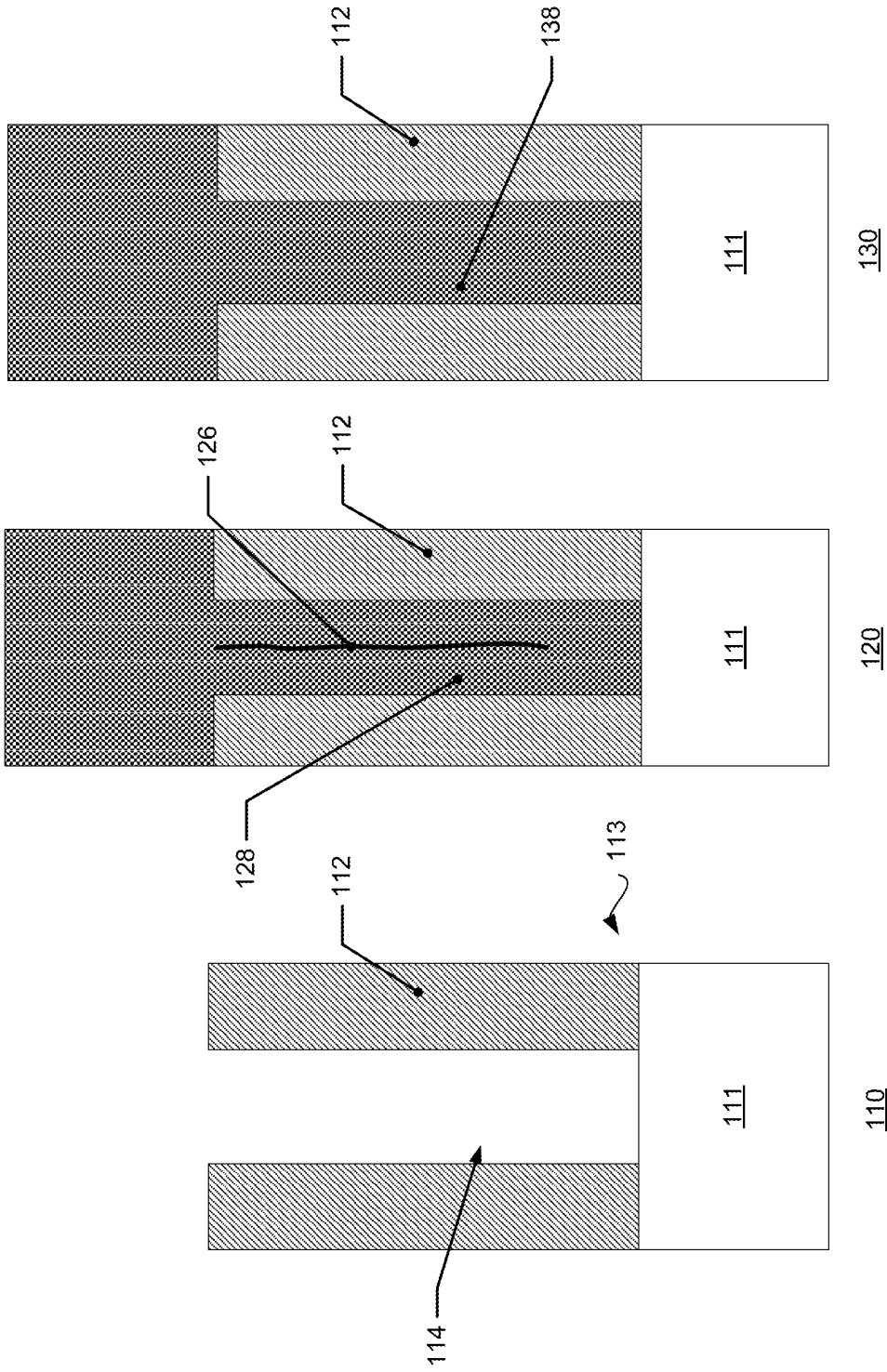


FIG. 1

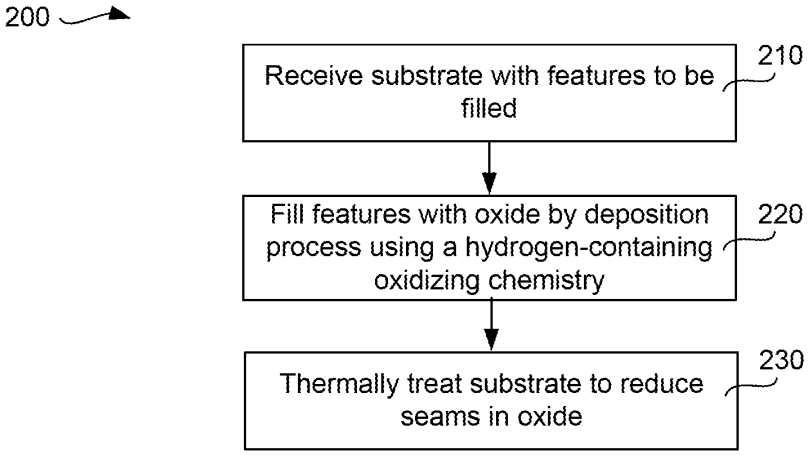

200
Receive substrate with features to be filled
210
Fill features with oxide by deposition process using a hydrogen-containing oxidizing chemistry
220
Thermally treat substrate to reduce seams in oxide
230

FIG. 2

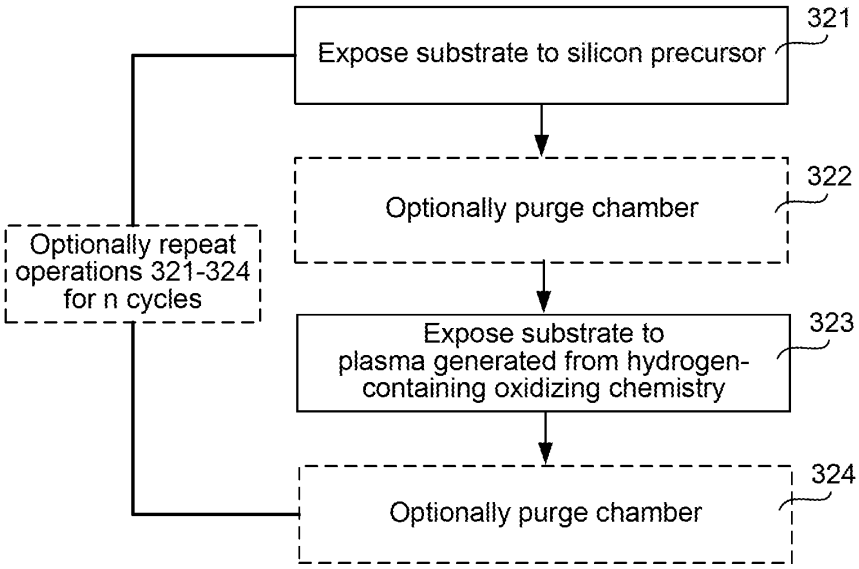

Expose substrate to silicon precursor
321
Optionally purge chamber
322
Optionally repeat operations 321-324 for n cycles
Expose substrate to plasma generated from hydrogen-containing oxidizing chemistry
323
Optionally purge chamber
324

FIG. 3

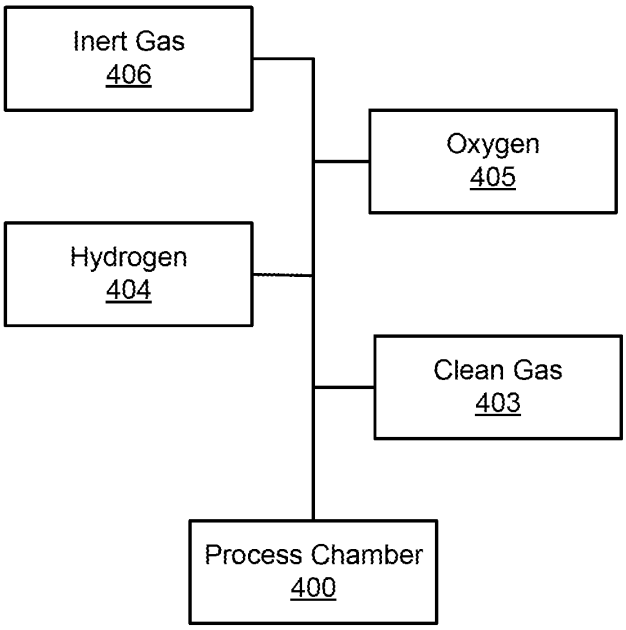

Inert Gas
406
Oxygen
405
Hydrogen
404
Clean Gas
403
Process Chamber
400

FIG. 4

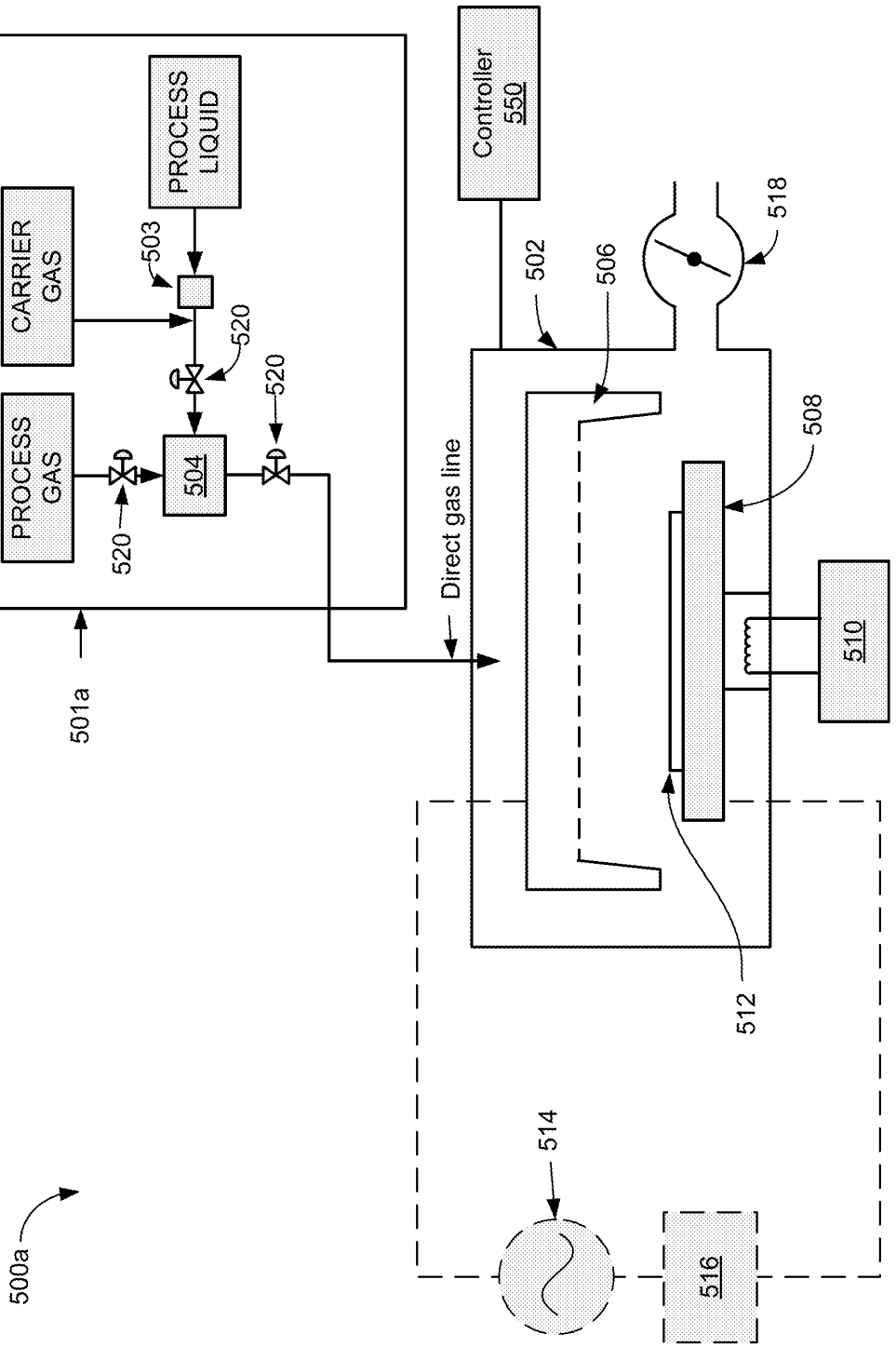

Controller
550
PROCESS
LIQUID
CARRIER
GAS
PROCESS
GAS
503
520
520
520
504
501a
Direct gas line
502
506
518
508
510
512
514
516
500a

FIG. 5

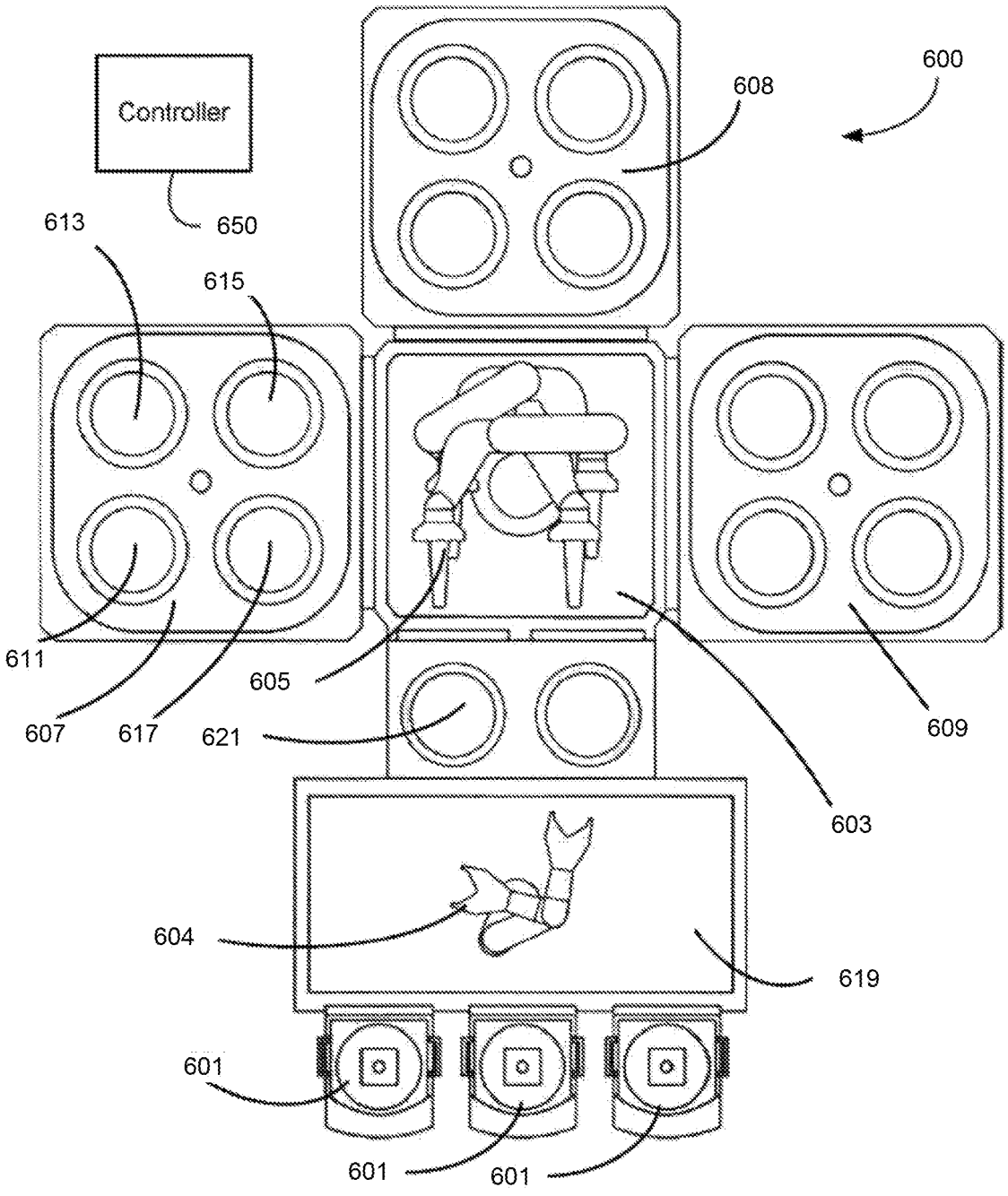

Controller
650
600
608
613
615
611
607
617
621
605
609
603
604
619
601
601
601

FIG. 6