FIG. 1

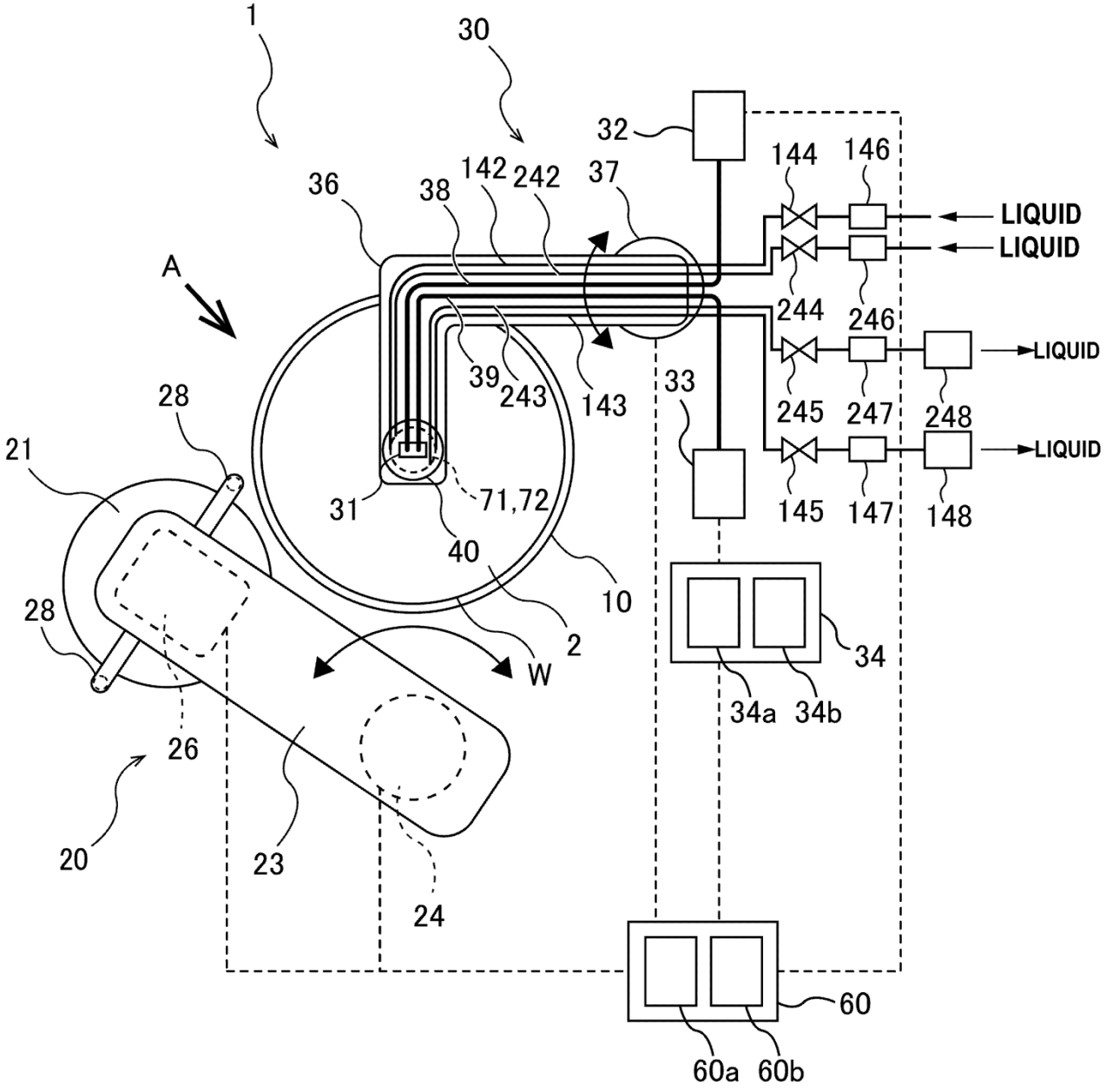

1
30
32
144
146
LIQUID
LIQUID
36
38
142
242
37
A
244
246
LIQUID
39
243
143
33
28
245
247
248
LIQUID
21
31
71,72
145
147
148
40
10
28
2
W
34
34a
34b
26
20
23
24
60
60a
60b

FIG. 2

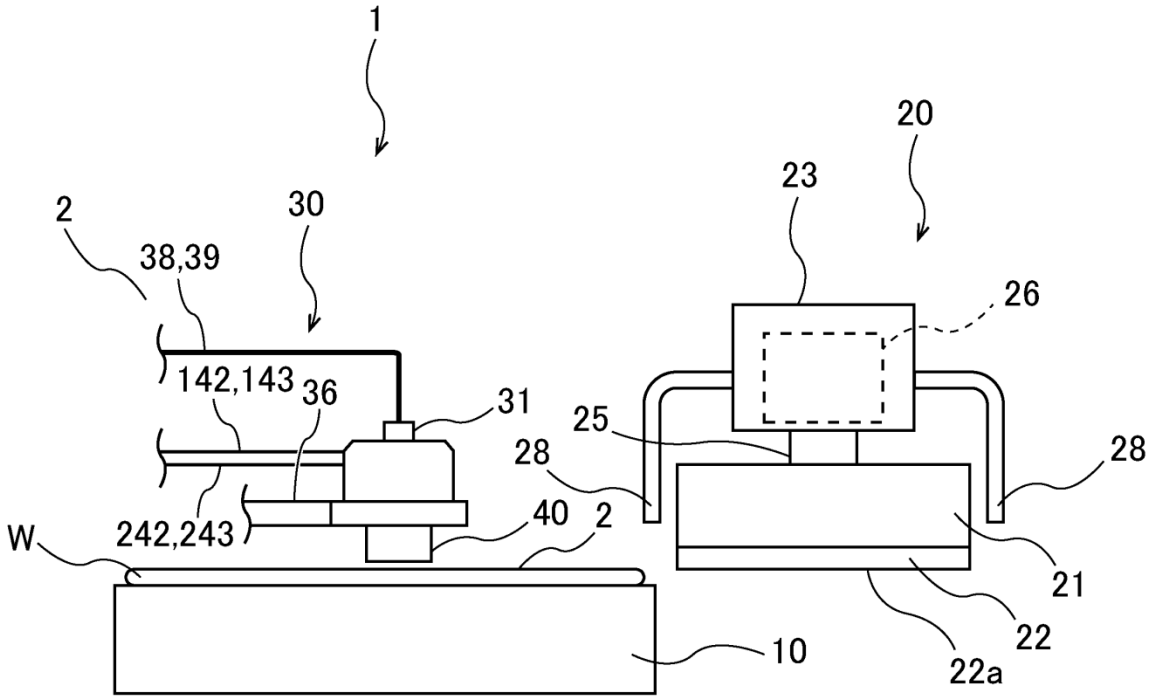


FIG. 3

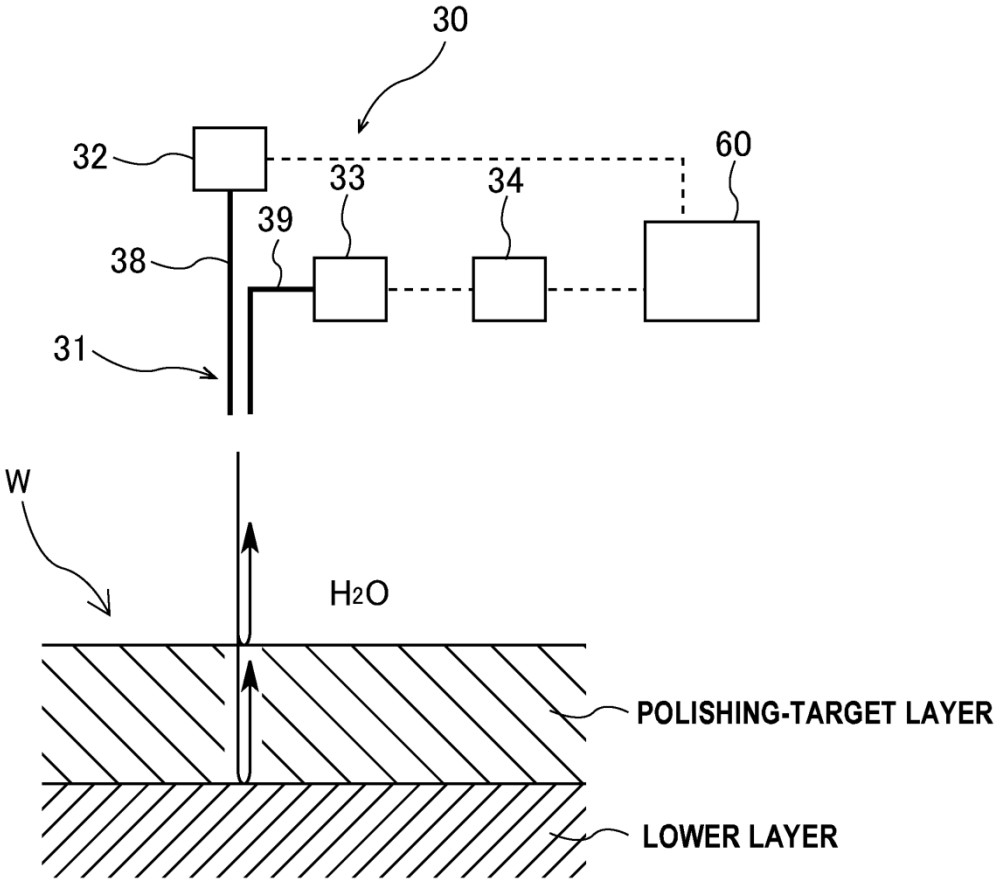

30
32
33
34
60
39
38
31
W
H2O
POLISHING-TARGET LAYER
LOWER LAYER

FIG. 4

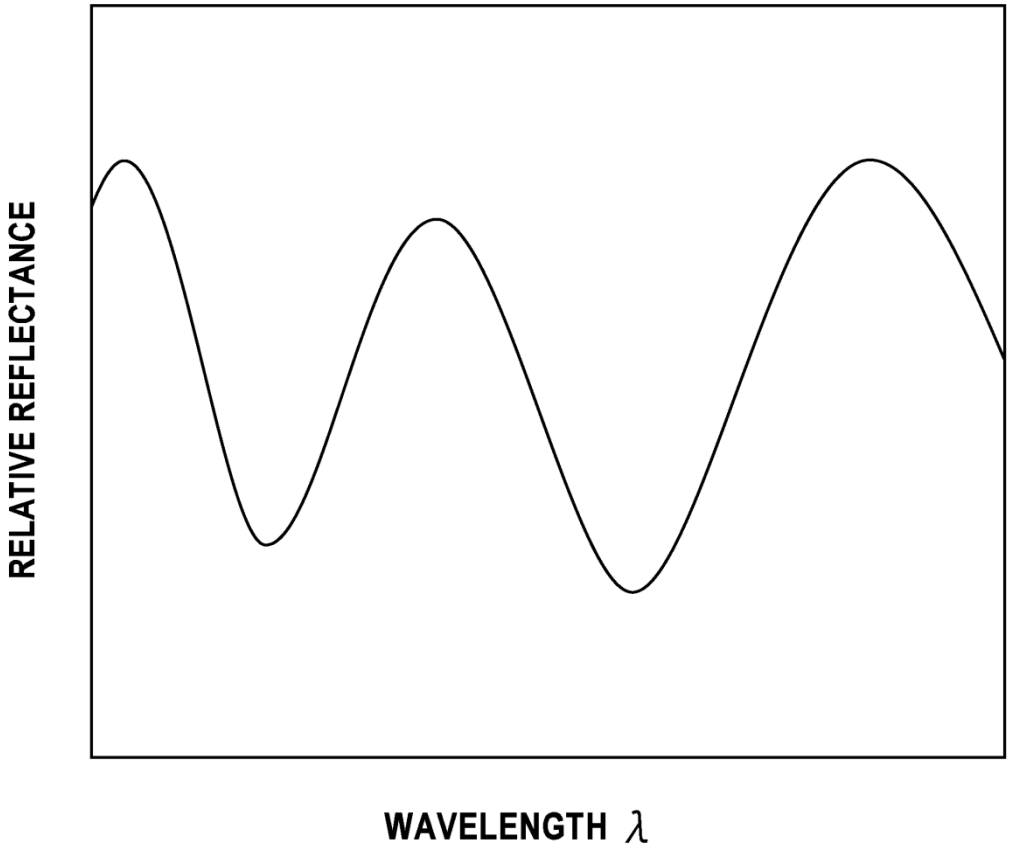


FIG. 5A

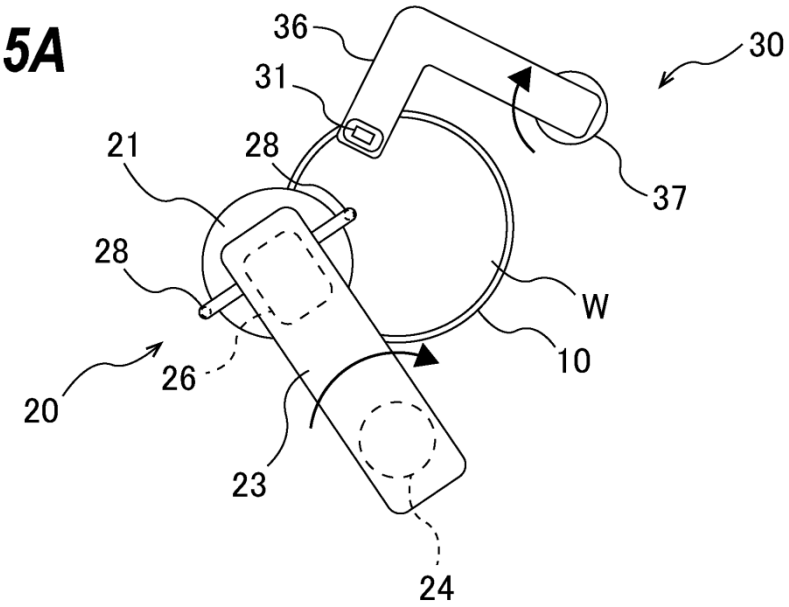


FIG. 5B

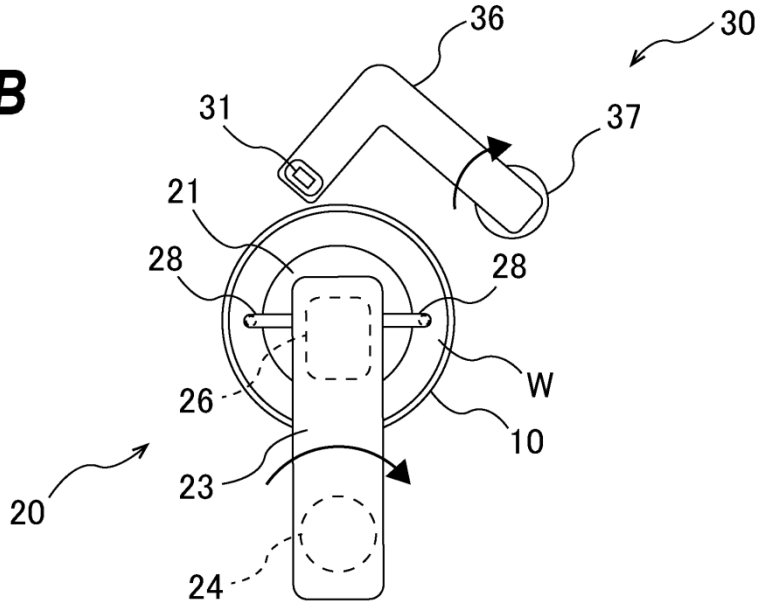


FIG. 5C

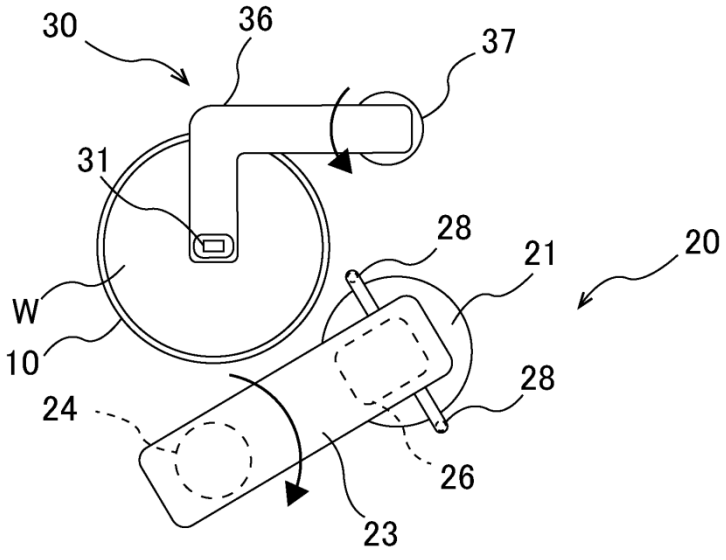


FIG. 6

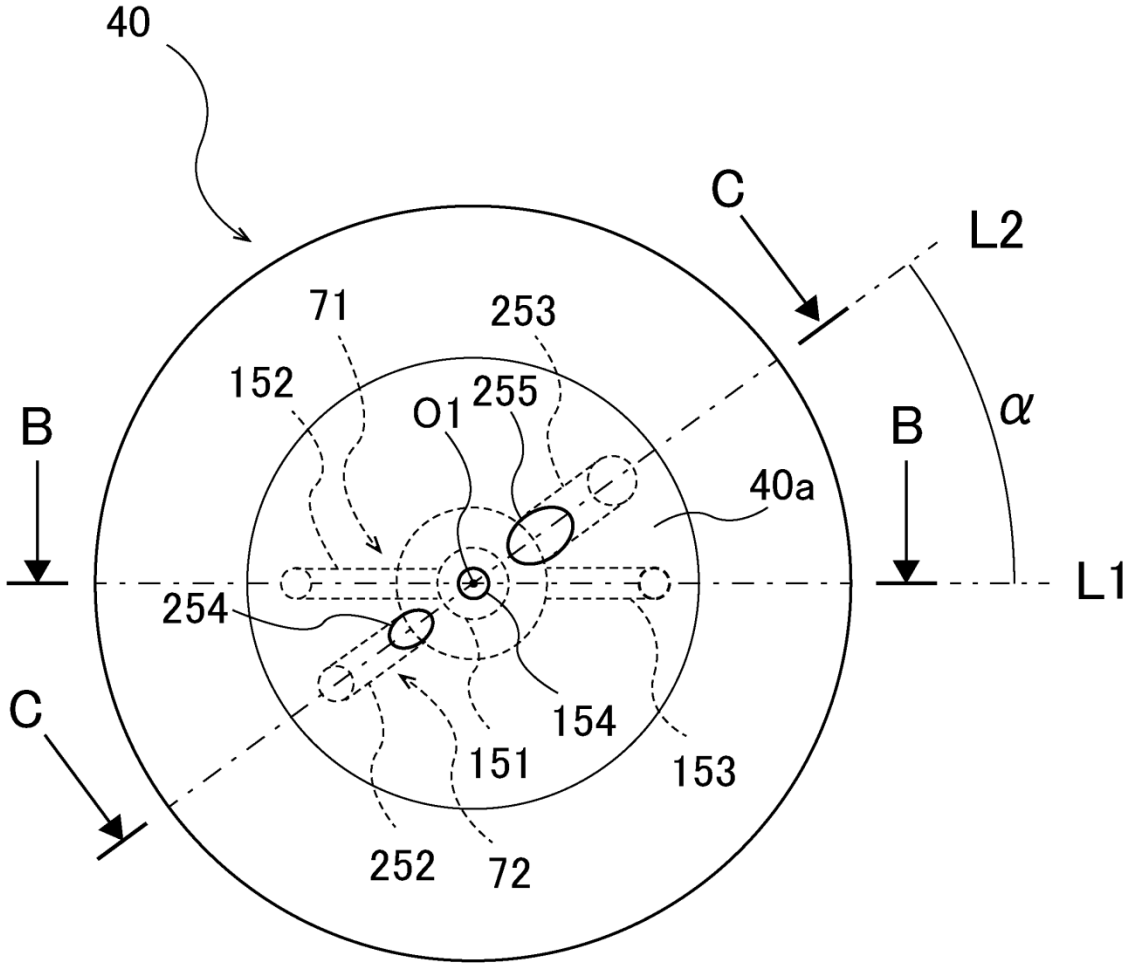


FIG. 7

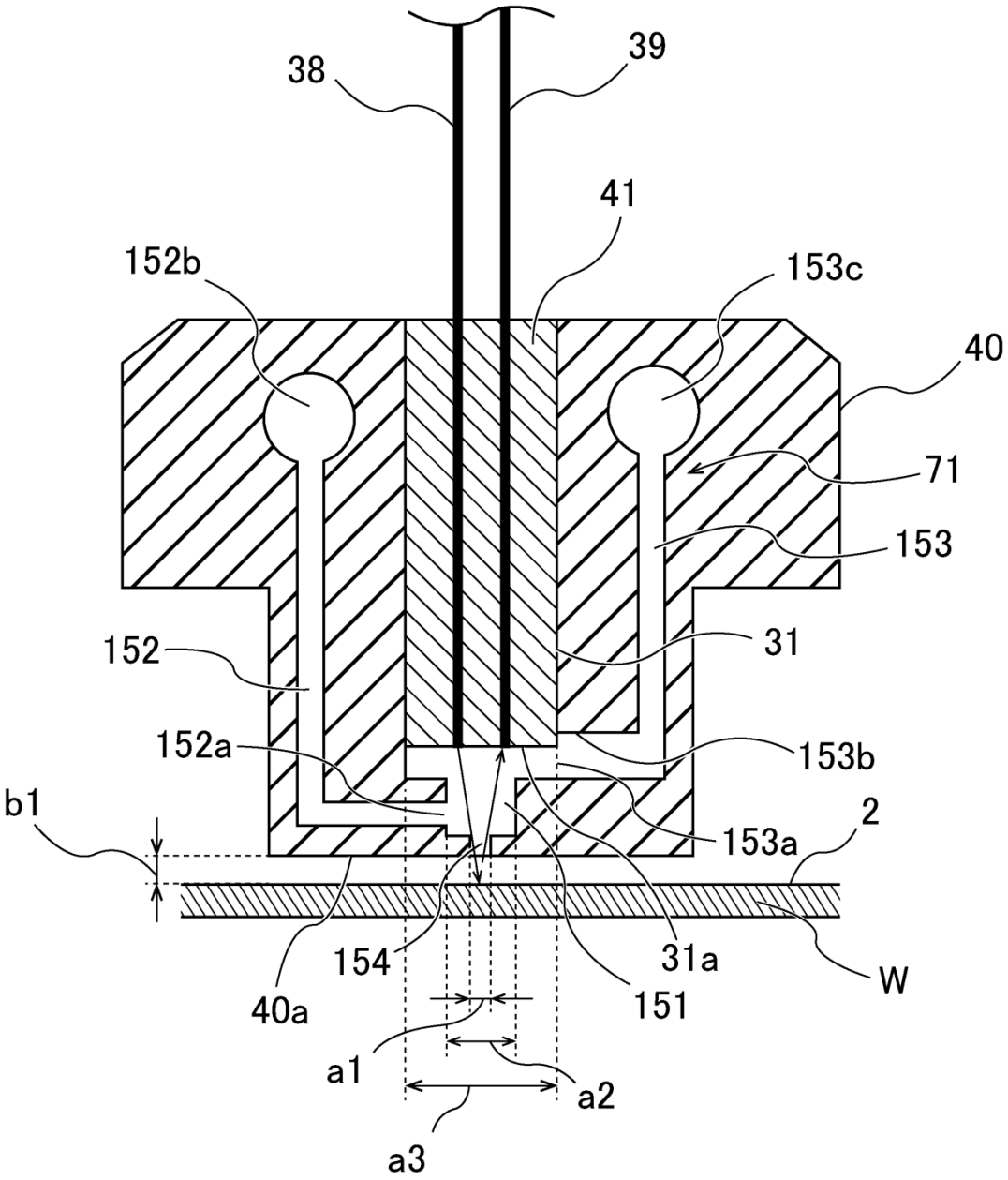

38
39
41
152b
153c
40
71
153
31
152
152a
153b
b1
153a
2
154
31a
W
40a
151
a1
a2
a3

FIG. 8

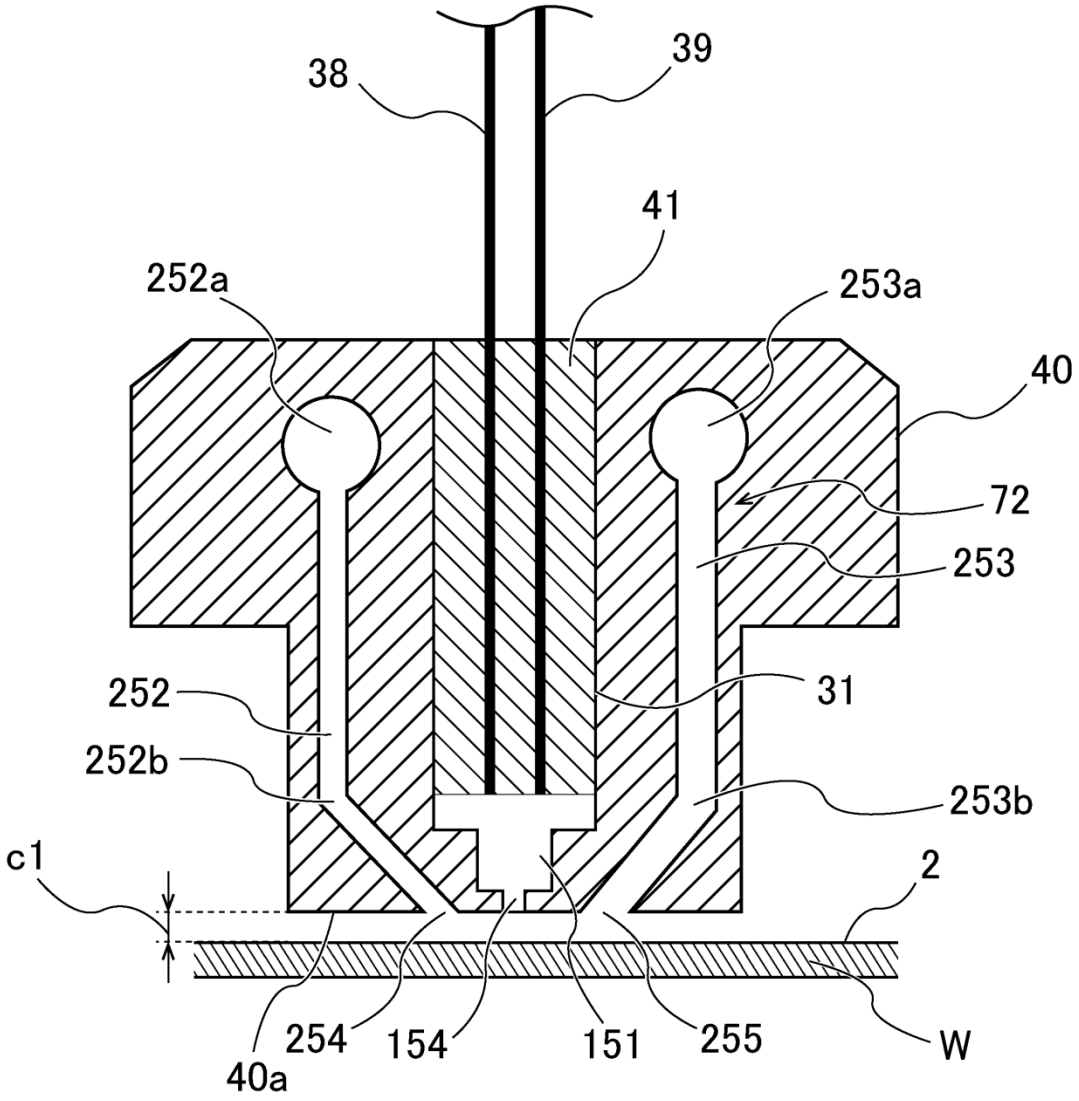

38
39
41
252a
253a
40
72
253
252
31
252b
253b
c1
2
254
154
151
255
W
40a

FIG. 9

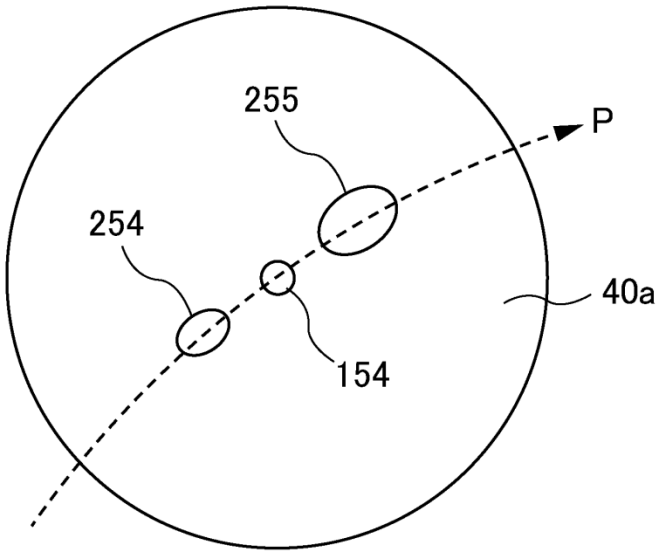


FIG. 10

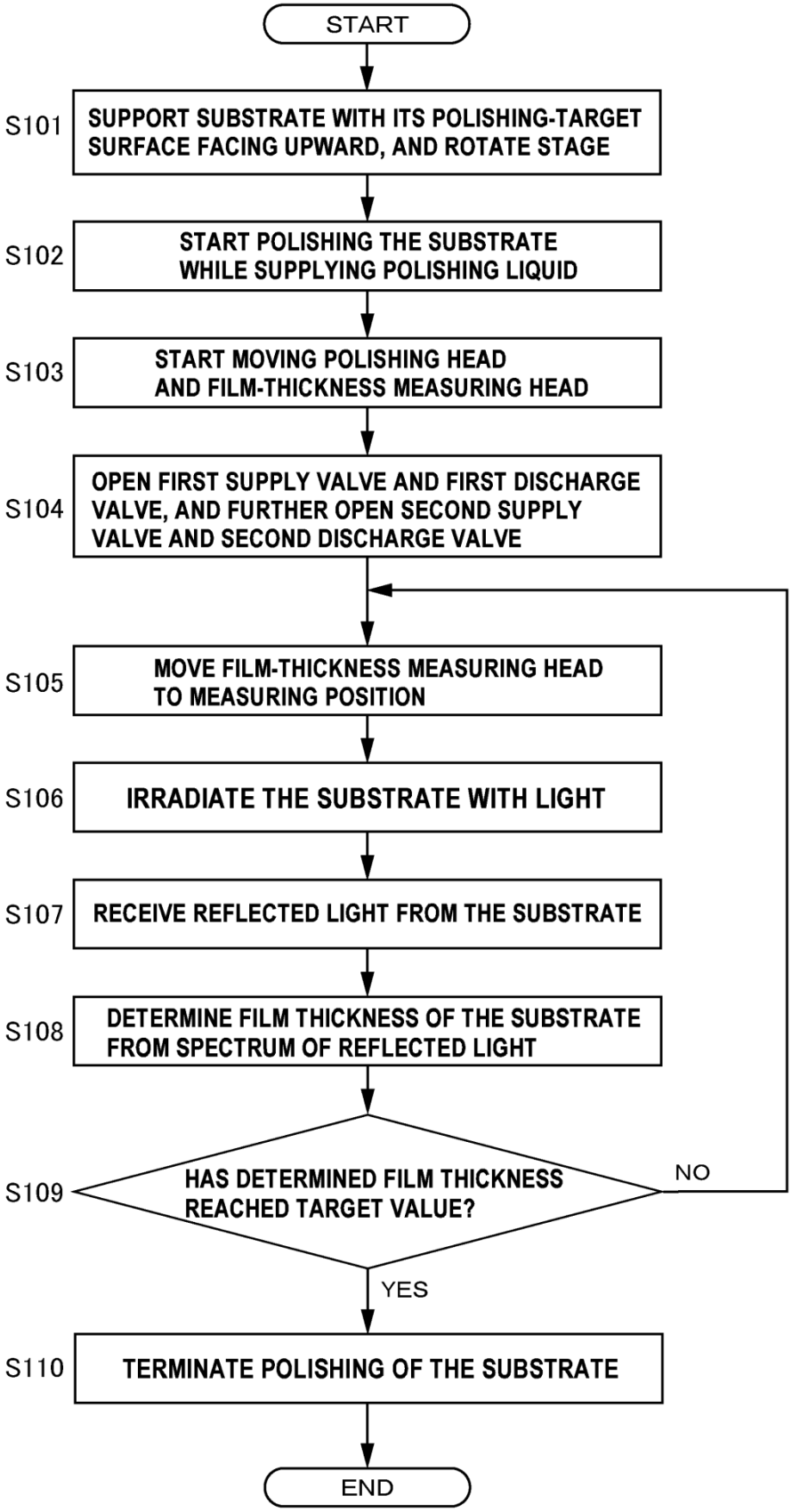

START
S101
SUPPORT SUBSTRATE WITH ITS POLISHING-TARGET SURFACE FACING UPWARD, AND ROTATE STAGE
S102
START POLISHING THE SUBSTRATE WHILE SUPPLYING POLISHING LIQUID
S103
START MOVING POLISHING HEAD AND FILM-THICKNESS MEASURING HEAD
S104
OPEN FIRST SUPPLY VALVE AND FIRST DISCHARGE VALVE, AND FURTHER OPEN SECOND SUPPLY VALVE AND SECOND DISCHARGE VALVE
S105
MOVE FILM-THICKNESS MEASURING HEAD TO MEASURING POSITION
S106
IRRADIATE THE SUBSTRATE WITH LIGHT
S107
RECEIVE REFLECTED LIGHT FROM THE SUBSTRATE
S108
DETERMINE FILM THICKNESS OF THE SUBSTRATE FROM SPECTRUM OF REFLECTED LIGHT
S109
HAS DETERMINED FILM THICKNESS REACHED TARGET VALUE?
NO
YES
S110
TERMINATE POLISHING OF THE SUBSTRATE
END

FIG. 11

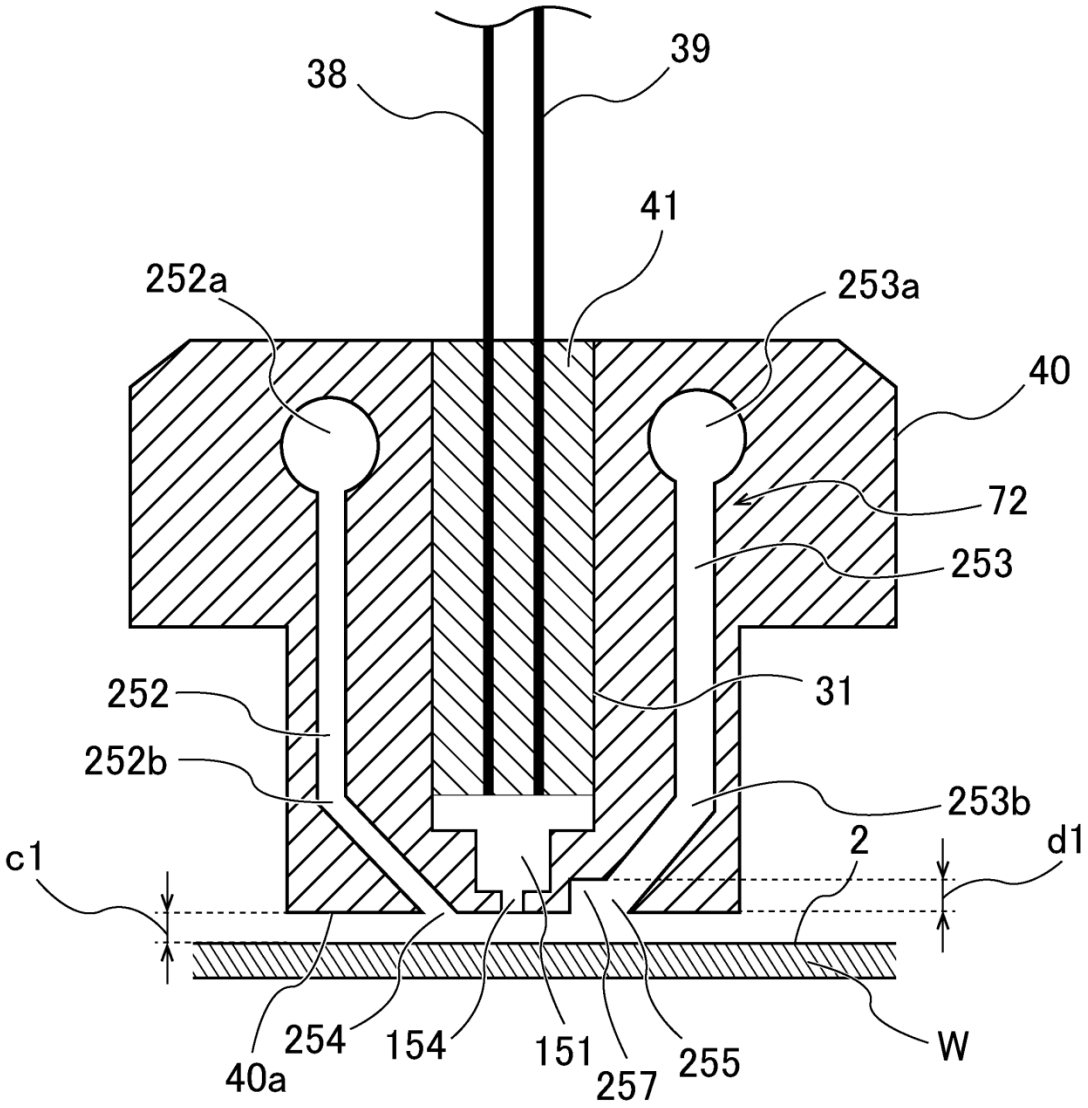

38
39
41
252a
253a
40
72
253
31
252
252b
253b
c1
2
d1
254
154
151
257
255
W
40a

FIG. 12

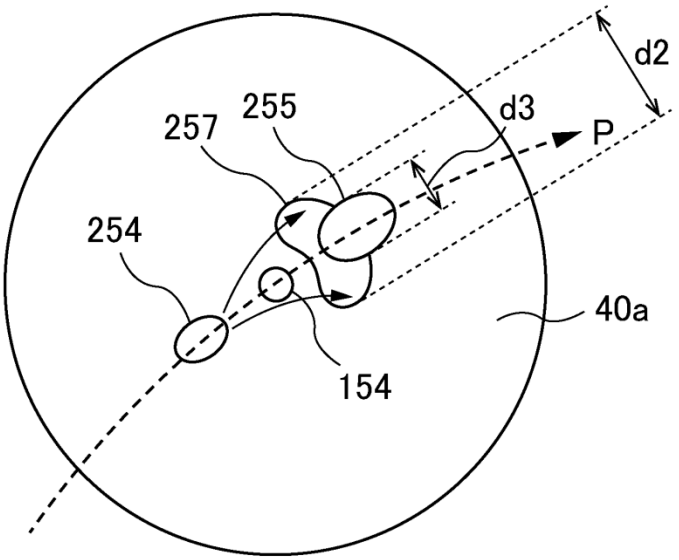


FIG. 13

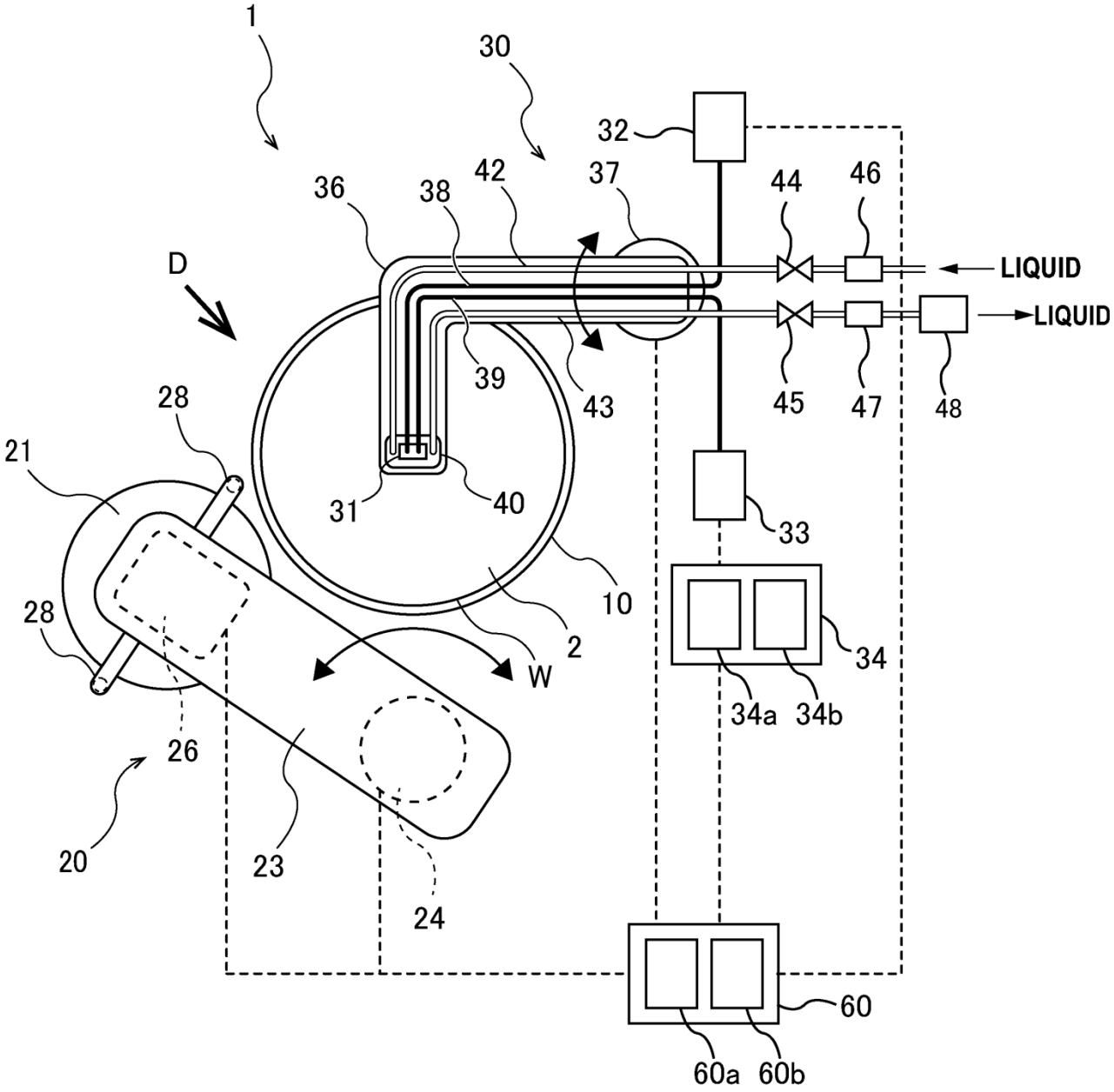

1
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46
D
LIQUID
LIQUID
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34a
34b
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23
24
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60a
60b

FIG. 14

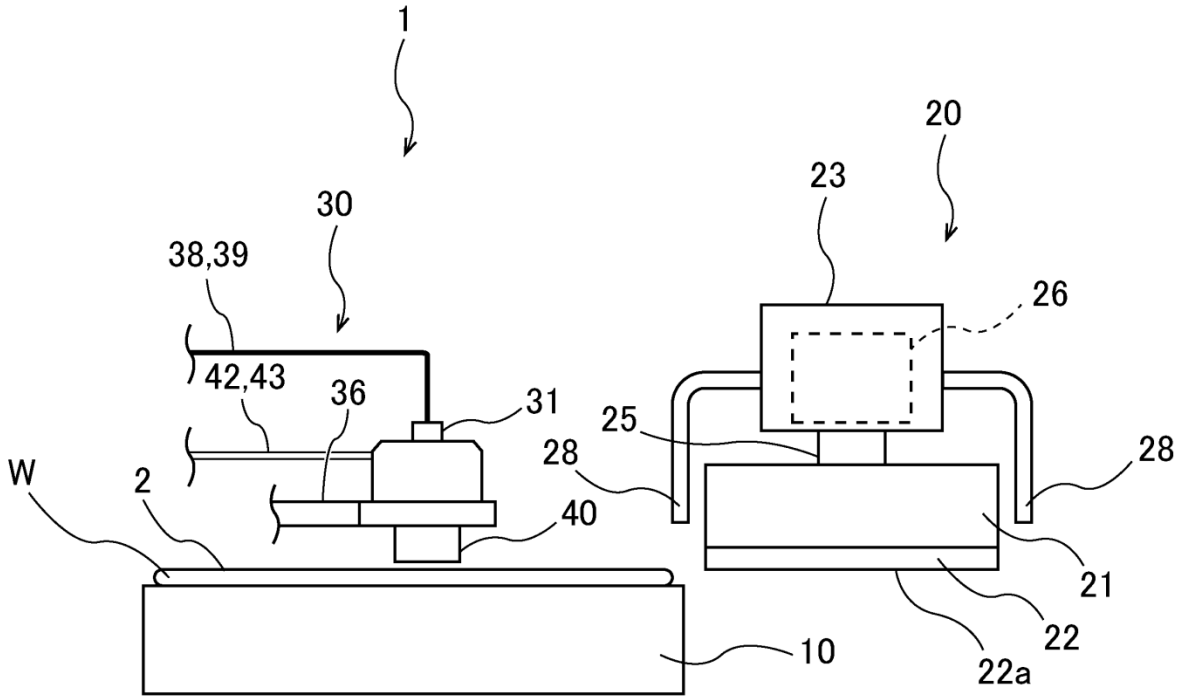


FIG. 15

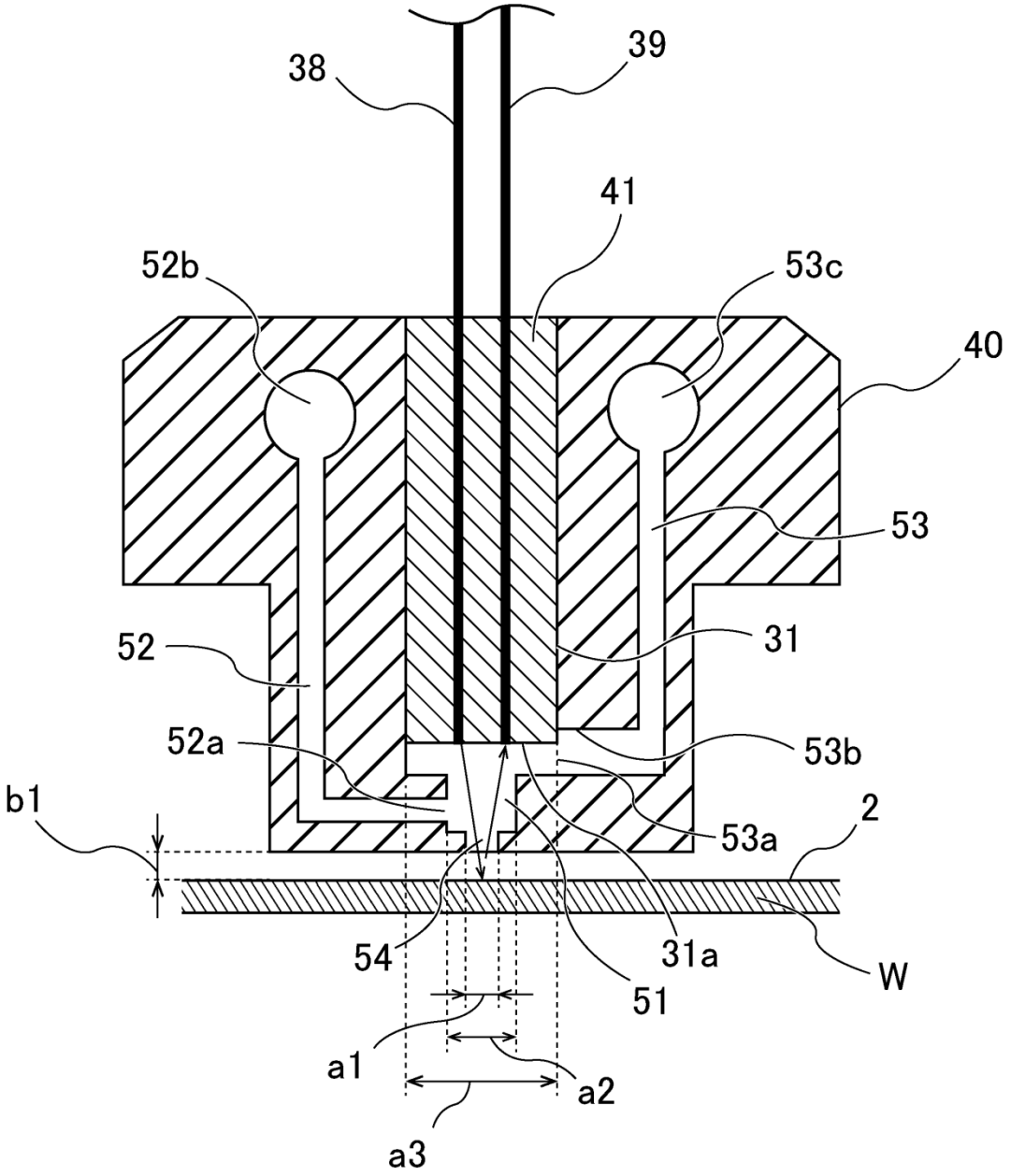
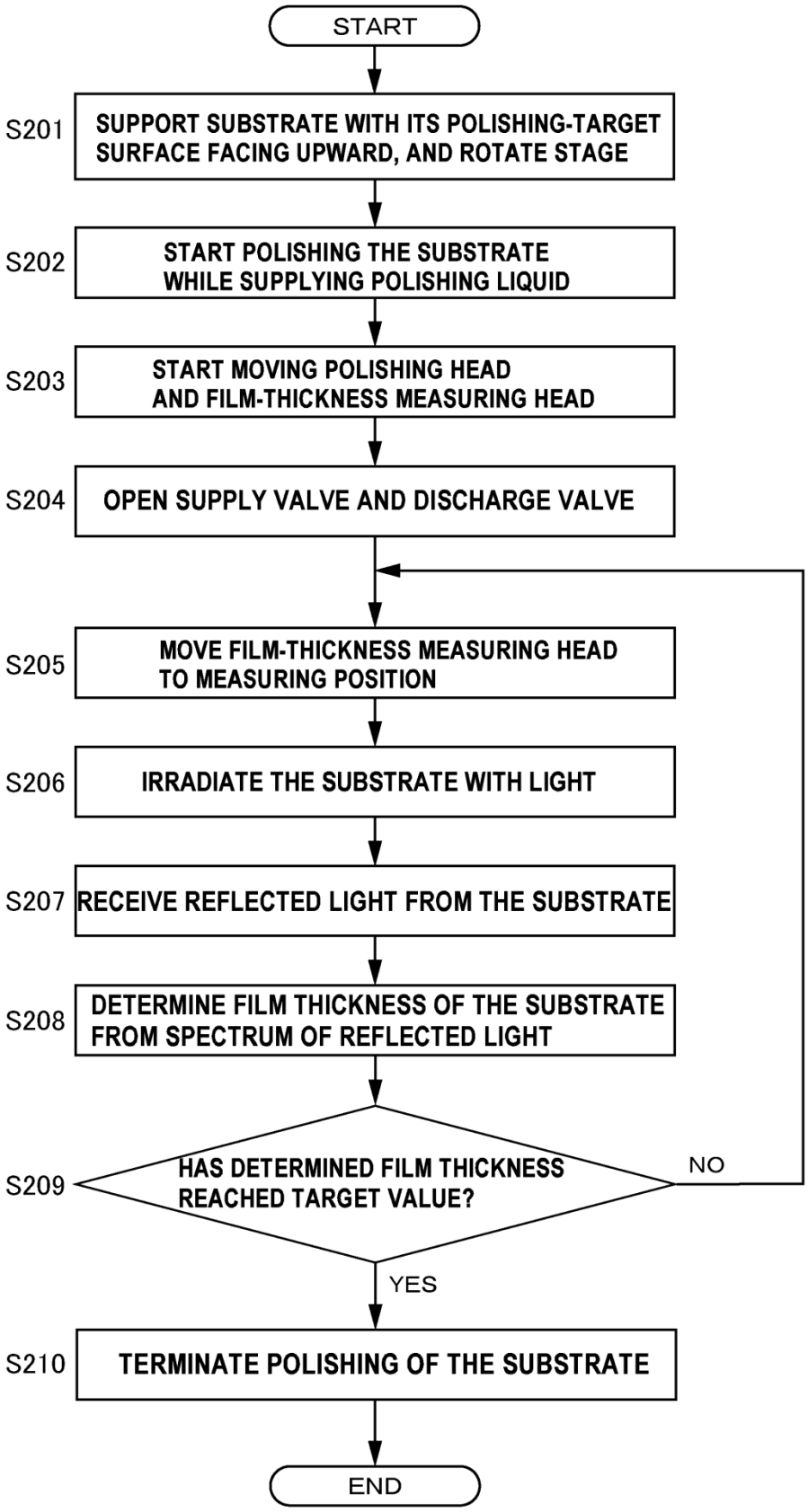


FIG. 16


START
S201
SUPPORT SUBSTRATE WITH ITS POLISHING-TARGET SURFACE FACING UPWARD, AND ROTATE STAGE
S202
START POLISHING THE SUBSTRATE WHILE SUPPLYING POLISHING LIQUID
S203
START MOVING POLISHING HEAD AND FILM-THICKNESS MEASURING HEAD
S204
OPEN SUPPLY VALVE AND DISCHARGE VALVE
S205
MOVE FILM-THICKNESS MEASURING HEAD TO MEASURING POSITION
S206
IRRADIATE THE SUBSTRATE WITH LIGHT
S207
RECEIVE REFLECTED LIGHT FROM THE SUBSTRATE
S208
DETERMINE FILM THICKNESS OF THE SUBSTRATE FROM SPECTRUM OF REFLECTED LIGHT
S209
HAS DETERMINED FILM THICKNESS REACHED TARGET VALUE?
NO
YES
S210
TERMINATE POLISHING OF THE SUBSTRATE
END