FIG. 1

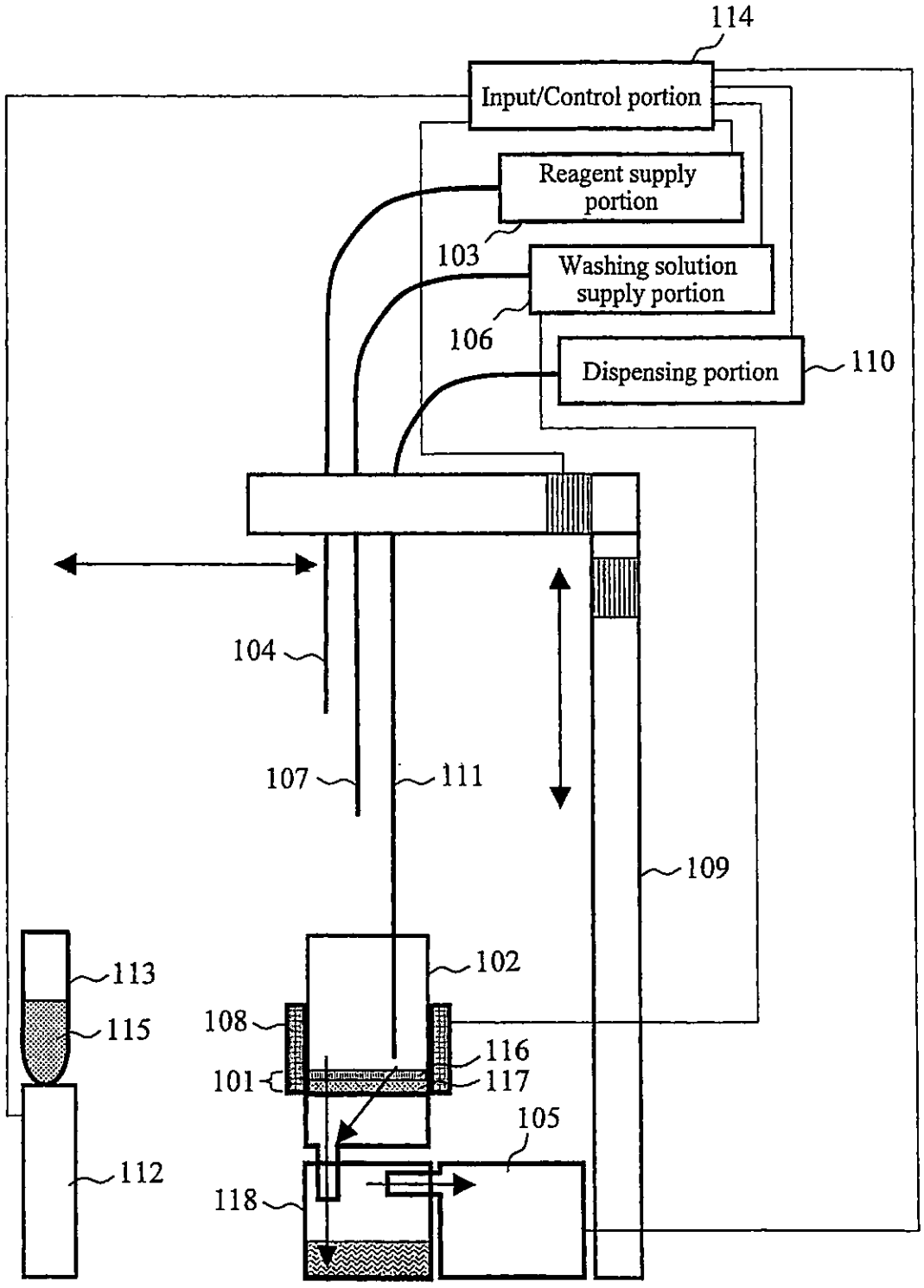

114
Input/Control portion
Reagent supply portion
103
Washing solution supply portion
106
Dispensing portion
110
104
107
111
109
113
115
102
108
116
101
117
105
112
118

FIG. 2

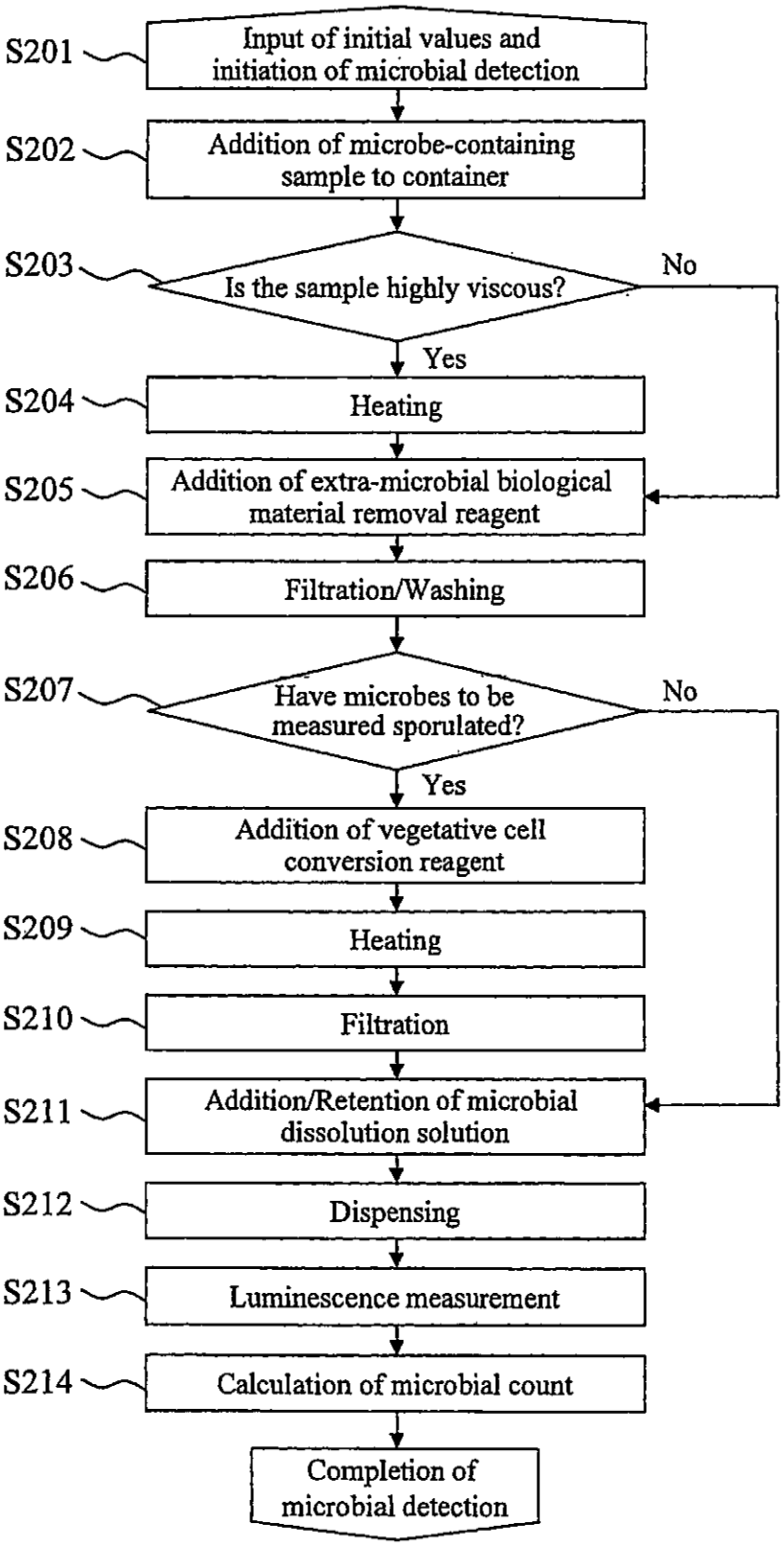

S201
Input of initial values and initiation of microbial detection
S202
Addition of microbe-containing sample to container
S203
Is the sample highly viscous?
No
Yes
S204
Heating
S205
Addition of extra-microbial biological material removal reagent
S206
Filtration/Washing
S207
Have microbes to be measured sporulated?
No
Yes
S208
Addition of vegetative cell conversion reagent
S209
Heating
S210
Filtration
S211
Addition/Retention of microbial dissolution solution
S212
Dispensing
S213
Luminescence measurement
S214
Calculation of microbial count
Completion of microbial detection

FIG. 3

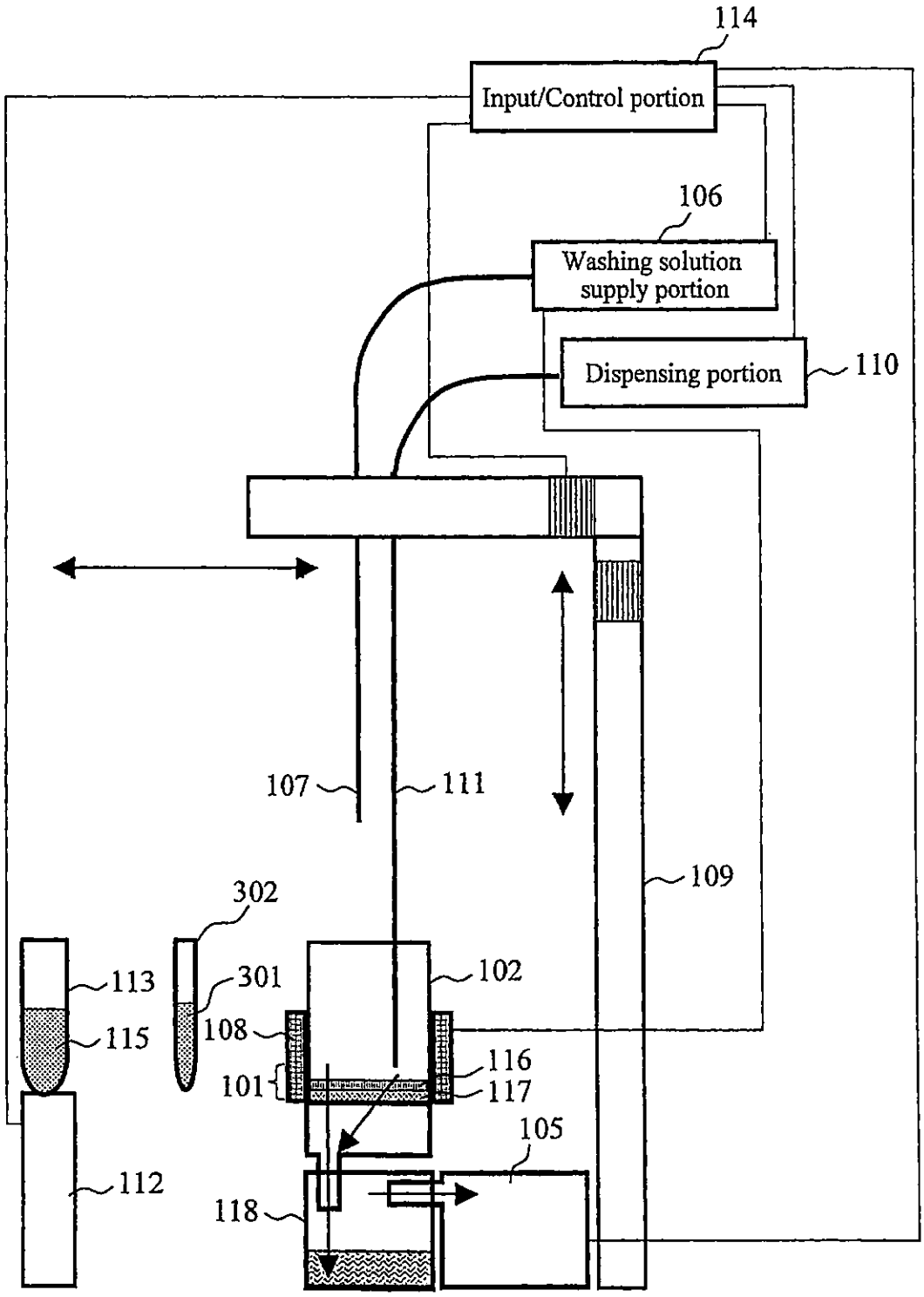

114
Input/Control portion
106
Washing solution supply portion
Dispensing portion
110
107
111
109
302
113
301
102
115
108
116
101
117
105
112
118

FIG. 4

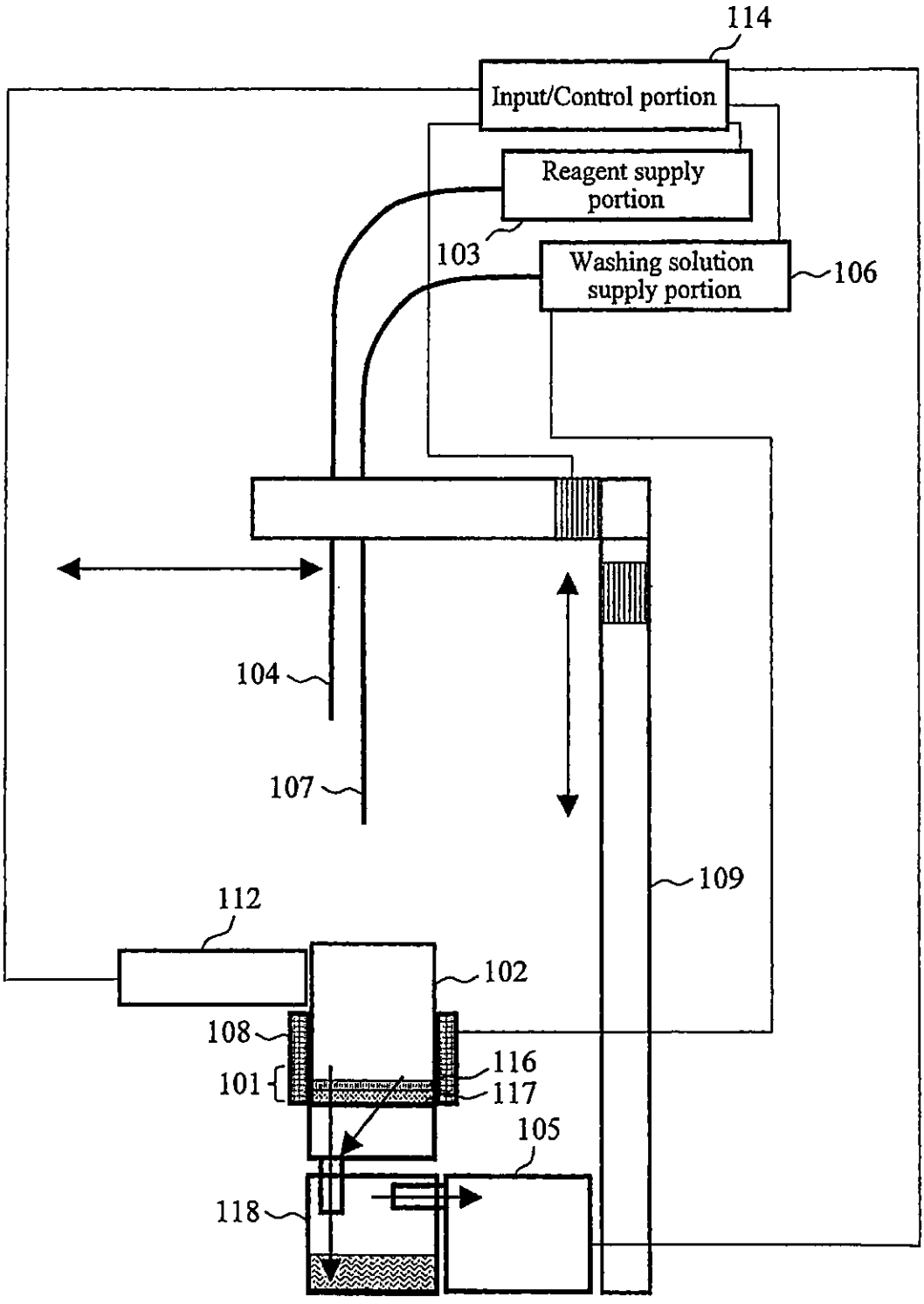

114
Input/Control portion
Reagent supply portion
103
Washing solution supply portion
106
104
107
109
112
102
108
116
101
117
105
118

FIG. 5

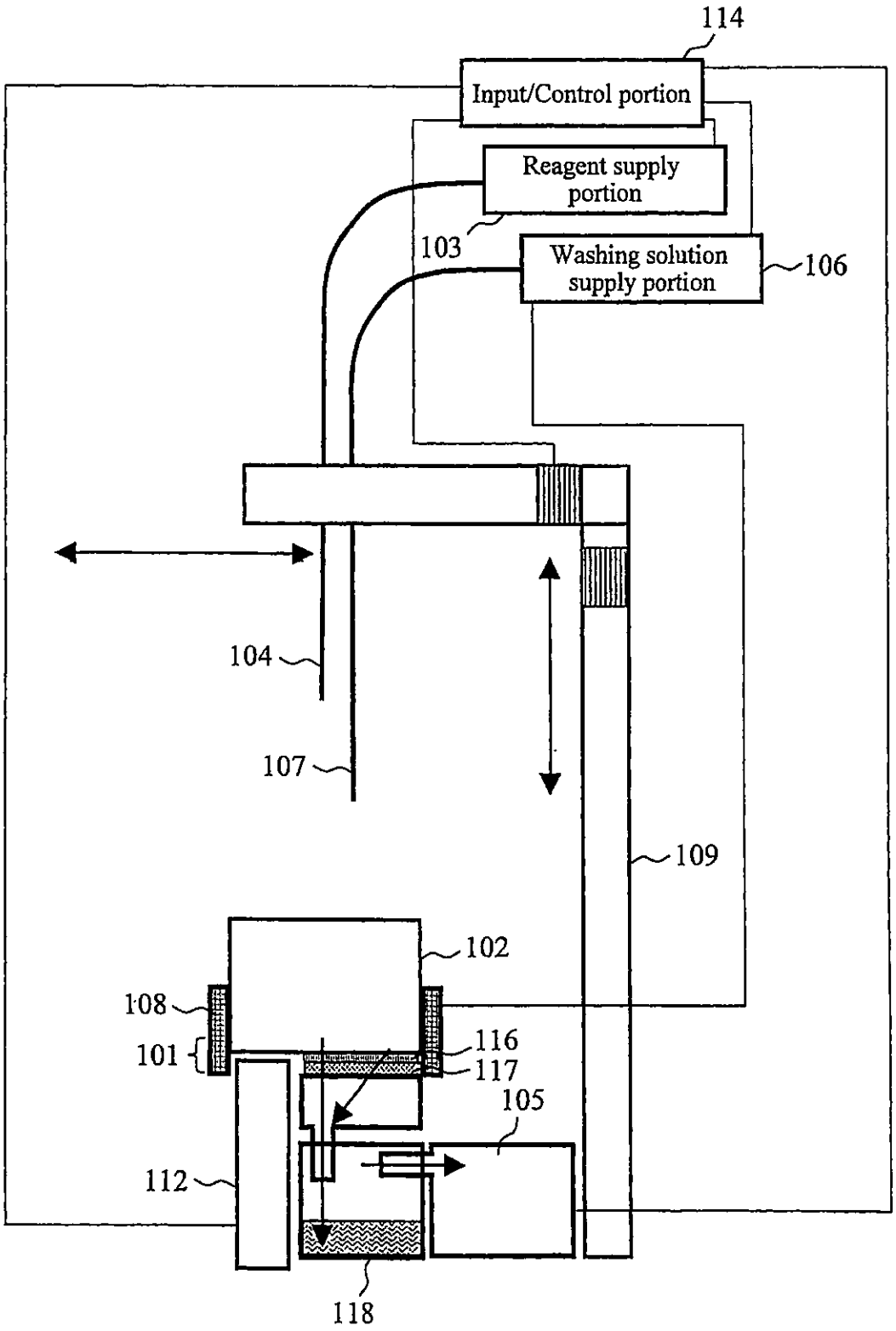

114
Input/Control portion
Reagent supply portion
103
Washing solution supply portion
106
104
107
109
102
108
101
116
117
105
112
118

FIG. 6

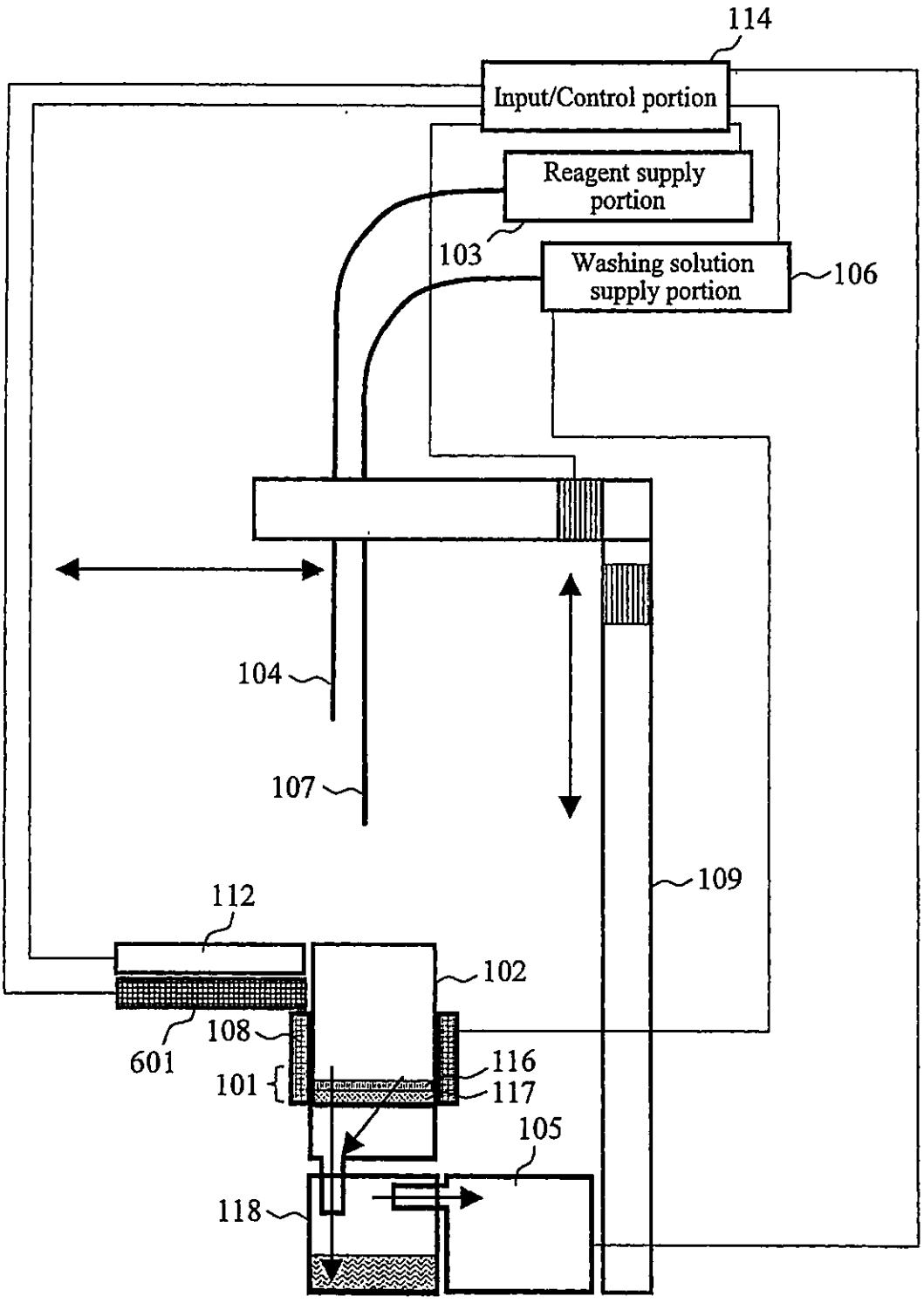

114
Input/Control portion
Reagent supply portion
103
Washing solution supply portion
106
104
107
109
112
102
601
108
116
101
117
105
118

FIG. 7A

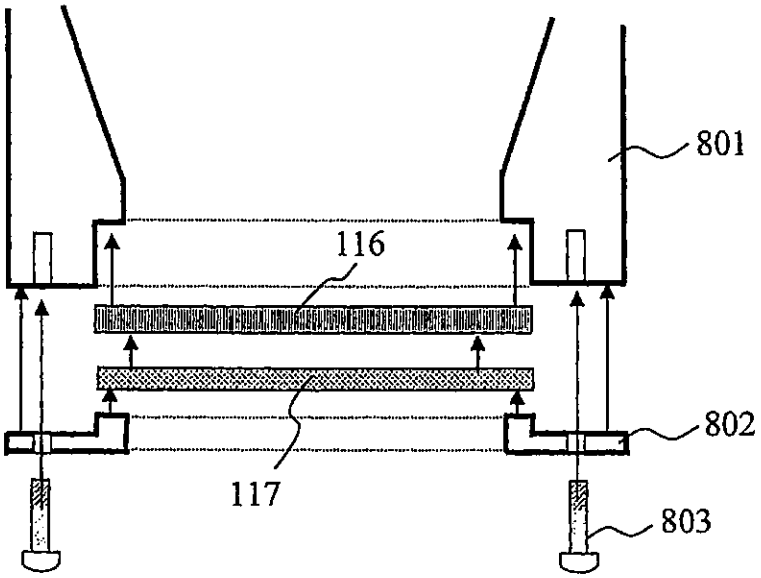


FIG. 7B

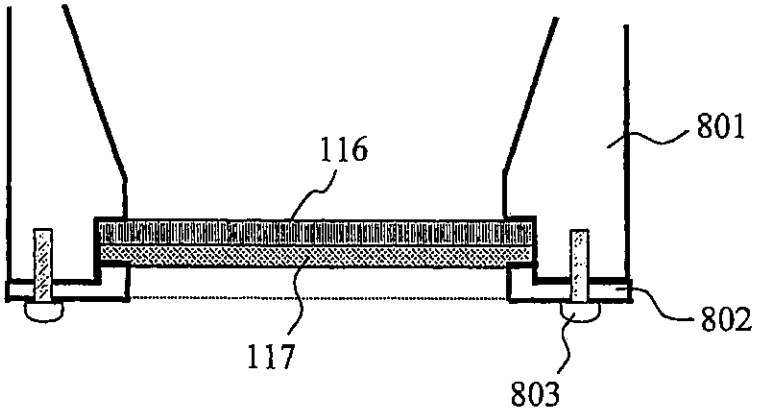


FIG. 8A

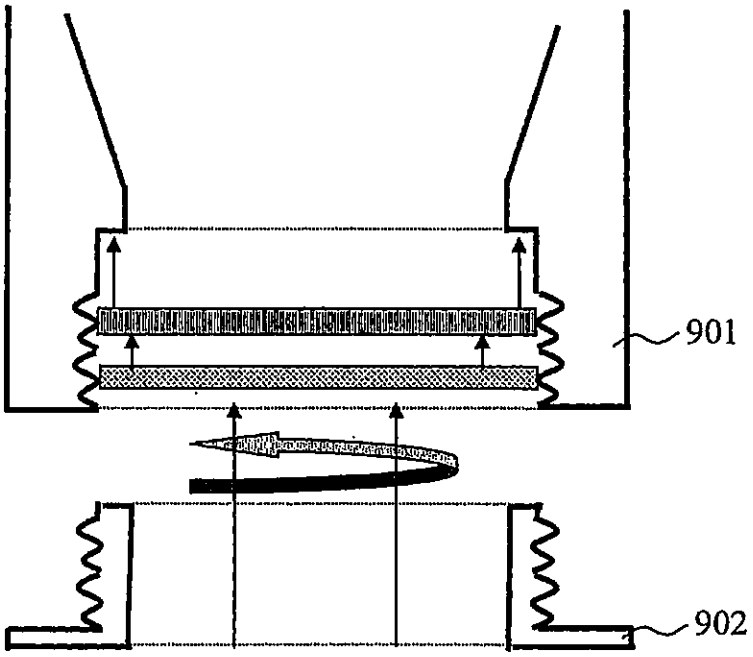


FIG. 8B

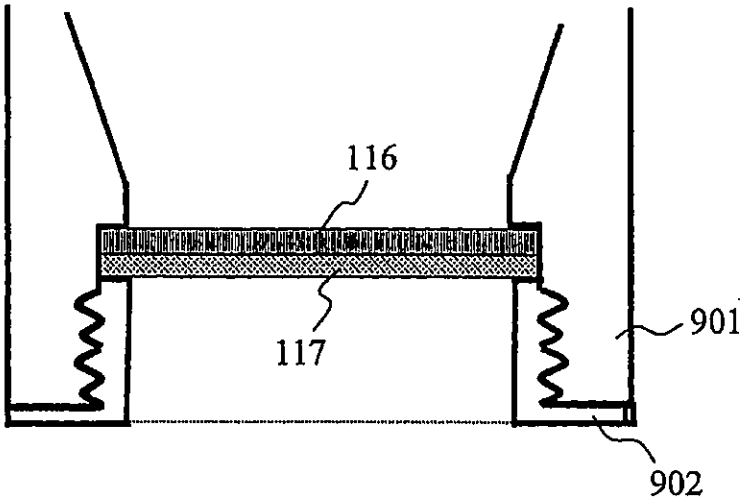


FIG. 9A

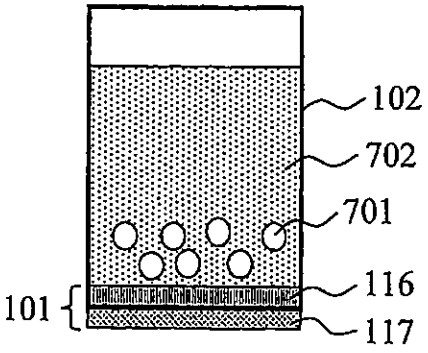


FIG. 9B

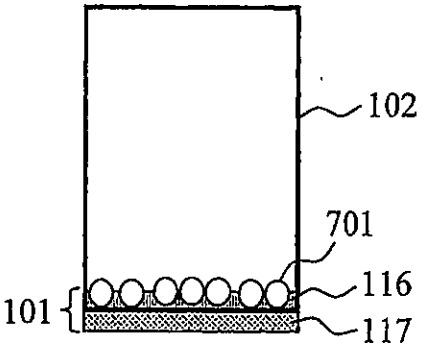


FIG. 9C

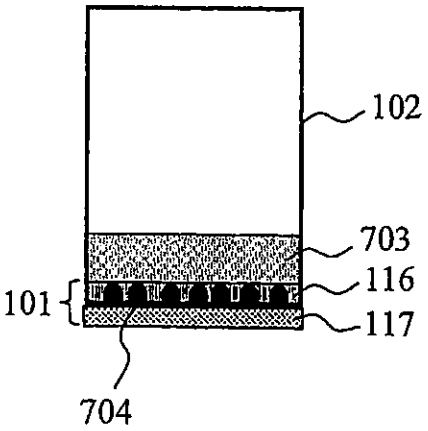


FIG. 9D

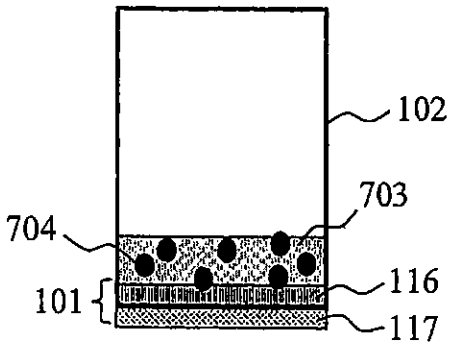


FIG. 10A

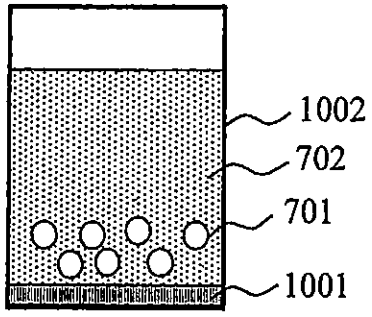


FIG. 10B

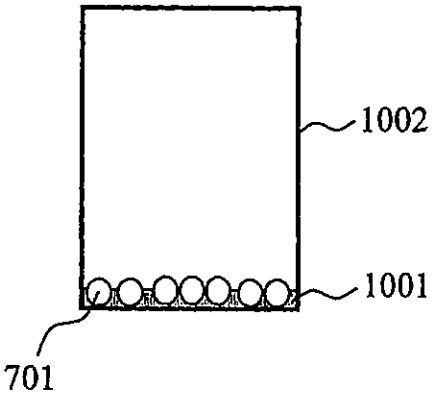


FIG. 10C

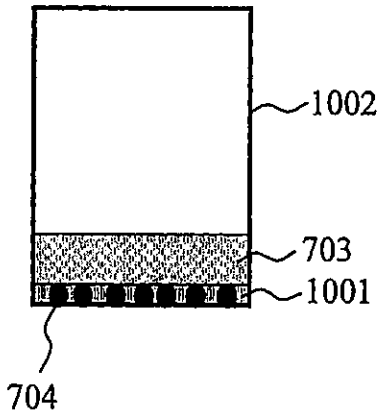


FIG. 10D

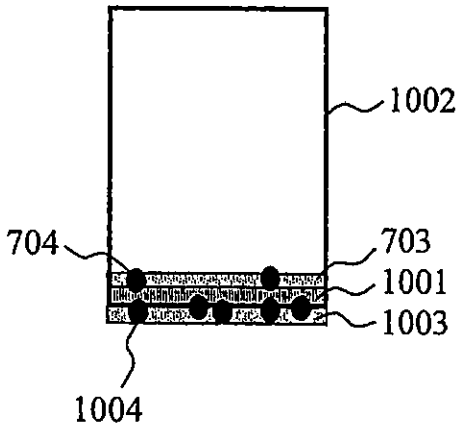


FIG. 11A

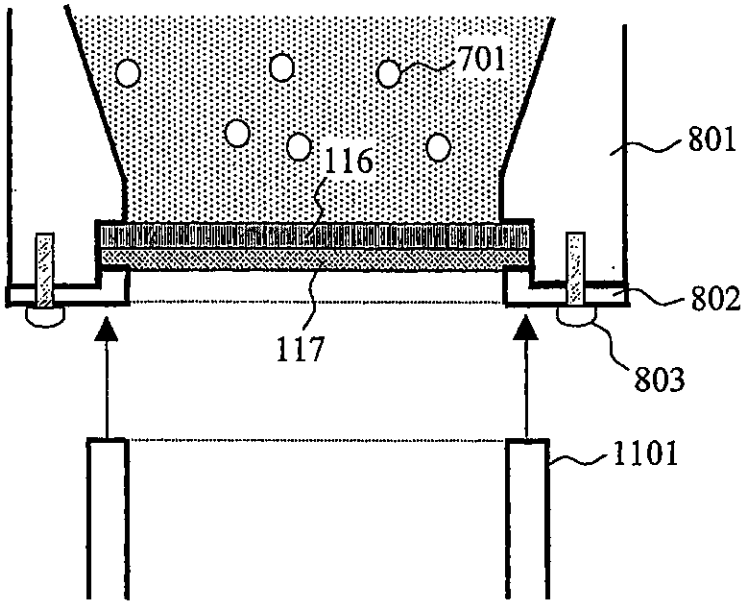


FIG. 11B

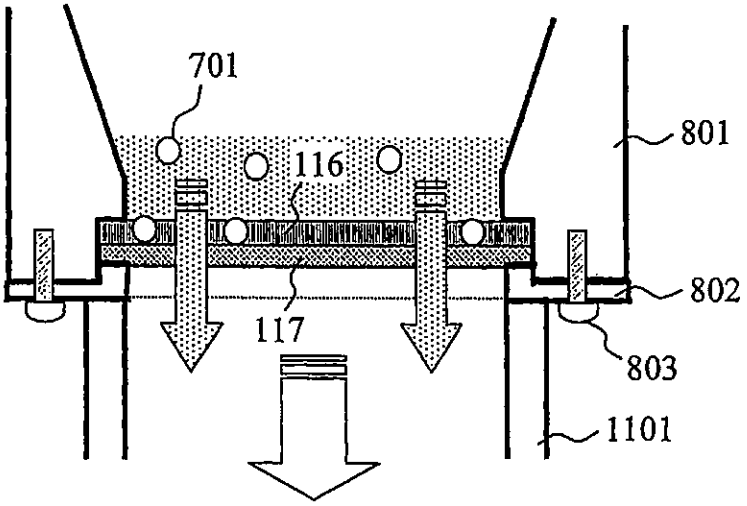


FIG. 12

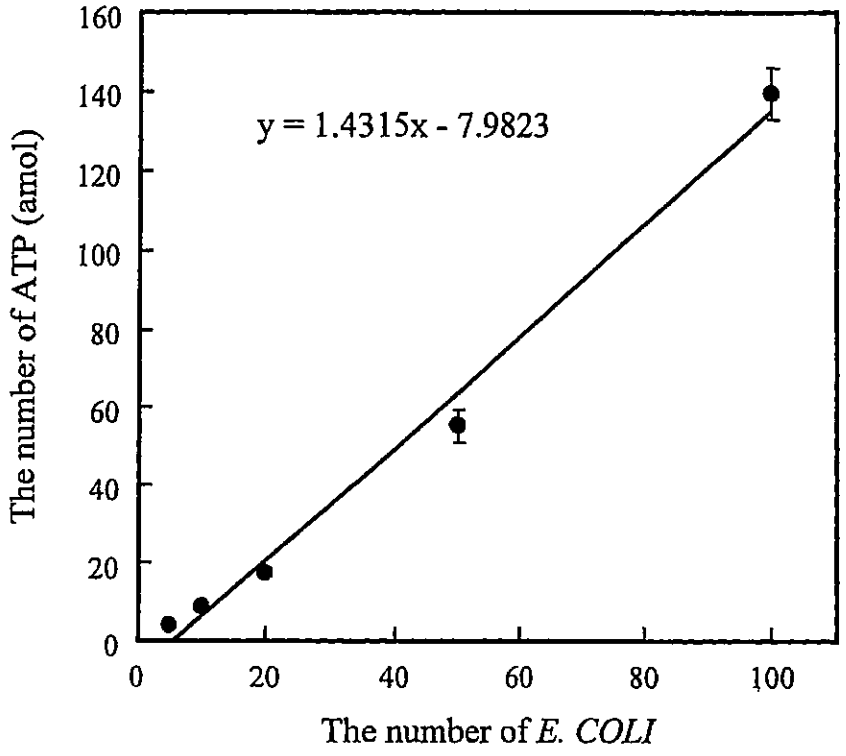

y = 1.4315x - 7.9823
The number of ATP (amol)
The number of E. COLI
0
20
40
60
80
100
120
140
160

FIG. 13

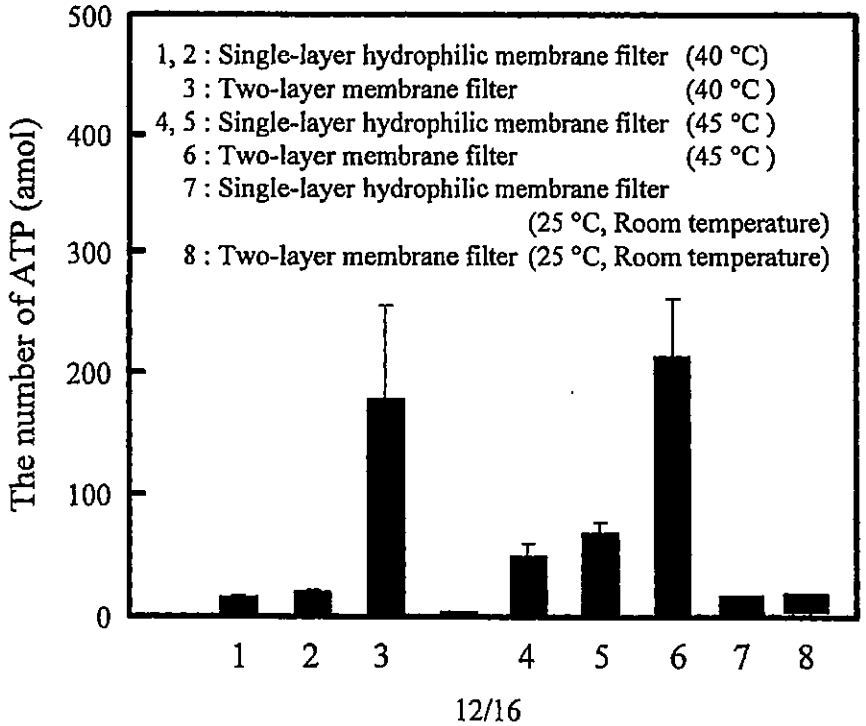

1, 2 : Single-layer hydrophilic membrane filter (40 °C)
3 : Two-layer membrane filter (40 °C)
4, 5 : Single-layer hydrophilic membrane filter (45 °C)
6 : Two-layer membrane filter (45 °C)
7 : Single-layer hydrophilic membrane filter (25 °C, Room temperature)
8 : Two-layer membrane filter (25 °C, Room temperature)
The number of ATP (amol)
0
100
200
300
400
500
1
2
3
4
5
6
7
8

FIG. 14A-a

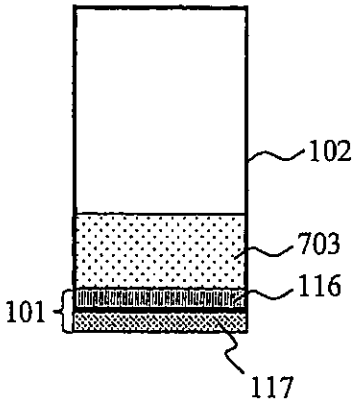


FIG. 14A-b

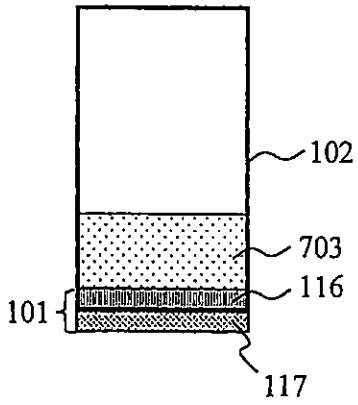


FIG. 14A-c

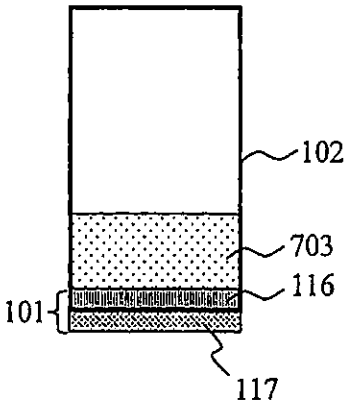


FIG. 14B-a

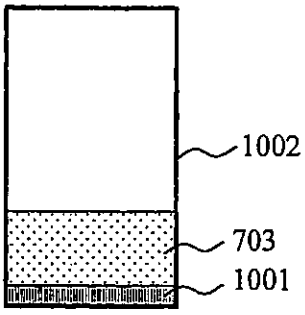


FIG. 14B-b

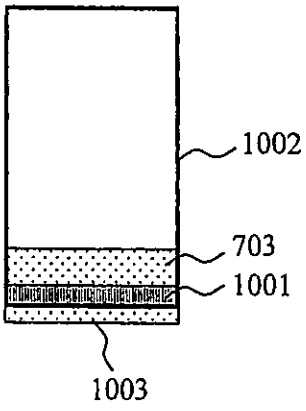


FIG. 14B-c

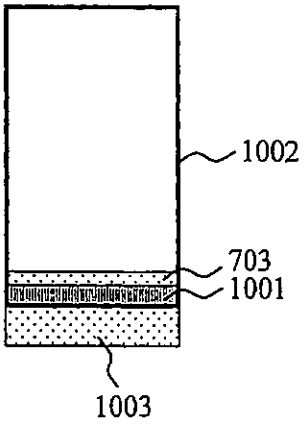


FIG. 15A

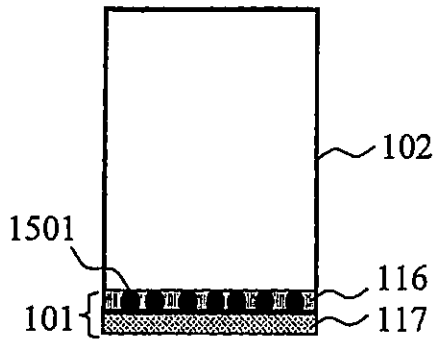


FIG. 15B

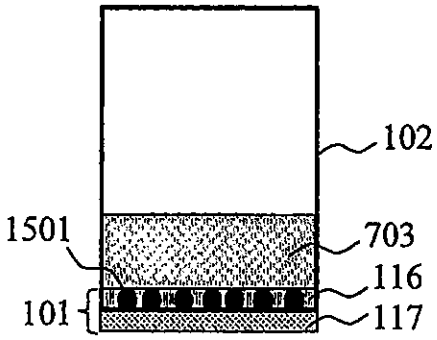


FIG. 15C

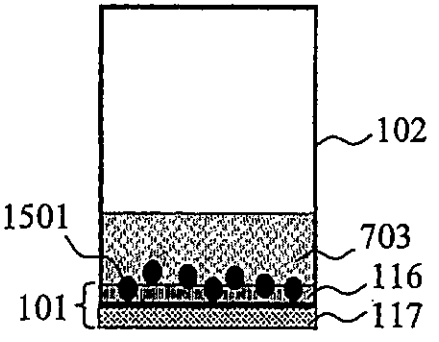


FIG. 15D

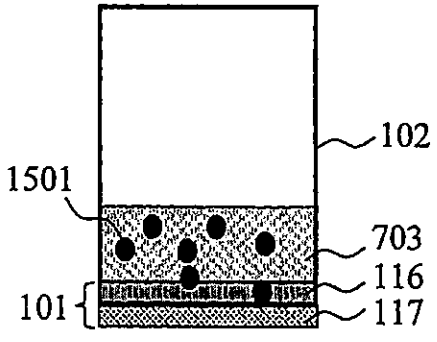


FIG. 16A

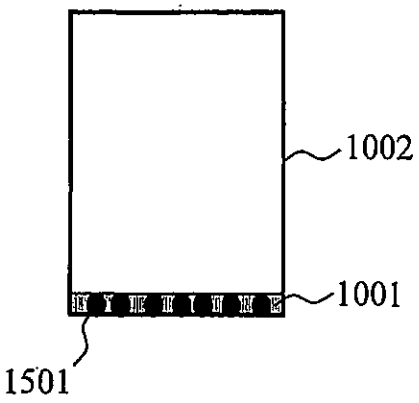


FIG. 16B

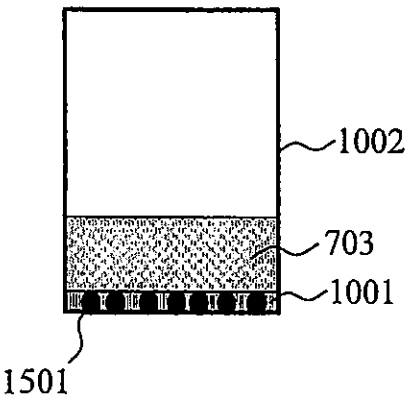


FIG. 16C

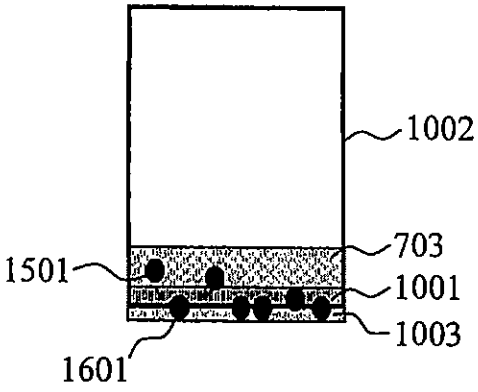


FIG. 16D

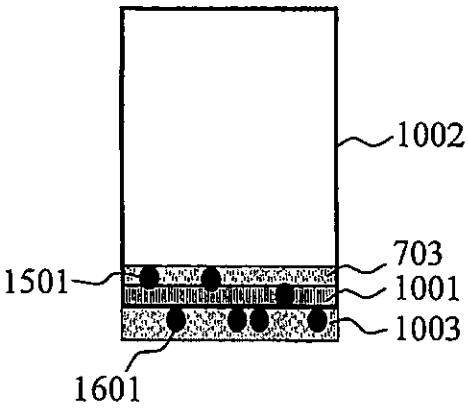


FIG. 17

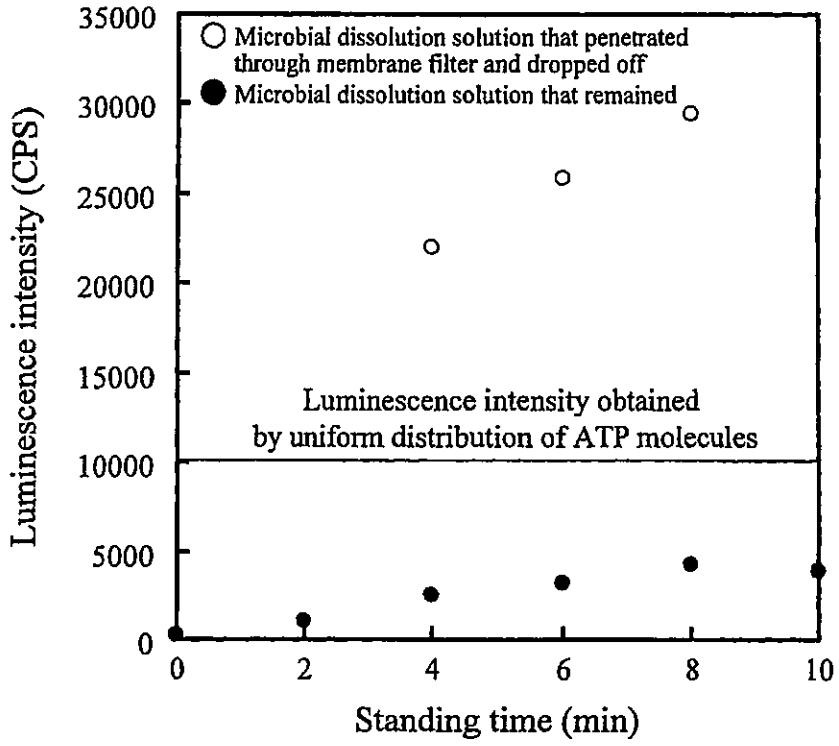
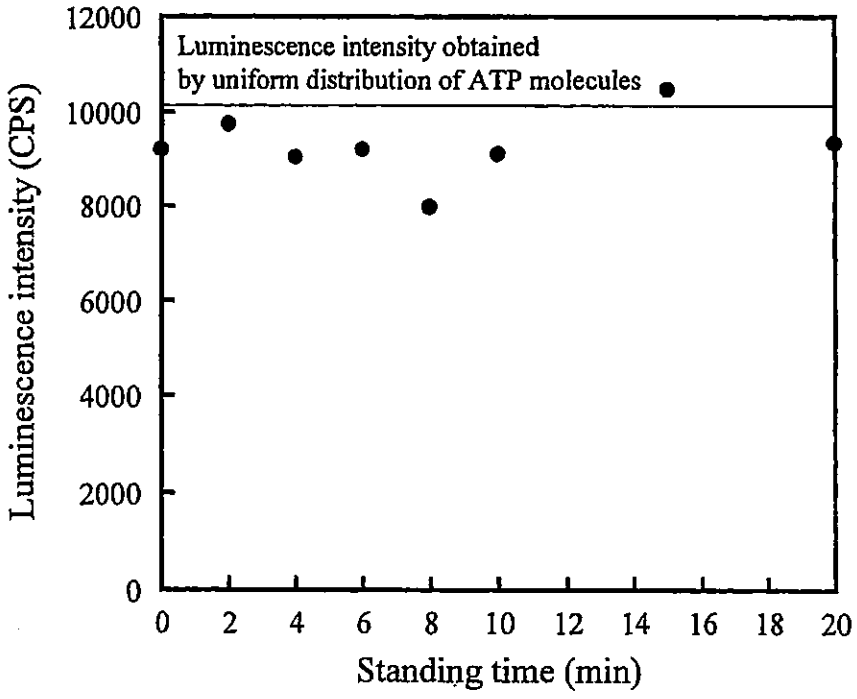

Microbial dissolution solution that penetrated through membrane filter and dropped off
Microbial dissolution solution that remained
Luminescence intensity obtained by uniform distribution of ATP molecules
Luminescence intensity (CPS)
Standing time (min)
35000
30000
25000
20000
15000
10000
5000
0
0
2
4
6
8
10

FIG. 18


Luminescence intensity obtained by uniform distribution of ATP molecules
Luminescence intensity (CPS)
Standing time (min)
12000
10000
8000
6000
4000
2000
0
0
2
4
6
8
10
12
14
16
18
20