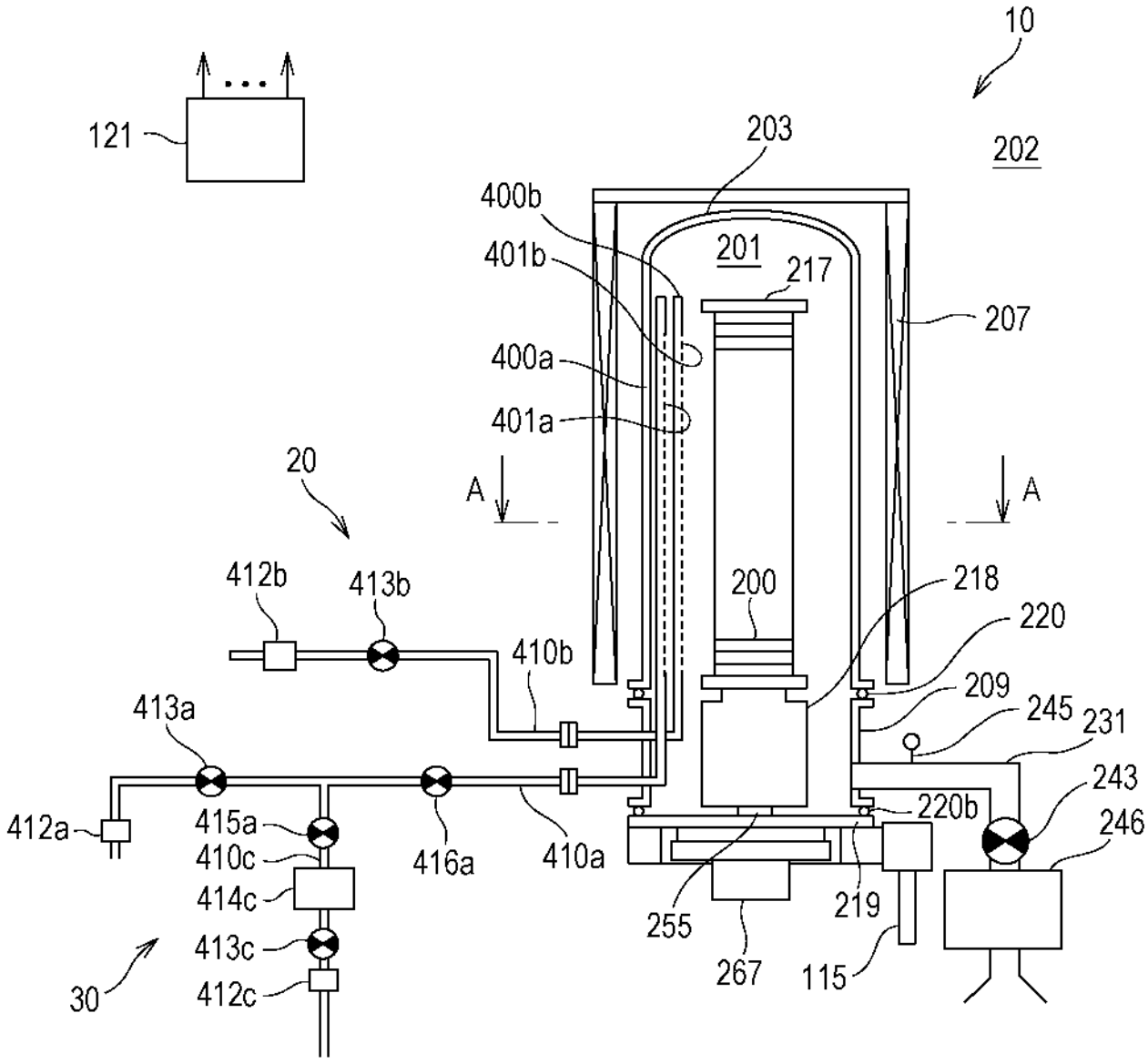
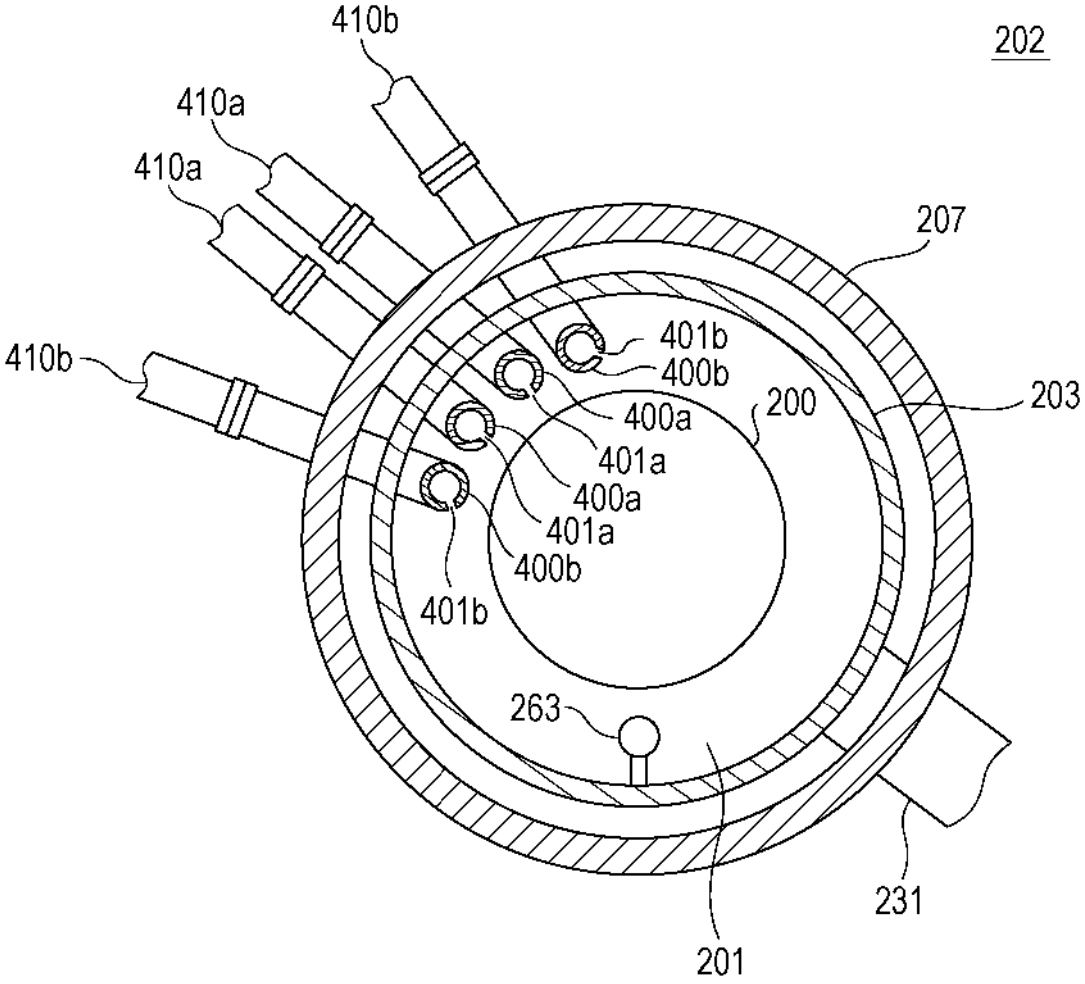
[Figures]

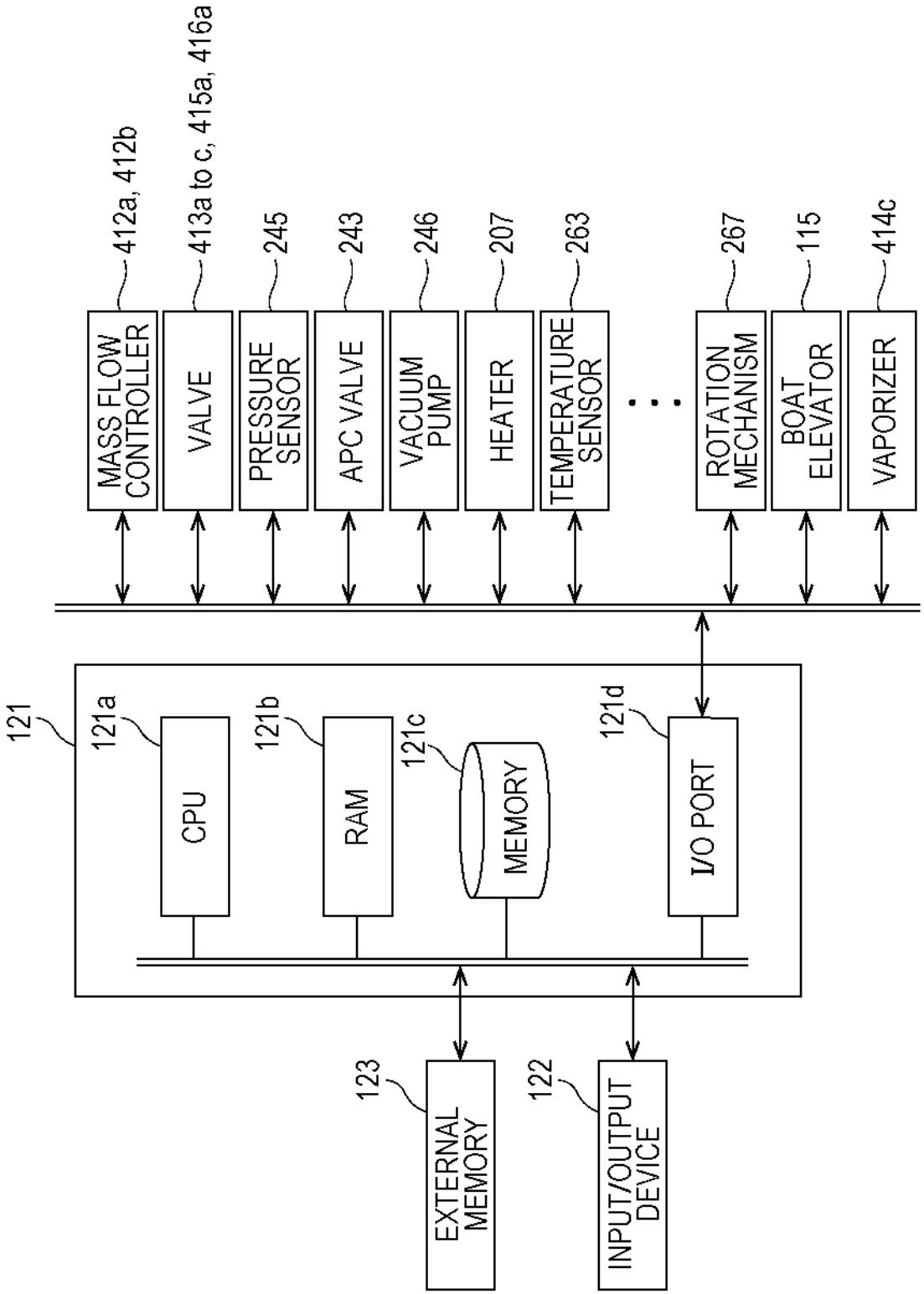
[Figure 1]



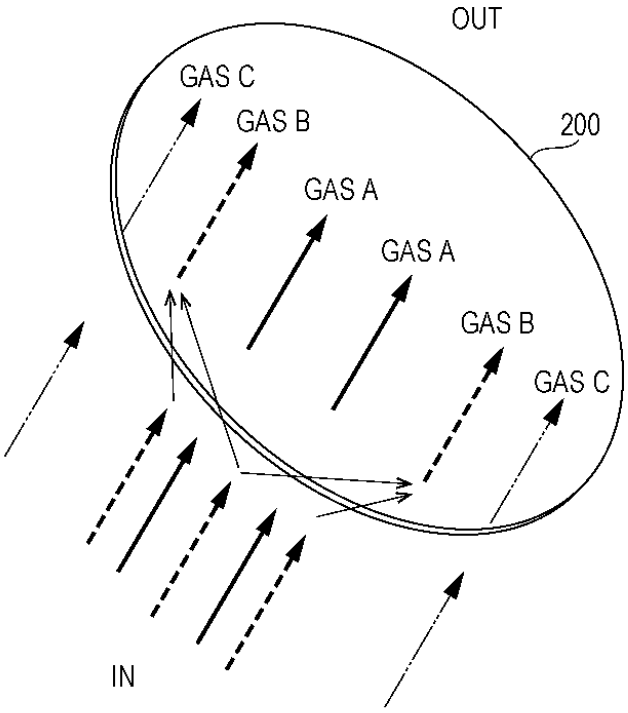
[Figure 2]


202
410b
410a
410a
410b
207
203
200
401b
400b
400a
401a
400a
401a
400b
401b
263
231
201

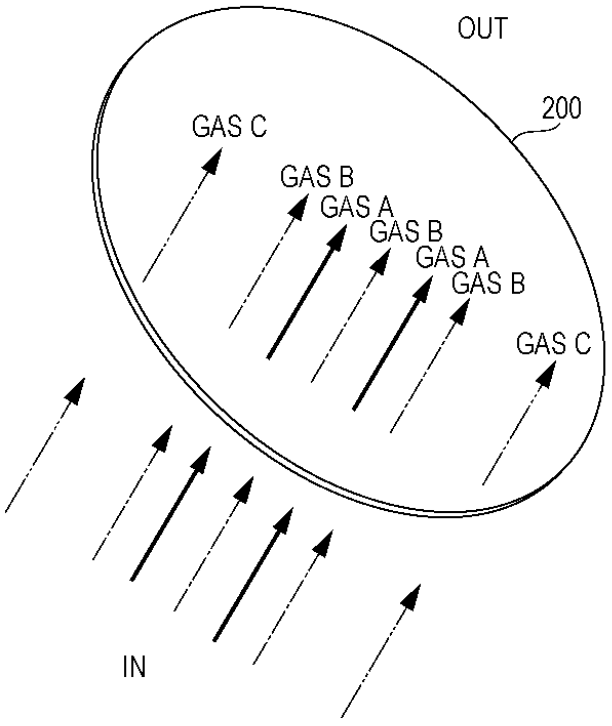
[Figure 3]


412a, 412b
413a to c, 415a, 416a
245
243
246
207
263
267
115
414c
MASS FLOW CONTROLLER
VALVE
PRESSURE SENSOR
APC VALVE
VACUUM PUMP
HEATER
TEMPERATURE SENSOR
ROTATION MECHANISM
BOAT ELEVATOR
VAPORIZER
121
121a
121b
121c
121d
CPU
RAM
MEMORY
I/O PORT
123
122
EXTERNAL MEMORY
INPUT/OUTPUT DEVICE

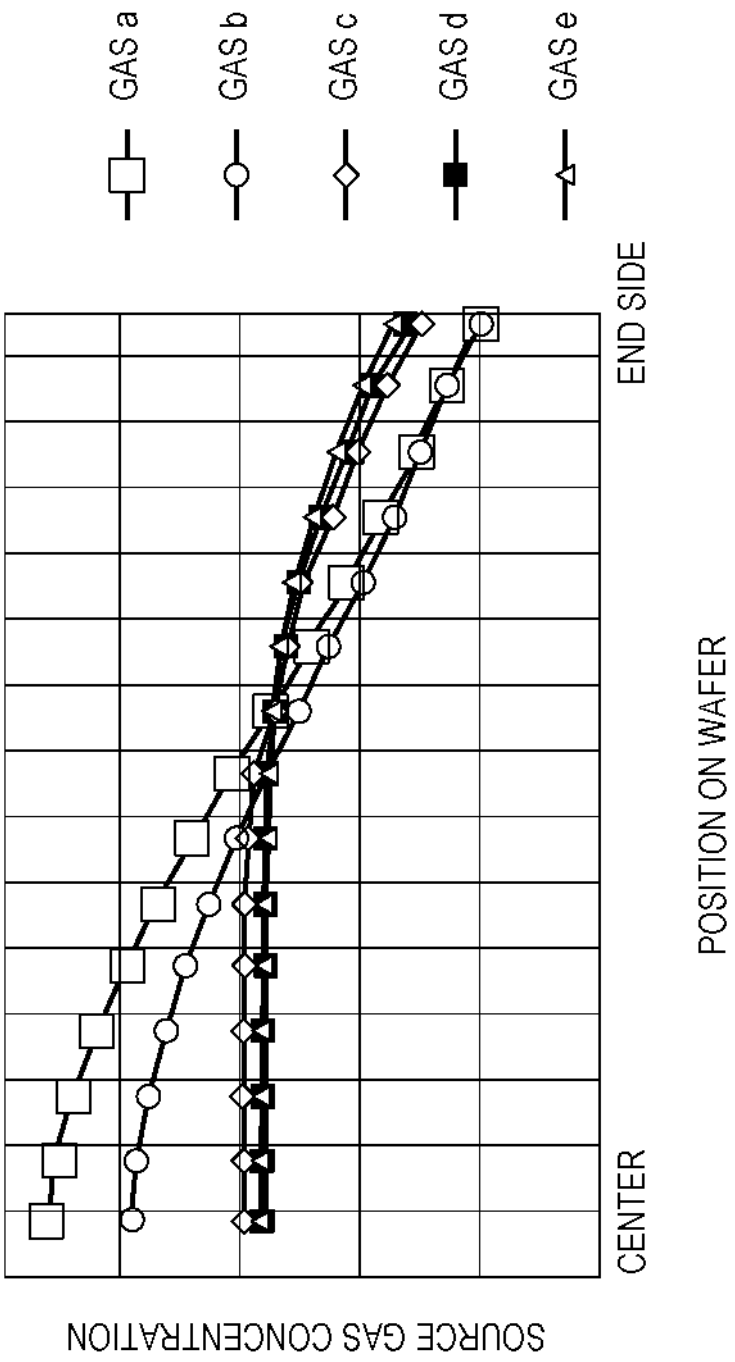
[Figure 4]



[Figure 5]



[Figure 6]


GAS a
GAS b
GAS c
GAS d
GAS e
END SIDE
CENTER
POSITION ON WAFER
SOURCE GAS CONCENTRATION