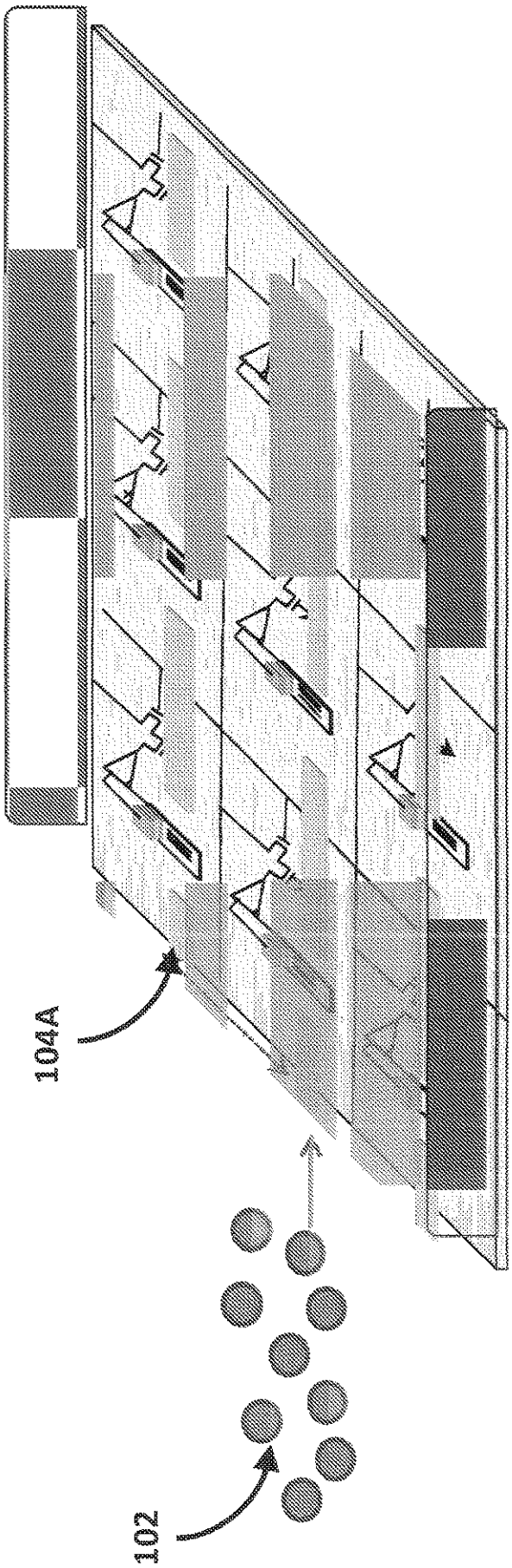


FIG. 1A

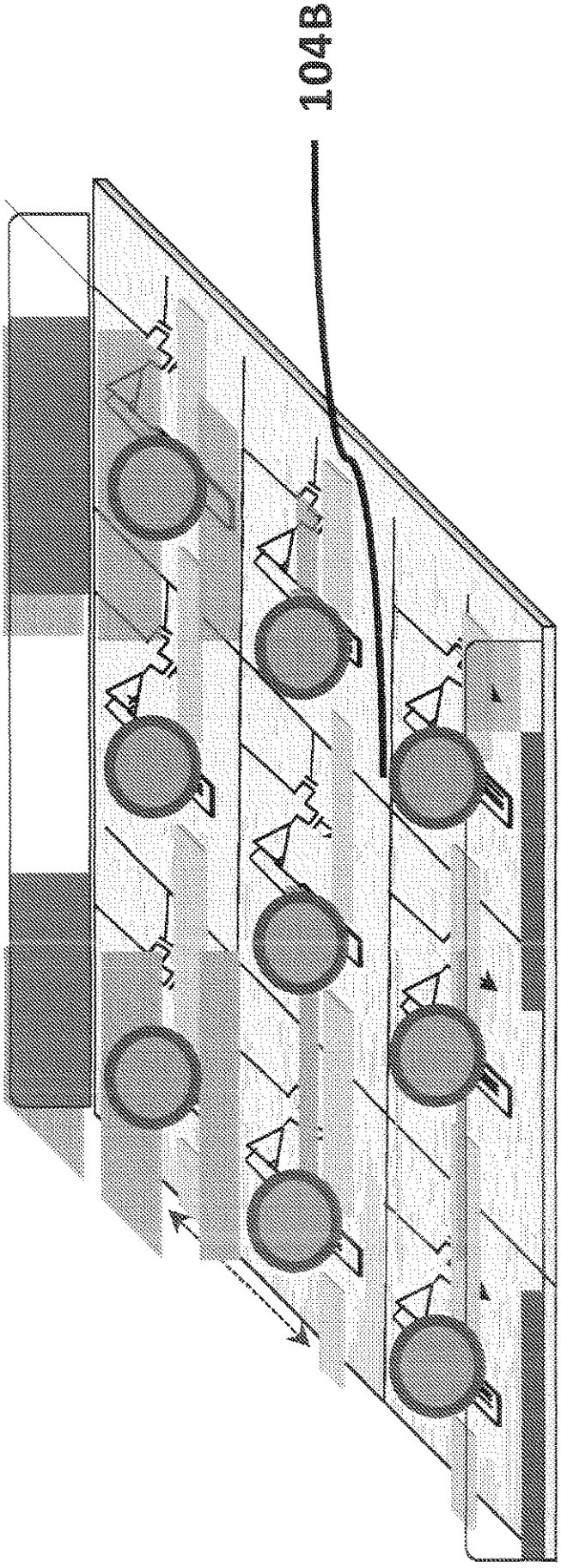


FIG. 1B

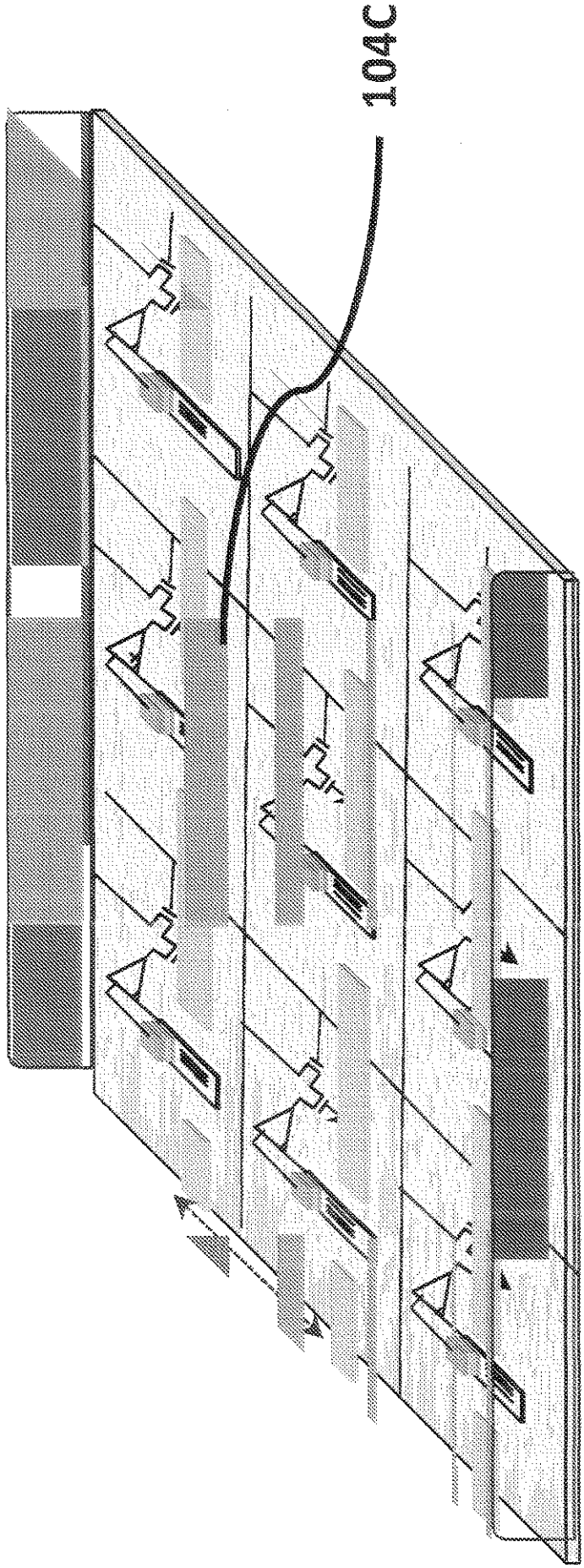


FIG. 1C

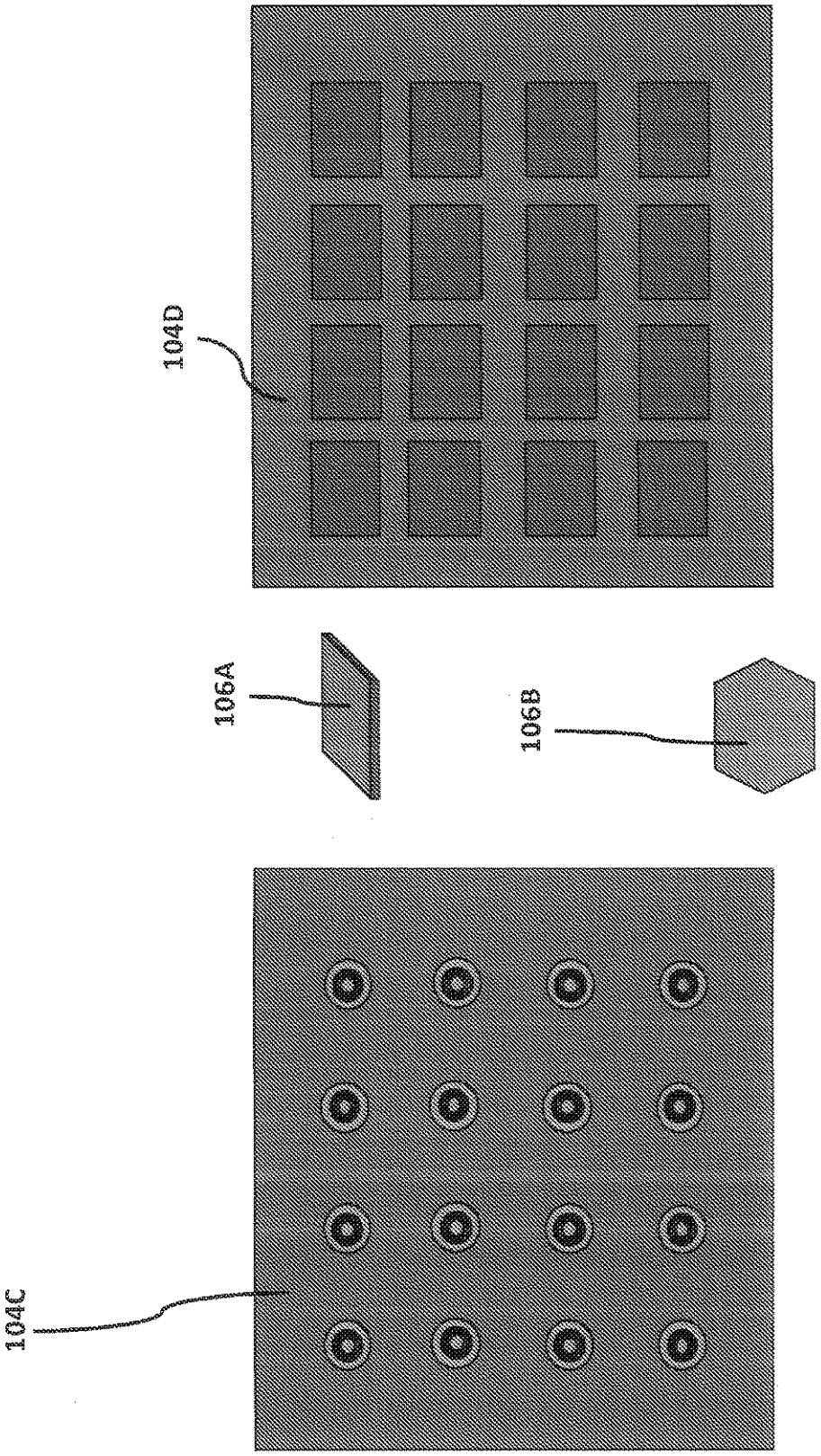


FIG. 1D

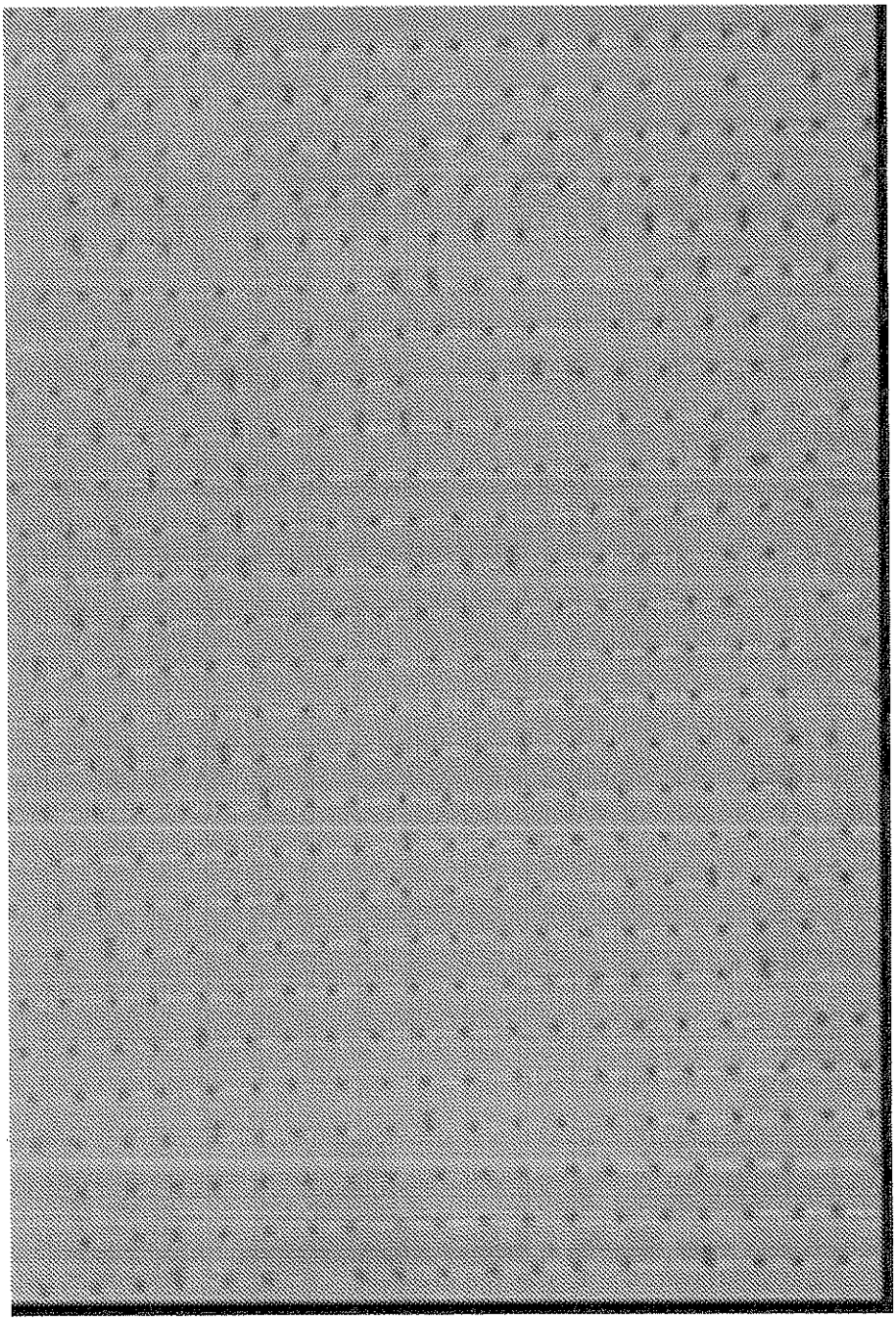


FIG. 2A

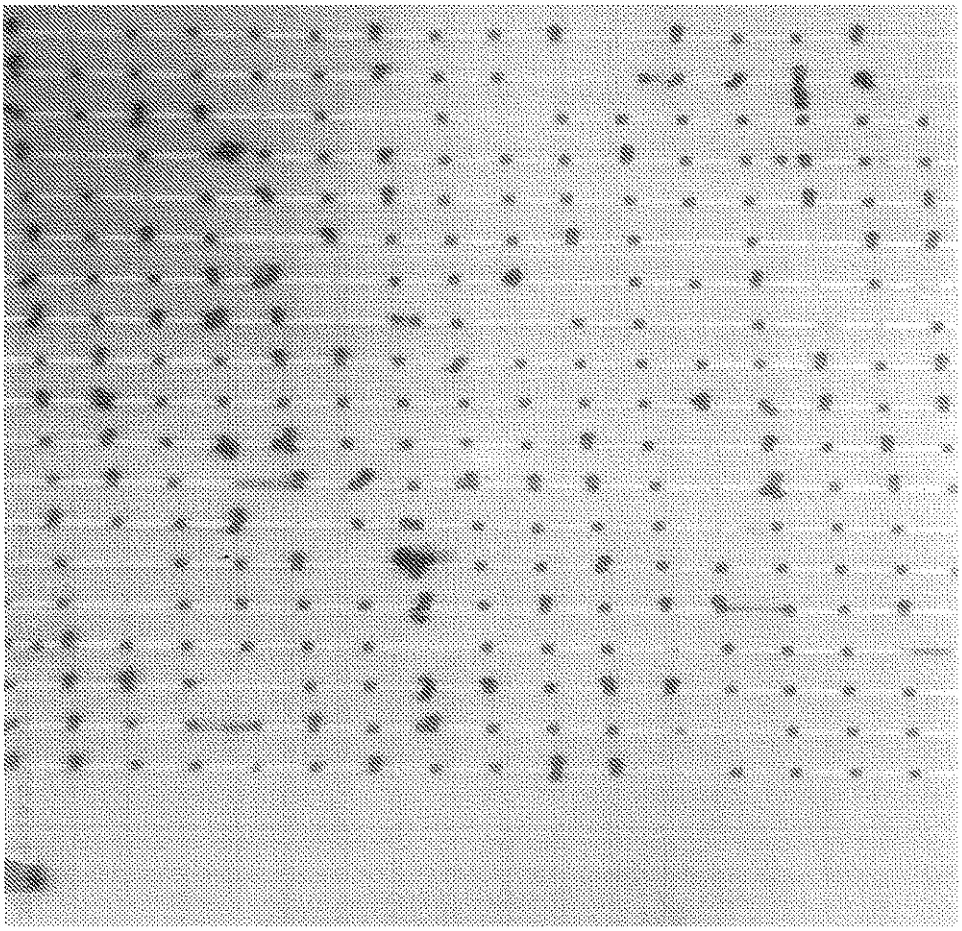


FIG. 2B

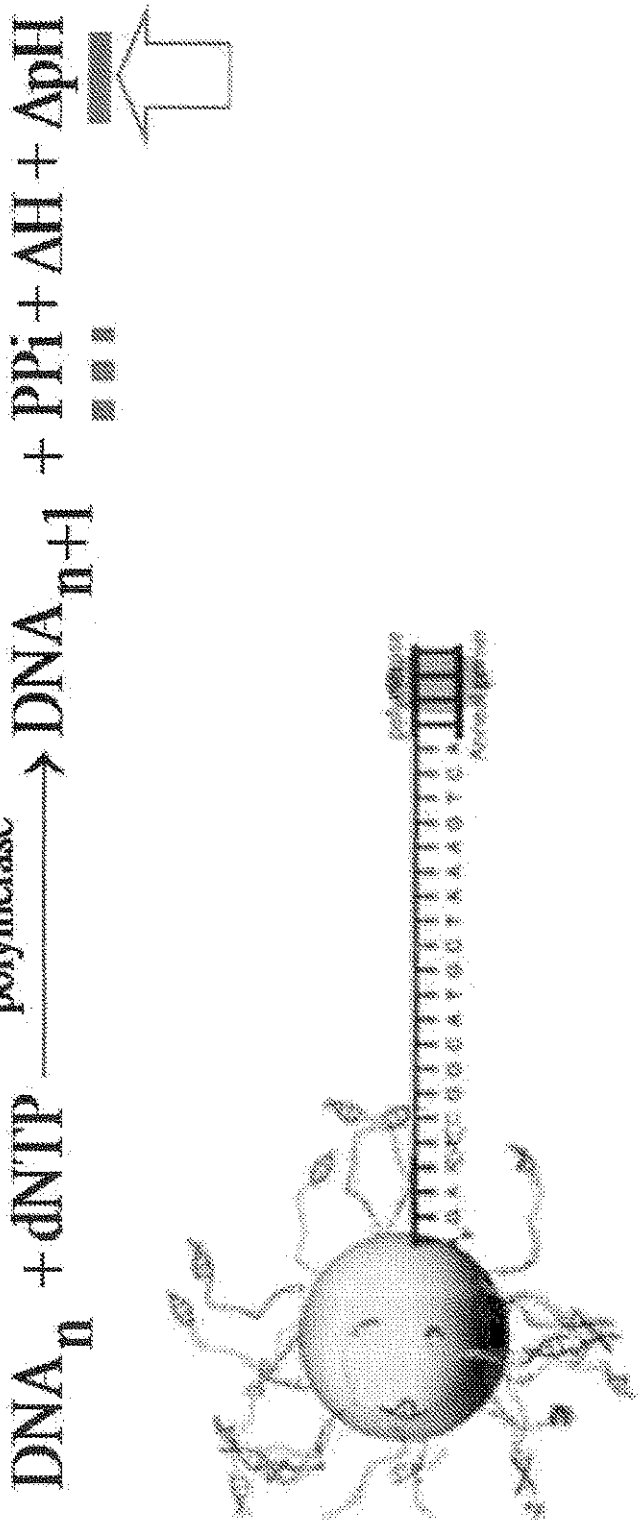


FIG. 3

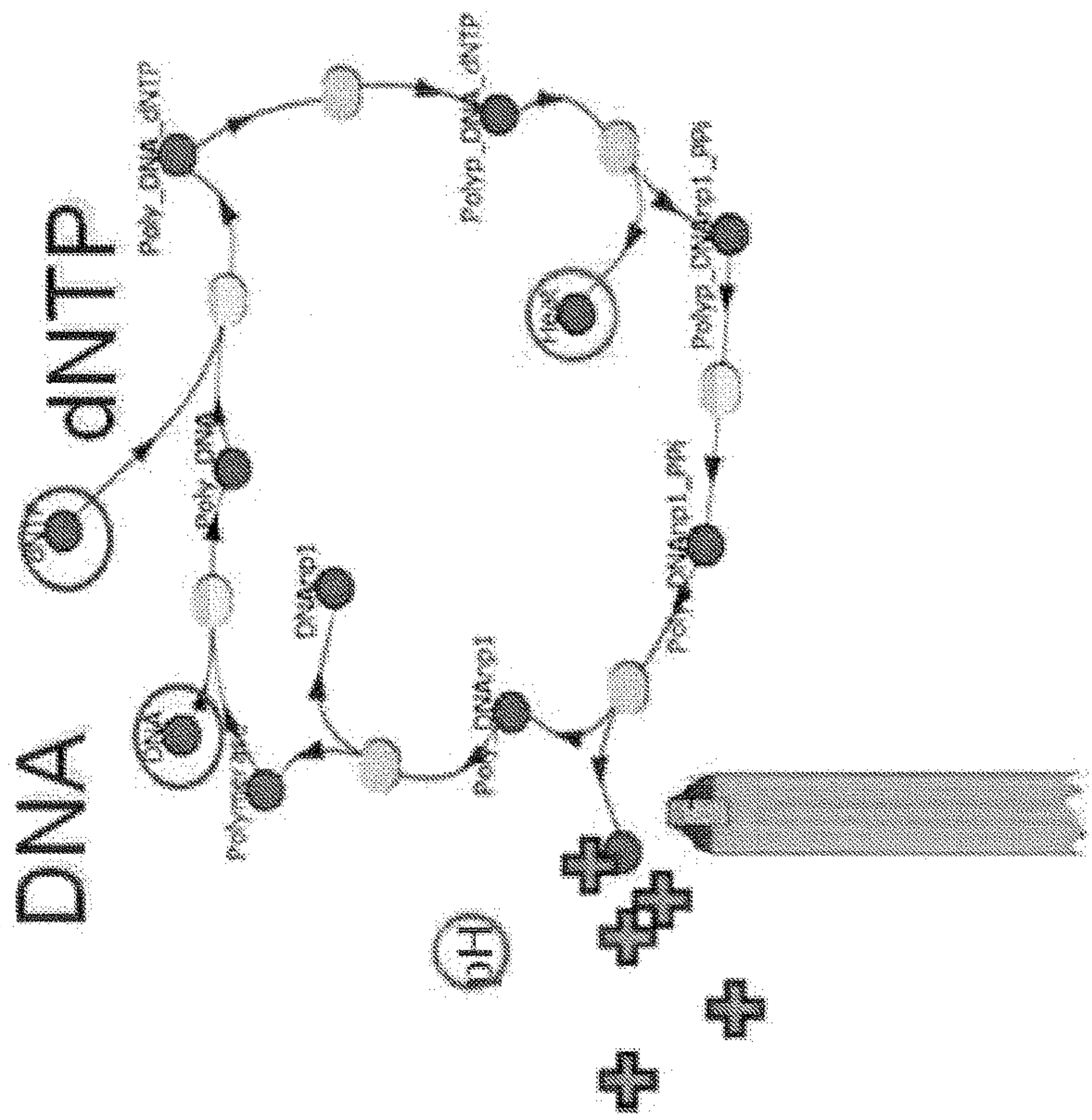


FIG. 4

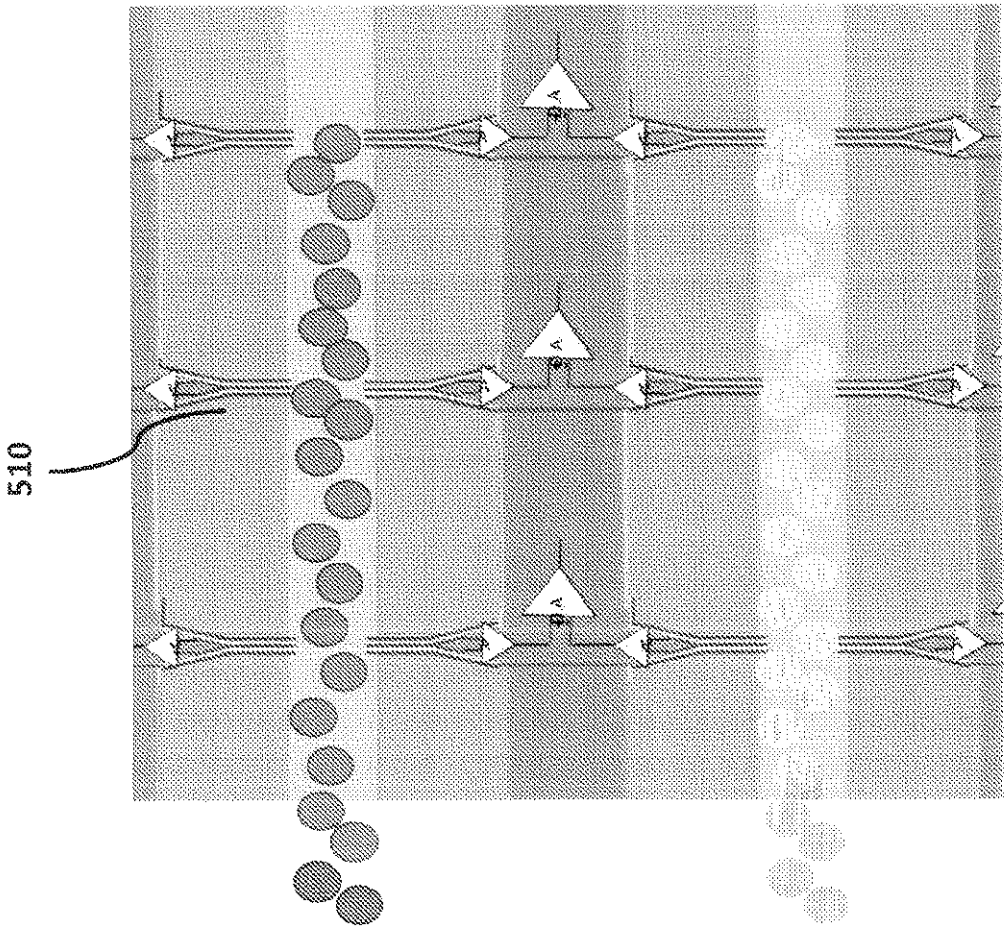


FIG. 5A

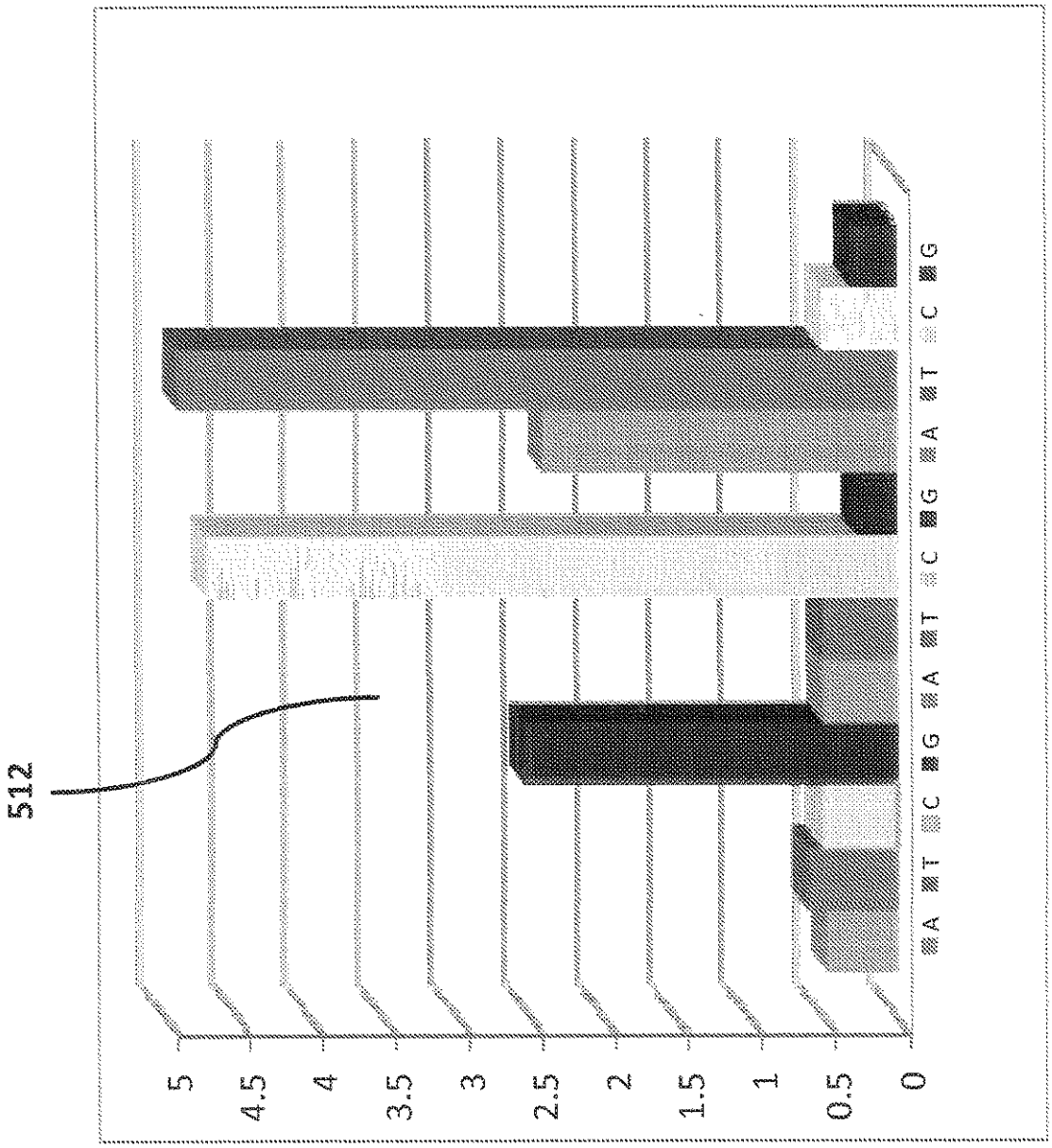


FIG. 5B

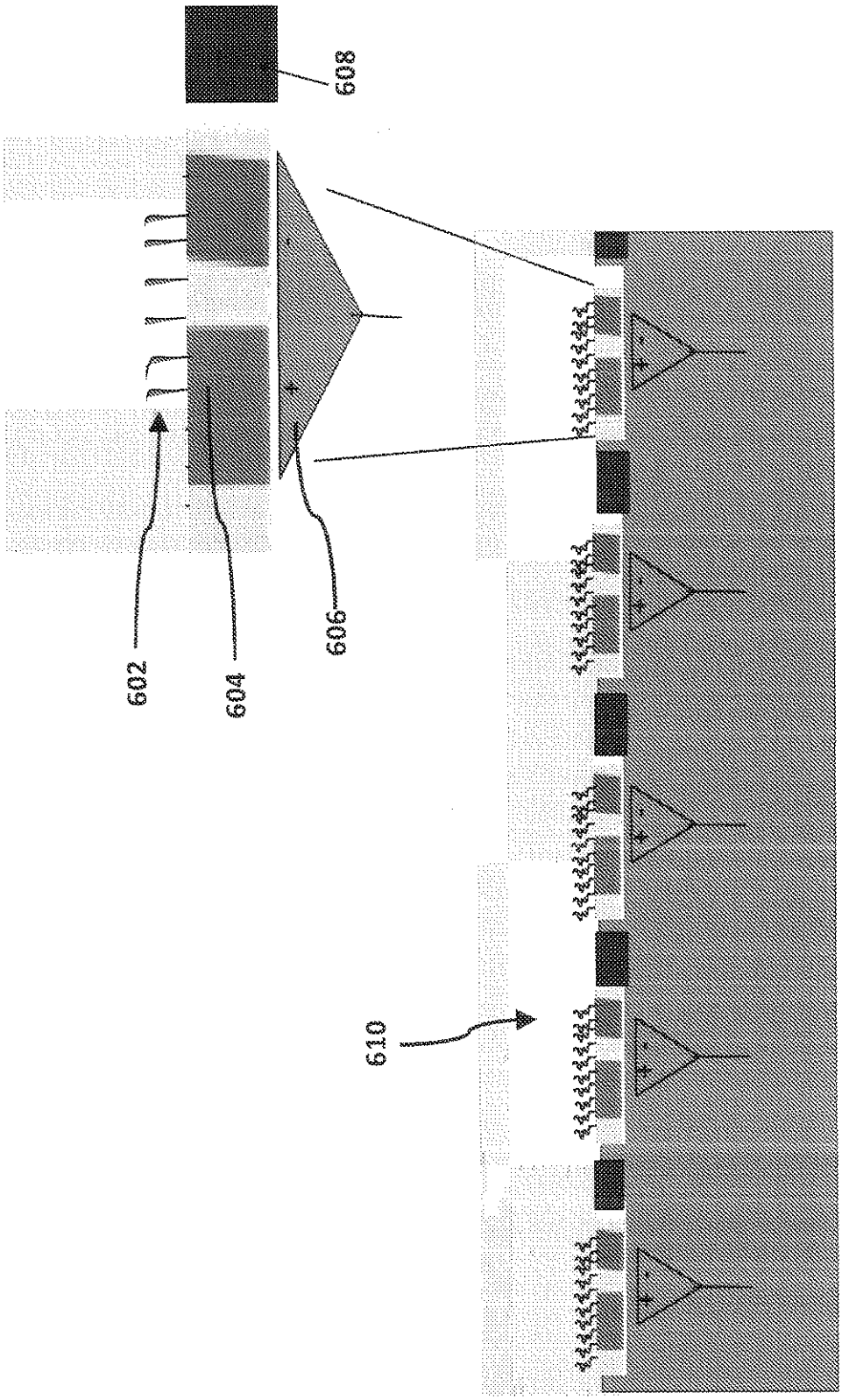


FIG. 6

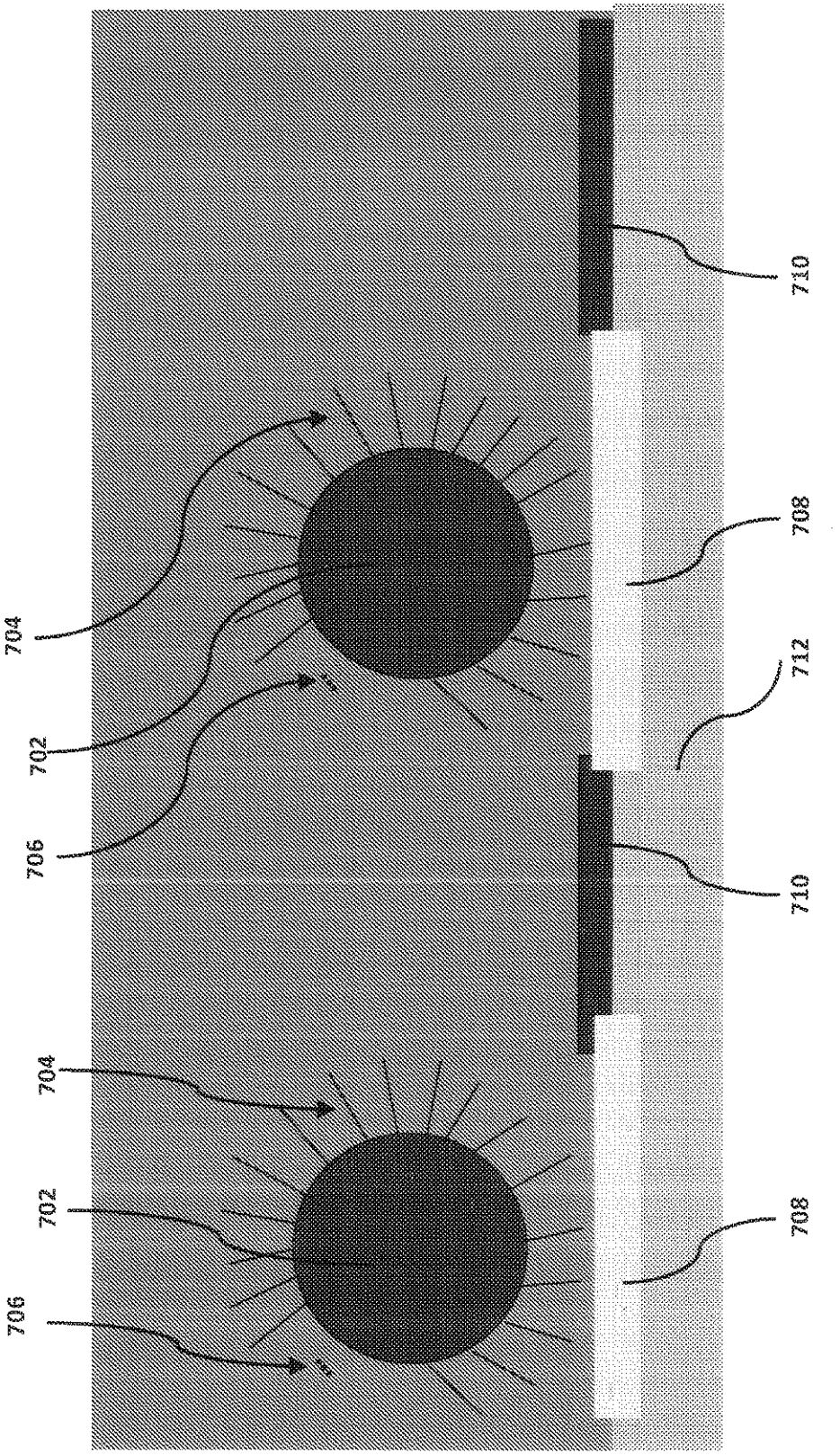


FIG. 7

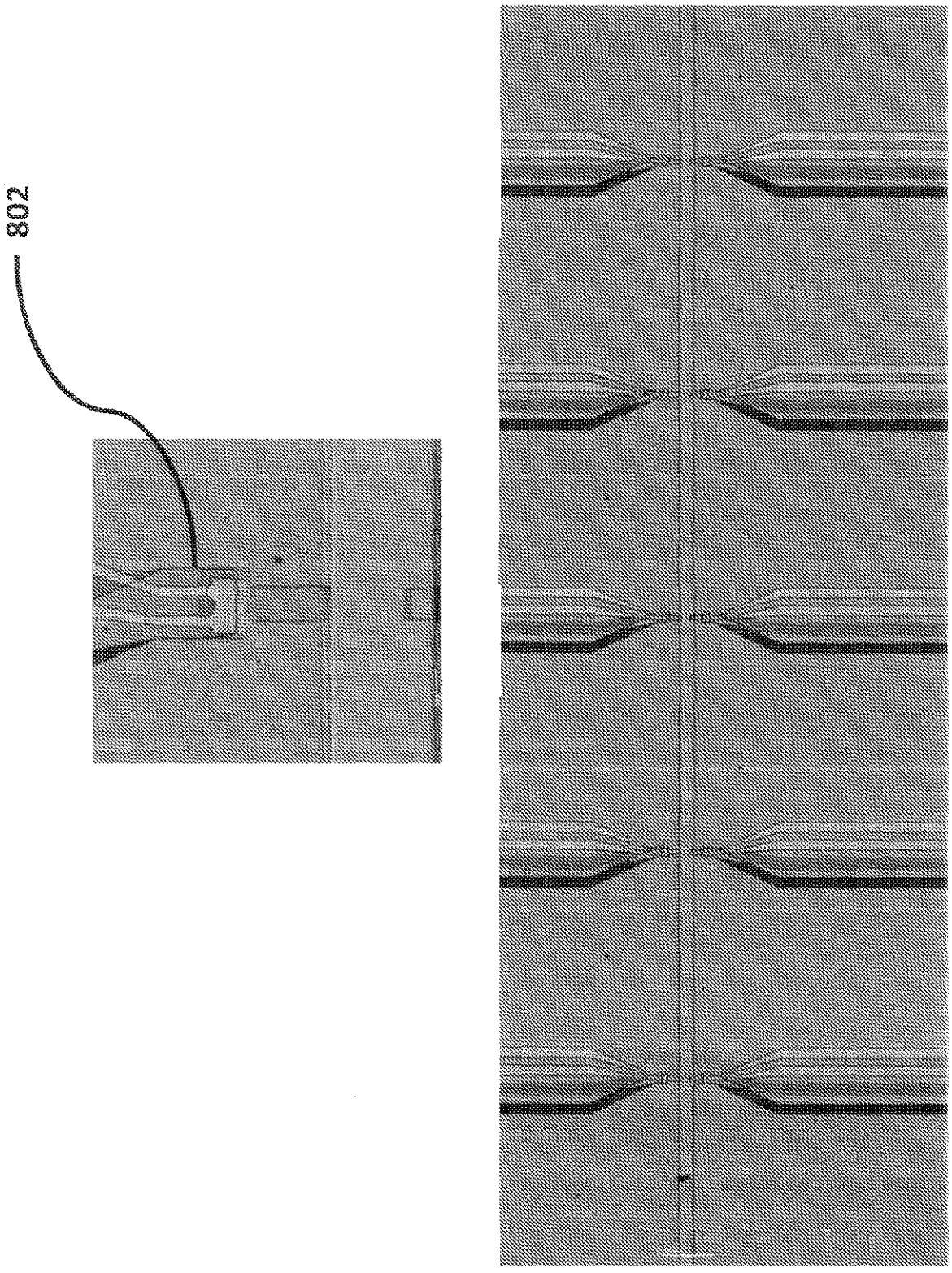


FIG. 8A

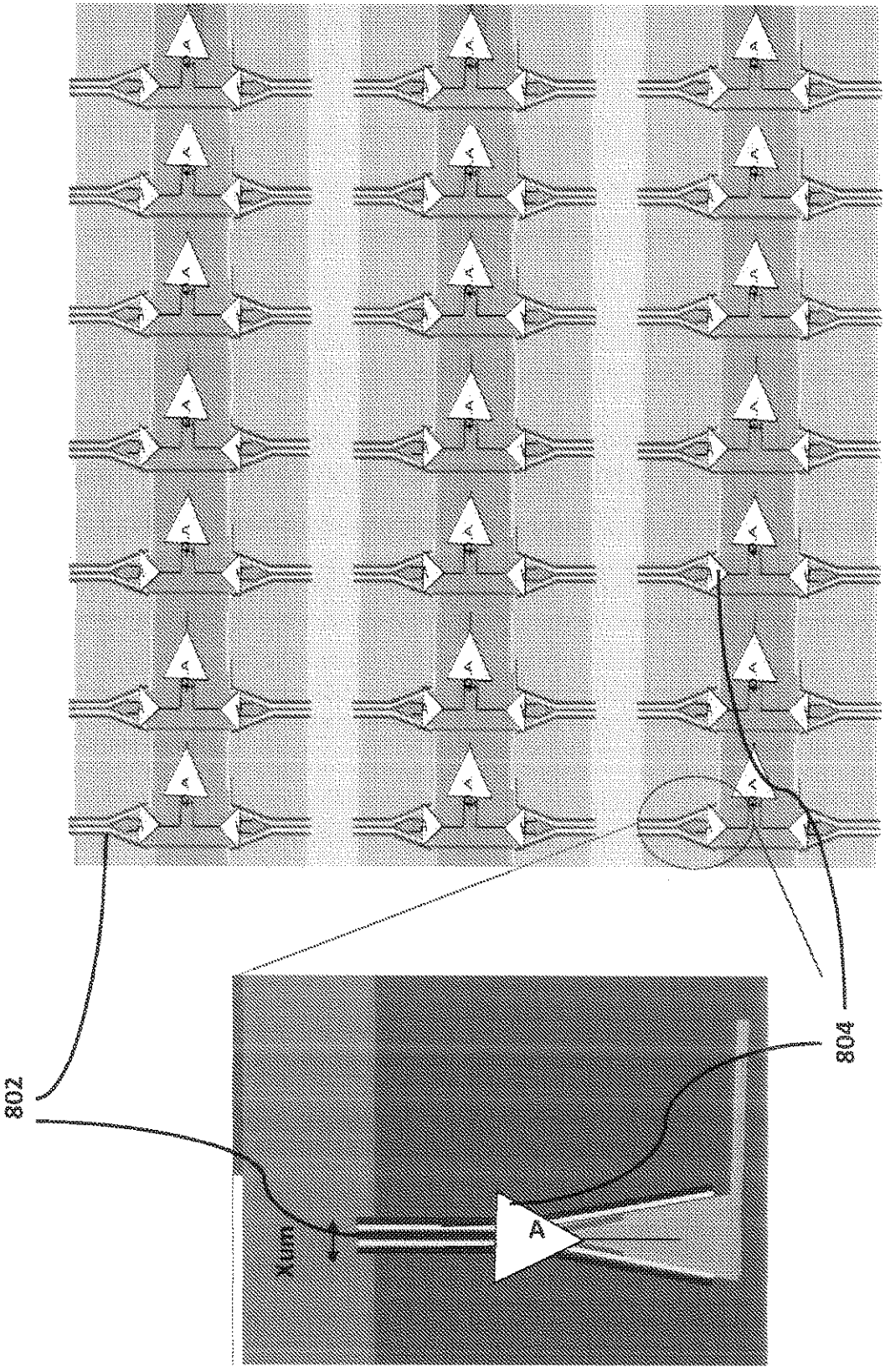


FIG. 8B

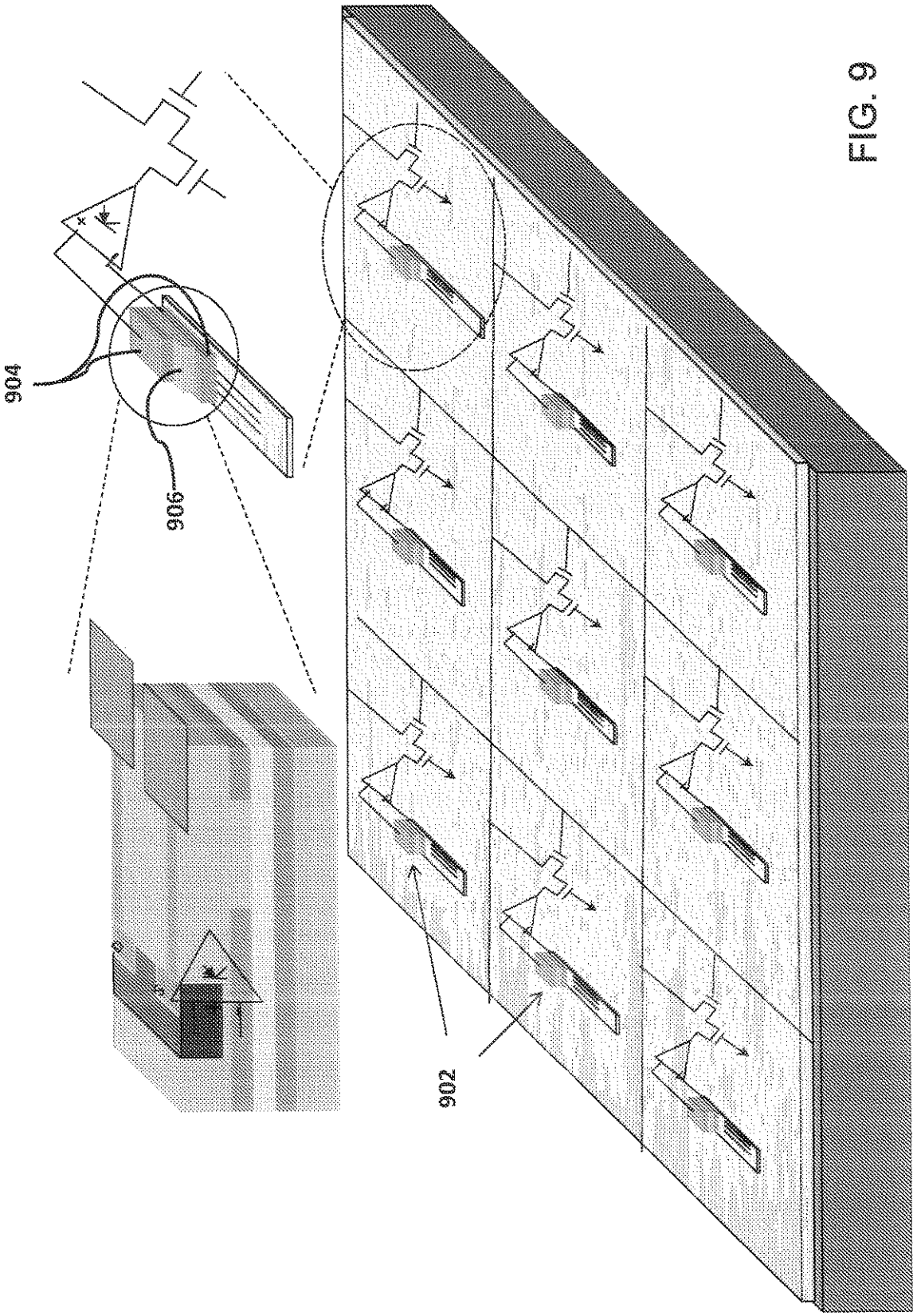


FIG. 9

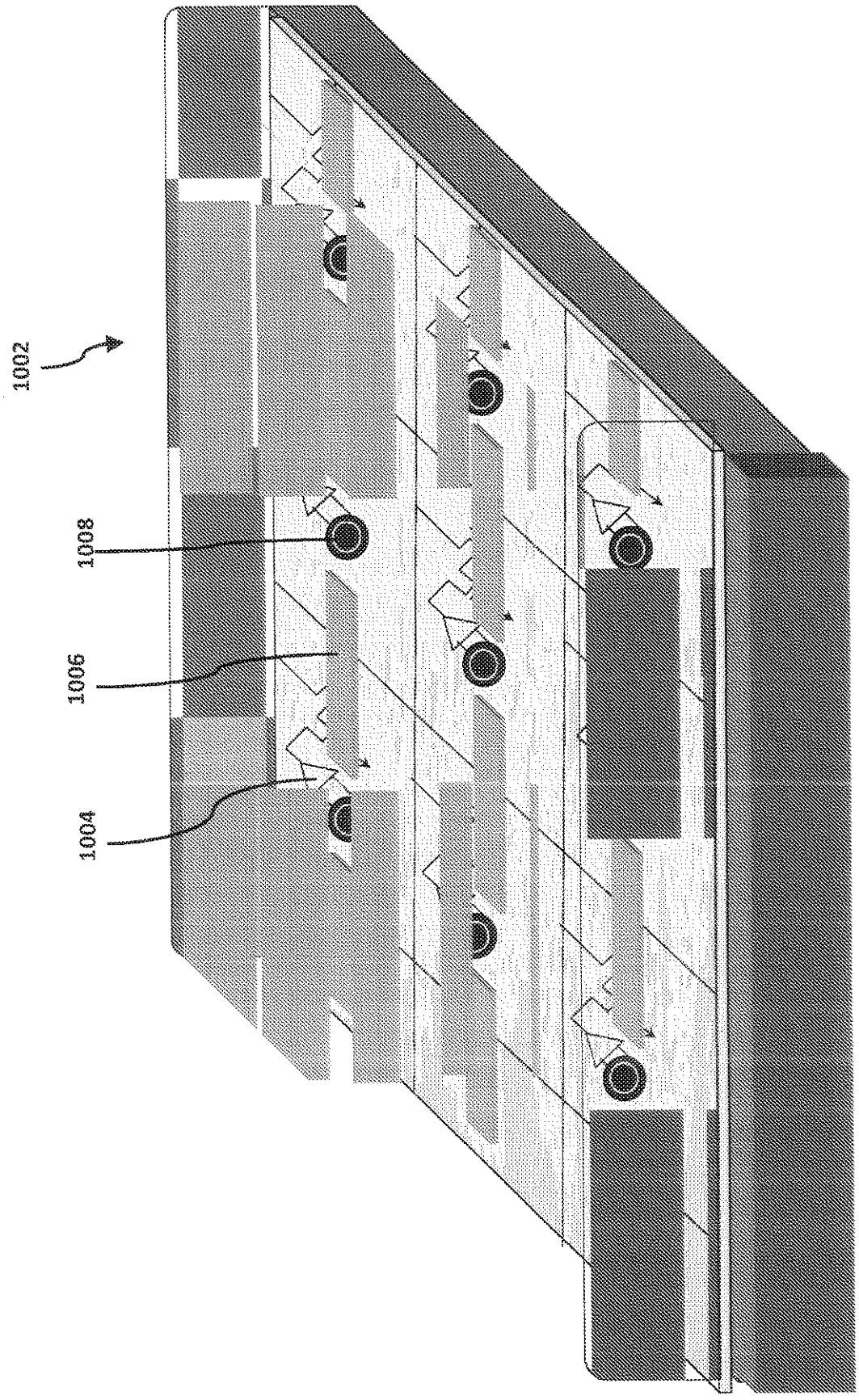


FIG. 10

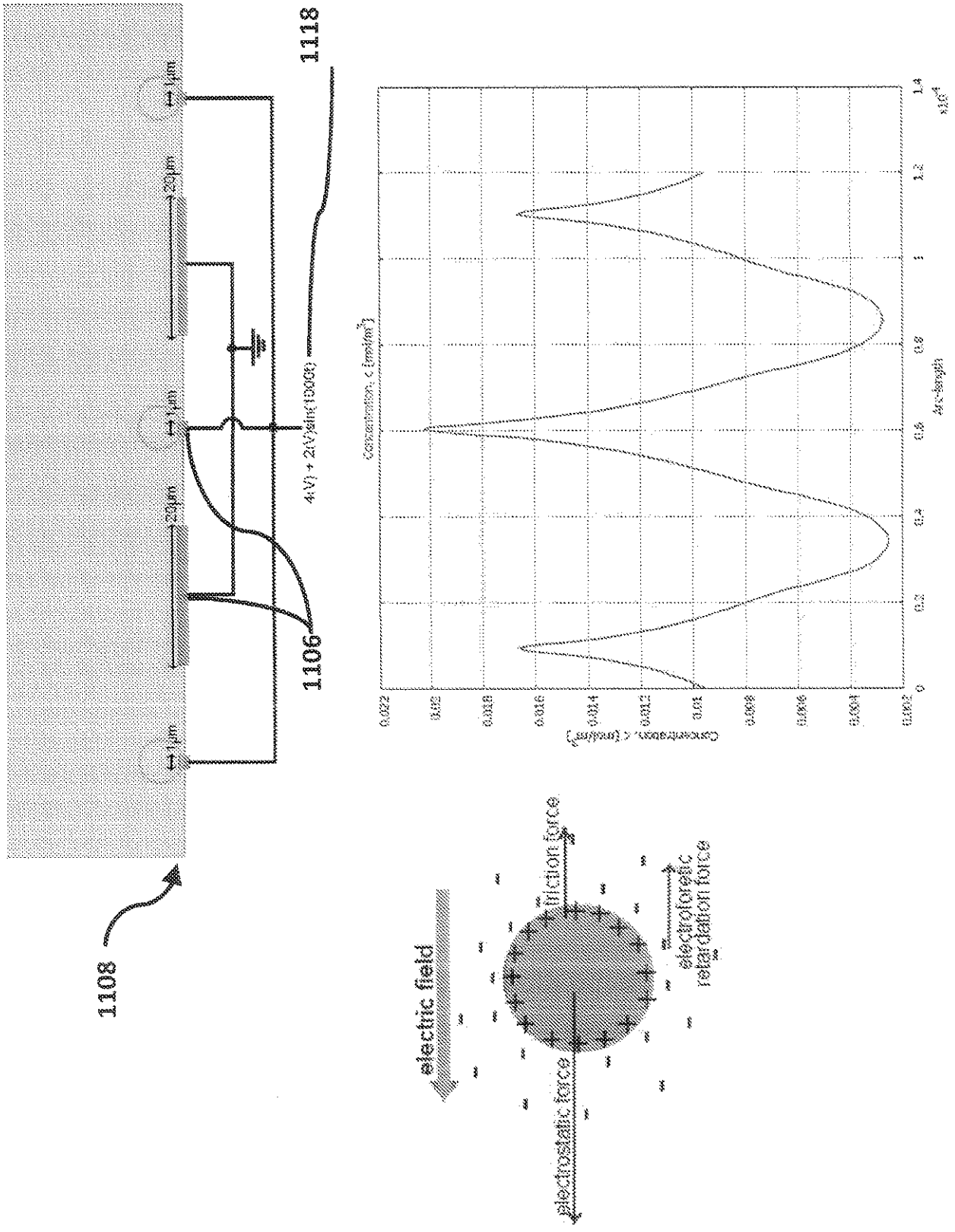

1108
1106
1118
1 μm
20μm
1 μm
20μm
1 μm
4·V) + 2rVsin(1000t)
Concentration, c (mol/m³)
Arc-length
electric field
friction force
electrostatic force
electrophoretic retardation force

FIG. 11

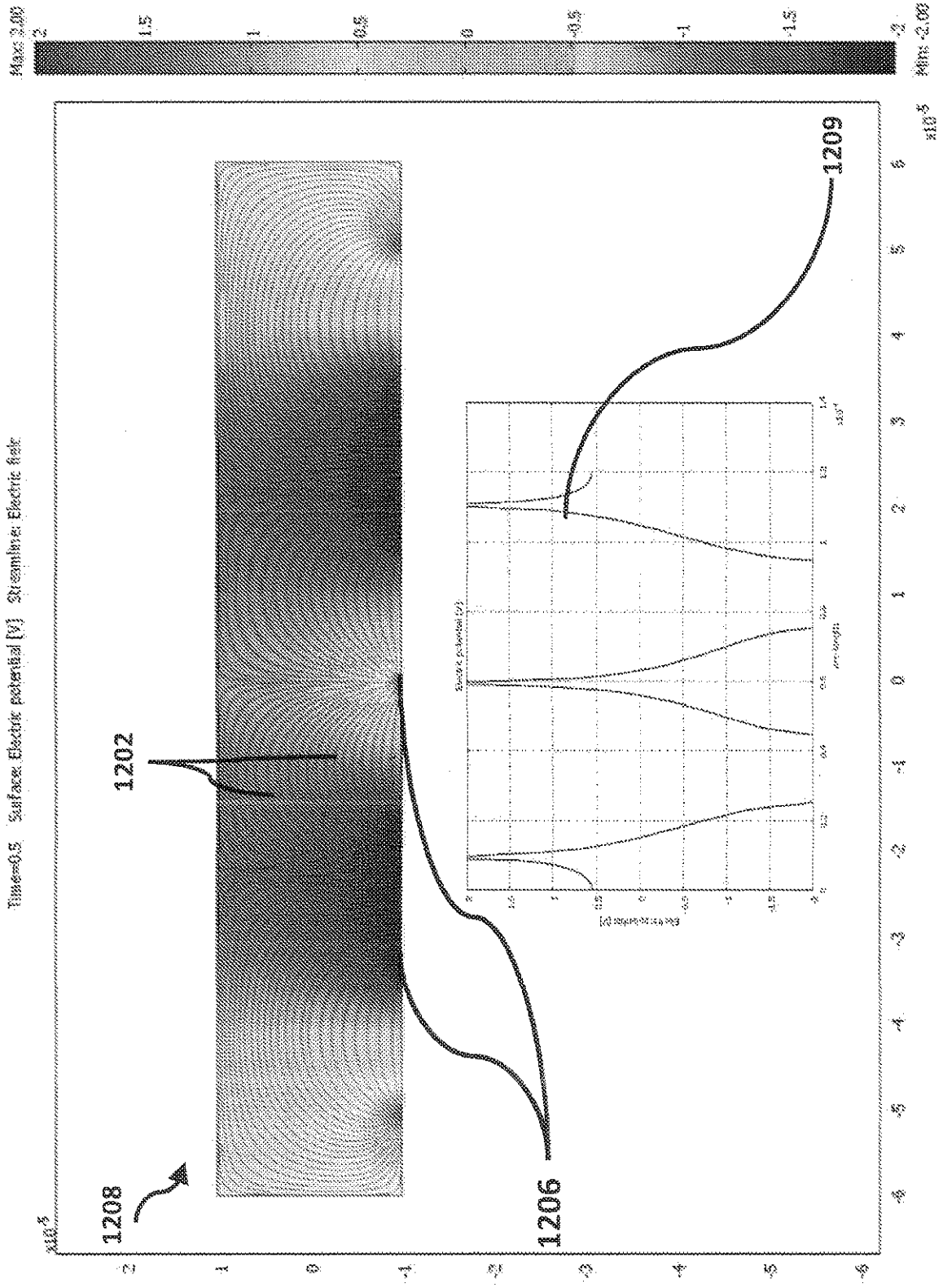

Time=0.6 Surface: Electric potential [V] Streamline: Electric field
Max: 2.00
Min: -2.00
1202
1206
1208
1209

FIG. 12

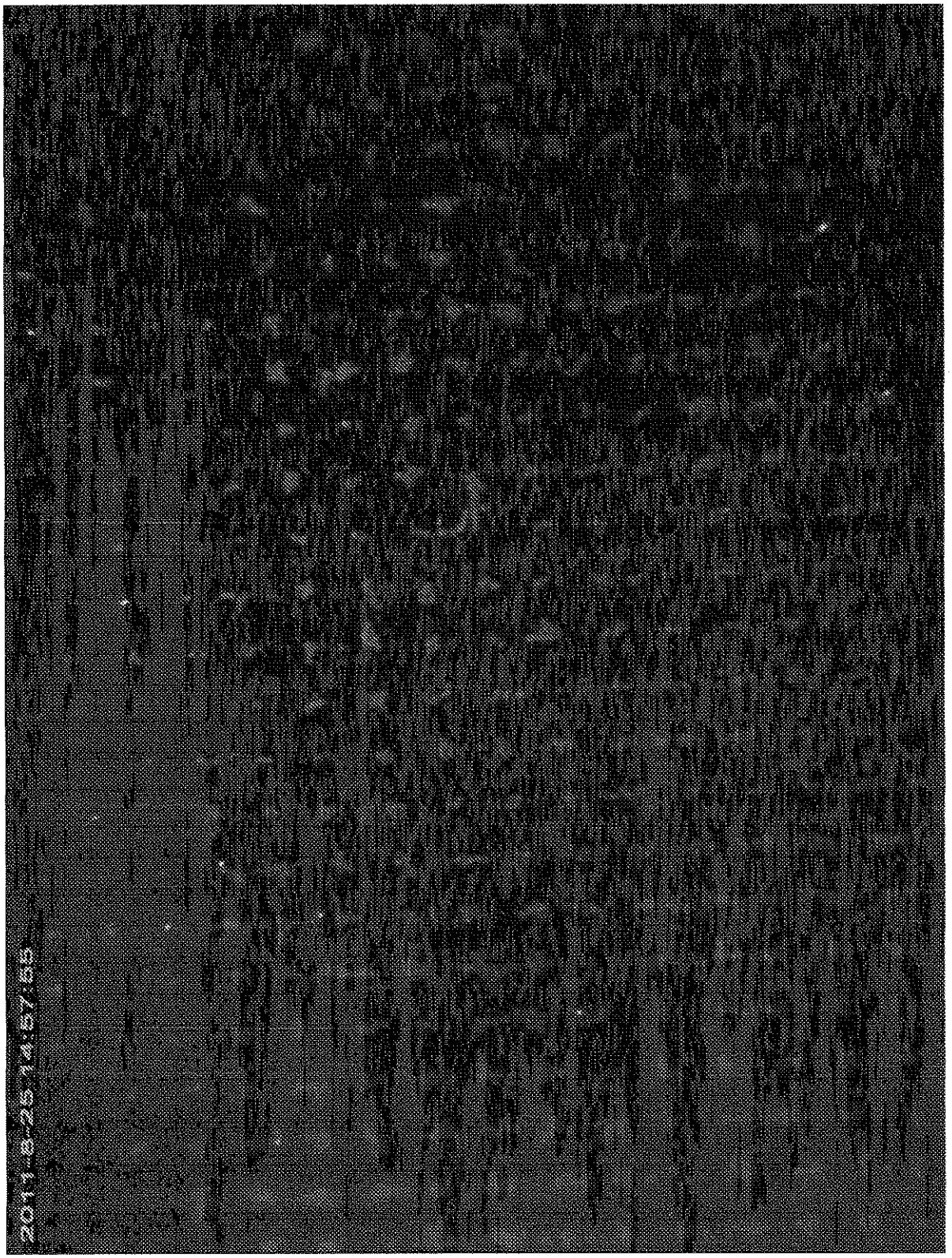


FIG. 13

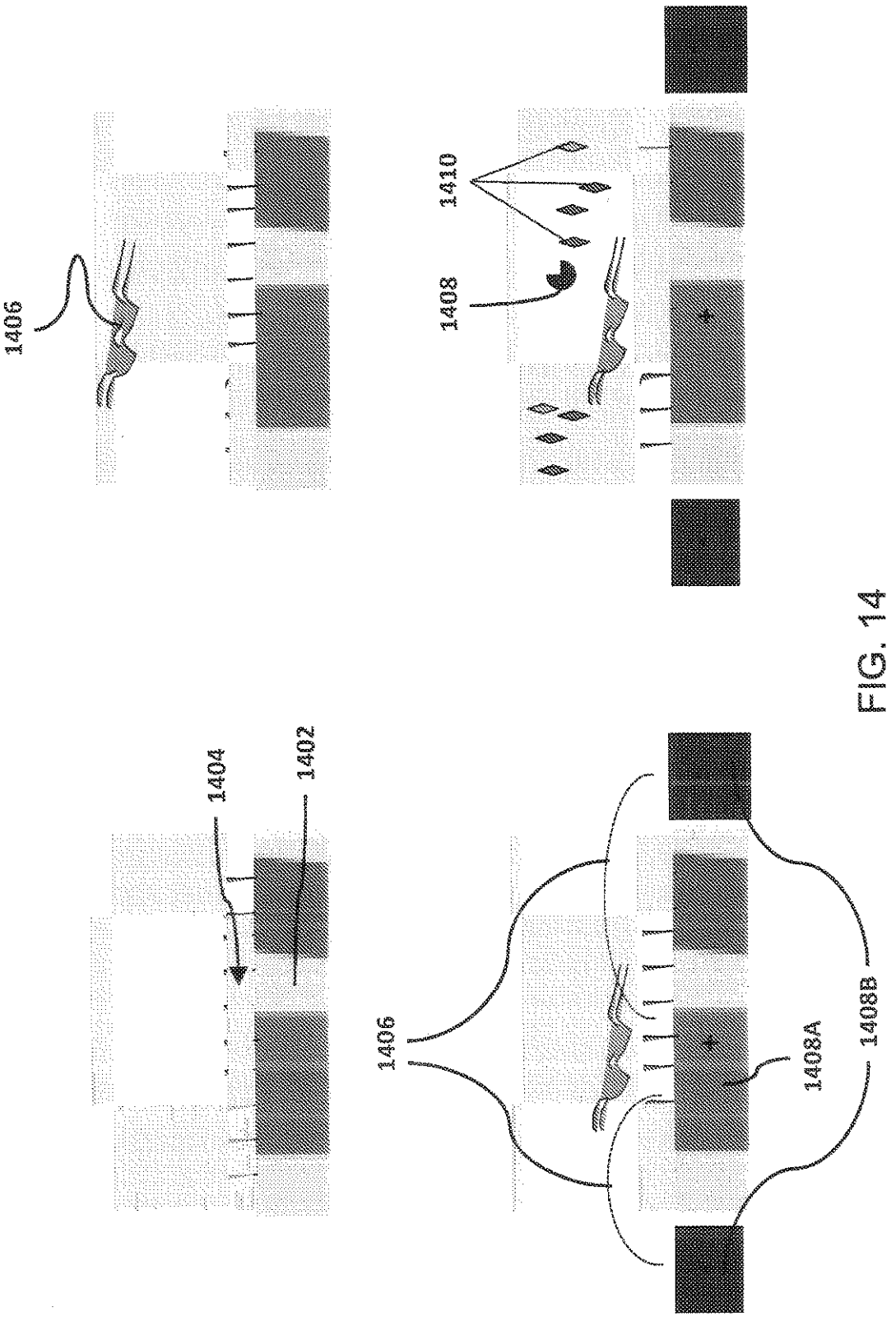


FIG. 14

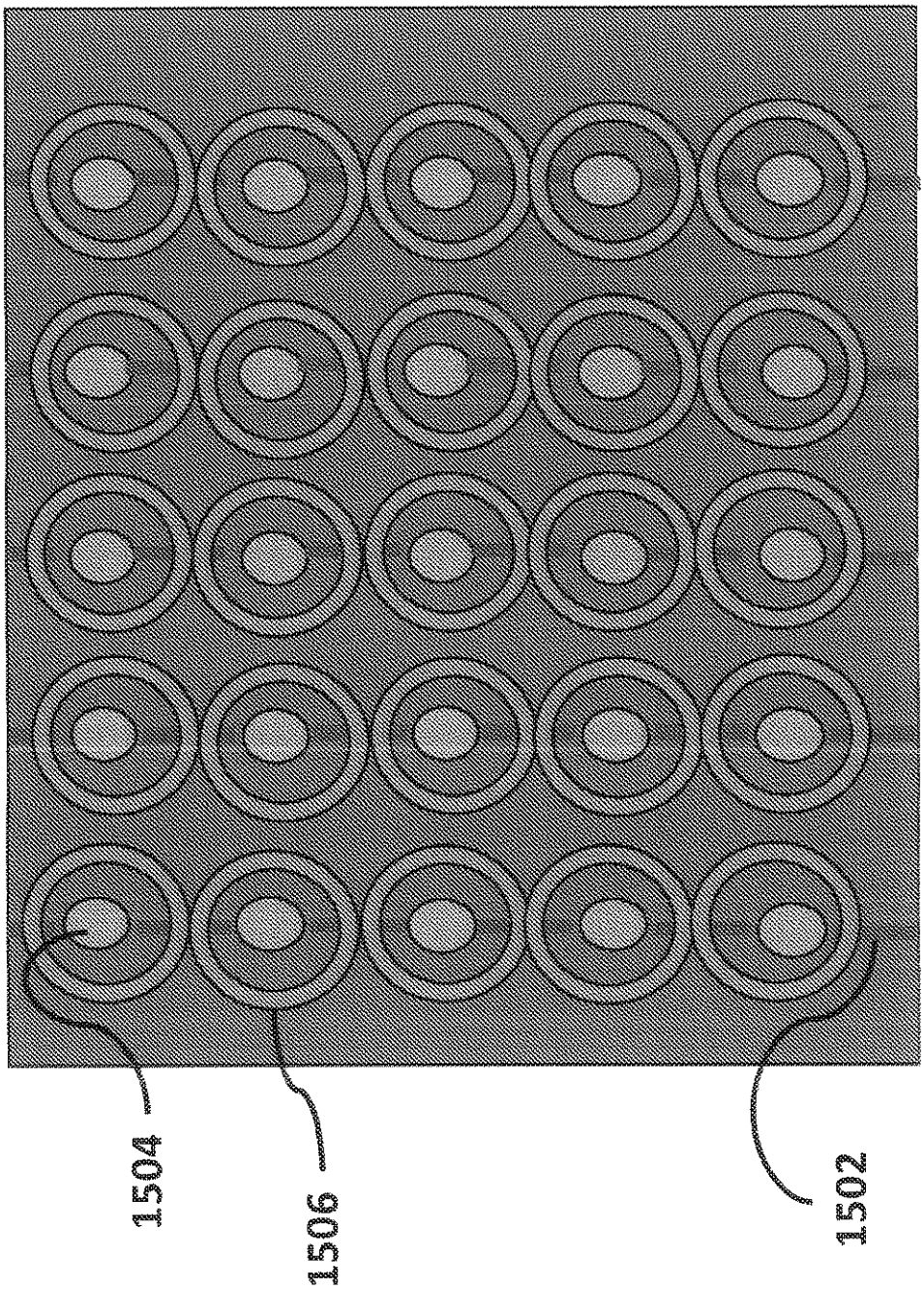


FIG. 15

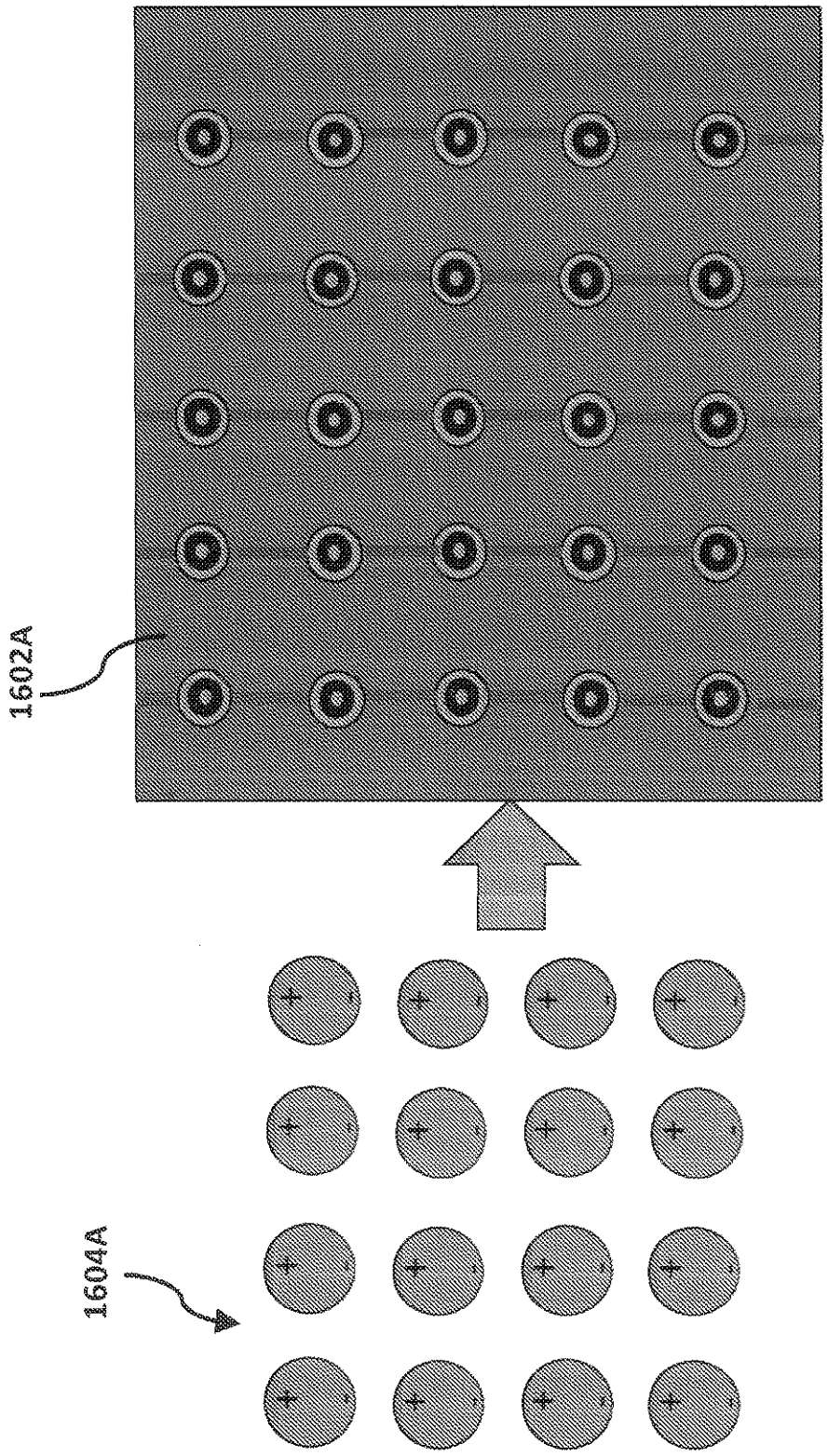
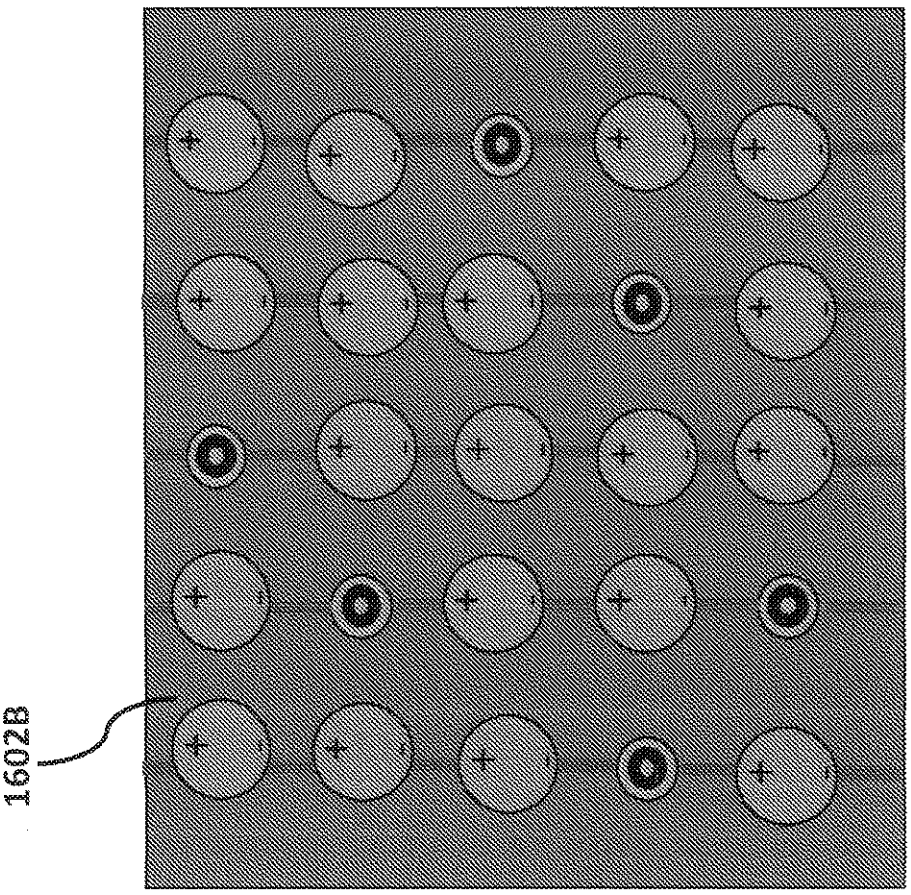


FIG. 16A



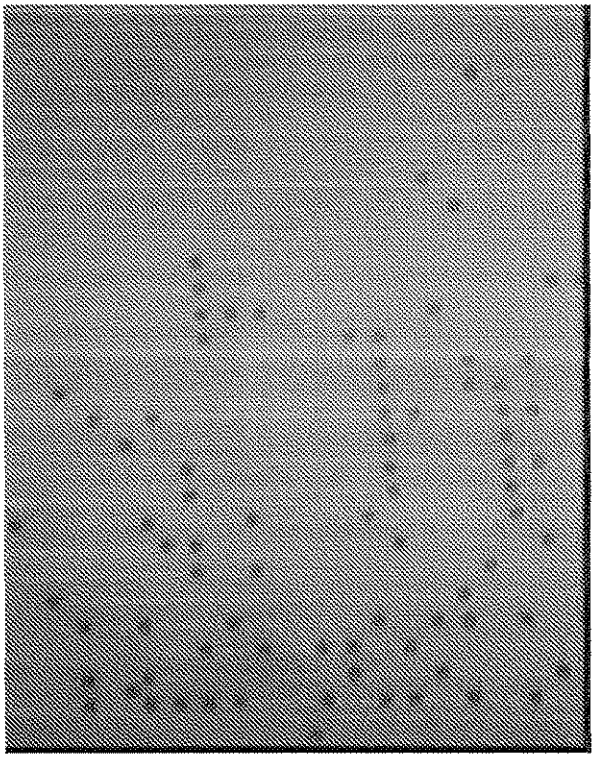


FIG. 16B

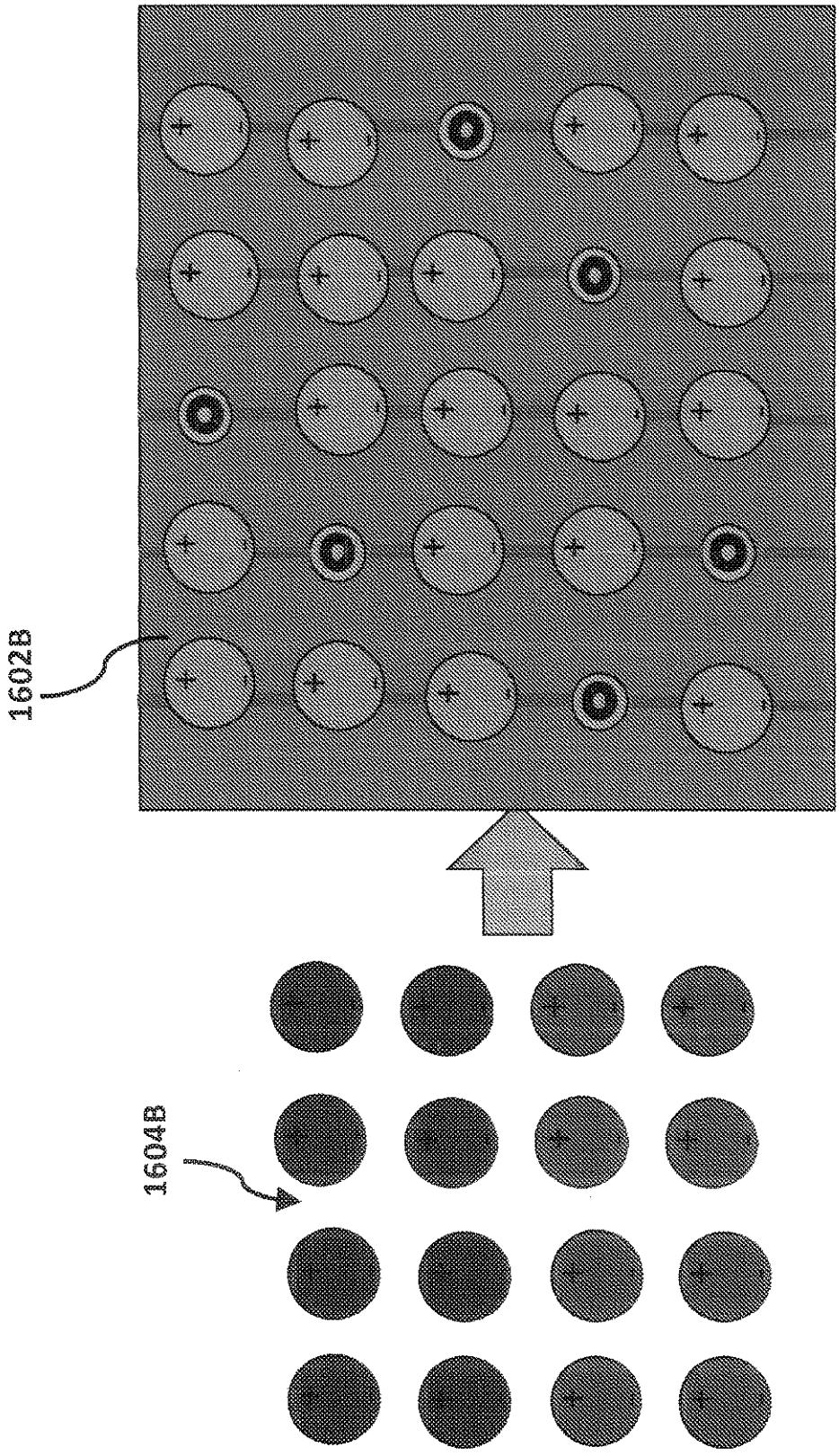


FIG. 16C

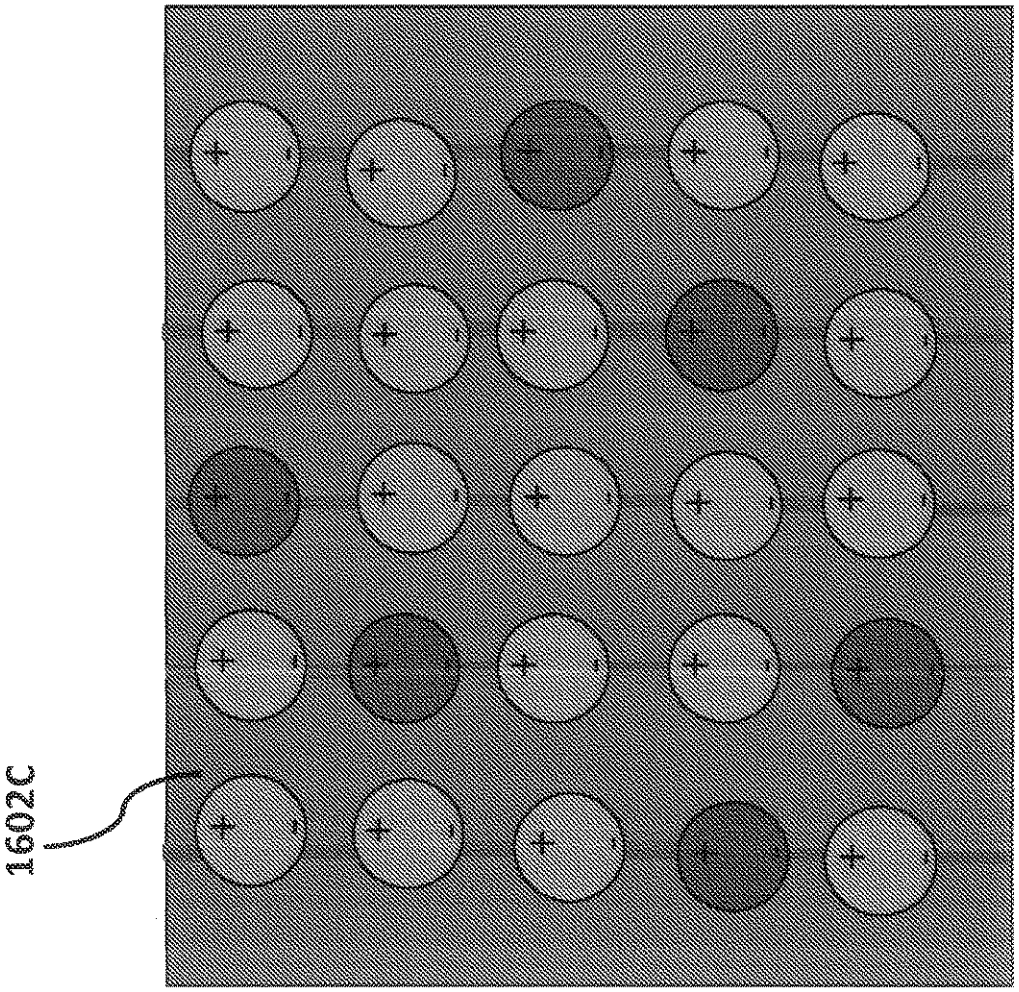


FIG. 16D

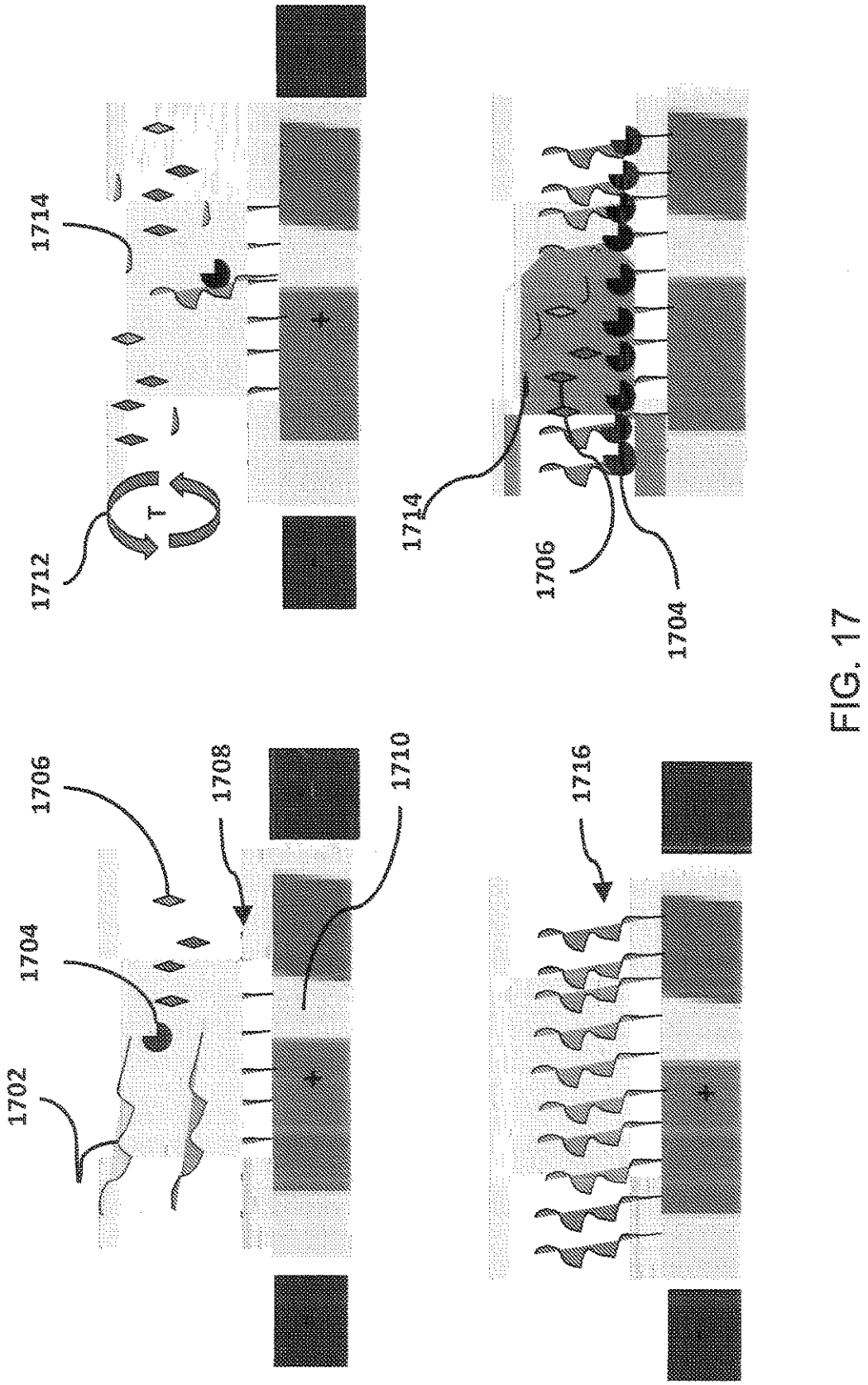


FIG. 17

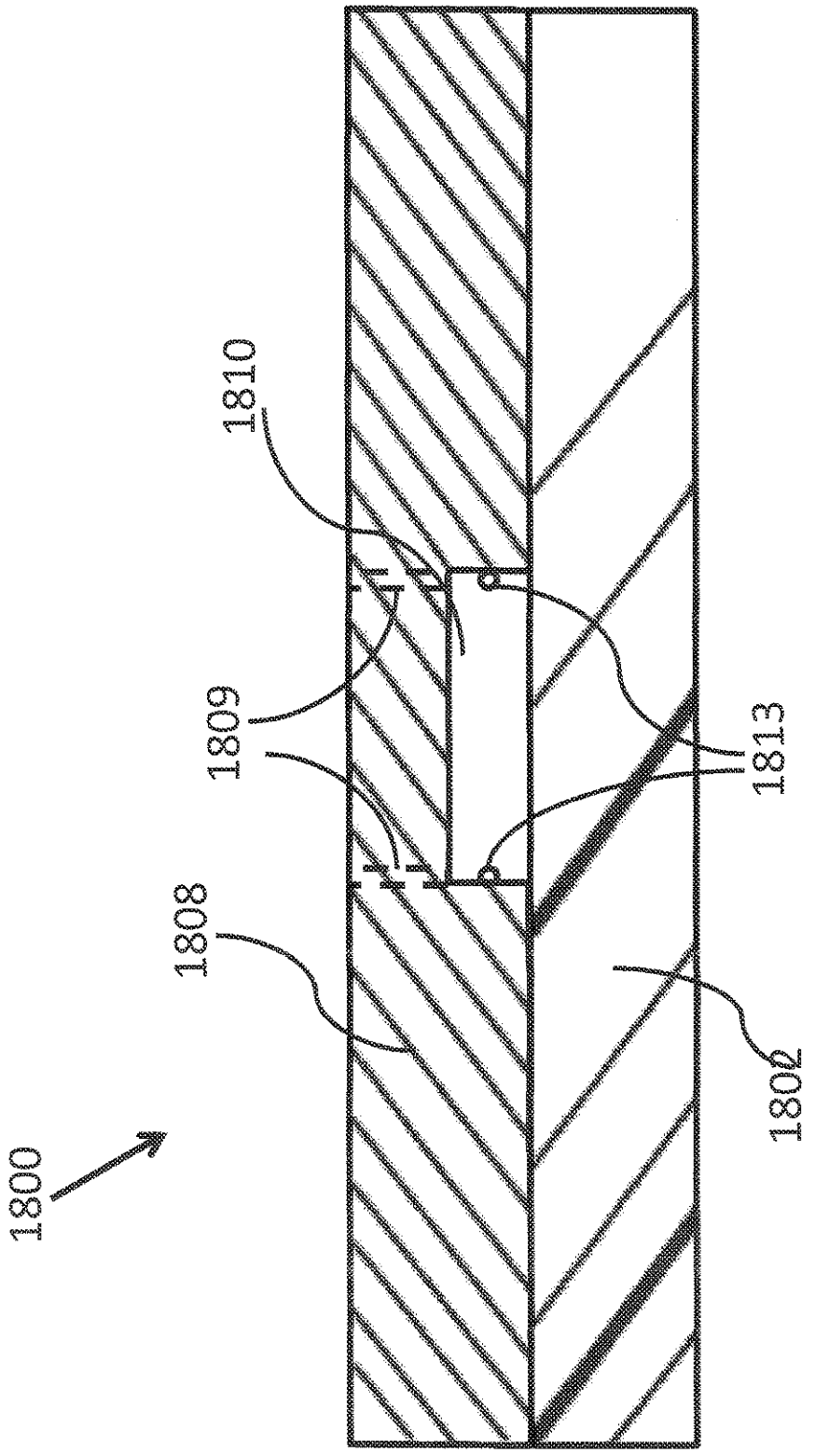


FIG. 18A

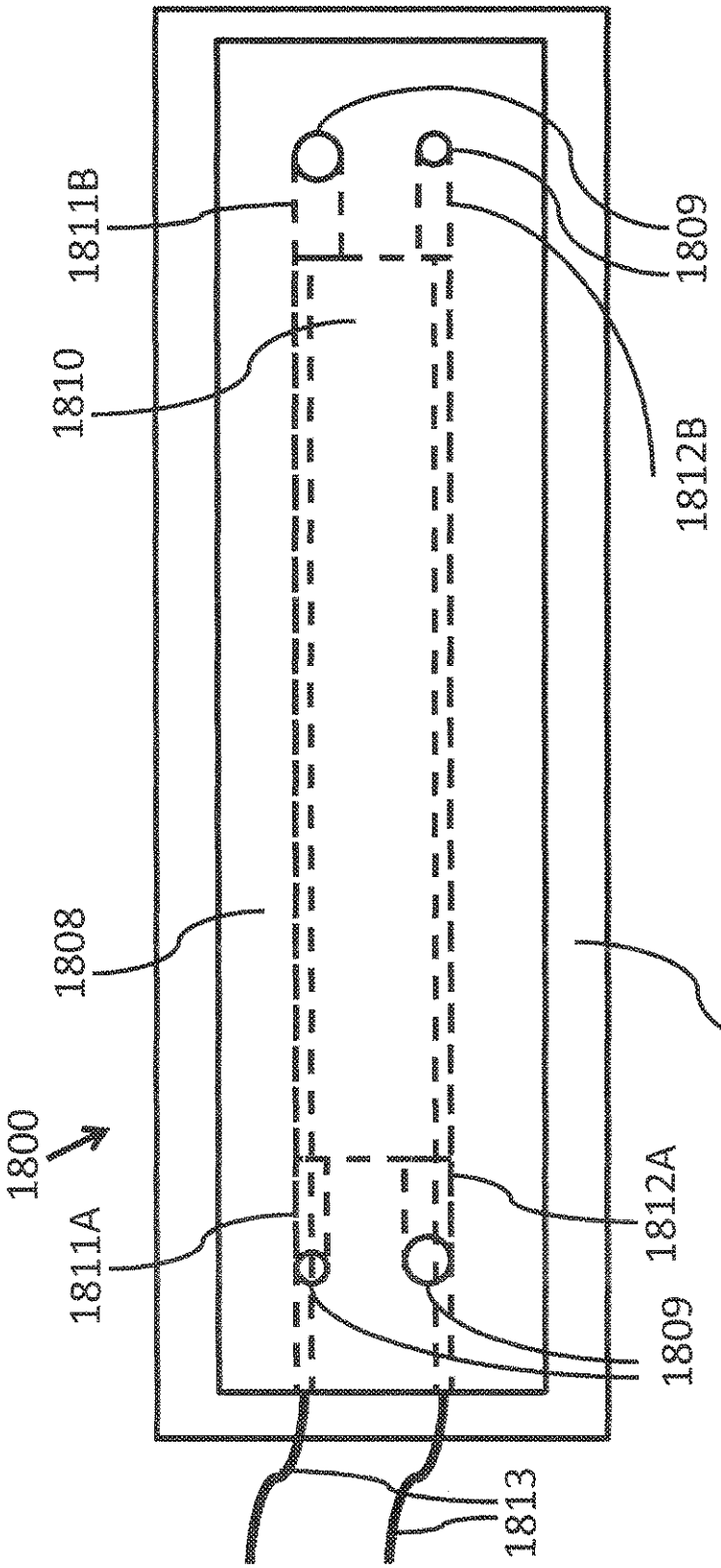

1800
1811A
1811B
1810
1808
1802
1812A
1812B
1809
1809
1813
Q
P

FIG. 18B

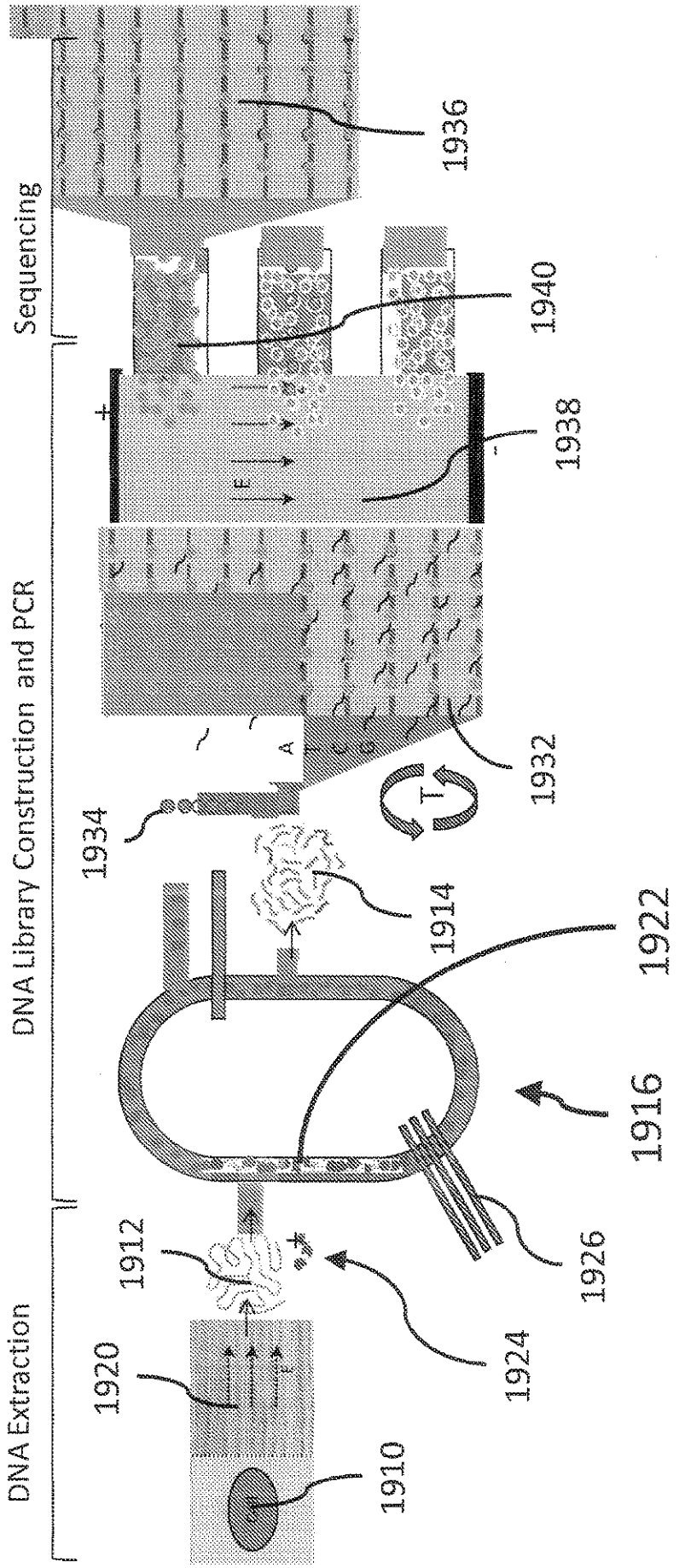

DNA Extraction
DNA Library Construction and PCR
Sequencing
1910
1912
1914
1916
1920
1922
1924
1926
1932
1934
1936
1938
1940
F
A
T
G
C
+
-

FIG. 19

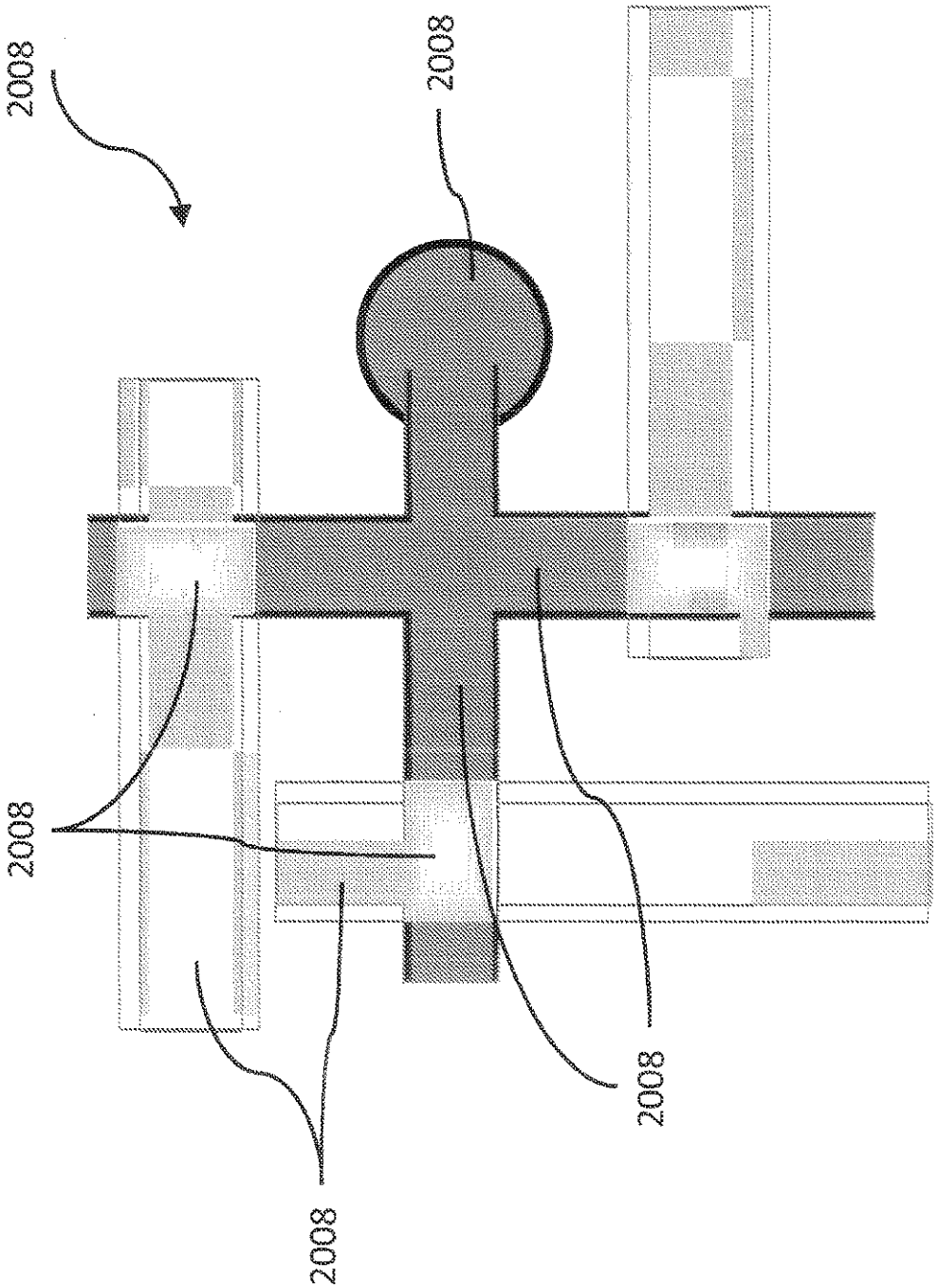


FIG. 20

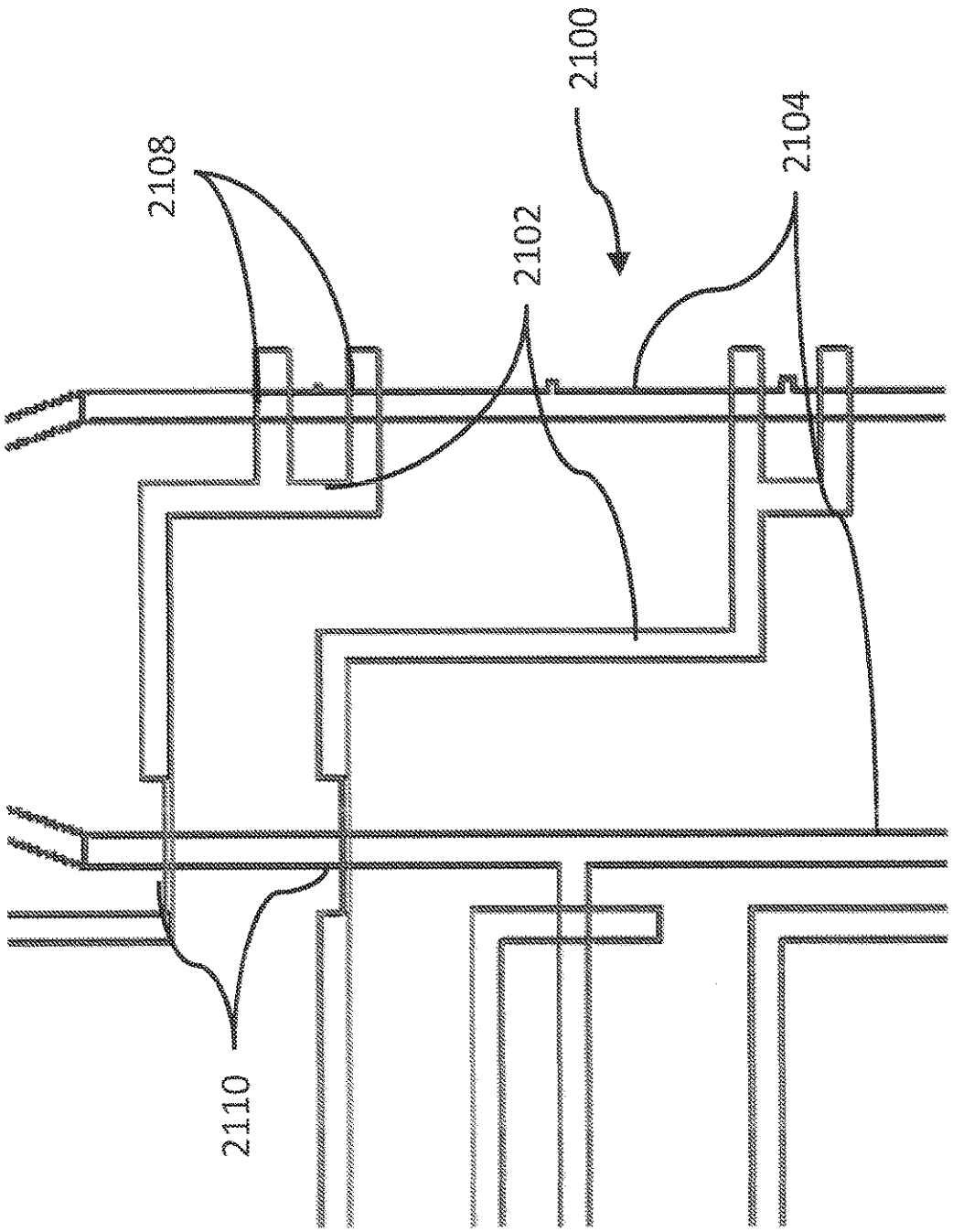


FIG. 21

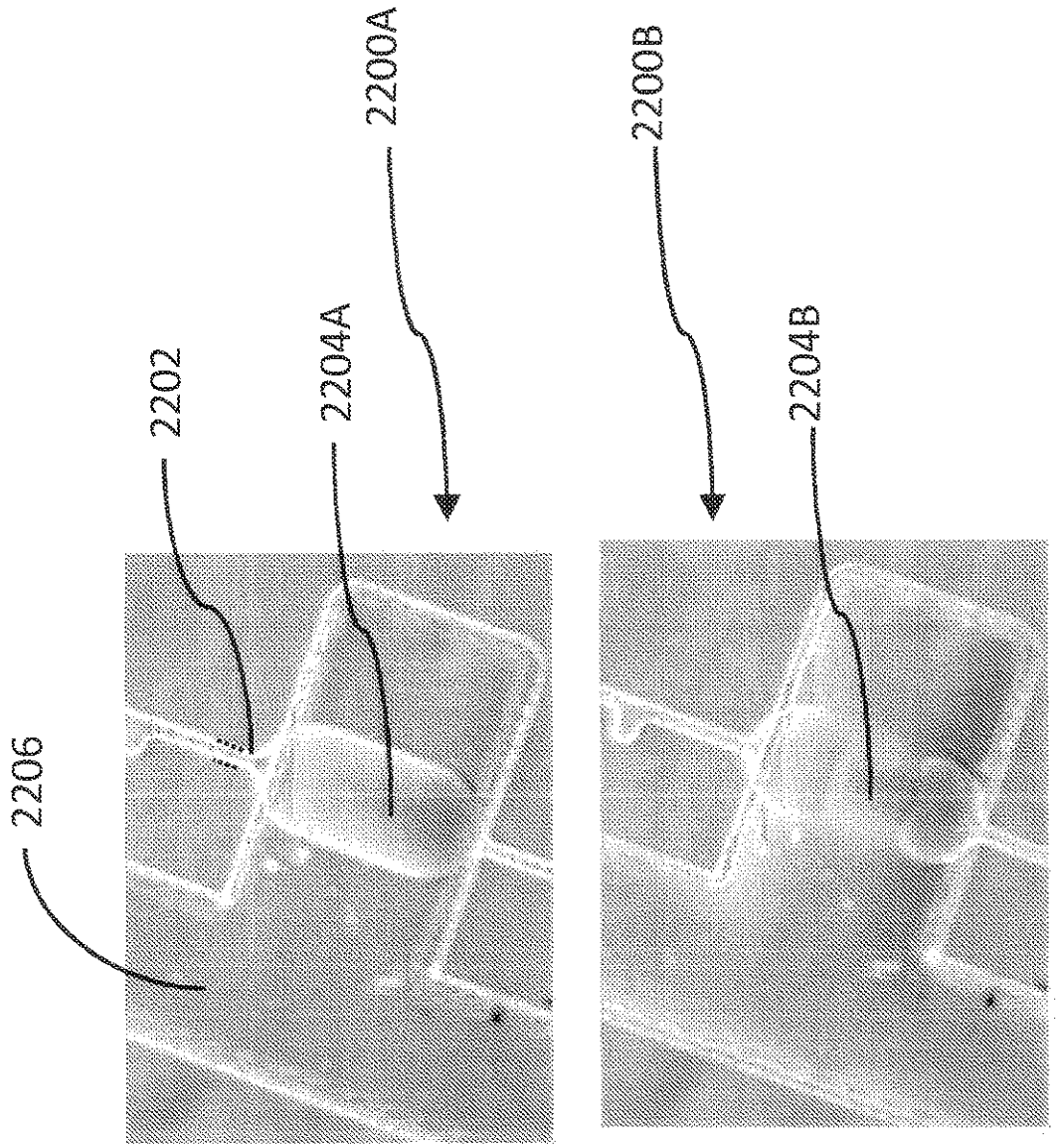


FIG. 22

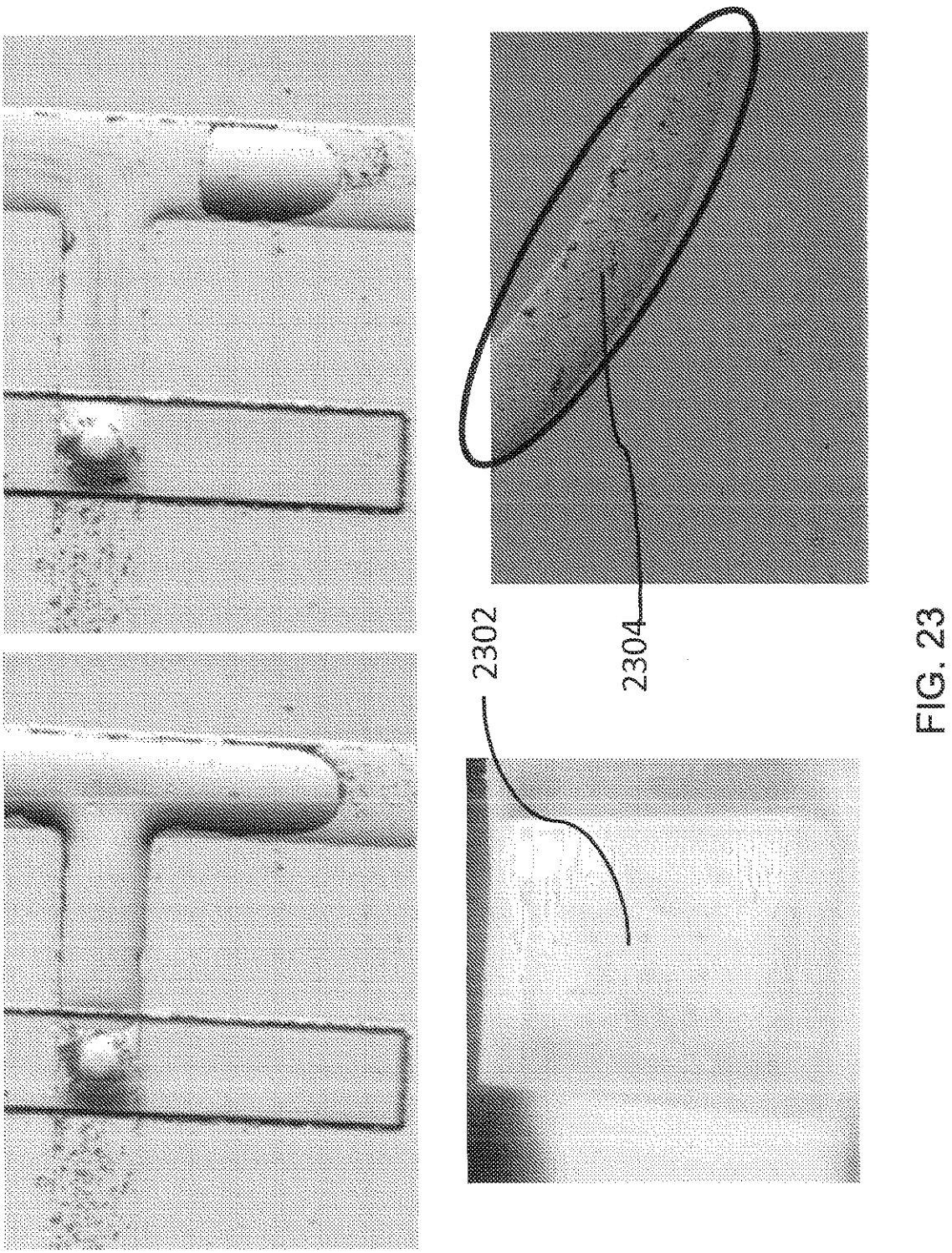


FIG. 23

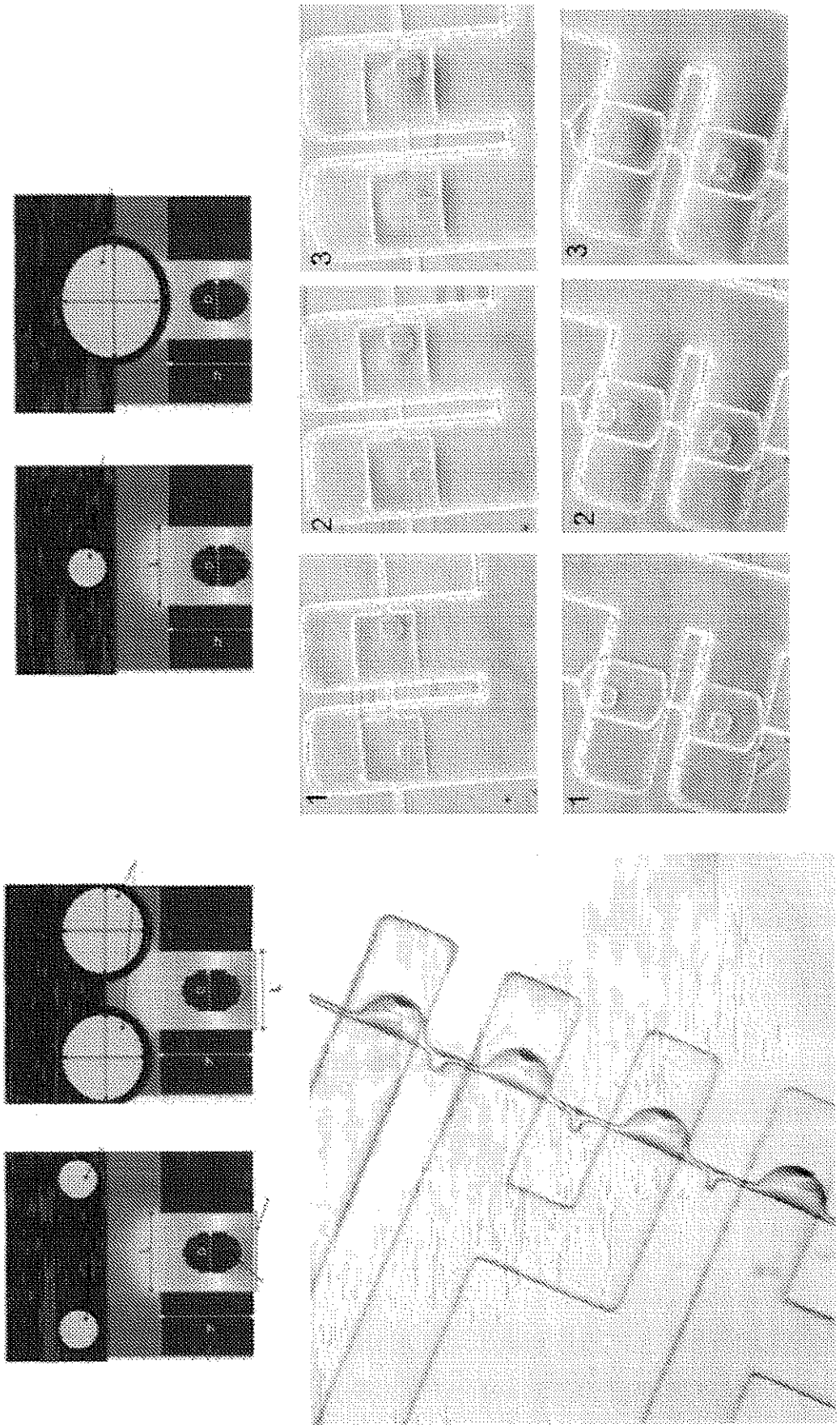


FIG. 24