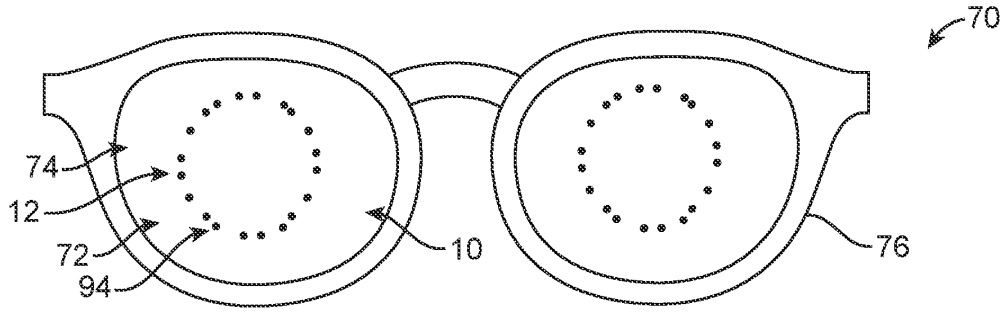


FIG. 1A

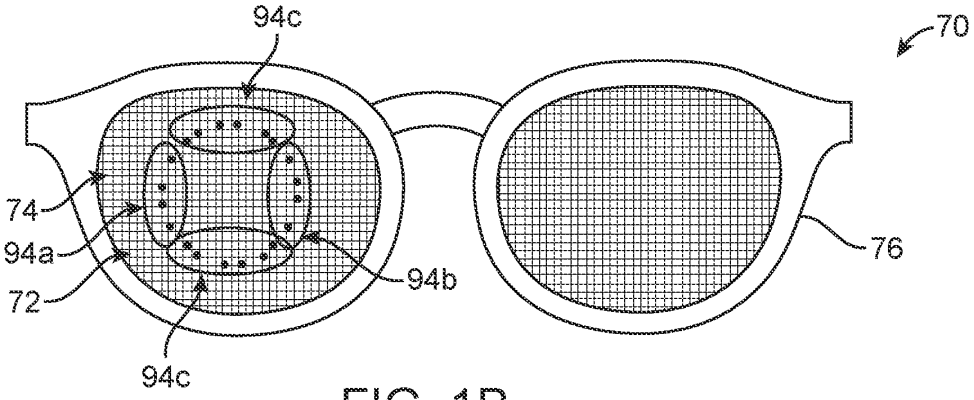


FIG. 1B

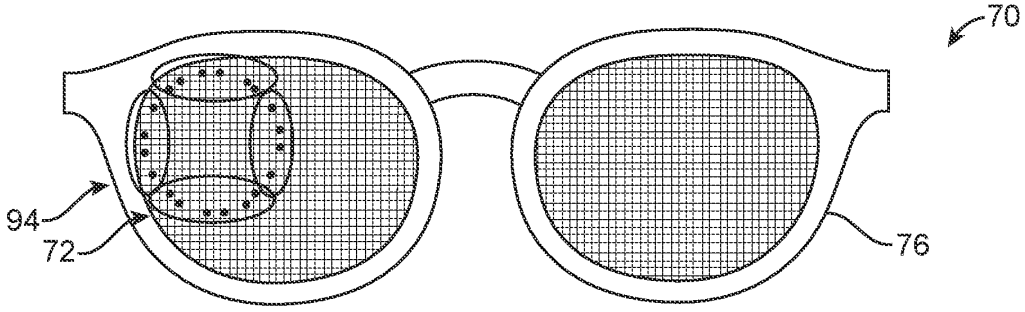


FIG. 1C

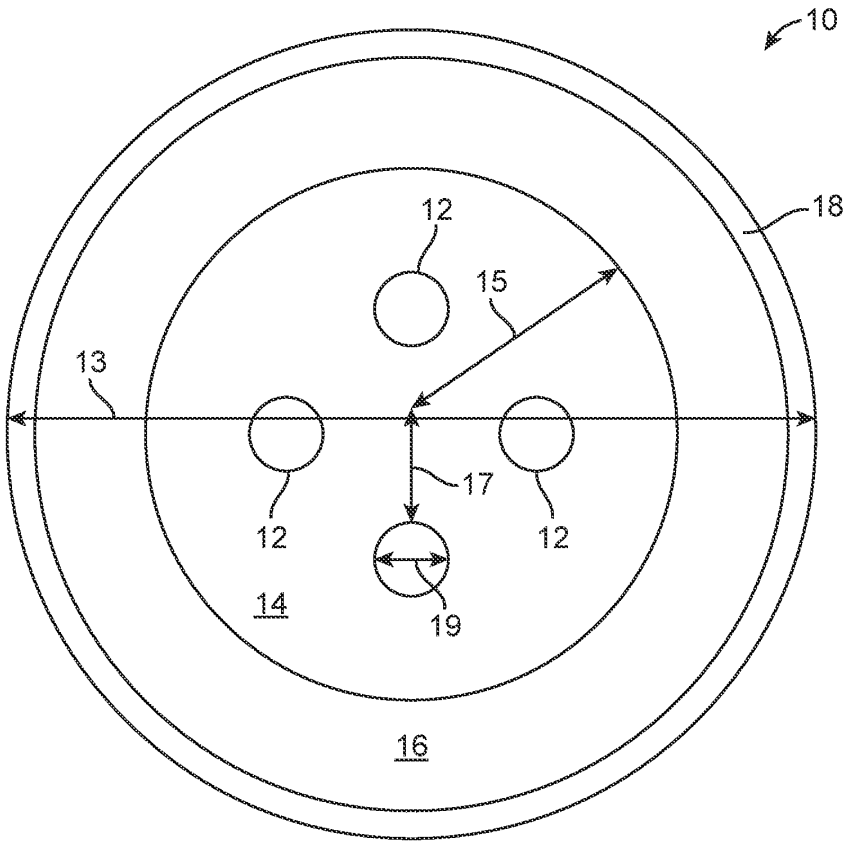


FIG. 2A

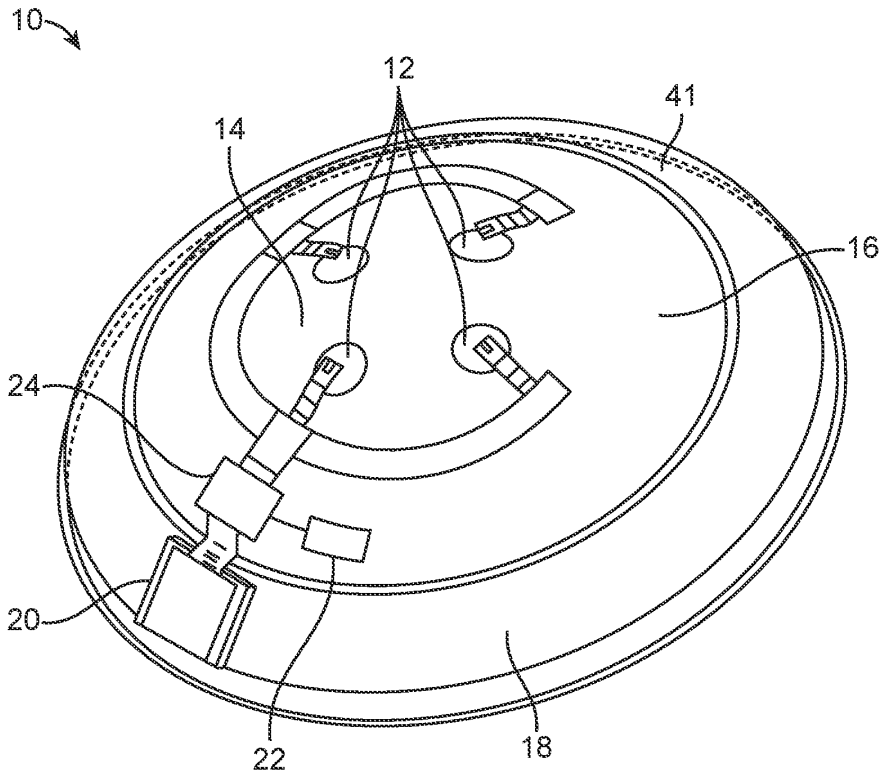


FIG. 2B

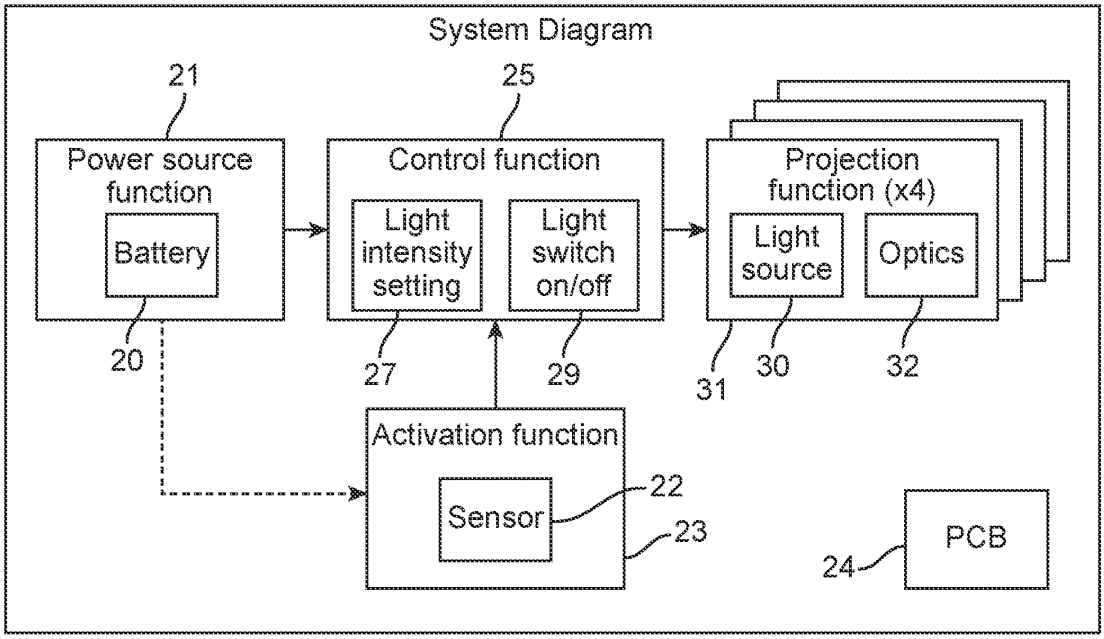

System Diagram
21
25
Power source function
Battery
Control function
Light intensity setting
Light switch on/off
Projection function (x4)
Light source
Optics
20
27
29
31
30
32
Activation function
Sensor
22
23
24
PCB

FIG. 3

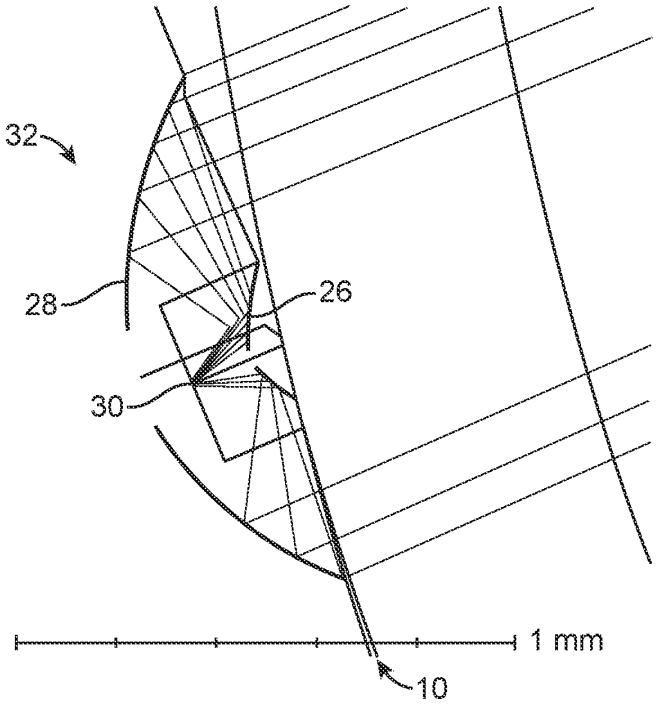


FIG. 4A

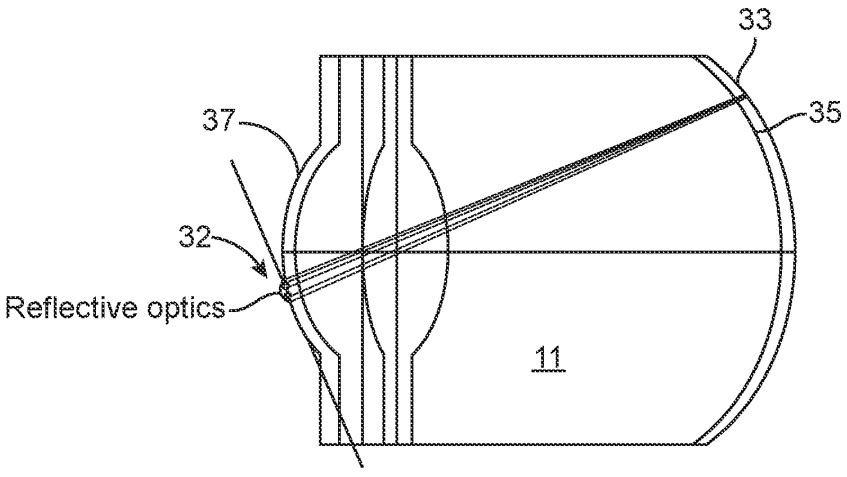


FIG. 4B

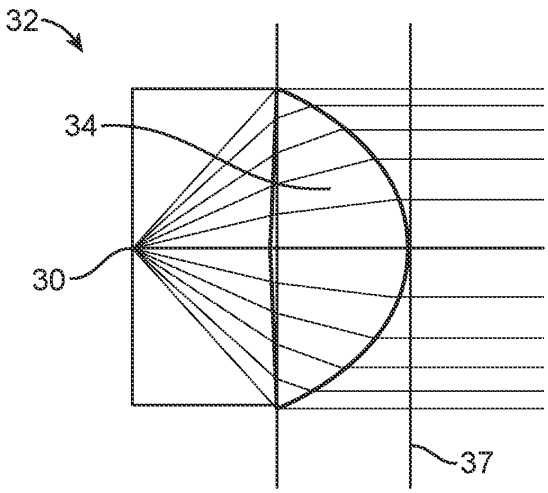


FIG. 5A

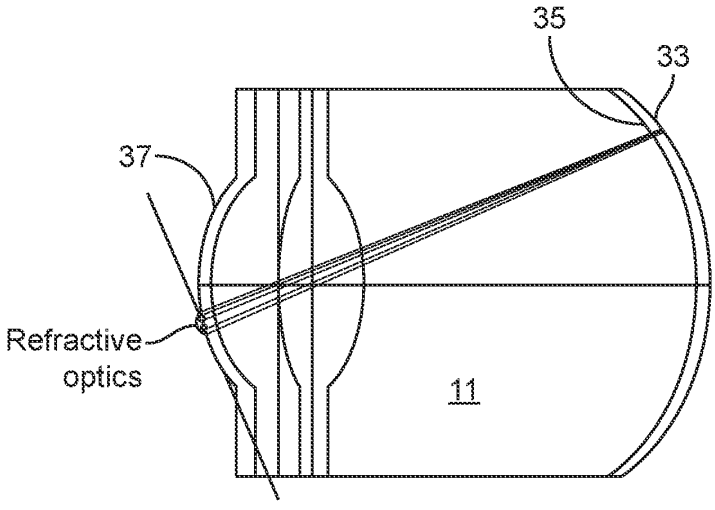


FIG. 5B

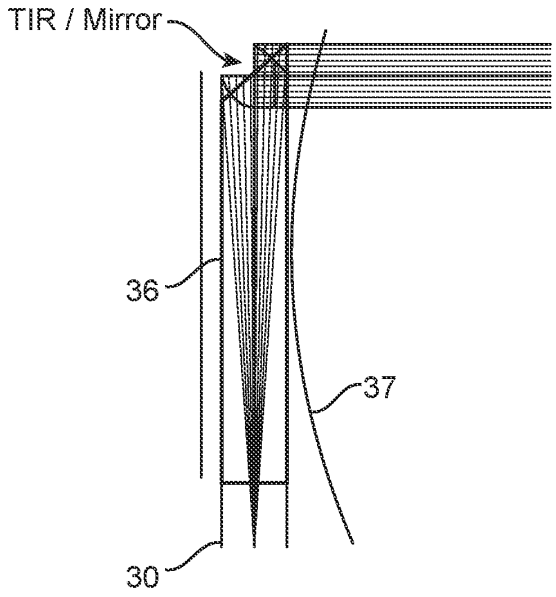


FIG. 6A

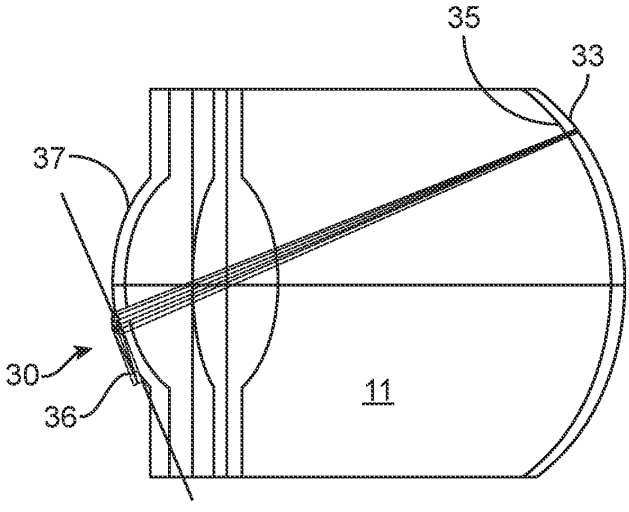


FIG. 6B

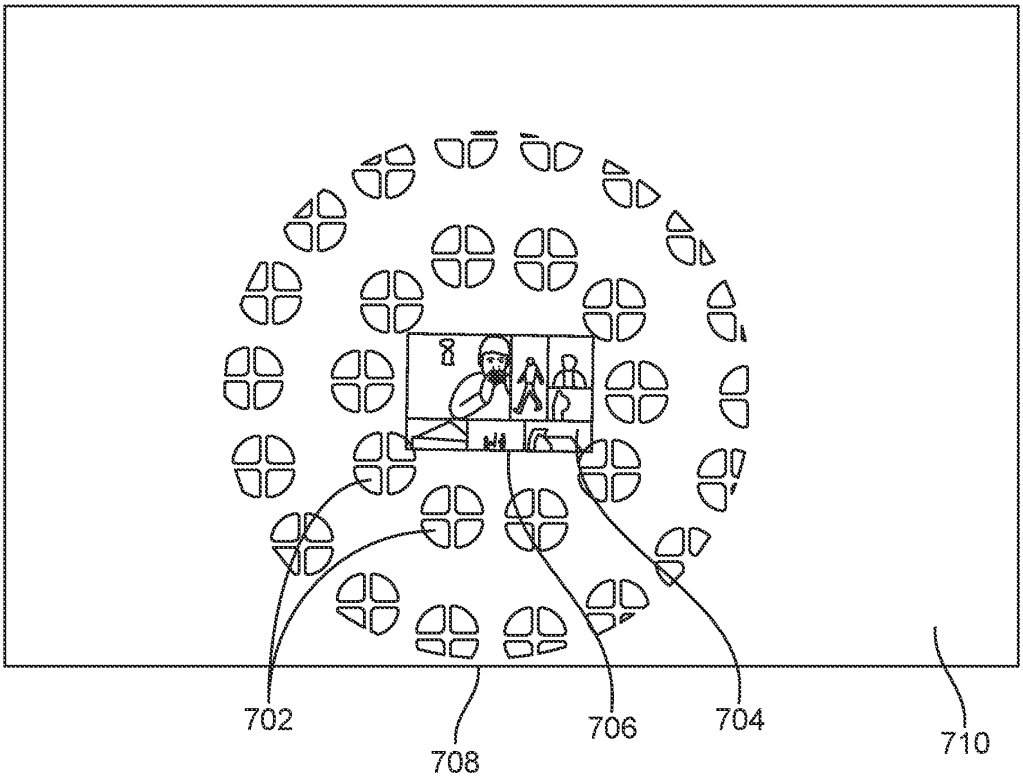


FIG. 7

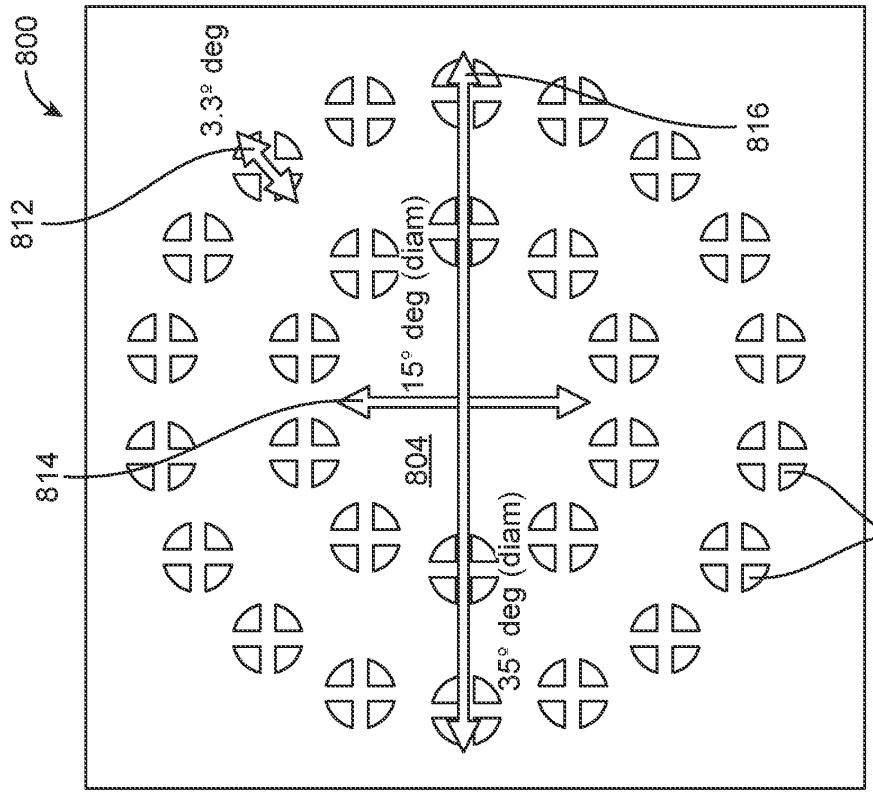

800
3.3° deg
812
816
15° deg (diam)
814
804
35° deg (diam)
702

FIG. 8B

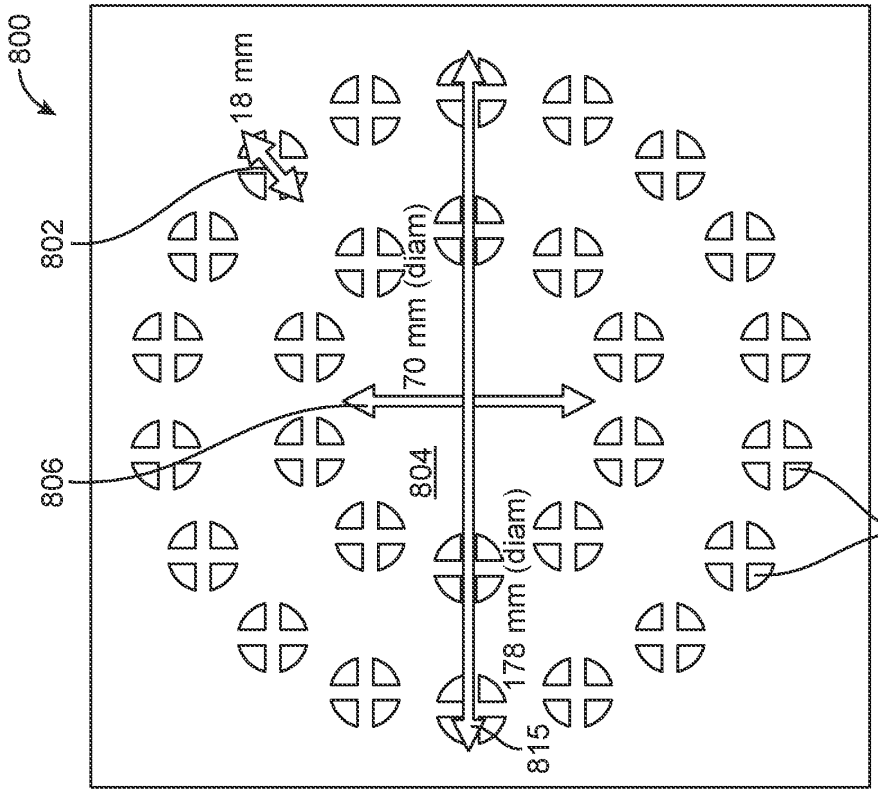

800
18 mm
802
70 mm (diam)
806
804
178 mm (diam)
815
702

FIG. 8A

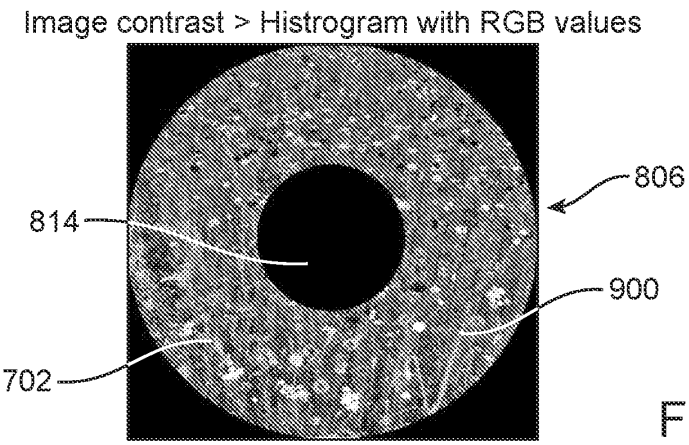

Image contrast > Histrogram with RGB values
806
814
900
702

FIG. 9

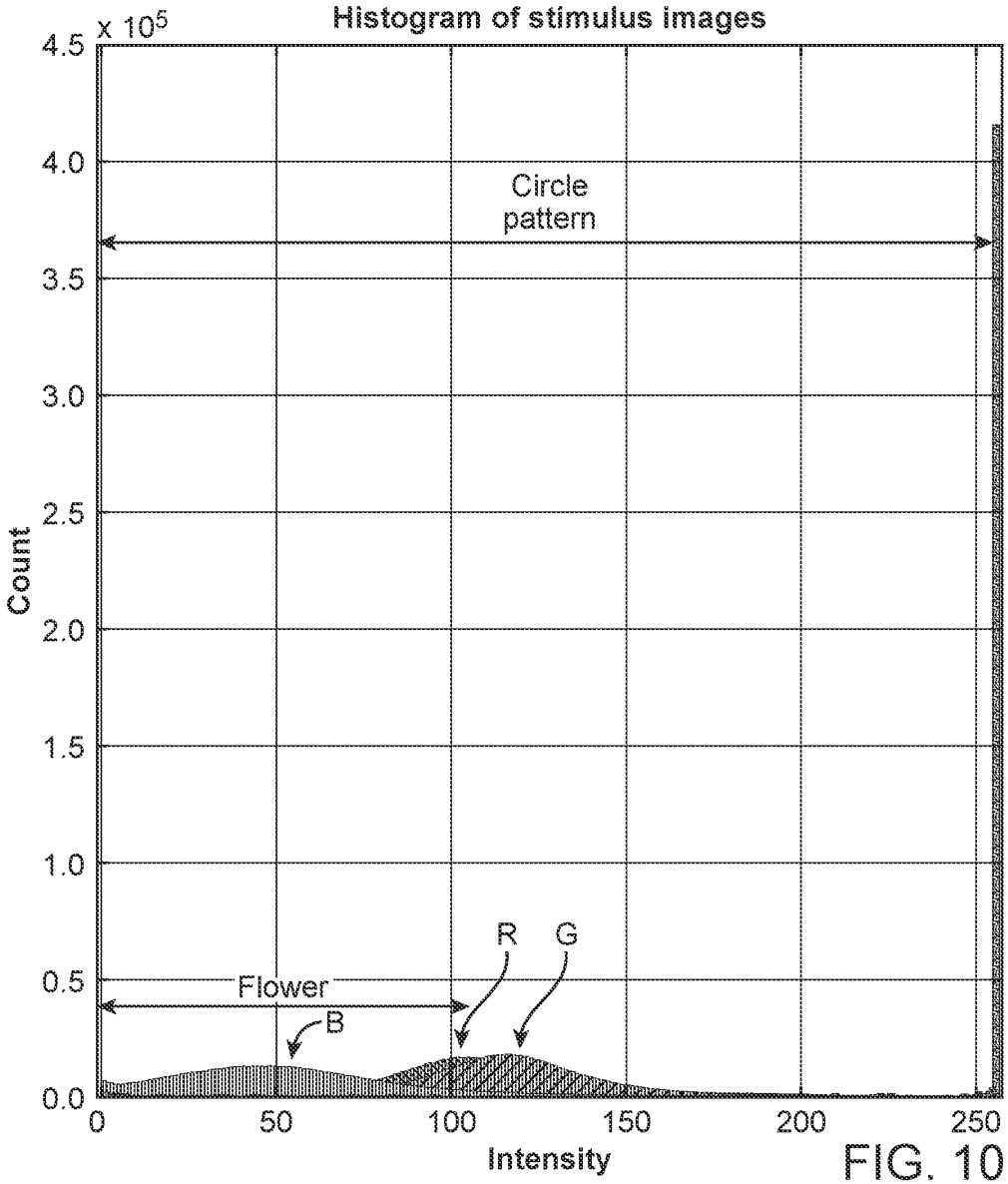

Histogram of stimulus images
x 10^5
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Count
Circle pattern
R
G
Flower
B
0
50
100
150
200
250
Intensity

FIG. 10

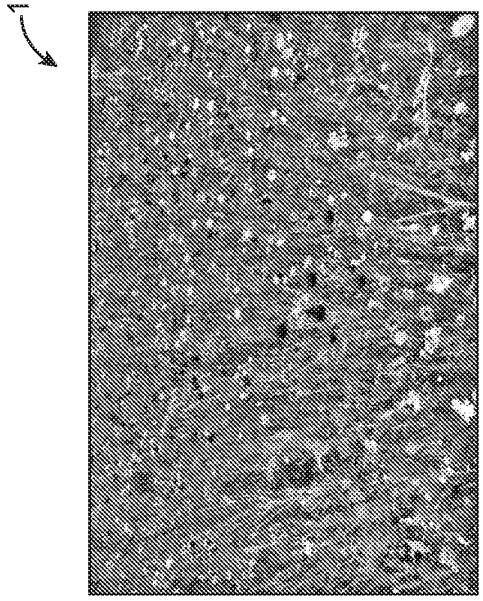


FIG. 11

FIG. 12

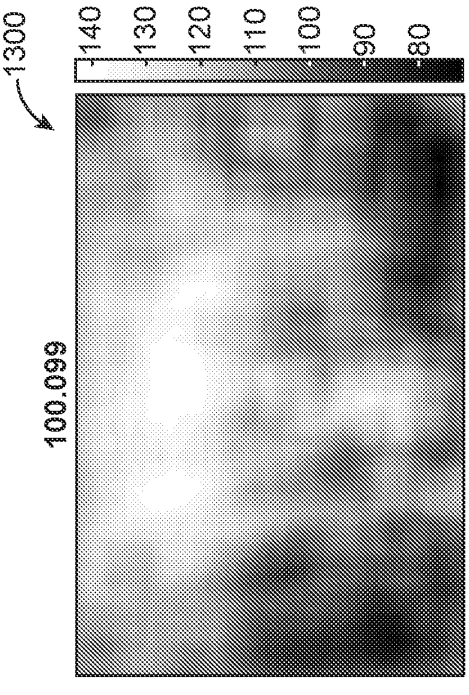


FIG. 13

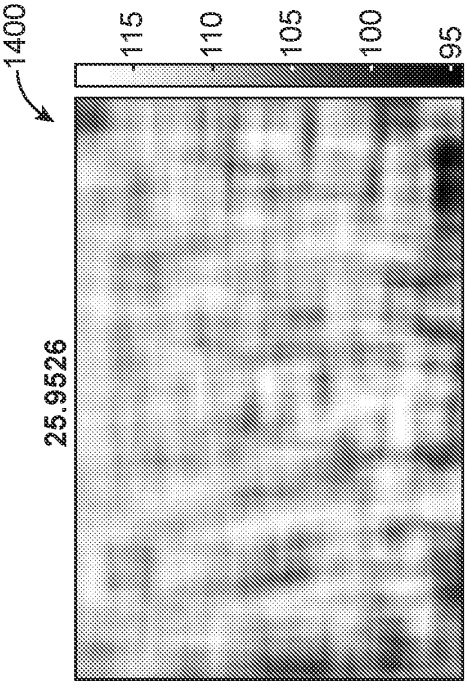


FIG. 14

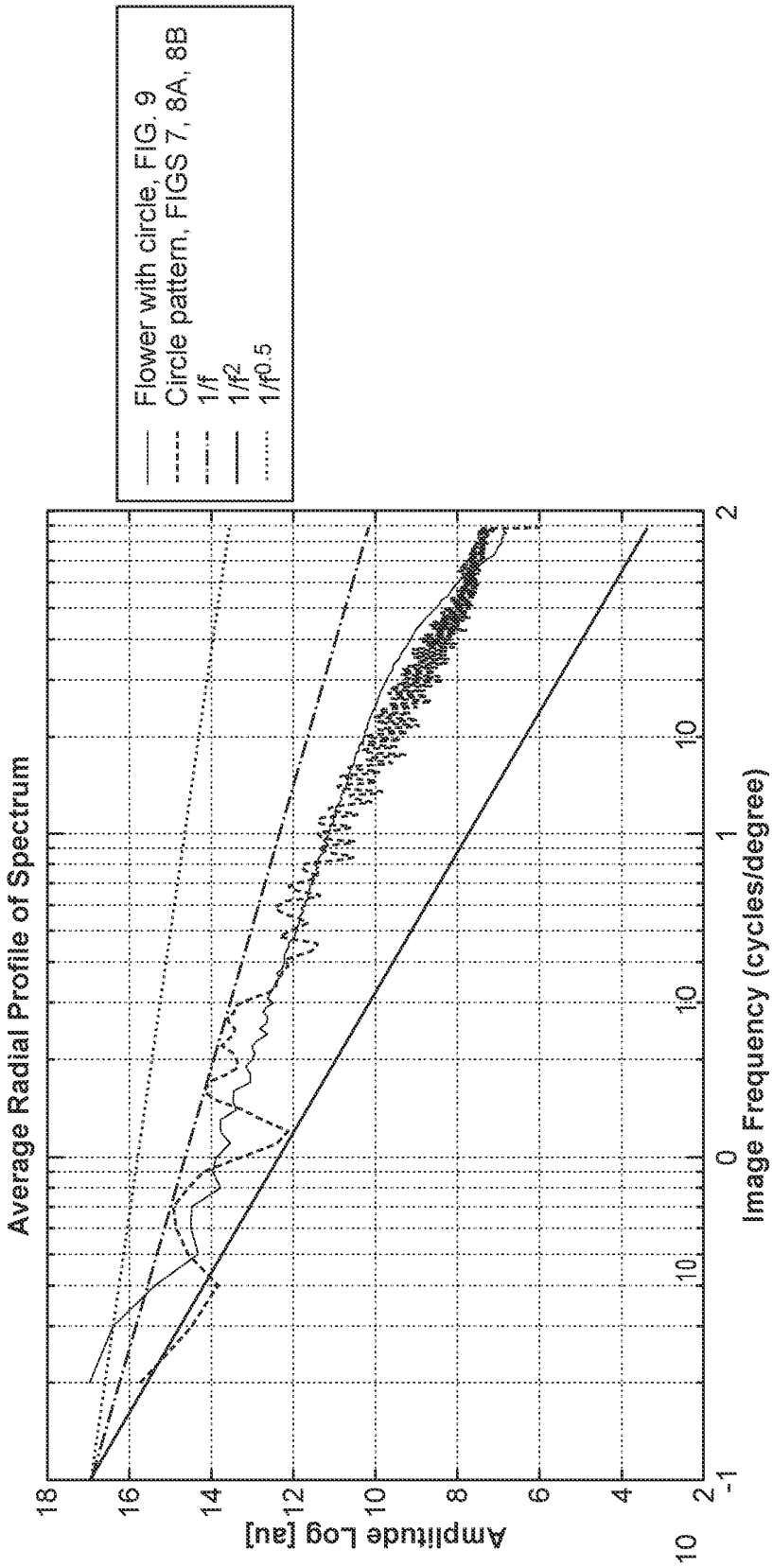

Flower with circle, FIG. 9
Circle pattern, FIGS 7, 8A, 8B
1/f
1/f^2
1/f^0.5
Average Radial Profile of Spectrum
Amplitude Log [au]
Image Frequency (cycles/degree)
18
16
14
12
10
8
6
4
2
10
-1
0
1
2

FIG. 15

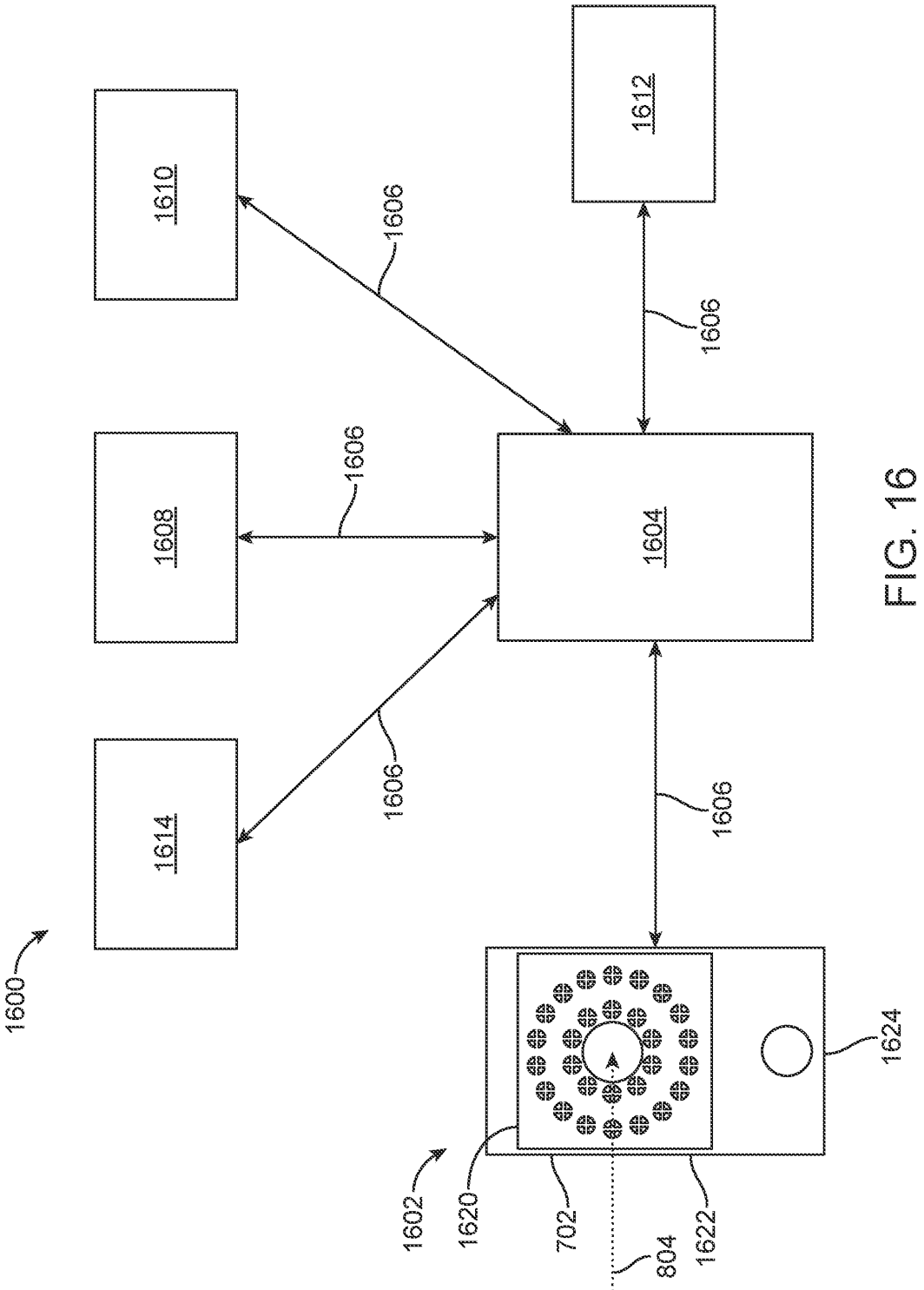

1600
1602
1604
1606
1608
1610
1612
1614
1620
1622
1624
702
804

FIG. 16

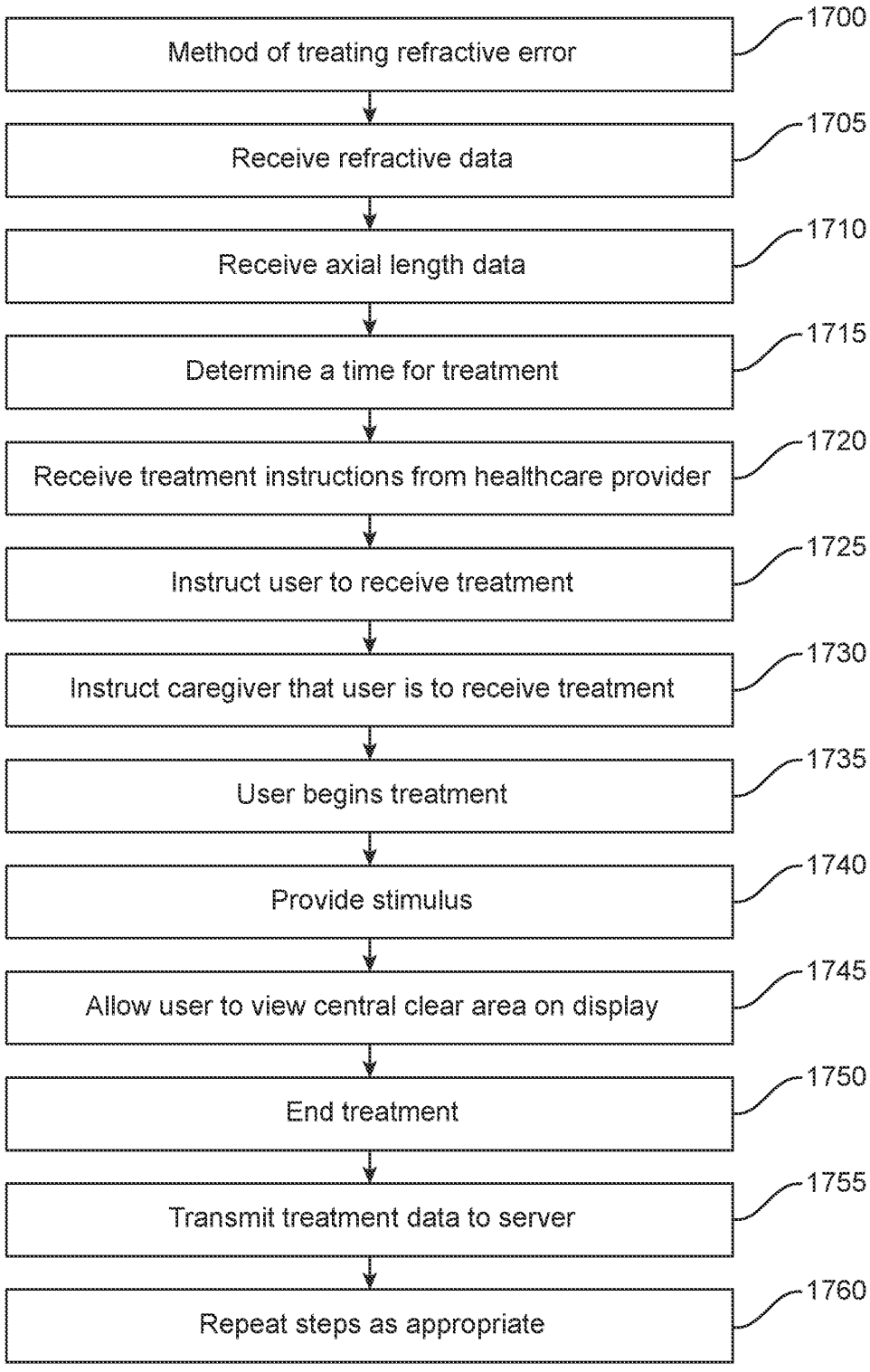

Method of treating refractive error
1700
Receive refractive data
1705
Receive axial length data
1710
Determine a time for treatment
1715
Receive treatment instructions from healthcare provider
1720
Instruct user to receive treatment
1725
Instruct caregiver that user is to receive treatment
1730
User begins treatment
1735
Provide stimulus
1740
Allow user to view central clear area on display
1745
End treatment
1750
Transmit treatment data to server
1755
Repeat steps as appropriate
1760

FIG. 17

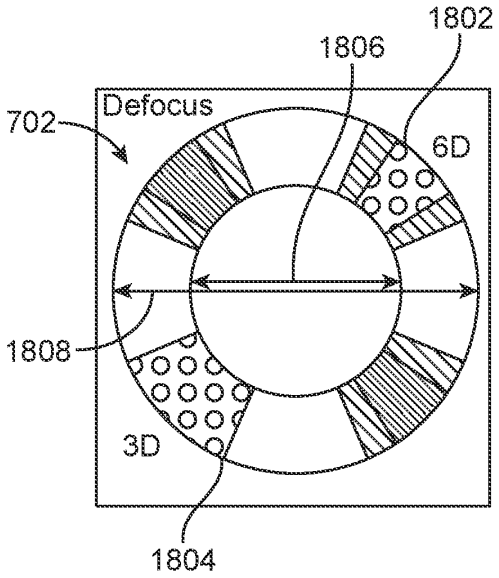


FIG. 18A

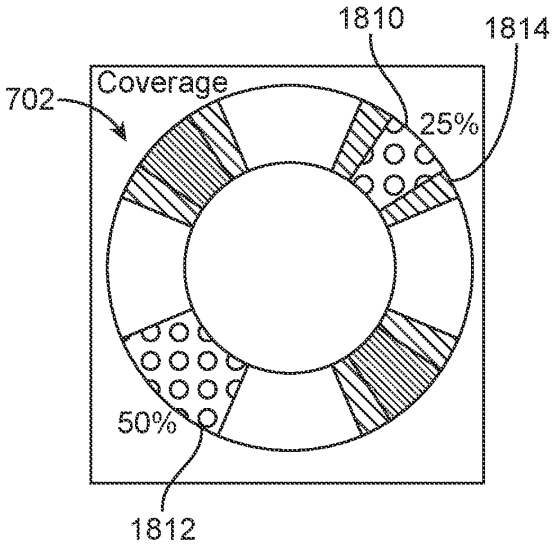


FIG. 18B

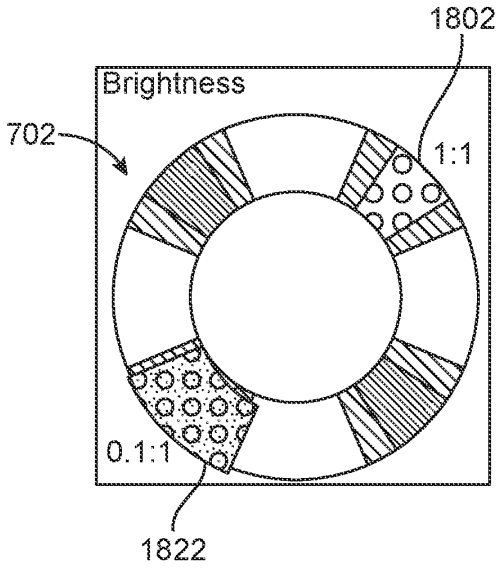


FIG. 18C

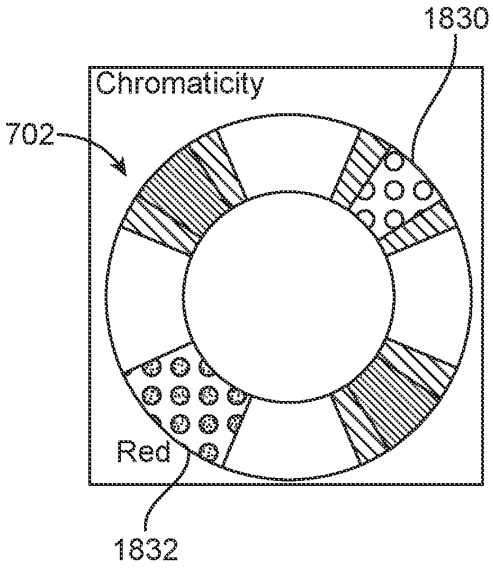


FIG. 18D

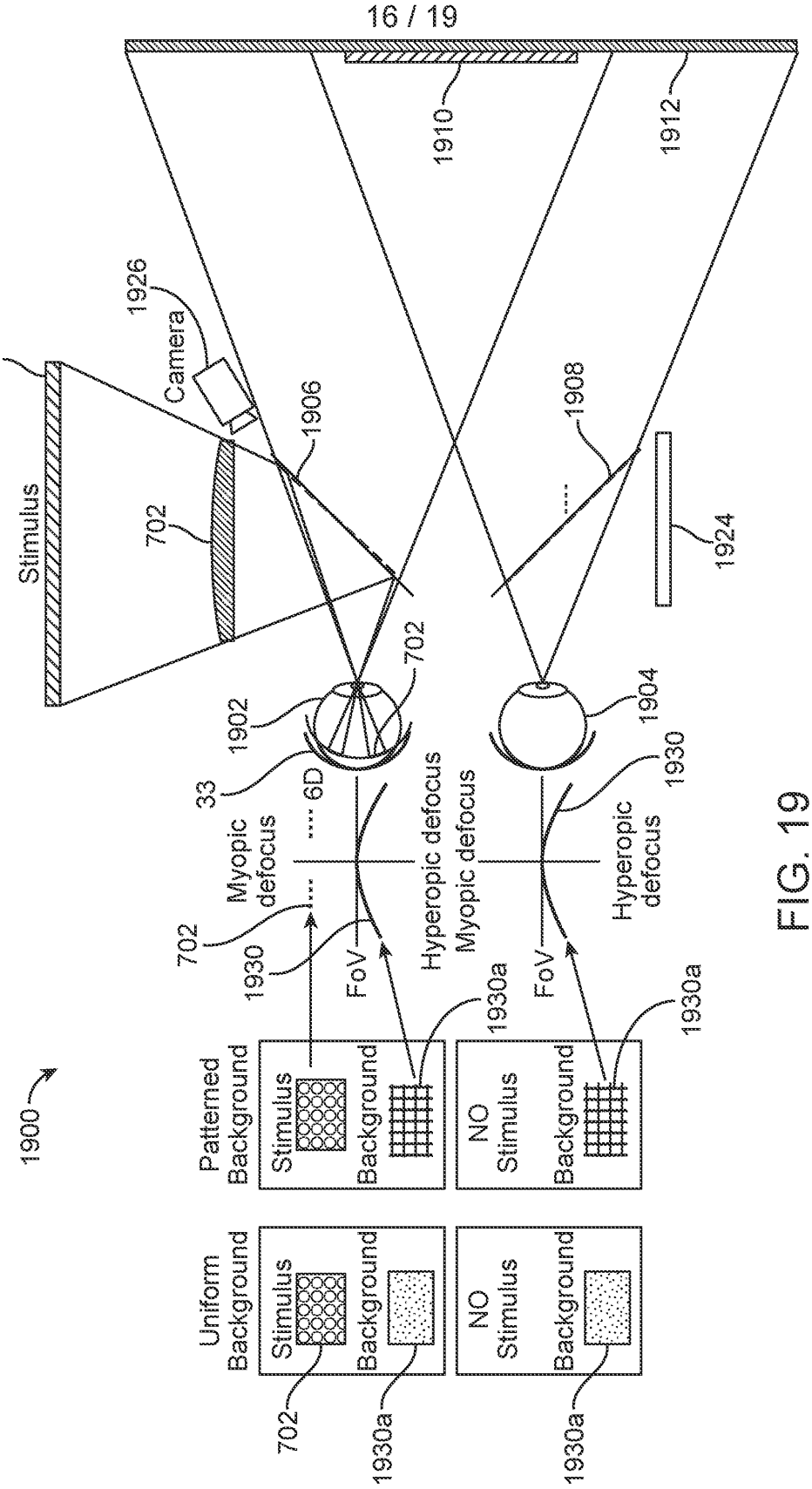

1900
Uniform Background
Stimulus
Background
NO Stimulus
Background
Patterned Background
Stimulus
Background
NO Stimulus
Background
702
1930a
1930a
1930a
1930
702
Myopic defocus
6D
33
Hyperopic defocus
Myopic defocus
Hyperopic defocus
FoV
FoV
1902
1904
702
1930
1920
Stimulus
702
1926
Camera
1906
1908
1910
1912
1924

FIG. 19

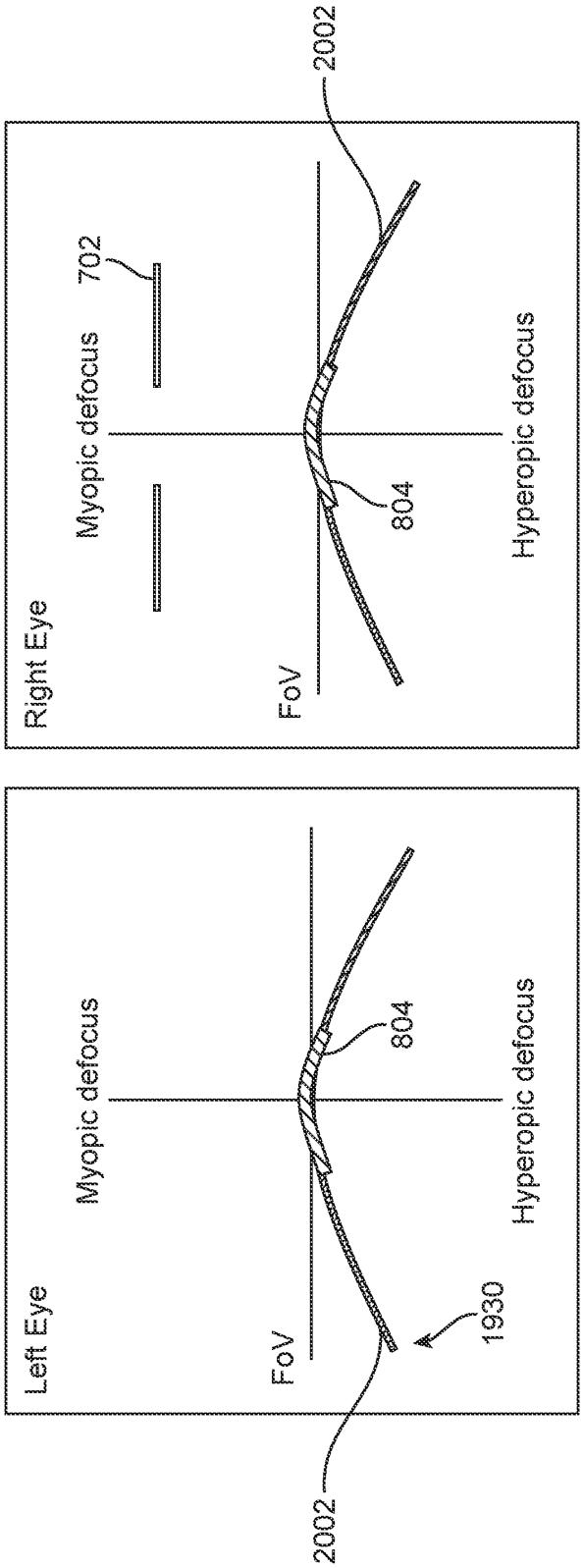


FIG. 20A

FIG. 20B

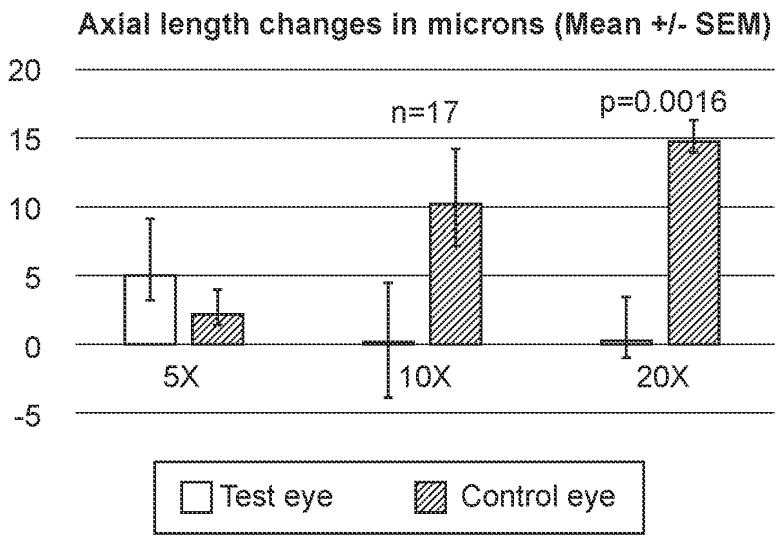

Axial length changes in microns (Mean +/- SEM)
20
15
10
5
0
-5
n=17
p=0.0016
5X
10X
20X
Test eye
Control eye

FIG. 21

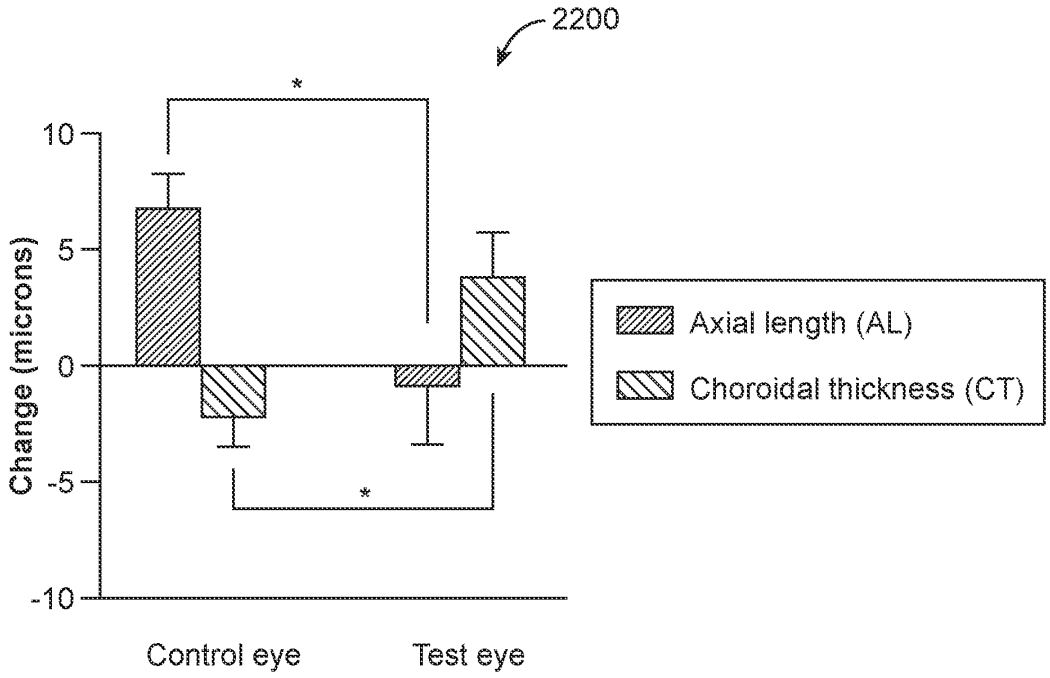

2200
*
10
5
0
-5
-10
Change (microns)
*
Axial length (AL)
Choroidal thickness (CT)
Control eye
Test eye

FIG. 22

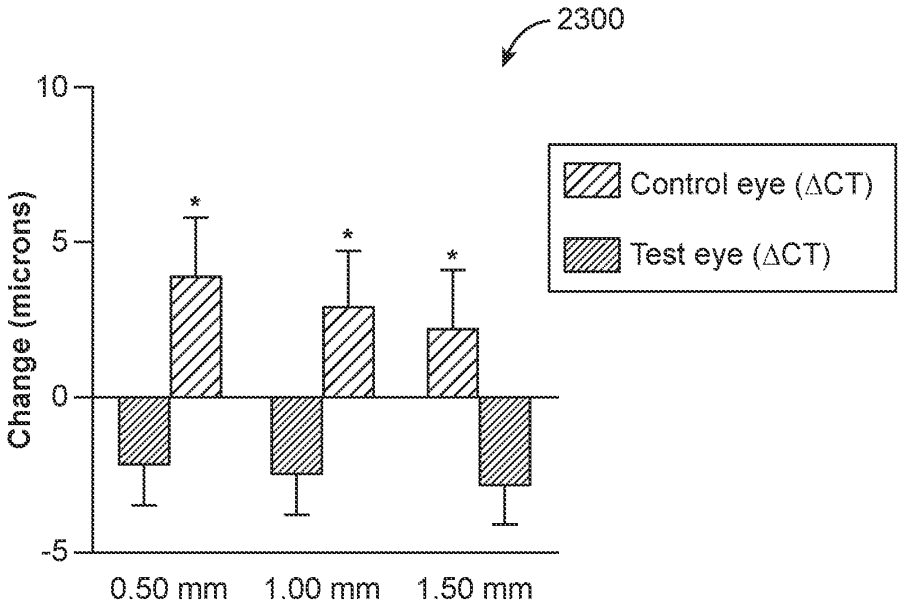

2300
10
5
0
-5
Change (microns)
*
*
*
Control eye (ΔCT)
Test eye (ΔCT)
0.50 mm
1.00 mm
1.50 mm

FIG. 23