

FIG. 1

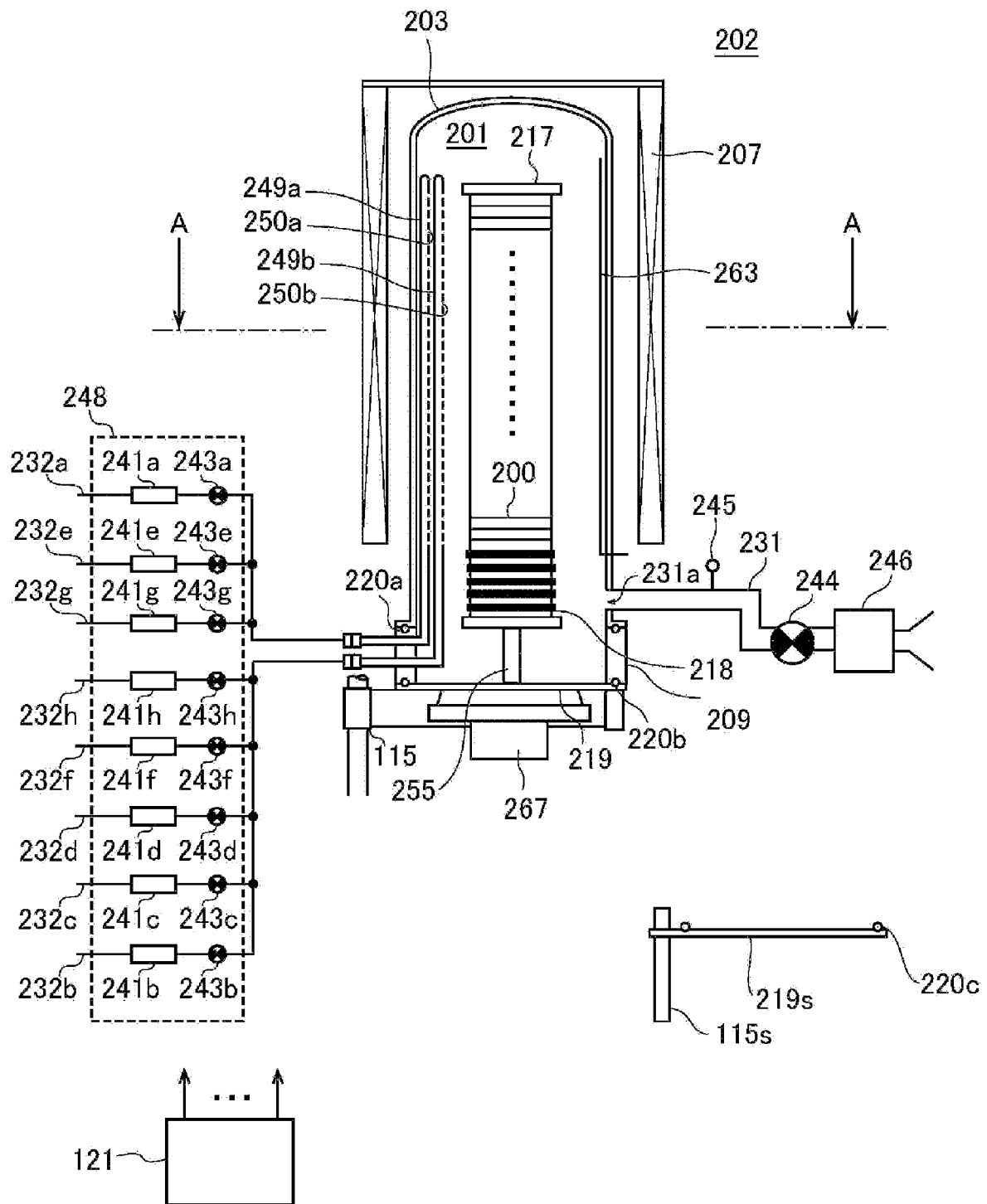


FIG. 2

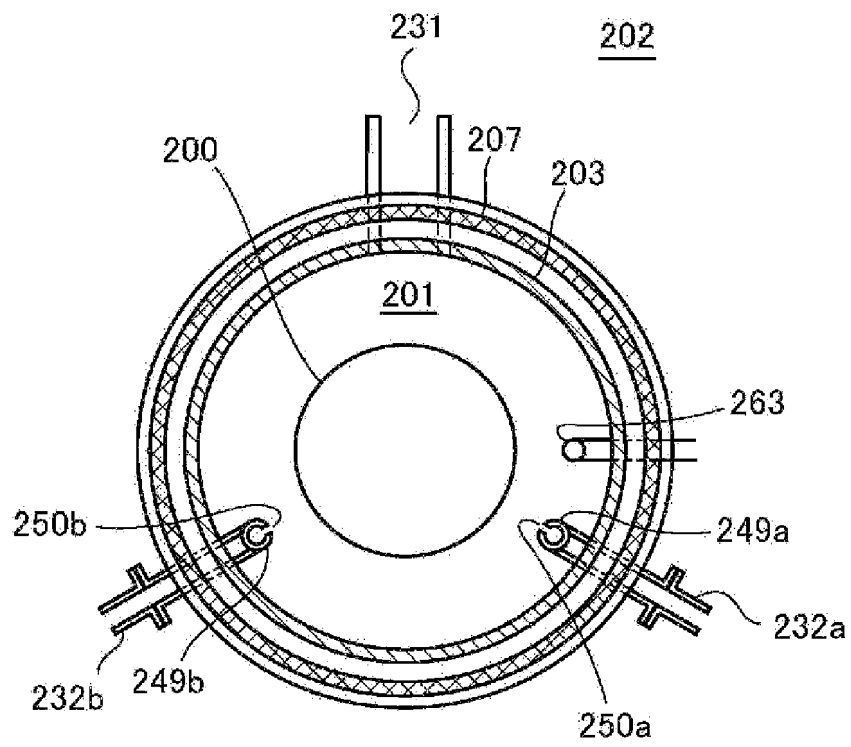


FIG. 3

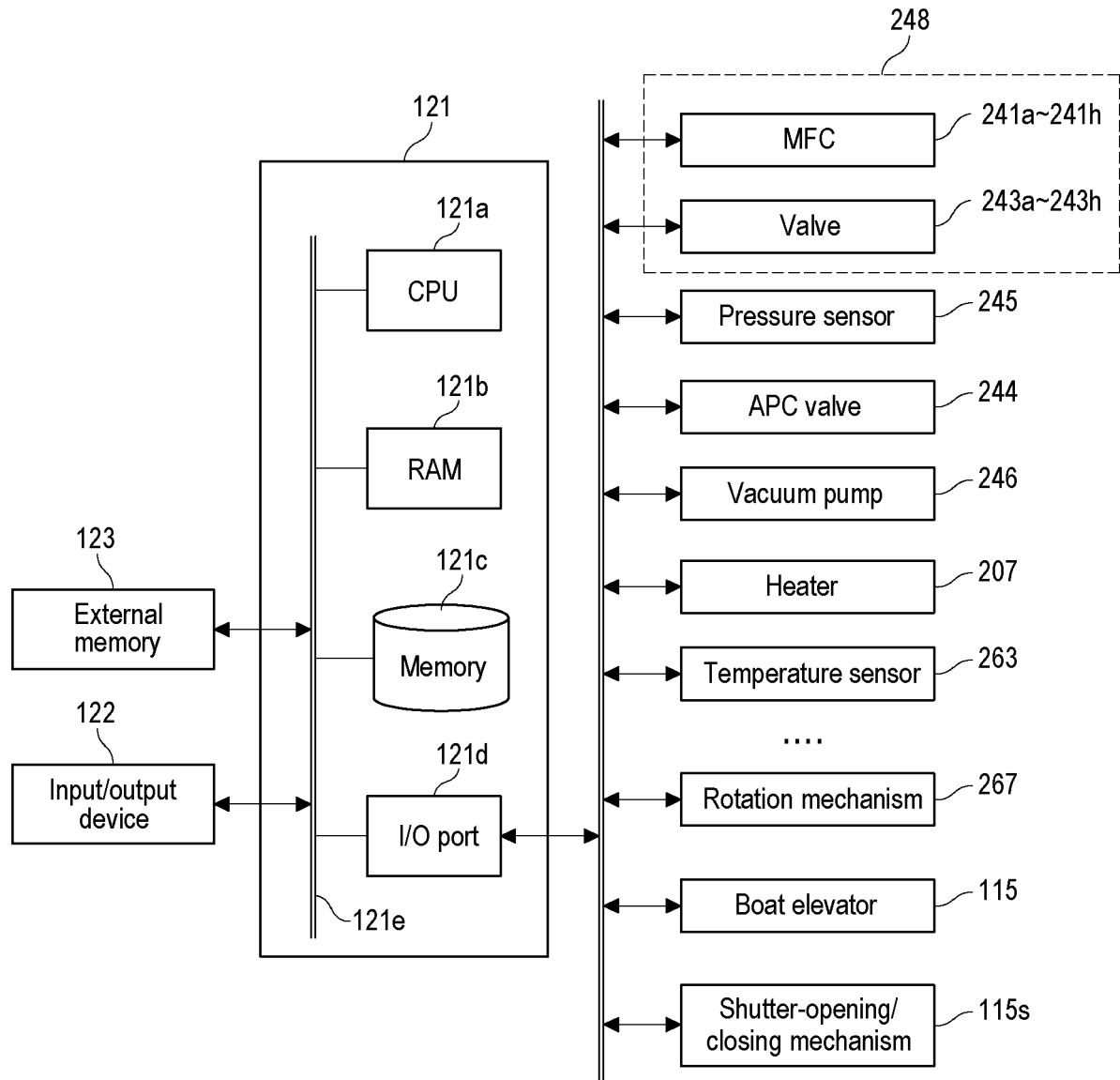


FIG. 4

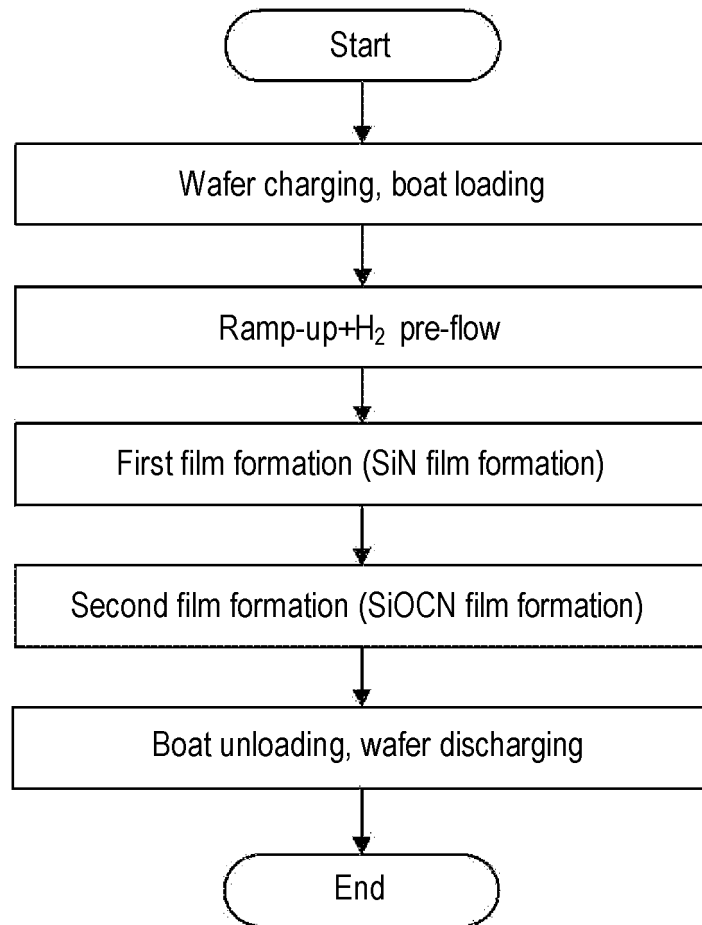


FIG. 5

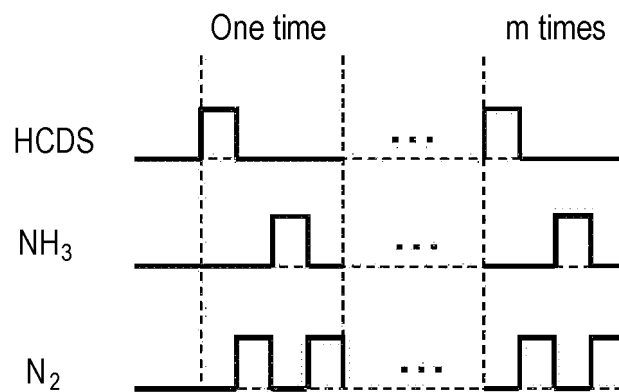


FIG. 6

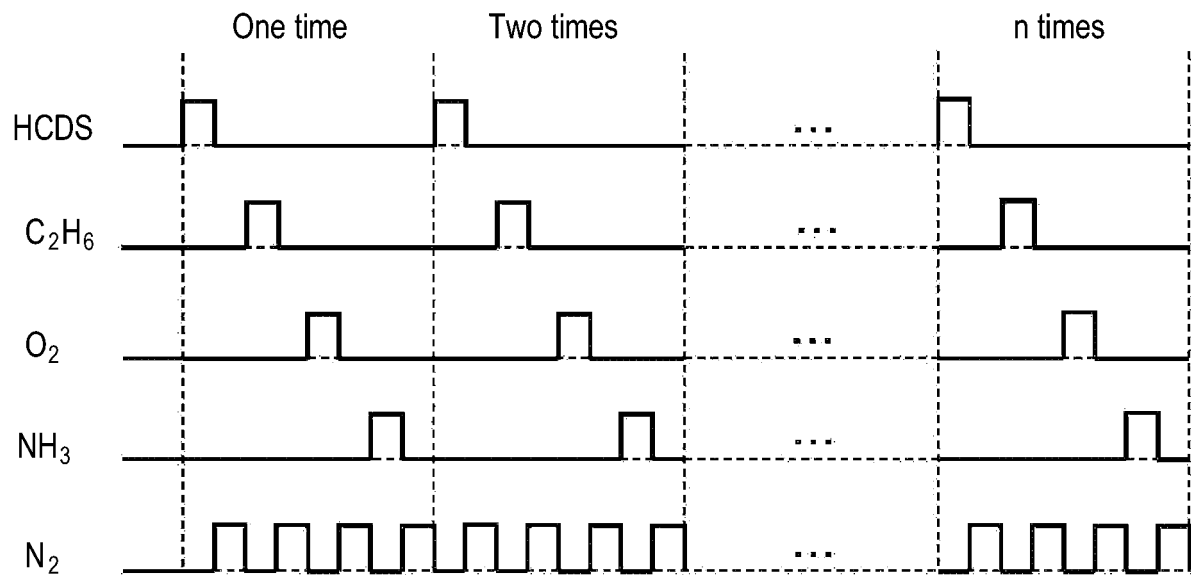


FIG. 7A

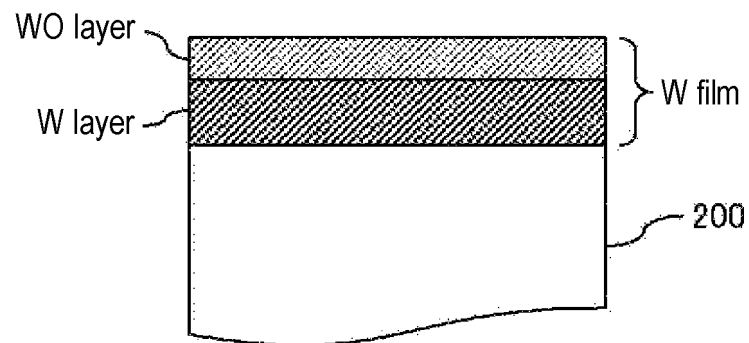


FIG. 7B

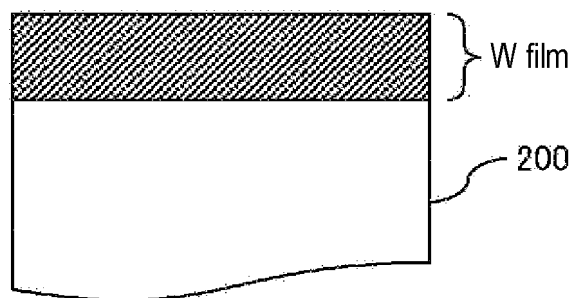


FIG. 7C

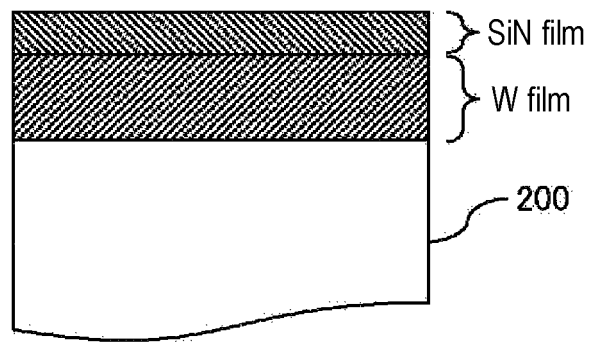


FIG. 7D

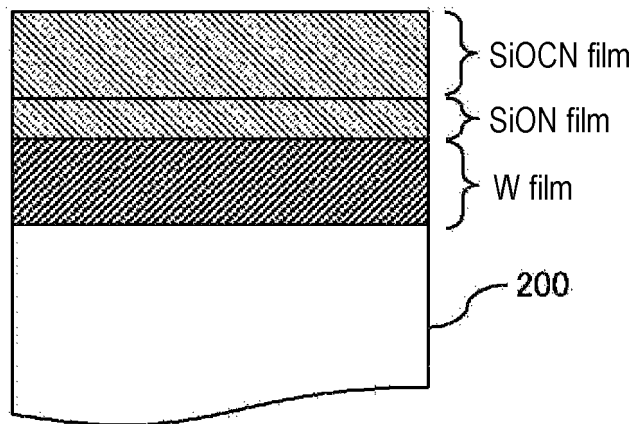


FIG. 8

	Ramp-up + H ₂ pre-flow	Thickness of SiN film(nm)	Thickness of SiOCN film(nm)	(Thickness of W layer /thickness of W film) × 100%	(Thickness of WO layer /thickness of W film) × 100%
Initial state	—	—	—	70	30
Sample 1	Performed	0	7	98.84	1.16
Sample 2	Performed	0.16	6.84	100	0
Sample 3	Performed	0.32	6.68	100	0
Sample 4	Performed	0.48	6.52	100	0
Sample 5	Performed	1.00	6.00	100	0