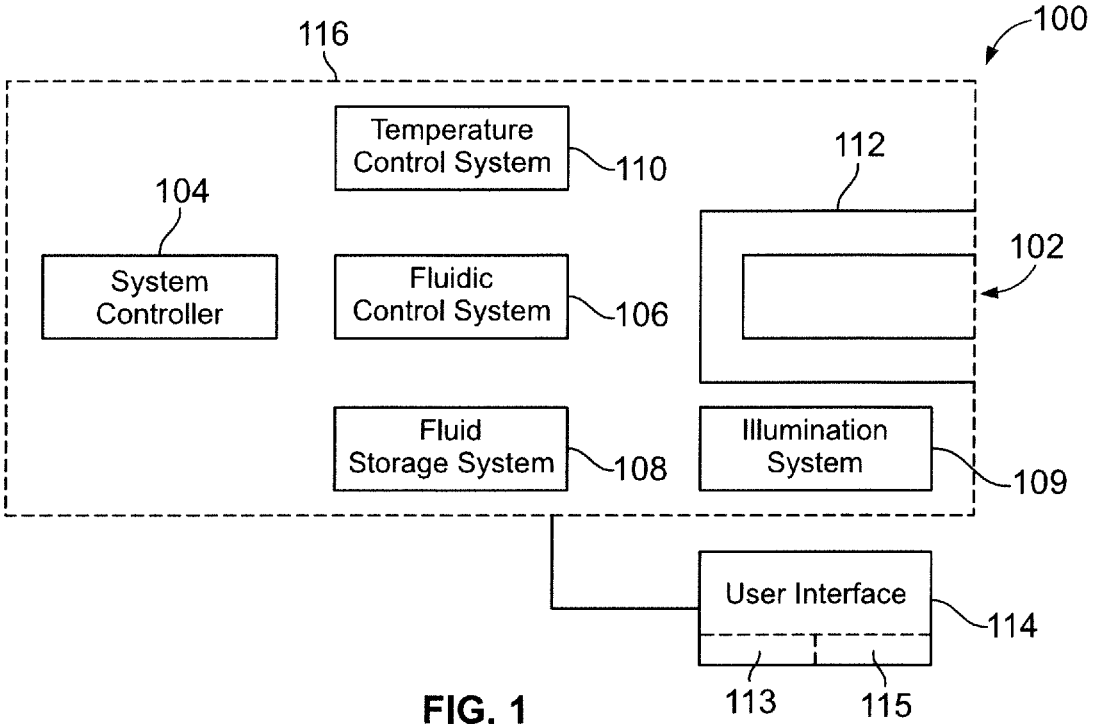

116
100
Temperature Control System
110
112
104
System Controller
Fluidic Control System
106
102
Fluid Storage System
108
Illumination System
109
User Interface
114
113
115

FIG. 1

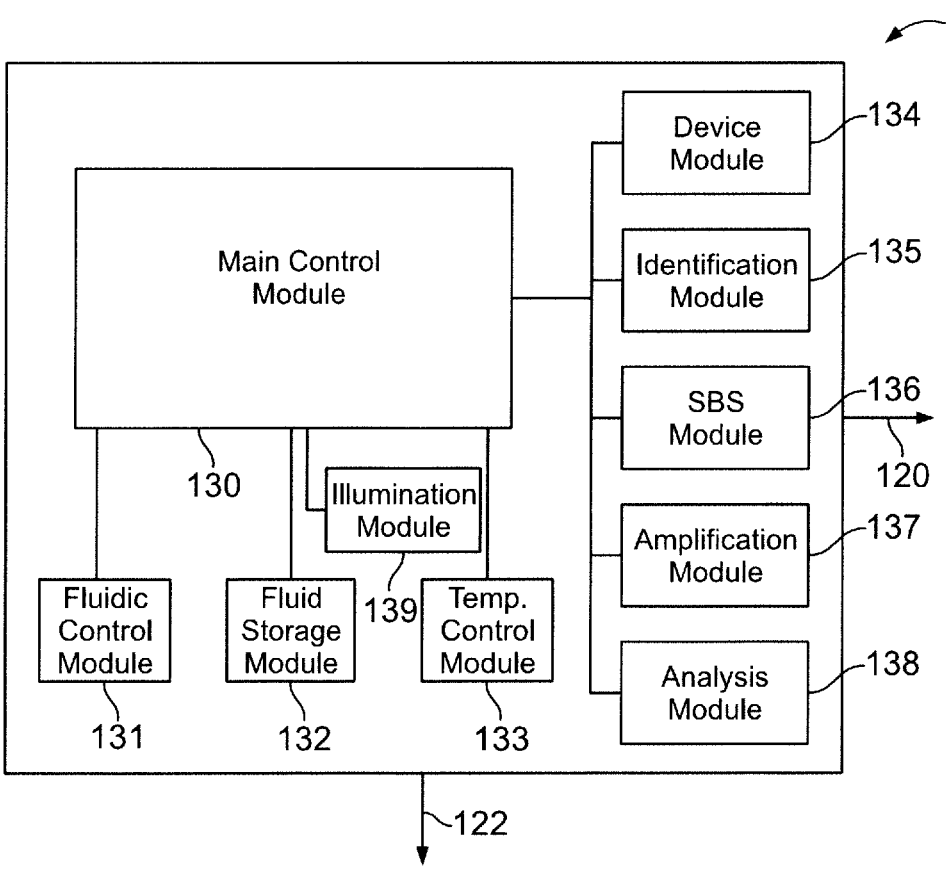

104
Device Module
134
Main Control Module
Identification Module
135
SBS Module
136
120
130
Illumination Module
Amplification Module
137
Fluidic Control Module
Fluid Storage Module
139
Temp. Control Module
Analysis Module
138
131
132
133
122

FIG. 2

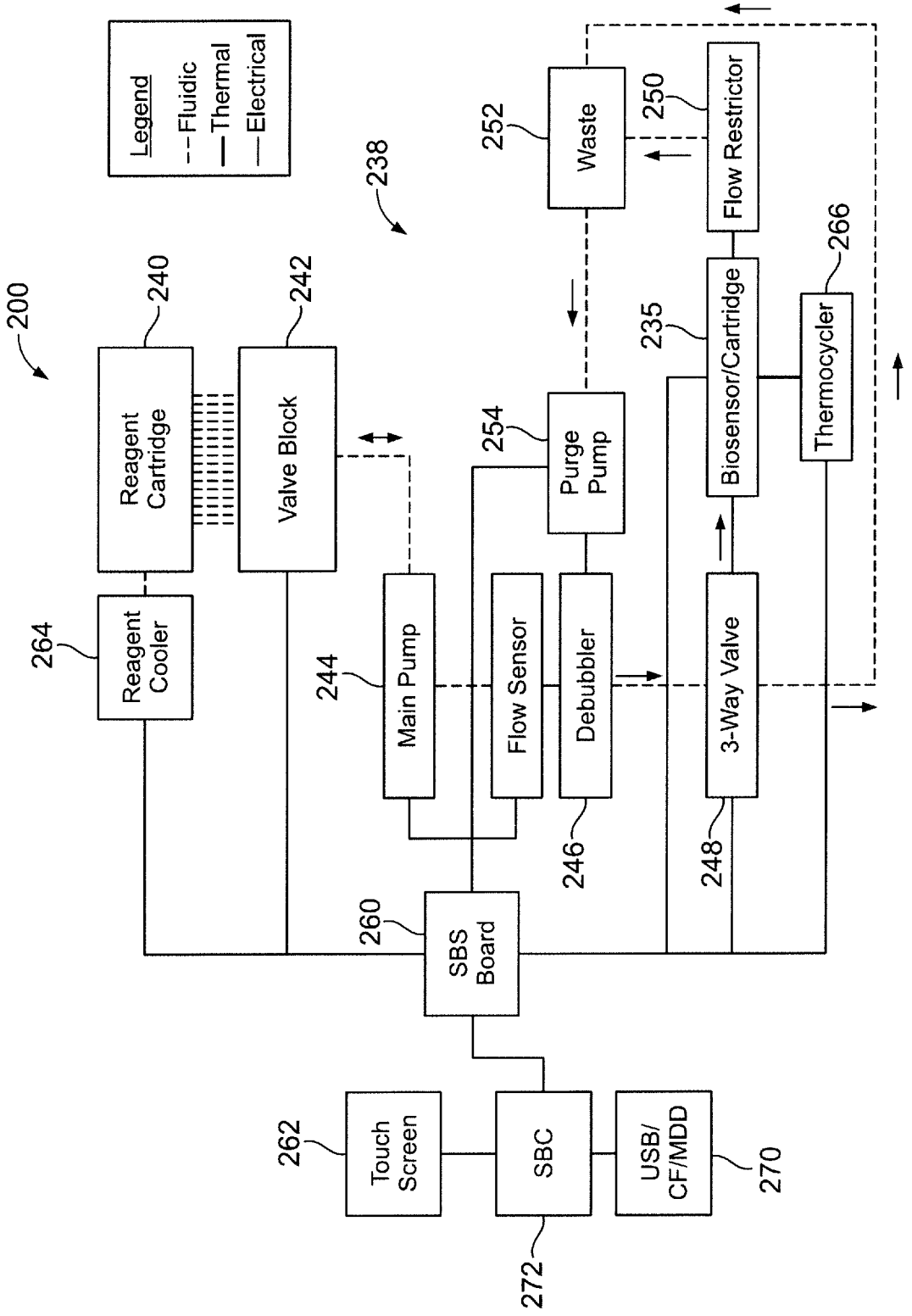

Legend
Fluidic
Thermal
Electrical
200
238
240
Reagent Cartridge
242
Valve Block
252
Waste
250
Flow Restrictor
266
Thermocycler
235
Biosensor/Cartridge
254
Purge Pump
264
Reagent Cooler
244
Main Pump
Flow Sensor
Debubbler
3-Way Valve
246
248
260
SBS Board
262
Touch Screen
SBC
USB/ CF/MDD
270
272

FIG. 3

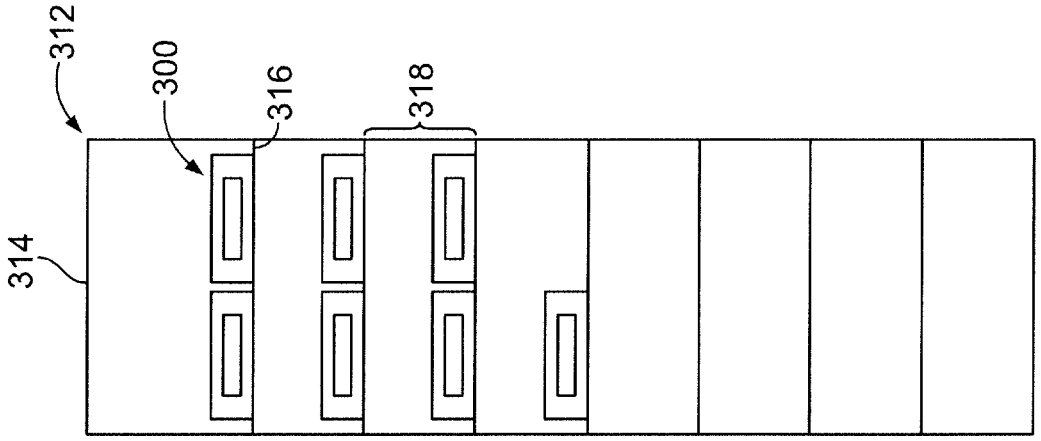


FIG. 5

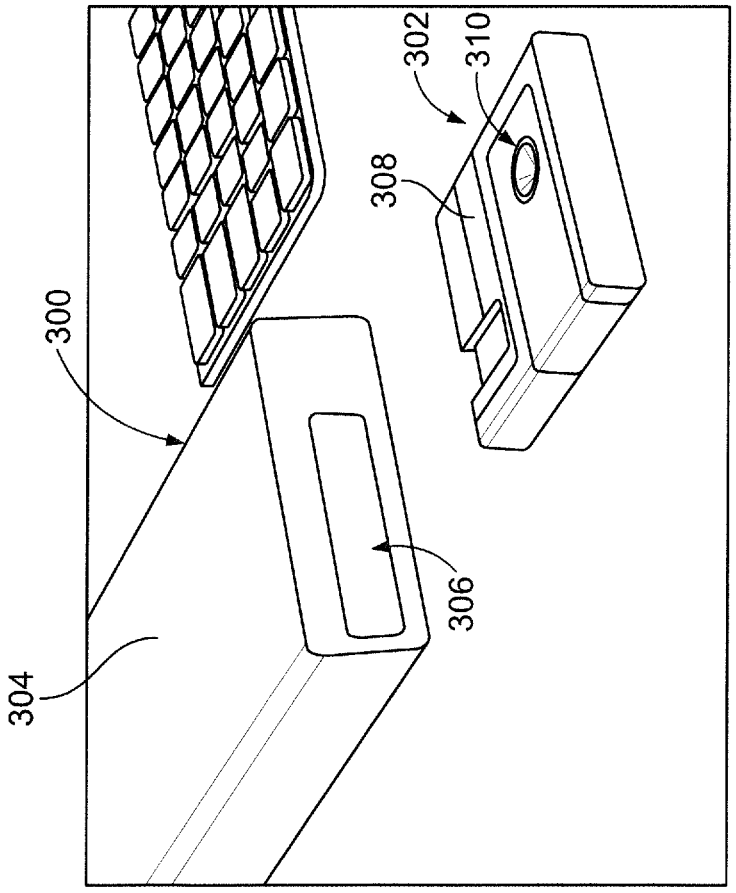


FIG. 4

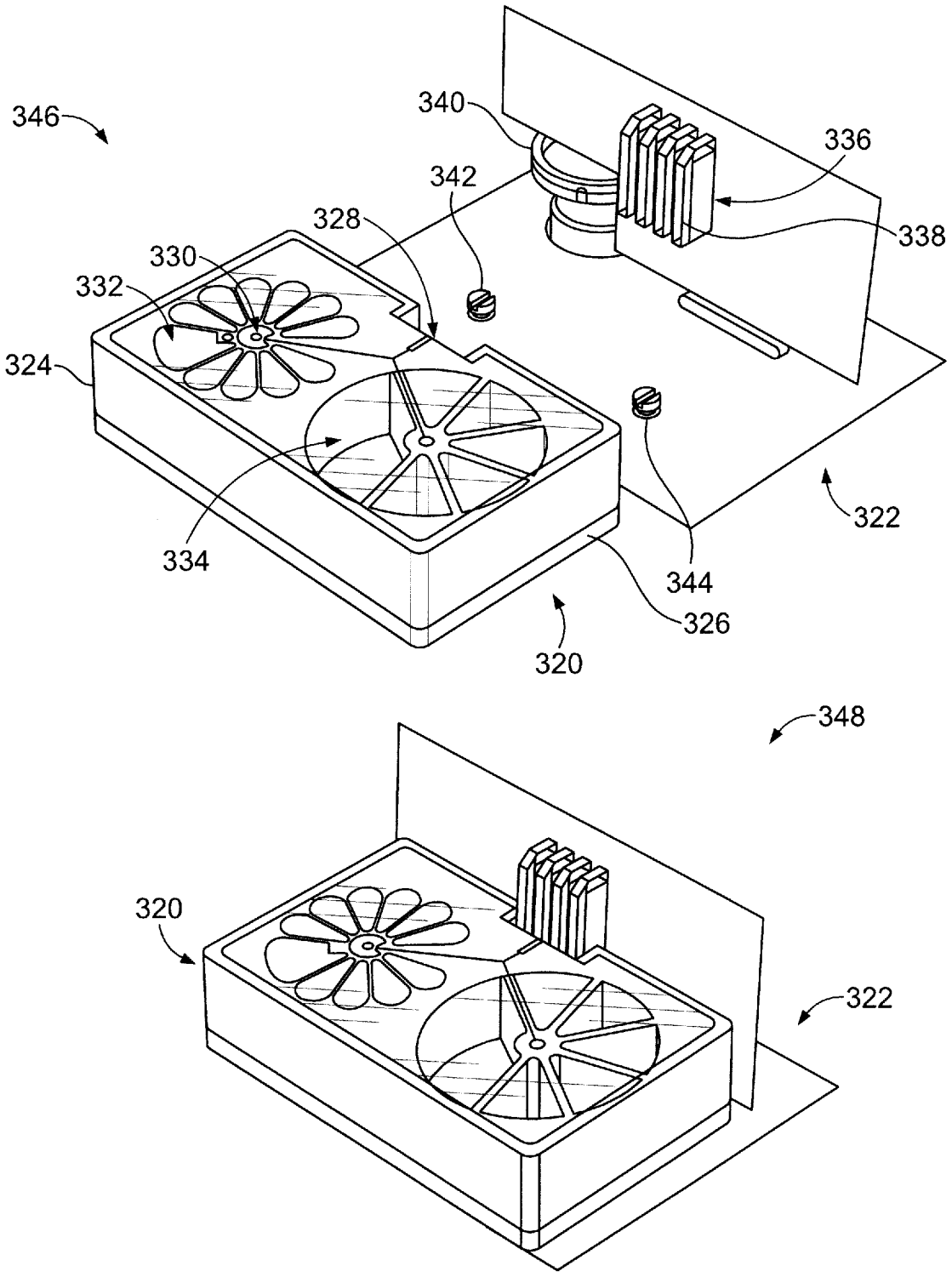

346
340
336
342
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338
330
332
324
322
334
344
326
320
348
320
322

FIG. 6

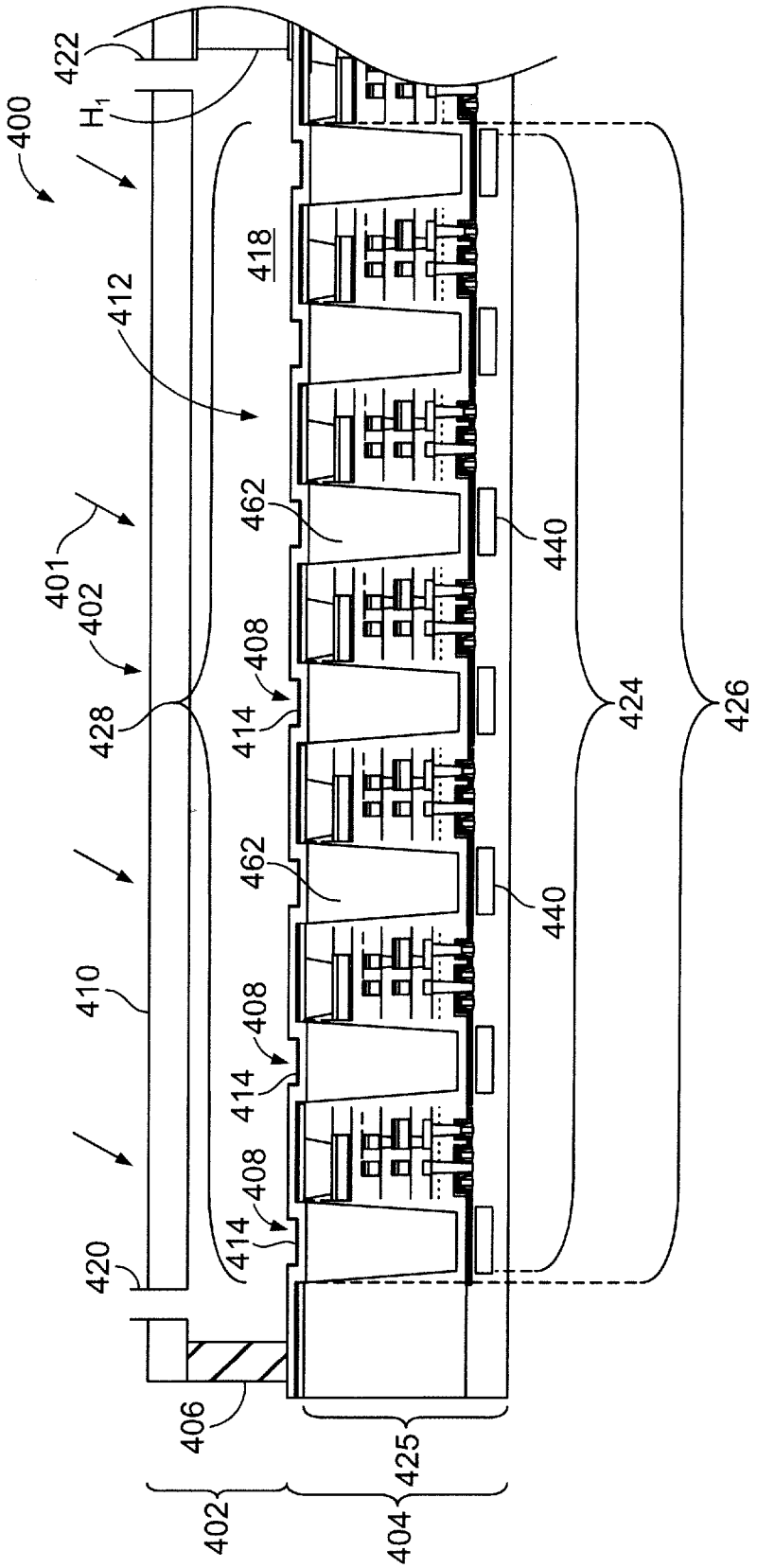

422
400
H_1
418
412
462
440
401
402
408
414
428
424
426
462
440
410
408
414
408
414
420
406
425
402
404

FIG. 7

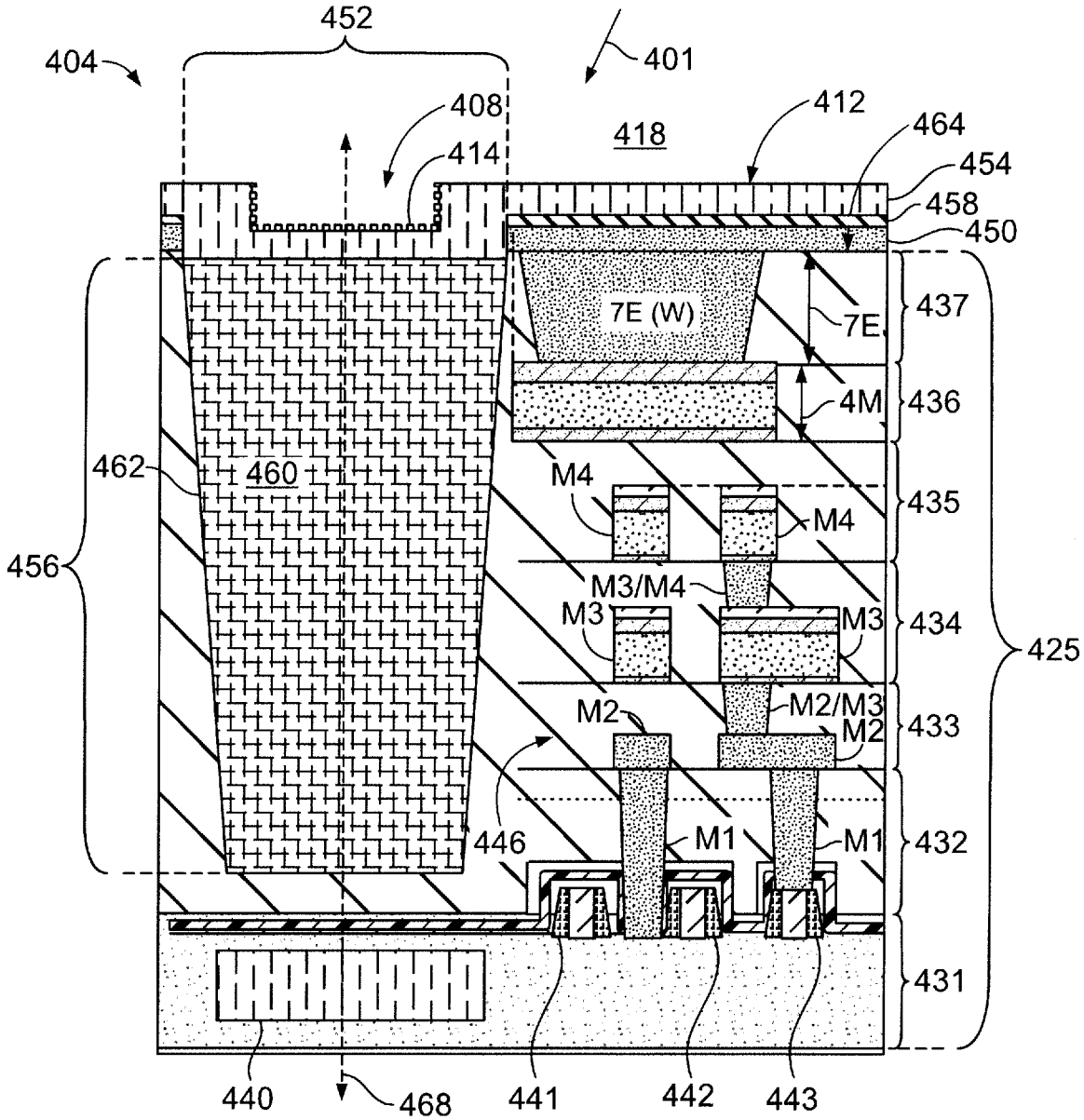

452
404
401
408
414
418
412
464
454
458
450
7E (W)
7E
437
4M
436
462
460
M4
435
M4
456
M3/M4
M3
M3
434
425
M2
M2/M3
M2
433
446
M1
M1
432
431
440
468
441
442
443

FIG. 8

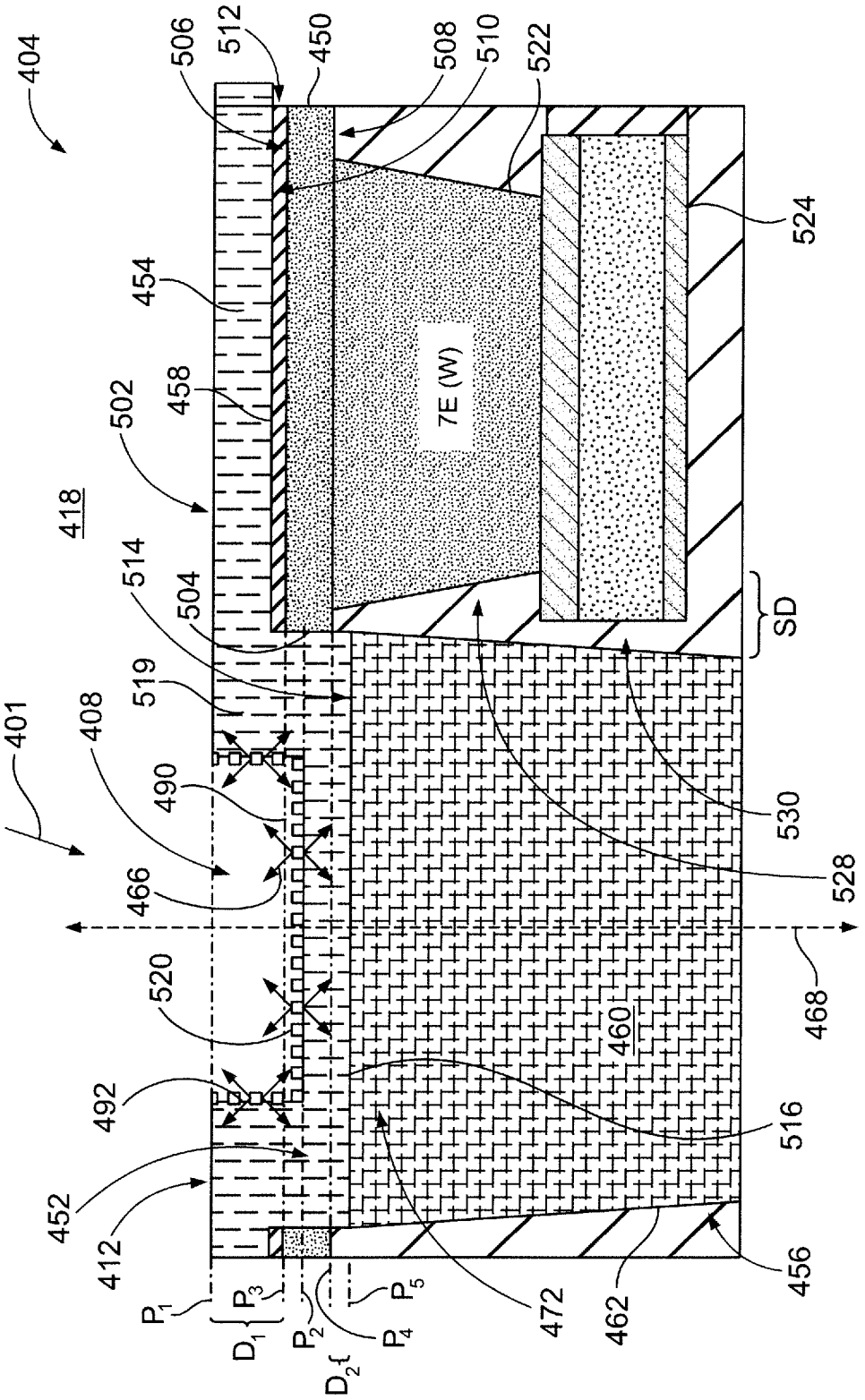

404
506
512
450
508
510
522
524
454
458
502
418
7E (W)
514
504
519
SD
401
408
490
530
528
466
520
468
460
492
516
452
412
456
472
462
P1
P3
P5
P2
P4
D1
D2

FIG. 9

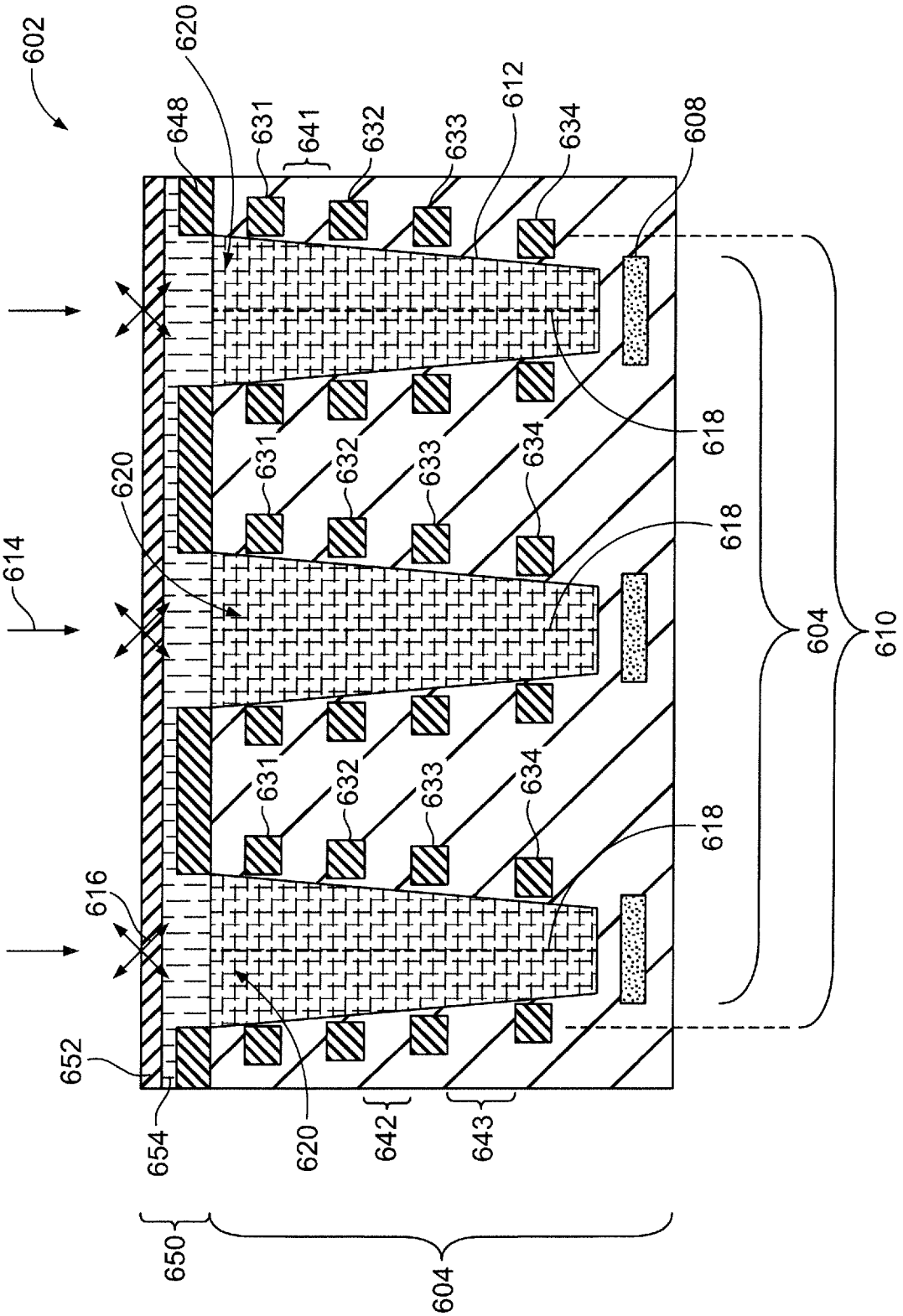

602
620
648
631
641
632
633
612
634
608
618
614
616
652
654
642
643
650
604
610

FIG. 10

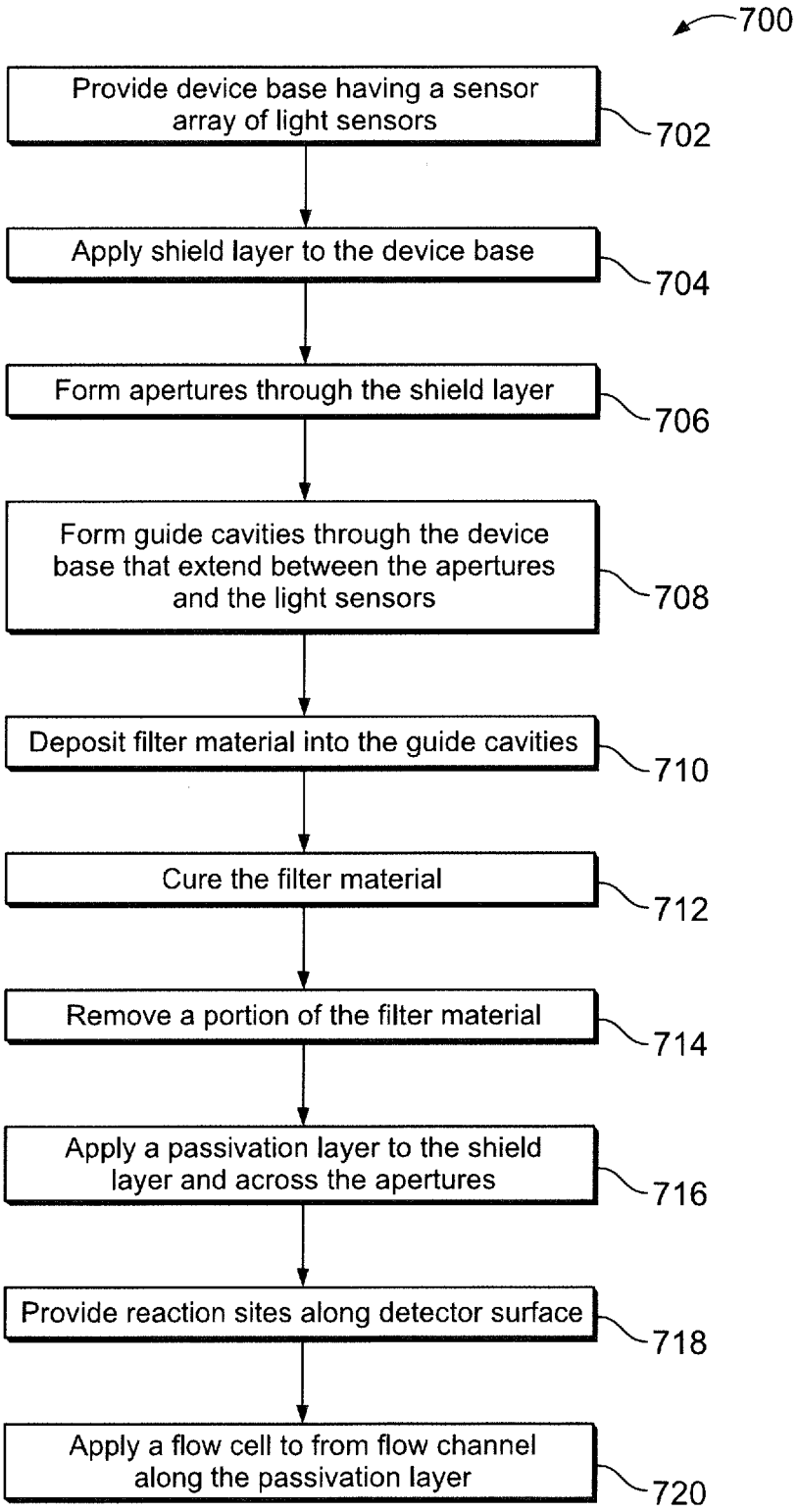

700
Provide device base having a sensor array of light sensors
702
Apply shield layer to the device base
704
Form apertures through the shield layer
706
Form guide cavities through the device base that extend between the apertures and the light sensors
708
Deposit filter material into the guide cavities
710
Cure the filter material
712
Remove a portion of the filter material
714
Apply a passivation layer to the shield layer and across the apertures
716
Provide reaction sites along detector surface
718
Apply a flow cell to from flow channel along the passivation layer
720

FIG. 11

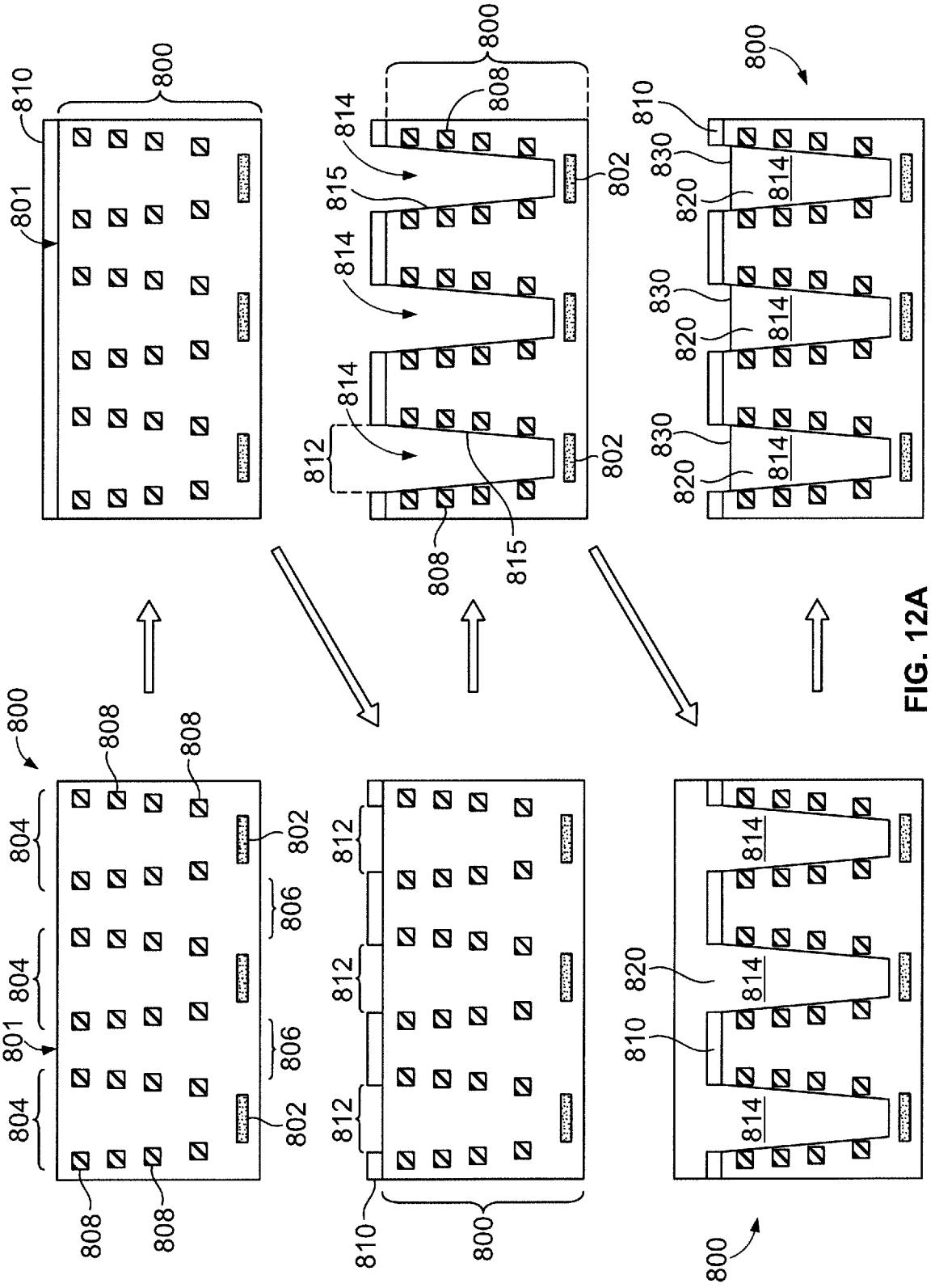


FIG. 12A

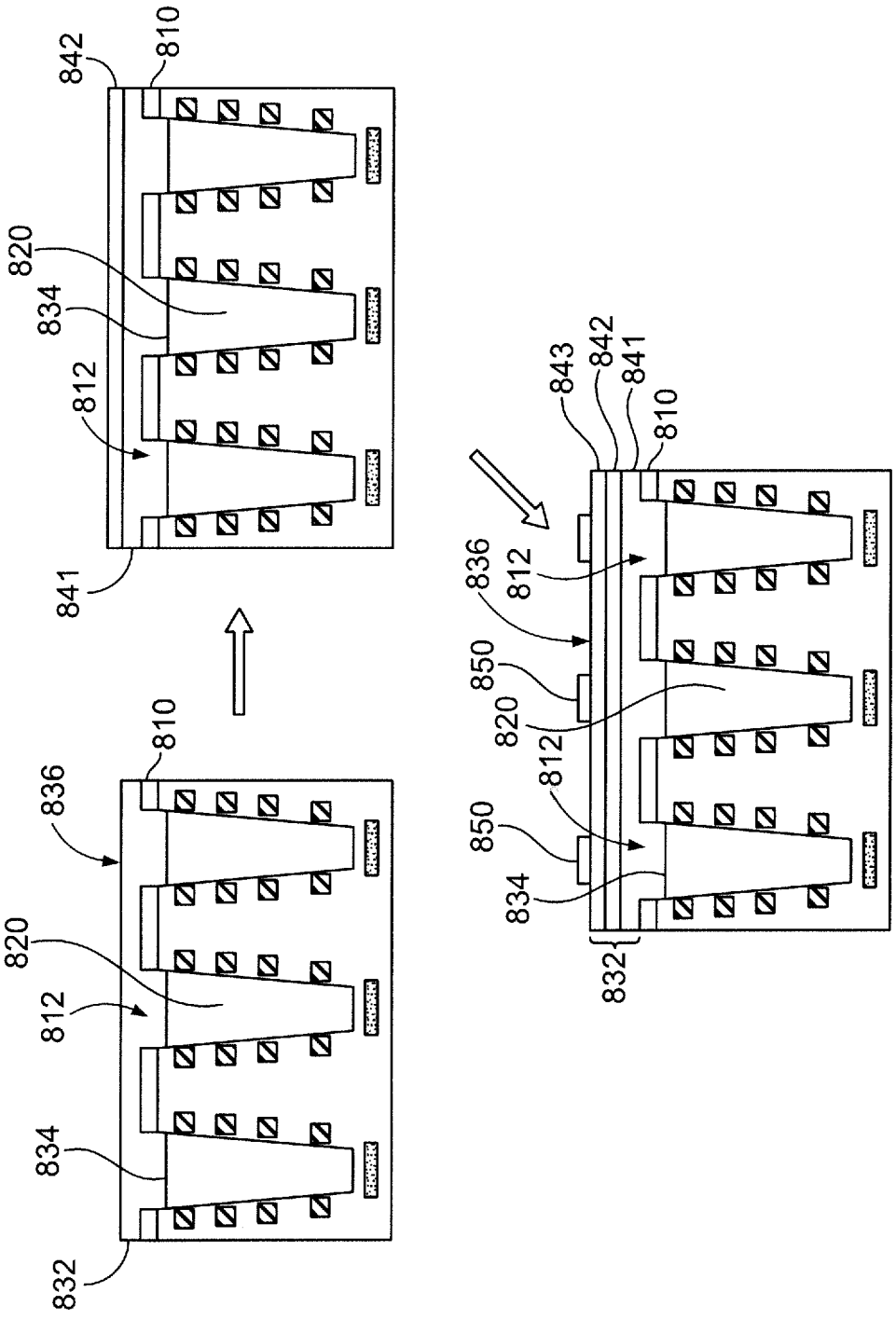

842
810
820
834
812
841
810
836
820
812
834
832
843
842
841
810
836
812
850
820
812
850
834
832

FIG. 12B