

(54)

(12) (10) , (12) O- (15) , O-
 (18) , (18)
 (29) (27), (10) (27),
 (18), O- (15) (20) , (29) (12) (10) ,
 (12) O- (15) , (15) (18) ,
 1 (127) , O-
 (29) 2 (132), (10) (127,132),
 (18), O- (15) (20) , (29)

6

, O- , , ,

가

가

4,911,406

가

가

(teeth)

가

가

, 가

. O-

4,911,406

가

PEX[-]
 가 가 . 가

1 4,911,406
, 0 -

1,406 2 4,91

1

2 1

3

4

5 4,911,406 0 -

6

7 6

8

9 , , (faucet) ,

10 가

11 ,

12

1 가 ,

가

가

4 가 ,

가

5

4,911,406

1 5 O- (15) (14) (12) (10)
 (16) (18) (29)
 2 가 (27) (29)가
 (27) (30) (36)
 (31) (39)가
 (41)가 (10) (14) (40; 1)

(20) (12) O- ,
 (22) (10) (12)
 1 가 (35) (12)
 (14) , ,
 PVC, CPVC, PEX

1 가 O- (16)
 (30) (36) O- ,
 (29) (3) (30)
 (22) (26)가
 가 (26)
 (12) (50) 가 (50)
 가

O- (2)
 9) 0.203mm(0.008inch) 0.305mm(0.012inch)
 (26)가 (33)
 O- ,
 가 가

4 1 , 4,911,406 , 가 .
 (50)

5 4,911,406 (50a) .
 (60) - 가 61

5

6 가 , , 4,911,406
 , 가 6 , 9 가
 ,가 , ,

4,911,406

6 11 , (114) (112) (110)
 . O- (115) (116) . (118)
 . 7 가 (133)
 . (127) (129)가
 . 2 (132) O- (118)
 (127, 132) (130) (136)
 , (141)가 (131) . (139)가
 , (140; 6) (110) (114)

(120) (127) O- , 가 (11
 2) . (122; 10) (110)
 (126) 가 (12
 8)가 , 가 (12
 0) . 6 . (13
 5; 7) (112) (114) , , PVC,
 , PEX, .

6 가 , O- (116) , (13
 2) O- , (131) (136)
 (132) , (127) (129) (133)
 (130) ,
 (122)
 가 (126)가 ,
 가

가 (126) 가 (150) (1
12) (150 ; 10) 가

O- 가 가

가 (129)
0.305mm(0.012inch) 0.203mm(0.008inch)
(126)가
(133)

가 O-

가

8

9

가

10

(118, 178, 188)

(127, 177, 187)

11

가

12

10

11

, O-

(118)가

가

가

가

(57)

1.

가

가

2.

1 ,

3.

1 ,

4.

1 , 1 2 가 , 1 2

5.

4 , 1 2 2

6.

1 ,

7.

1 ,

가 ,

8.

6 ,

9.

1 , ,

10.

7 , ,

11.

,
,
,
,
가 , 가
가 , 1 ,
2 ,

12.

11 , .

13.

11 , ,
가 ,

14.

11 , , 1

15.

가

1

16.

10

17.

15

1

18.

15

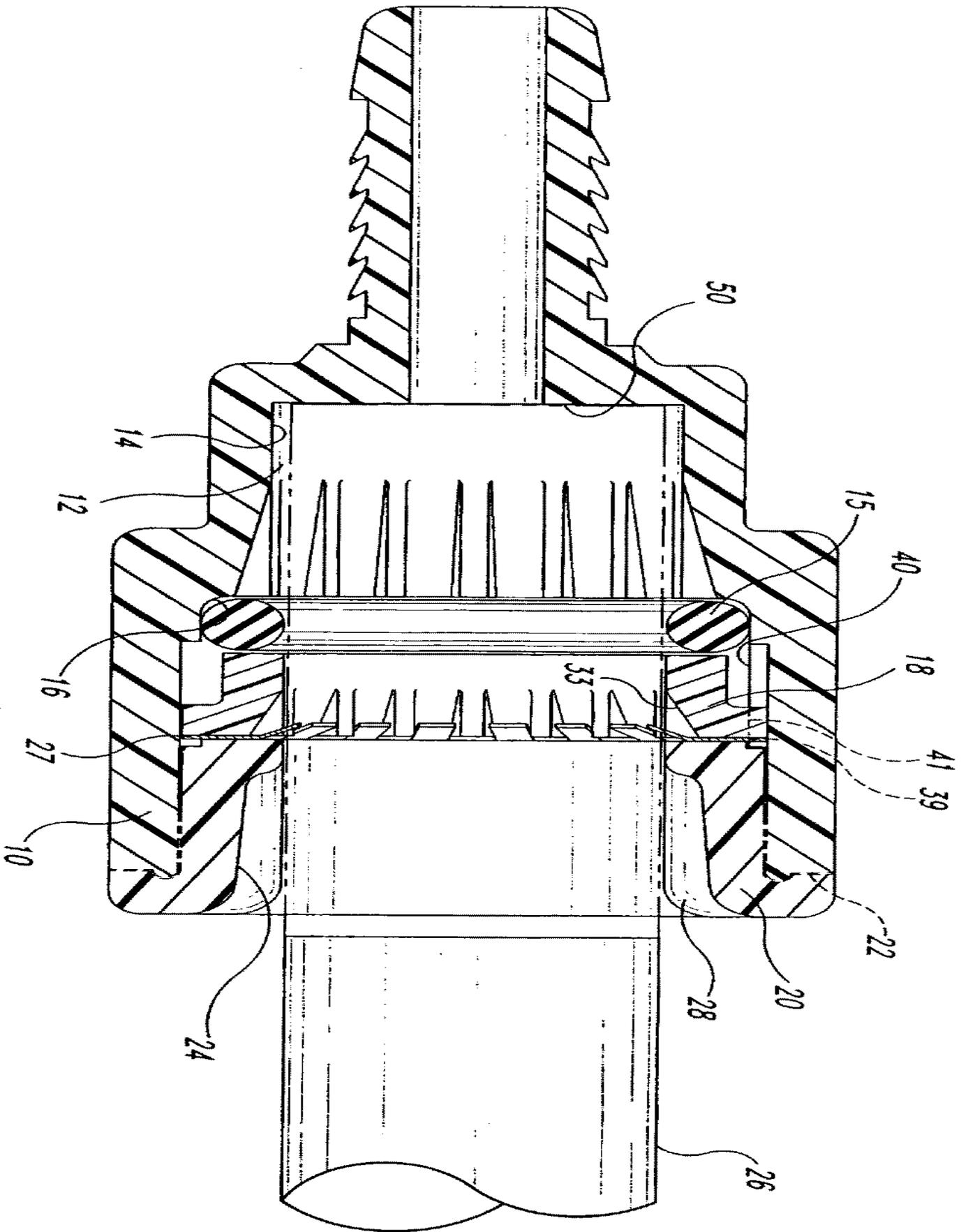
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15

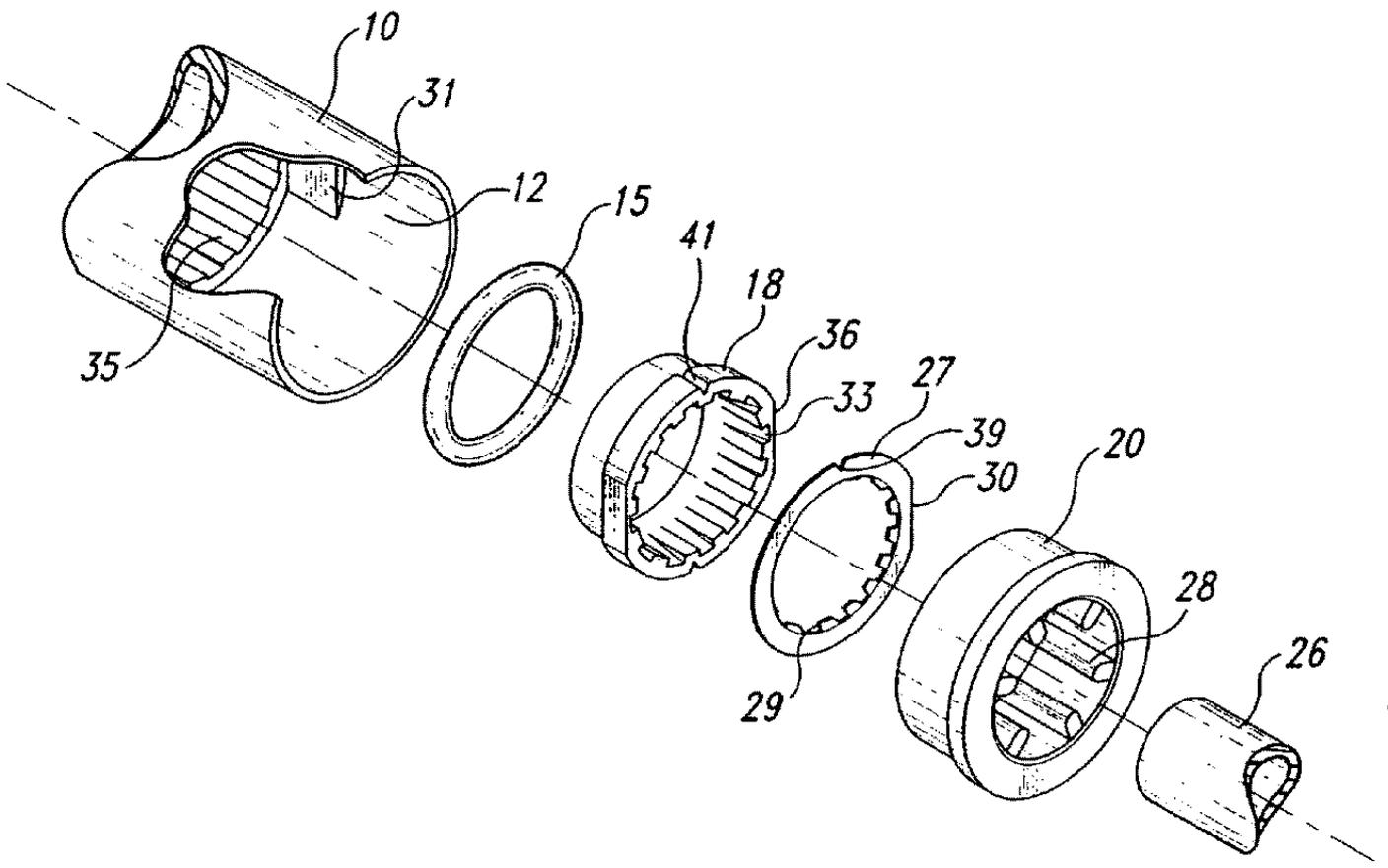
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1

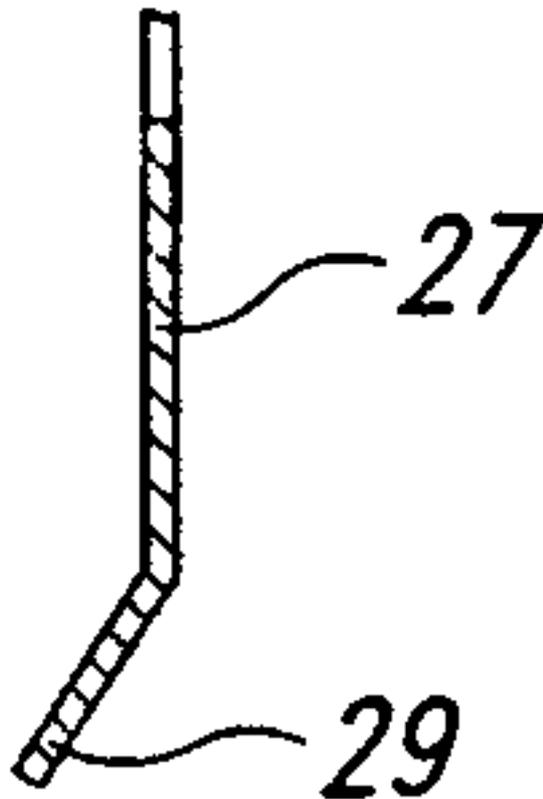
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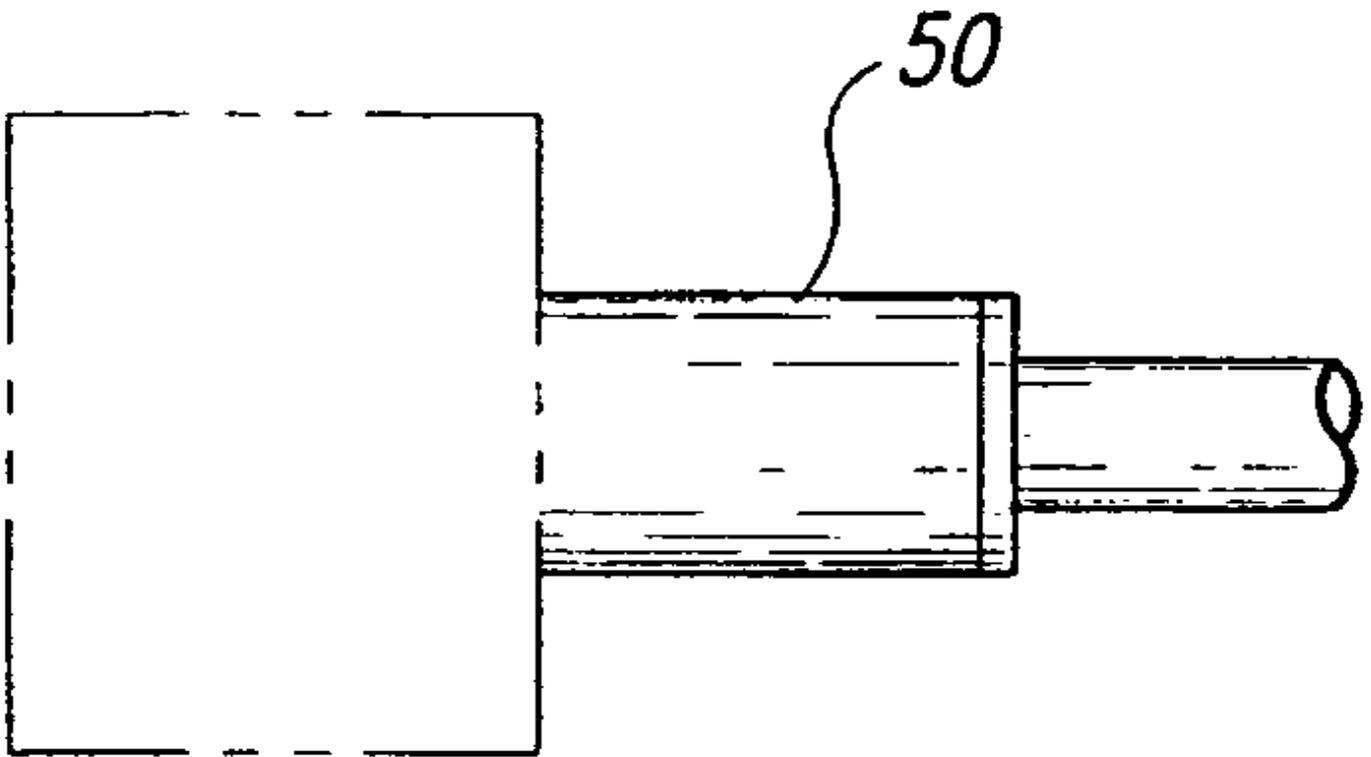
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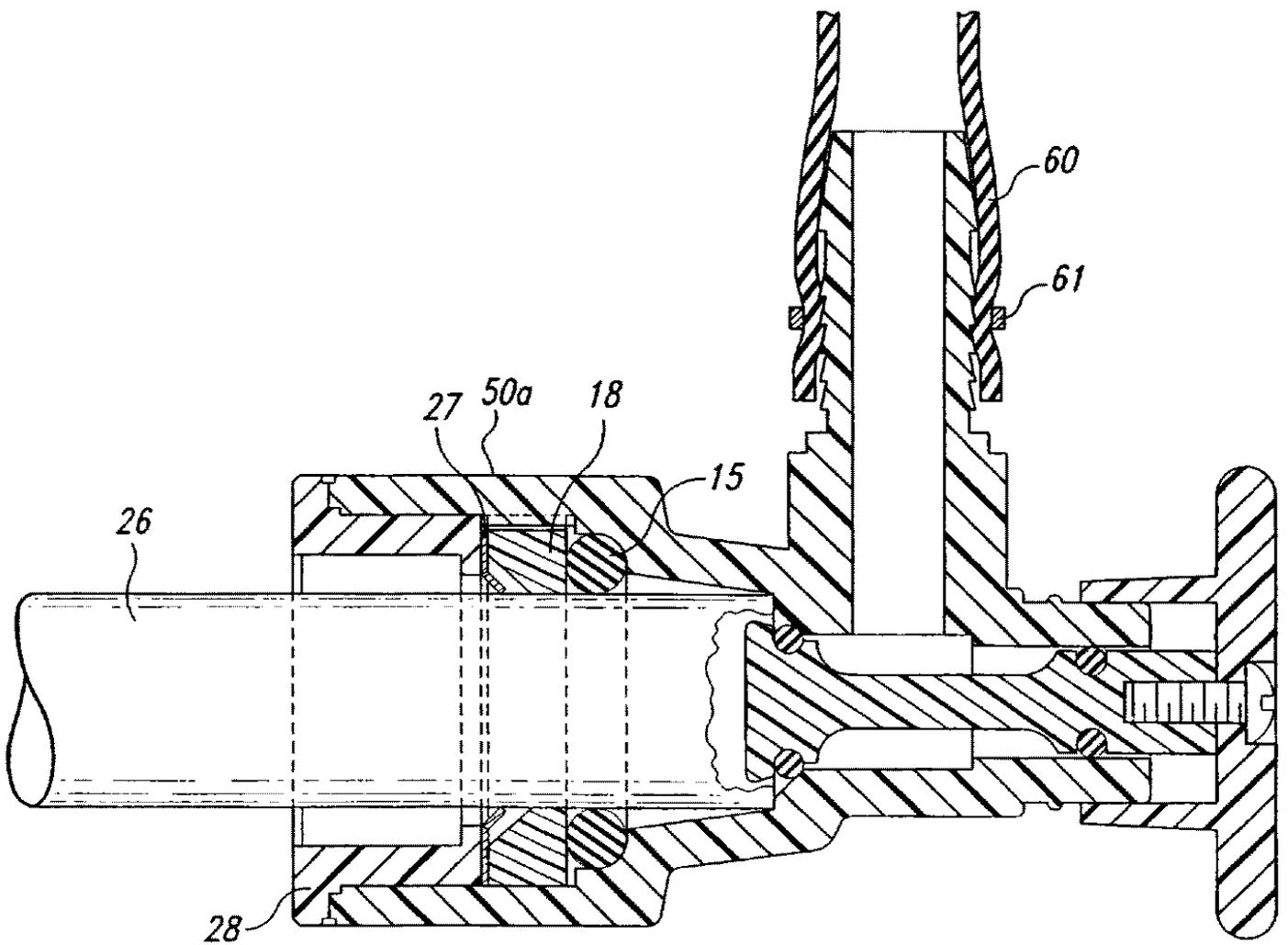
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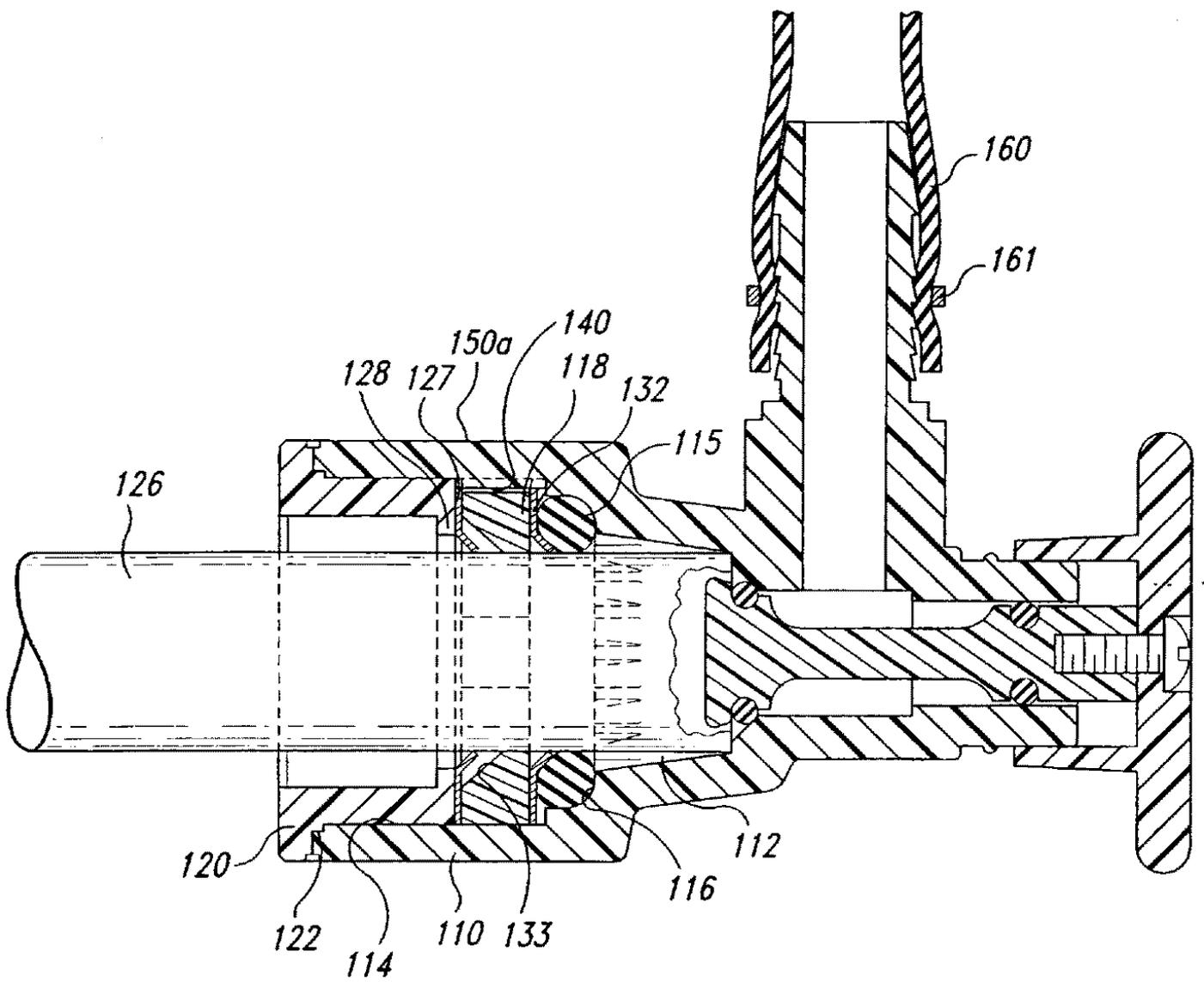
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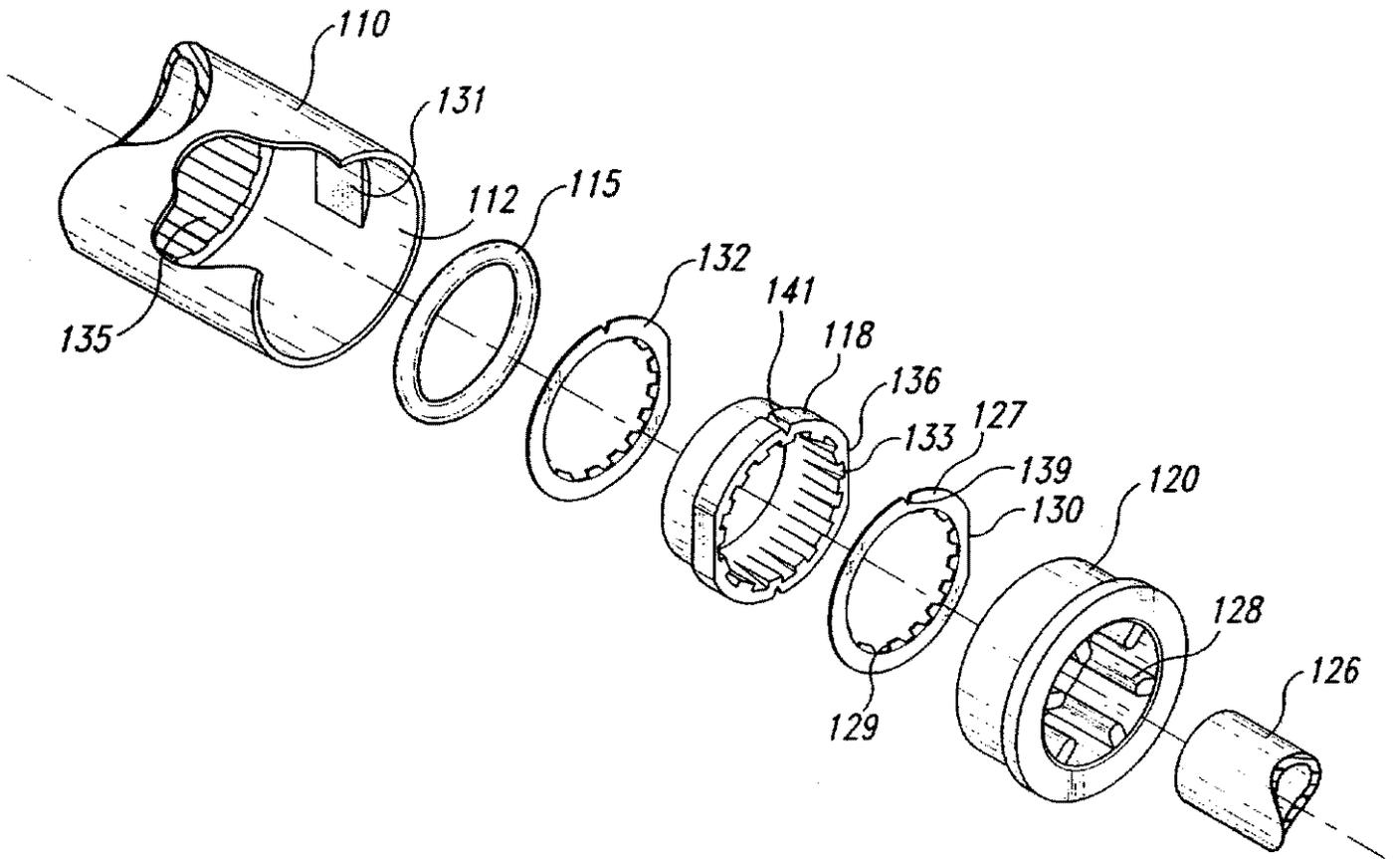
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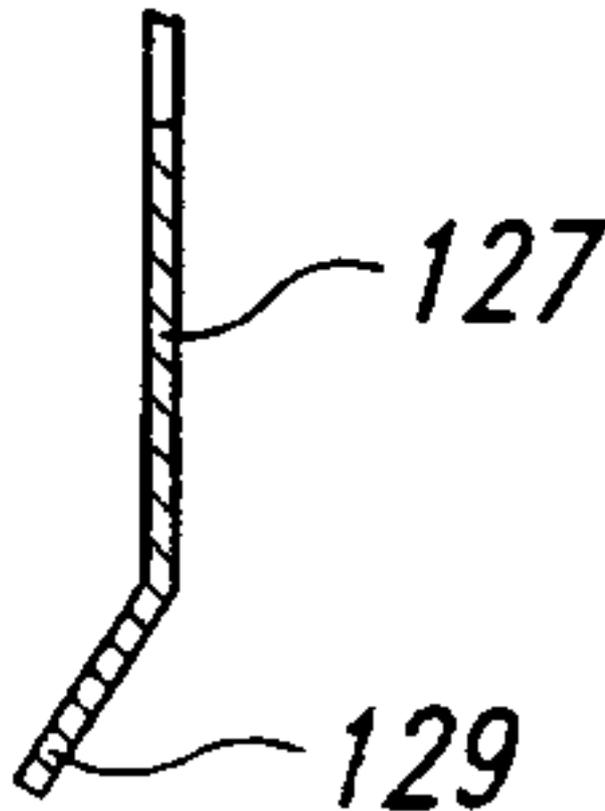
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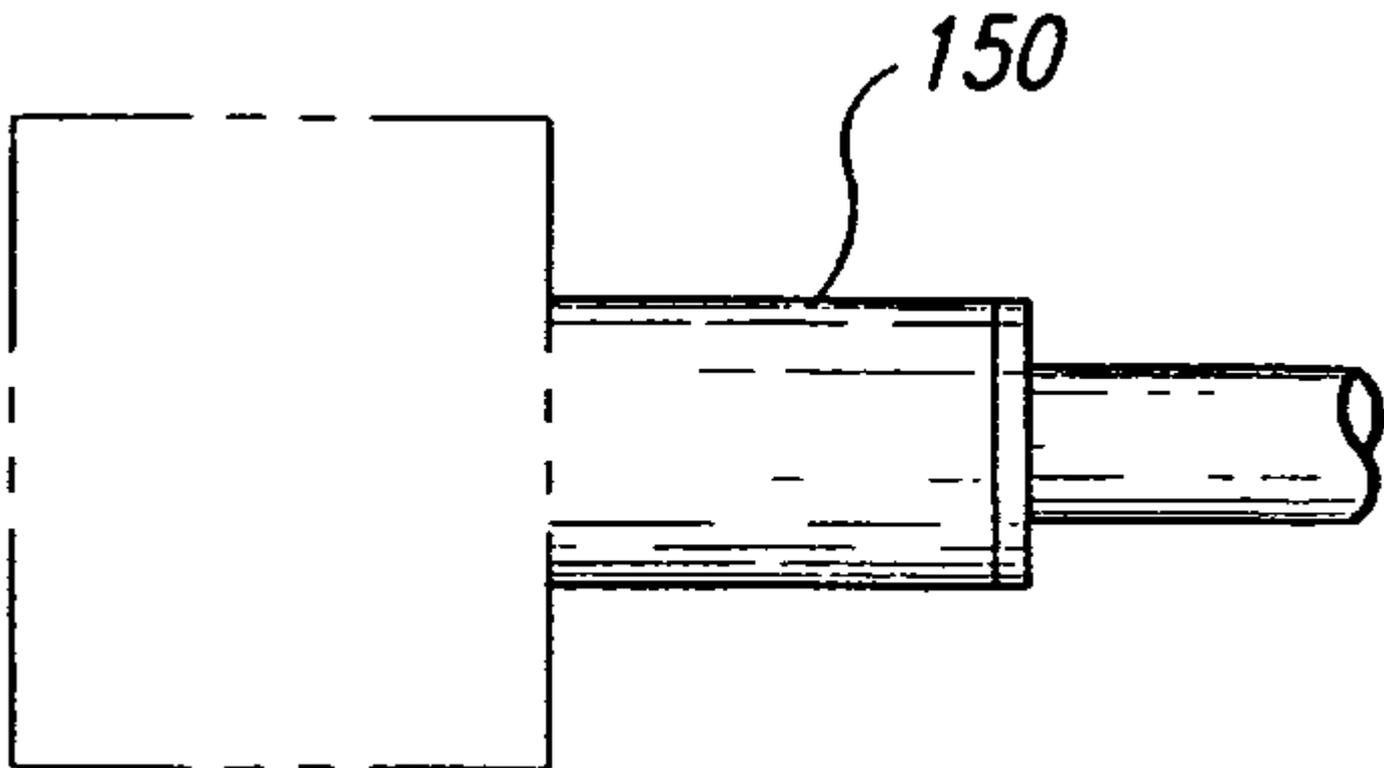
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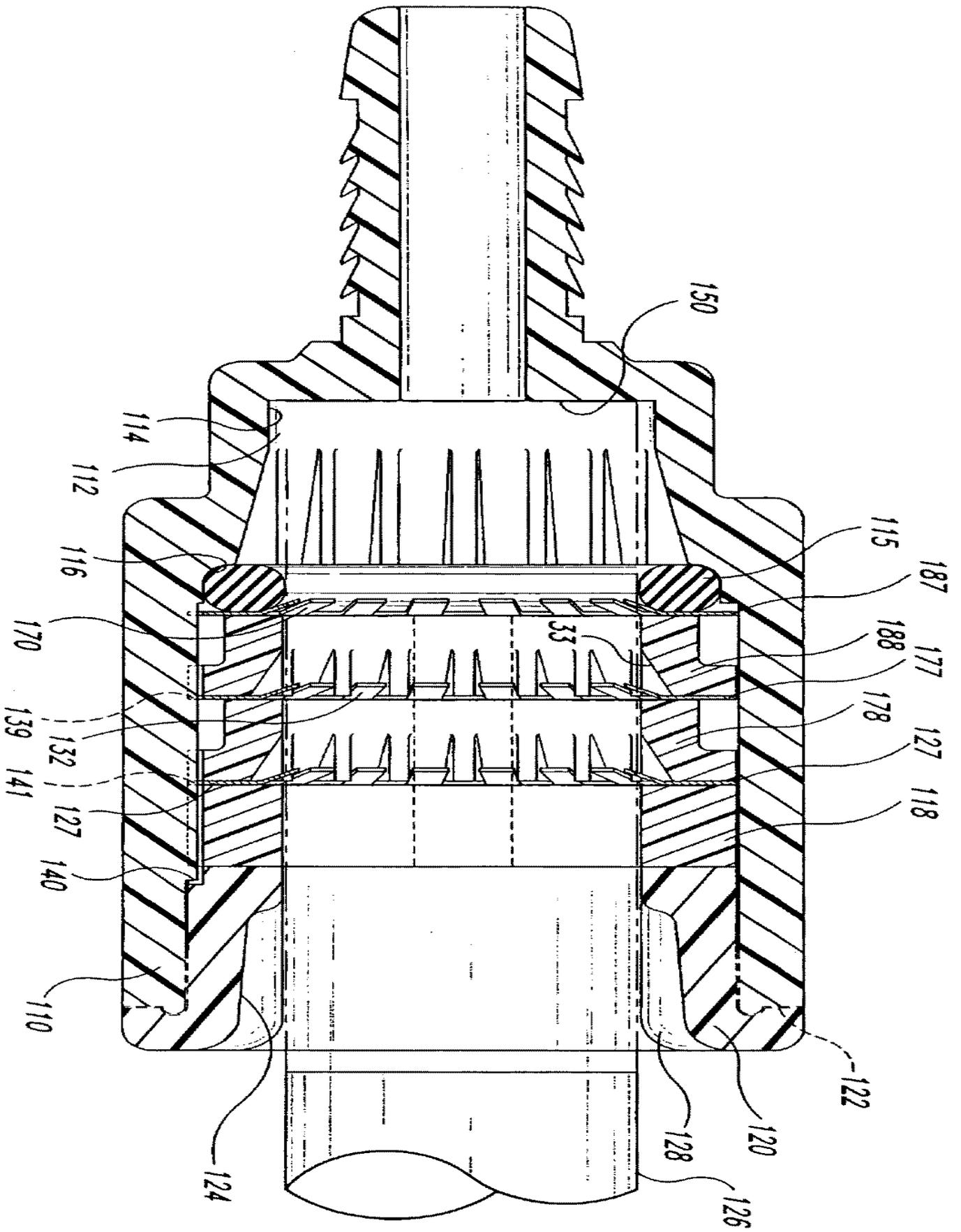
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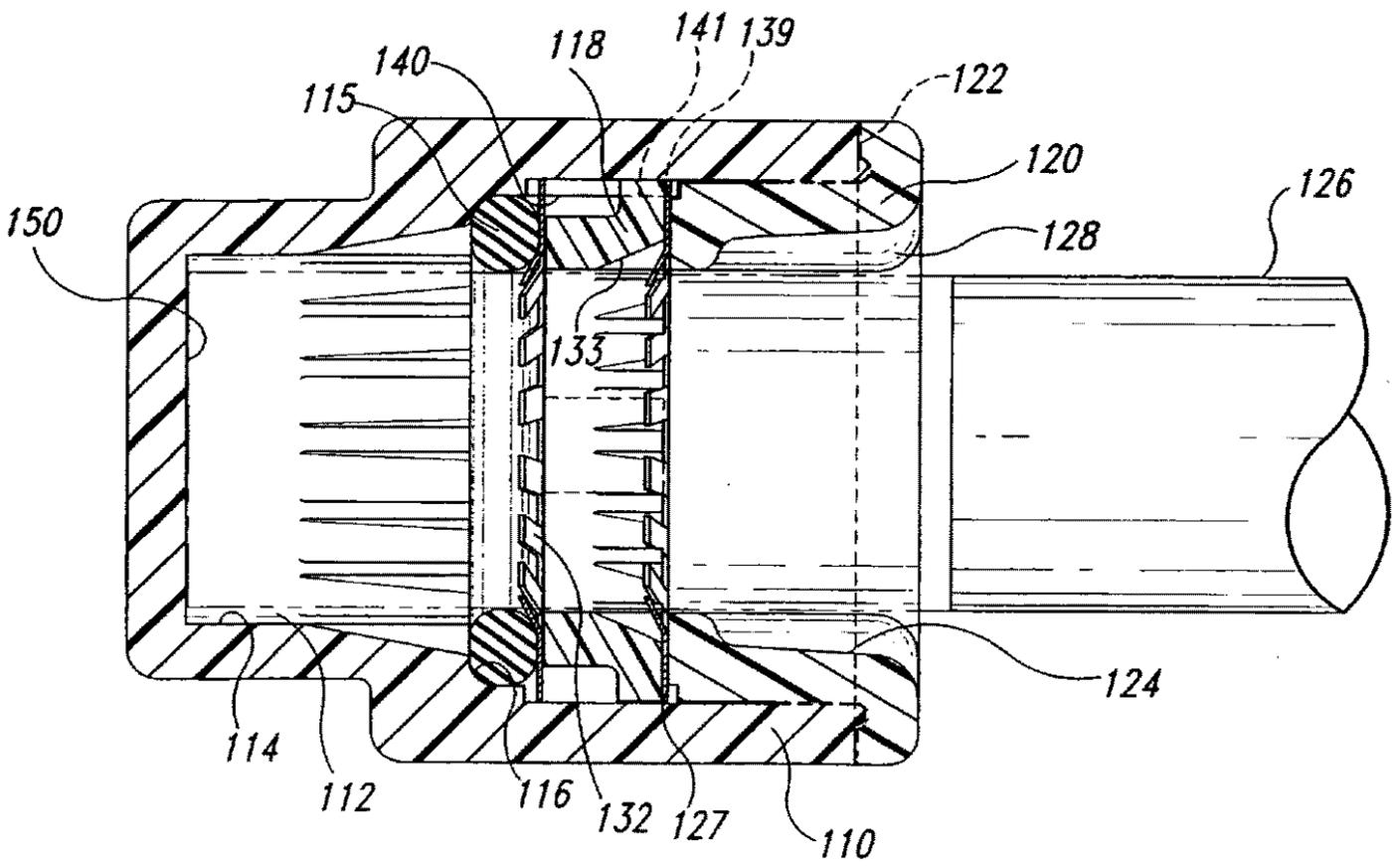
9



10



11



12

