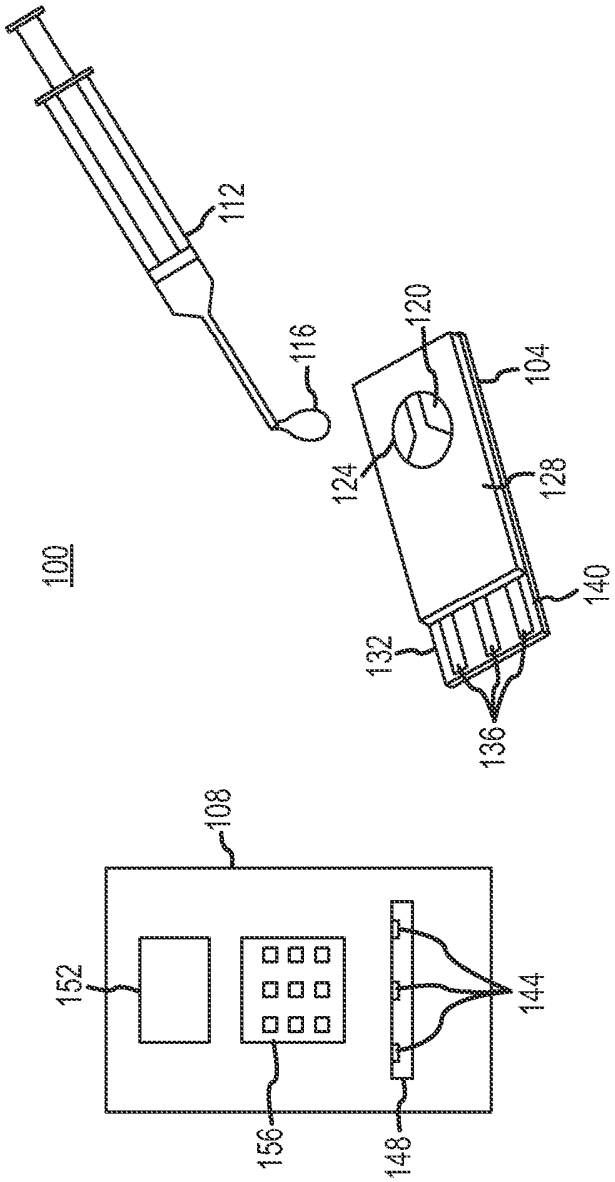


FIG.1

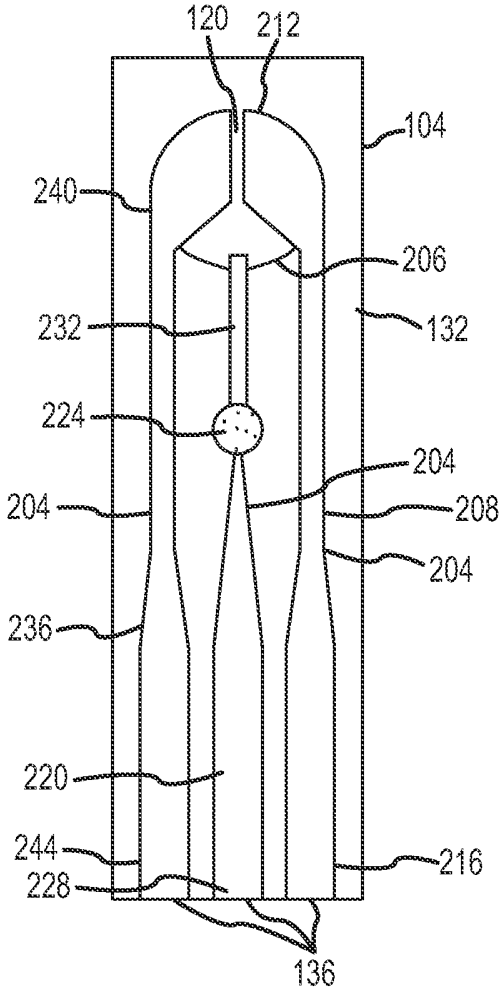

120
212
104
240
206
232
132
224
204
204
208
204
236
220
244
228
216
136

FIG.2

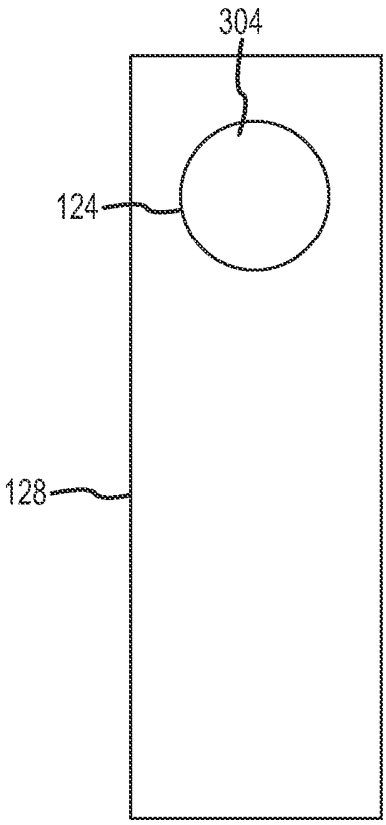

304
124
128

FIG.3

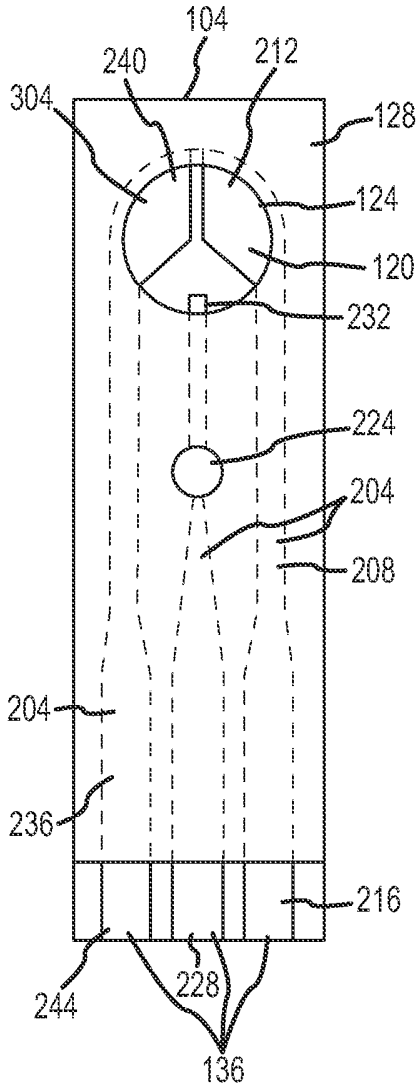

104
240
212
304
128
124
120
232
224
204
208
204
236
216
244
228
136

FIG.4

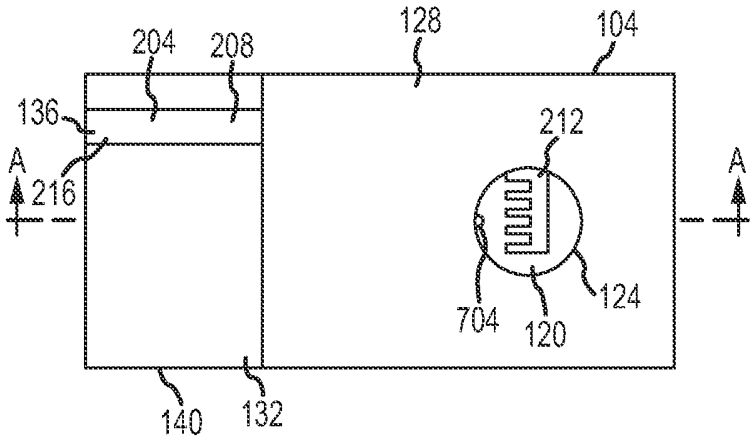

204
208
128
104
136
212
A
216
A
704
120
124
140
132

FIG.5

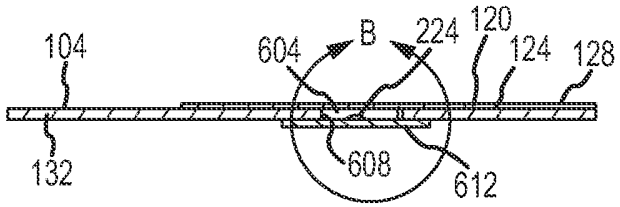

104
604
B
224
120
124
128
132
608
612

FIG.6

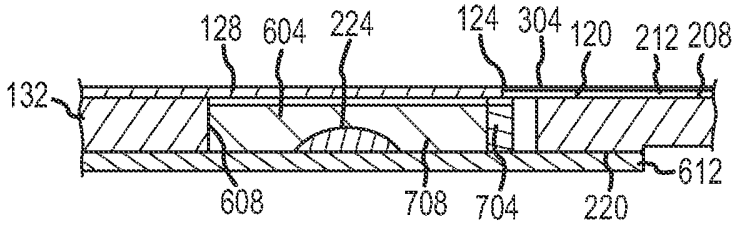

128
604
224
124
304
120
212
208
132
612
608
708
704
220

FIG.7

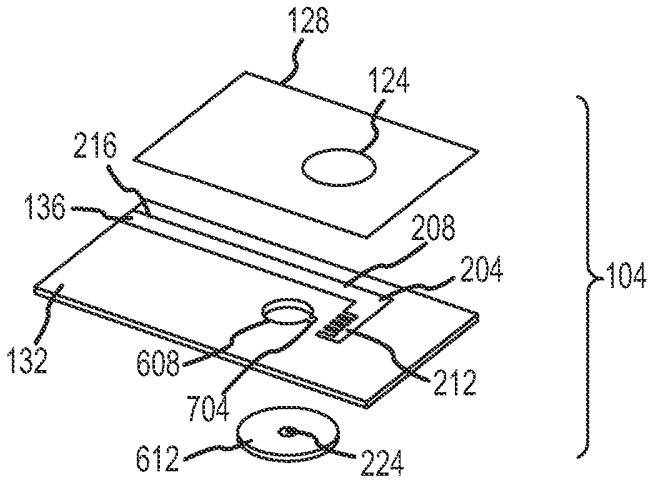

128
124
216
136
208
204
104
132
608
212
704
612
224

FIG.8

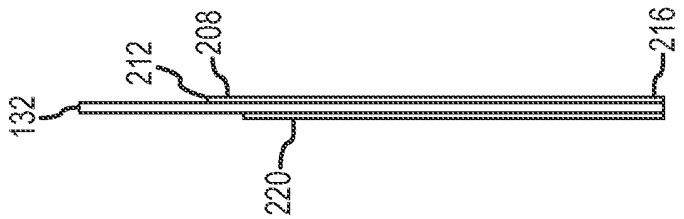


FIG.11

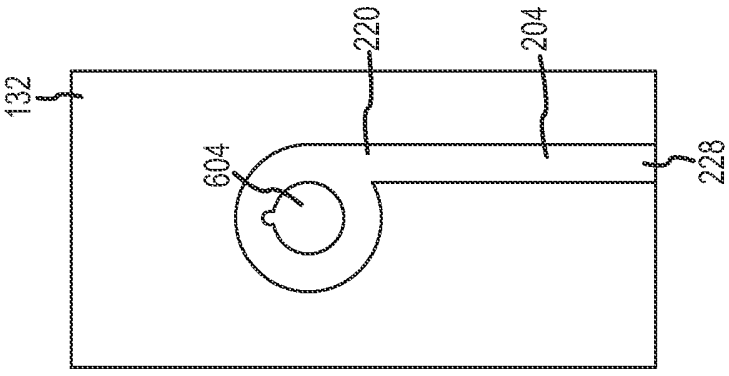


FIG.10

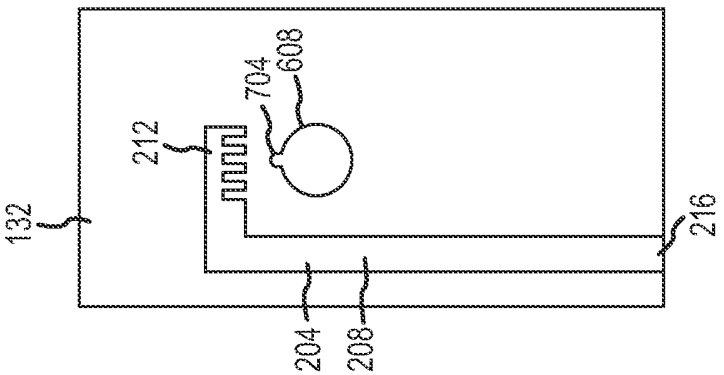


FIG.9

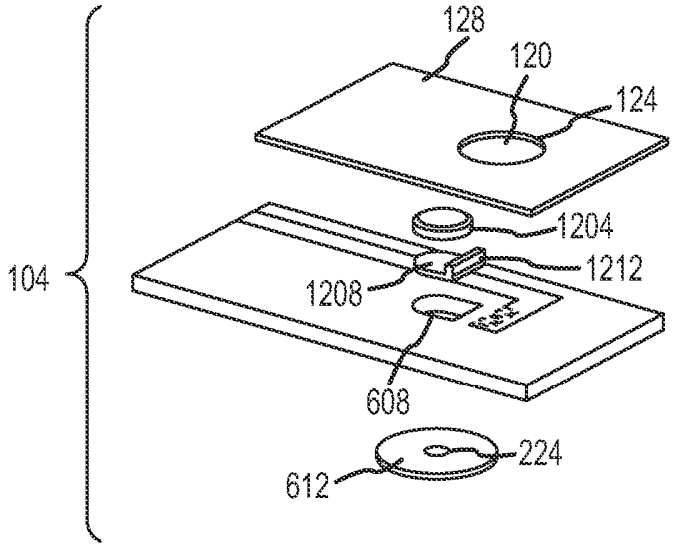


FIG.12

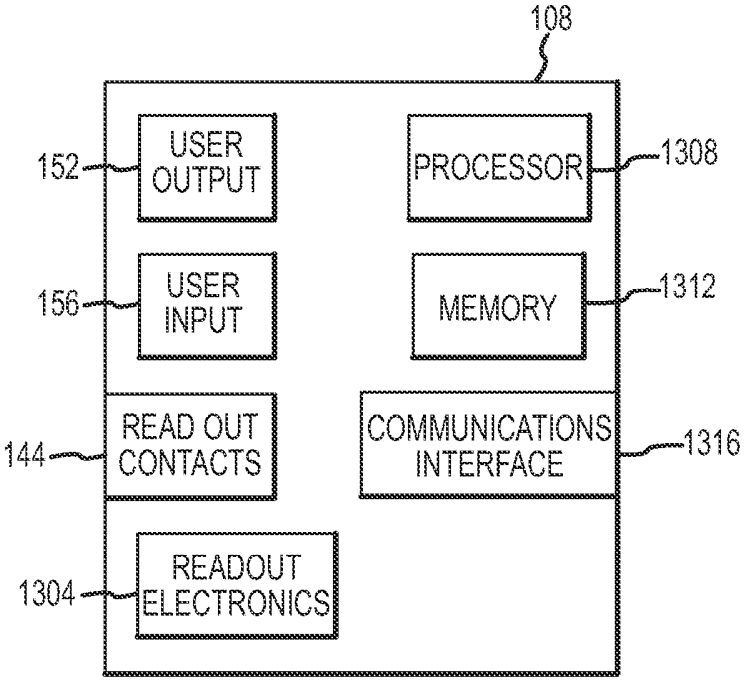

108
152
USER OUTPUT
PROCESSOR
1308
156
USER INPUT
MEMORY
1312
144
READ OUT CONTACTS
COMMUNICATIONS INTERFACE
1316
1304
READOUT ELECTRONICS

FIG.13

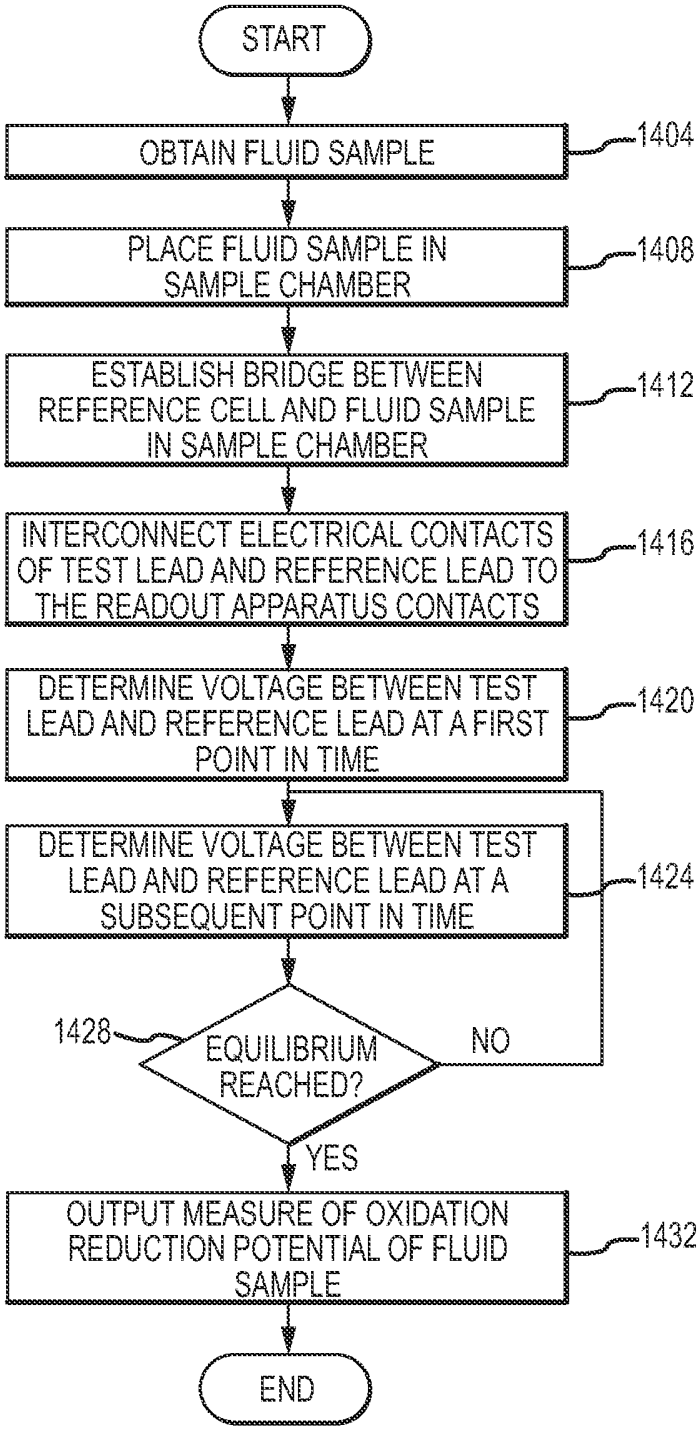

START
OBTAIN FLUID SAMPLE
1404
PLACE FLUID SAMPLE IN SAMPLE CHAMBER
1408
ESTABLISH BRIDGE BETWEEN REFERENCE CELL AND FLUID SAMPLE IN SAMPLE CHAMBER
1412
INTERCONNECT ELECTRICAL CONTACTS OF TEST LEAD AND REFERENCE LEAD TO THE READOUT APPARATUS CONTACTS
1416
DETERMINE VOLTAGE BETWEEN TEST LEAD AND REFERENCE LEAD AT A FIRST POINT IN TIME
1420
DETERMINE VOLTAGE BETWEEN TEST LEAD AND REFERENCE LEAD AT A SUBSEQUENT POINT IN TIME
1424
1428
EQUILIBRIUM REACHED?
NO
YES
OUTPUT MEASURE OF OXIDATION REDUCTION POTENTIAL OF FLUID SAMPLE
1432
END

FIG.14

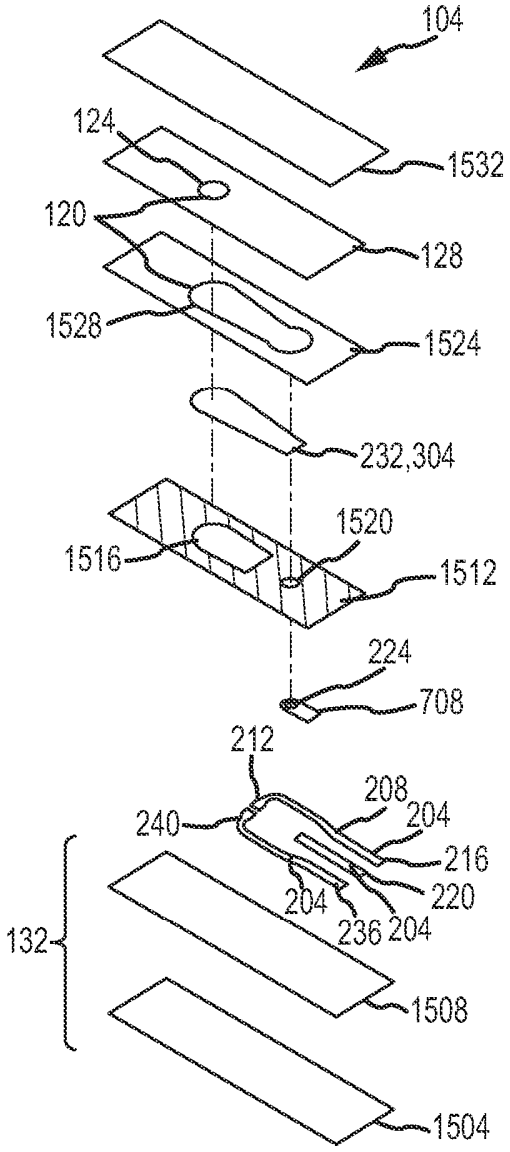

104
124
1532
120
128
1528
1524
232,304
1520
1516
1512
224
708
212
208
204
240
216
204
220
236
204
132
1508
1504

FIG.15

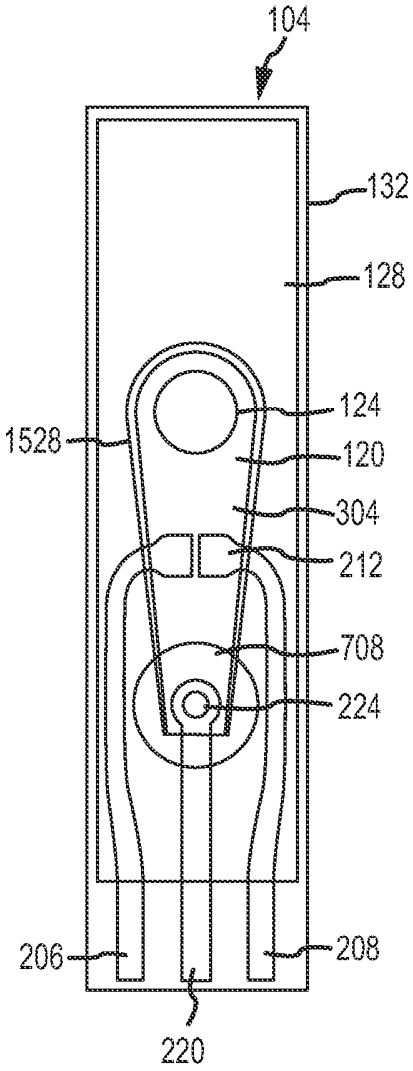


FIG.16

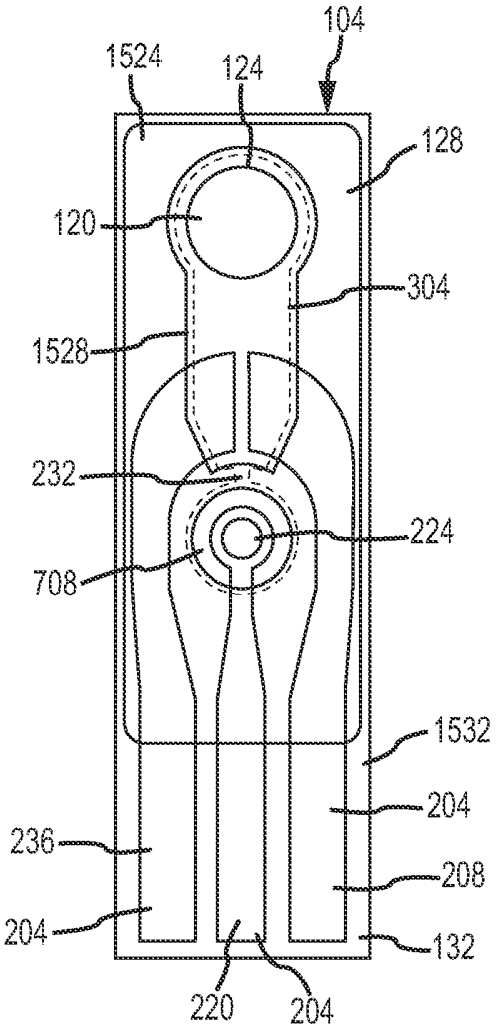

104
1524
124
128
120
304
1528
232
224
708
1532
204
236
208
204
132
220
204

FIG.17

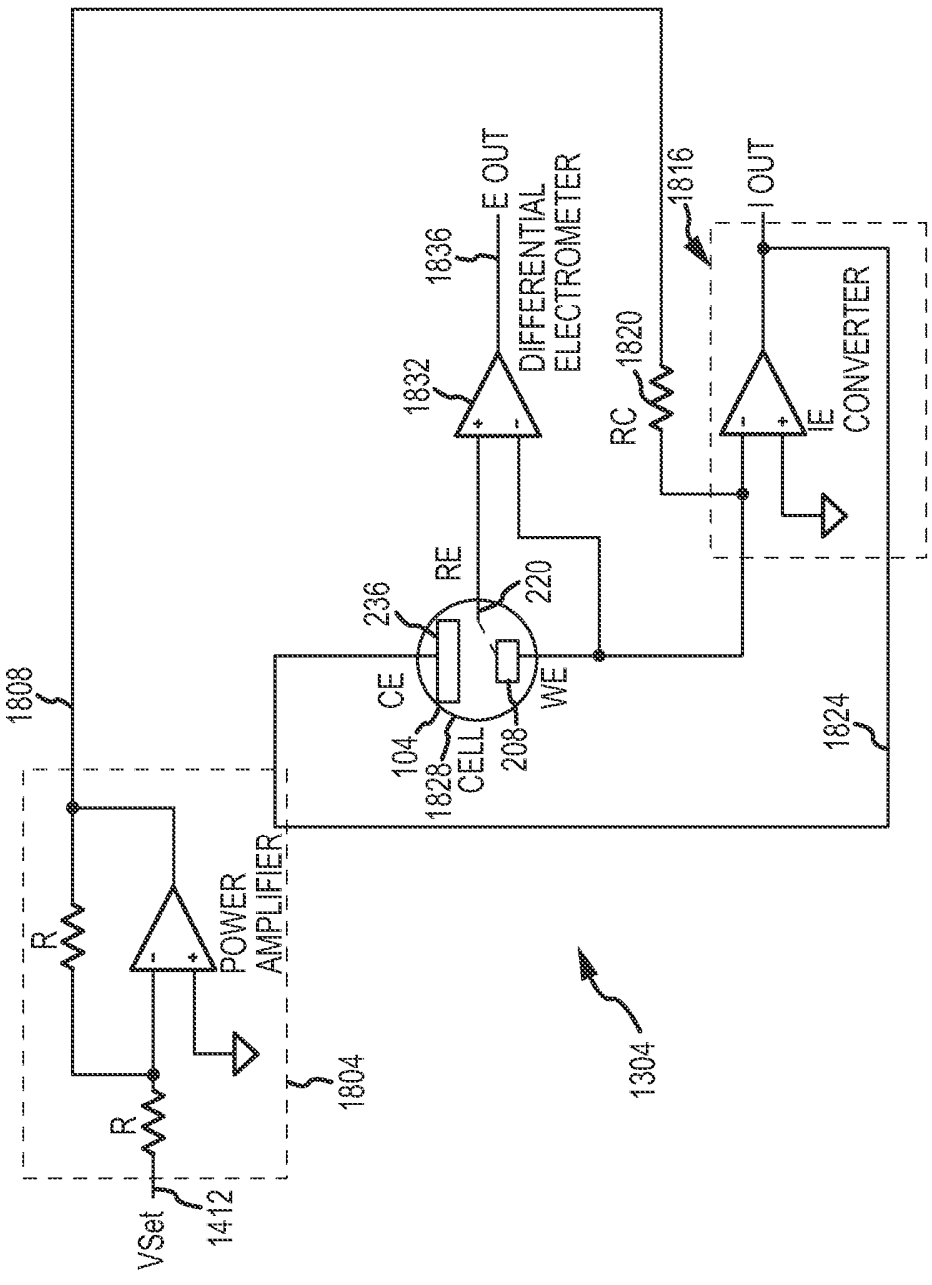

1808
R
R
VSet
1412
POWER AMPLIFIER
1804
1304
CE
236
RE
220
WE
208
104
CELL
1828
1832
DIFFERENTIAL ELECTROMETER
E OUT
1836
RC
1820
1816
I OUT
IE CONVERTER
1824

FIG.18

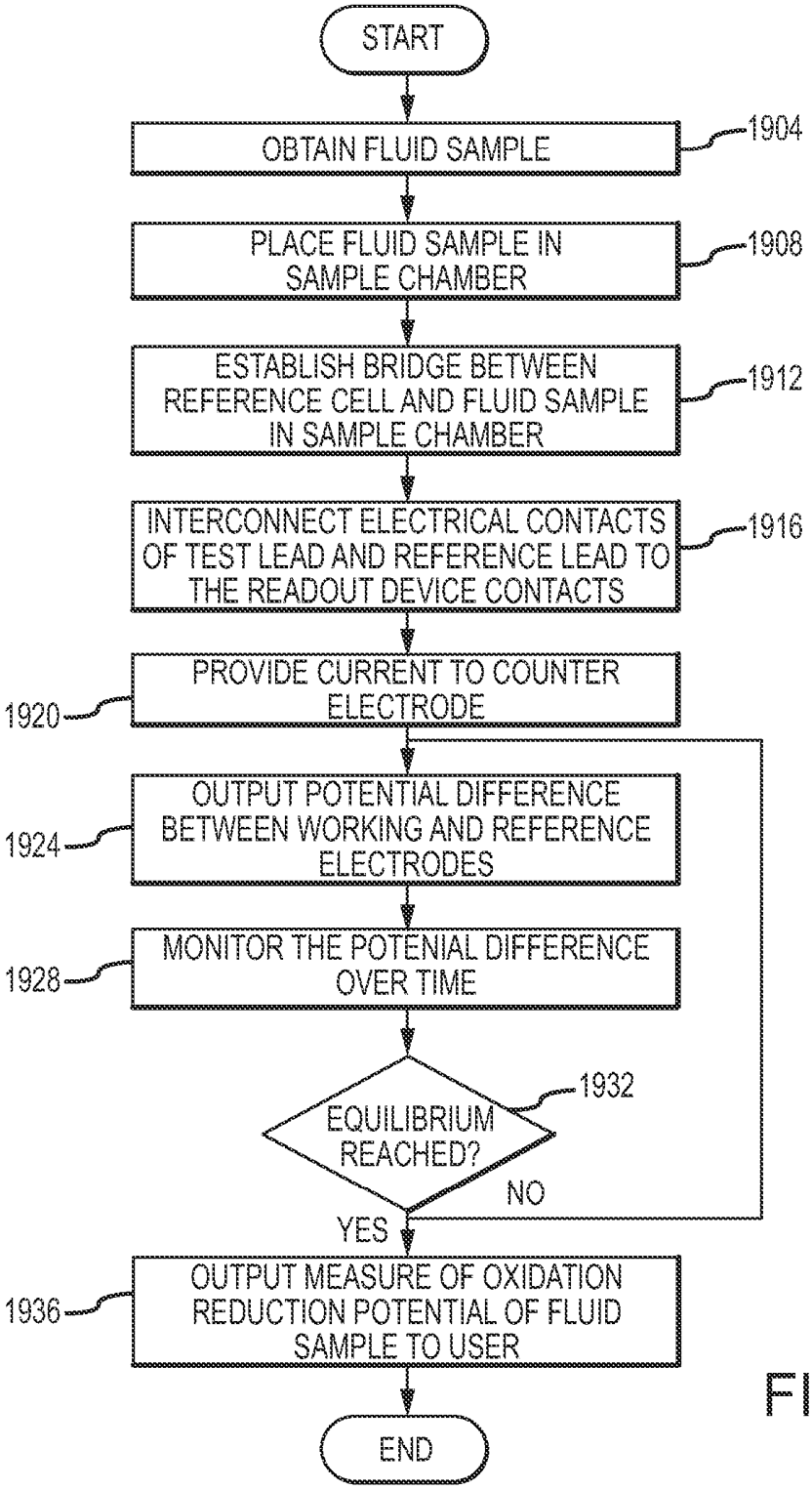

START
OBTAIN FLUID SAMPLE
1904
PLACE FLUID SAMPLE IN SAMPLE CHAMBER
1908
ESTABLISH BRIDGE BETWEEN REFERENCE CELL AND FLUID SAMPLE IN SAMPLE CHAMBER
1912
INTERCONNECT ELECTRICAL CONTACTS OF TEST LEAD AND REFERENCE LEAD TO THE READOUT DEVICE CONTACTS
1916
PROVIDE CURRENT TO COUNTER ELECTRODE
1920
OUTPUT POTENTIAL DIFFERENCE BETWEEN WORKING AND REFERENCE ELECTRODES
1924
MONITOR THE POTENIAL DIFFERENCE OVER TIME
1928
EQUILIBRIUM REACHED?
1932
NO
YES
OUTPUT MEASURE OF OXIDATION REDUCTION POTENTIAL OF FLUID SAMPLE TO USER
1936
END

FIG.19

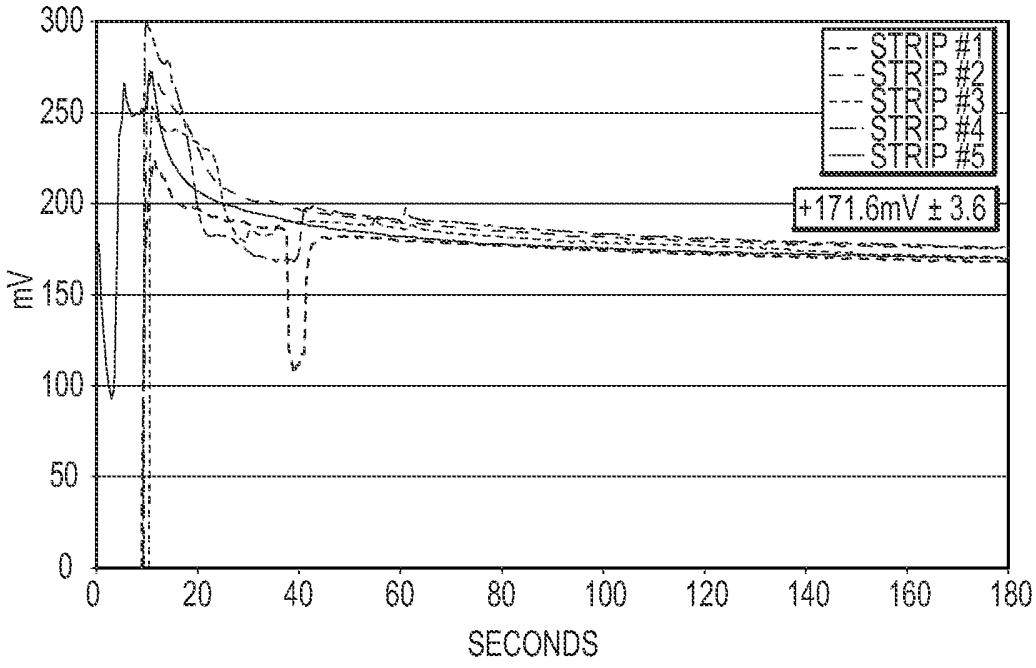

300
250
200
150
100
50
0
mV
0
20
40
60
80
100
120
140
160
180
SECONDS
STRIP #1
STRIP #2
STRIP #3
STRIP #4
STRIP #5
+171.6mV ± 3.6

FIG.20A

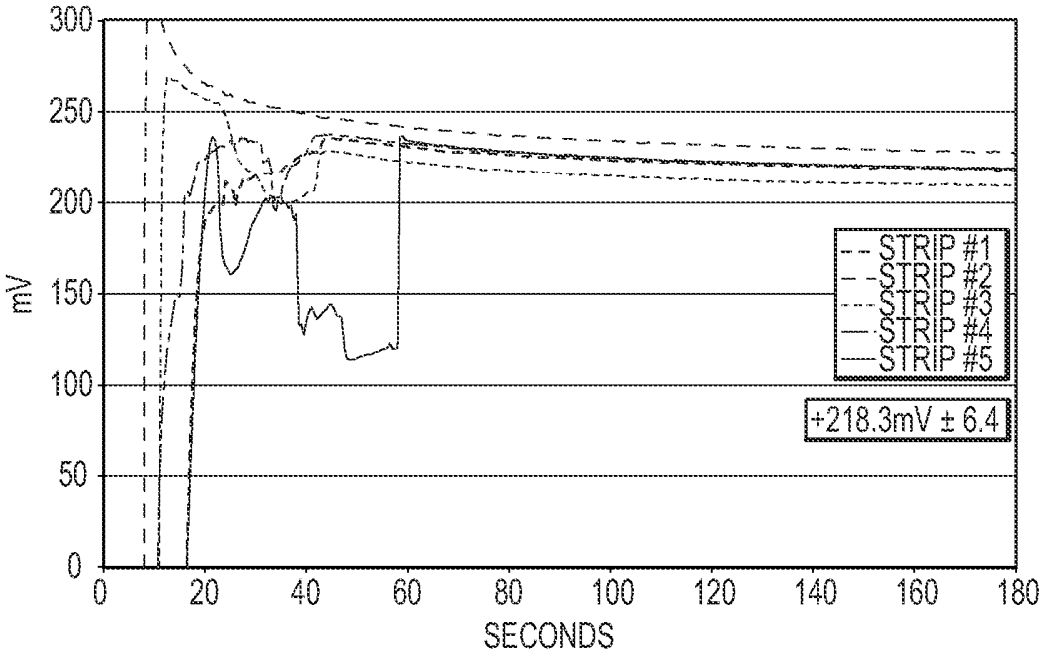

300
250
200
150
100
50
0
mV
0
20
40
60
80
100
120
140
160
180
SECONDS
STRIP #1
STRIP #2
STRIP #3
STRIP #4
STRIP #5
+218.3mV ± 6.4

FIG.20B