FIG.1

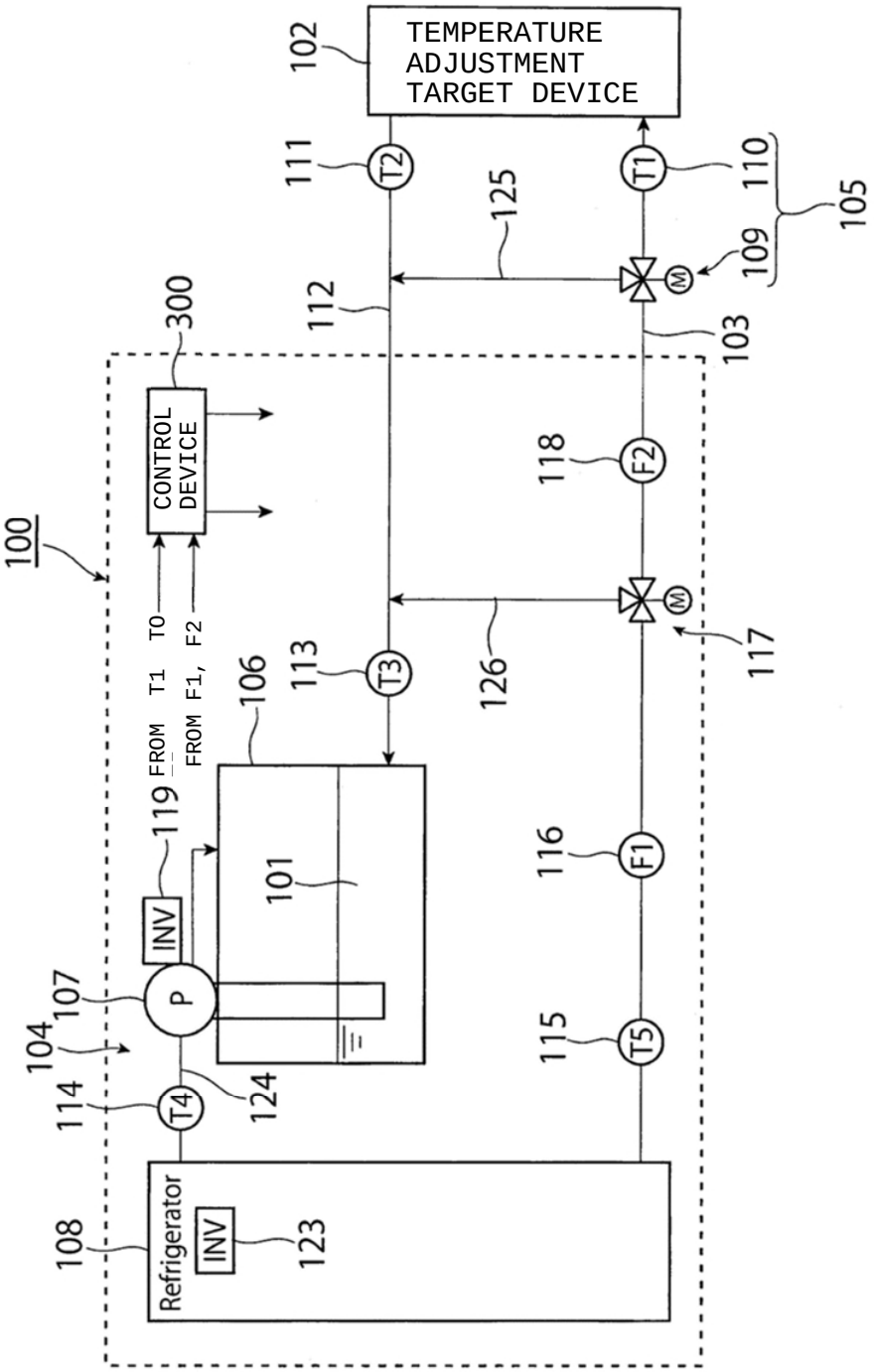

TEMPERATURE ADJUSTMENT TARGET DEVICE
102
111
T2
125
T1
110
105
109
M
112
103
300
CONTROL DEVICE
100
118
F2
TO
T1
FROM F1, F2
106
113
T3
126
117
119
INV
101
116
F1
107
P
104
115
T5
114
T4
124
108
Refrigerator
INV
123

FIG.2

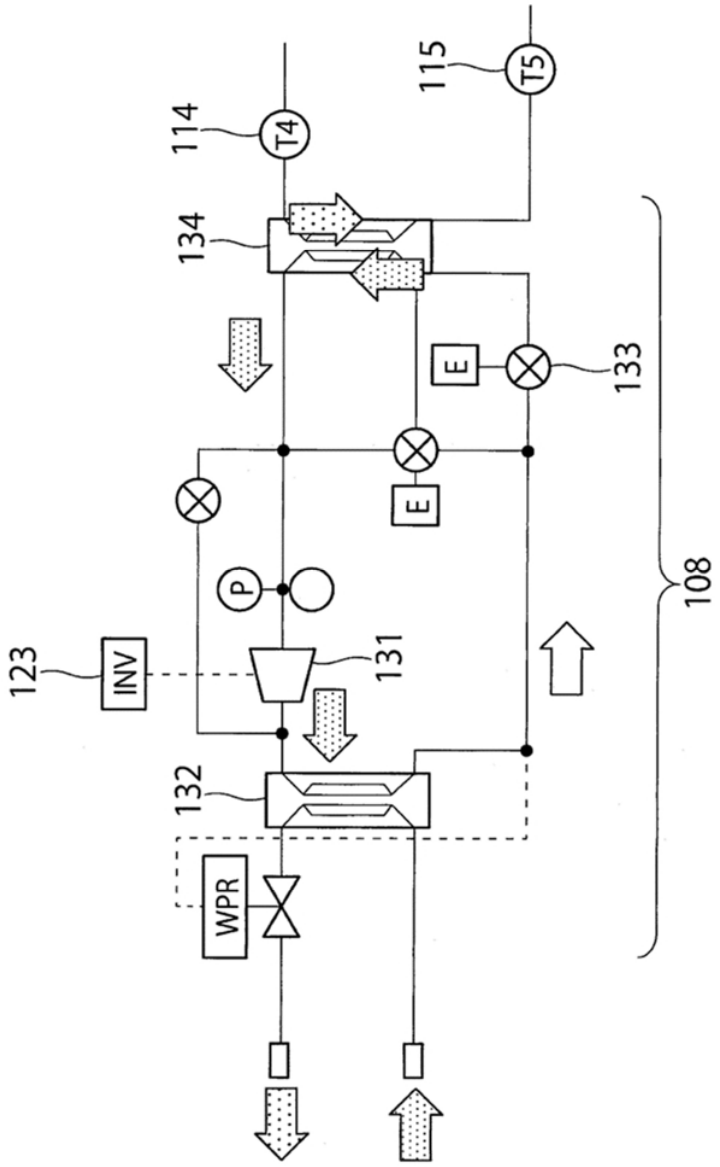


FIG.3

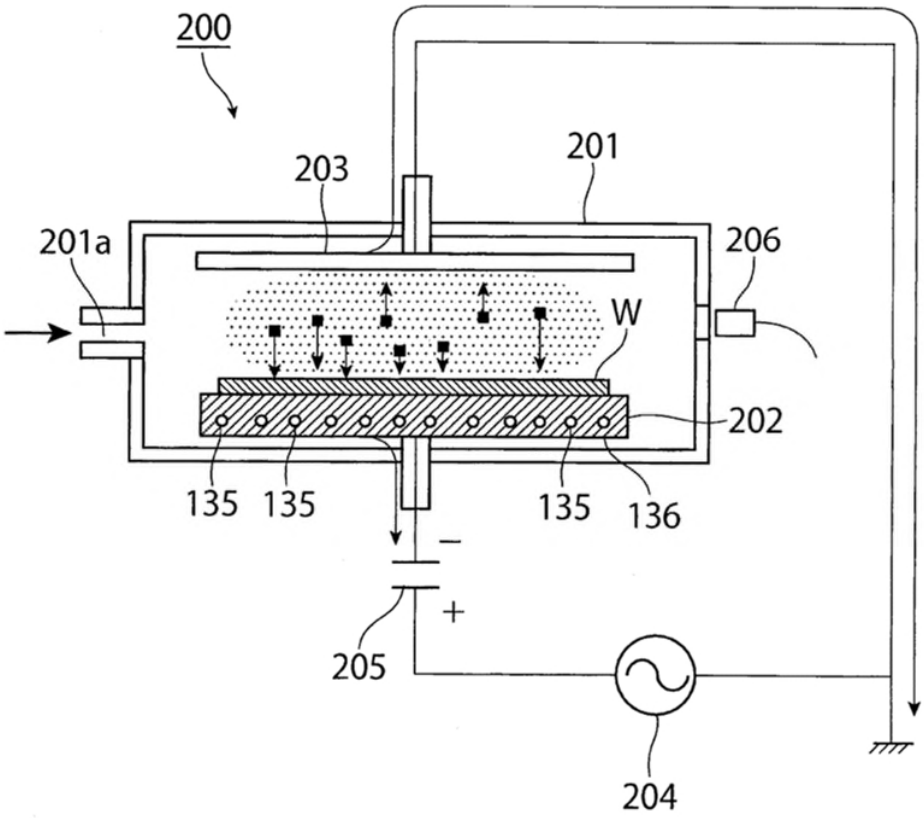


FIG.4

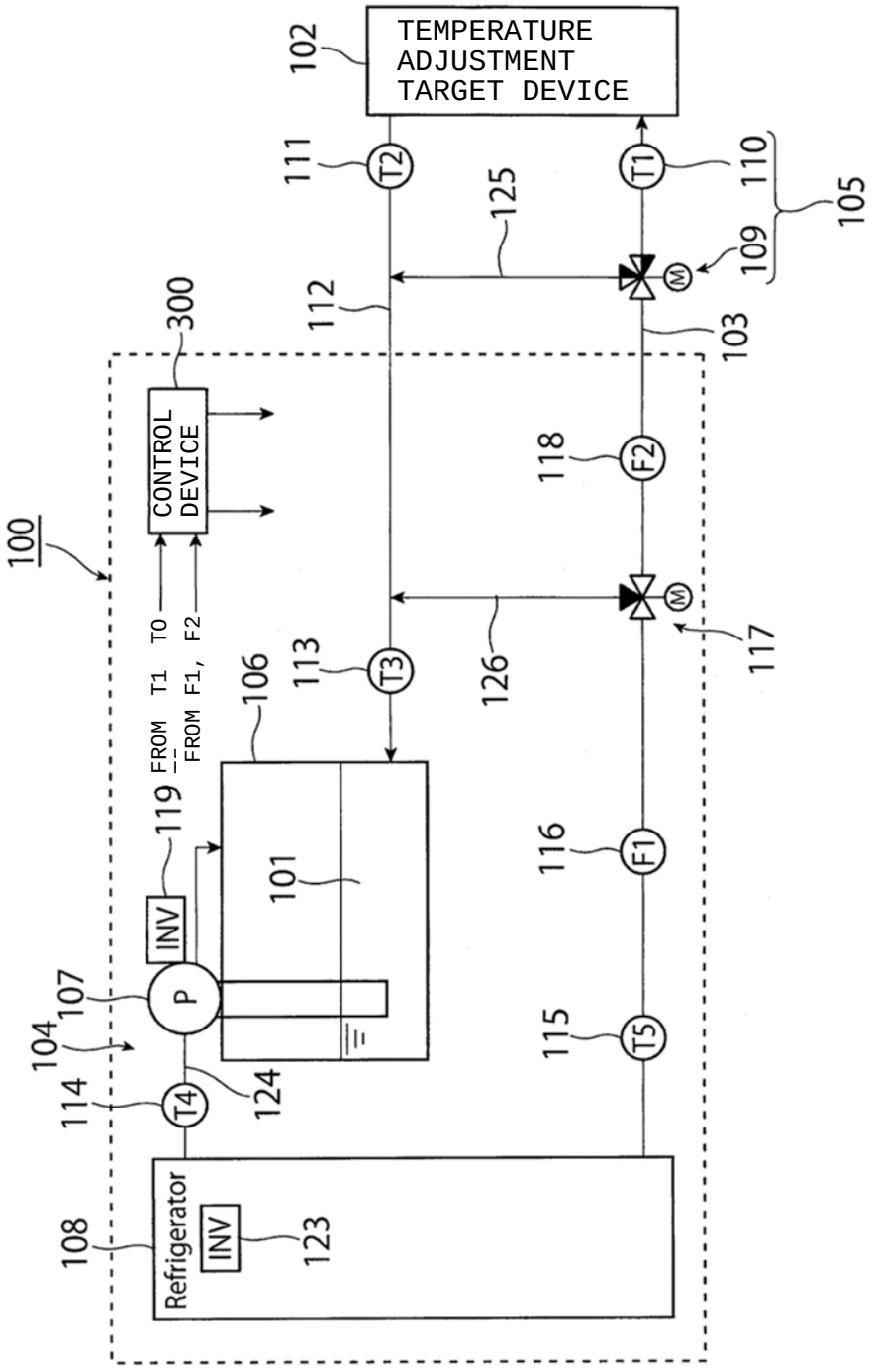

TEMPERATURE ADJUSTMENT TARGET DEVICE
102
111
T2
T1
110
105
125
109
M
112
103
300
CONTROL DEVICE
100
118
F2
FROM T1 T0
FROM F1, F2
106
113
T3
126
117
119
INV
101
116
F1
107
P
104
115
T5
114
T4
124
108
Refrigerator
INV
123

FIG.5

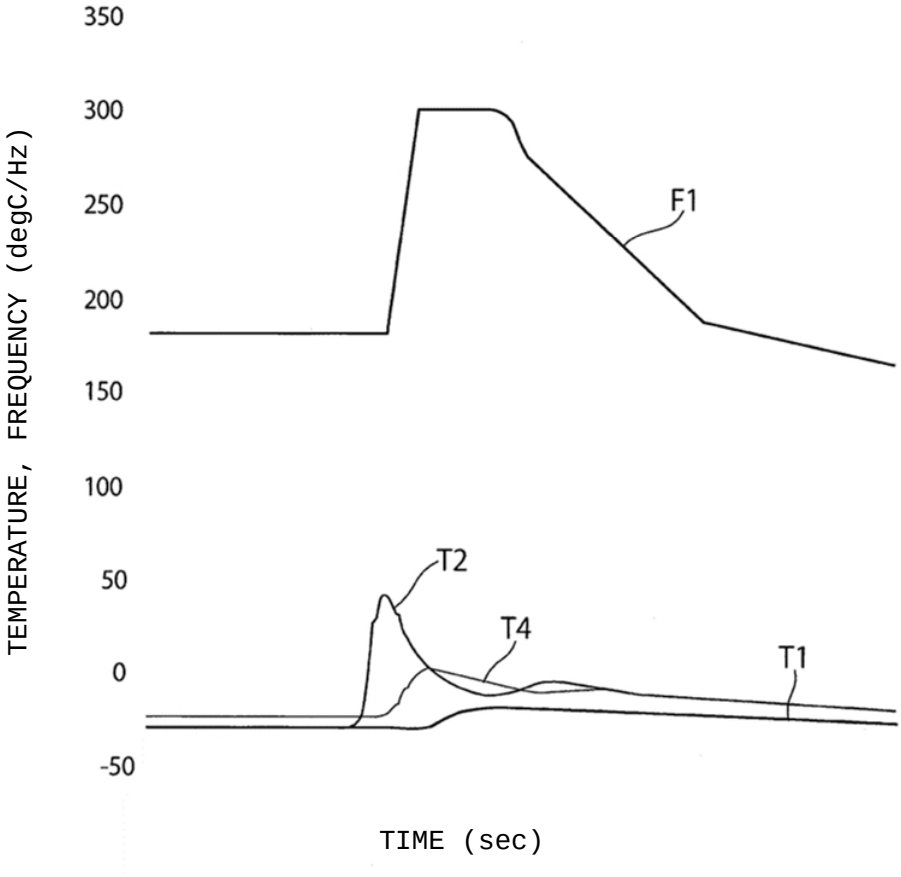

350
300
250
200
150
100
50
0
-50
TEMPERATURE, FREQUENCY (degC/Hz)
F1
T2
T4
T1
TIME (sec)

FIG.6

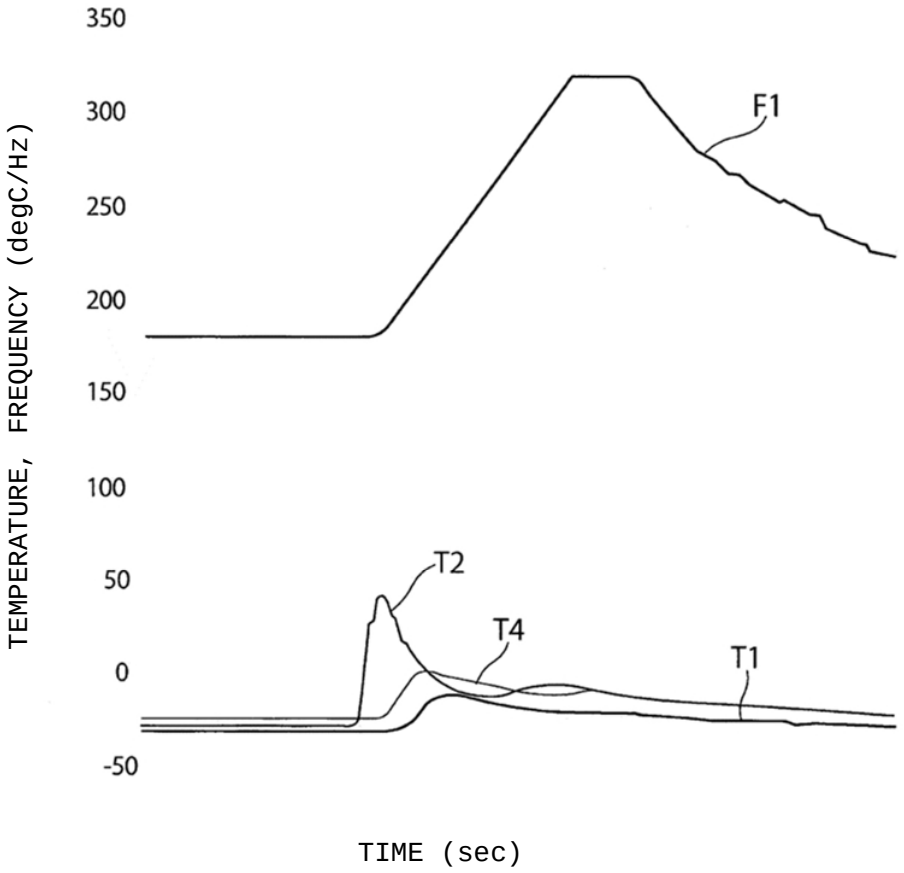

350
300
250
200
150
100
50
0
-50
TEMPERATURE, FREQUENCY (degC/Hz)
F1
T2
T4
T1
TIME (sec)

FIG.7

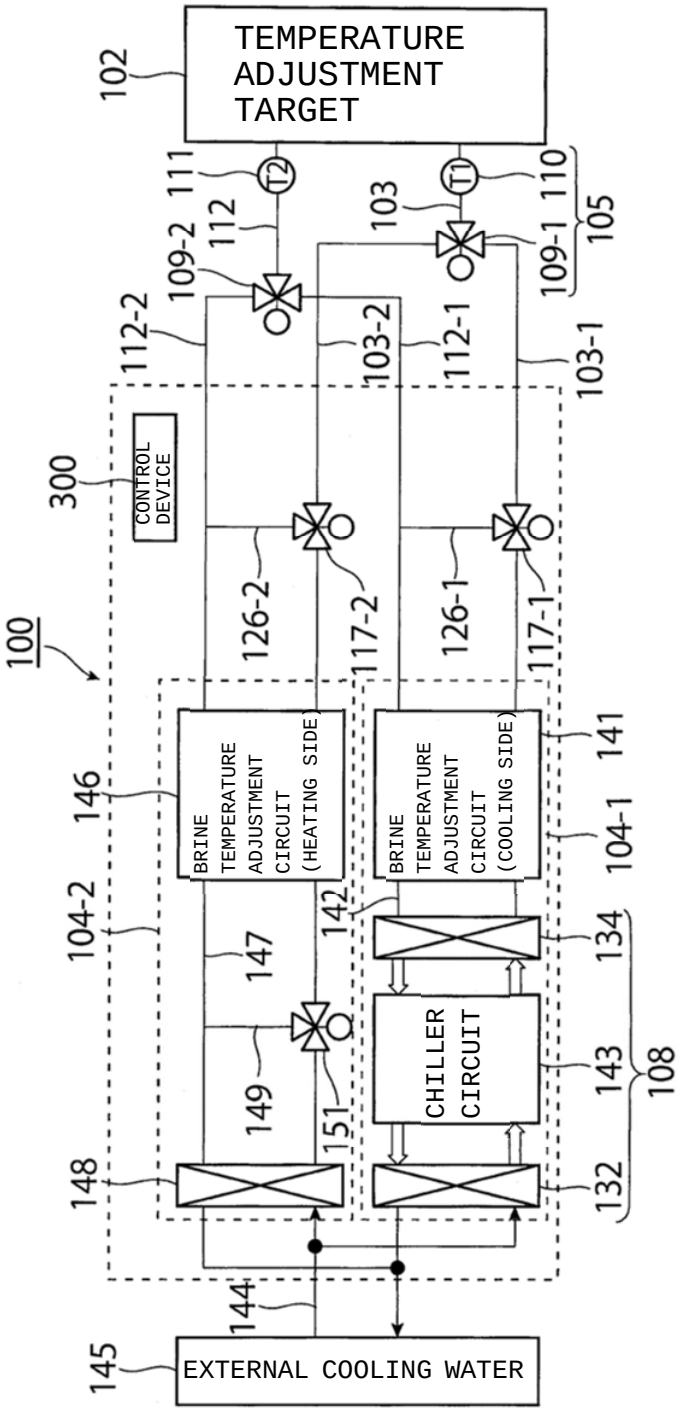

TEMPERATURE ADJUSTMENT TARGET
102
111
T2
112
109-2
112-2
103
T1
110
105
109-1
103-2
112-1
103-1
300
CONTROL DEVICE
100
126-2
117-2
126-1
117-1
BRINE TEMPERATURE ADJUSTMENT CIRCUIT (HEATING SIDE)
146
BRINE TEMPERATURE ADJUSTMENT CIRCUIT (COOLING SIDE)
141
104-1
104-2
142
134
147
CHILLER CIRCUIT
143
108
149
151
148
132
144
145
EXTERNAL COOLING WATER

FIG.8

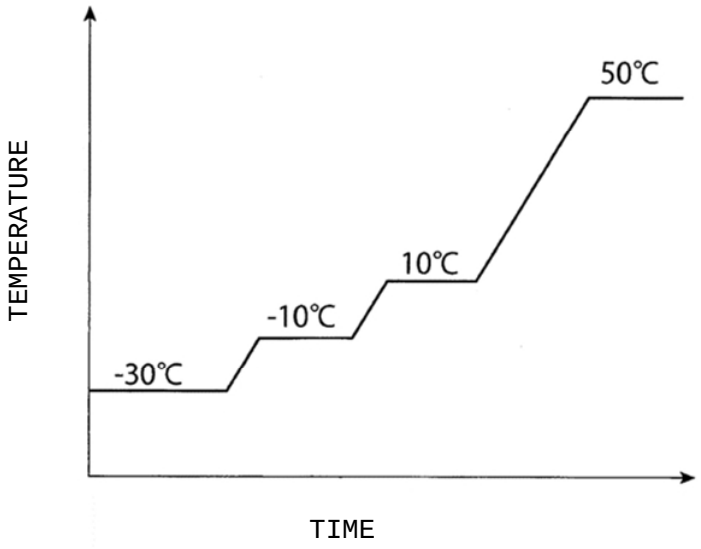


FIG.9

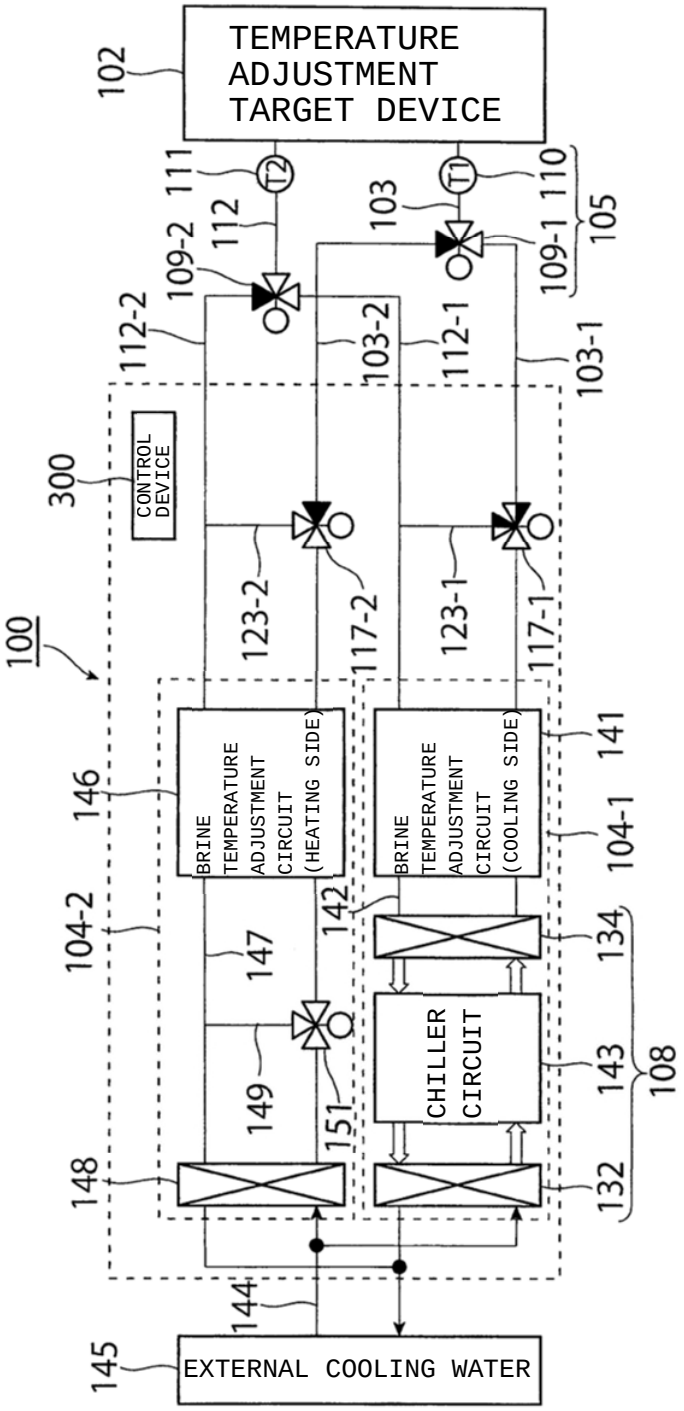

TEMPERATURE ADJUSTMENT TARGET DEVICE
102
T2
T1
111
112
103
109-2
109-1
110
105
112-2
103-2
112-1
103-1
300
CONTROL DEVICE
100
123-2
117-2
123-1
117-1
BRINE TEMPERATURE ADJUSTMENT CIRCUIT (HEATING SIDE)
BRINE TEMPERATURE ADJUSTMENT CIRCUIT (COOLING SIDE)
146
141
104-1
104-2
142
147
134
CHILLER CIRCUIT
143
108
149
151
148
132
144
145
EXTERNAL COOLING WATER

FIG.10

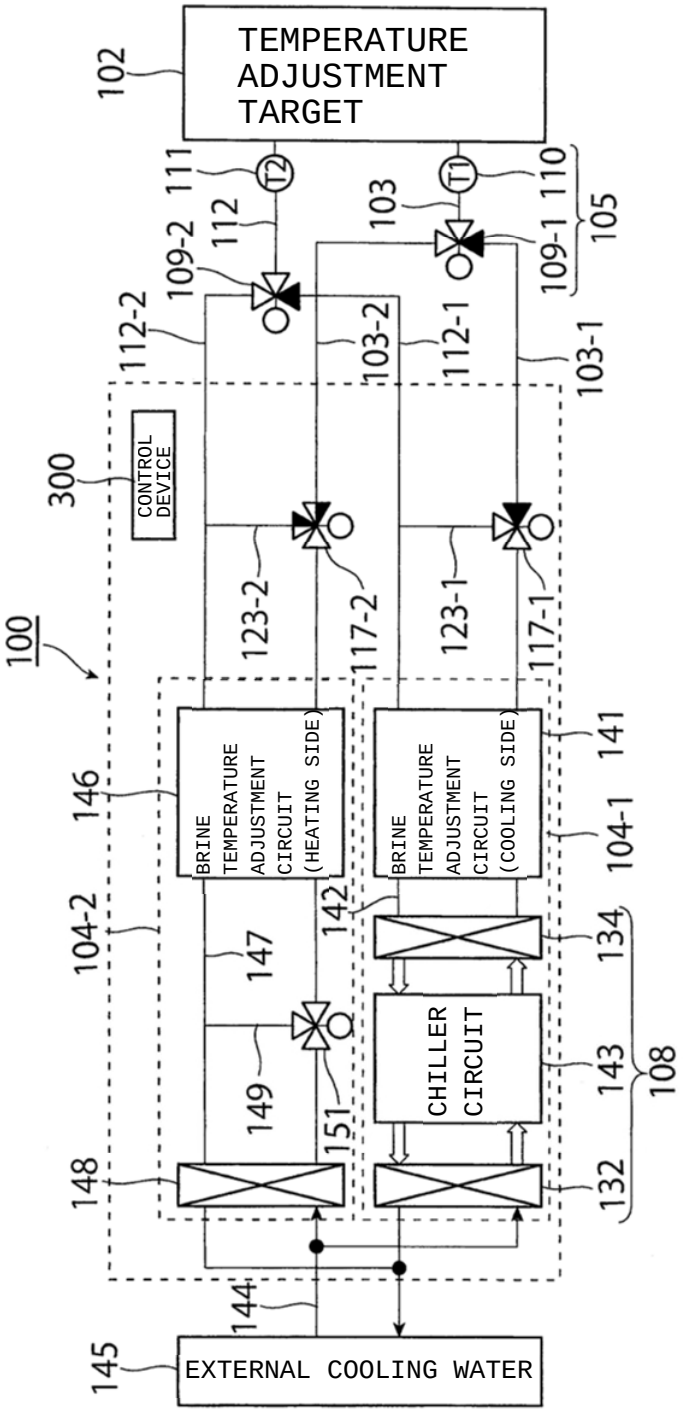

TEMPERATURE ADJUSTMENT TARGET
102
111
T2
T1
110
105
103
112
109-2
109-1
112-2
103-2
112-1
103-1
300
CONTROL DEVICE
100
123-2
117-2
123-1
117-1
BRINE TEMPERATURE ADJUSTMENT CIRCUIT (HEATING SIDE)
BRINE TEMPERATURE ADJUSTMENT CIRCUIT (COOLING SIDE)
146
141
104-1
104-2
142
147
134
CHILLER CIRCUIT
143
108
149
151
148
132
144
145
EXTERNAL COOLING WATER

FIG.11

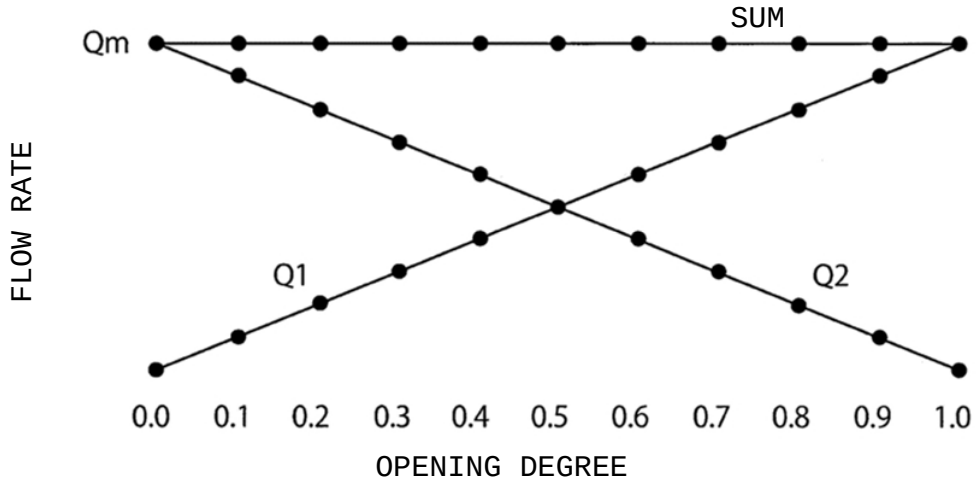


FIG.12(a)

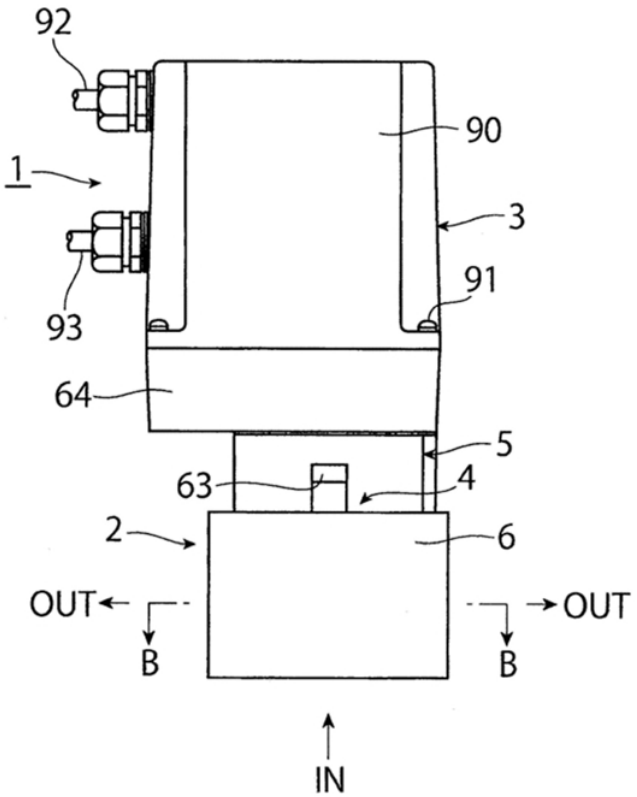


FIG.12(b)

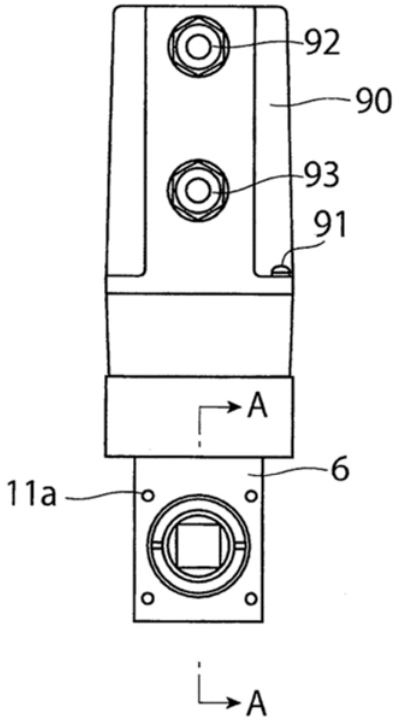


FIG.12(c)

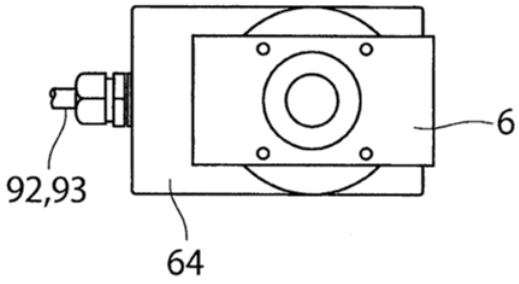


FIG.13

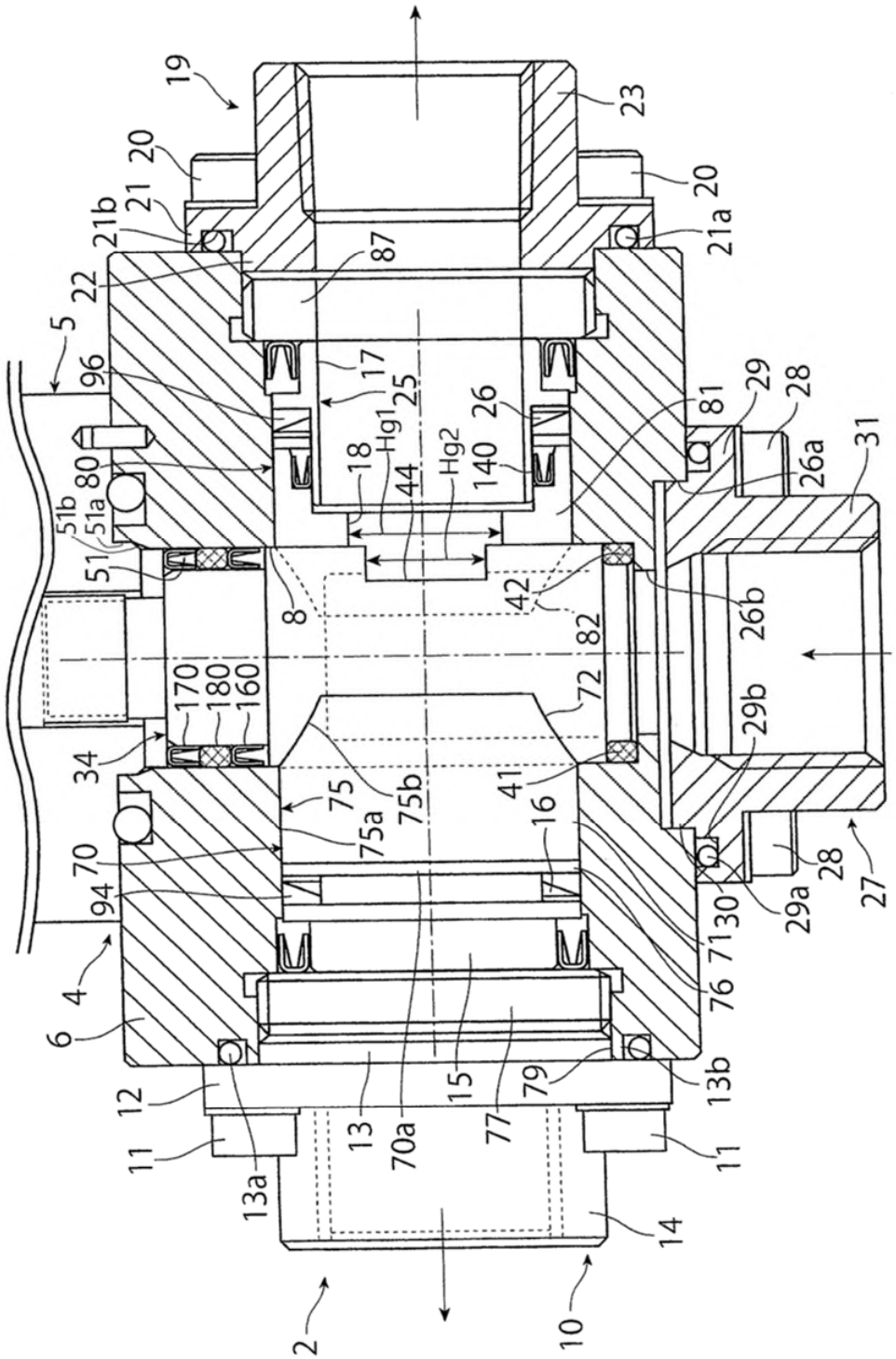

19
23
20
21
21b
20
21a
87
22
5
96
17
25
26
81
29
28
Hg1
18
Hg2
44
140
80
51b
51a
51
8
42
26a
31
26b
82
72
170
180
160
29b
34
75
75a
75b
41
16
70
94
4
6
12
11
13a
13
70a
15
77
79
13b
76
71
130
29a
28
27
14
2
10

FIG.14

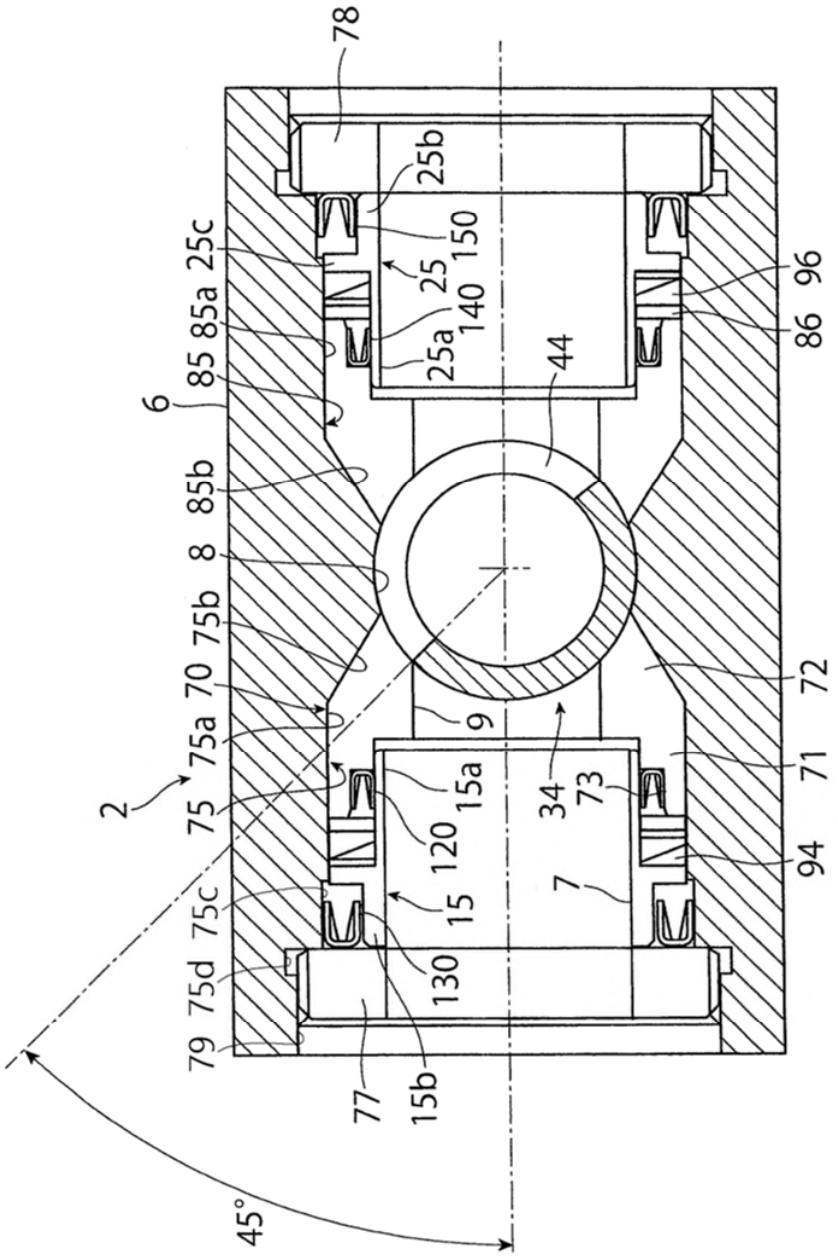

78
25b
150
25
140
25a
25c
85a
85
6
85b
8
75b
70
75a
75
2
75c
75d
79
77
15b
130
15
120
15a
9
34
73
7
44
72
71
94
86
96
45°

FIG.15

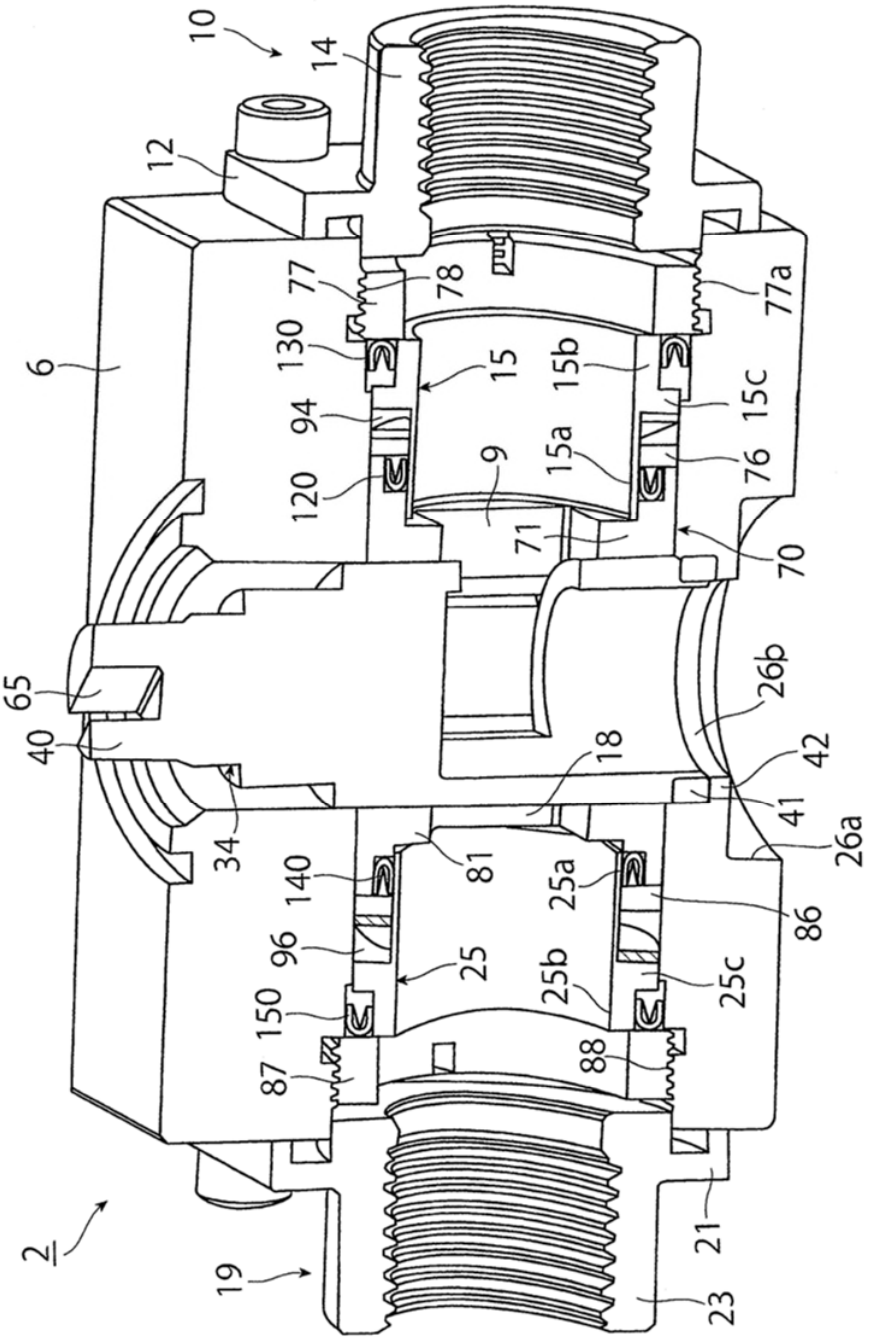

10
14
12
77
78
77a
6
130
15
15b
15c
94
15a
76
120
9
71
70
65
26b
40
18
42
34
41
26a
81
140
25a
86
96
25
25b
25c
150
87
88
2
19
21
23

FIG.16(a)

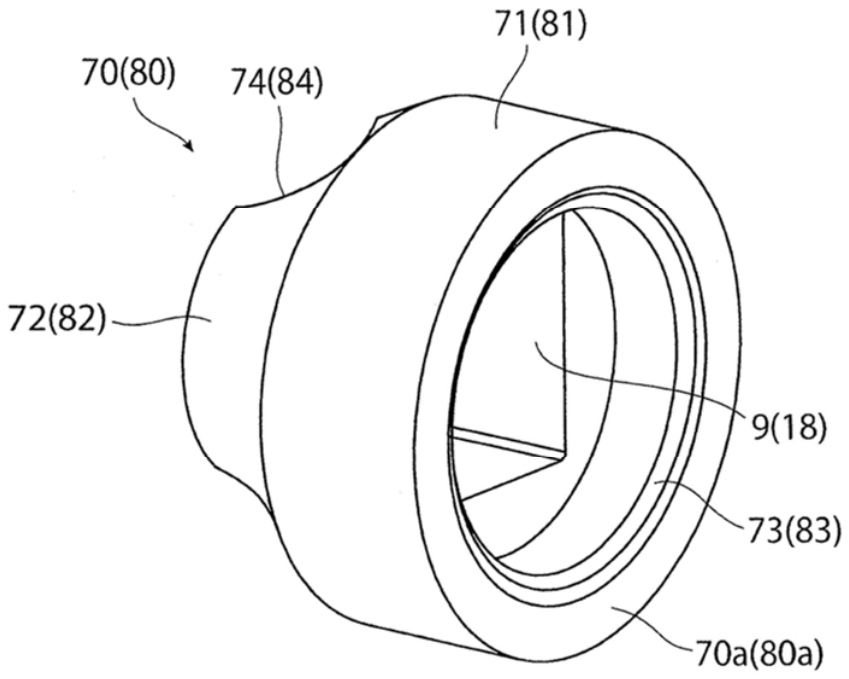


FIG.16(b)

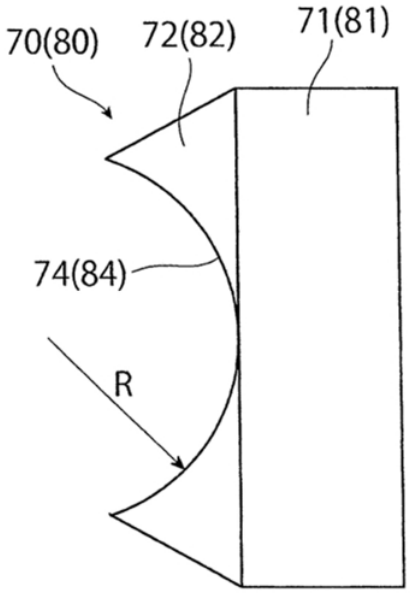


FIG.17

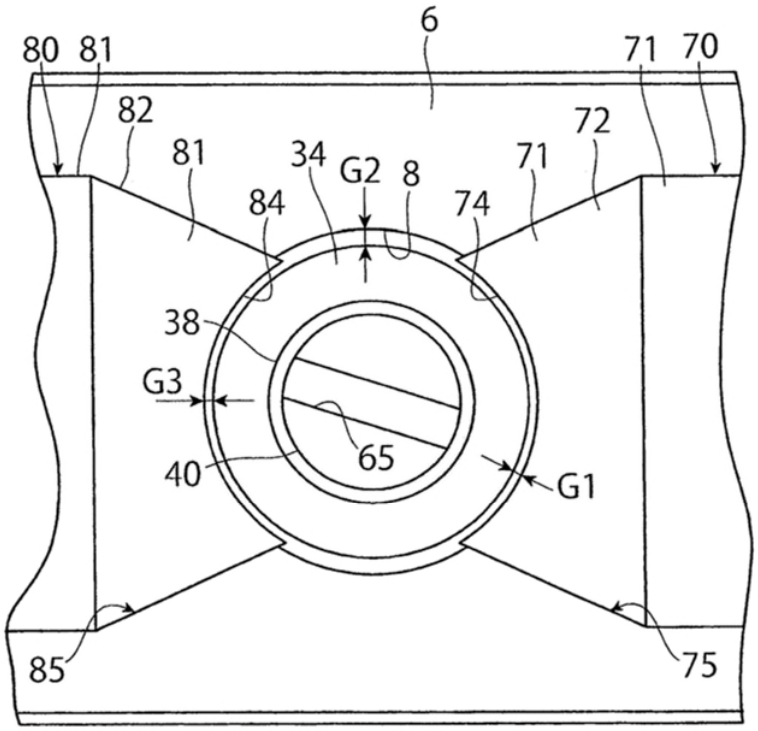


FIG.18(a)

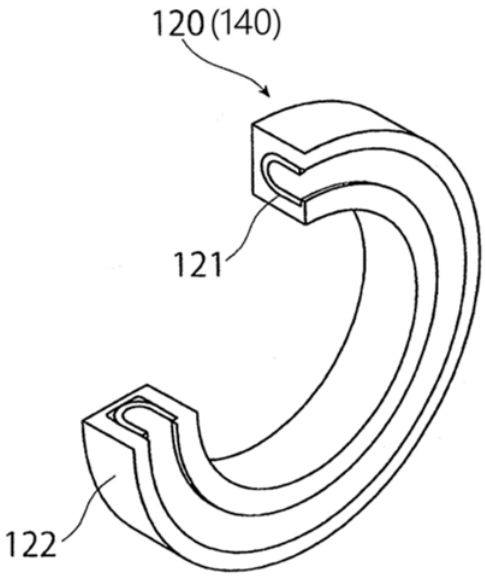


FIG.18(b)

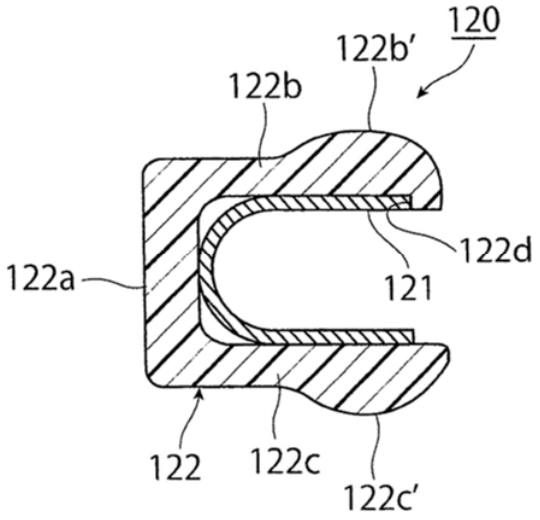


FIG.19

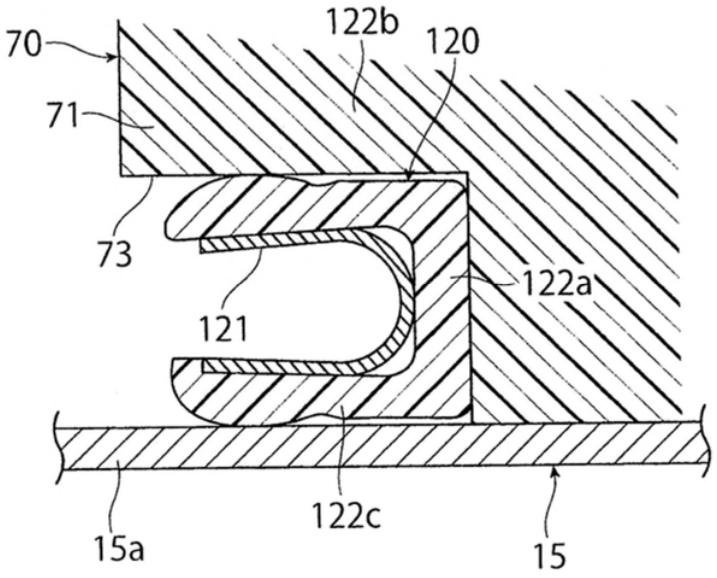


FIG.20

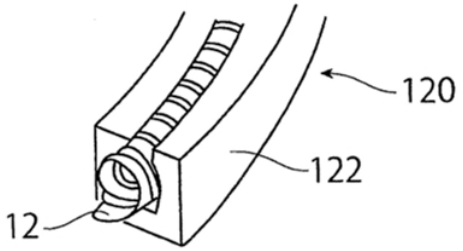


FIG.21(a)

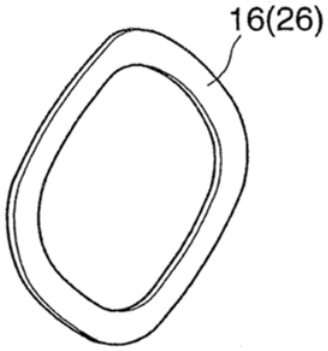


FIG.21(b)

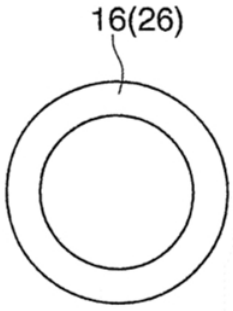


FIG.21(c)



FIG.22

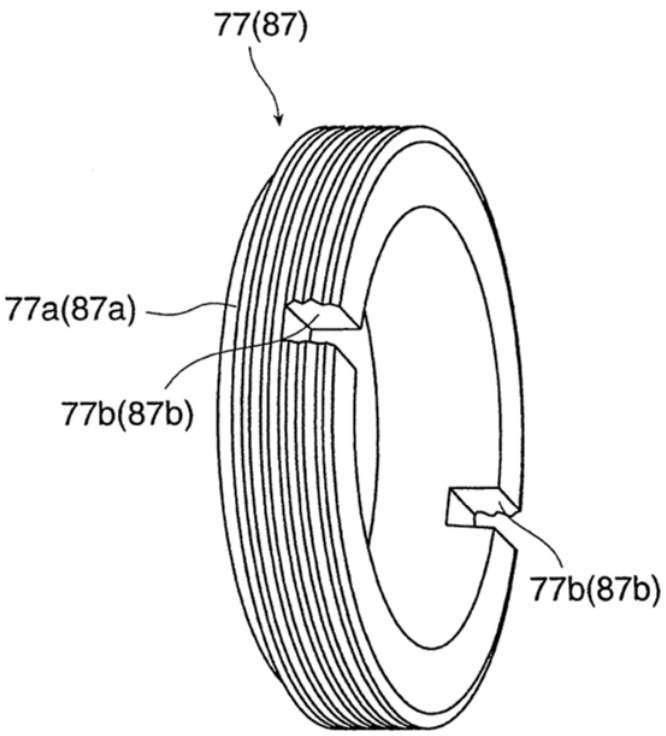


FIG.23(a)

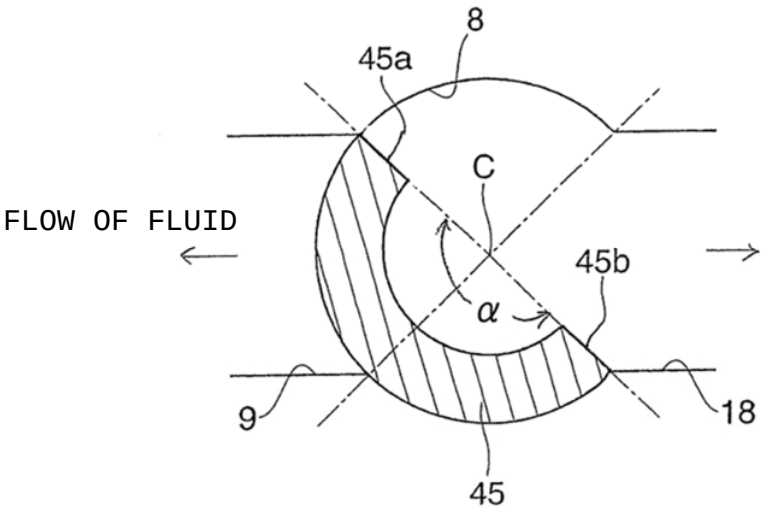


FIG.23(b)

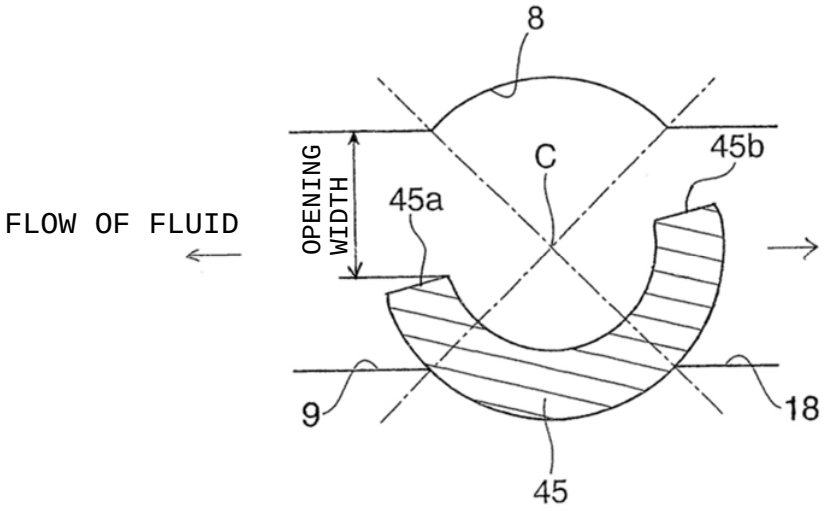


FIG.24(a)

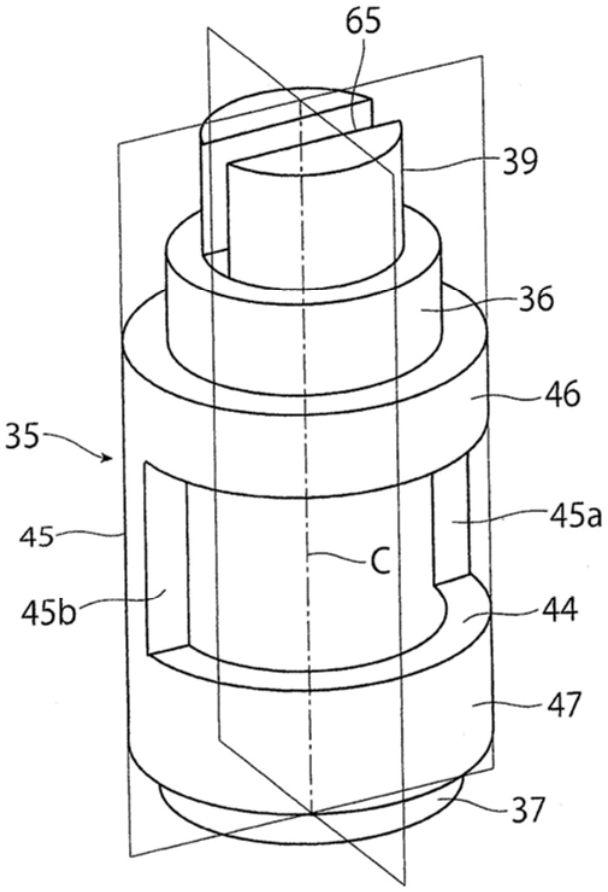


FIG.24(b)

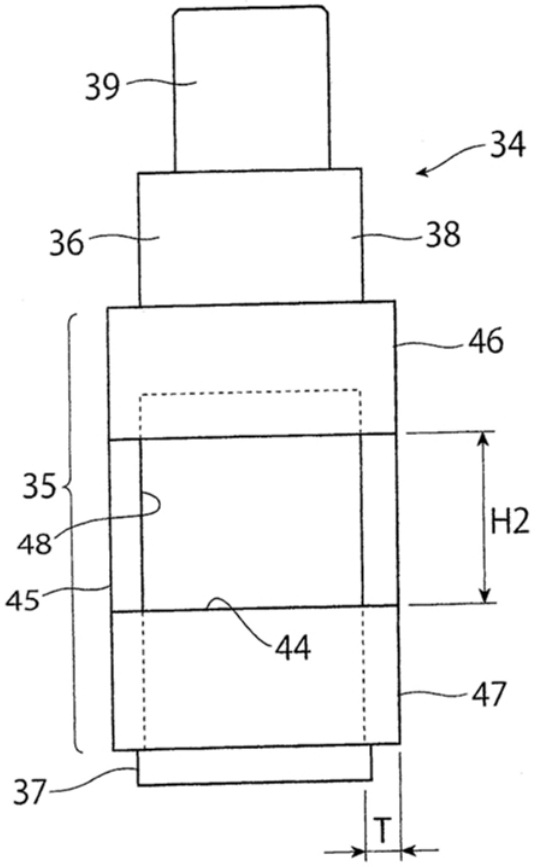


FIG.25(a)

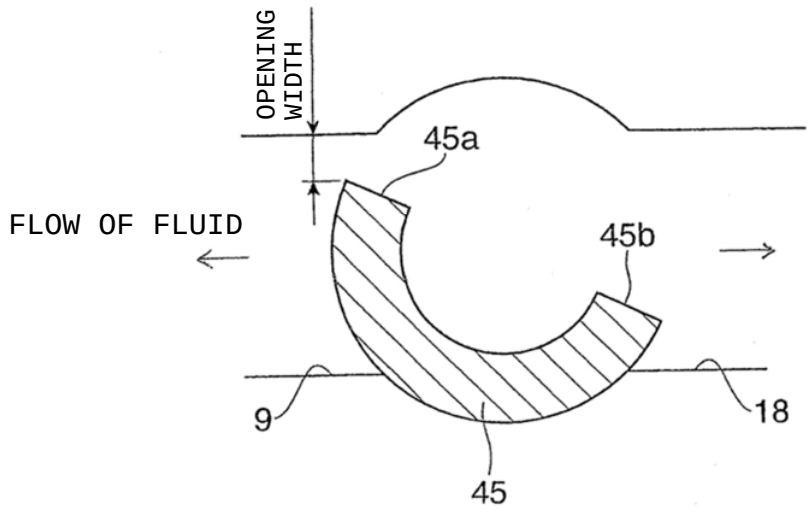


FIG.25(b)

OPENING DEGREES 0～50%

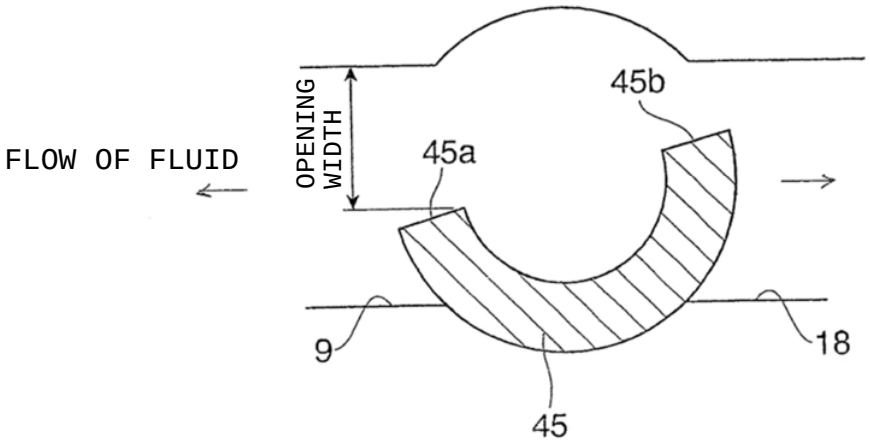


FIG.26

