FIG.1

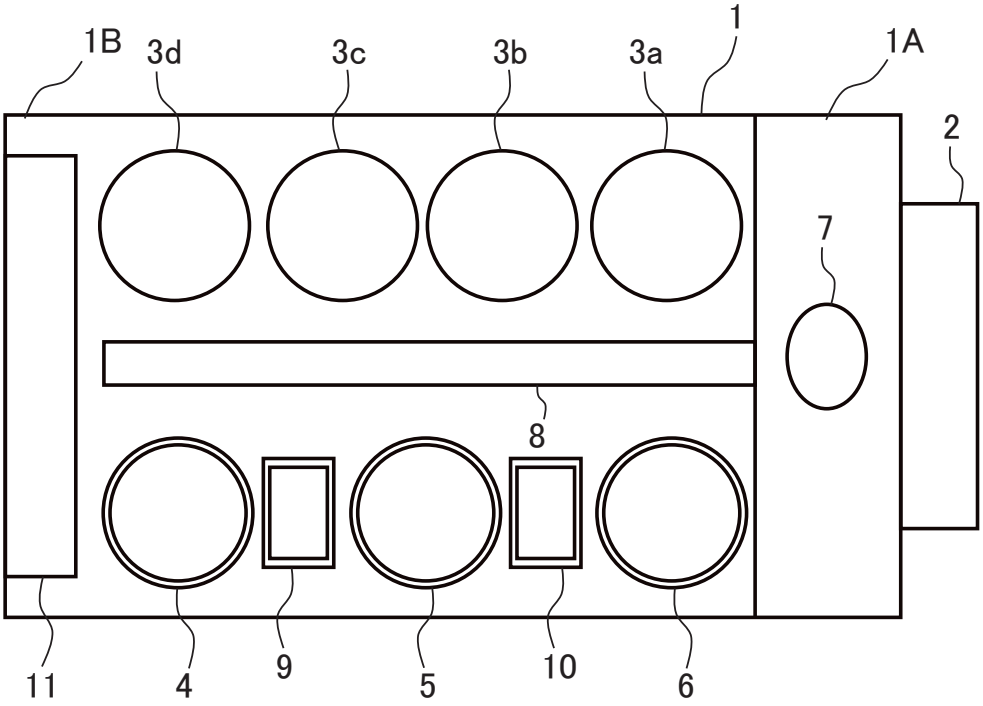


FIG.2

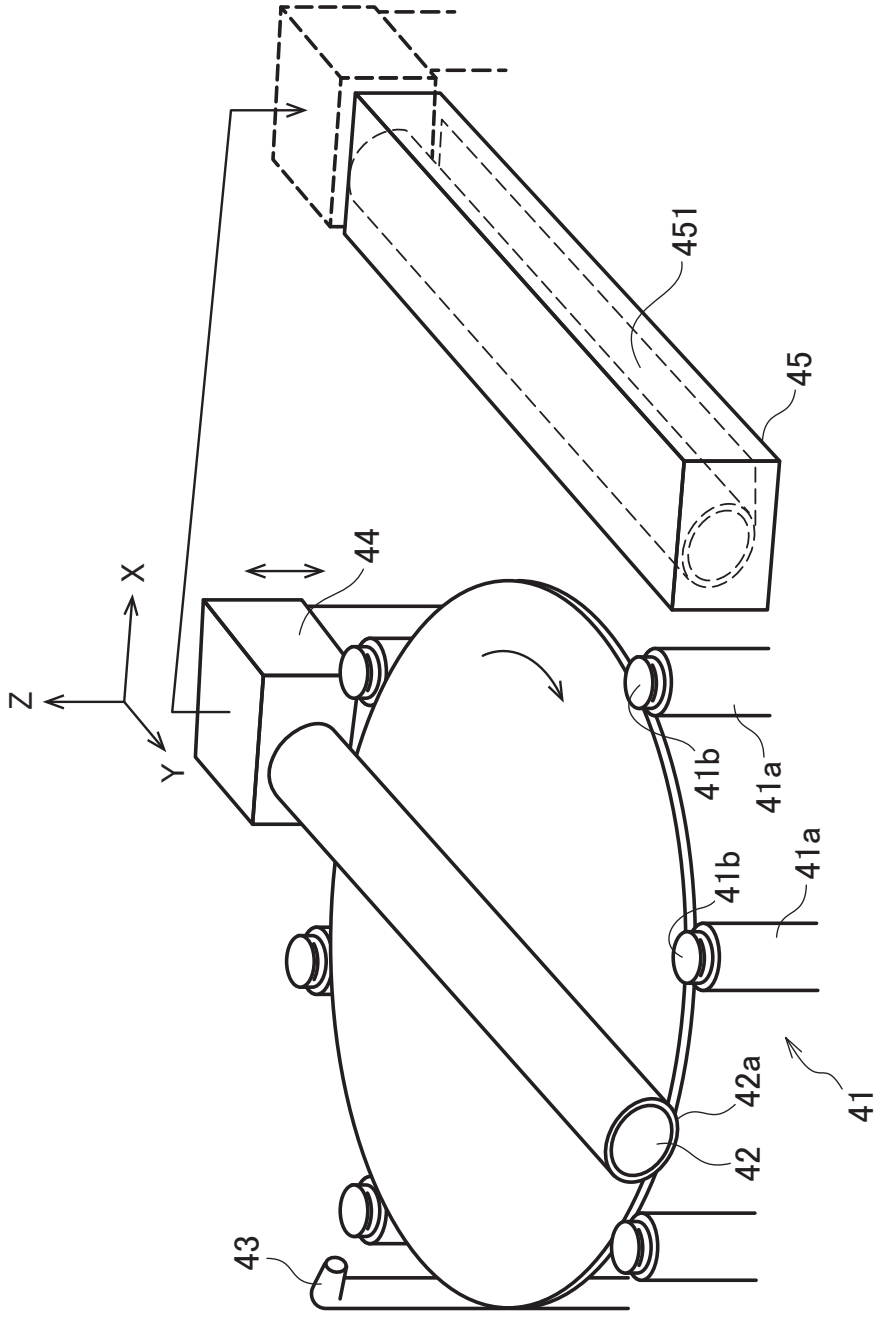
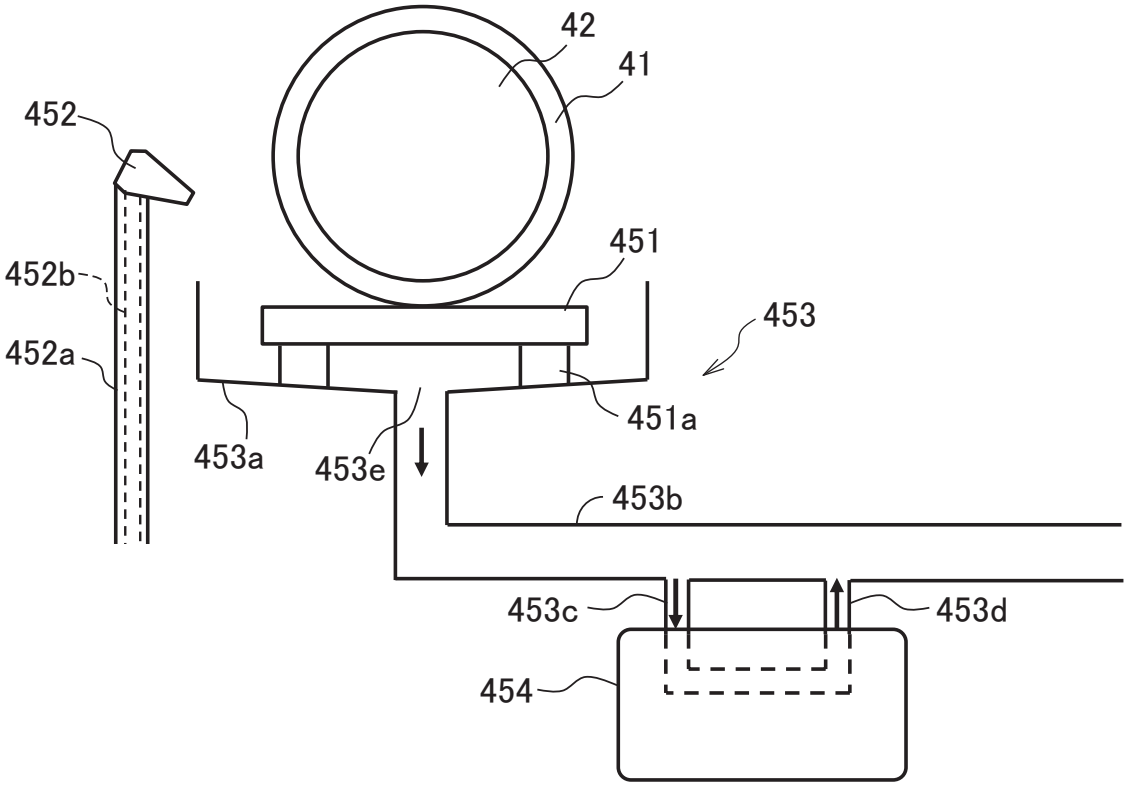


FIG.3



45

FIG.4

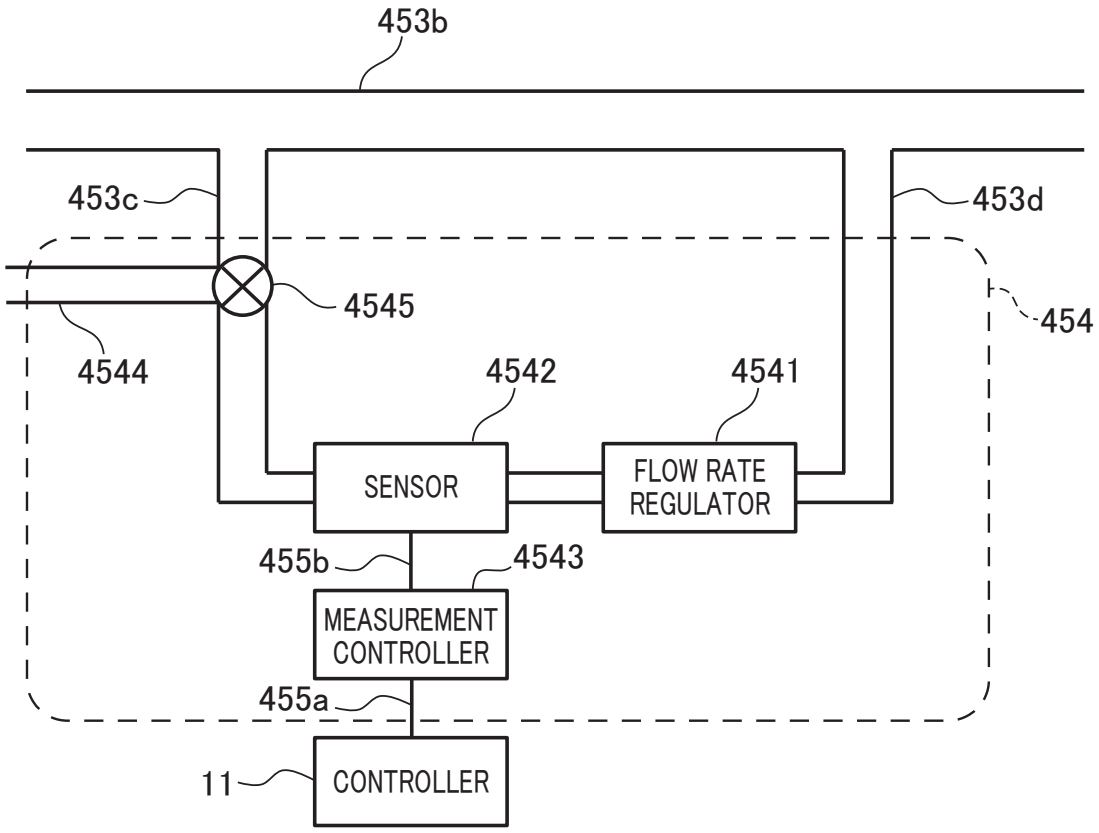

453b
453c
453d
4545
454
4544
4542
4541
SENSOR
FLOW RATE REGULATOR
455b
4543
MEASUREMENT CONTROLLER
455a
11
CONTROLLER

FIG.5A

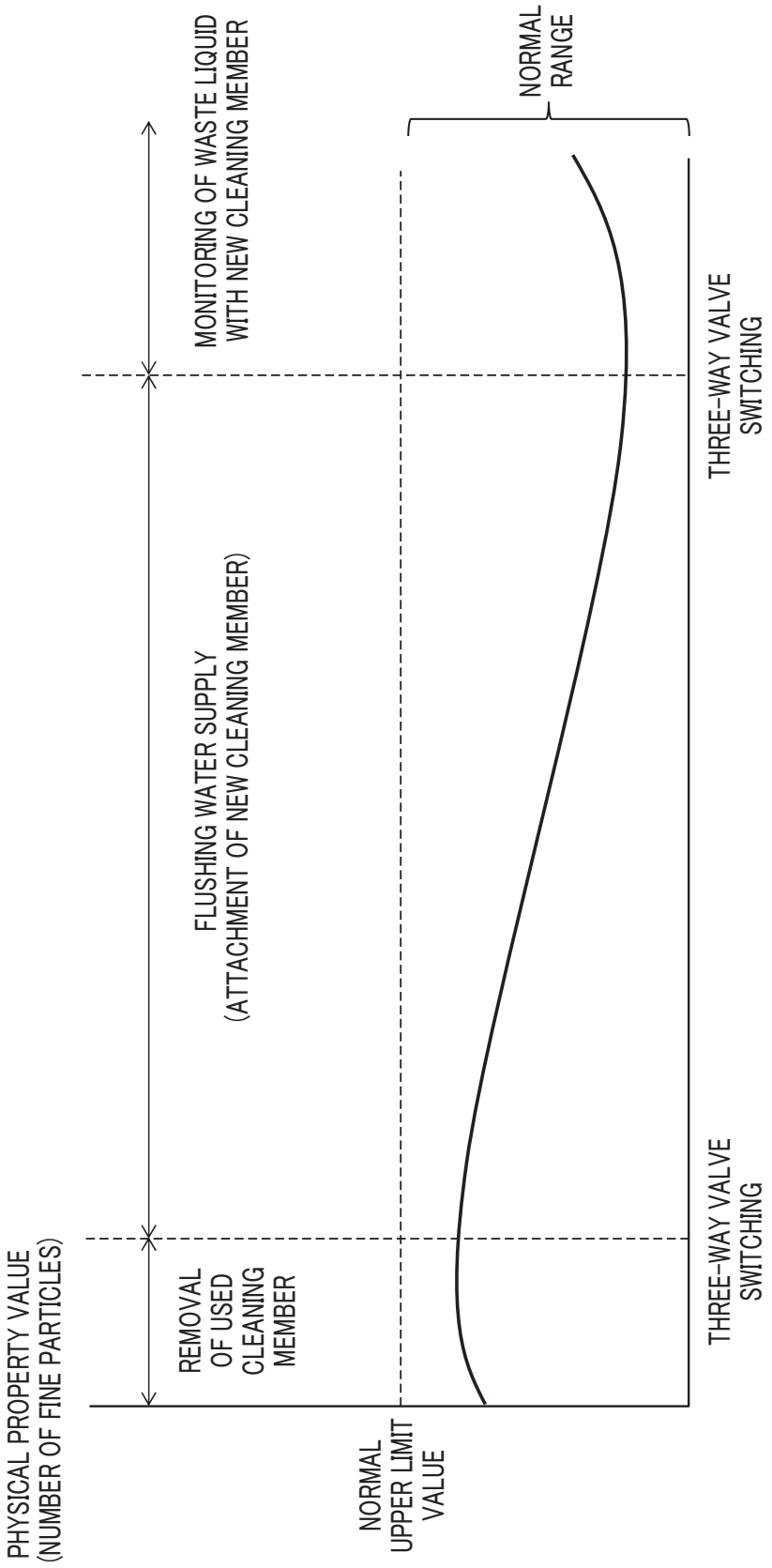

PHYSICAL PROPERTY VALUE
(NUMBER OF FINE PARTICLES)
REMOVAL OF USED CLEANING MEMBER
FLUSHING WATER SUPPLY
(ATTACHMENT OF NEW CLEANING MEMBER)
MONITORING OF WASTE LIQUID WITH NEW CLEANING MEMBER
NORMAL UPPER LIMIT VALUE
NORMAL RANGE
THREE-WAY VALVE SWITCHING
THREE-WAY VALVE SWITCHING

FIG.5B

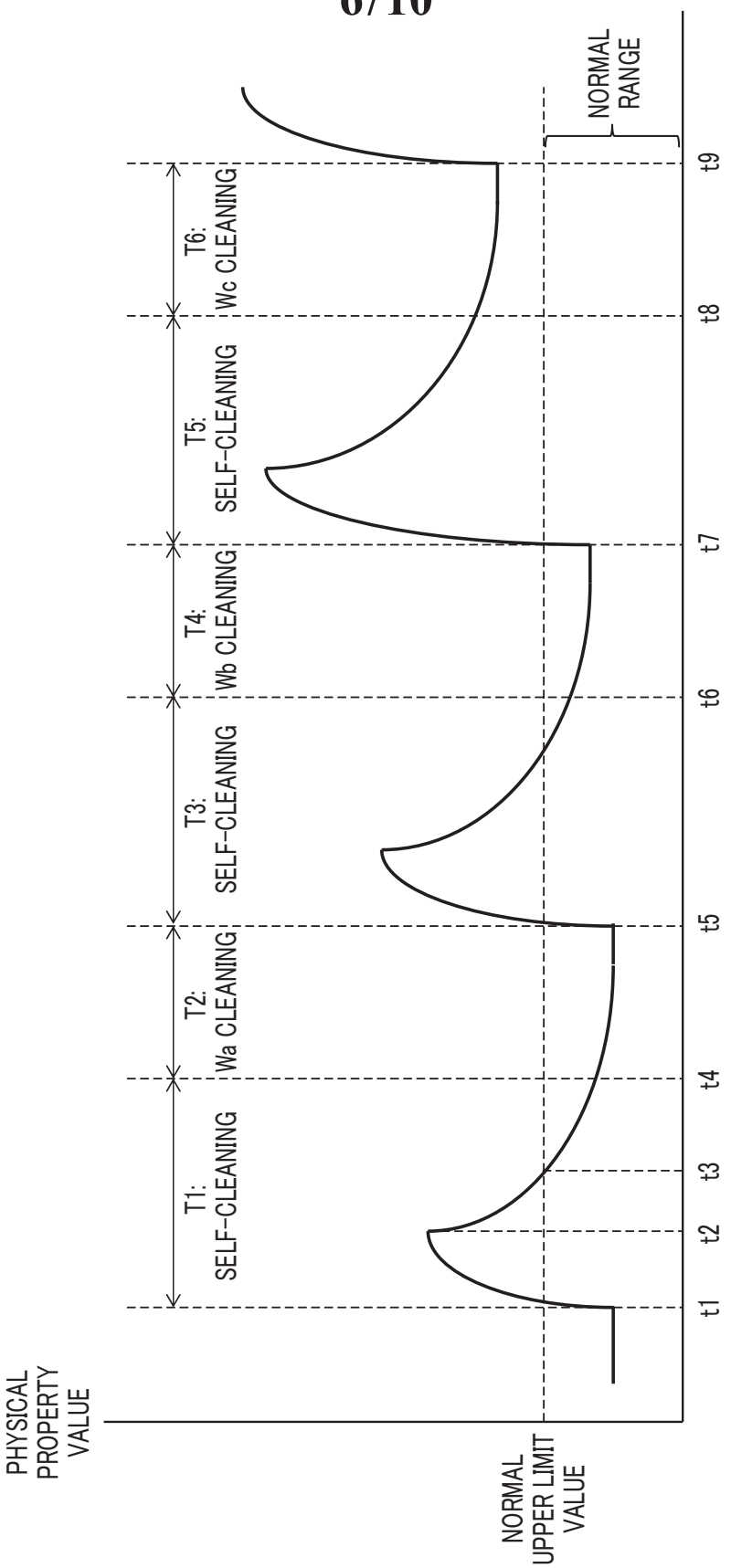

PHYSICAL PROPERTY VALUE
NORMAL UPPER LIMIT VALUE
NORMAL RANGE
T1: SELF-CLEANING
T2: Wa CLEANING
T3: SELF-CLEANING
T4: Wb CLEANING
T5: SELF-CLEANING
T6: Wc CLEANING
t1
t2
t3
t4
t5
t6
t7
t8
t9

FIG.6

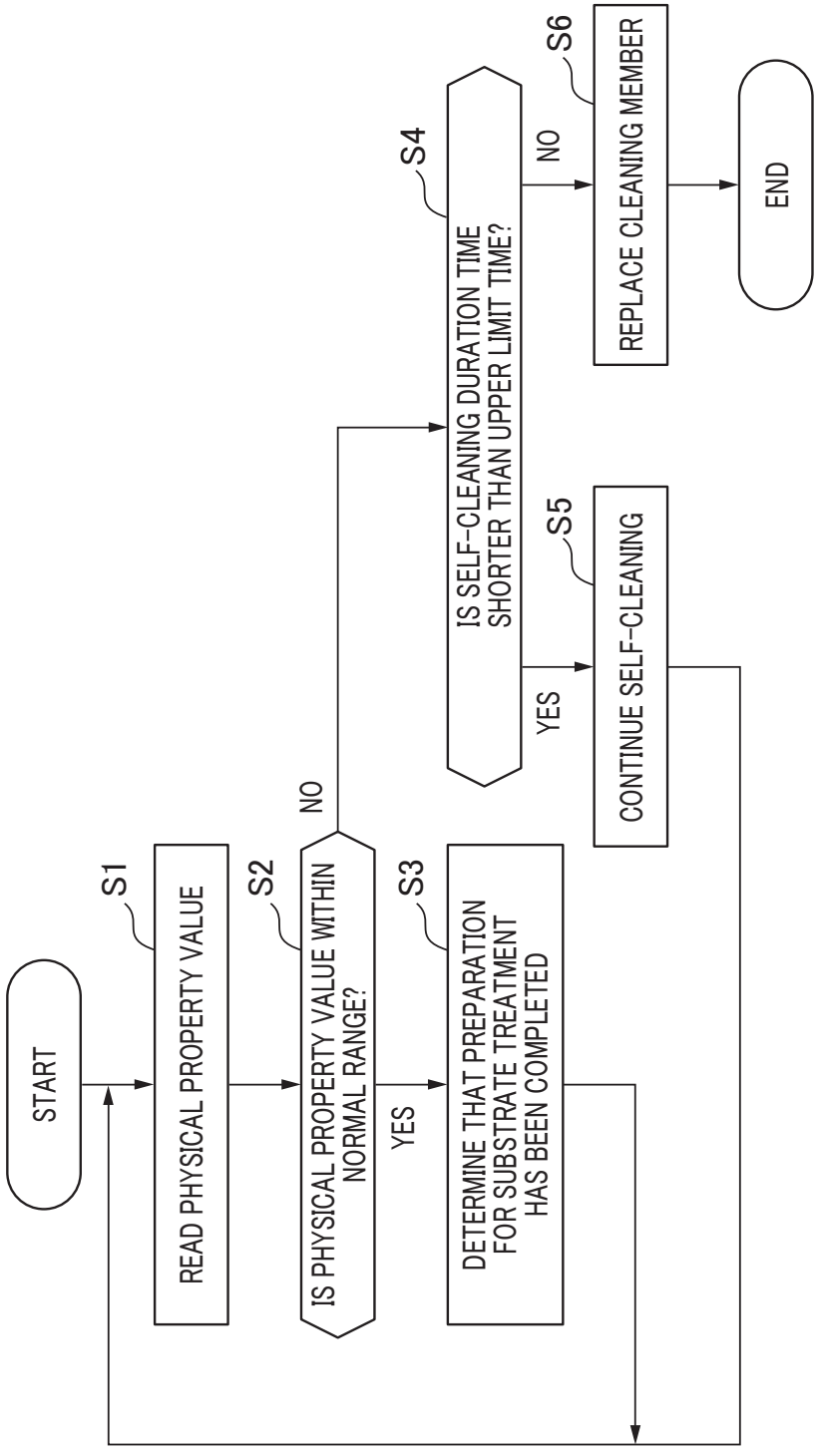

START
S1
READ PHYSICAL PROPERTY VALUE
S2
IS PHYSICAL PROPERTY VALUE WITHIN NORMAL RANGE?
NO
YES
S3
DETERMINE THAT PREPARATION FOR SUBSTRATE TREATMENT HAS BEEN COMPLETED
S4
IS SELF-CLEANING DURATION TIME SHORTER THAN UPPER LIMIT TIME?
YES
S5
CONTINUE SELF-CLEANING
NO
S6
REPLACE CLEANING MEMBER
END

FIG.7

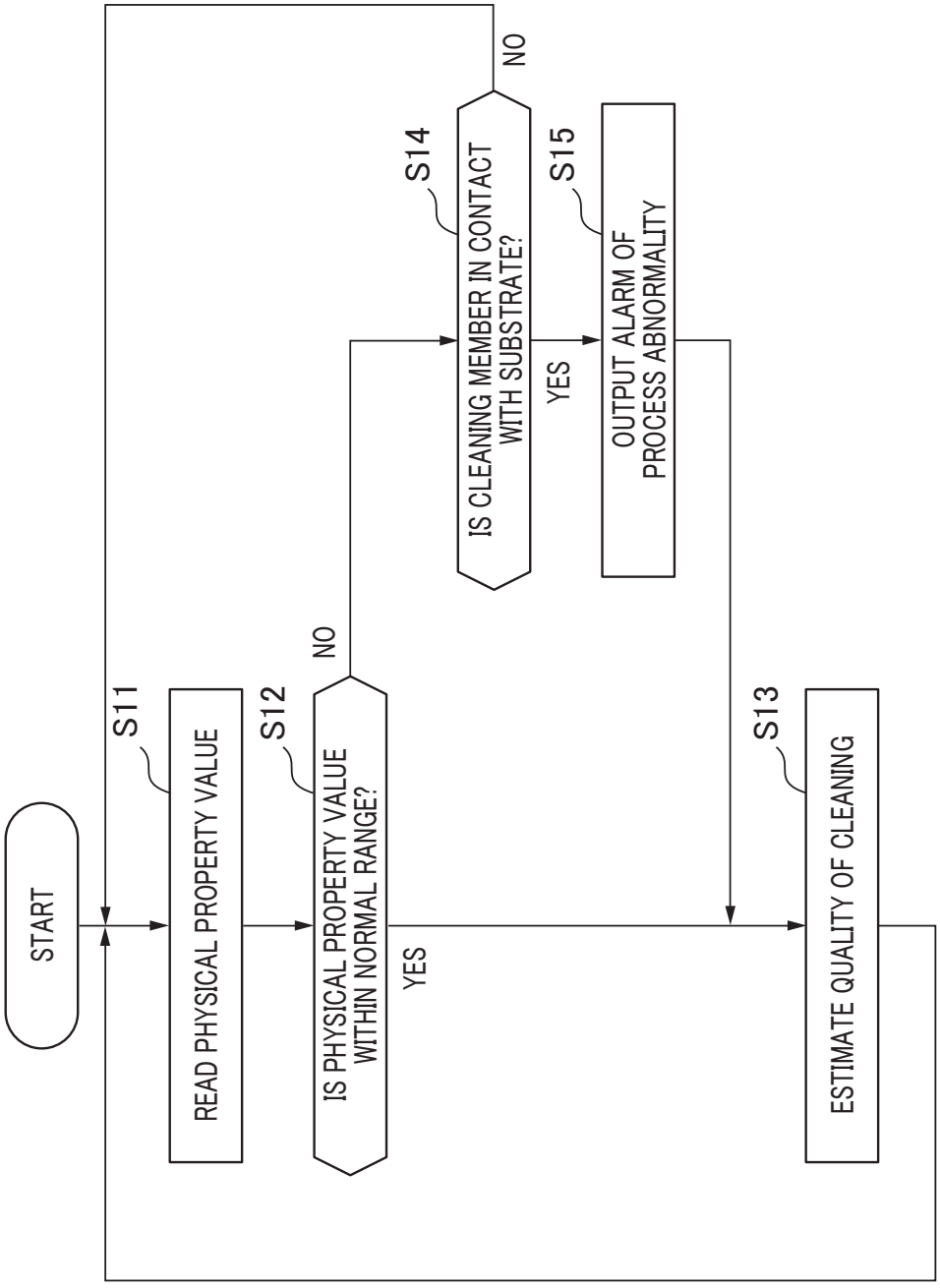
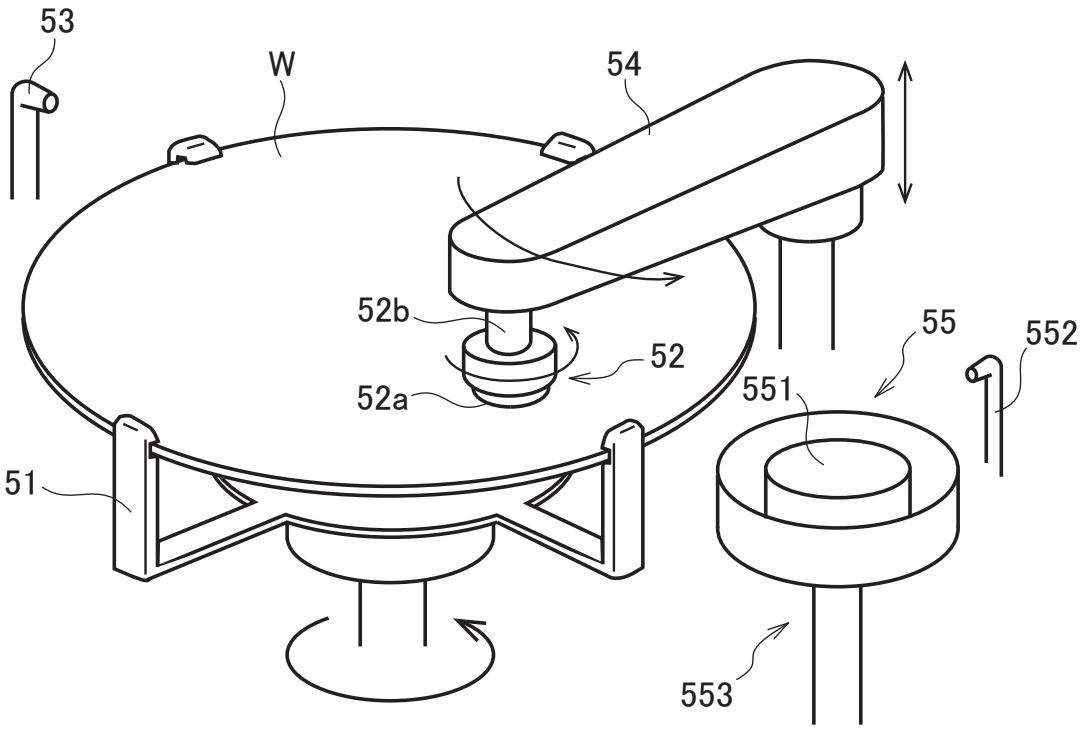
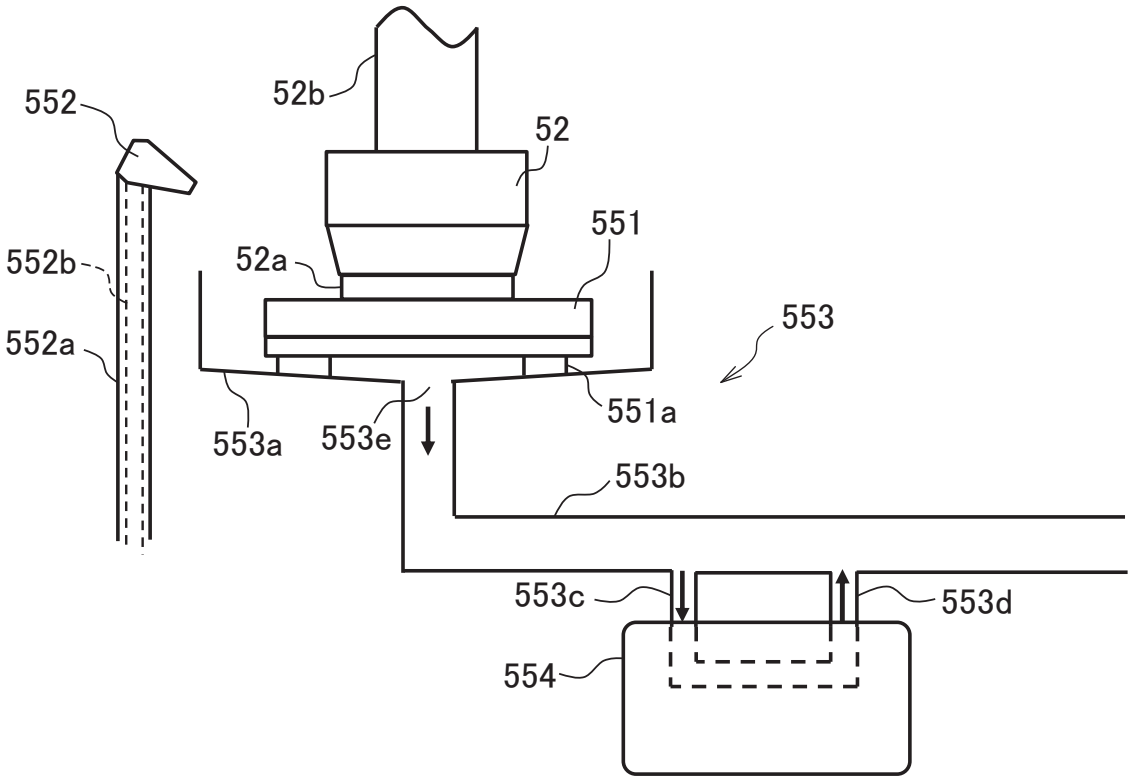

START
S11
READ PHYSICAL PROPERTY VALUE
S12
IS PHYSICAL PROPERTY VALUE WITHIN NORMAL RANGE?
NO
YES
S14
IS CLEANING MEMBER IN CONTACT WITH SUBSTRATE?
NO
YES
S15
OUTPUT ALARM OF PROCESS ABNORMALITY
S13
ESTIMATE QUALITY OF CLEANING

FIG.8



5

FIG.9


552
52b
52
551
552b
52a
553
552a
551a
553a
553e
553b
553c
553d
554

55