Fig.1

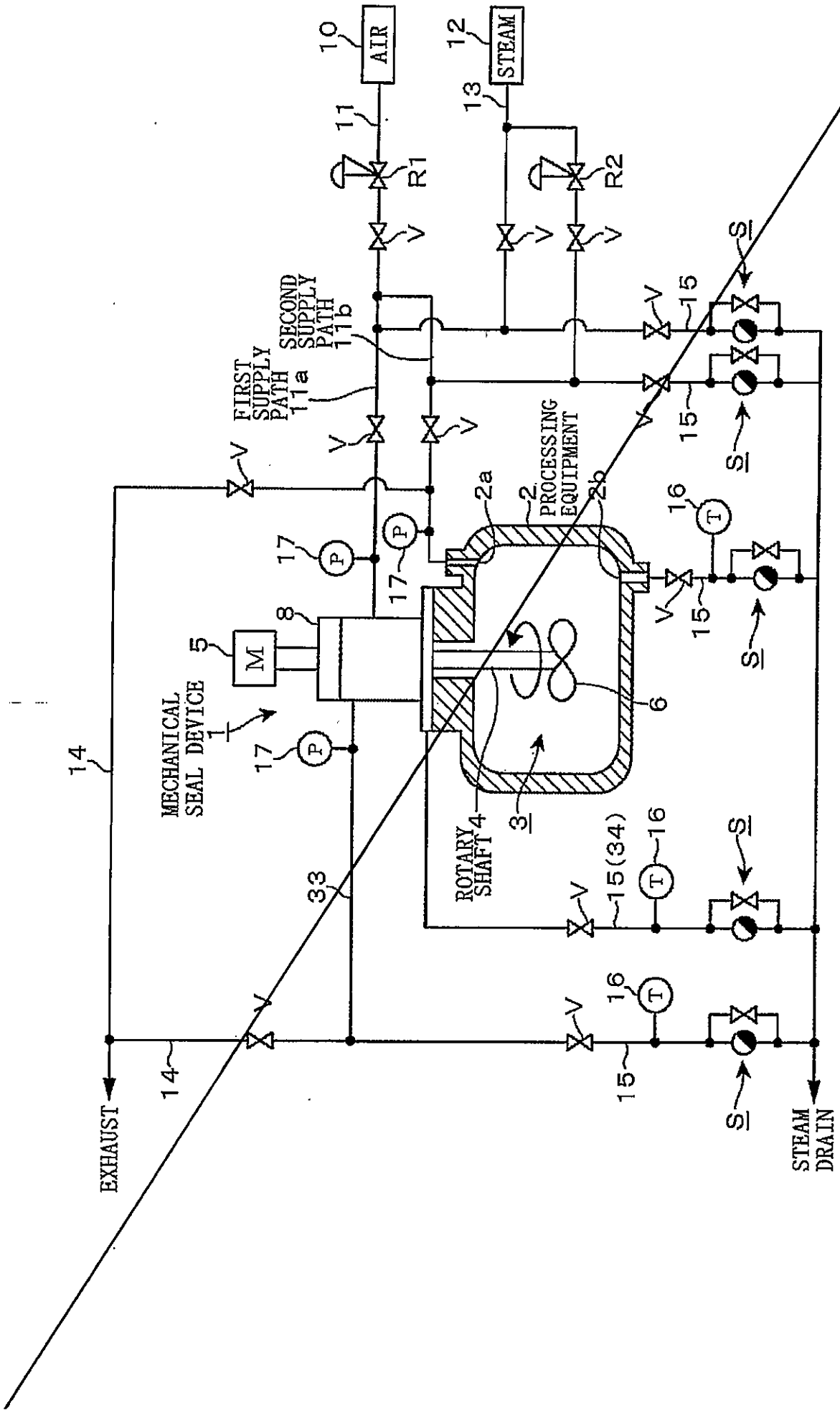

AIR
10
STEAM
12
11
13
R1
R2
V
FIRST SUPPLY PATH 11a
SECOND SUPPLY PATH 11b
15
S
PROCESSING EQUIPMENT
2
2a
2b
16
T
17
P
8
5
M
MECHANICAL SEAL DEVICE
1
6
3
ROTARY SHAFT 4
14
33
15(34)
EXHAUST
STEAM DRAIN

Fig.2

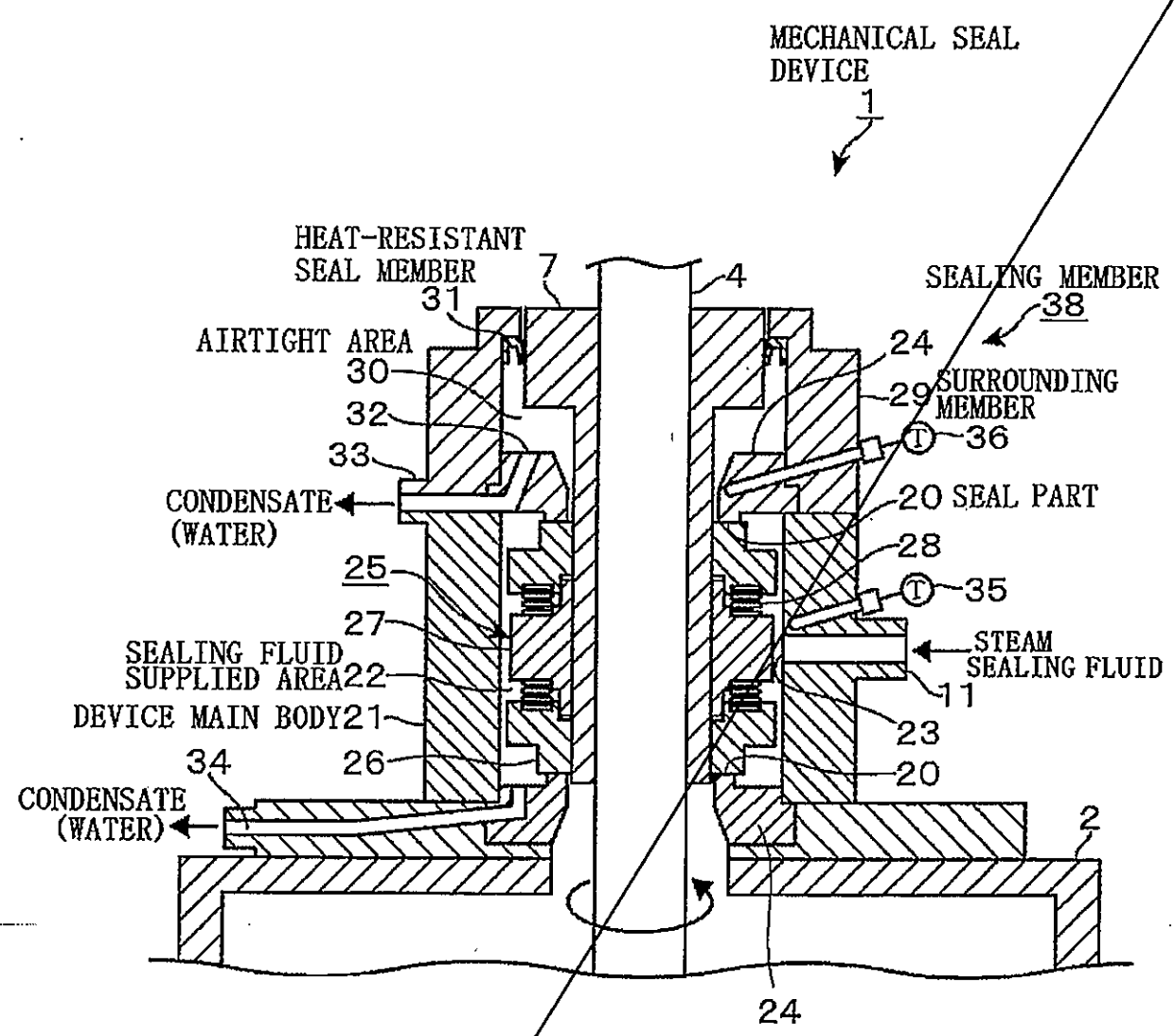

MECHANICAL SEAL DEVICE
1
HEAT-RESISTANT SEAL MEMBER
7
4
SEALING MEMBER
38
31
AIRTIGHT AREA
24
30
29
SURROUNDING MEMBER
32
36
33
CONDENSATE (WATER)
20 SEAL PART
28
25
35
27
STEAM SEALING FLUID
SEALING FLUID SUPPLIED AREA
22
11
DEVICE MAIN BODY
21
23
34
26
20
CONDENSATE (WATER)
2
24

Fig.3

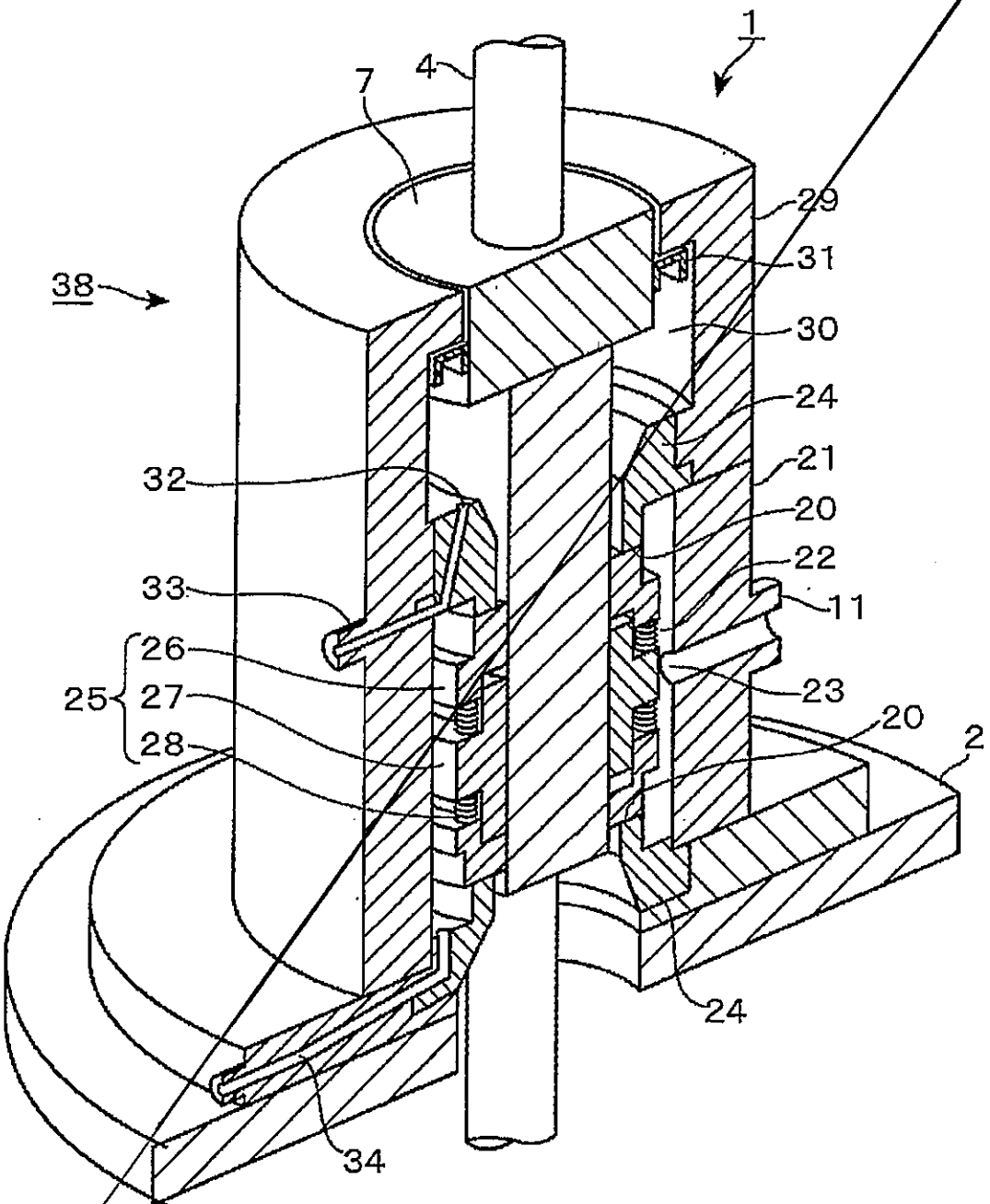


Fig.4

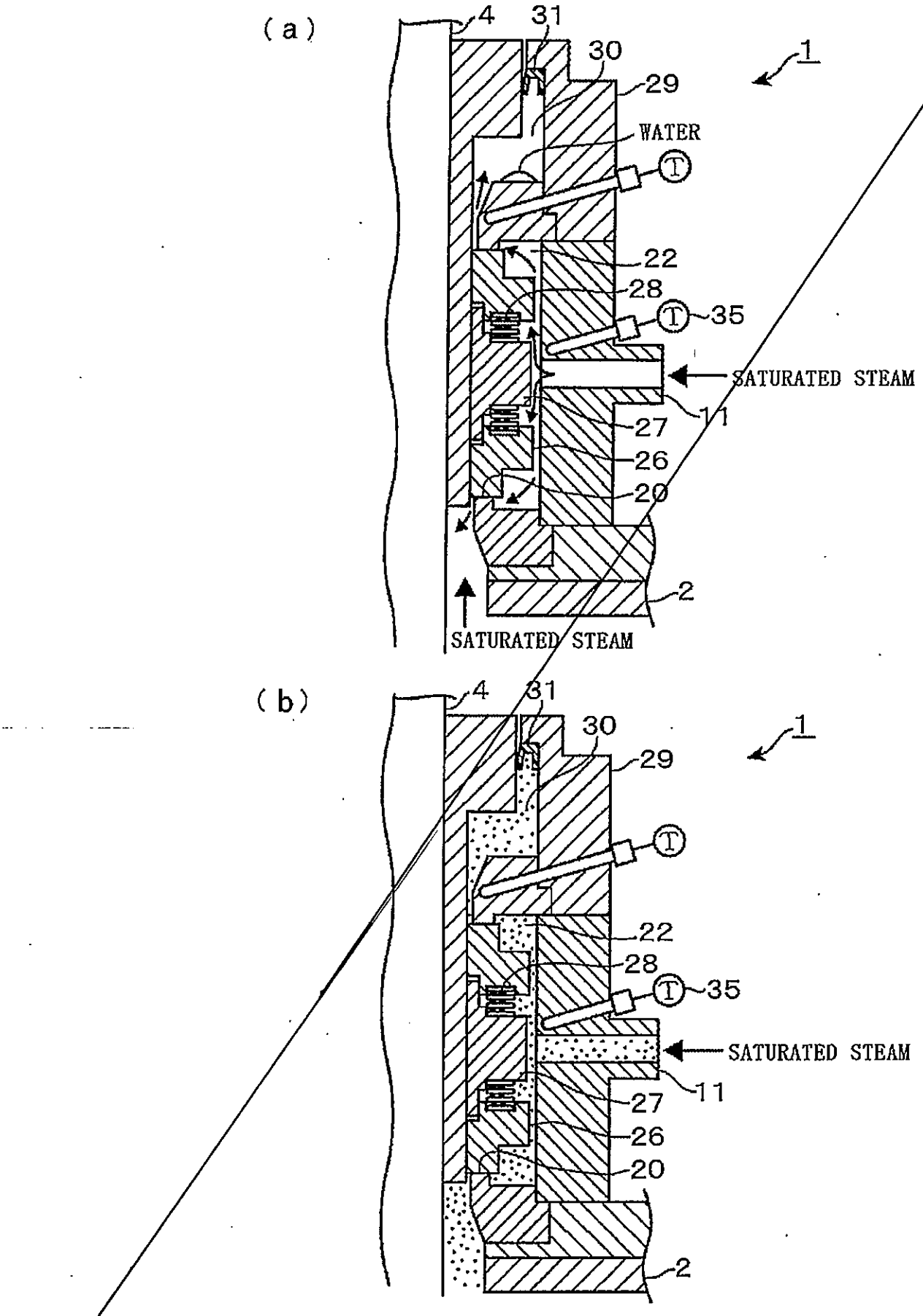

(a)
4
31
30
29
1
WATER
T
22
28
T
35
SATURATED STEAM
11
27
26
20
2
SATURATED STEAM
(b)
4
31
30
29
1
T
22
28
T
35
SATURATED STEAM
11
27
26
20
2

Fig.5

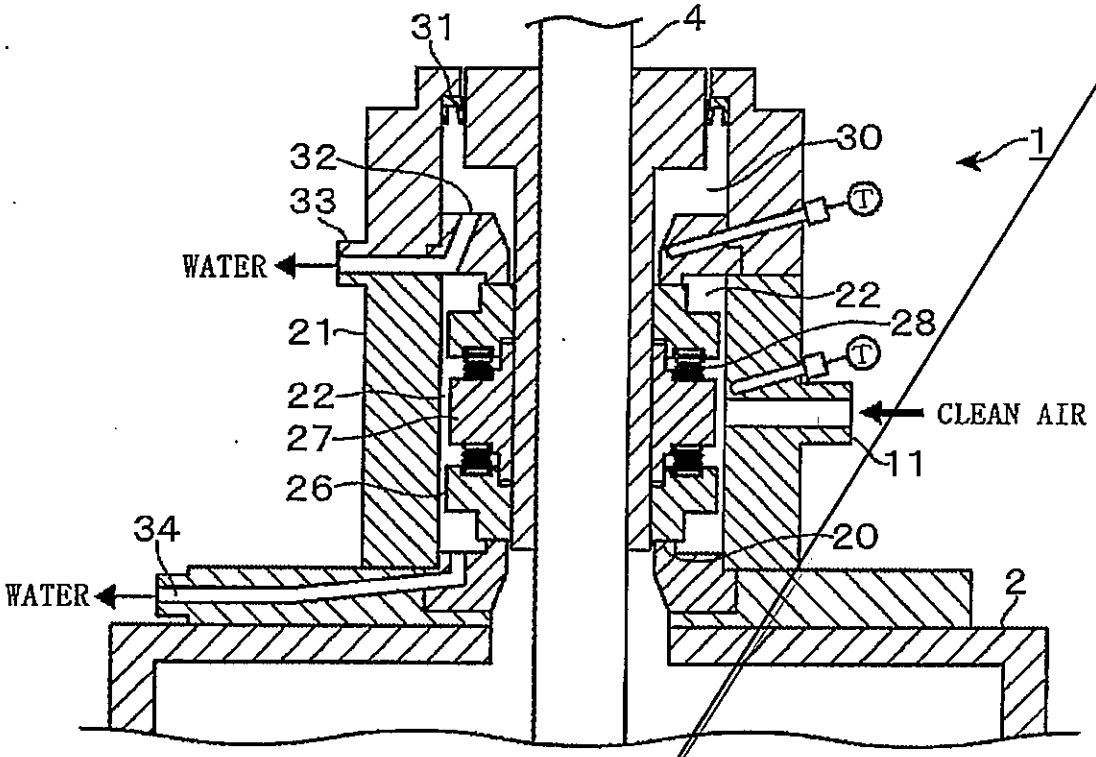

31
4
32
30
1
33
T
WATER
22
21
28
T
22
CLEAN AIR
27
11
26
34
20
WATER
2

Fig.6

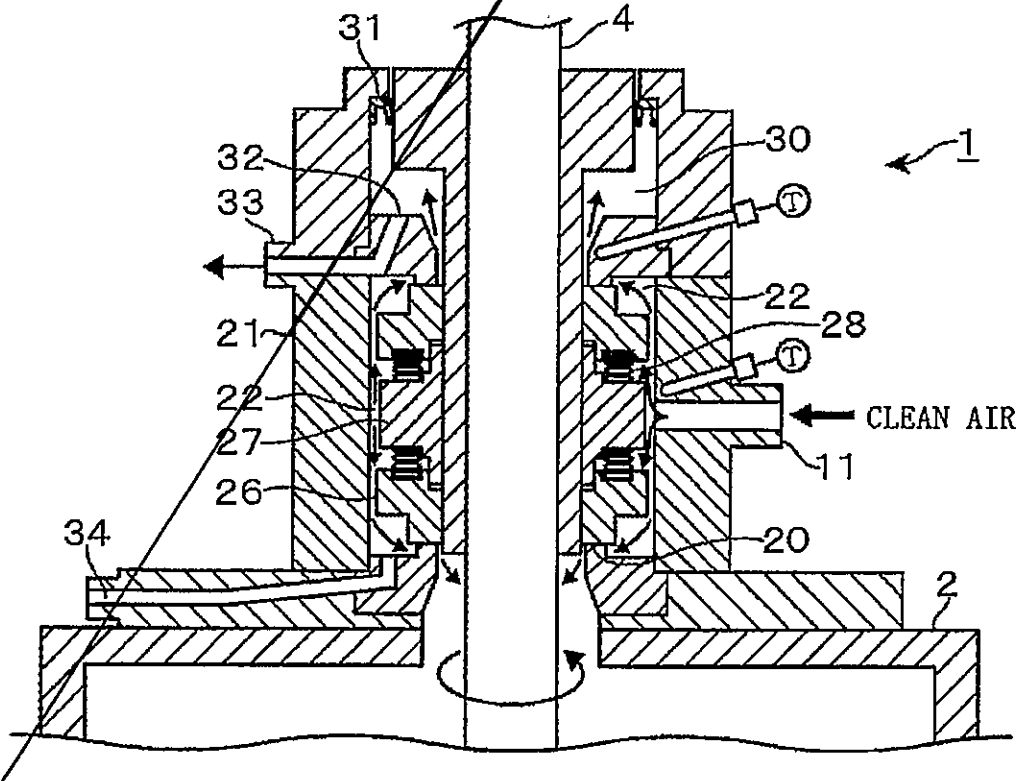

31
4
32
30
1
33
T
22
21
28
T
22
CLEAN AIR
27
11
26
34
20
2

Fig.7

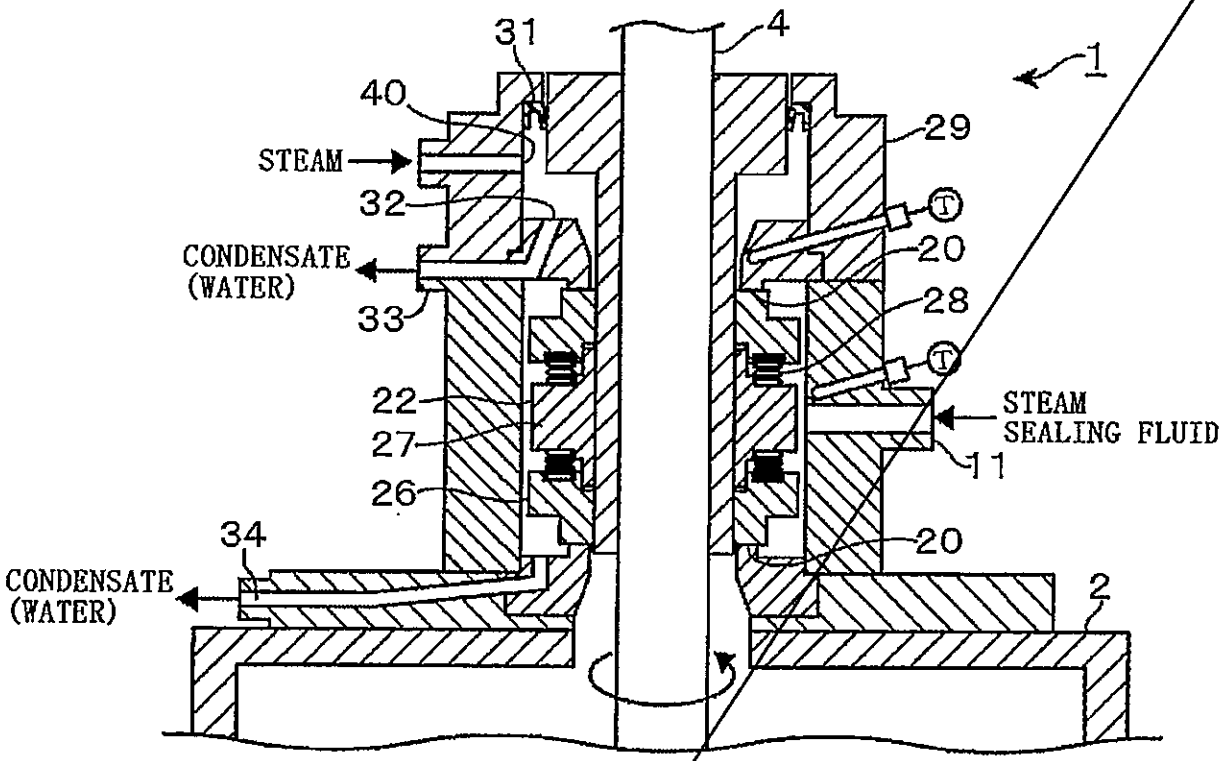

31
4
1
40
29
STEAM
32
T
CONDENSATE
(WATER)
20
28
33
T
22
STEAM
SEALING FLUID
27
11
26
34
20
CONDENSATE
(WATER)
2

Fig.8

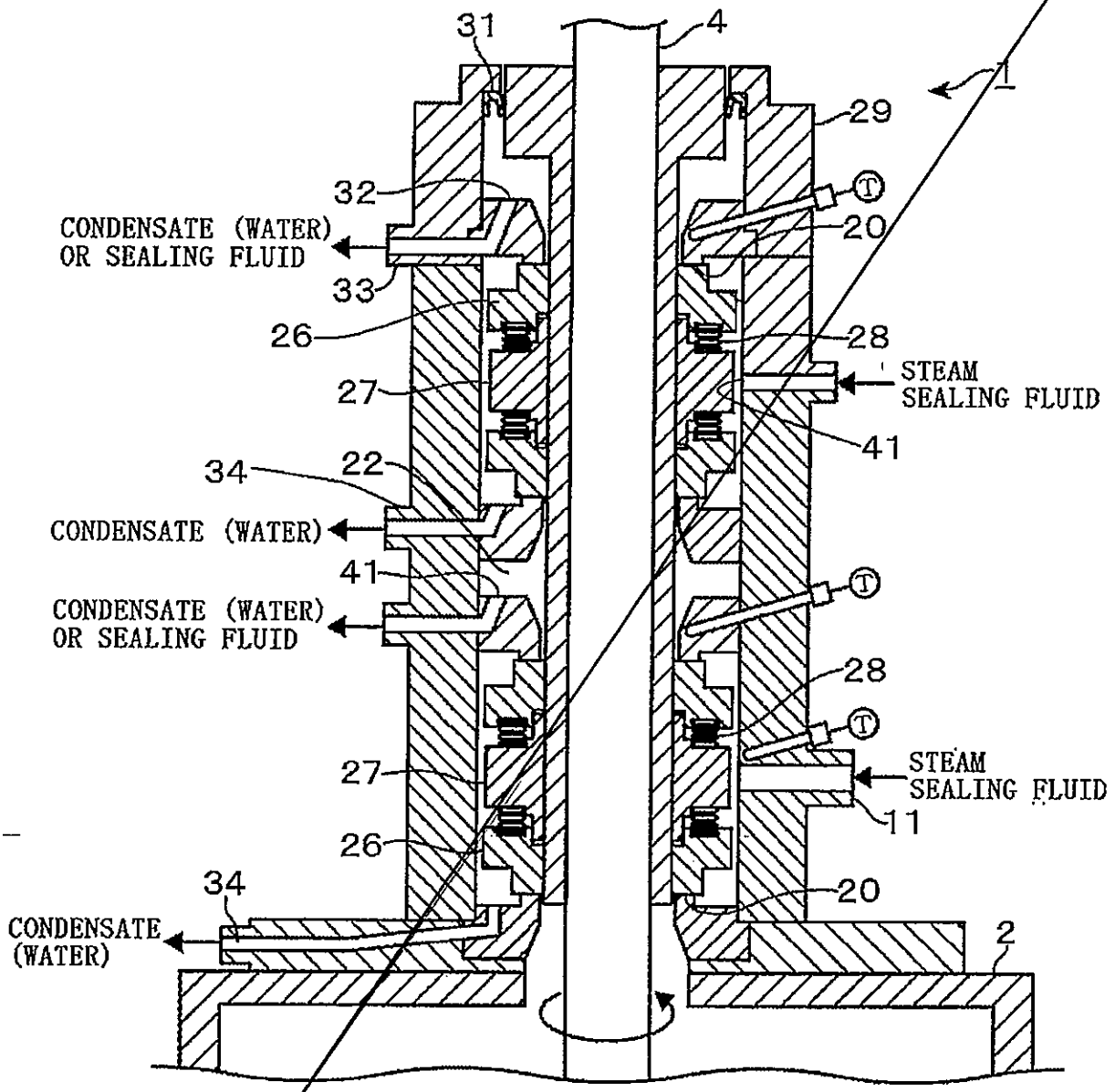

31
4
1
29
32
T
CONDENSATE (WATER)
OR SEALING FLUID
20
33
26
28
27
STEAM
SEALING FLUID
41
34
22
CONDENSATE (WATER)
41
CONDENSATE (WATER)
OR SEALING FLUID
28
T
27
STEAM
SEALING FLUID
11
26
34
20
CONDENSATE
(WATER)
2

Fig.9

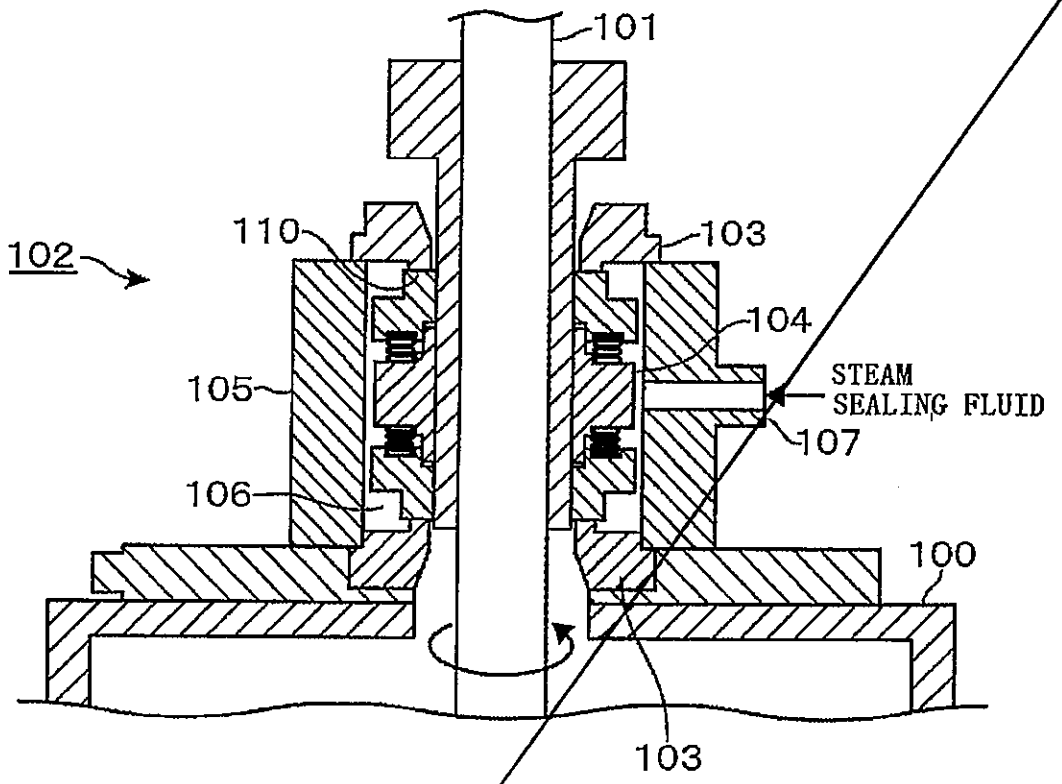


Fig.1

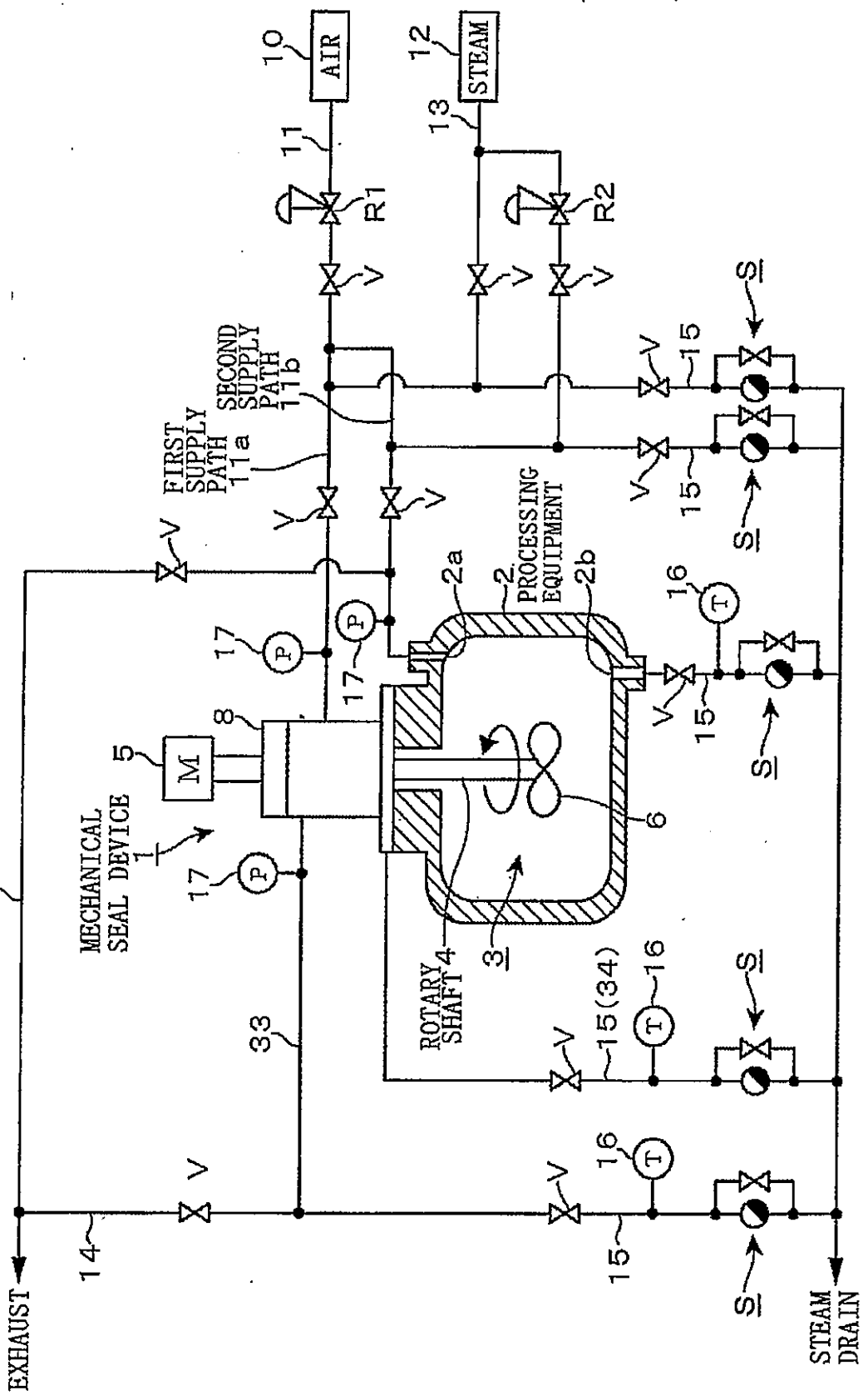

AIR
STEAM
R1
R2
V
FIRST SUPPLY PATH 11a
SECOND SUPPLY PATH 11b
PROCESSING EQUIPMENT
2
2a
2b
MECHANICAL SEAL DEVICE
1
M
5
8
6
3
ROTARY SHAFT 4
P
T
S
15
15(34)
16
17
14
33
EXHAUST
STEAM DRAIN

Fig.2

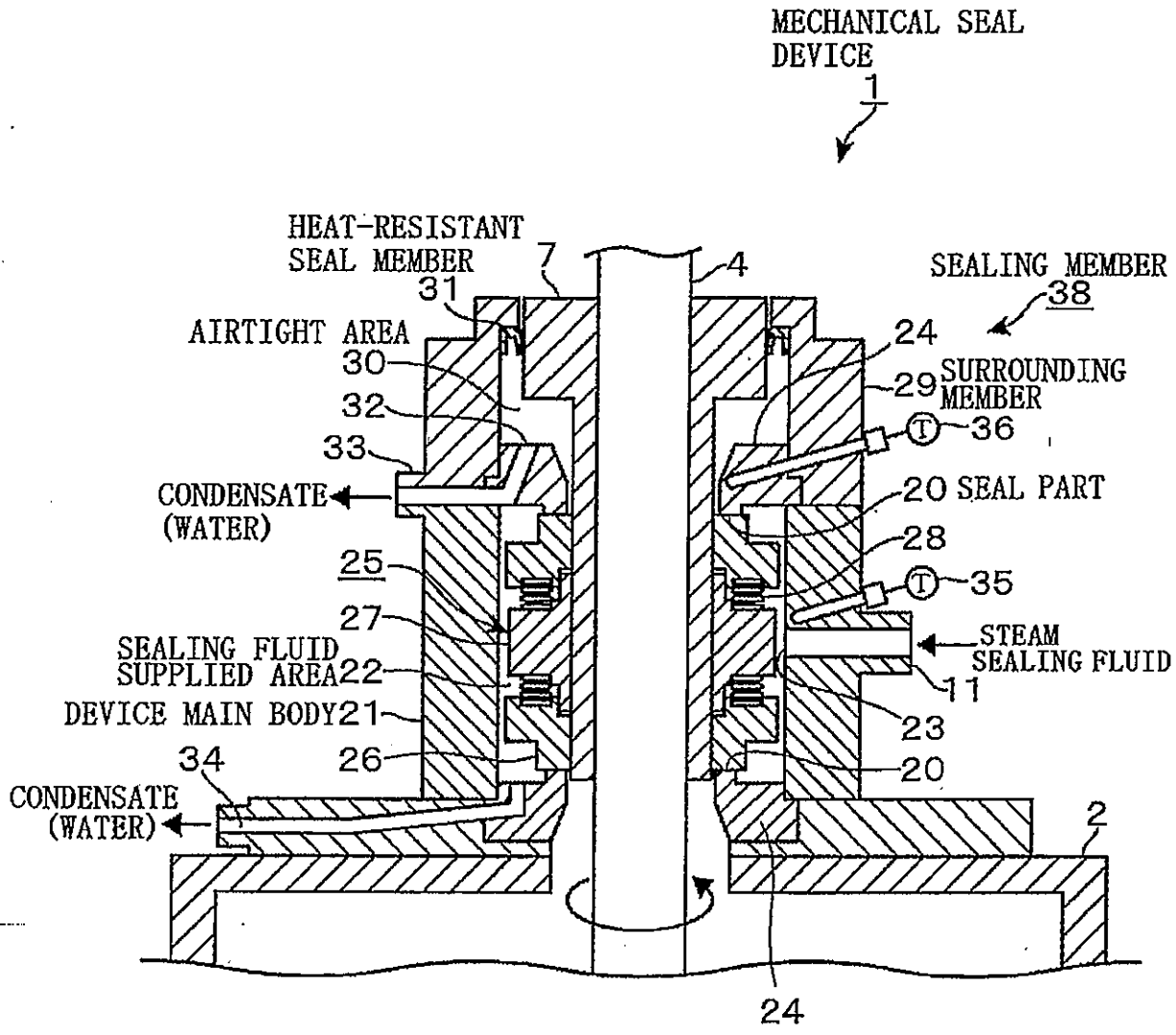

MECHANICAL SEAL DEVICE
1
HEAT-RESISTANT SEAL MEMBER
7
4
SEALING MEMBER
38
31
AIRTIGHT AREA
24
30
29
SURROUNDING MEMBER
32
T
36
33
CONDENSATE (WATER)
20 SEAL PART
28
25
T
35
27
STEAM SEALING FLUID
SEALING FLUID SUPPLIED AREA
22
11
DEVICE MAIN BODY
21
23
34
26
20
CONDENSATE (WATER)
2
24

Fig.3

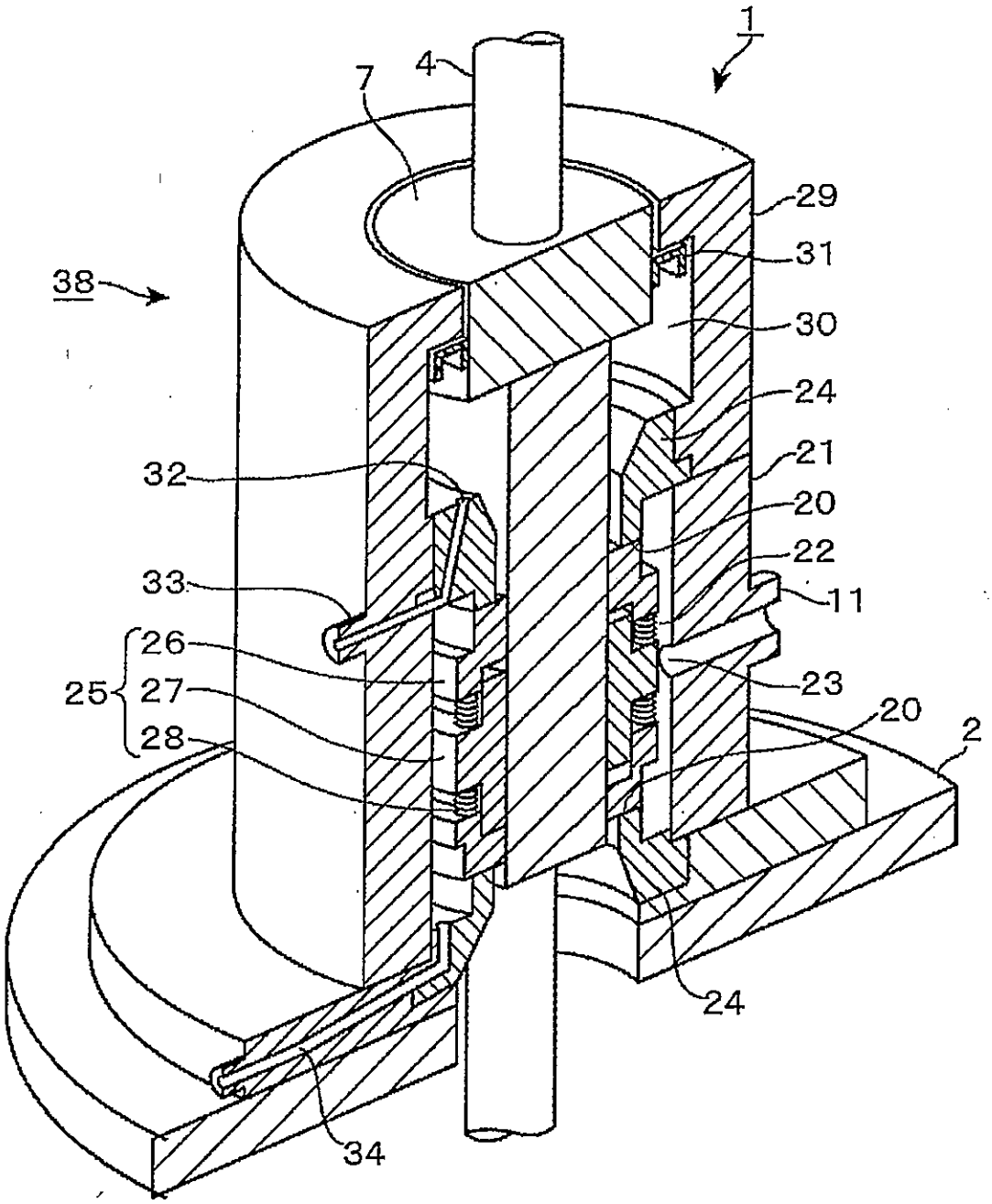


Fig.4

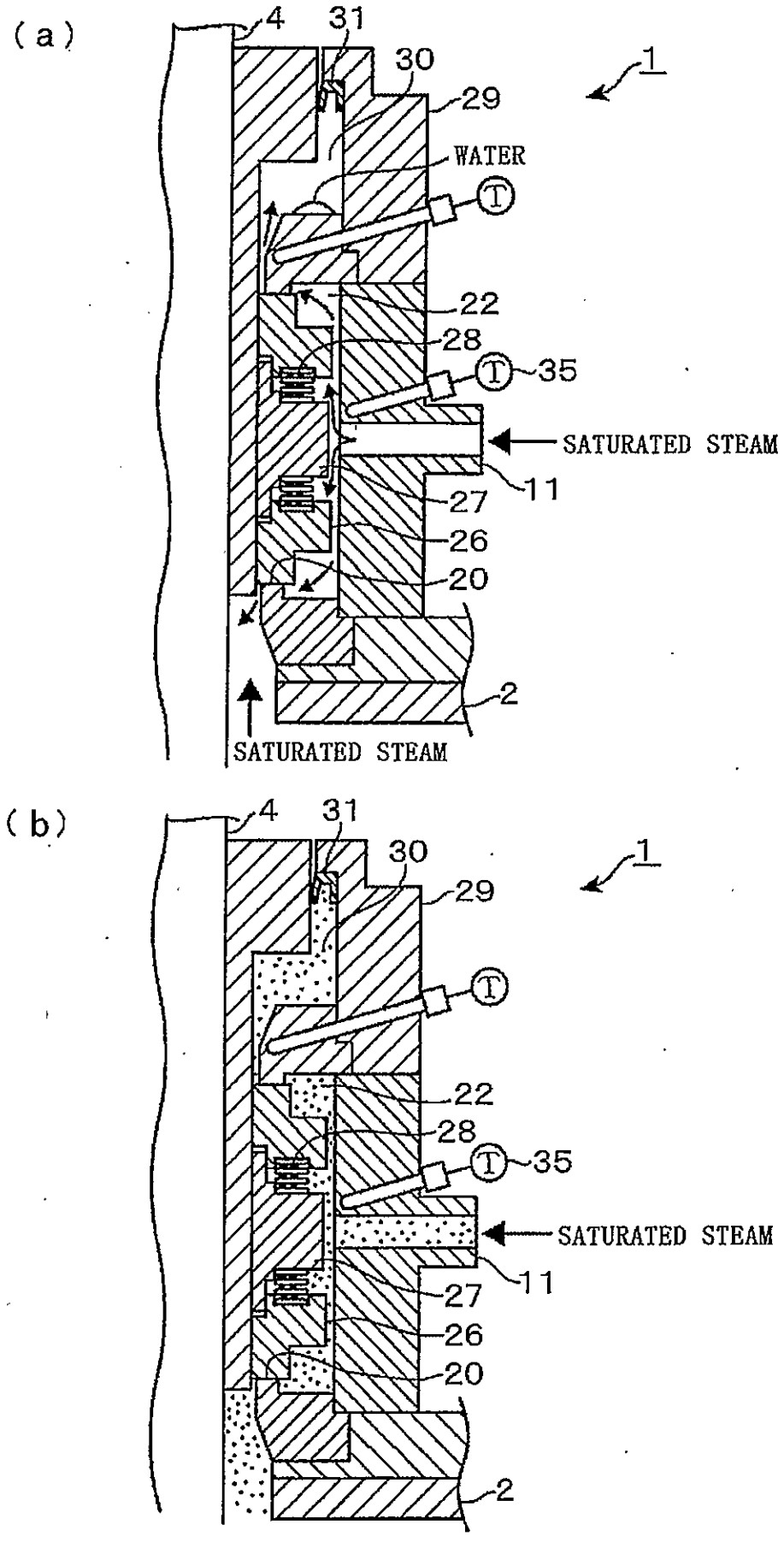

(a)
4
31
30
29
1
WATER
T
22
28
T
35
SATURATED STEAM
11
27
26
20
2
SATURATED STEAM
(b)
4
31
30
29
1
T
22
28
T
35
SATURATED STEAM
11
27
26
20
2

Fig.5

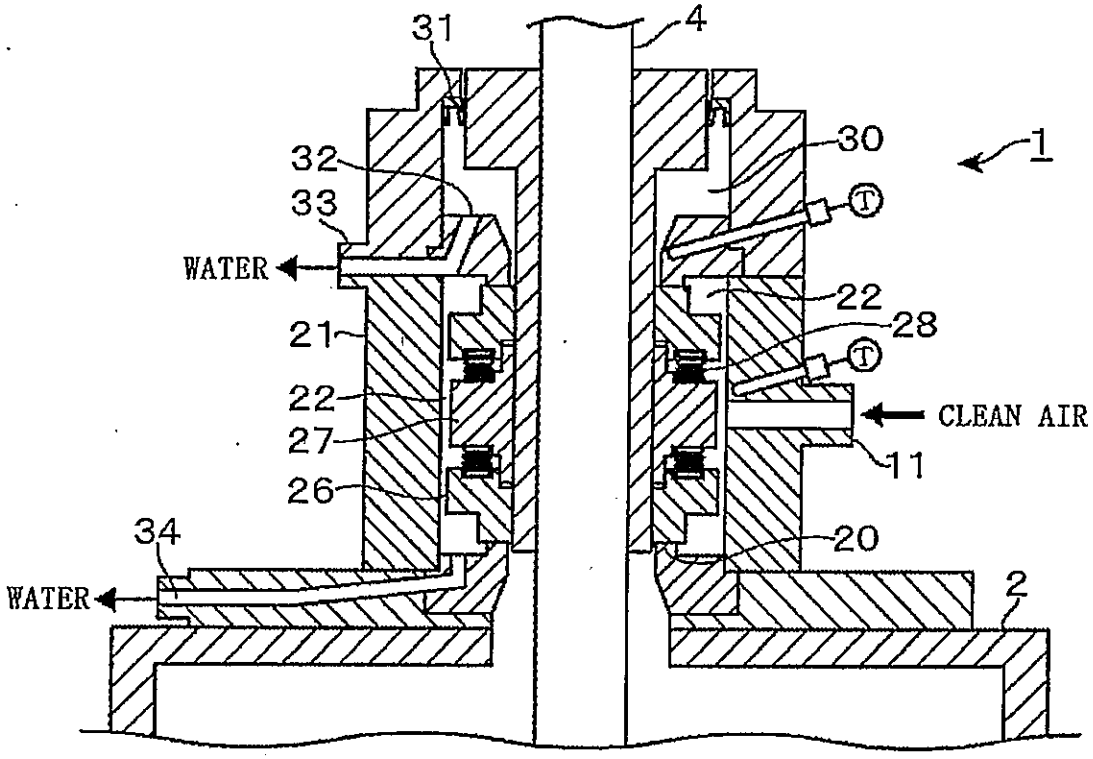

31
4
32
30
1
33
WATER
22
21
28
22
CLEAN AIR
27
11
26
34
20
WATER
2

Fig.6

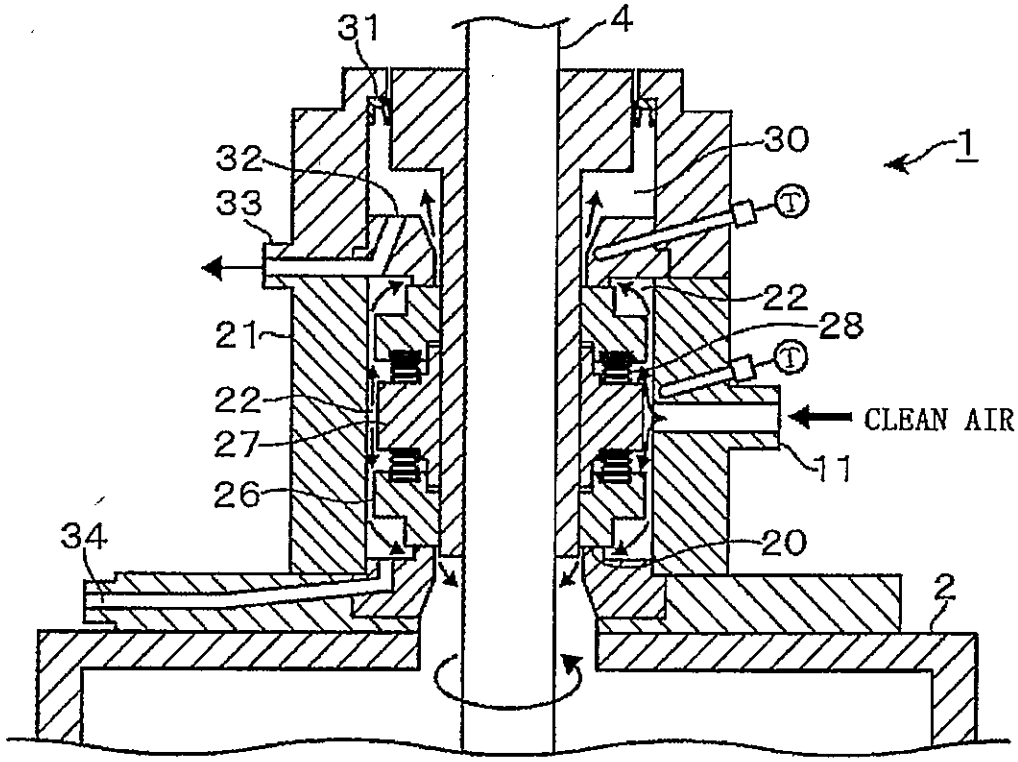

31
4
32
30
1
33
22
21
28
22
CLEAN AIR
27
11
26
34
20
2

Fig.7

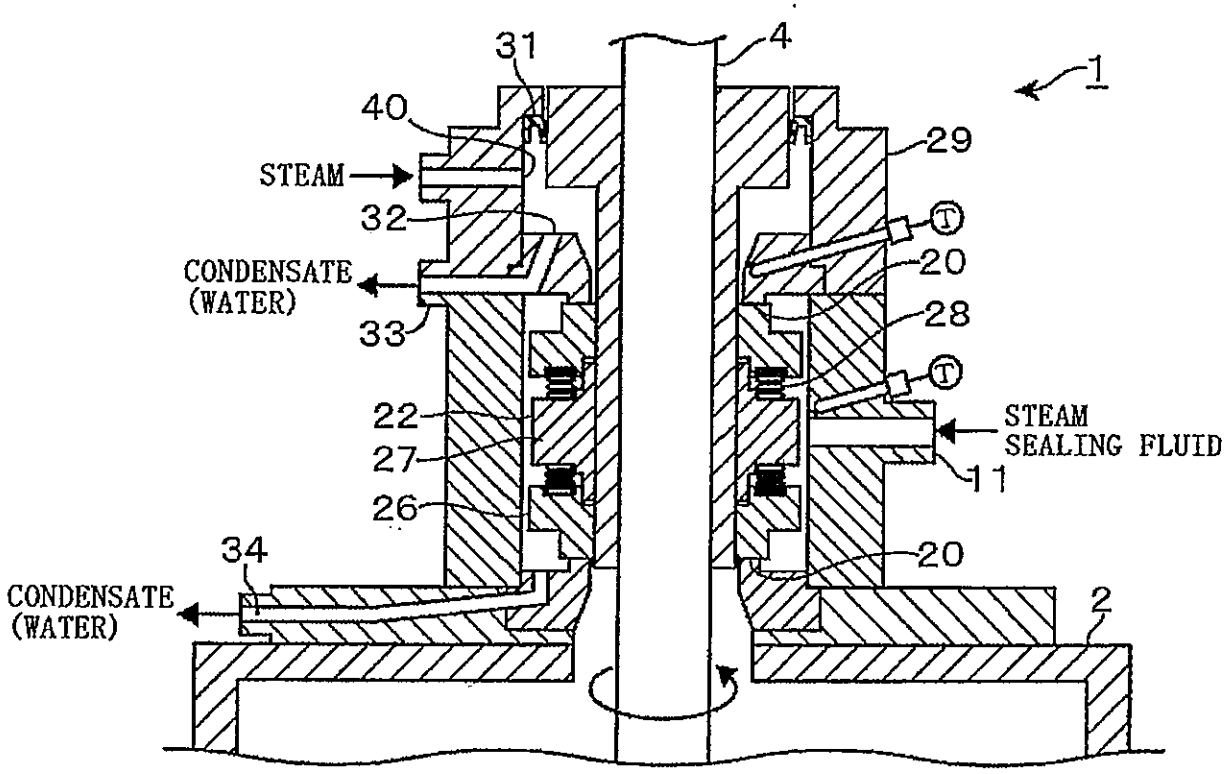

31
4
1
40
29
STEAM
32
T
20
CONDENSATE
(WATER)
28
33
T
22
STEAM
SEALING FLUID
27
11
26
34
20
CONDENSATE
(WATER)
2

Fig.8

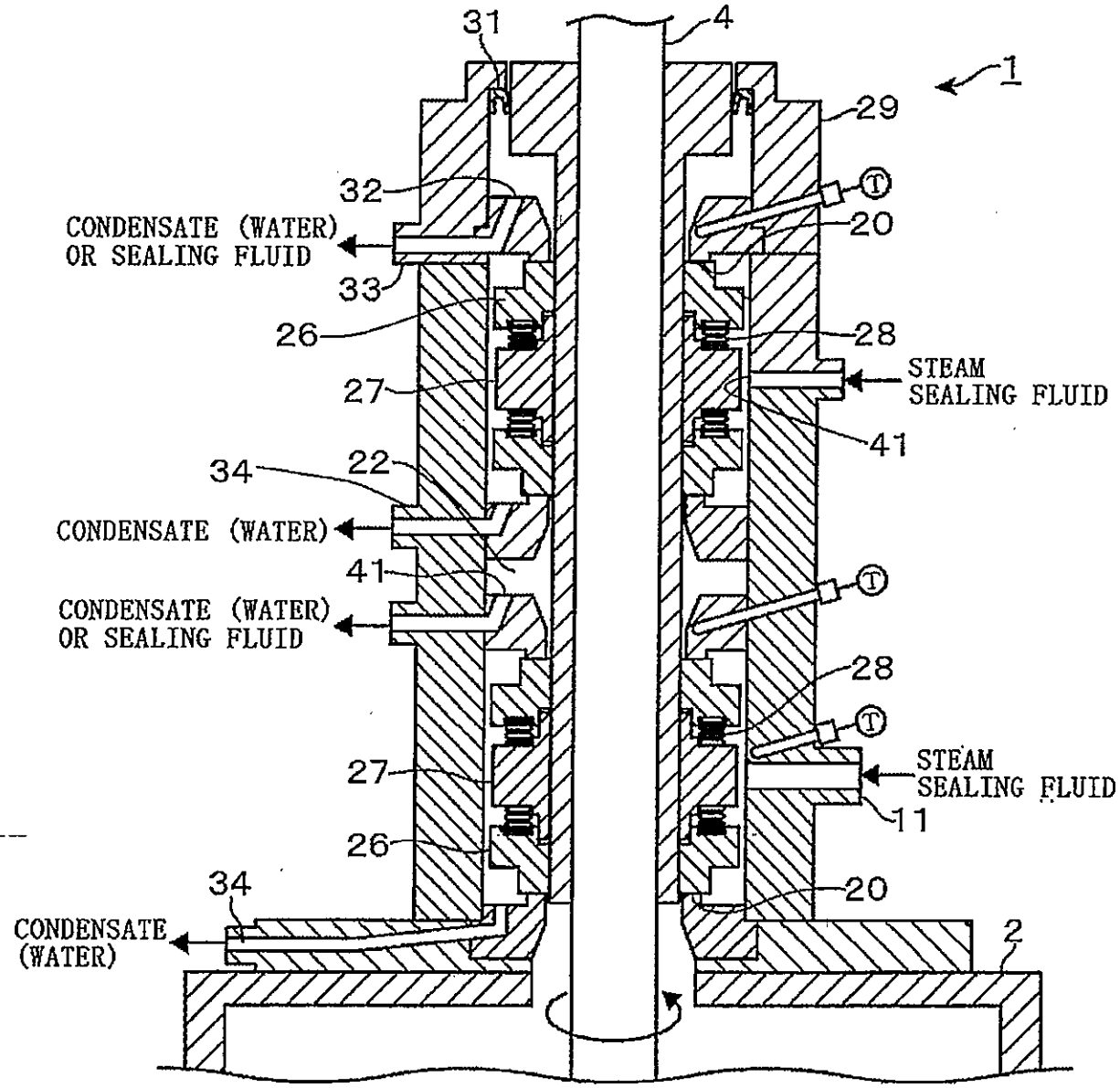

31
4
1
29
32
CONDENSATE (WATER)
OR SEALING FLUID
20
33
26
28
STEAM
SEALING FLUID
27
41
34
22
CONDENSATE (WATER)
41
CONDENSATE (WATER)
OR SEALING FLUID
28
27
STEAM
SEALING FLUID
11
26
34
20
CONDENSATE
(WATER)
2

Fig.9

