FIG. 1

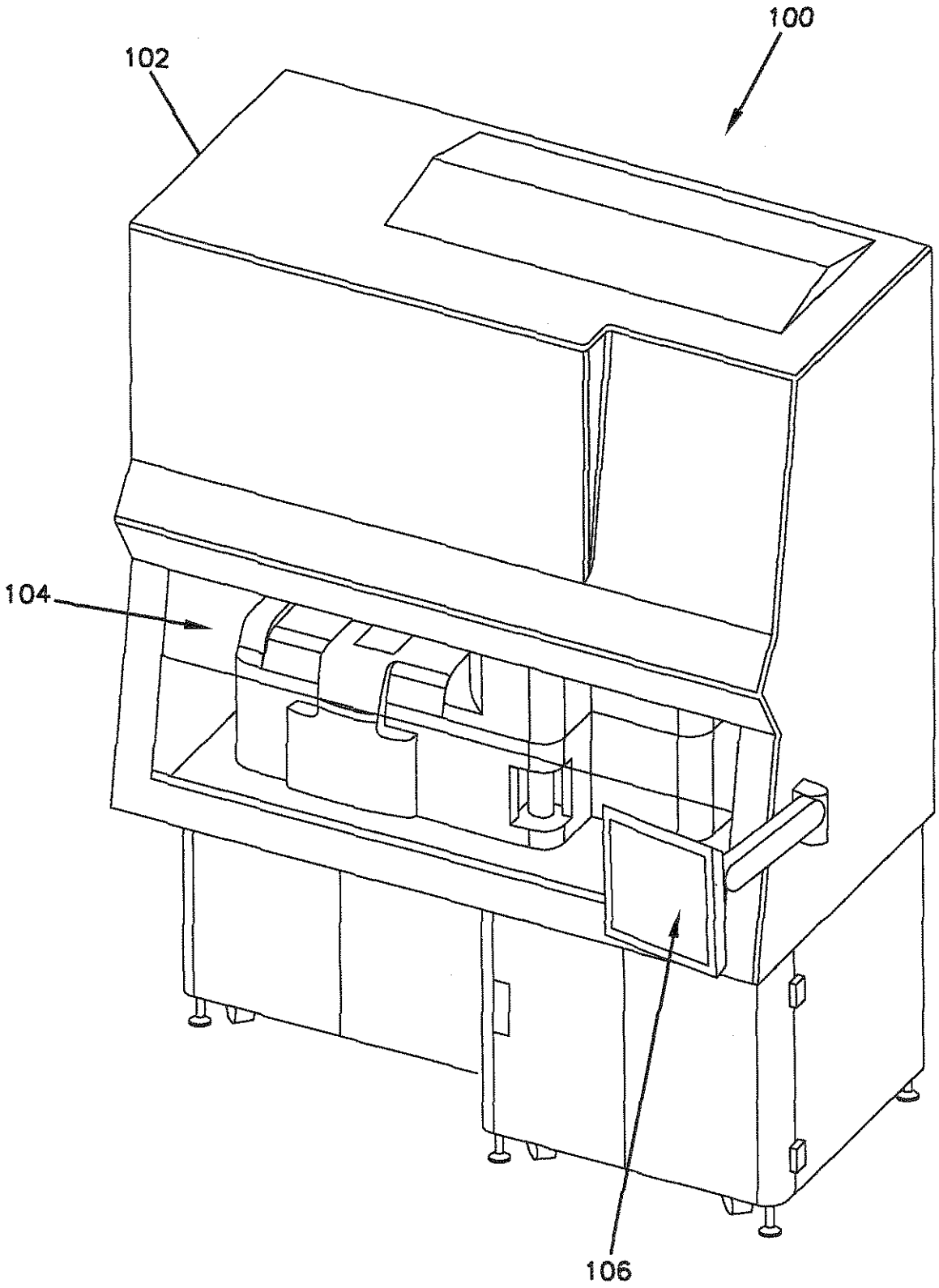


FIG. 2

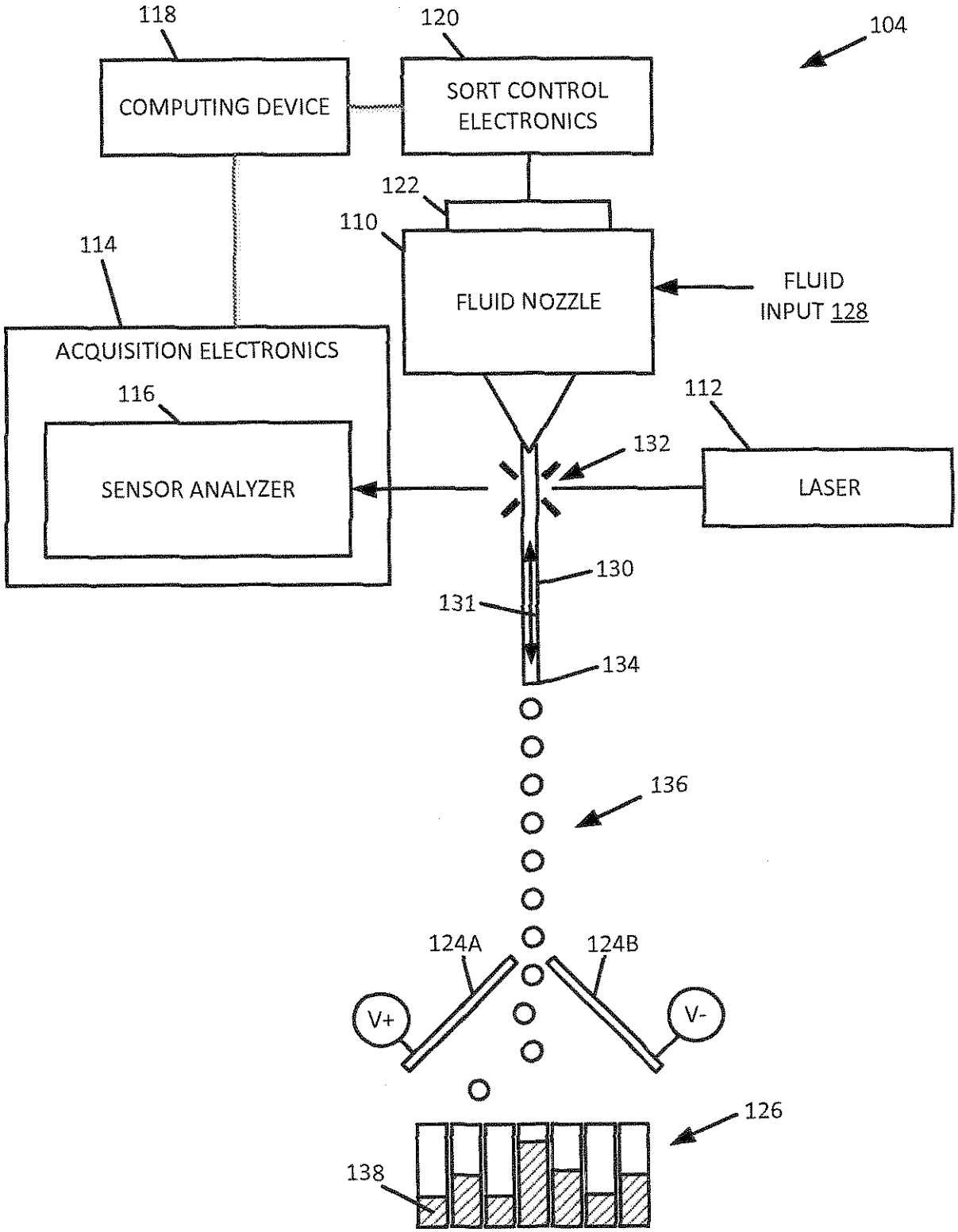

118
120
104
COMPUTING DEVICE
SORT CONTROL ELECTRONICS
122
110
114
FLUID NOZZLE
FLUID INPUT 128
ACQUISITION ELECTRONICS
116
112
SENSOR ANALYZER
132
LASER
130
131
134
136
124A
124B
V+
V-
126
138

FIG. 3

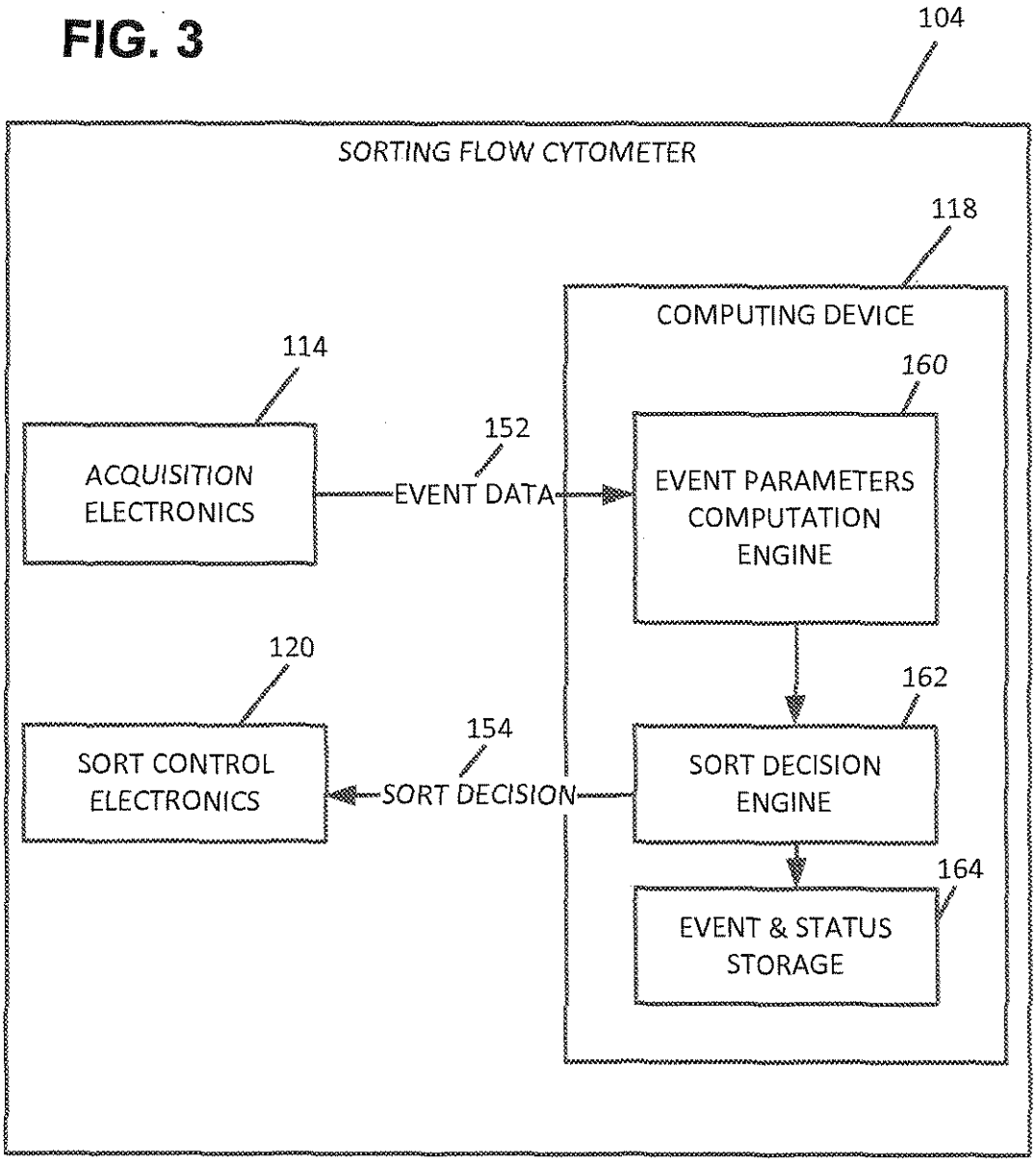

104
SORTING FLOW CYTOMETER
118
COMPUTING DEVICE
114
ACQUISITION ELECTRONICS
152
EVENT DATA
160
EVENT PARAMETERS COMPUTATION ENGINE
120
SORT CONTROL ELECTRONICS
154
SORT DECISION
162
SORT DECISION ENGINE
164
EVENT & STATUS STORAGE

FIG. 4

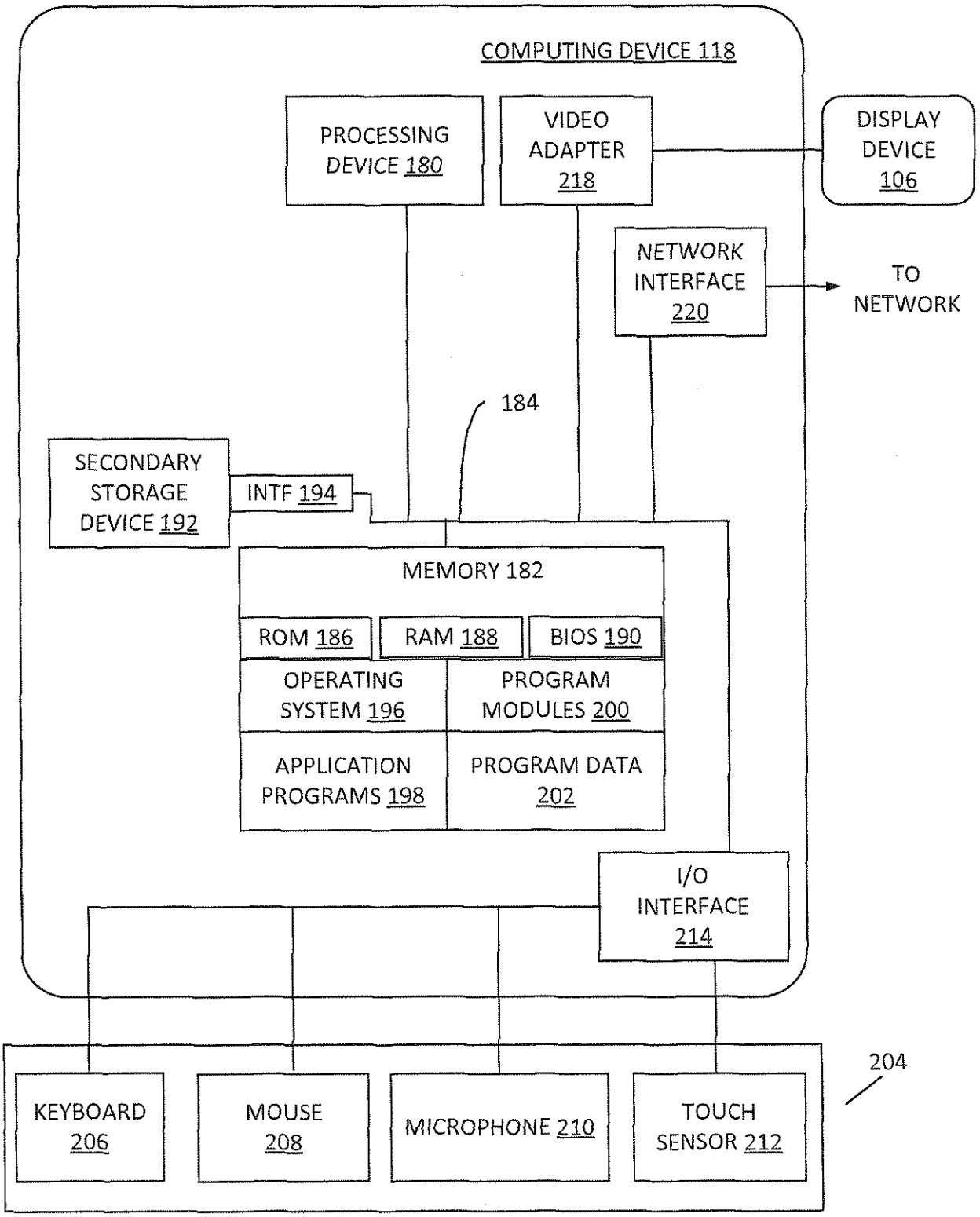

COMPUTING DEVICE 118
PROCESSING DEVICE 180
VIDEO ADAPTER 218
DISPLAY DEVICE 106
NETWORK INTERFACE 220
TO NETWORK
184
SECONDARY STORAGE DEVICE 192
INTF 194
MEMORY 182
ROM 186
RAM 188
BIOS 190
OPERATING SYSTEM 196
PROGRAM MODULES 200
APPLICATION PROGRAMS 198
PROGRAM DATA 202
I/O INTERFACE 214
204
KEYBOARD 206
MOUSE 208
MICROPHONE 210
TOUCH SENSOR 212

FIG. 5

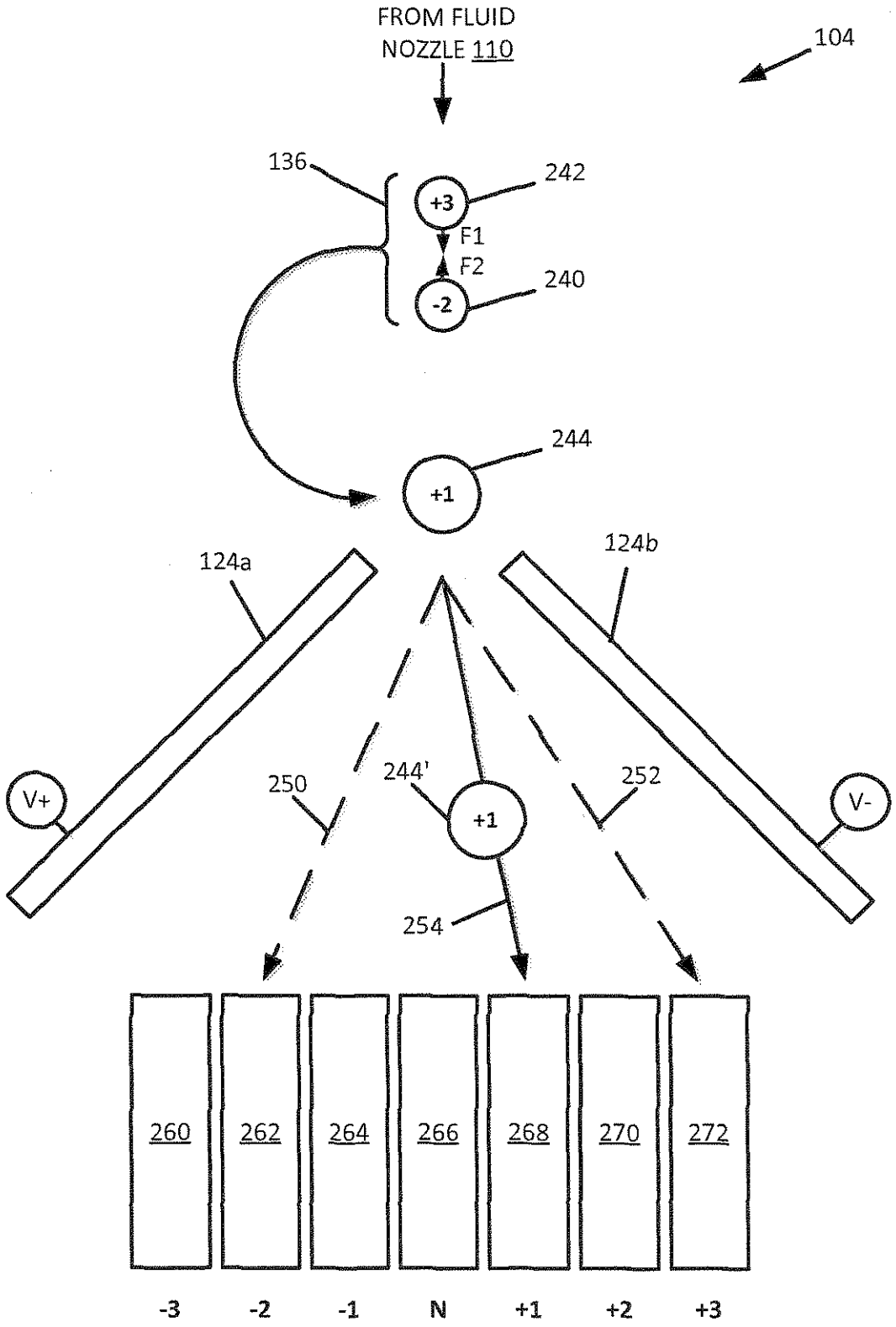

FROM FLUID NOZZLE 110
104
136
242
+3
F1
F2
240
-2
244
+1
124a
124b
V+
250
244'
+1
252
V-
254
260
262
264
266
268
270
272
-3
-2
-1
N
+1
+2
+3

FIG. 6

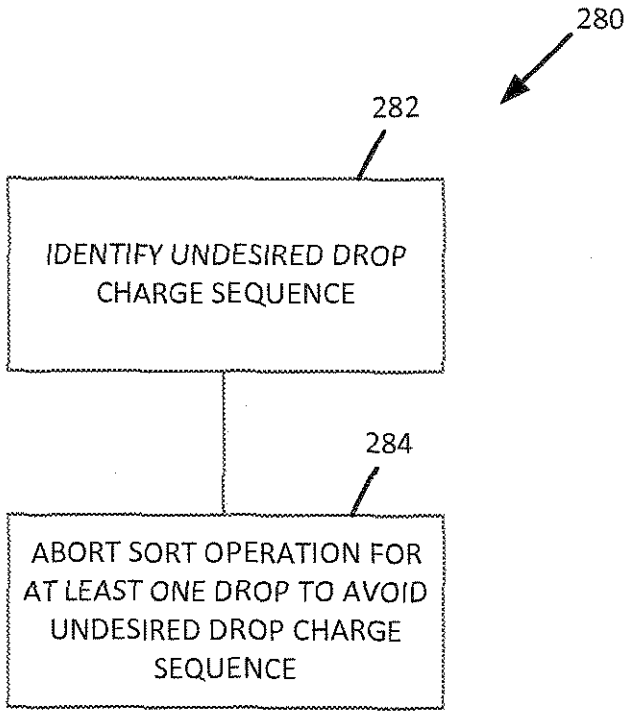

280
282
IDENTIFY UNDESIRED DROP CHARGE SEQUENCE
284
ABORT SORT OPERATION FOR AT LEAST ONE DROP TO AVOID UNDESIRED DROP CHARGE SEQUENCE

FIG. 7

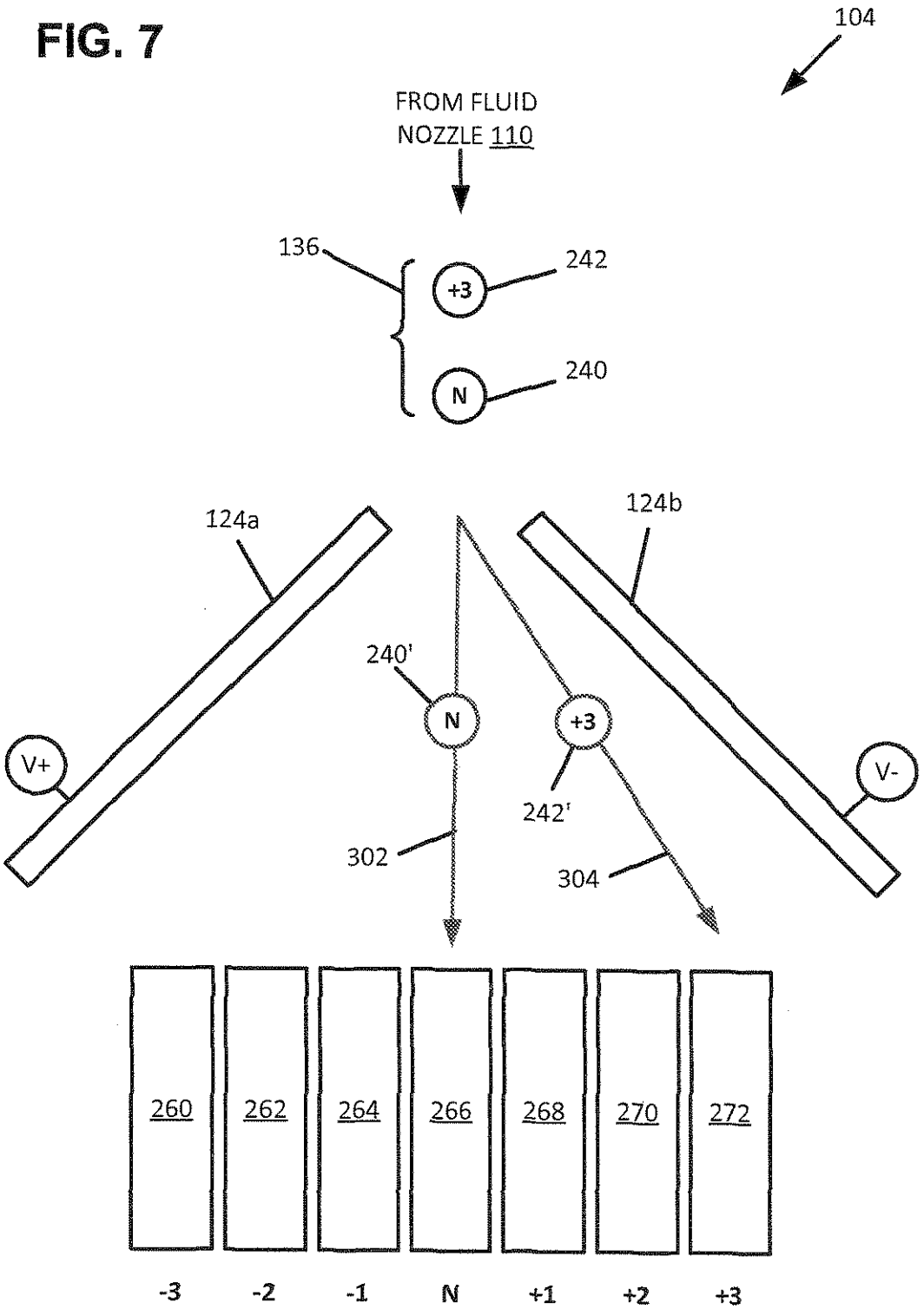

104
FROM FLUID NOZZLE 110
136
+3
242
N
240
124a
124b
240'
N
+3
242'
V+
V-
302
304
260
262
264
266
268
270
272
-3
-2
-1
N
+1
+2
+3

FIG. 8

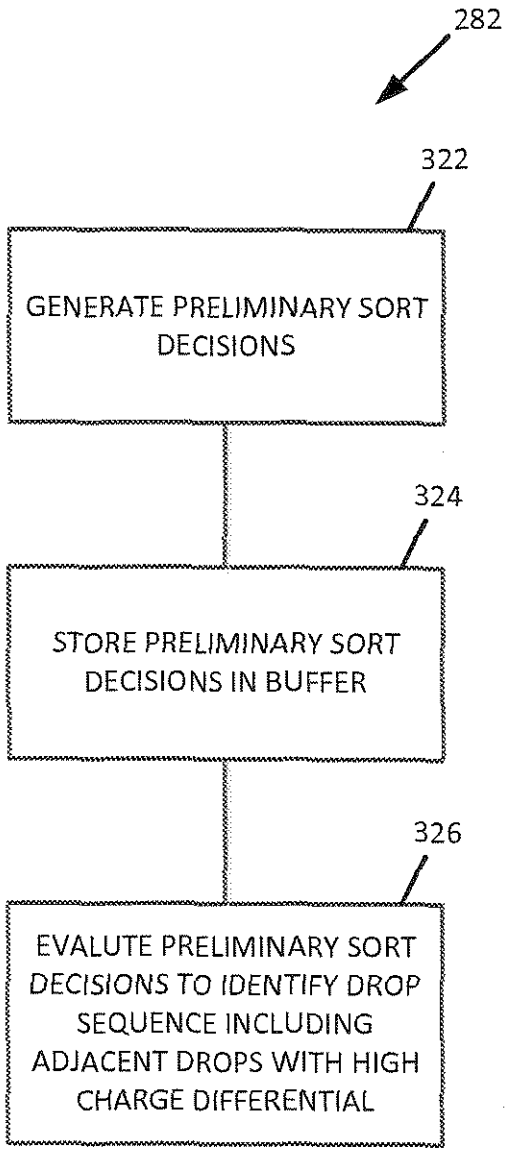

282
322
GENERATE PRELIMINARY SORT DECISIONS
324
STORE PRELIMINARY SORT DECISIONS IN BUFFER
326
EVALUTE PRELIMINARY SORT DECISIONS TO IDENTIFY DROP SEQUENCE INCLUDING ADJACENT DROPS WITH HIGH CHARGE DIFFERENTIAL

FIG. 9

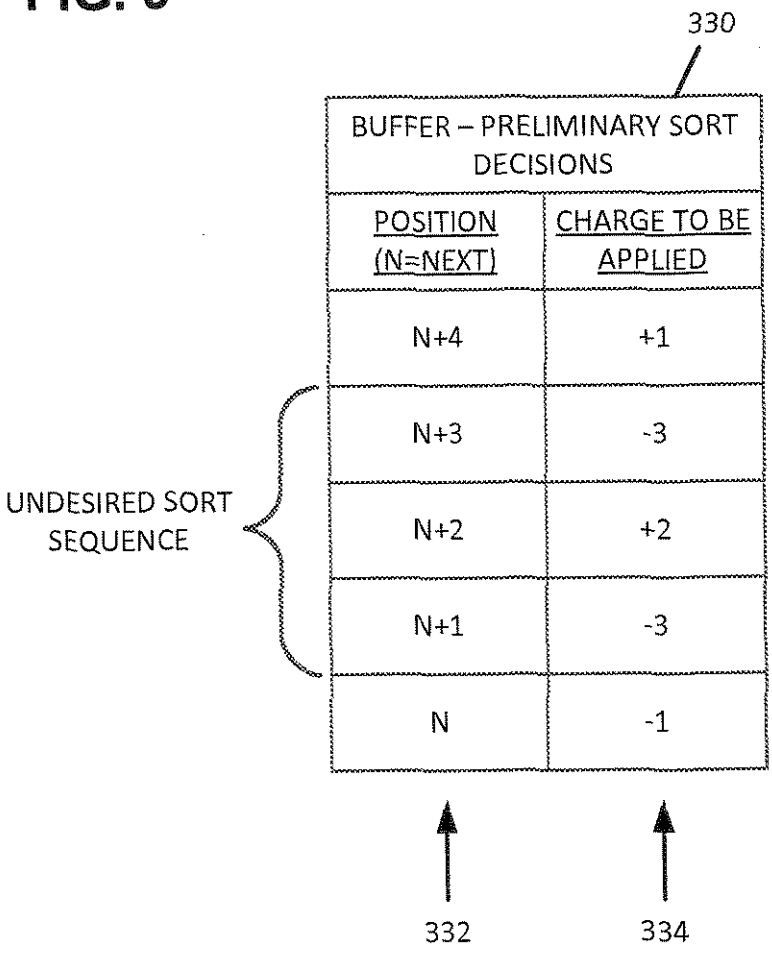

330
BUFFER – PRELIMINARY SORT DECISIONS
POSITION (N=NEXT)
CHARGE TO BE APPLIED
N+4
+1
N+3
-3
N+2
+2
N+1
-3
N
-1
UNDESIRED SORT SEQUENCE
332
334

FIG. 10

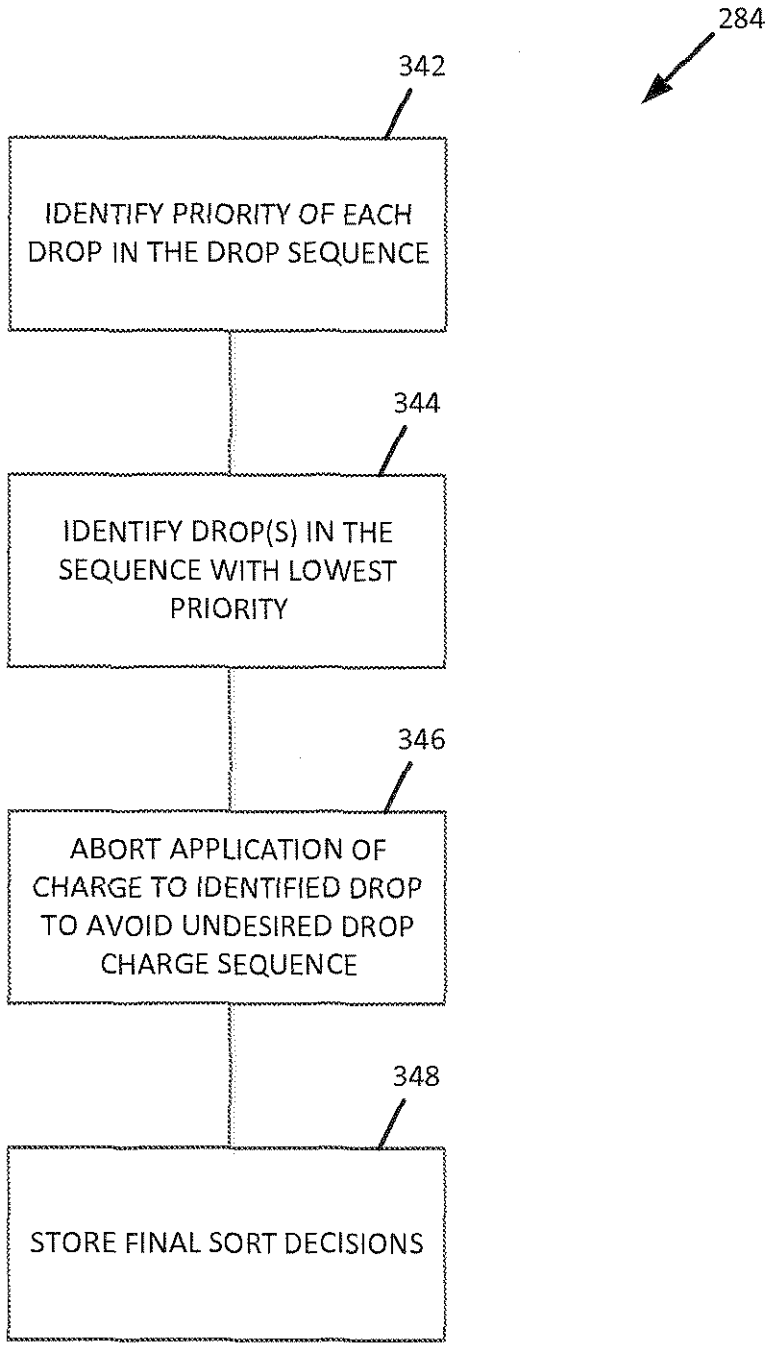

284
342
IDENTIFY PRIORITY OF EACH DROP IN THE DROP SEQUENCE
344
IDENTIFY DROP(S) IN THE SEQUENCE WITH LOWEST PRIORITY
346
ABORT APPLICATION OF CHARGE TO IDENTIFIED DROP TO AVOID UNDESIRED DROP CHARGE SEQUENCE
348
STORE FINAL SORT DECISIONS

FIG. 11

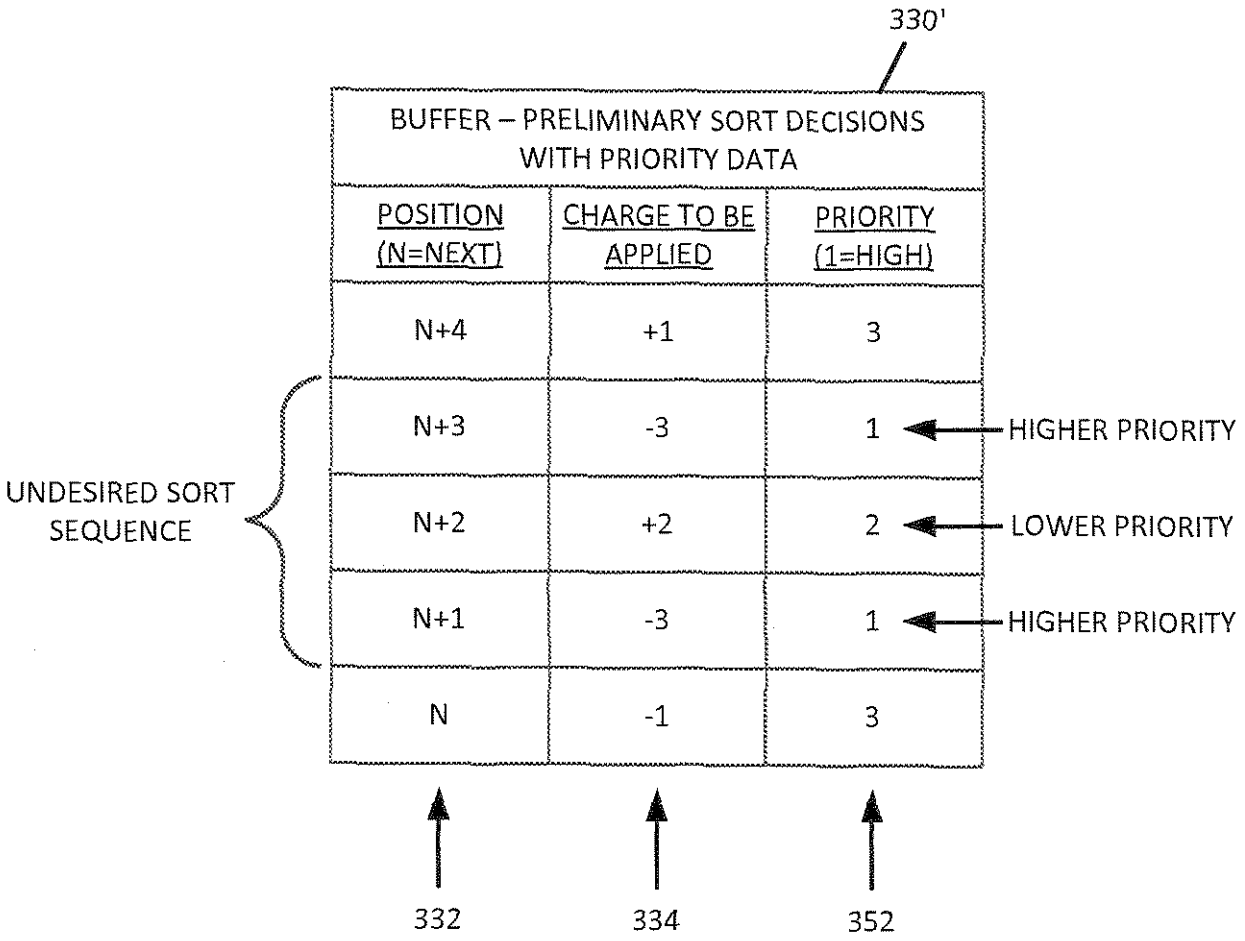
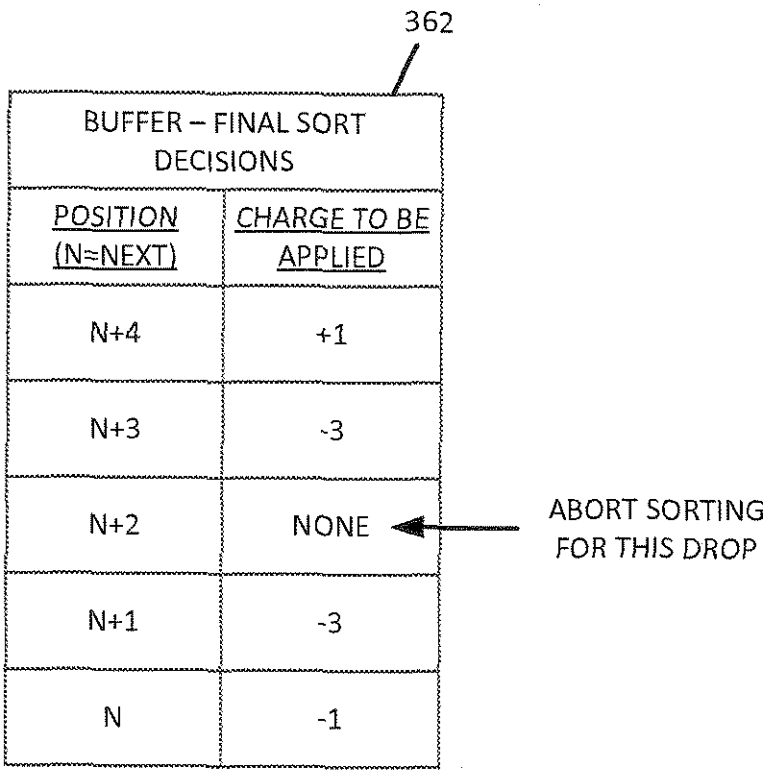

330'
BUFFER – PRELIMINARY SORT DECISIONS WITH PRIORITY DATA
POSITION (N=NEXT)
CHARGE TO BE APPLIED
PRIORITY (1=HIGH)
N+4
+1
3
N+3
-3
1
HIGHER PRIORITY
N+2
+2
2
LOWER PRIORITY
N+1
-3
1
HIGHER PRIORITY
N
-1
3
UNDESIRED SORT SEQUENCE
332
334
352

FIG. 12


362
BUFFER – FINAL SORT DECISIONS
POSITION (N=NEXT)
CHARGE TO BE APPLIED
N+4
+1
N+3
-3
N+2
NONE
ABORT SORTING FOR THIS DROP
N+1
-3
N
-1