

(19)
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(Y1)(51) 。 Int. Cl.⁷
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(24)2003 08 21
20-0324262
2003 08 12(21) 20-2003-0010839
(22) 2003 04 09

(73)

2 89

246 705

(72)

2 89

246 705

(74)

:

가 :

(54)

가 (Water hammer)

가 , 가 , 가

가 , 가 , 가

가 , 가 , 가

가 , (Water hammer) 가

1
 2
 3 가
 4 .
 5 2 3 (40)
 6 5
 7 2 3 (40)
 8 7
 9 " (一)"
 10 3 "T"
 11 10
 12 4 "+"
 13 2 "L"
 14 13
 *
 10 : 13 : 14 :
 14' : 15 : 15' :
 16 : 16' :
 17 : 20 : 30 :
 40 : 41 : 42 :
 43 : 44 : 50 :
 60 : 70 : 71 :
 110 : 112 : 120 :
 130 : 132 : 134 :
 140 : 142 : 150 : (seal)

5 (42)가 6 (41)가 (41) (42)가 (30) (40) ; (43) ,

3 4 (51) (20) (30) ((40) (13')가 (10) (13) (50) .

4 (20) (50) (51) (40) (43) (30) (60) (10) (14) (13) (13') (10) (13) (60) (20) (50) 가 (60) (40) (42)가 (42) 가 (60) 가 (60) .

(40) ,

7 8 (42) (41) (44) .

9 14 , " (一)" , "T" , "+" , "L" 2 .

3 (50) , (10) (30) (10) (40) (20) (30) (40) (20) .

3 (14) (60) (10) (14') (20) (15') 가 (30) (15) (20) (16') (40) (16) (30) (13)가 가 (50) , (20) (30) (40) (43) (50) (60) (60) .

3 (bore) (10) (15) (15') (30) (20) (42)가 (30) 가 (20) (10) (30) (40) (50) (40) (50) (10) (50)가 (10) .

50) , 가 (20) (30) (40) (43) ((60) (60) (14) .

3 (()) (40) (50) (50) (20) .

(50) (10) 가 (60) , (30)

(20) (60) (10) (16) (30) 가 (40)

(42)가 (40) (42) (16') (60) 가

(60)

(12) 3 4 (10) (12)가

(6)

가 4

9

(12) " (－)"

10

"T" (12) 가 3

11

(71)가 (70) , 9 " (－)"

12

10 "T" (12)

4 "+" 가

13

(12) 2 "L" 2

"L"

14

(71)가 (70) , 13 "L"

" (－)" , "+" , "T" , "L"

(12)

가 90 °

(12)

가

가 가 가

(Water hammer) 가

가

가

1.

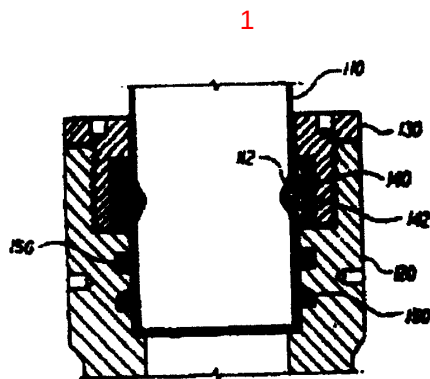
5) (13)가 (14) (14') (1) (15') (16) (16') (17)가 (10) ; (15') (15) (20) ; (16) (16') (17)가 (16) (30) ; (41)가 (41) (42)가 (30) (42)가 (40) ; (51) (13')가 (10) (20) (30) (40) (50) ; (60) (50) (51) (40) (43) (30) (20) (10) (13) (14) (13') (60) (42)가 (60) (42) 가 (60) 가 (40) (60)

2.

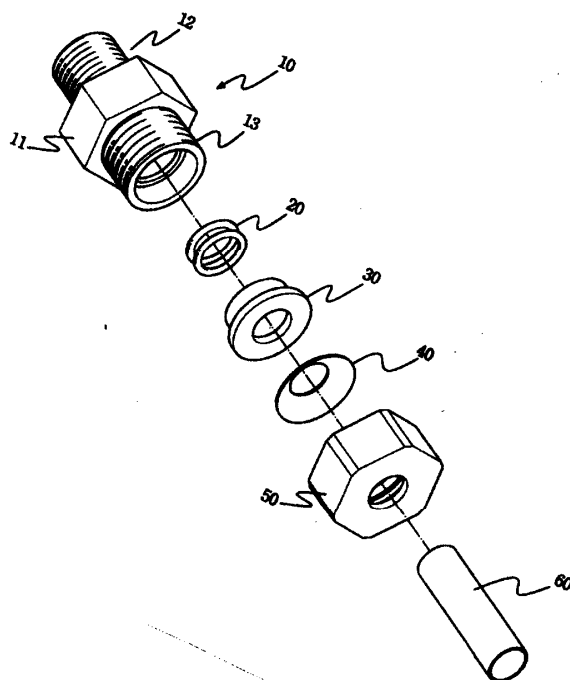
1 (40) , (42) (41) (44)

3.

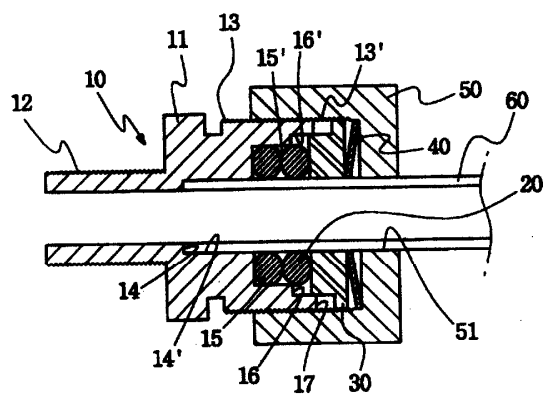
1 " (-)" , "T" , "+" , "L" 2



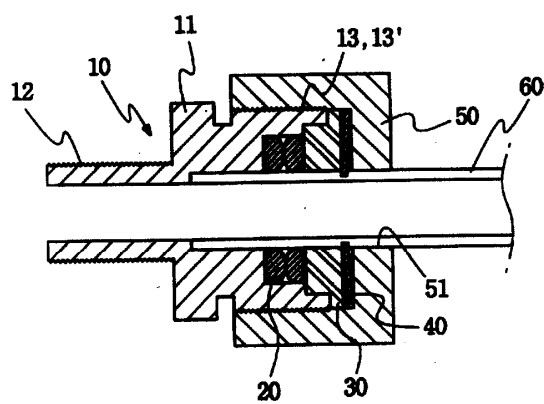
2



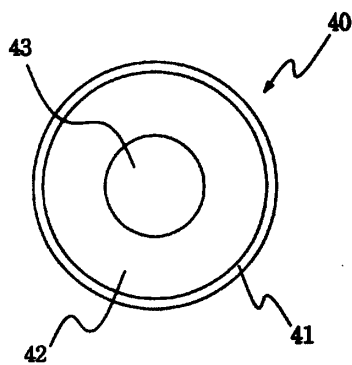
3



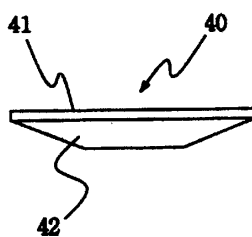
4



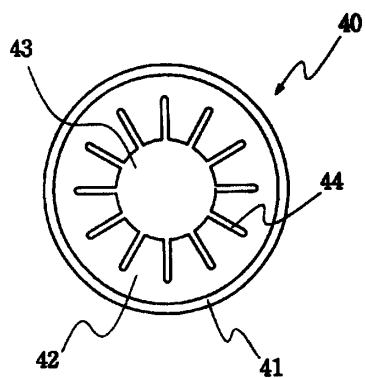
5



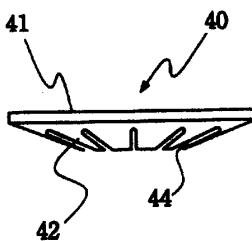
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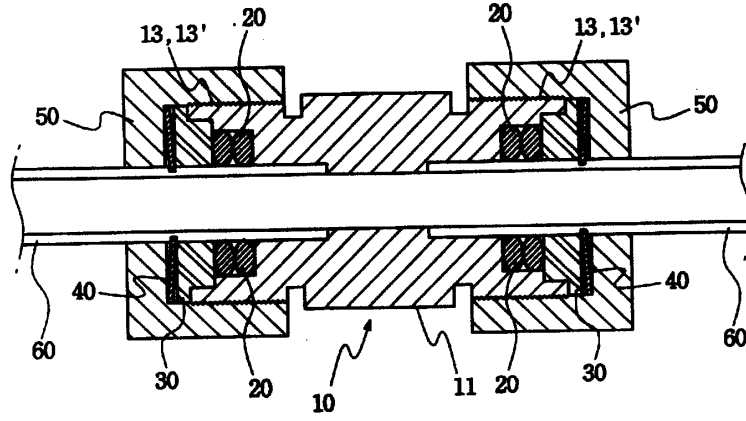
7



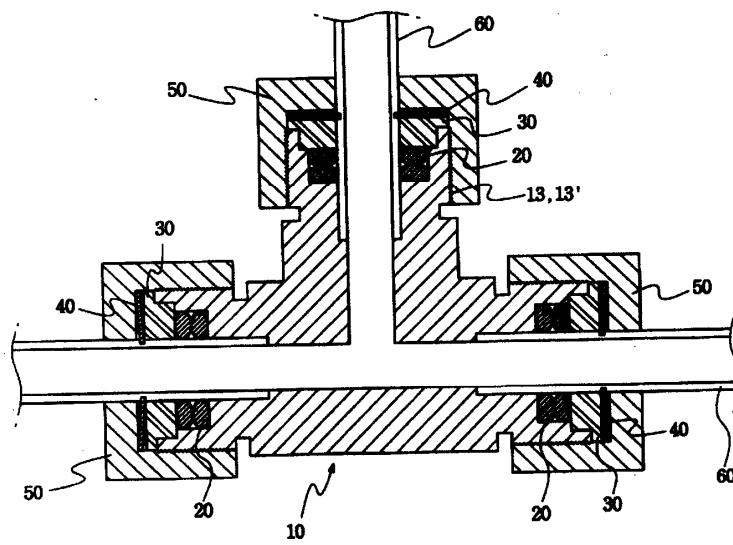
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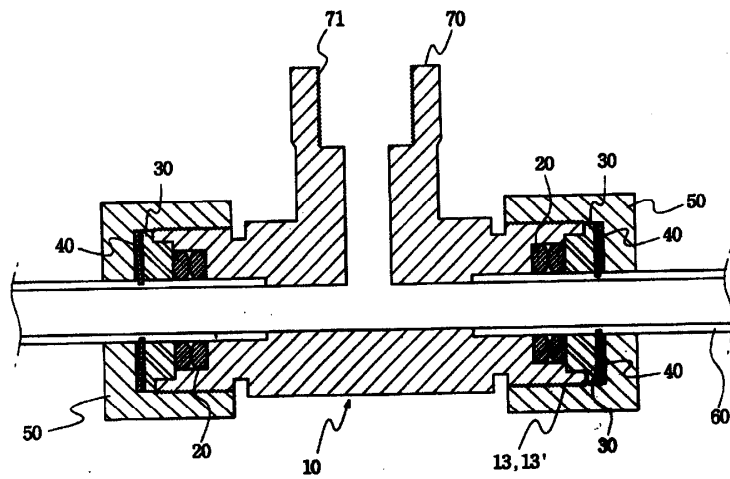
9



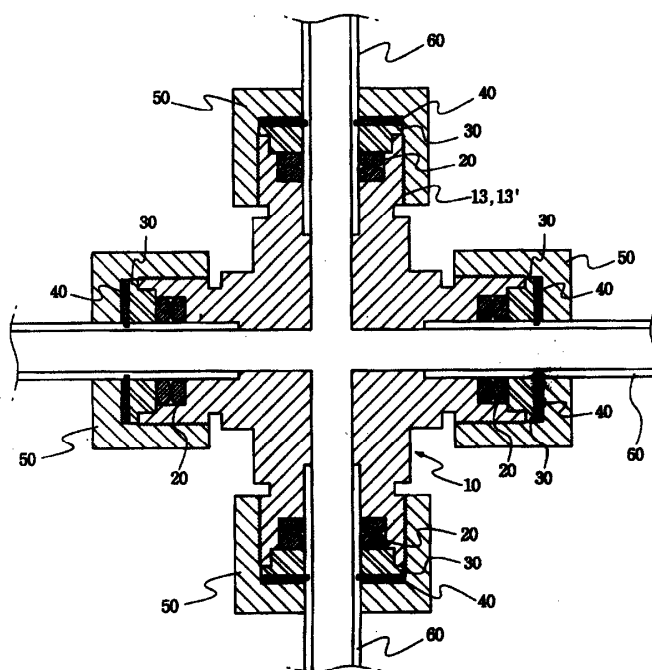
10



11



12



13

