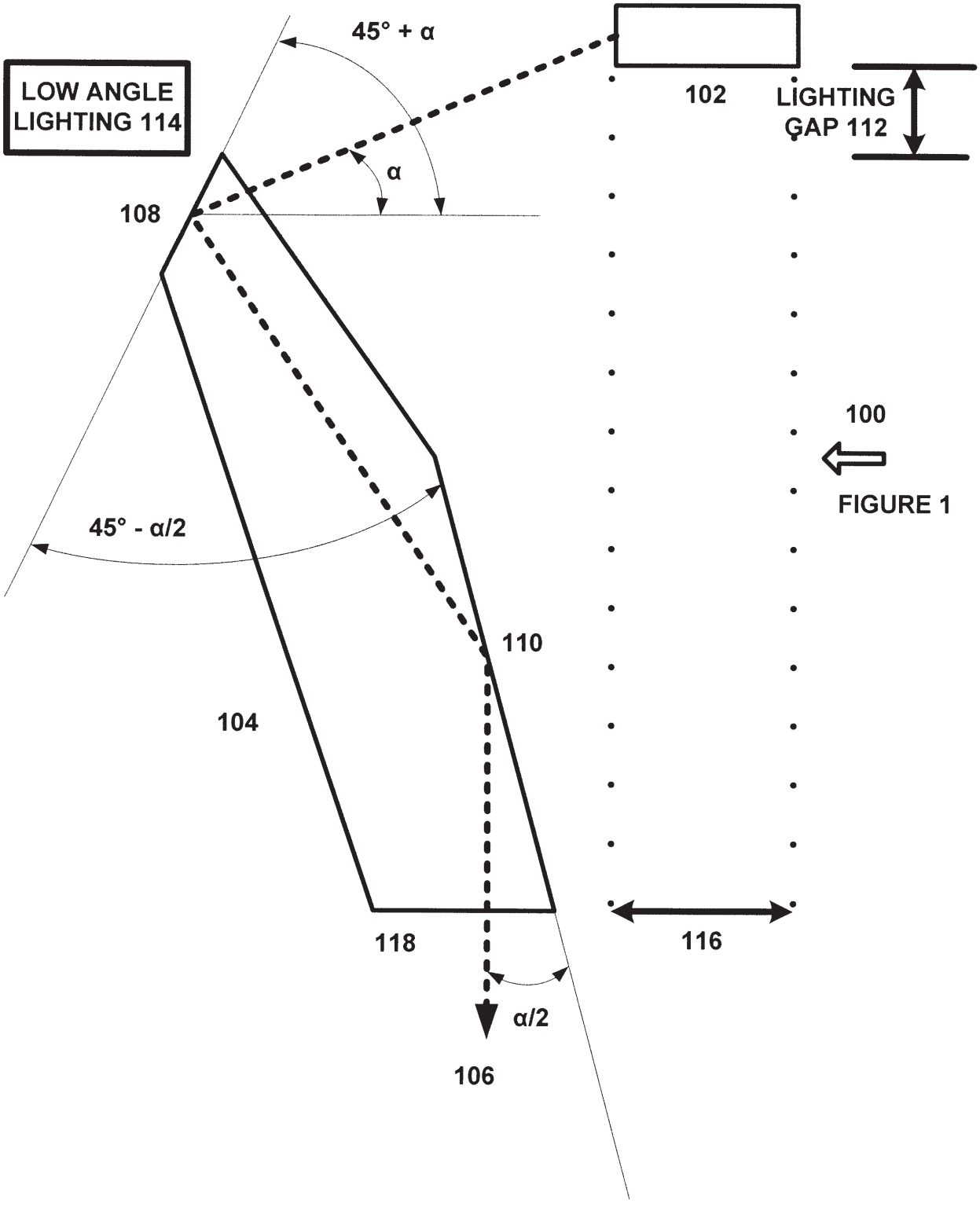

45° + α
LOW ANGLE LIGHTING 114
102
LIGHTING GAP 112
α
108
100
45° - α/2
110
104
118
116
α/2
106

FIGURE 1

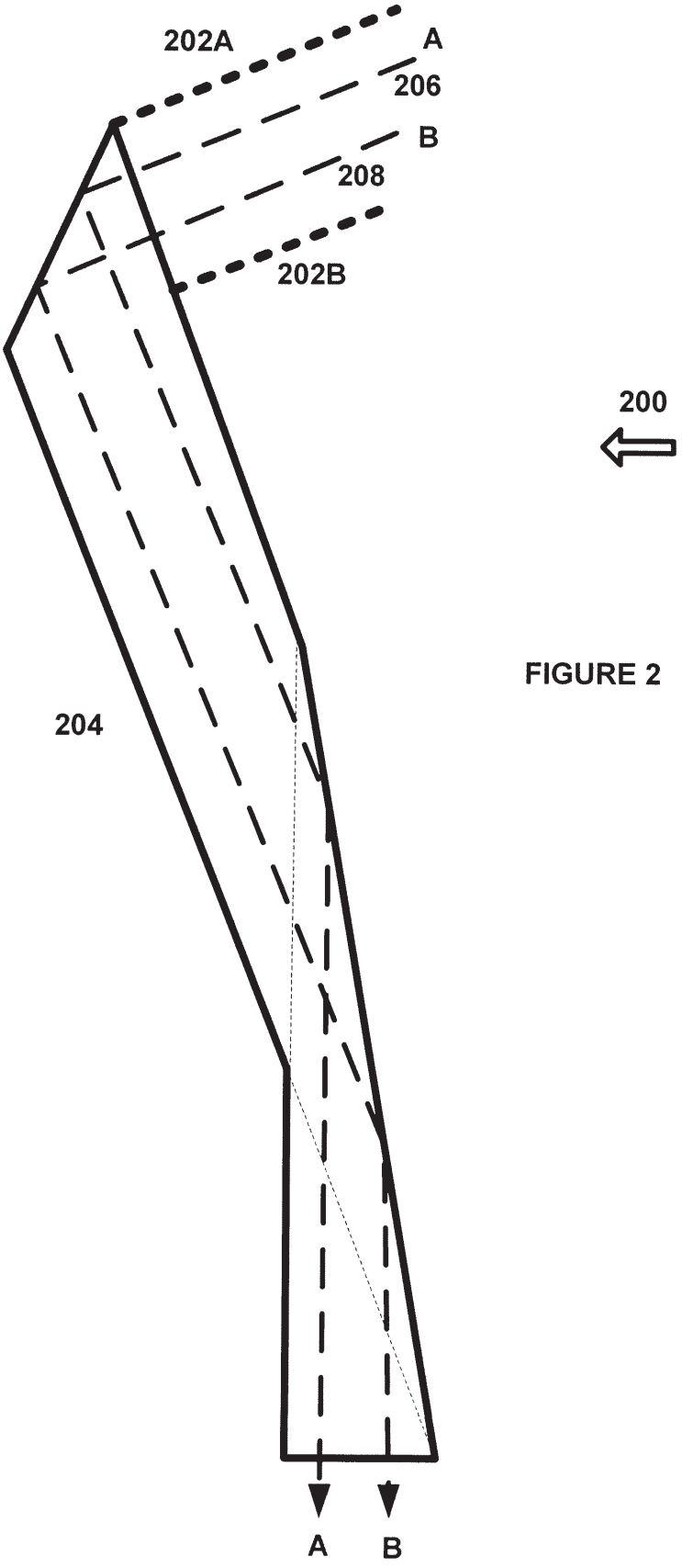
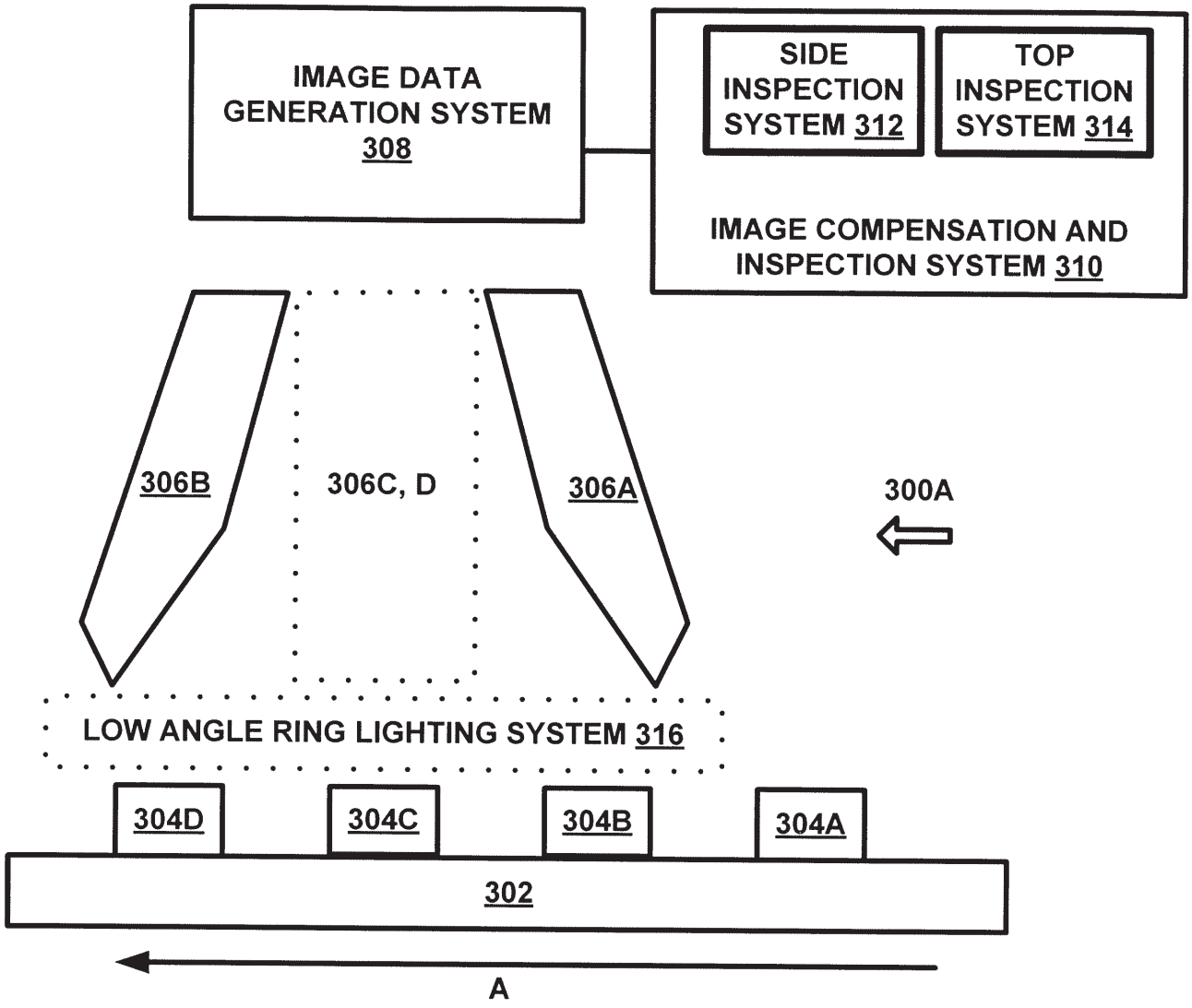


FIGURE 2


IMAGE DATA GENERATION SYSTEM 308
SIDE INSPECTION SYSTEM 312
TOP INSPECTION SYSTEM 314
IMAGE COMPENSATION AND INSPECTION SYSTEM 310
306B
306C, D
306A
300A
LOW ANGLE RING LIGHTING SYSTEM 316
304D
304C
304B
304A
302
A

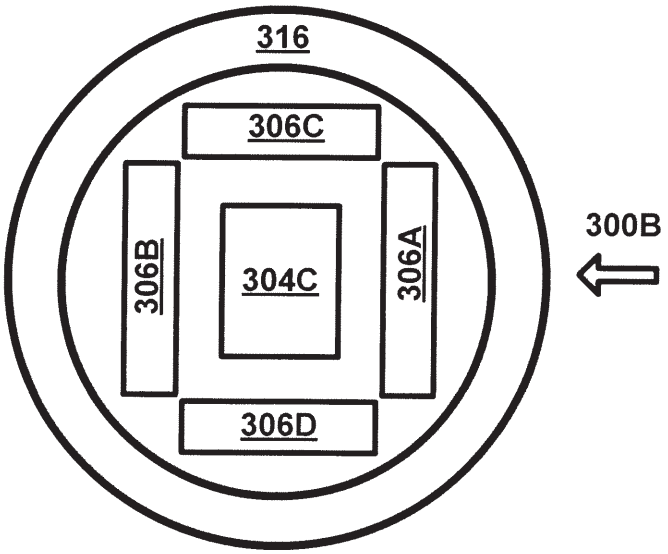

316
306C
306B
304C
306A
306D
300B

FIGURE 3

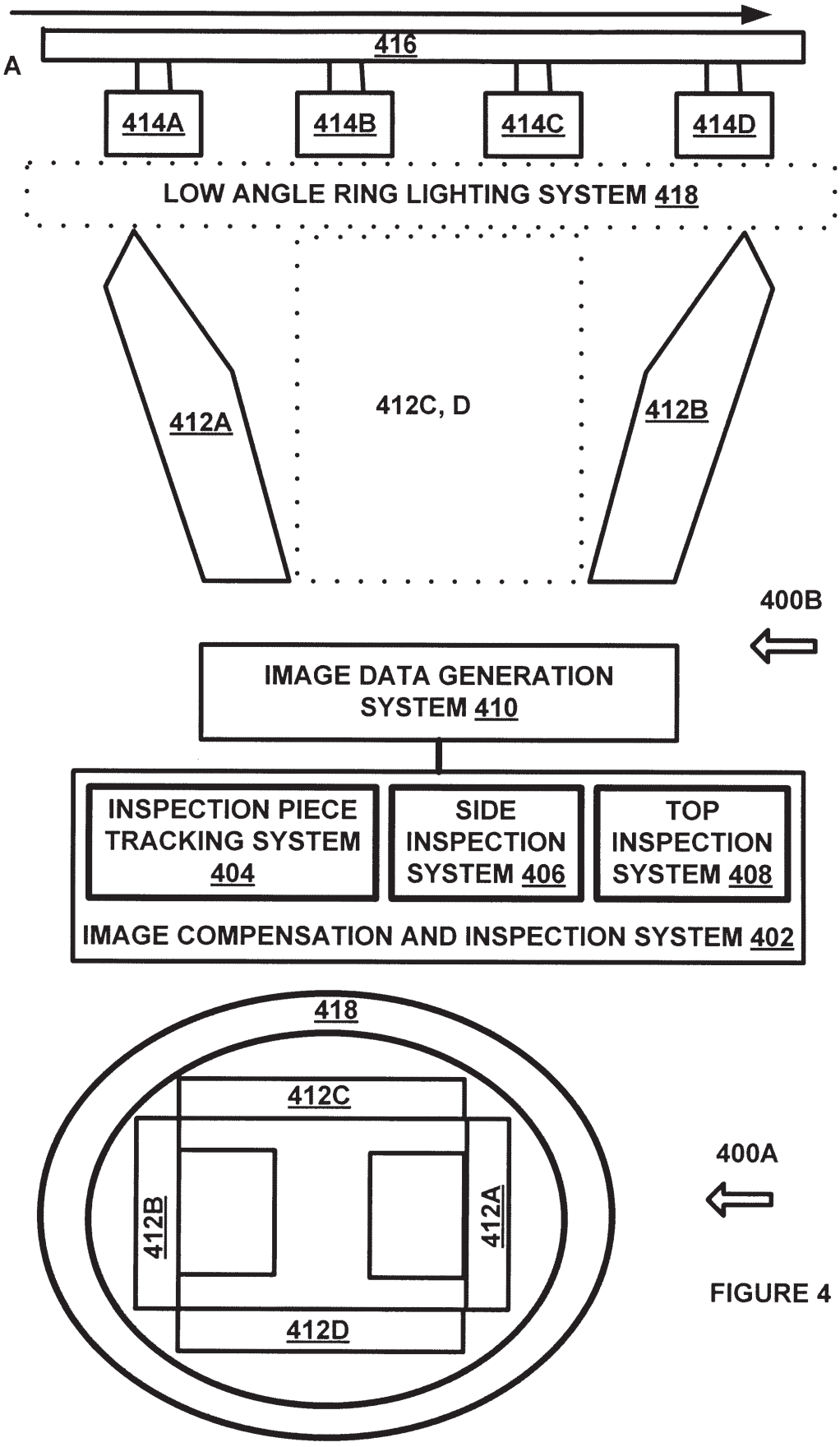
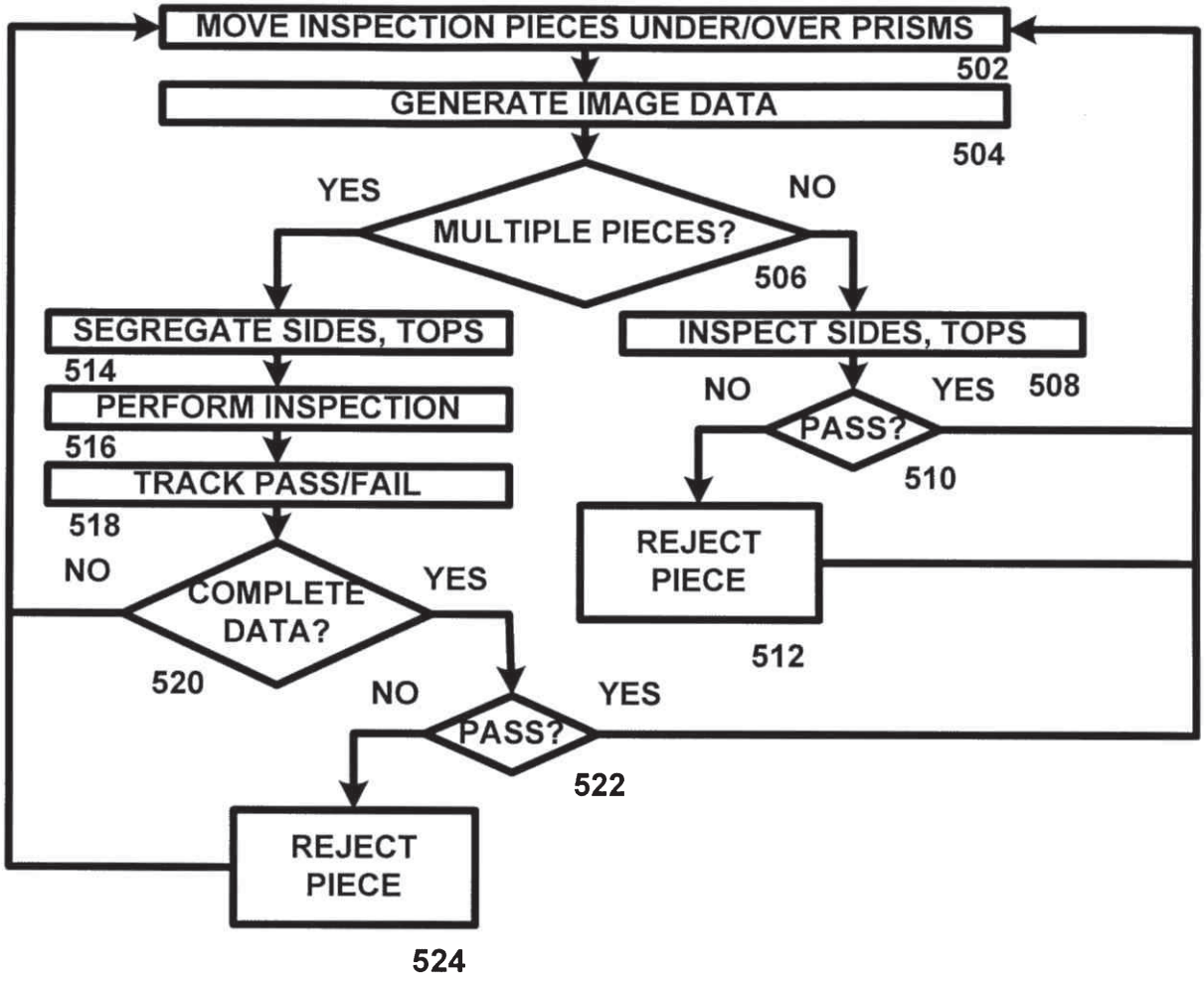

A
416
414A
414B
414C
414D
LOW ANGLE RING LIGHTING SYSTEM 418
412A
412C, D
412B
400B
IMAGE DATA GENERATION SYSTEM 410
INSPECTION PIECE TRACKING SYSTEM 404
SIDE INSPECTION SYSTEM 406
TOP INSPECTION SYSTEM 408
IMAGE COMPENSATION AND INSPECTION SYSTEM 402
418
412C
412B
412A
412D
400A

FIGURE 4


MOVE INSPECTION PIECES UNDER/OVER PRISMS
502
GENERATE IMAGE DATA
504
YES
NO
MULTIPLE PIECES?
506
SEGREGATE SIDES, TOPS
514
PERFORM INSPECTION
516
TRACK PASS/FAIL
518
INSPECT SIDES, TOPS
NO
YES
508
PASS?
510
REJECT PIECE
512
NO
COMPLETE DATA?
YES
520
NO
PASS?
YES
522
REJECT PIECE
524

500 ⇧

FIGURE 5

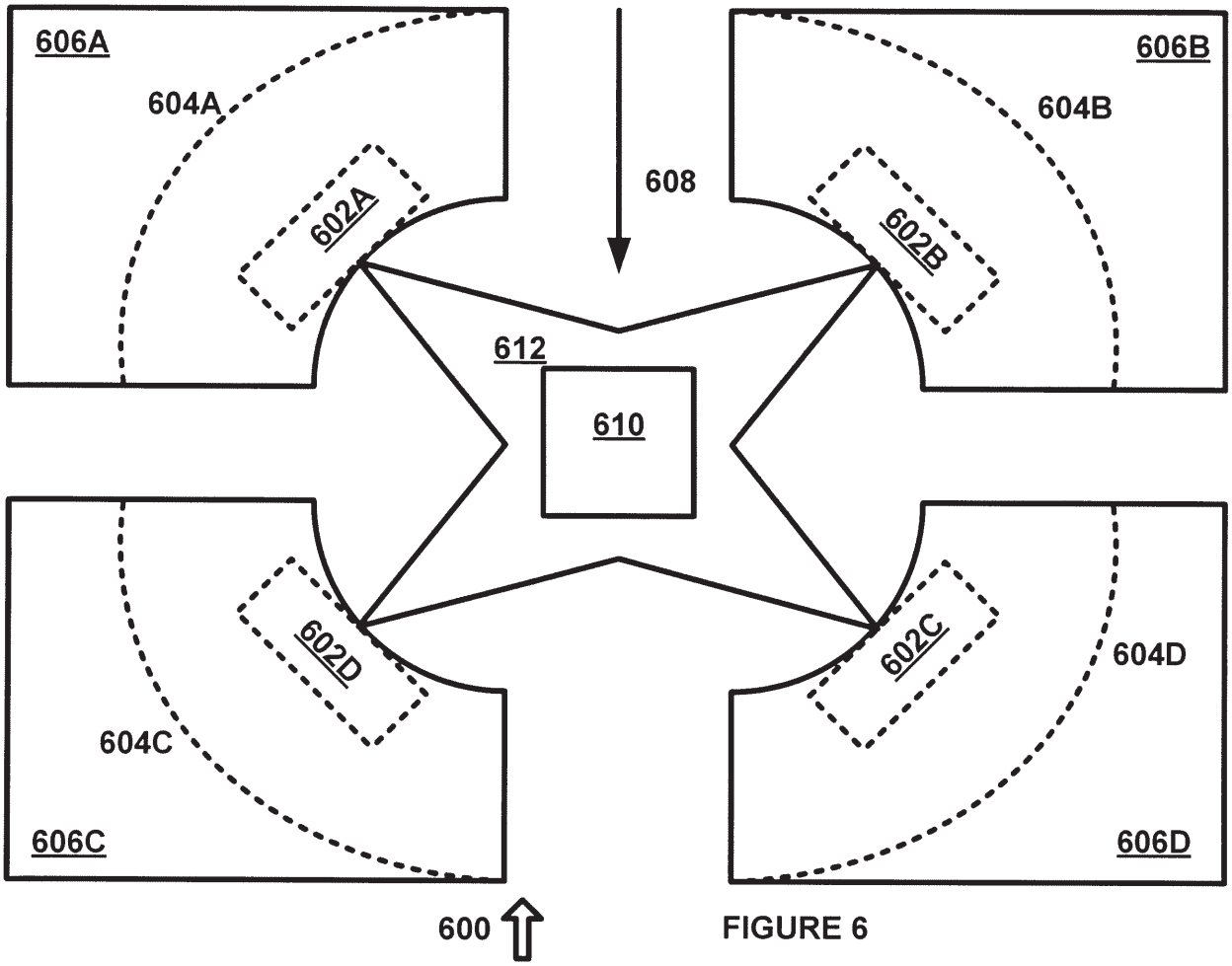


FIGURE 6

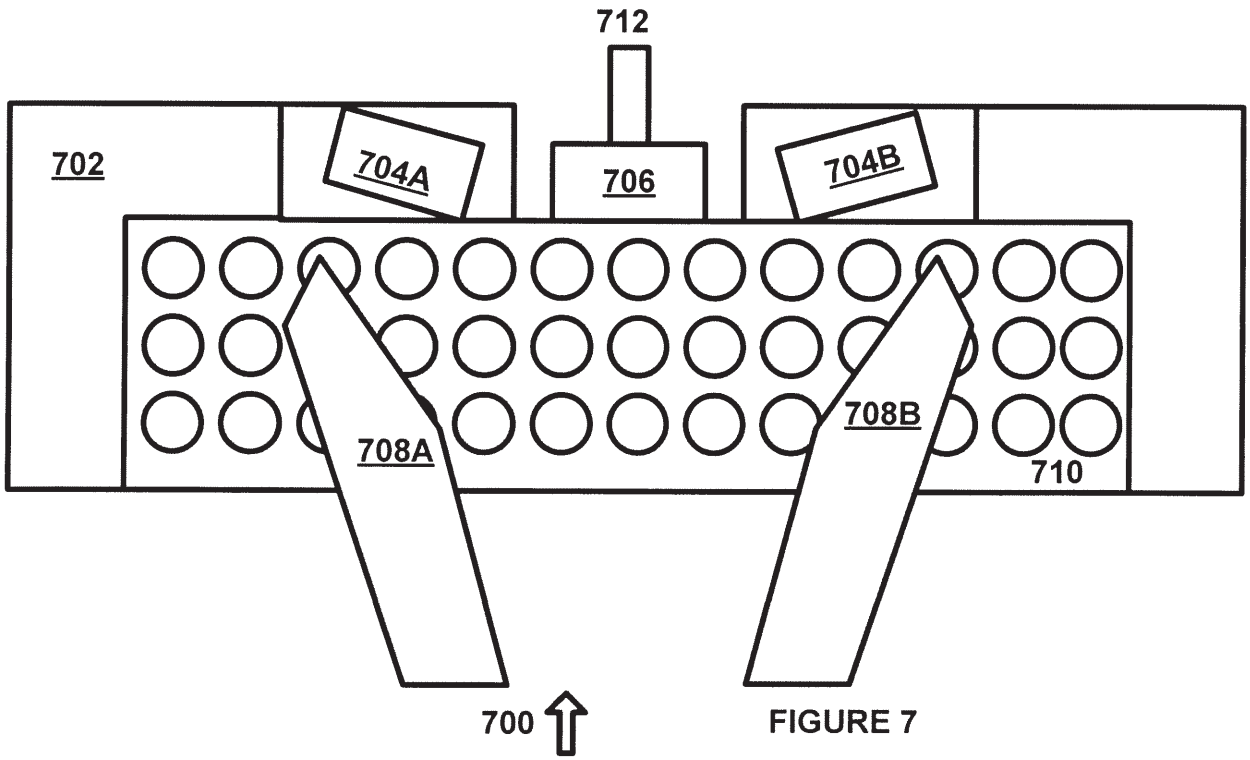


FIGURE 7