

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. 7
F16K 7/00

(11)
(43)

2002 - 0035441
2002 05 11

(21) 10 - 2001 - 0067853
(22) 2001 11 01

(30) JP - P - 2000 - 0033 2000 11 06 (JP)
7760

(71) 가 가
105 - 8659 1 16 - 4

(72) 300 - 2493, , , 4 - ,2 - 2

300 - 2493, , , 4 - ,2 - 2

(74)
:

(54)

1 (40a) 1 (42a), 1 (42a) (44),
(44) (46) , 2 (40b) (44)가
(66) 2 (42b) . 1 (42a) (S1) 2
(42b) (S2) .

1 ,
 2 1 1 1
 ,
 3 1 2 2
 ,
 4 ,
 5 .

가 1 2 가 .
 , 5,131,627). (1) 5 가 1 (2) 2 (3)가 (4) (5) , (7)가 (; 6) 1 (2) 2 (3)가 (7)가 .
 , (1) (7) 2 (3) (6) , (5) 2 .
 , , 가 . ,
) , , 가 (, , 가 1 가 , 2 가 ;

가 ;

가 ,

1 2 , 1 2

1 2 , 1 1

가 , 가 , 1 2

가 ,

1 10

4) (10) (12a, 12b)가 (14), (1

(16), (16)

(18)

(14), (16) (18)

(14) 1 (20a), 2 (20b)가 , 1 (20a) 2

(20b) (22)가 (24); 1 (20a) 2 (20b) ,

(12a, 12b) (26); (24)

(12a, 12b) (28)

(14)

(14)

5,996,636

(24) (30)가 , (30)

(34), 1 (36a) 2 (36b)

X2 (16) (30) 1 1 (38a) 2 (38b) X1

(22) 1 (40a) 2 (40b)

1 (40a) 1 (42a), 1 (42a) (44),

(44) 1 (42a) (46) 1

(42a) 1 V (41a) 1 (42a) () S1

1 (42a) 1 (36a) 1 (38a)가 1 (38a)
 (54a, 54b)가 (54a, 54b) 1 (42a)
 1 (36a) (48) (54a, 54b) 1 2
 (40a, 40b) 가 (X2) (54a, 54b)
 2

1 (36a) 1 (42a) 1 (38a) ()
 1 (56a)가 , 1 (56a) 1 (38a) 가

(58) (46) (58) (44)
 2 (56b) ()

(60) (46) (44) 1 (42a) 1 (42a)
 (22) (22) (46) (24) (60) , (46)
 () 가

(64) (46) (62)가 , (62) (44) (46)

(66) 2 (40b) 2 V (41b) (44) 가
 (44) 2 (42b), 2 (42b) (68), (44)
 2 (42b) (66) (70) (72a) , 1 (36a)
 2 (72b)가

2 (42b) () S2 1 (42a) (S1) 2 (42b)
 (S2) S1 > S2가 1 (42a) (S1) (46)
 2 (42b) (S2) (46) 1
 (42a) (2), 2 (42b)
 (3). 1 2 (42a, 42b)
 S1 < S2가

(44) , 2 (40b) 2 (42b) (66) (44)
 , 2 (42b) 2 (42b)

2 (42b) (34) 2 (38b)가 , 2 (38b) 3
 (56c) ()

(34) 2 (42b) (46)
 (74)가 . (74) 2 (42b) (76a) (76b)가
 (78) , (76b) (78) (80)

a) 1 (18) 1 (42a) 1 (82a) 1 (84
 2 (84b) 2 (86a) , 2 (42b) 2 (82b)
 1 (84a) 1 (82a) 1 (42a)
 , 1 (42a) 1 (44) , (44)가 (66)
 2 (84b) 2 (82b) 2 (42b)
 (44)가 , (68) 2 (42b) (44)가 ,
 1 (42a)
 1 (82a) 1 (42a) (88)가

(10) ,

(10) 1 (20a)가 , 1 (20a) 2 (20b)
 (12a, 12b) 2 (20b) ()가 . 1 (42a)
 (84a, 84b) () 1 (42a)
 2 (42b) , (46) (60)

1 (84a) , () 가 ()
 (82a) . 1 (42a) 1 (84a) 1 (54a, 54b)
 (S1)

, 1 (46) 1 (40a) 가 1 (42a) , (44)
 , 1 (42a) (46) (60) 가
 , 1 (42a) (44) , (44)가 (66)
 2 (42b) (2) .

, 1 (20a) () (22)
 2 (20b) () .

, 2 (20b) () 1 (42a) (S1)
 (42a) (46) , 2 (42b) (S2) 1
 (S1) 가 () (2) .

, () 1 (84a)
 (82a) (54a, 54b) 1 (42a) , 1
 (46) (60) 가 , 1

1 (42a) , 1 (42a) 가 (88)
 (46) (60)

b) , () 2 (84b) 2 (84
 (82b) (54a, 54b)
 2 (42b) (44)가

4) , (46) 2 (40b) 가 2 (42b) , (4
 (46) (60) 가 (68)
 2 (42b) (44)가 , (44) 1
 (42a) (3).

2 , 1 (20a) () (22) ,
 (20b) ()

2 (20b) () 2 (42b) (S2)
 (46) , 1 (42a) (S1) 2
 (42b) (S2) 가 () (3).

() 2 (84b) (54a, 54b)
 2 (42b) , (46) (60) 가

(S1, S2) 1 (42a) 2 (42b)
 (46) 2 (20b) ()

(74) 2 (42b) (46)

(42b) (30) 1 (40a) 1 (42a) 2 (40b) 2
 1 (84a) 2 (84b)

() ,

1 (42a) , 2 (42b)
 가
 , 1 2 (42a, 42b)

4

2 (42b) (10a) (74) , (90) (90a)

(57)

1.

(22) 가 , 1 (20a)가 ,
 2 (20b)가 (14);
 (22) (40a, 40b)가
 (16);

(18) , (84a ,84b)가 (86a, 86b)

가 (40a, 40b)

2.

1 , 1 (42a) 1 (40a) 2 (42b) 2
 (40b) , 1 (42a) (S1) 2 (42b) (S2)

3.

2 , 1 2 (40a, 40b)

4.

1 , 1 (40a) 2 (40b) , 1 (40a)
 1 (42a), 1 (42a) (44), (44)
 (46) 가 , 2 (40b) (44)가 (66)
 2 (46b)

5.

4 , 1 (42a) (S1) 2 (42b) (S2)

6.

5 , 1 (42a) (S1) 2 (42b) (S2)

7.

5 , 1 2 (42a, 42b)

8.

5 , 2 (42b) (16) (90) (90a)

9.

1 , (18) 1 (82a) 1 (40
 a) 1 (42a) 1 (86a) , 2 (82b)
 2 (40b) 2 (40b) 2 (86b)

10.

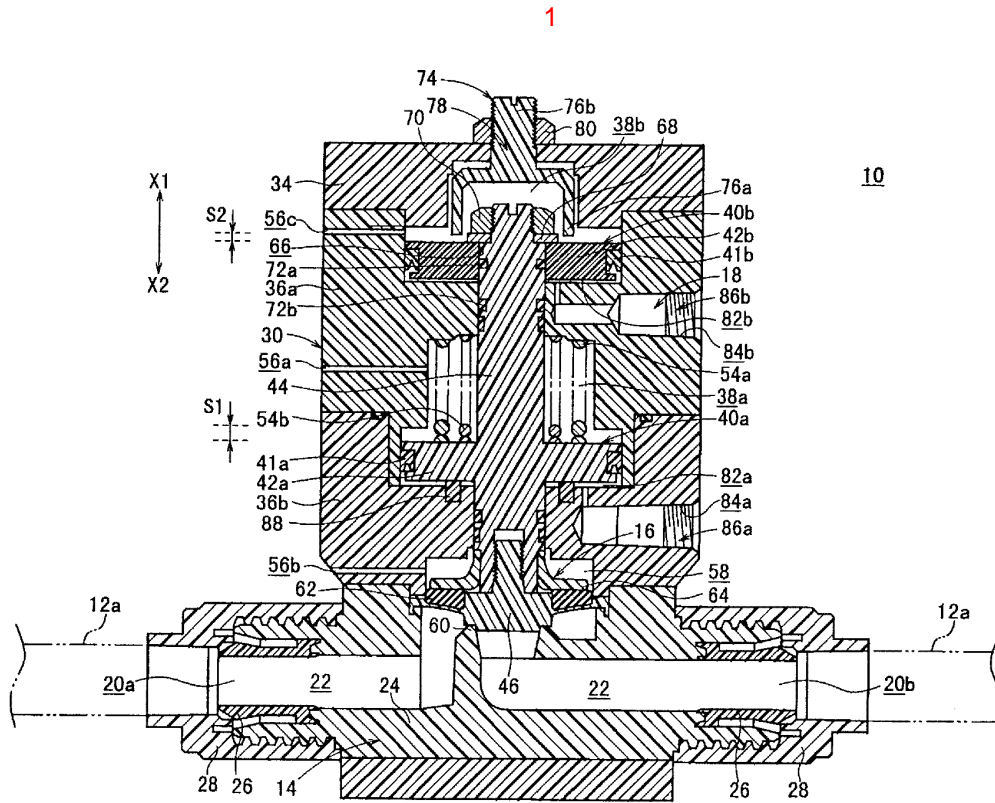
1 , (74)

11.

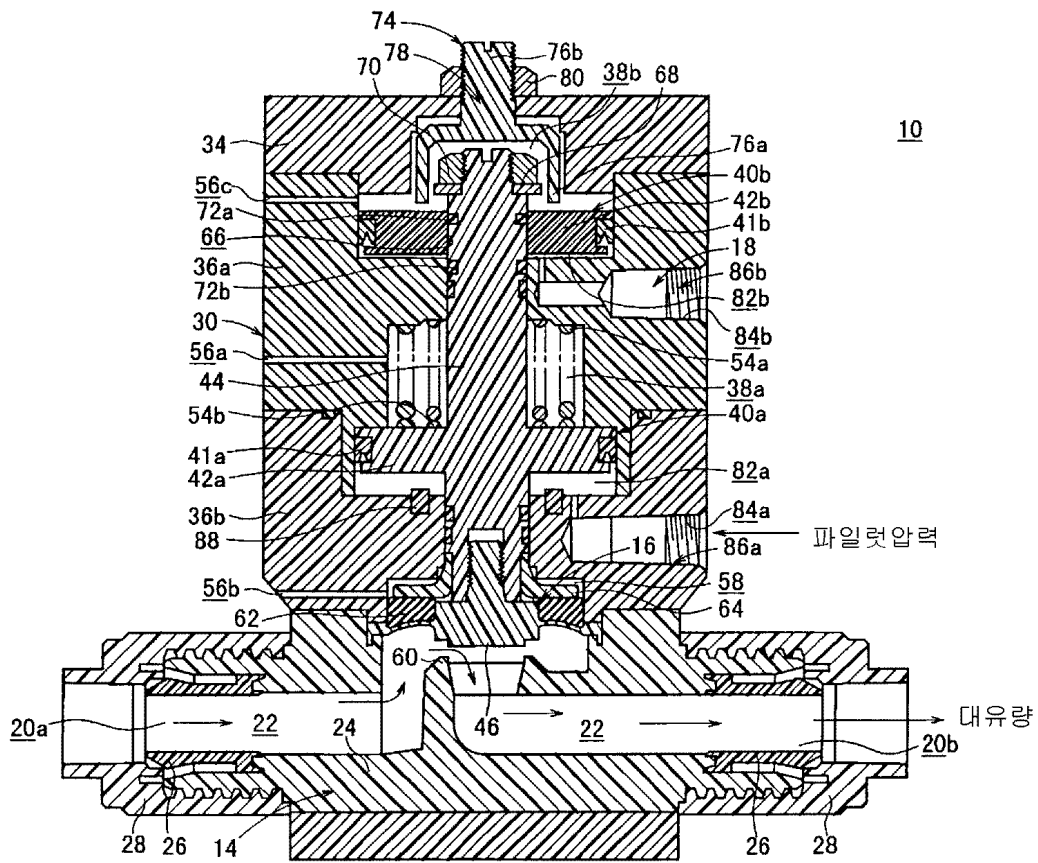
10 , (74) (16) (40b) (42b)
 , (16)

12.

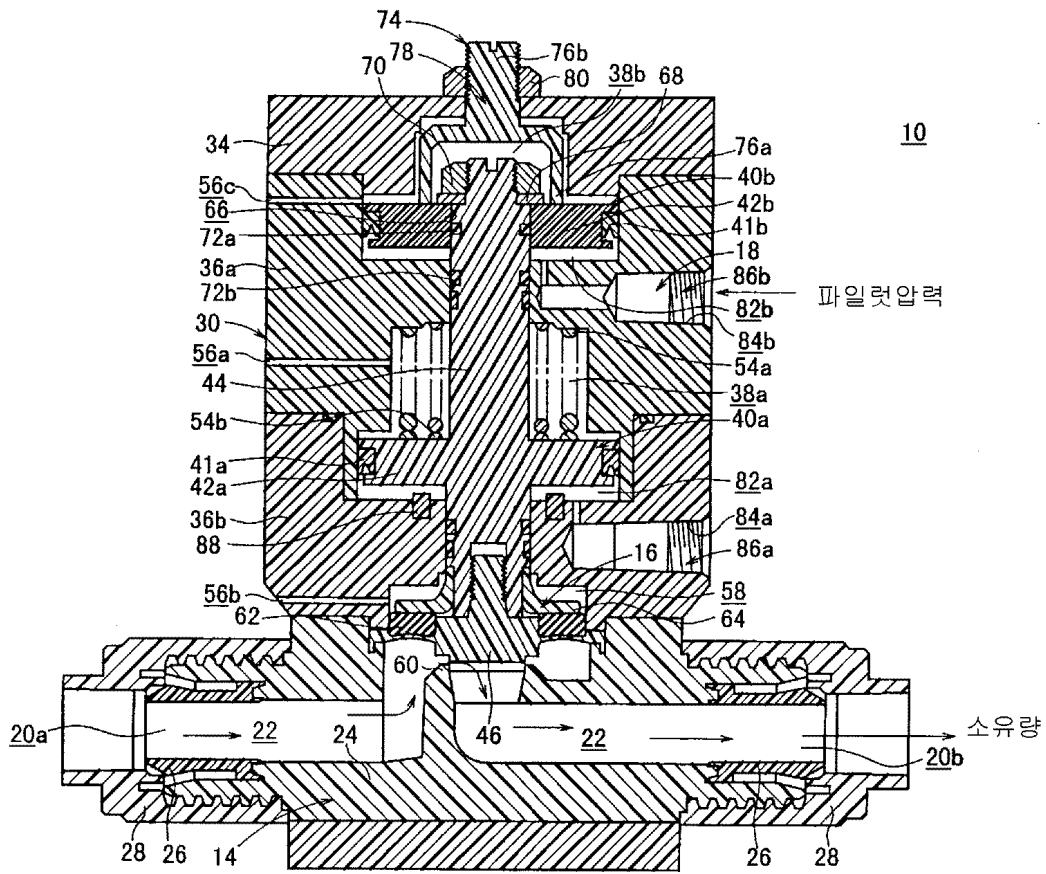
10 , (74) (42b) (42b)
 (76b) (76a) (78), (76b) (78)
 (80)



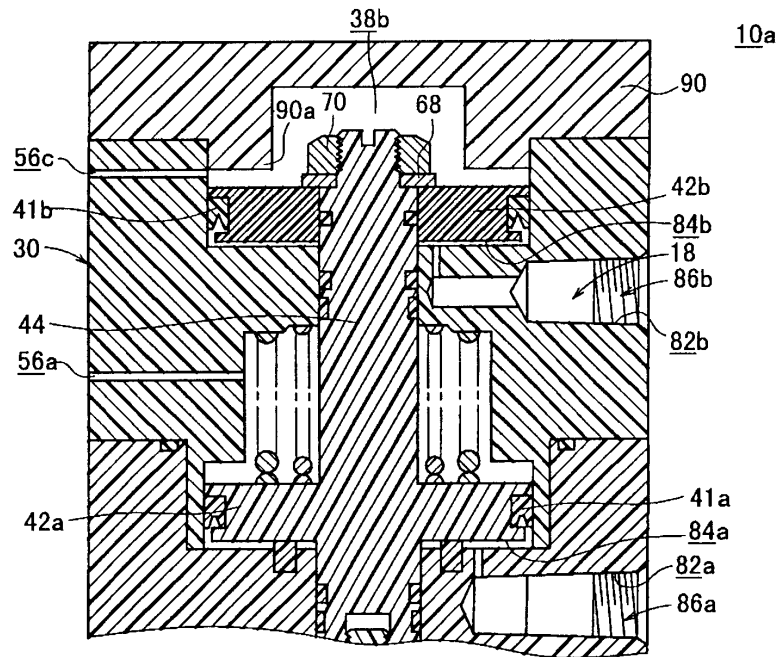
2



3



4



5

