FIG. 1

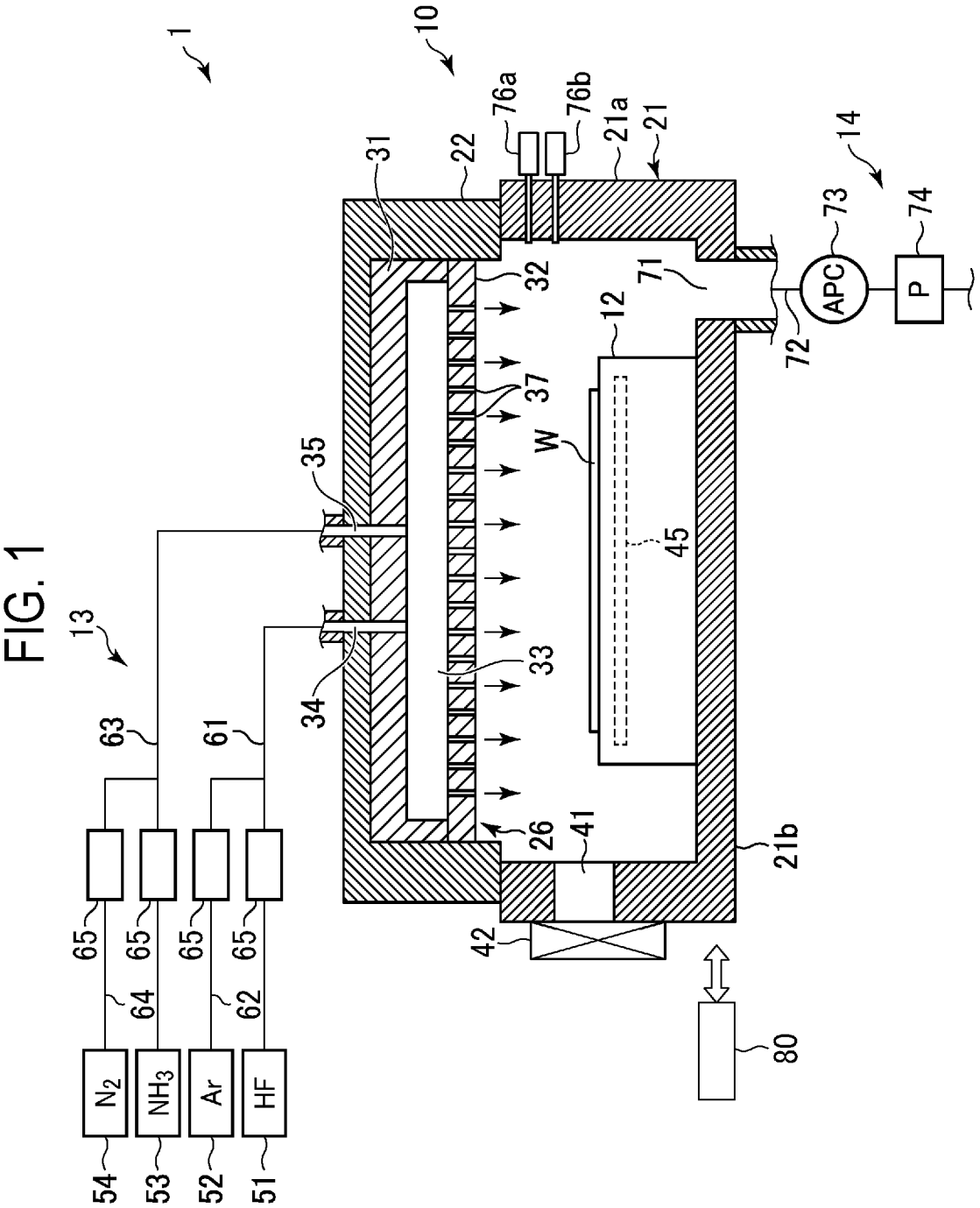

1
10
13
14
76a
76b
21a
21
31
22
32
71
12
37
W
35
45
33
34
63
61
26
41
21b
42
80
72
APC
73
P
74
65
64
62
N_2
NH_3
Ar
HF
54
53
52
51

FIG. 2

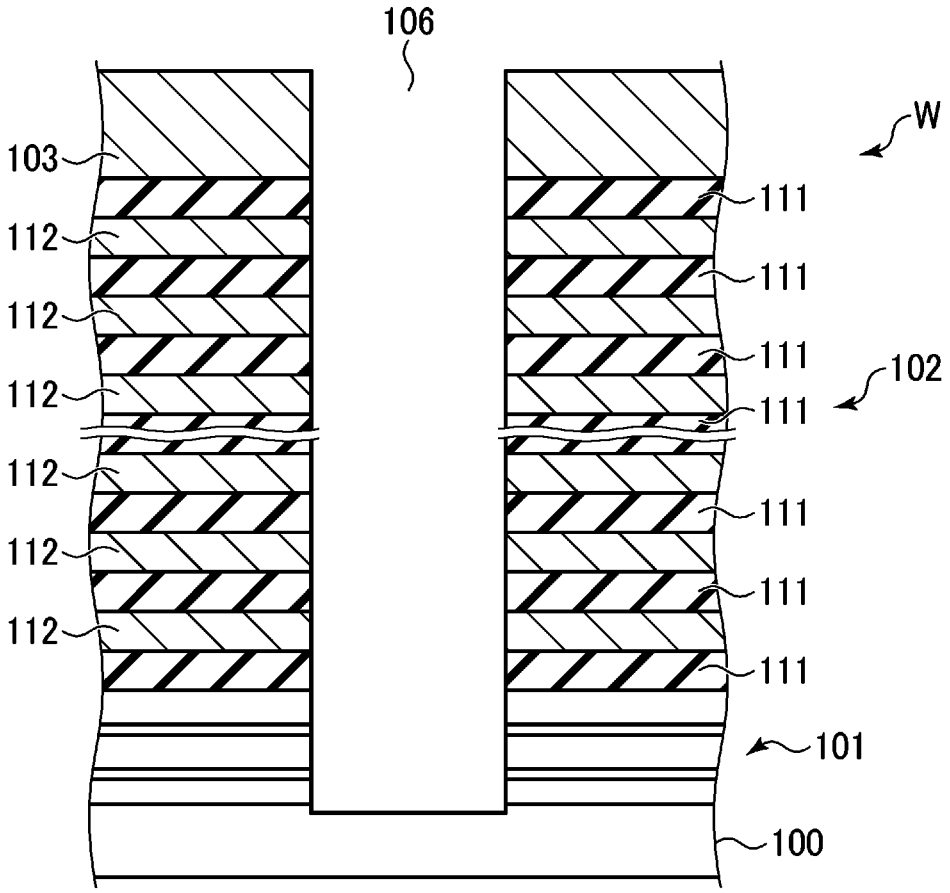

106
W
103
111
112
111
112
111
102
112
111
112
111
112
111
112
111
101
100

FIG. 3

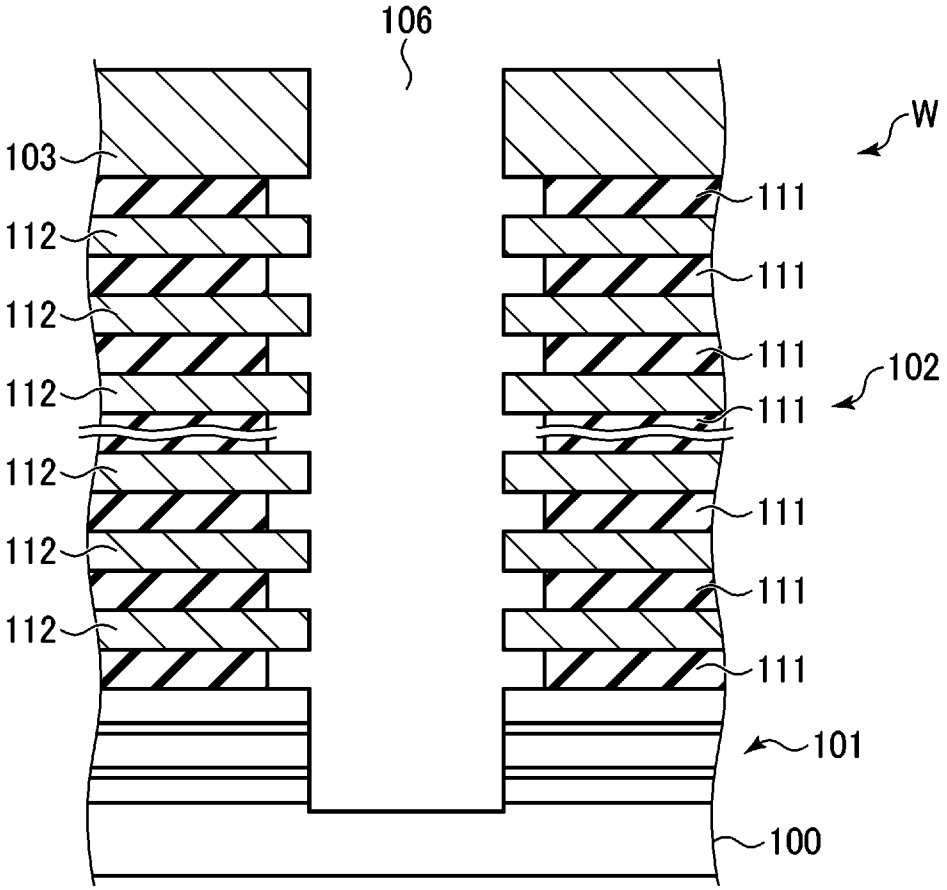

106
W
103
111
112
111
112
111
102
112
111
112
111
112
111
112
111
101
100

FIG. 4

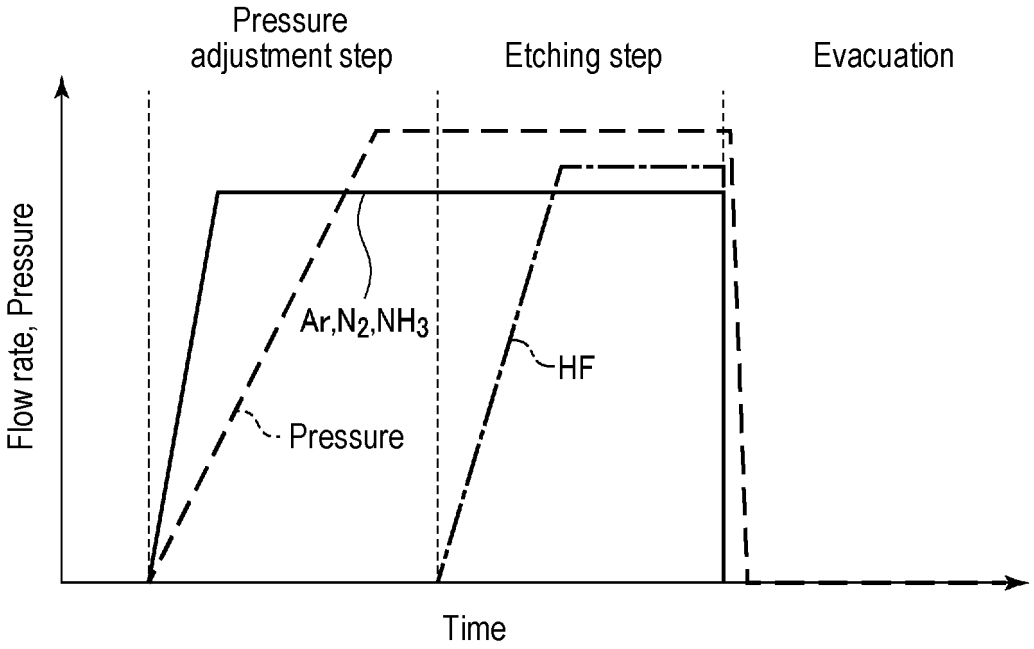

Pressure
adjustment step
Etching step
Evacuation
Flow rate, Pressure
Ar,N2,NH3
HF
Pressure
Time

FIG. 5

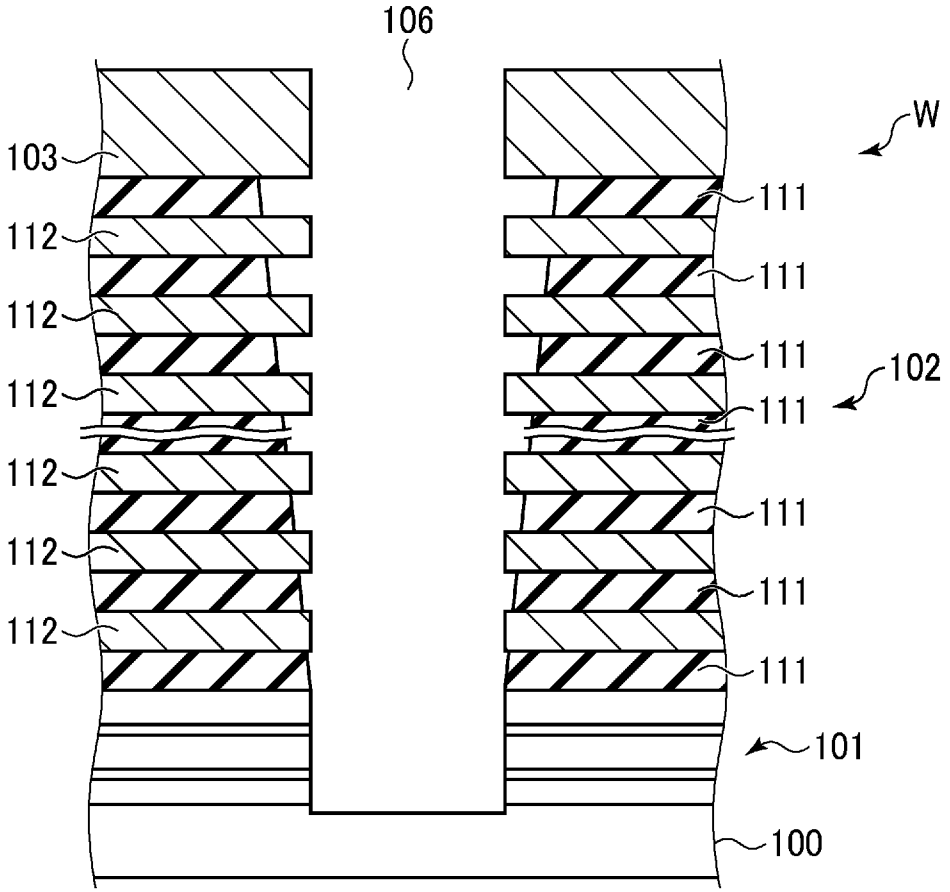

106
W
103
111
112
111
112
111
102
112
111
112
111
112
111
112
111
101
100

FIG. 6A

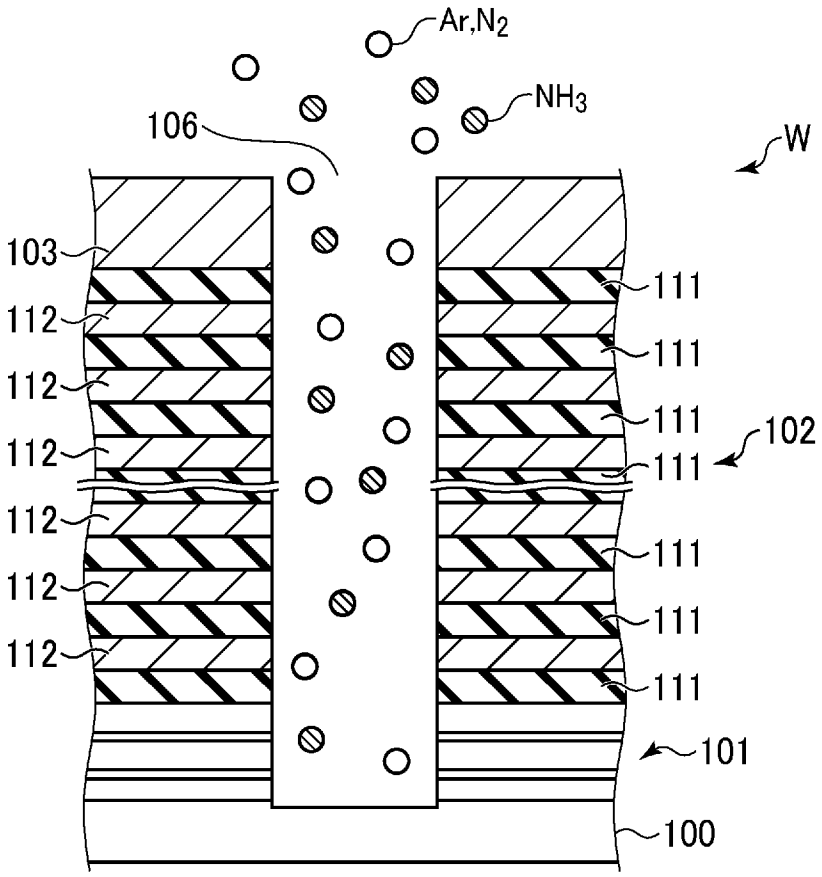

Ar,N2
NH3
106
W
103
112
112
112
112
112
112
111
111
111
111
111
111
111
102
101
100

FIG. 6B

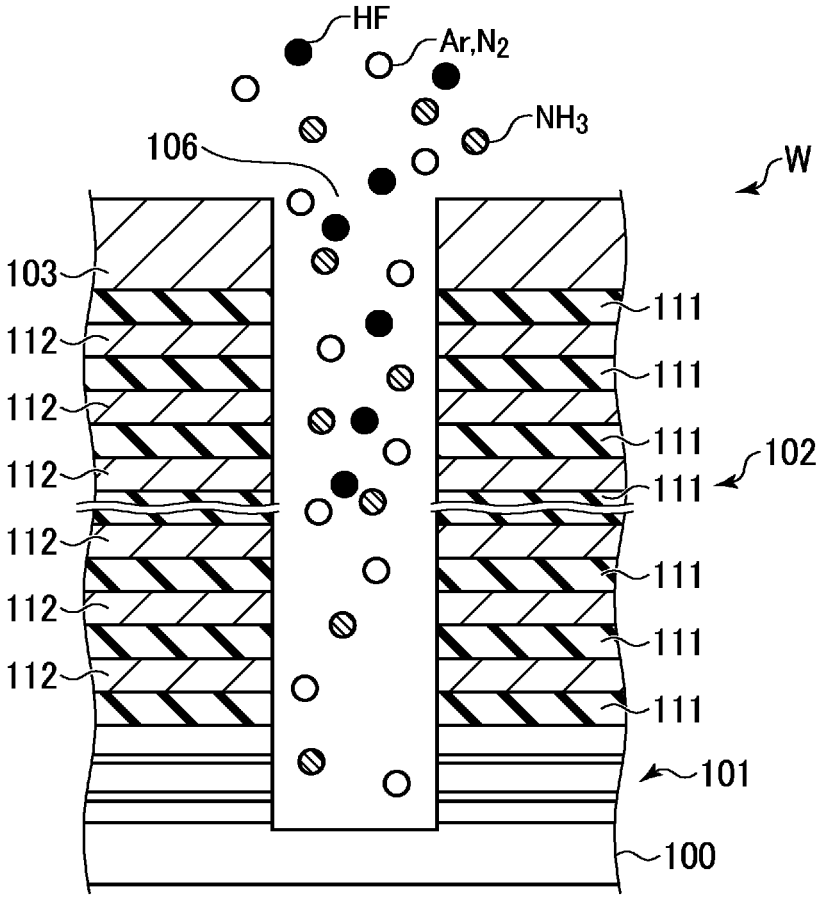

HF
Ar,N2
NH3
106
W
103
111
112
111
112
111
102
112
111
112
111
112
111
101
100

FIG. 7

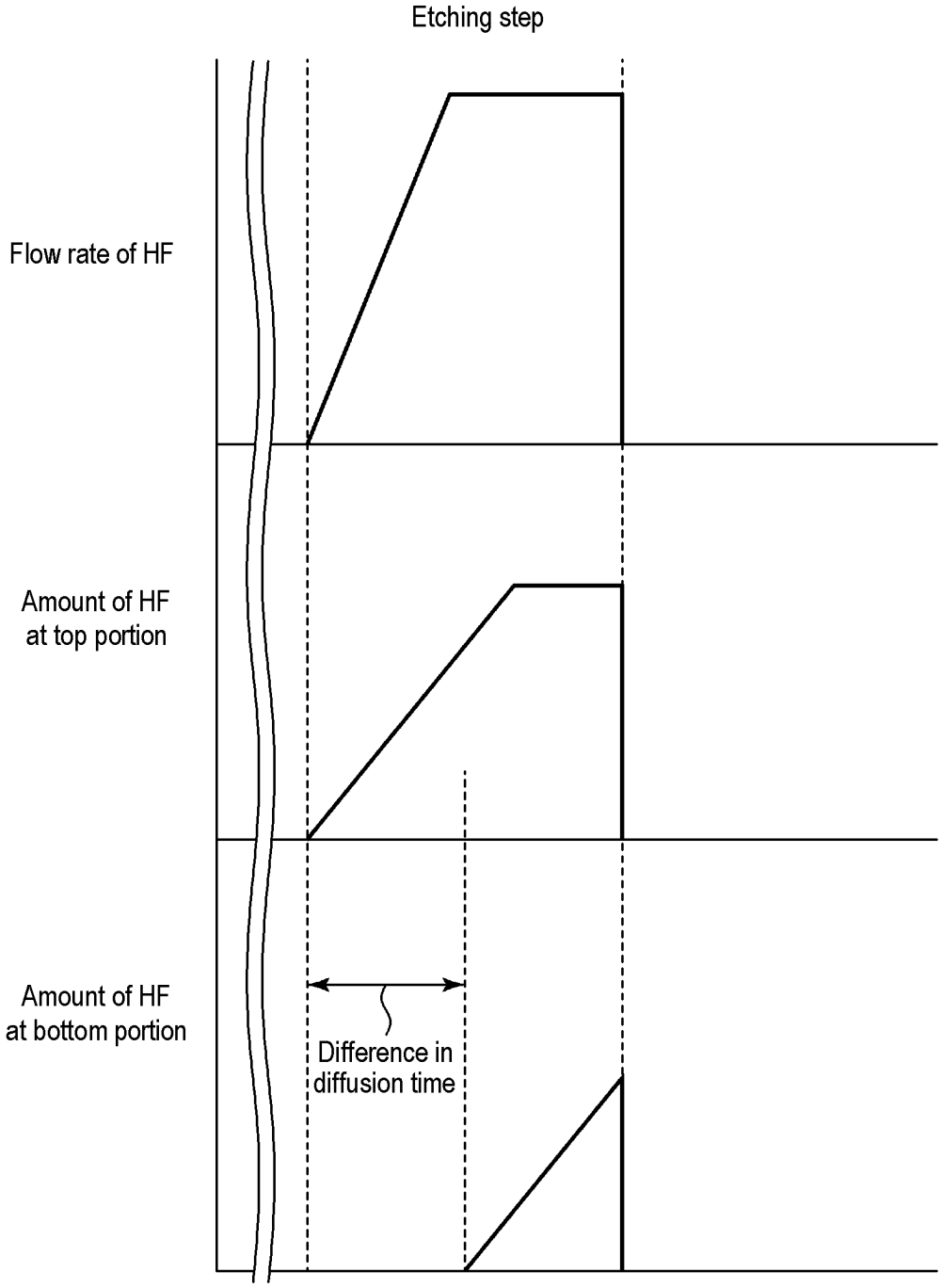

Etching step
Flow rate of HF
Amount of HF at top portion
Amount of HF at bottom portion
Difference in diffusion time

FIG. 8

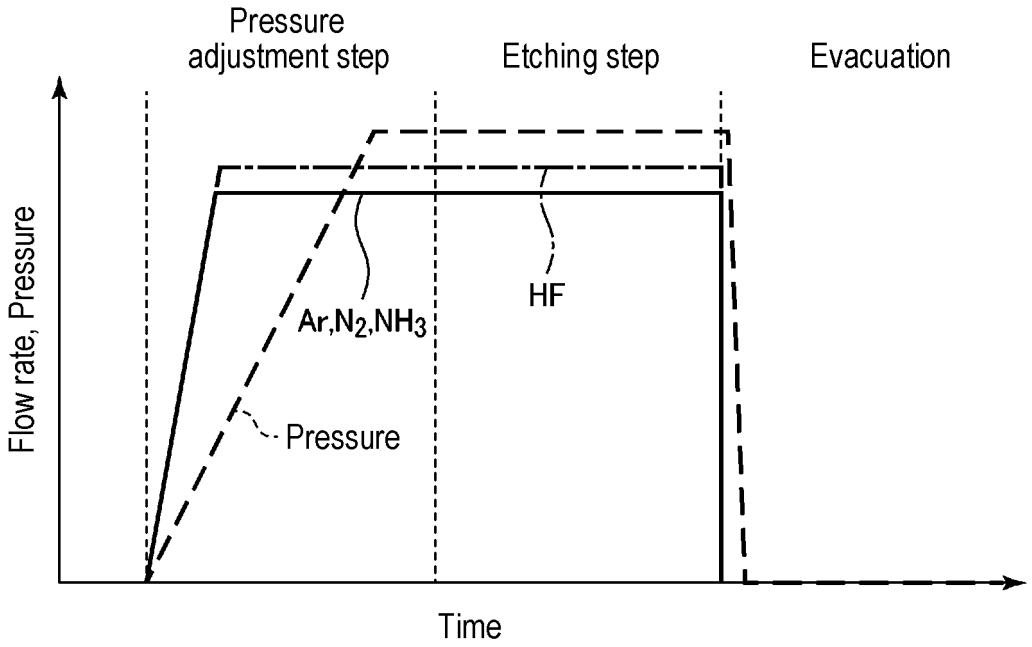

Pressure
adjustment step
Etching step
Evacuation
Flow rate, Pressure
Ar,N2,NH3
HF
Pressure
Time

FIG. 9A

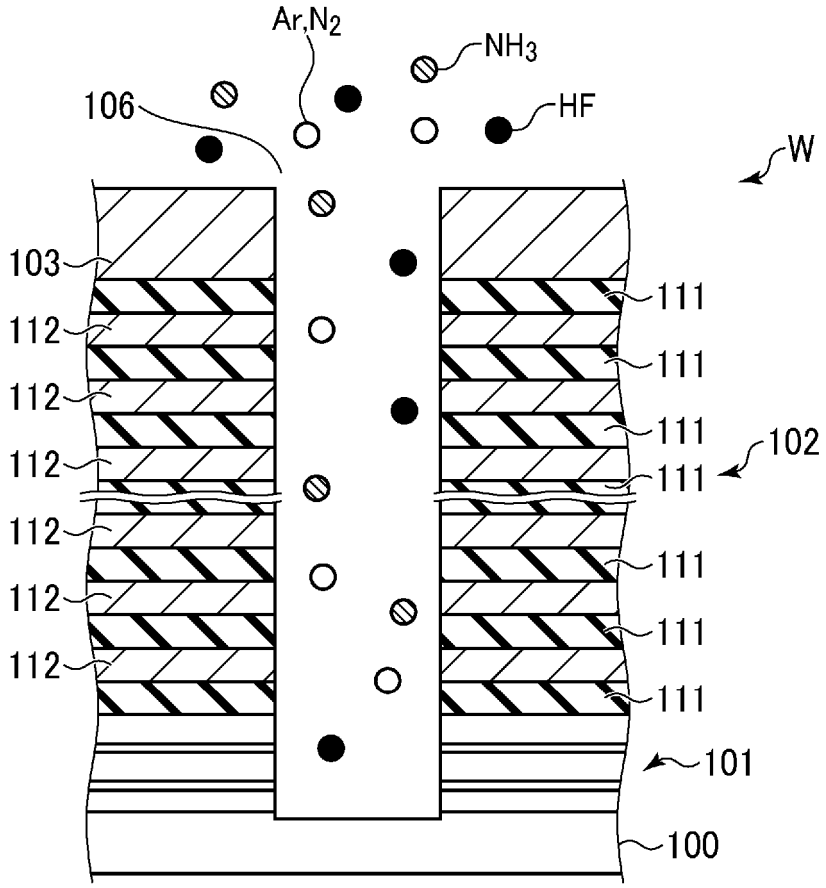

Ar,N2
NH3
106
HF
W
103
111
112
111
112
111
102
112
111
112
111
112
111
101
100

FIG. 9B

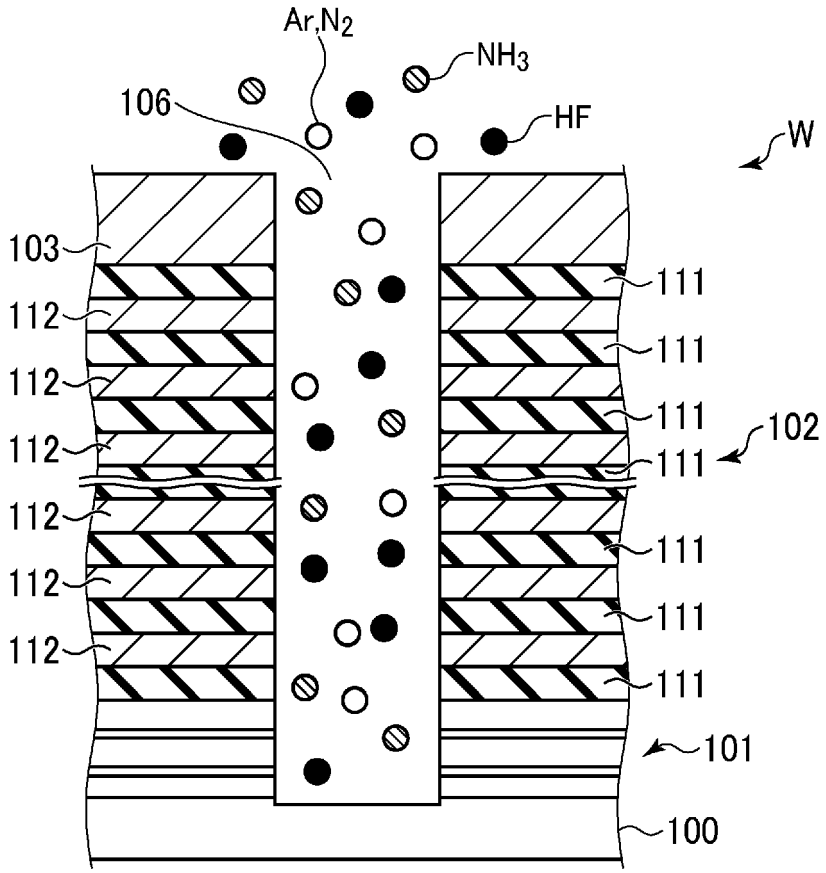

Ar,N2
NH3
106
HF
W
103
112
112
112
112
112
112
112
111
111
111
111
111
111
111
102
101
100

FIG. 10

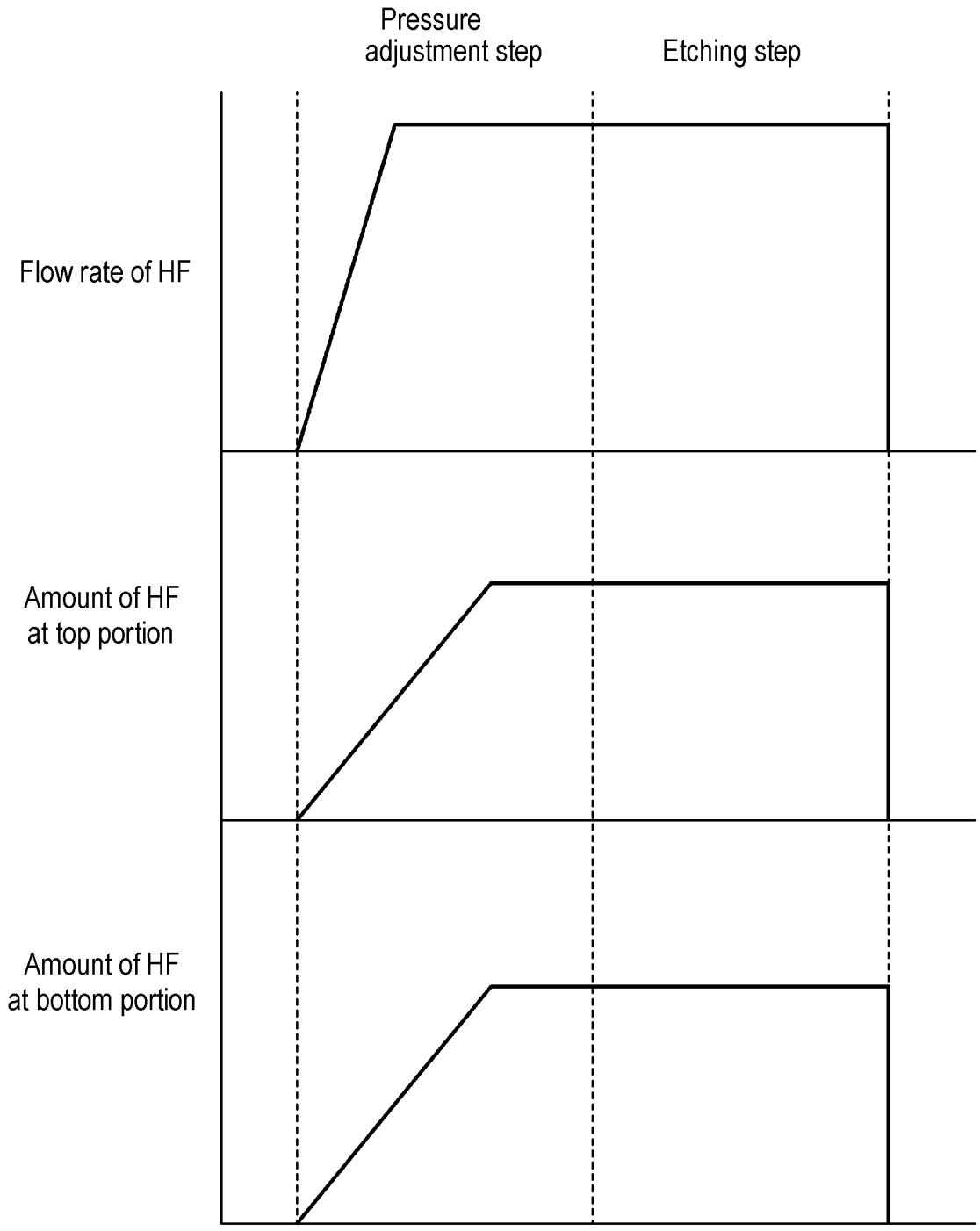

Pressure
adjustment step
Etching step
Flow rate of HF
Amount of HF
at top portion
Amount of HF
at bottom portion

FIG. 11

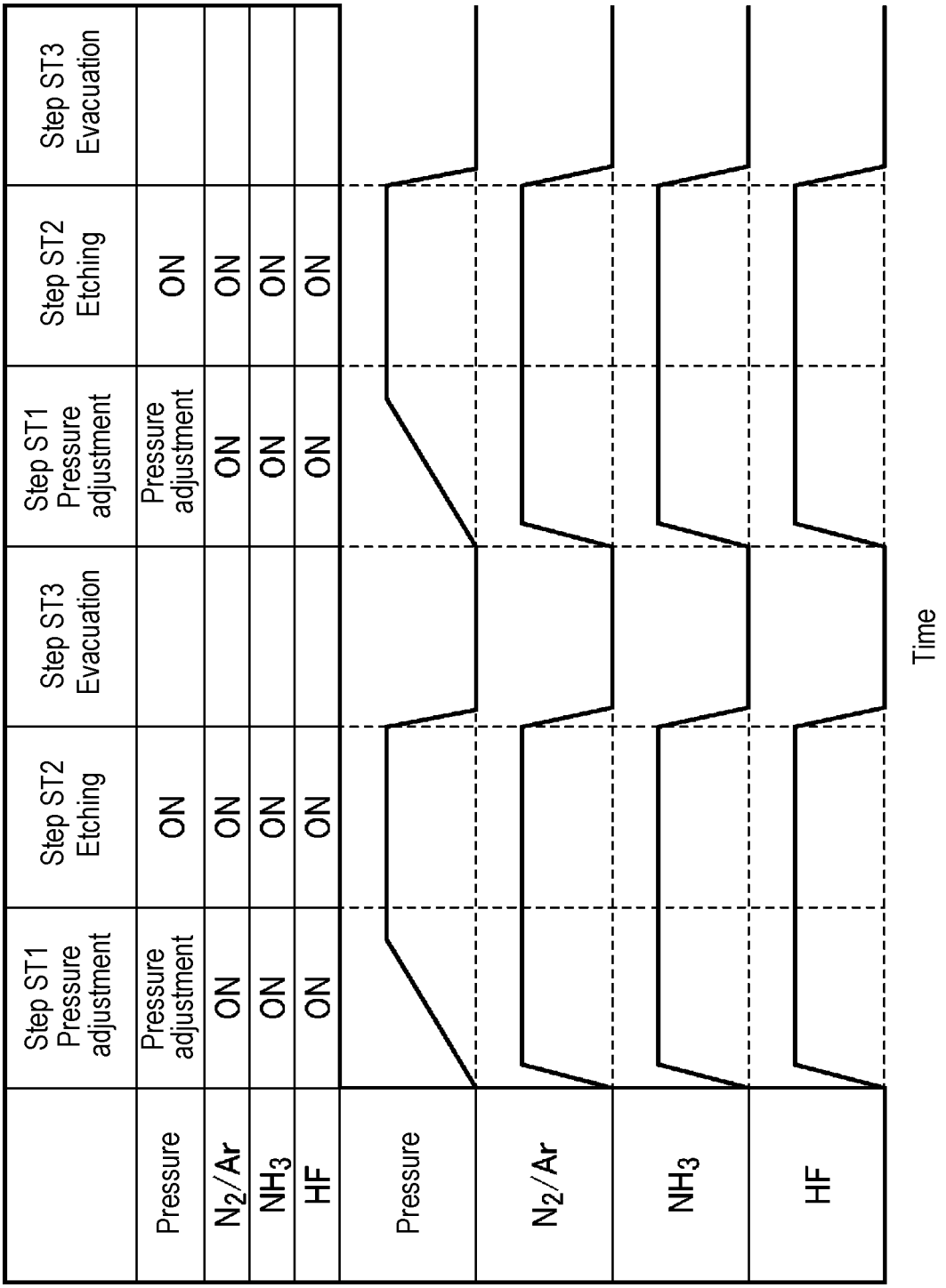

Step ST1 Pressure adjustment
Step ST2 Etching
Step ST3 Evacuation
Step ST1 Pressure adjustment
Step ST2 Etching
Step ST3 Evacuation
Pressure
Pressure adjustment
ON
N_2/Ar
NH_3
HF
Time

FIG. 12

	Step ST1' Preflow	Step ST1 Pressure adjustment	Step ST2 Etching	Step ST3 Evacuation	Step ST1' Preflow	Step ST1 Pressure adjustment	Step ST2 Etching	Step ST3 Evacuation	...
Pressure	Low	Pressure adjustment	ON		Low	Pressure adjustment	ON		
N_2/Ar	Low	ON	ON		Low	ON	ON		
NH_3	Low	ON	ON		Low	ON	ON		
HF	Low	ON	ON		Low	ON	ON		

