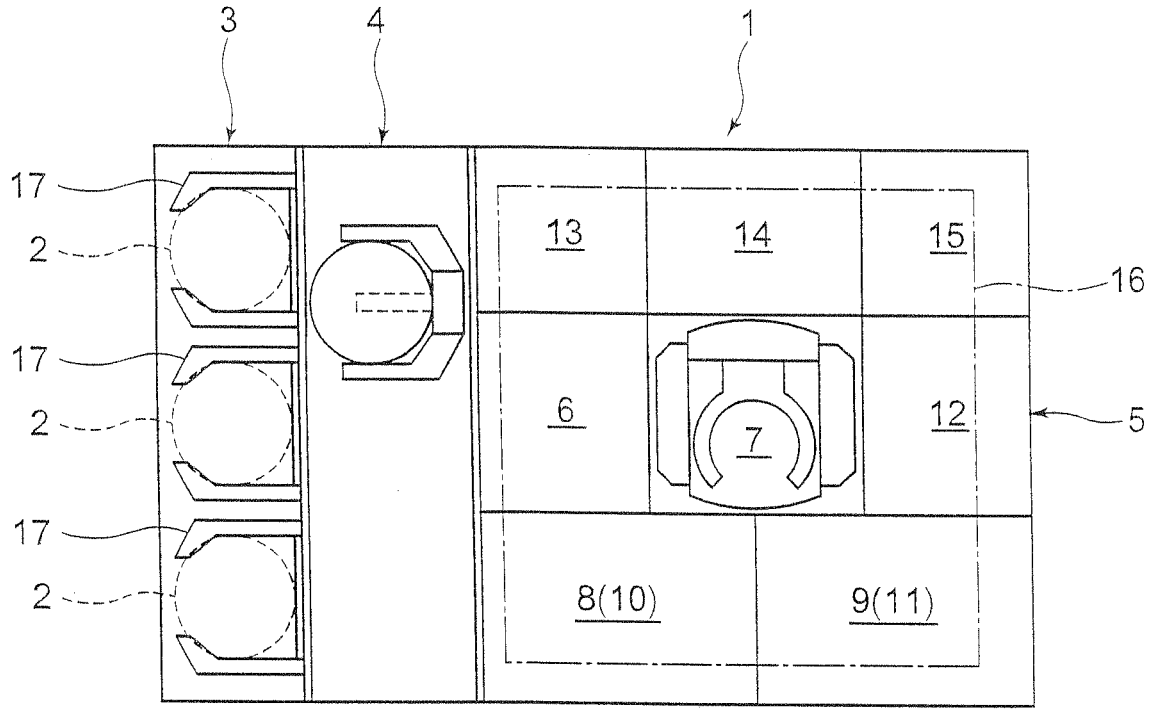


FIG. 1

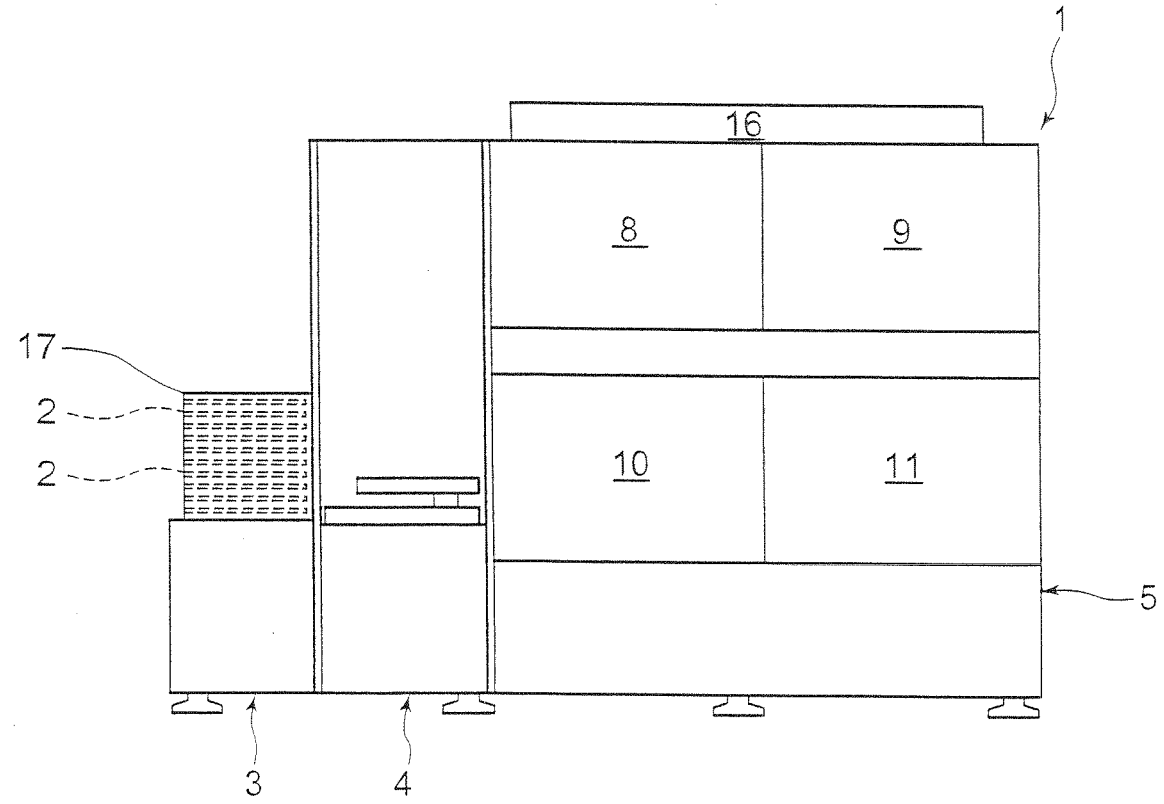


FIG. 2

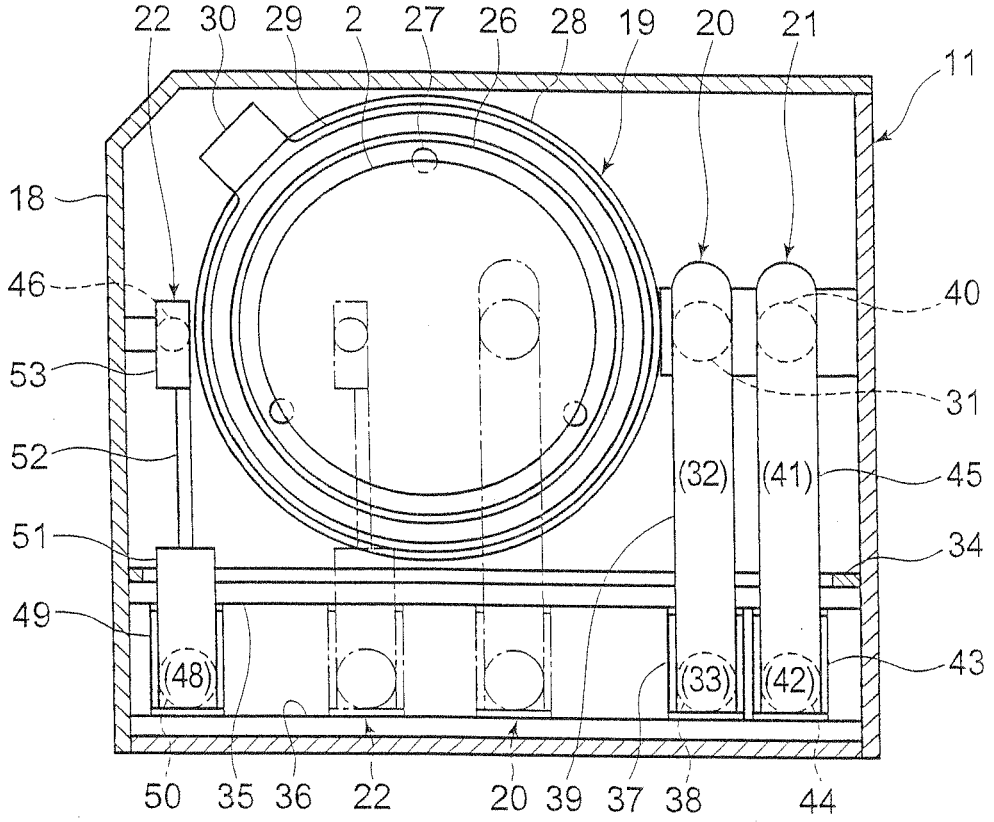

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(32)
(41)
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(48)
(33)
(42)
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FIG. 3

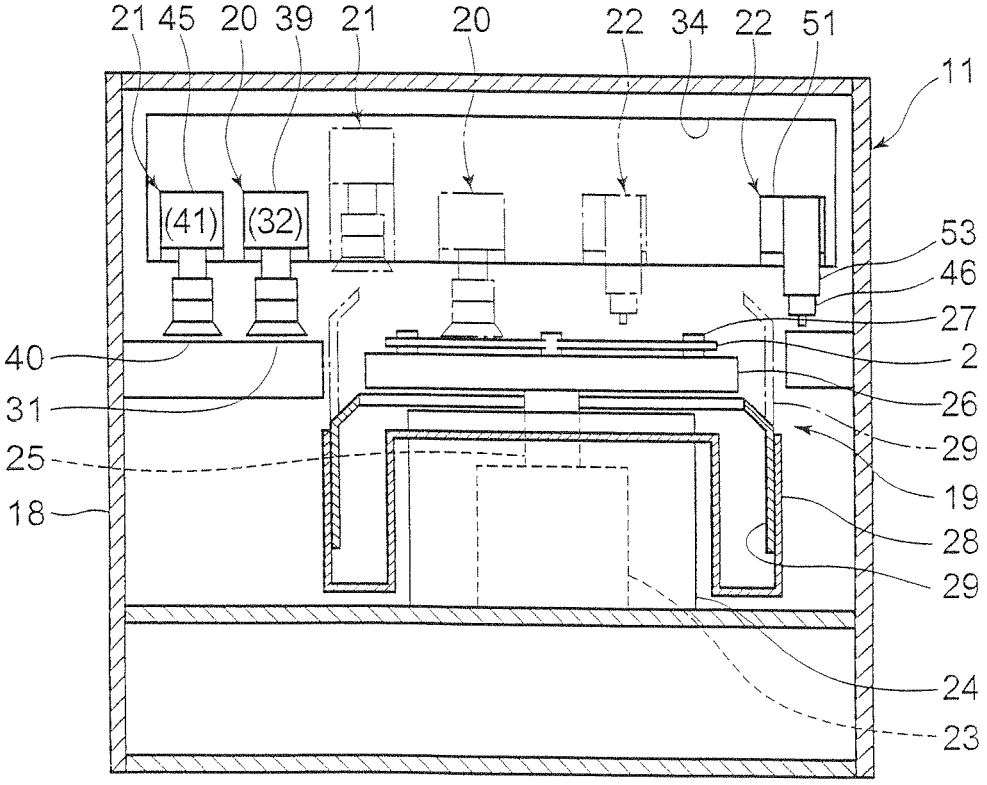

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(41)
(32)
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FIG. 4

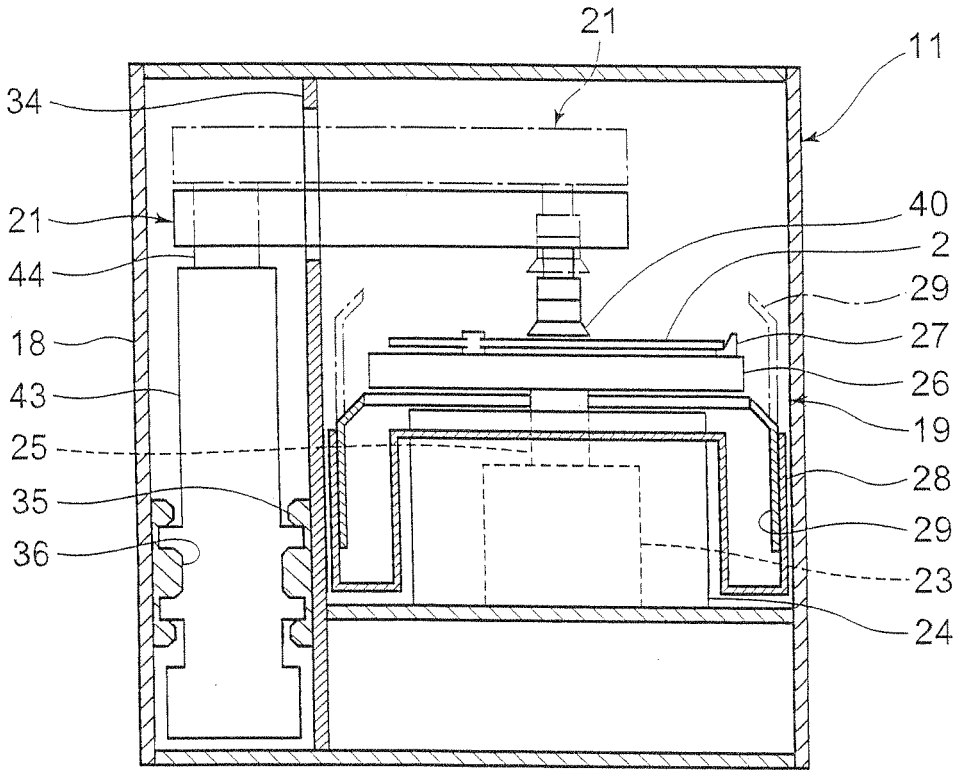

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FIG. 5

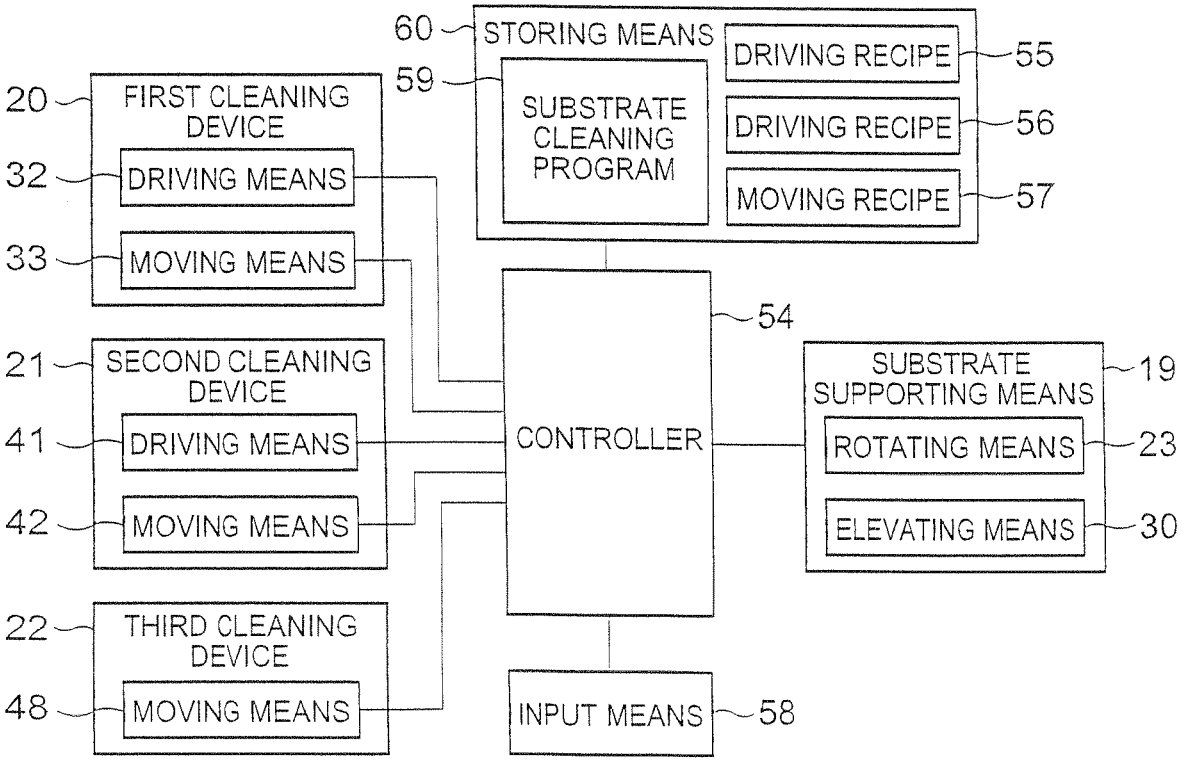

60
STORING MEANS
59
SUBSTRATE CLEANING PROGRAM
DRIVING RECIPE
55
DRIVING RECIPE
56
MOVING RECIPE
57
20
FIRST CLEANING DEVICE
32
DRIVING MEANS
33
MOVING MEANS
54
21
SECOND CLEANING DEVICE
41
DRIVING MEANS
42
MOVING MEANS
CONTROLLER
SUBSTRATE SUPPORTING MEANS
19
ROTATING MEANS
23
ELEVATING MEANS
30
22
THIRD CLEANING DEVICE
48
MOVING MEANS
INPUT MEANS
58

FIG. 6

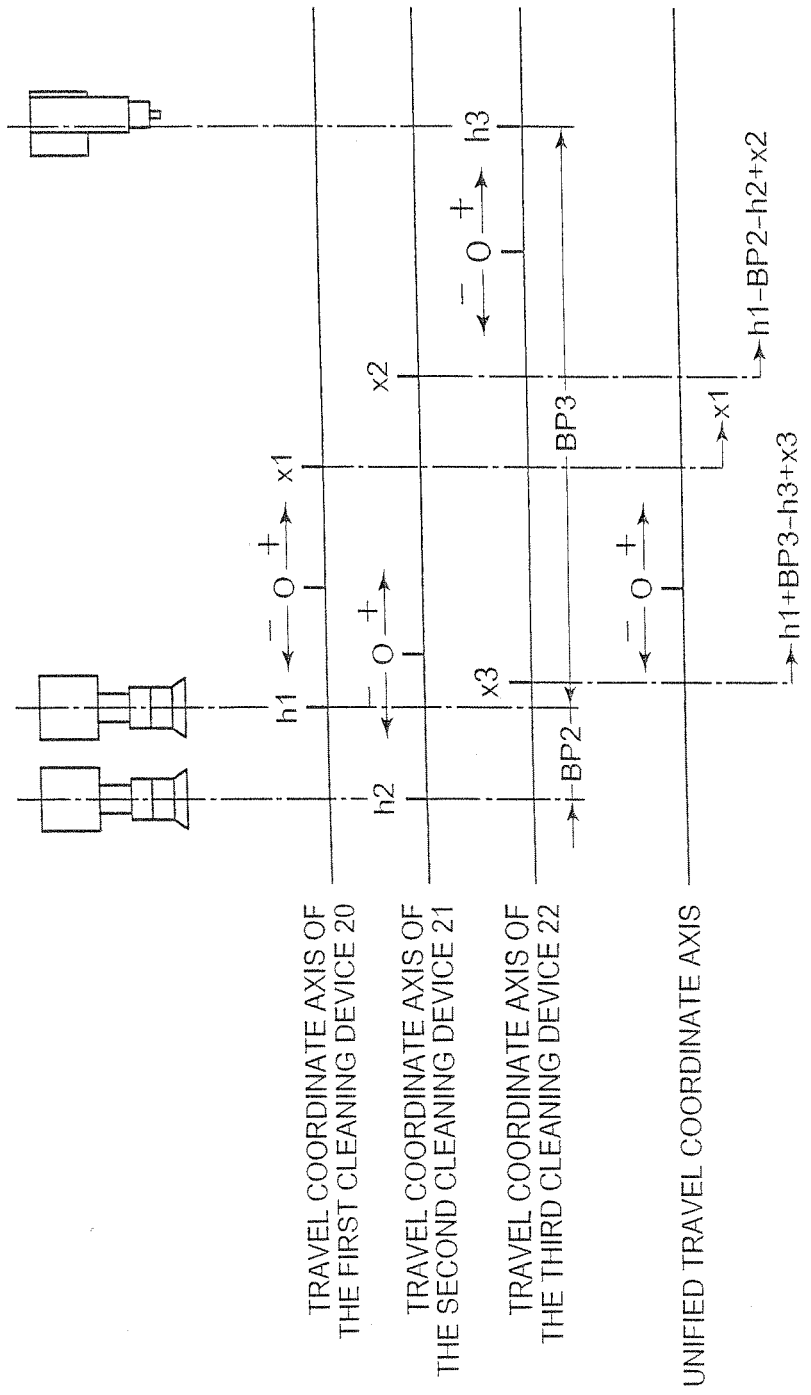

TRAVEL COORDINATE AXIS OF THE FIRST CLEANING DEVICE 20
TRAVEL COORDINATE AXIS OF THE SECOND CLEANING DEVICE 21
TRAVEL COORDINATE AXIS OF THE THIRD CLEANING DEVICE 22
UNIFIED TRAVEL COORDINATE AXIS
h1
h2
h3
x1
x2
x3
BP2
BP3
h1+BP3-h3+x3
h1-BP2-h2+x2

FIG. 7

DRIVING RECIPE 55 FOR THE FIRST CLEANING DEVICE 20

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P1)	DOWN ↓ UP
2	RETREAT POSITION (P1) ↓ 150mm/s CLEANING-STARTING POSITION (P2)	UP
3	CLEANING-STARTING POSITION (P2)	UP ↓ DOWN
4	CLEANING-STARTING POSITION (P2) ↓ 15mm/s SPEED-CHANGE POSITION (P3)	DOWN
5	SPEED-CHANGE POSITION (P3) ↓ 10mm/s CLEANING END POSITION (P4)	DOWN
6	CLEANING END POSITION (P4)	DOWN ↓ UP
7	CLEANING END POSITION (P4) ↓ 150mm/s RETREAT POSITION (P1)	UP
8	RETREAT POSITION (P1)	UP ↓ DOWN

FIG. 8A

DRIVING RECIPE 56 FOR THE SECOND CLEANING DEVICE 21

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P5)	DOWN

FIG. 8B

DRIVING RECIPE 57 FOR THE THIRD CLEANING DEVICE 22

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P6)	DOWN ↓ UP
2	RETREAT POSITION (P6) ↓ 150mm/s CLEANING-STARTING POSITION (P7)	UP
3	CLEANING-STARTING POSITION (P7)	UP ↓ DOWN
4	CLEANING-STARTING POSITION (P7) ↓ 15mm/s SPEED-CHANGE POSITION (P8)	DOWN
5	SPEED-CHANGE POSITION (P8) ↓ 10mm/s CLEANING END POSITION (P9)	DOWN
6	CLEANING END POSITION (P9)	DOWN ↓ UP
7	CLEANING END POSITION (P9) ↓ 150mm/s RETREAT POSITION (P6)	UP
8	RETREAT POSITION (P6)	UP ↓ DOWN

FIG. 8C

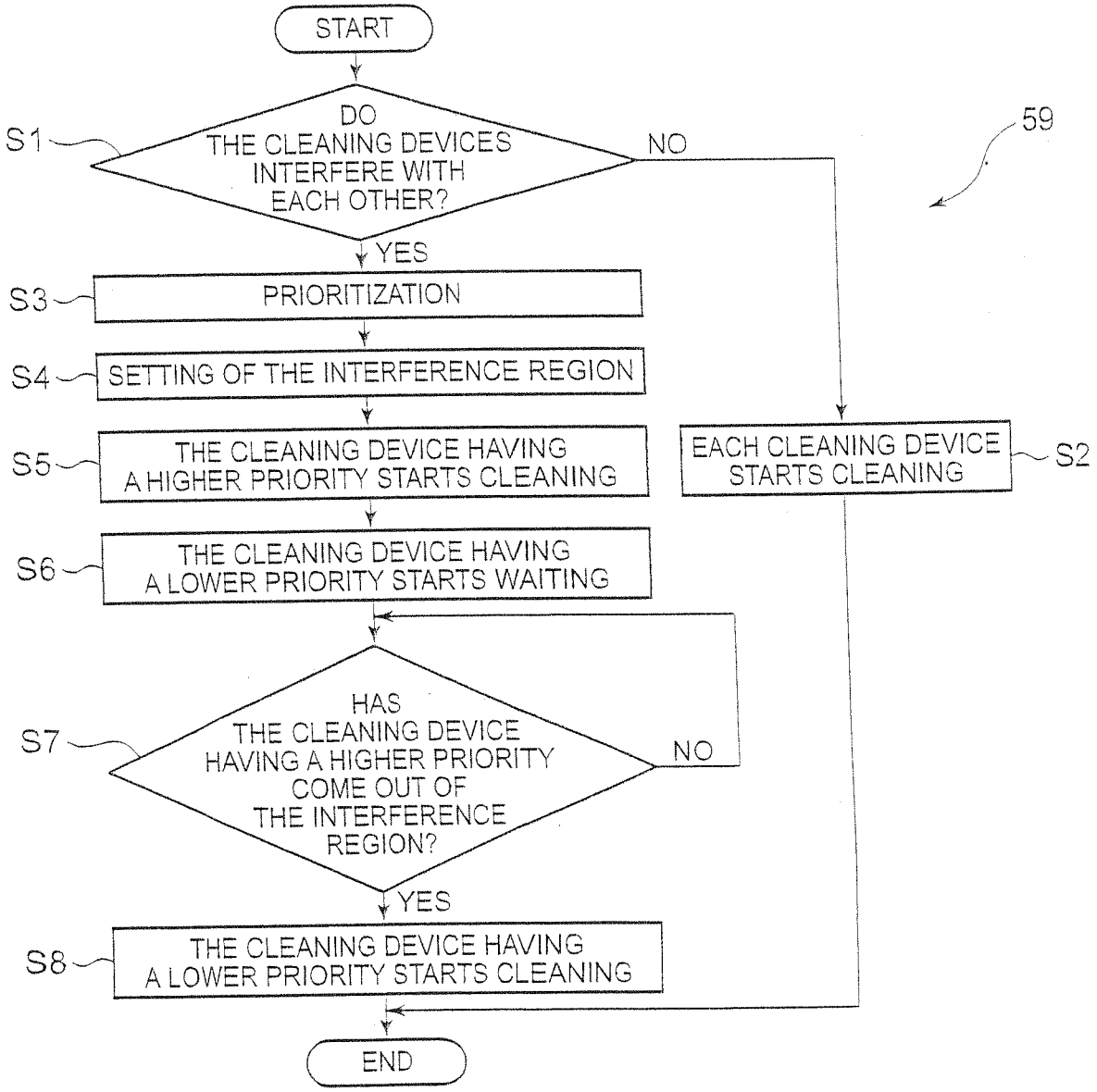

START
S1
DO THE CLEANING DEVICES INTERFERE WITH EACH OTHER?
NO
YES
59
S3
PRIORITIZATION
S4
SETTING OF THE INTERFERENCE REGION
S5
THE CLEANING DEVICE HAVING A HIGHER PRIORITY STARTS CLEANING
S6
THE CLEANING DEVICE HAVING A LOWER PRIORITY STARTS WAITING
EACH CLEANING DEVICE STARTS CLEANING
S2
S7
HAS THE CLEANING DEVICE HAVING A HIGHER PRIORITY COME OUT OF THE INTERFERENCE REGION?
NO
YES
S8
THE CLEANING DEVICE HAVING A LOWER PRIORITY STARTS CLEANING
END

FIG. 9

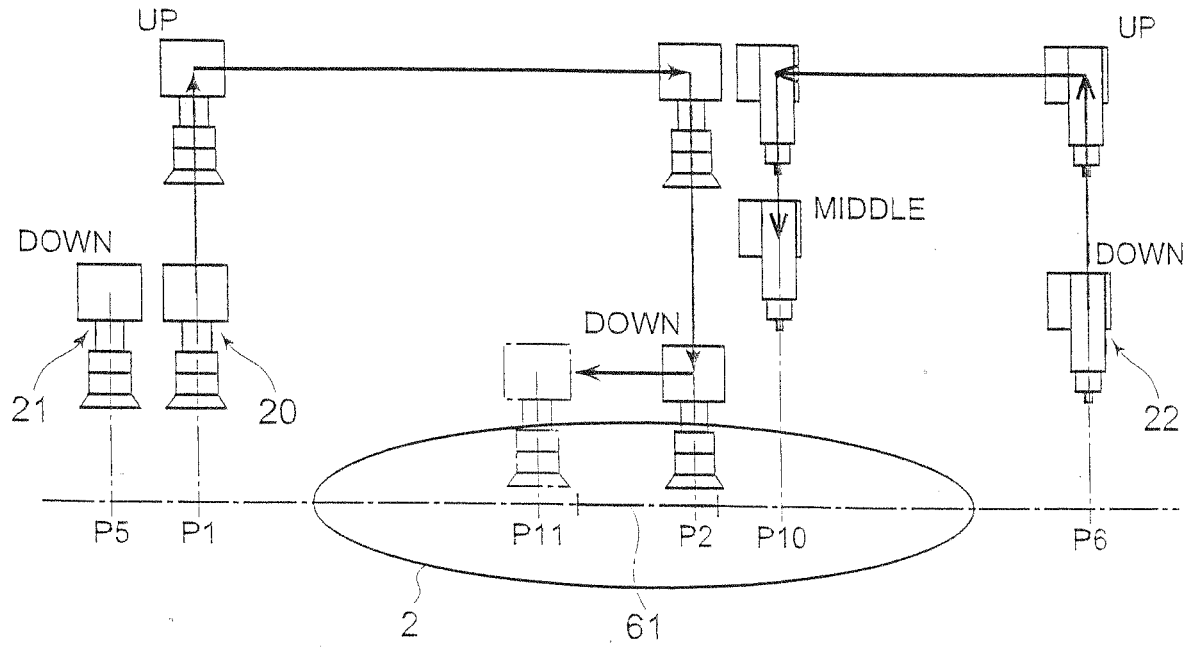


FIG. 10

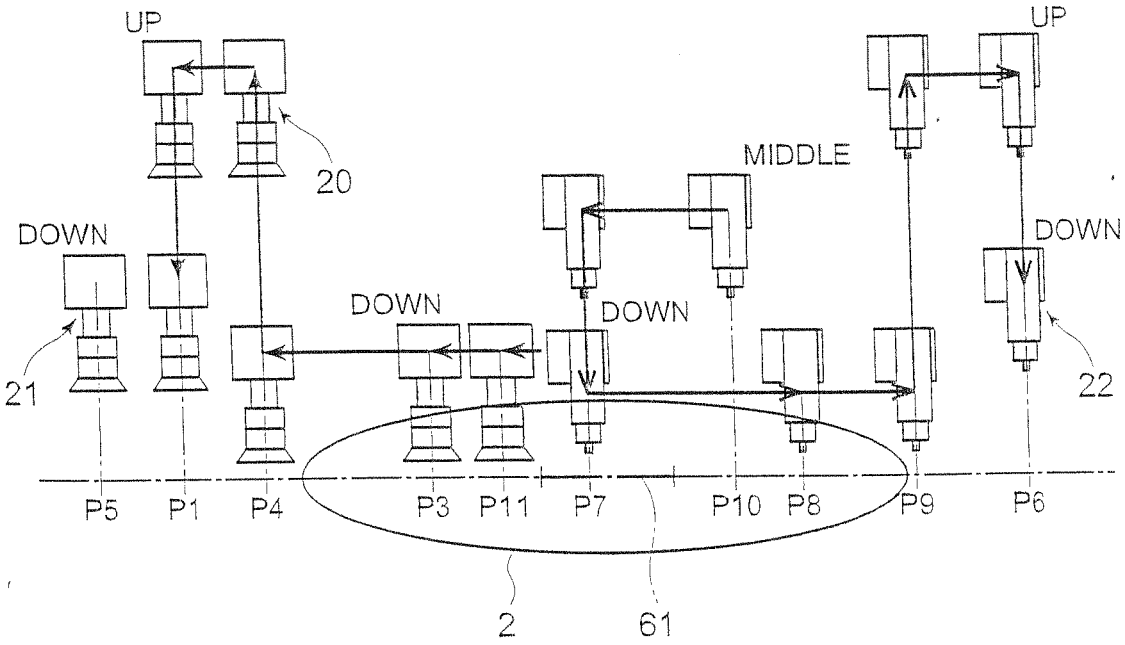

UP
UP
20
MIDDLE
DOWN
DOWN
DOWN
DOWN
21
22
P5
P1
P4
P3
P11
P7
P10
P8
P9
P6
2
61

FIG. 11

DRIVING RECIPE 62

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P6)	DOWN ↓ UP
2	RETREAT POSITION (P6) ↓ 150mm/s WAITING POSITION (P10)	UP
3	WAITING POSITION (P10)	UP ↓ MIDDLE
4	WAITING POSITION (P10)	MIDDLE
5	WAITING POSITION (P10) ↓ 30mm/s CLEANING-STARTING POSITION (P7)	MIDDLE
6	CLEANING-STARTING POSITION (P7)	MIDDLE ↓ DOWN
7	CLEANING-STARTING POSITION (P7) ↓ 15mm/s SPEED-CHANGE POSITION (P8)	DOWN
8	SPEED-CHANGE POSITION (P8) ↓ 10mm/s CLEANING END POSITION (P9)	DOWN
9	CLEANING END POSITION (P9)	DOWN ↓ UP
10	CLEANING END POSITION (P9) 150mm/s RETREAT POSITION (P6)	UP
11	RETREAT POSITION (P6)	UP ↓ DOWN

FIG. 12

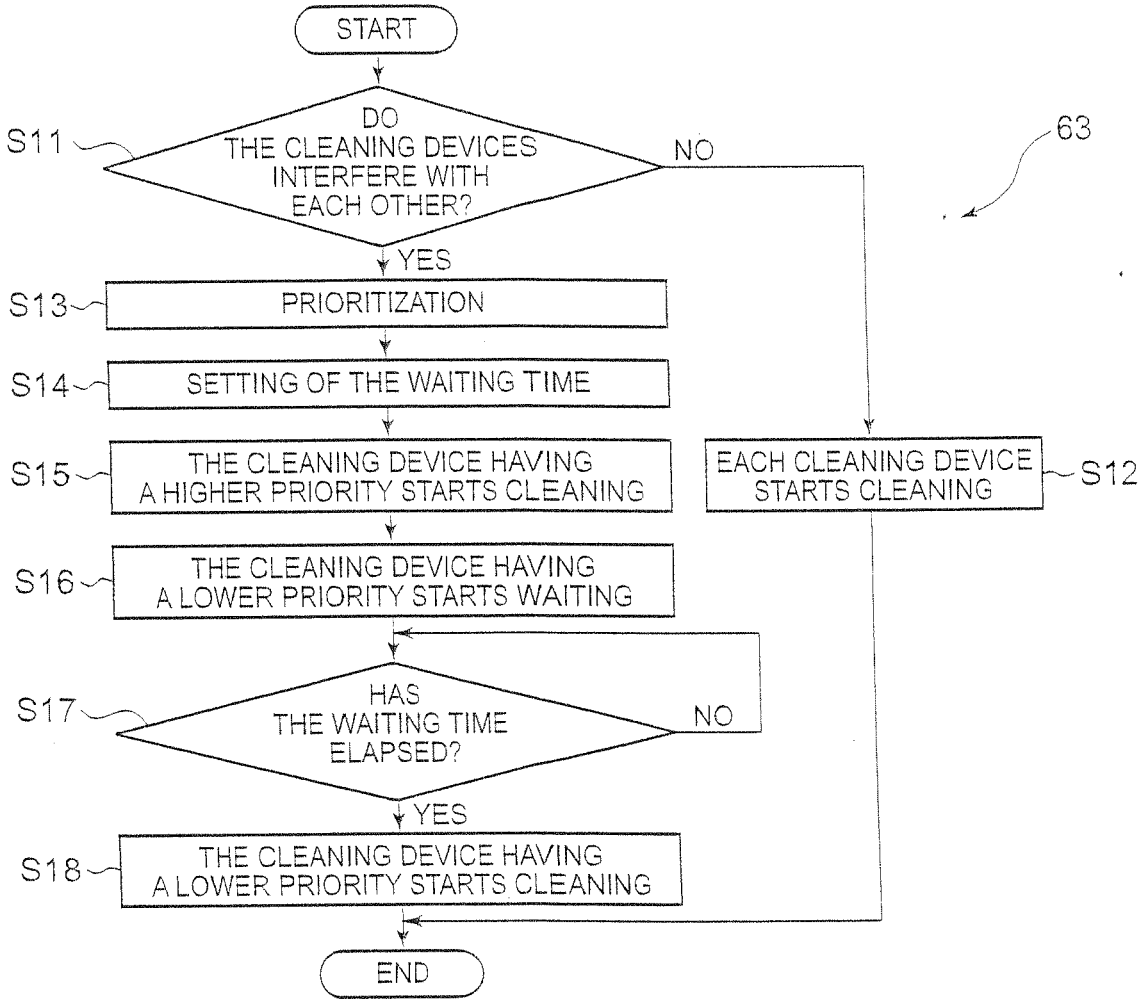

START
S11
DO THE CLEANING DEVICES INTERFERE WITH EACH OTHER?
NO
YES
63
S13
PRIORITIZATION
S14
SETTING OF THE WAITING TIME
S15
THE CLEANING DEVICE HAVING A HIGHER PRIORITY STARTS CLEANING
S16
THE CLEANING DEVICE HAVING A LOWER PRIORITY STARTS WAITING
S17
HAS THE WAITING TIME ELAPSED?
NO
YES
S18
THE CLEANING DEVICE HAVING A LOWER PRIORITY STARTS CLEANING
EACH CLEANING DEVICE STARTS CLEANING
S12
END

FIG. 13

DRIVING RECIPE 64 FOR THE FIRST CLEANING DEVICE 20

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P1)	DOWN ↓ UP
2	RETREAT POSITION (P1) ↓ 150mm/s CLEANING-STARTING POSITION (P2)	UP
3	CLEANING-STARTING POSITION (P2)	UP ↓ DOWN
4	CLEANING-STARTING POSITION (P2) ↓ 15mm/s SPEED-CHANGE POSITION (P3)	DOWN
5	SPEED-CHANGE POSITION (P3) ↓ 10mm/s CLEANING END POSITION (P4)	DOWN
6	CLEANING END POSITION (P4)	DOWN ↓ UP
7	CLEANING END POSITION (P4) ↓ 150mm/s RETREAT POSITION (P1)	UP
8	RETREAT POSITION (P1)	UP ↓ DOWN

FIG. 14A

DRIVING RECIPE 65 FOR THE SECOND CLEANING DEVICE 21

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P5)	DOWN ↓ UP
2	RETREAT POSITION (P5) ↓ 150mm/s CLEANING-STARTING POSITION (P2)	UP
3	CLEANING-STARTING POSITION (P2)	UP ↓ DOWN
4	CLEANING-STARTING POSITION (P2) ↓ 15mm/s SPEED-CHANGE POSITION (P3)	DOWN
5	SPEED-CHANGE POSITION (P3) ↓ 10mm/s CLEANING END POSITION (P4)	DOWN
6	CLEANING END POSITION (P4)	DOWN ↓ UP
7	CLEANING END POSITION (P4) ↓ 150mm/s RETREAT POSITION (P5)	UP
8	RETREAT POSITION (P5)	UP ↓ DOWN

FIG. 14B

DRIVING RECIPE 66 FOR THE THIRD CLEANING DEVICE 22

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P6)	DOWN

FIG. 14C

DRIVING RECIPE 67

STEP	HORIZONTAL POSITION	VERTICAL POSITION
1	RETREAT POSITION (P1)	DOWN ↓ UP
2	RETREAT POSITION (P1) ↓ 150mm/s WAITING POSITION (P12)	UP
3	WAITING POSITION (P12)	UP ↓ MIDDLE
4	WAITING POSITION (P12)	MIDDLE
5	WAITING POSITION (P12) ↓ 150mm/s CLEANING-STARTING POSITION (P2)	MIDDLE
6	CLEANING-STARTING POSITION (P2)	MIDDLE ↓ DOWN
7	CLEANING-STARTING POSITION (P2) ↓ 15mm/s SPEED-CHANGE POSITION (P3)	DOWN
8	SPEED-CHANGE POSITION (P3) ↓ 10mm/s CLEANING END POSITION (P4)	DOWN
9	CLEANING END POSITION (P4)	DOWN ↓ UP
10	CLEANING END POSITION (P4) 150mm/s RETREAT POSITION (P1)	UP
11	RETREAT POSITION (P1)	UP ↓ DOWN

FIG. 15

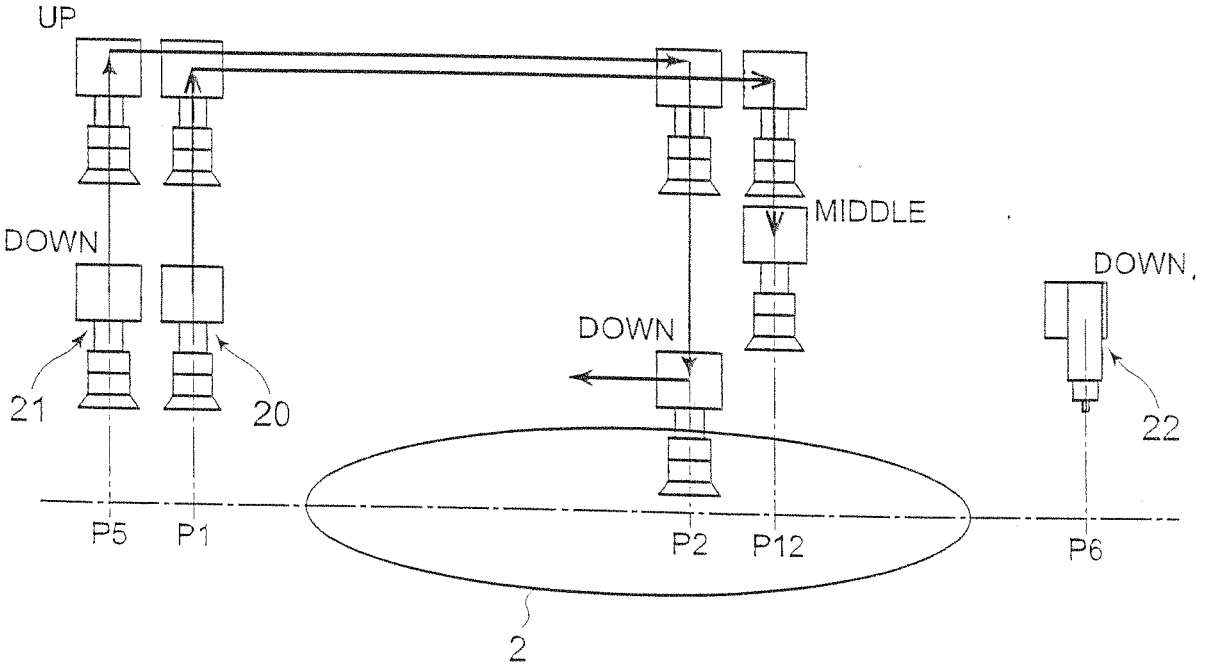

UP
DOWN
21
20
MIDDLE
DOWN
DOWN
22
P5
P1
P2
P12
P6
2

FIG. 16

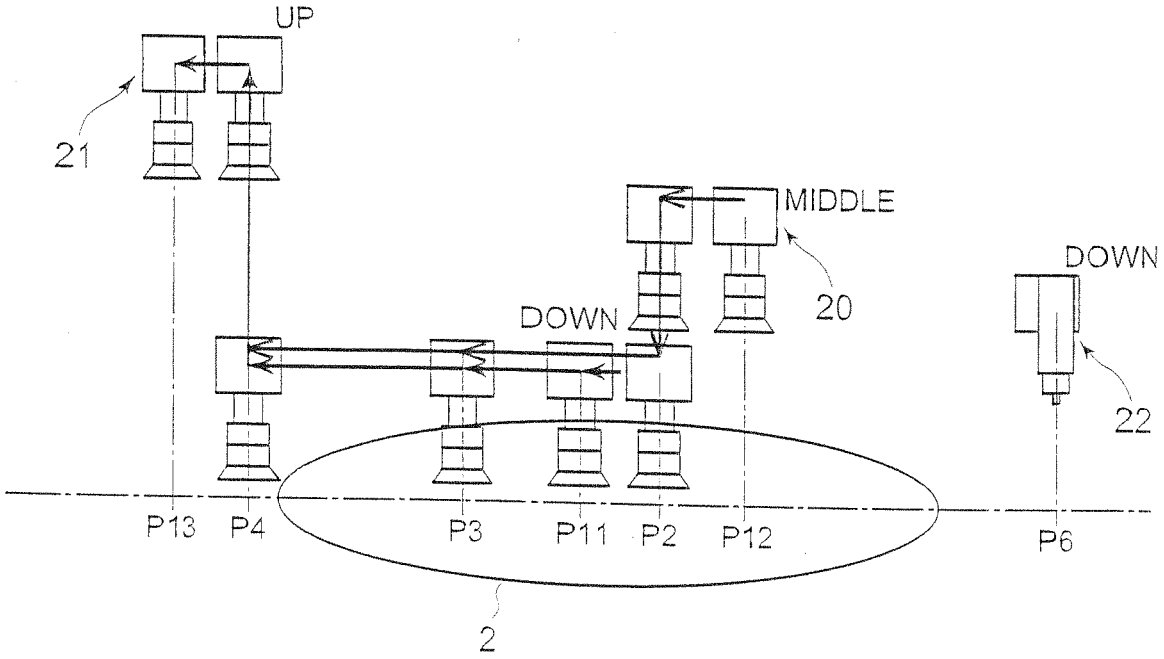

UP
21
MIDDLE
20
DOWN
DOWN
22
P13
P4
P3
P11
P2
P12
P6
2

FIG. 17

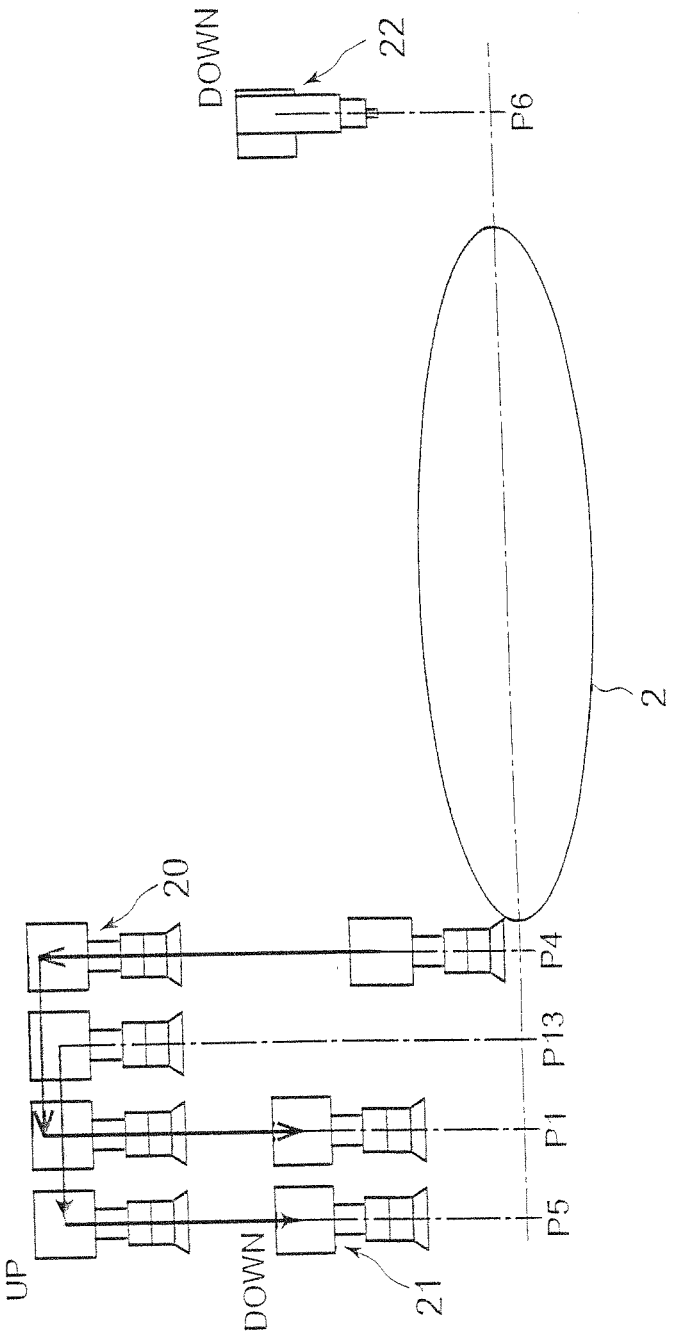


FIG. 18