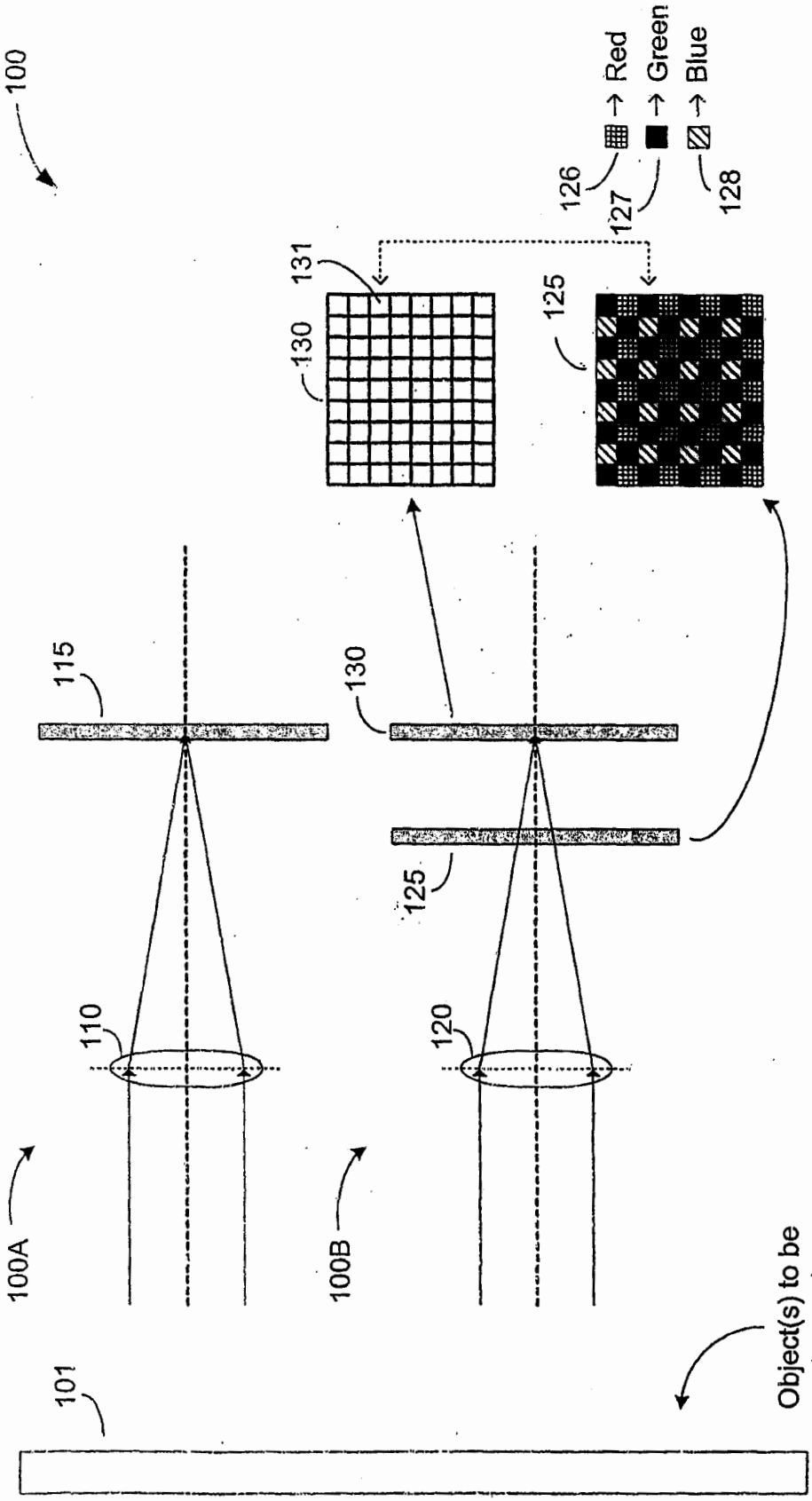

100
126
→ Red
127
→ Green
128
→ Blue
131
130
125
115
130
125
110
120
100A
100B
101
Object(s) to be imaged

FIG. 1

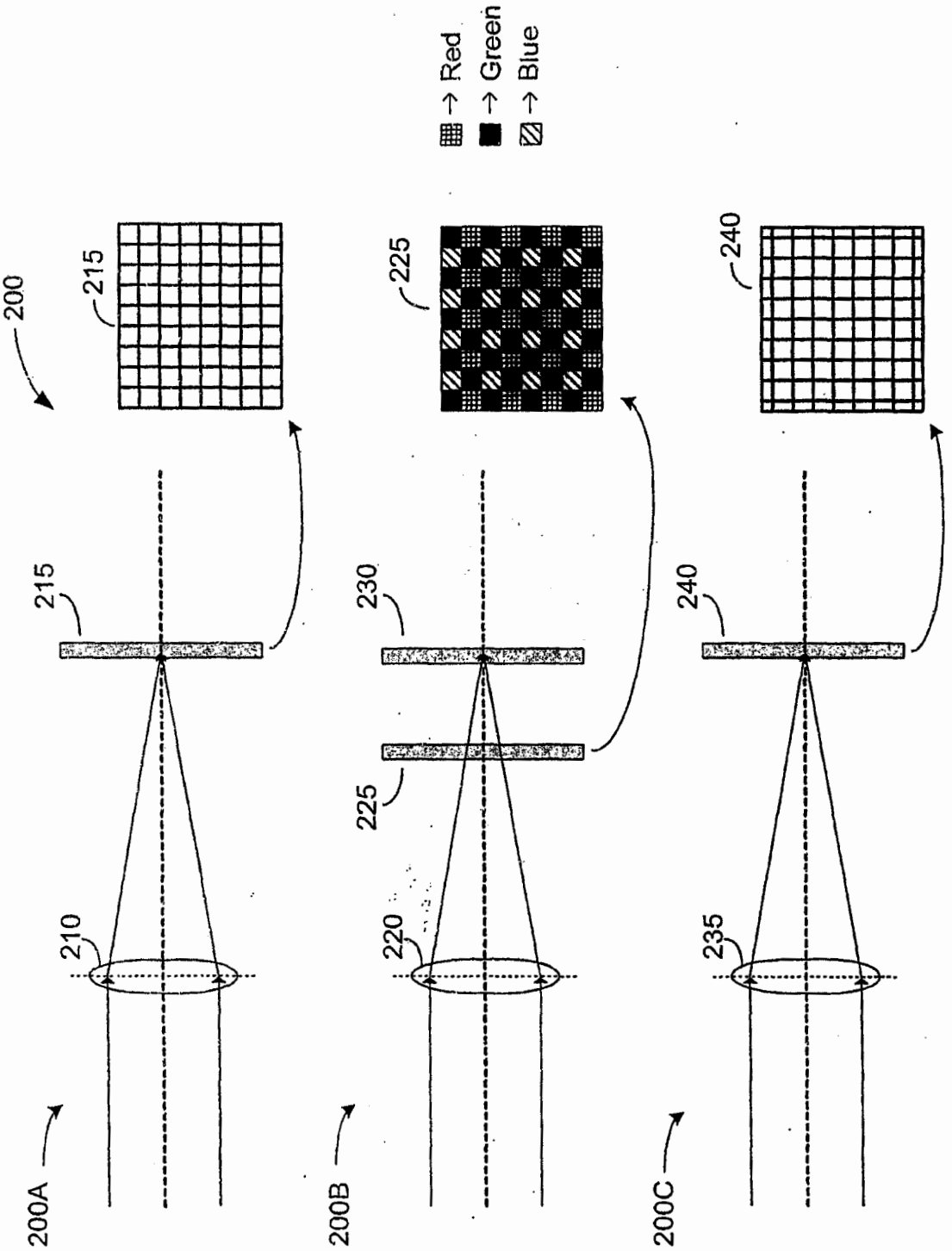

Red
Green
Blue
200
215
225
240
215
230
240
225
210
220
235
200A
200B
200C

FIG. 2

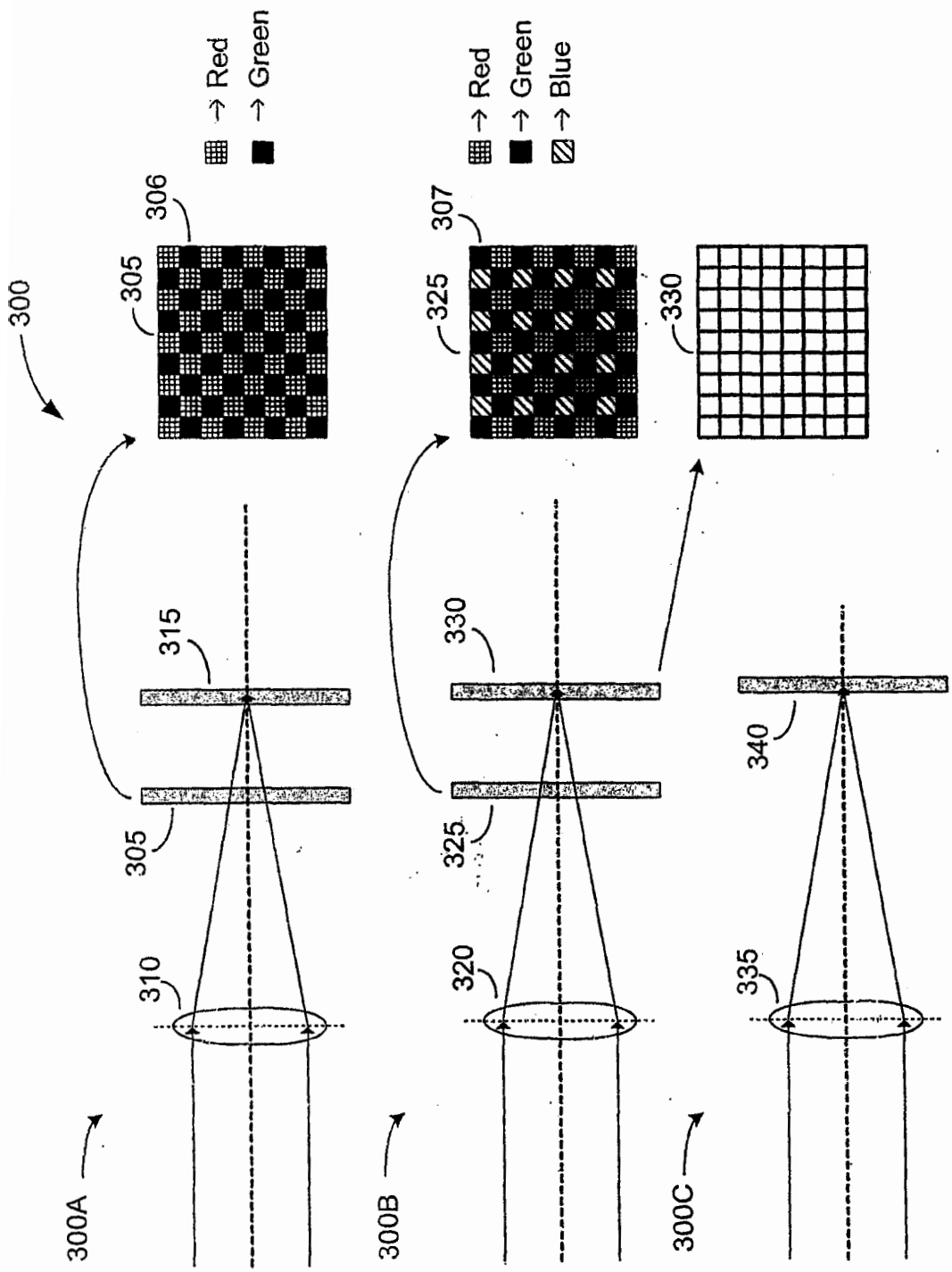

300
306
305
→ Red
→ Green
315
305
310
300A
307
325
330
→ Red
→ Green
→ Blue
330
325
320
300B
340
335
300C

FIG. 3

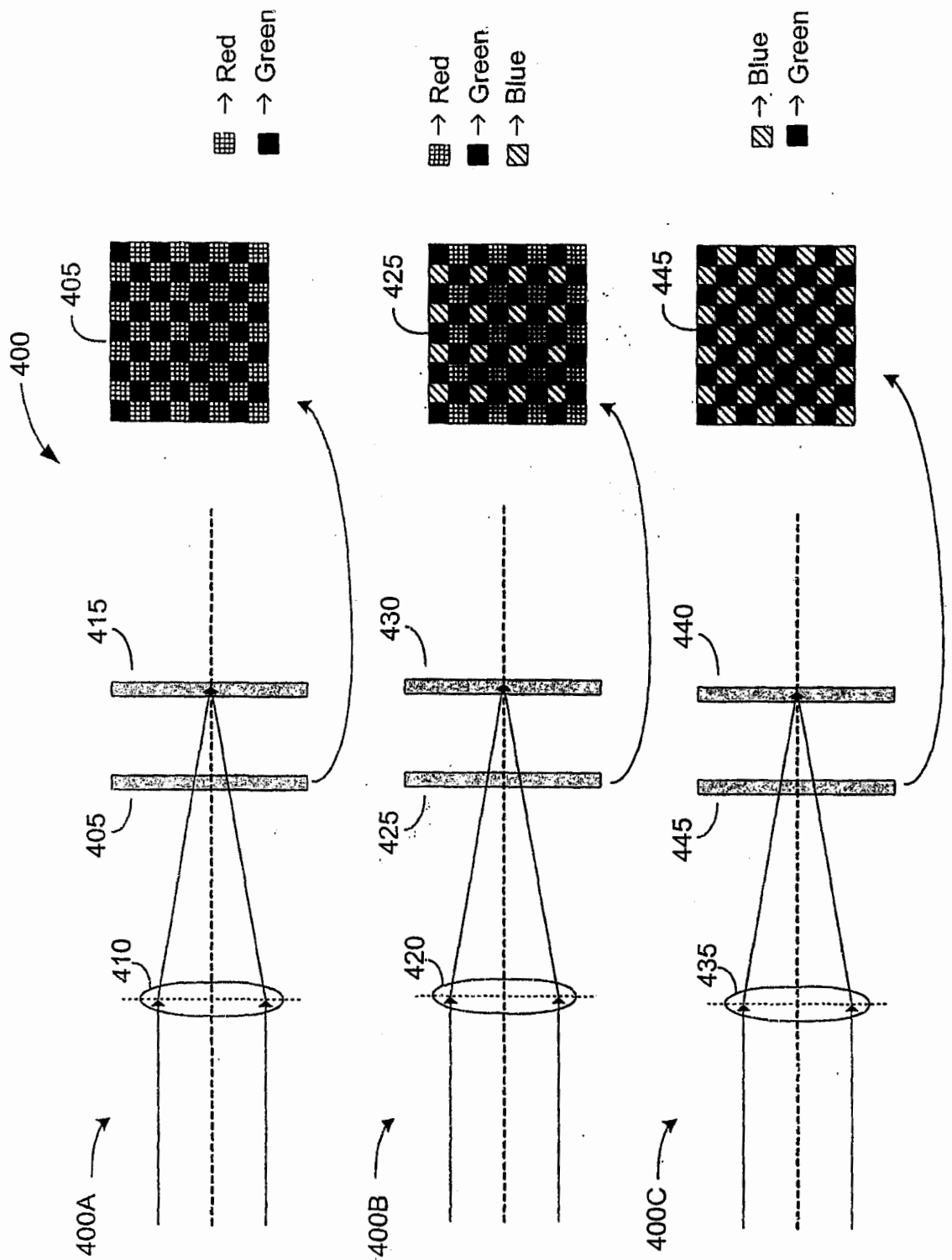

400
405
→ Red
→ Green
415
405
410
400A
425
→ Red
→ Green
→ Blue
430
425
420
400B
445
→ Blue
→ Green
440
445
435
400C

FIG. 4

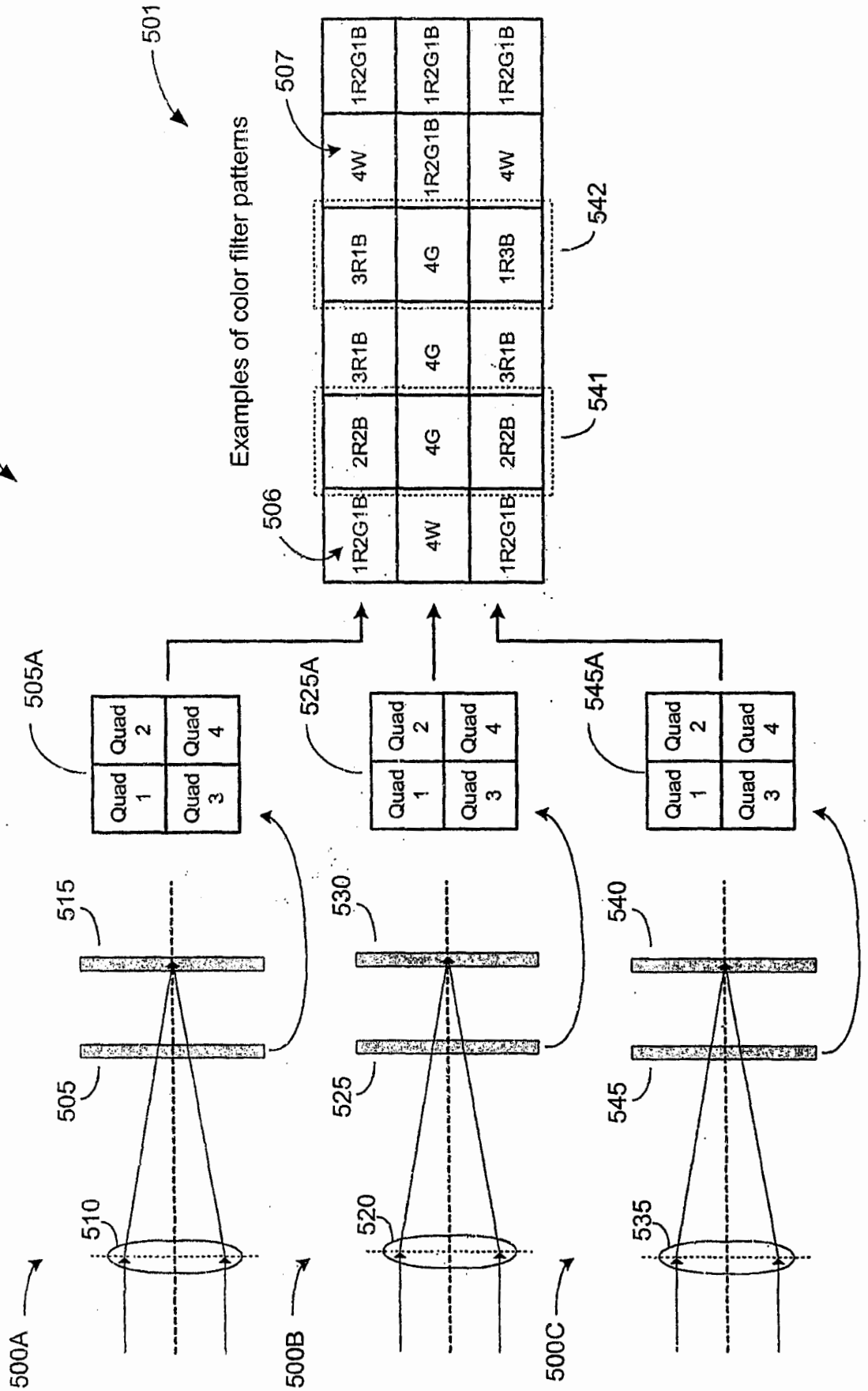

500
501
Examples of color filter patterns
507
506
541
542
1R2G1B
2R2B
3R1B
4W
4G
1R3B
505A
525A
545A
Quad 1
Quad 2
Quad 3
Quad 4
515
505
510
530
525
520
540
545
535
500A
500B
500C

FIG. 5

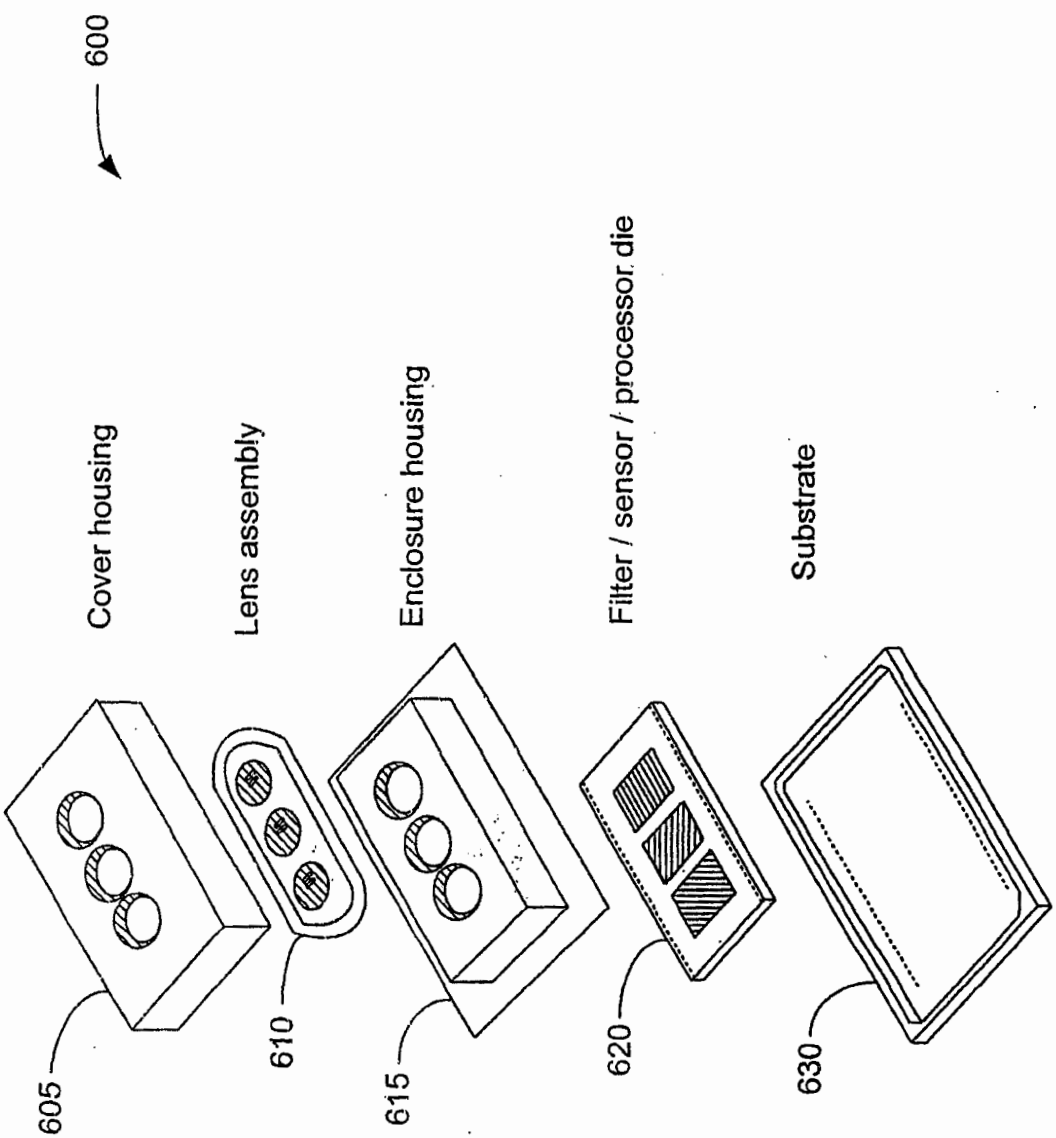

600
Cover housing
Lens assembly
Enclosure housing
Filter / sensor / processor die
Substrate
605
610
615
620
630

FIG. 6

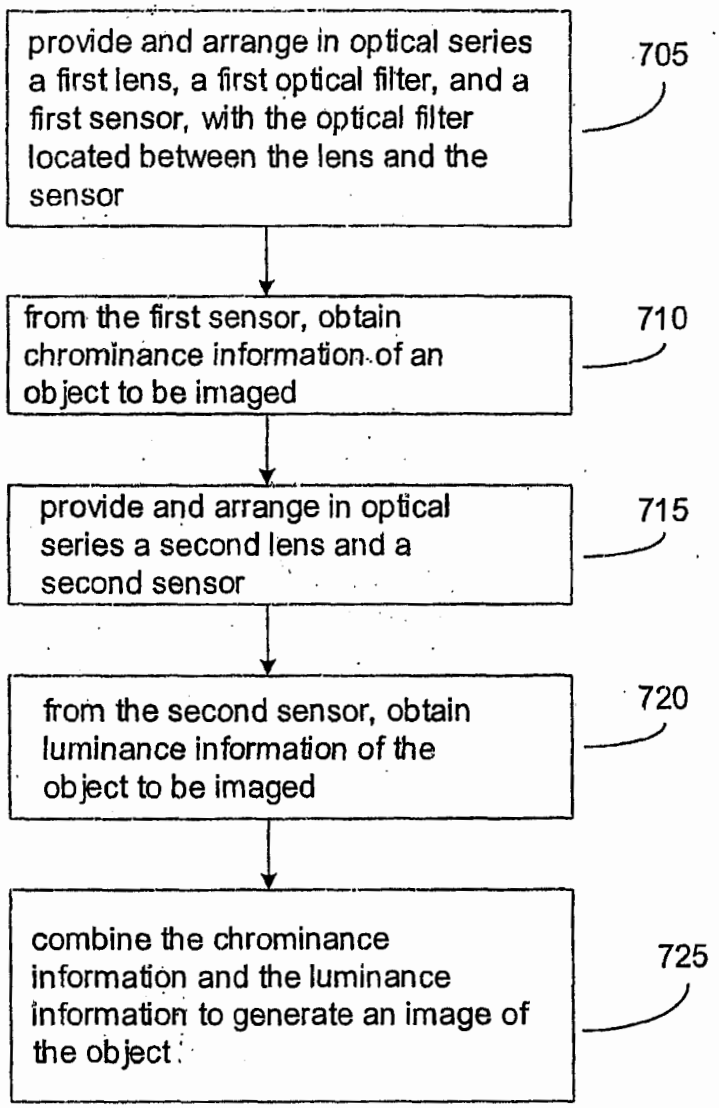

provide and arrange in optical series a first lens, a first optical filter, and a first sensor, with the optical filter located between the lens and the sensor
705
from the first sensor, obtain chrominance information of an object to be imaged
710
provide and arrange in optical series a second lens and a second sensor
715
from the second sensor, obtain luminance information of the object to be imaged
720
combine the chrominance information and the luminance information to generate an image of the object
725

FIG. 7

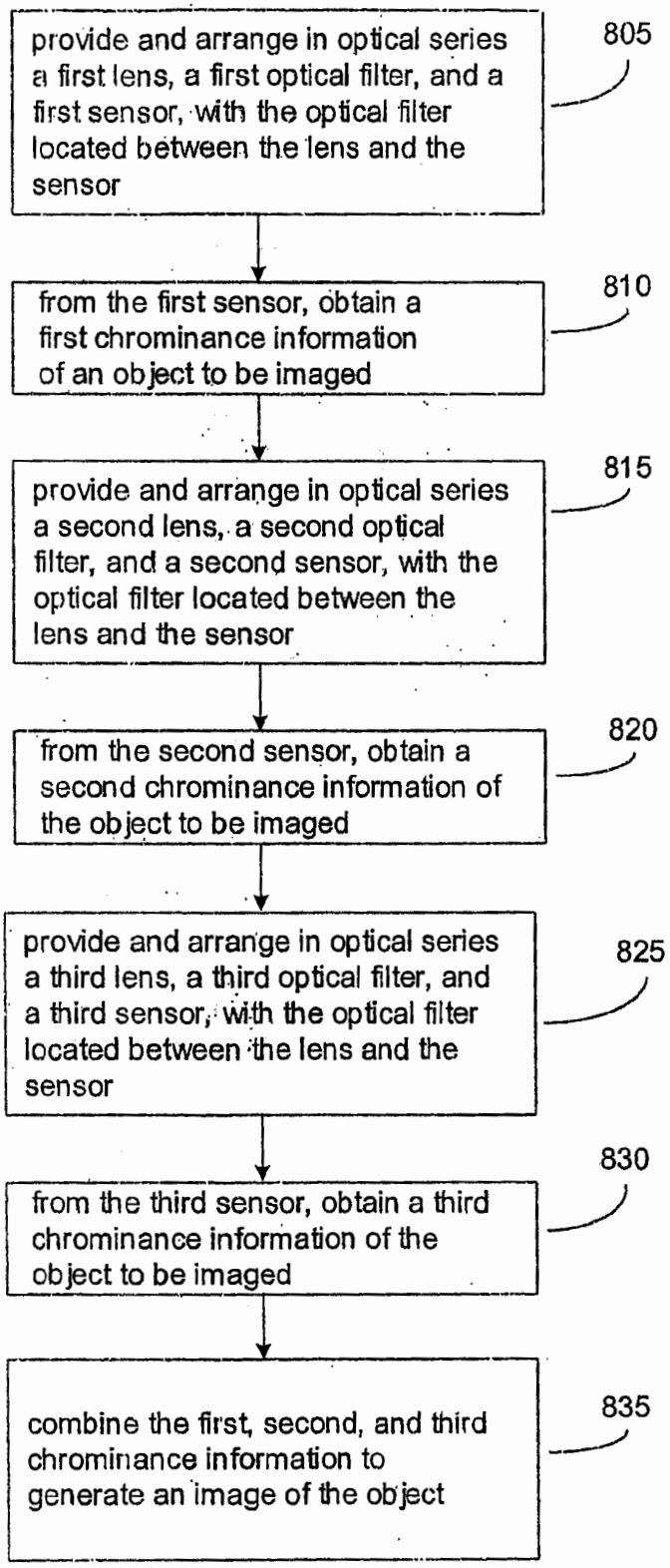

provide and arrange in optical series a first lens, a first optical filter, and a first sensor, with the optical filter located between the lens and the sensor
805
from the first sensor, obtain a first chrominance information of an object to be imaged
810
provide and arrange in optical series a second lens, a second optical filter, and a second sensor, with the optical filter located between the lens and the sensor
815
from the second sensor, obtain a second chrominance information of the object to be imaged
820
provide and arrange in optical series a third lens, a third optical filter, and a third sensor, with the optical filter located between the lens and the sensor
825
from the third sensor, obtain a third chrominance information of the object to be imaged
830
combine the first, second, and third chrominance information to generate an image of the object
835

FIG. 8

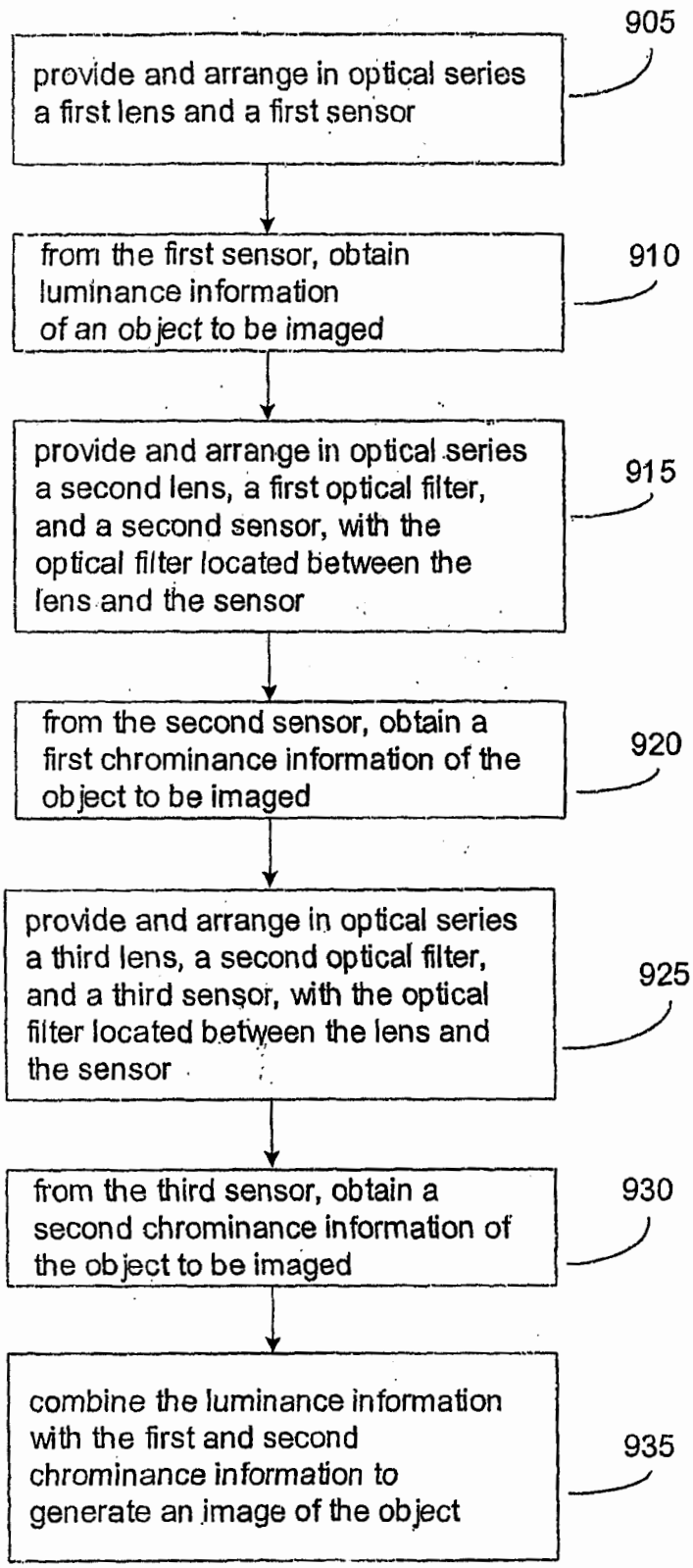

905
provide and arrange in optical series a first lens and a first sensor
910
from the first sensor, obtain luminance information of an object to be imaged
915
provide and arrange in optical series a second lens, a first optical filter, and a second sensor, with the optical filter located between the lens and the sensor
920
from the second sensor, obtain a first chrominance information of the object to be imaged
925
provide and arrange in optical series a third lens, a second optical filter, and a third sensor, with the optical filter located between the lens and the sensor
930
from the third sensor, obtain a second chrominance information of the object to be imaged
935
combine the luminance information with the first and second chrominance information to generate an image of the object

FIG. 9