

(19)
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(KR)
(A)

(51) 。 Int. Cl. 7
A61M 25/095

(11)
(43)

2002 - 0005463
2002 01 17

(21) 10 - 2001 - 0040233
(22) 2001 07 06

(30) 09/612,487 2000 07 07 (US)

(71) ,
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(72) 34561 6
34406 22
35590 12
36845 26/1

(74) :

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2 1 가 .

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4 - .

5 4 .

6 4 .

7 - .

8a .

8b .

9a - .

9b 9a .

9c 9a .

9d 9a .

10 .

11 - .

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13a .

13b .

* *

20, 242: 24:

25, 184: 28, 180:

29: 33, 48:

34: 36:

38: 42:

210: 212:

가 1mm 2mm (VT) . VT 가 , VT

5,545,951 , 08/793,371 PCT WO 96/05768

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가 가 , 5,409,000

가

PCT WO 99/05971

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09/122,137 1998 7 24 1999 7 22
09/357,559 , 974,936

100

5,738,096
가

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(RF)

RF

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RF

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가

RF

891,095 , 5,836,990 , 5,836,874 , 5,673,704 , 5,662,108 , 5,469,857 , 5,935,079 , 5,
5,341,807 , 5,078,714 , 2,285,342 , 5,447,529 ,
5,935,079 , 5,836,990 5,447,529
- '529

가

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5,341,807

'807

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ECG

ECG

'807

ECG

(sink)

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1 2 2 - 3 1 2

1 2 1 2 1 1 2 2 1

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가 가

2 2 , 1 1 1 2 2
2 2 , 1 1 1 2 2
2 , 1 1 2

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2 1 2

, 가 가

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18

1 가
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1 2 (18) (20) 가 (34)
 . (34) (36), (38) (42) (36)
 , (24), (25) (28)
 . (36) (24, 25) (28)
 가 가 (40)

(40) (28), (24) (25) , (40) (28)
 (20) , , , . (40) 가 (28)
 (24) 가 (40) (40)
 (40) 가 (36) (24), (25) (40) (48)
 (56) (3). (48)
 (49) (40) , (48)

2 (110) 가 , (48) (48) (110)
 3M 1149F 130cm²

(40)가 , / ()
 20) .

(20) (40) (46) (44)
 (21) (40) (21) (30) (3)
 3) (33) (21) 가 , -
 (40) (40) (21) (21) (21)
 (21)

(40) (34)
 . (40) (36) , .

(20) (18) 가 2 (51)
 (24) (28)가 (110) (29) (20) ,
 96/05768 5,391,199 1995 1 24 PCT WO
 ()
), (28) (110) (31)
 가 가 (28)
 (27) (27) (41)
 (40) (40) (43) (36)(1)
 . (36) (27) (18)

가

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5,409,000 PCT

WO 99/05971

5,391,199 (20) (26)

(24)

2 (53)

(40) (21) (20) (22) (24) RF 가 (24)

(不在) 가 - 가 RF 가

1 - 3 (20)

(22) (24), (25) (28) (50, 52, 54)

(30) (40) (40)

(56) 10kHz 100kHz (AC)

(58, 60) (24) (24) (25) 50kHz 가

가 (24) (25) (48)

(56) (48) (62)

(64) (24), (25) (48)

50kHz 가 0.5mA

(, 1988 Bureau Central de la Commission Electrotech

nique Internationale, CEI IEC 601 - 1, Medical Electrical Equipment Part 1 - General Requirements for Sa

fety). 1 (66) (24) (48) 가

2 (68) (25) (48) 가

(66, 68) (70, 72) 가 (70, 72)

(74) (74) (76) 가 (76)

AC (DC)

(78) (78) (40)

$$\frac{R1}{R2} = \frac{R3}{R4}$$

5

(4 104) 3 (25) (48) 5 (R3)

106) (24) (48) , 4 (R4)(4

(48) (48) . 4 (98)

(48) (28) 5, 6 7 , ECG

(24) (25) 가 , (24)

(48) (25) (48)

가 (R1)(100) (R2)(102) ,

(24) (24) (48)

(25) (48) 가 , (112), (114)

(116) 0

(R1, R2)가 , (24) (25)

(24) (25) 가 ,

(100, 102) (24) (25)

(112) (1)

02) (100) (25) (24)

(100, 102) (25)

(48) (24) (48) (24)

가 (100, 102) (25) 가 10 , 100 가

(48)

6

(90) 5 (100, 102) (120, 122) (120, 122)

(25) 가 (24) (24) (48)

(25) (48) , (24) (120)

가 (122) (24) 가 (24)

(48) (24) (48) (25)

(48) 가 , (112), (114) (116)

0

5 (24) (25) (24)
 (48) (25) (48) (24)
 (25) (120, 122) (24)
 (25) 가 (112)
 (25) (122) (120)
 (24)

(24) (25) 가 -
 (120, 122) (24) 가 (48)
 (25) 가 (48) 1000

7 - 7
 (24) (25) (130, 132) (130, 1
 25) (24) (25) (24) 가 (112)
 32) (112) (114) 가 (116)

(24) (25) 가
 (25) (48) (24) (48) (130)
 (132) (112) (24)
 (48) 가 (48) (25)
 (25) 가 (24) (24) (112), (1
 14) (116) 0

(24) (25) (24)
 (48) (25) (48) (24) (130,
 132) (24) (25) 가 (130, 32) (24)
 (25) 가 (132) (130) (112) (25)
 (24)

(25) (25) 가
 (150)(8a) (25) (25) (25)
 (150) (25) (PEEK) (20
 a) , 8b , (25) (20a) (155)

20) (20) , ()
 (24) 0.05Hz 500Hz (24) ECG
 (24) 10kHz 100kHz (56 90)

CT WO 96/05768 5,546,951 , 08/793,371 ; P
 5,738,096
 가
 가
) 가 , (

9a, 9b, 9c 9d (20) (162) (160) (162)
 (166) (164) (162) (164)
 (168)
 (164) (170)
 {4 2 (172, 174) 9d } (20) 4 (20) (160) 4 (186)
 (40) (184) (182) (40)
 (180)

9a 9d (162) 4 4 (1
 64) (166) 4

9a 9d 3 7 10
 (200) 9a 9d (200)
 3 7 (202, 204, 206, 208) (224, 226, 228, 230) (20)
 4 (160) (164) 1 (210)
 (202, 204, 206, 208) (212) (214)
 (164) (48) 가 (212)
 (164) , (214) (225) (184) (227)

(48) (214) 3 7 (164)
 (214) (212) (164)
 (164) (214) (184) 가 (48) 가 (210)
 (212) (48) 2 (218) 1
 (164) 가 (200) (164),
 (164)
 (200) (220) (164) ECG (220) (222) (ECG)
 11 (236) 9a 9d (236) (20)
 (232) 4 (234) (234) (23)
 4) (232) (232) (20a)
 (234) 1.0mm , 2 8mm ()
 (40) (234) (20) (232) (184)
 (234)
 12 (20) (240) ()
 20) (240) (245) (244) (245) (240)
 (246, 248, 250) (246, 248, 250) 3 6mm , 2mm
 (242) ()
 12 (20) 10 (200)
 (242) (244, 246, 248, 250)
 " " RF
 12 (20) 3 (20) (240) 3
 (200)
 9a 9d, 11 12 - 가

(57)

1.

i) , ;

ii) ;

iii) ;

iv) .

2.

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a) i) , ;

ii) , ;

iii) ;

b) ;

c) i) ;

ii) , ,

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19 , ,

i) 1 1 ;

ii) 2 2 .

27.

26 2 , 1 2 , 1 .

28.

27 2 , 3 , 3 1 .

29.

26 , 1 2 3

30.

29 , 1 1 ,
2 2 , 3
1 2 .

31.

30 , 3 .

32.

26 , 1 2 2 , 1
2 1 2 가 , 2 1 2
1 .

33.

26 , .

34.

10 , 1 2 , 1 2 가 ,
, 1 1 2 , 1 1 2 가
2 2 , 2 2 ,
1 1 2 1 2 ,
1 1 2 2 .

35.

34 , 1 1 , 2 2 .

36.

35 , 1 가 , 1 가 , 2 가 , 2 가 , 1
가 , 2 1 가 , 2
가 , .

37.

34 , 1 1 , 2 2

38.

37 , 1 가 , 2 가 , 2 가 , 2 가 , 1

39.

34 , ,

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39 , .

41.

34 , .

42.

10 , 1 2 .

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42 , .

44.

42 , 1 가 , 1 가 , 2 가 , 2 가 , 2 가 , 1

45.

42 , 1 2 가 ,

46.

45 , .

47.

42 , .

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a) i)

ii)

iii)

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d)

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54 , , 1
1 2 2 가 , ,

75.

74 , .

76.

74 , 가 , .

77.

74 , .

78.

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a) 1 2 ;

b) 1 2 .

79.

78 , .

80.

54 ,

a) ;

b) ,

가 .

81.

54 ,

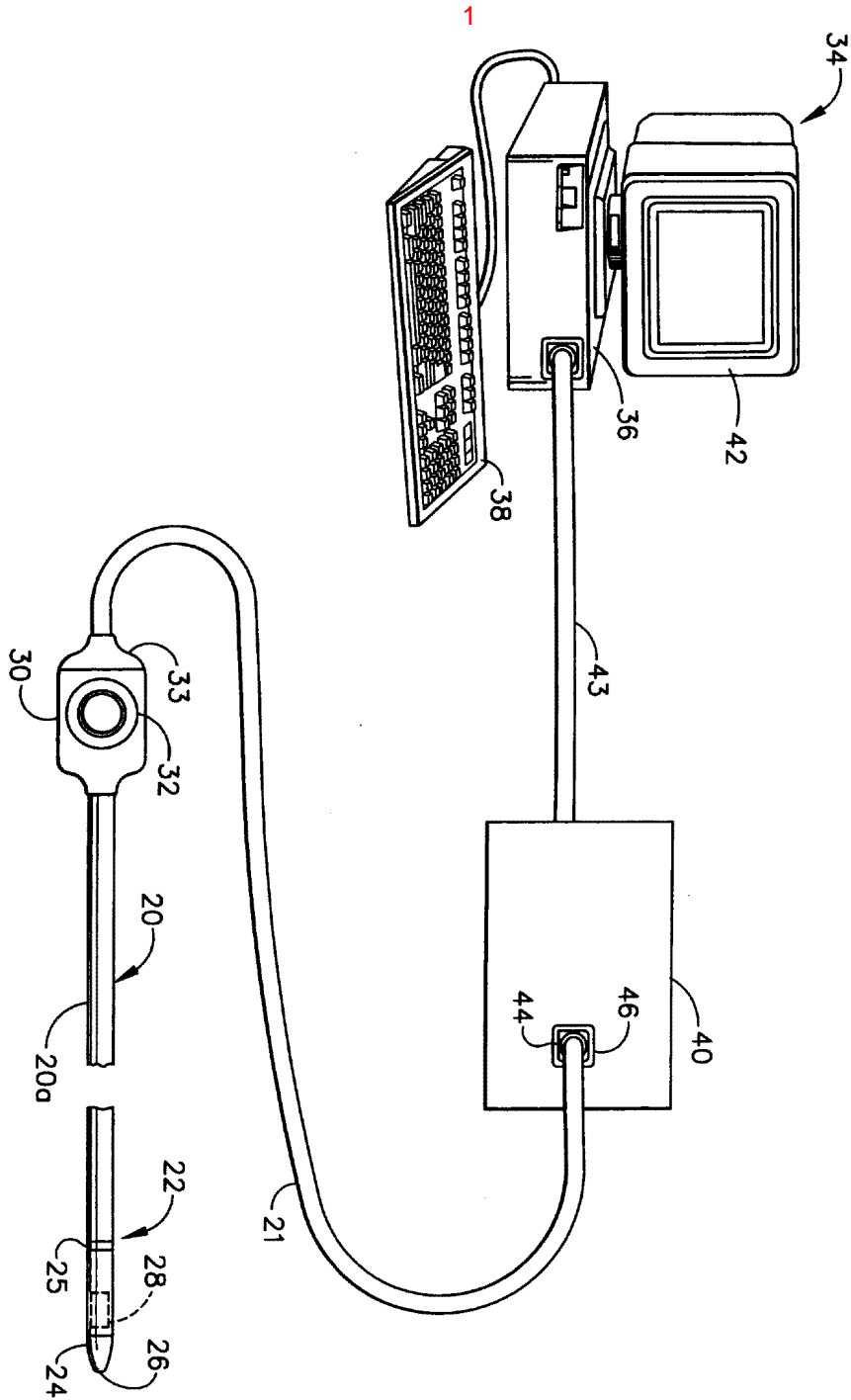
a) ;

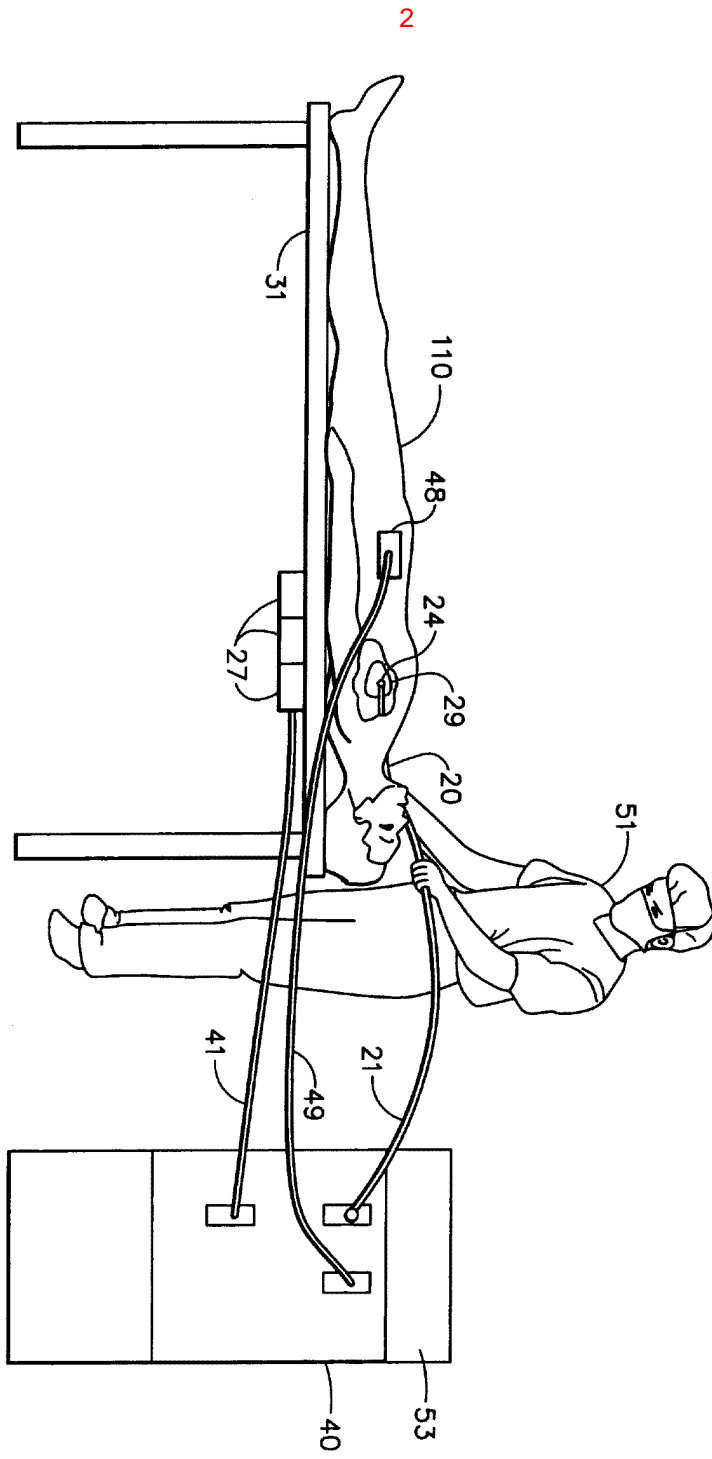
b)

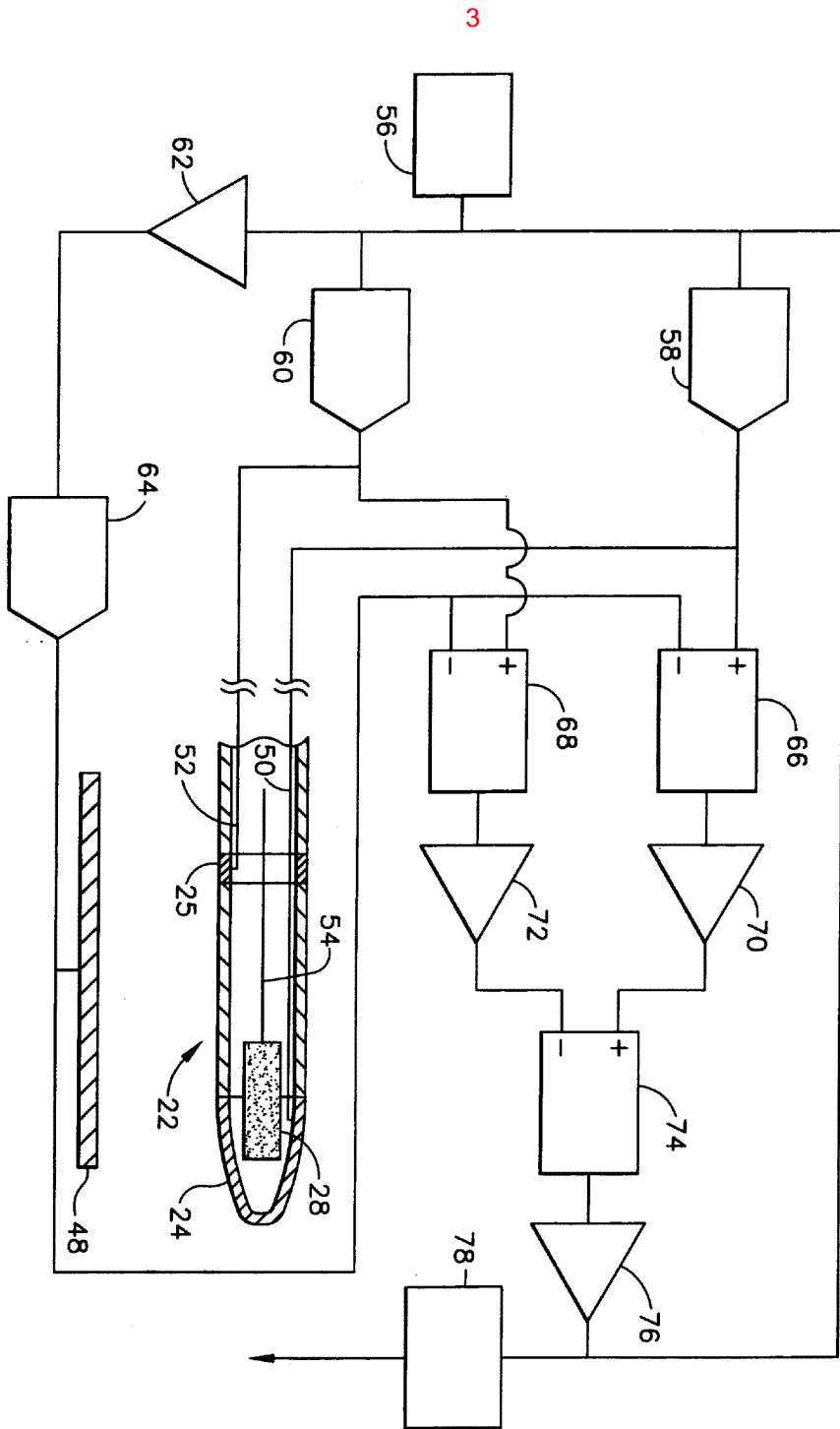
가

82.

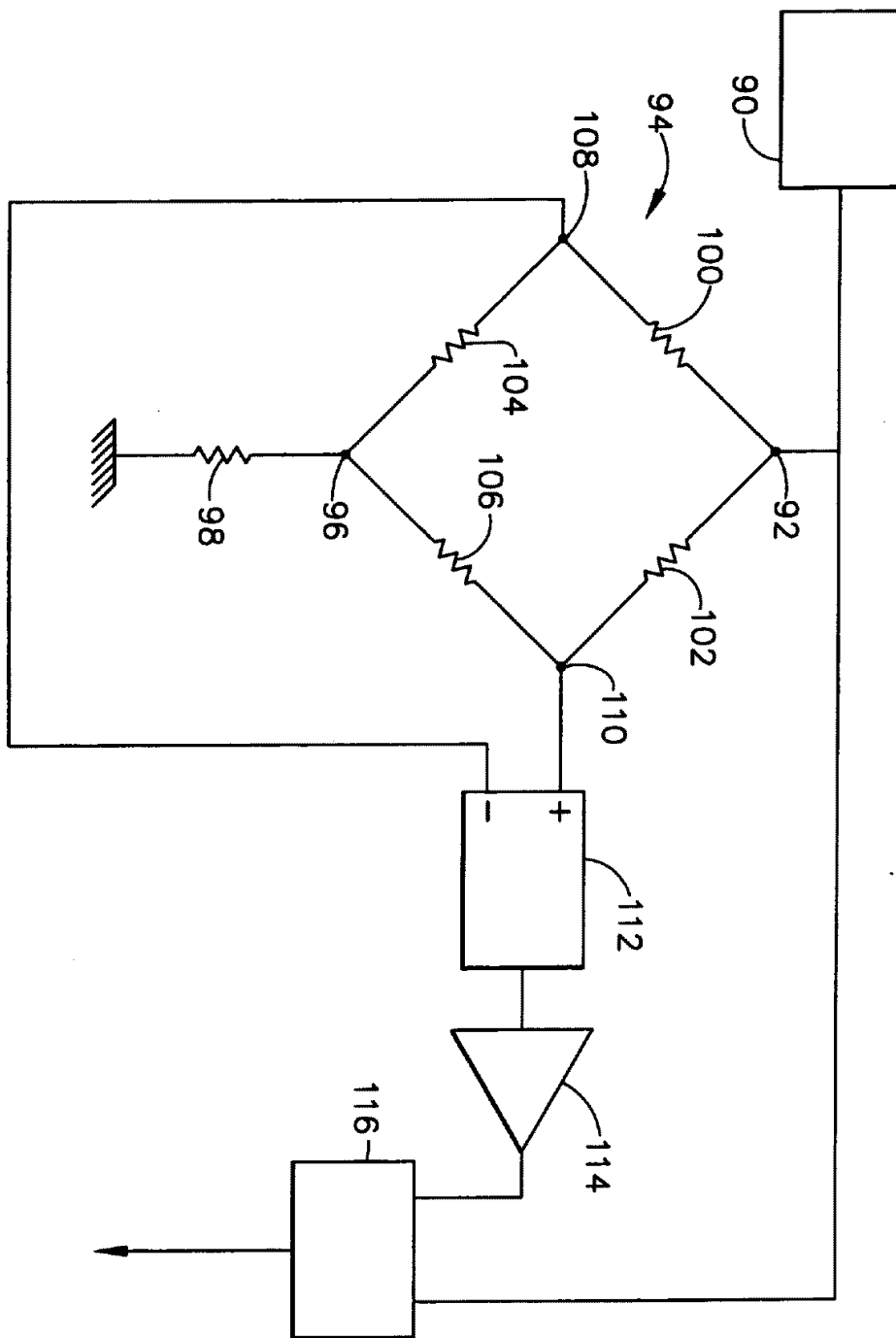
54



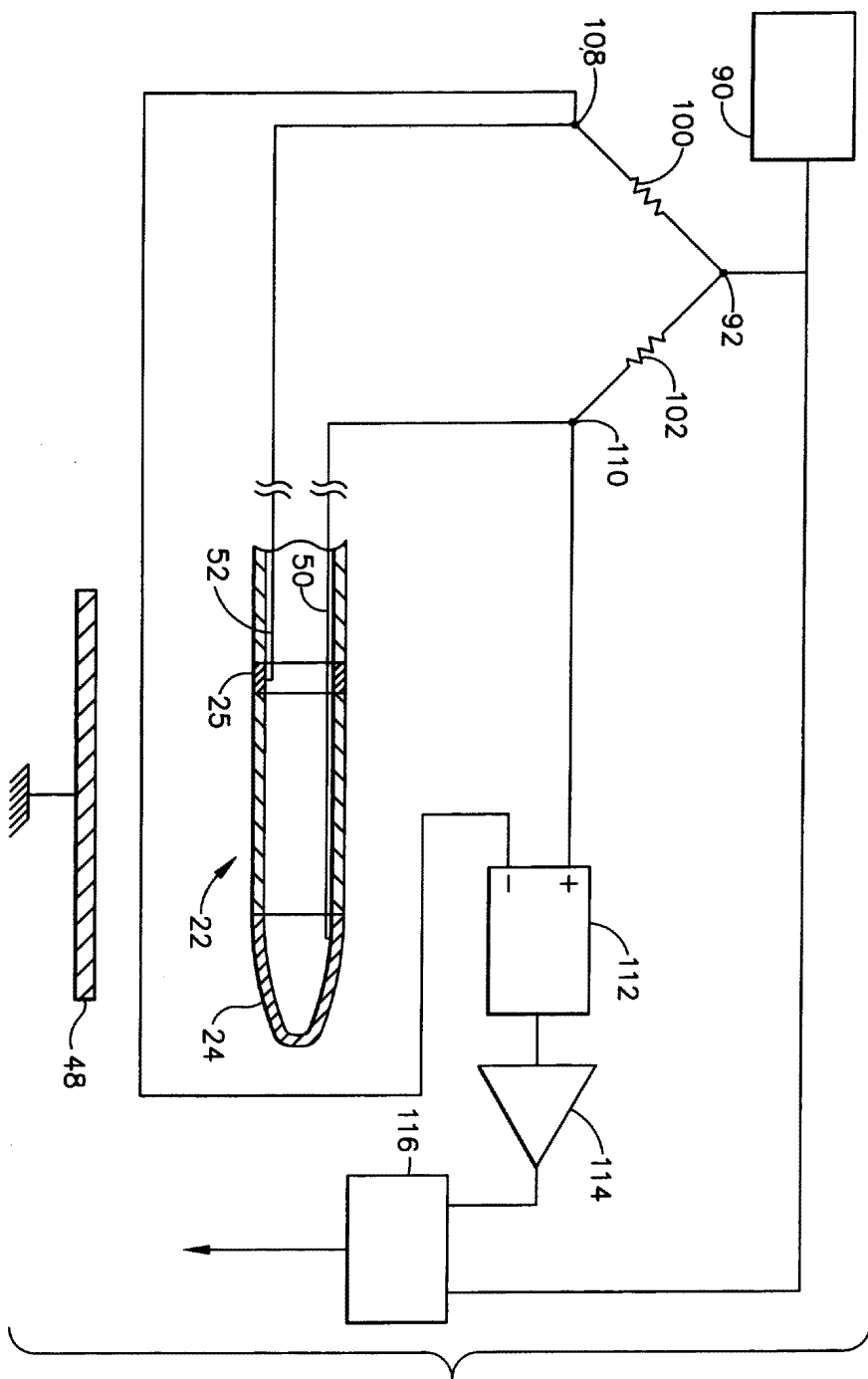




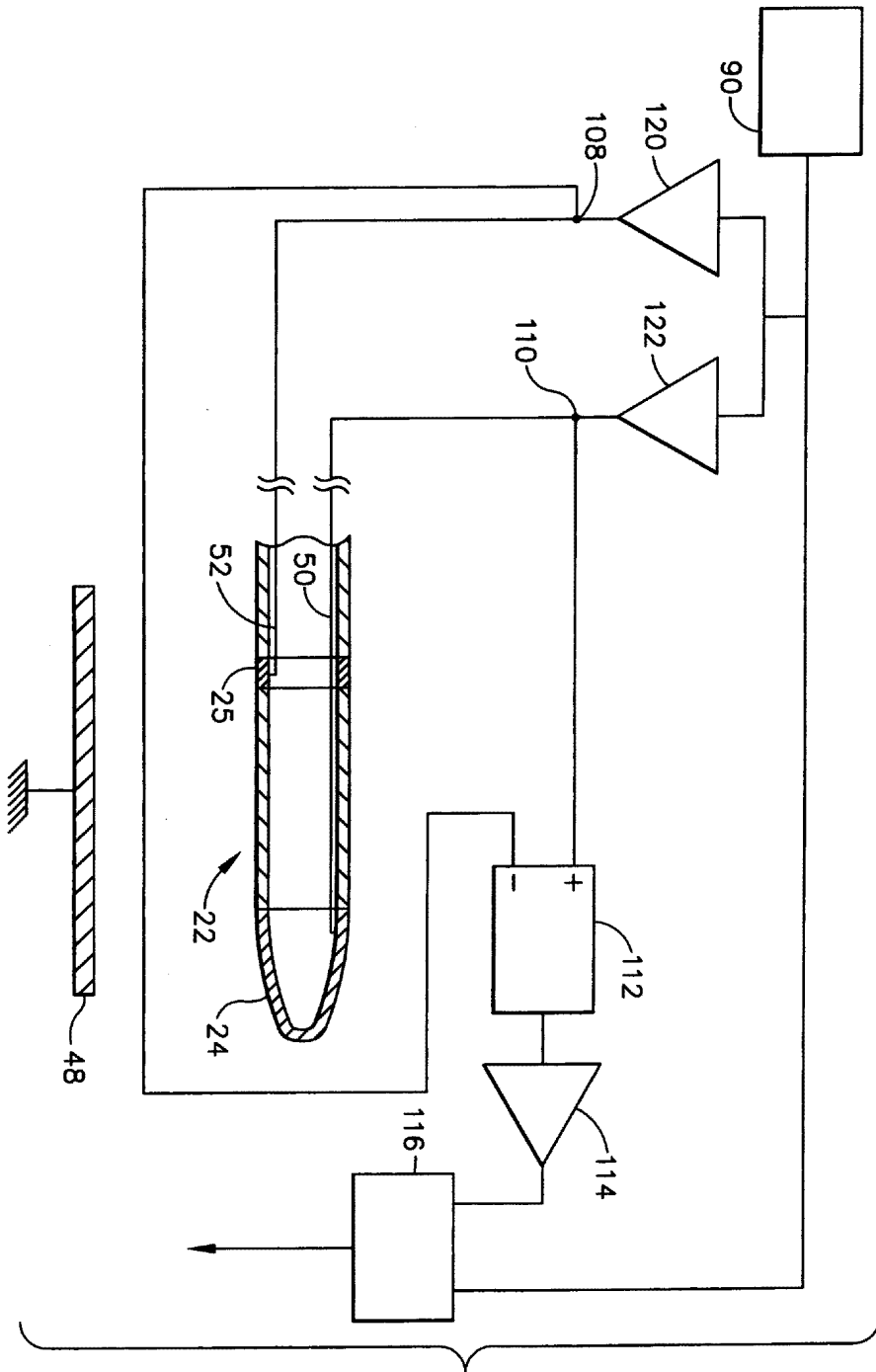
4



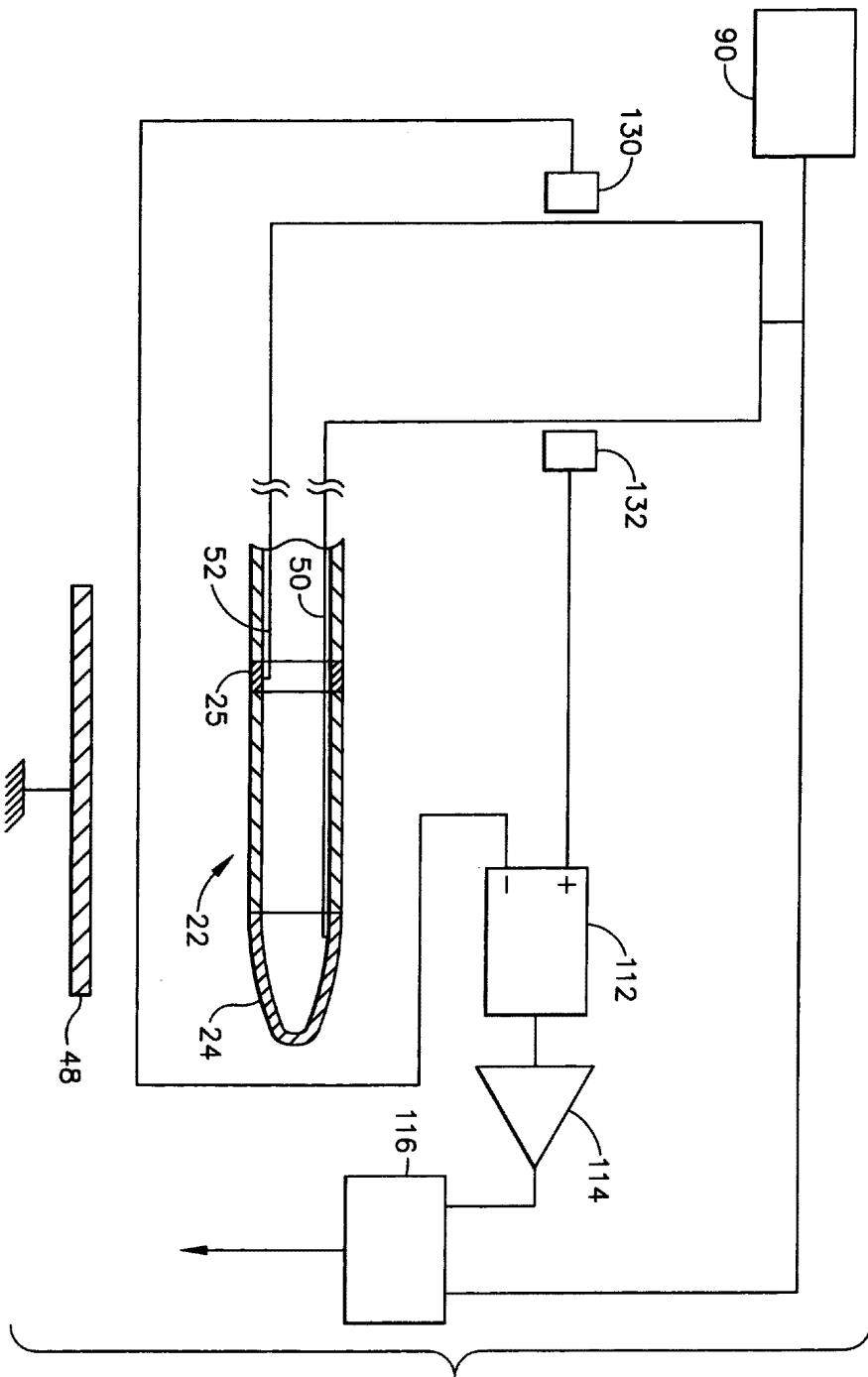
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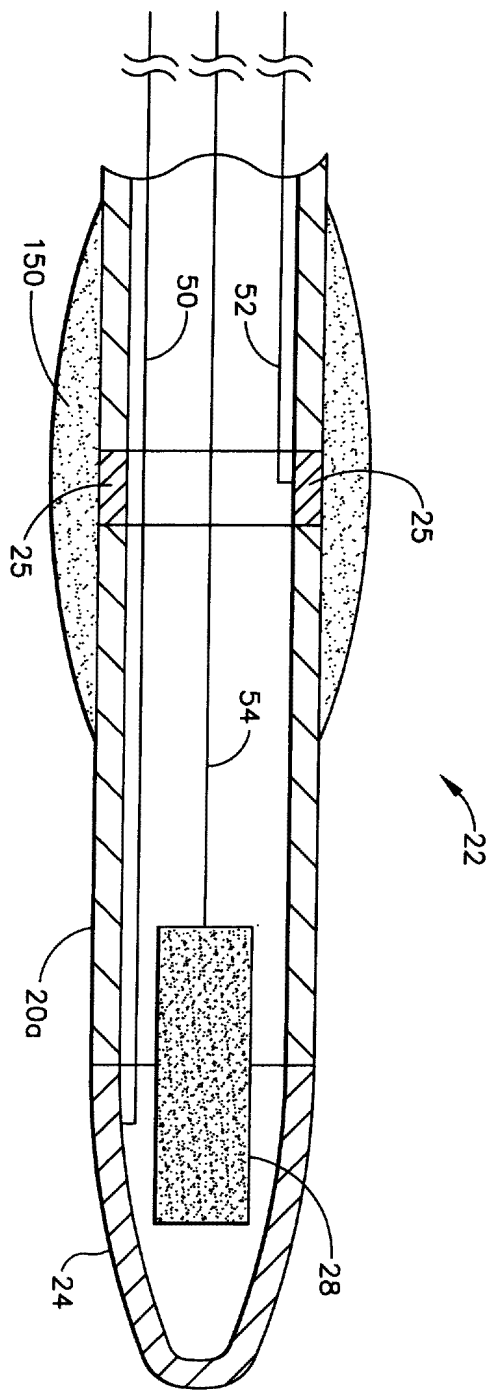
6



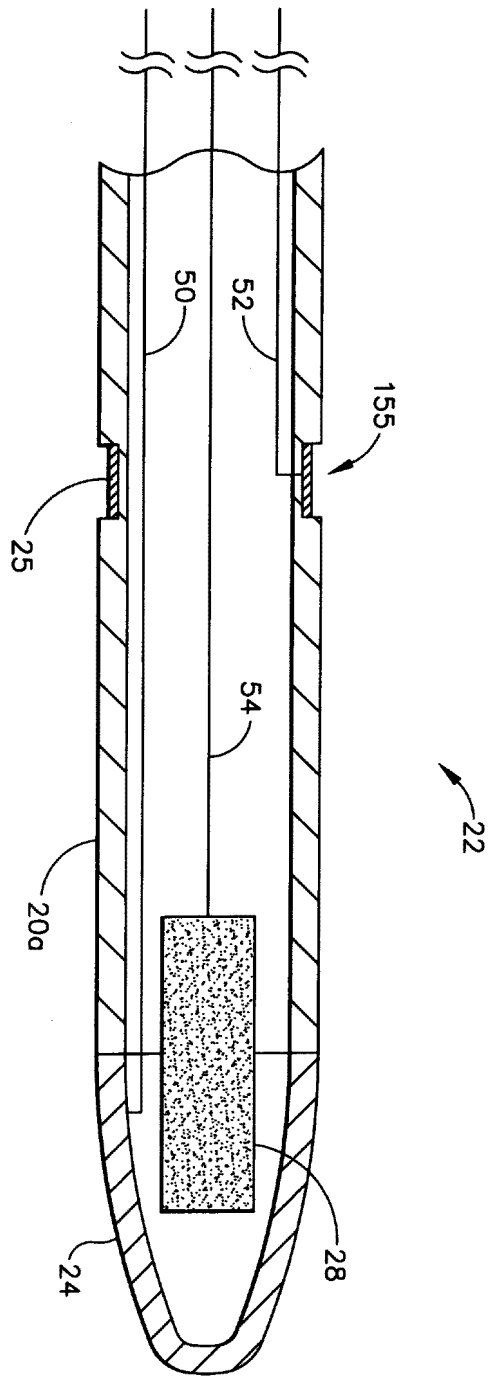
7



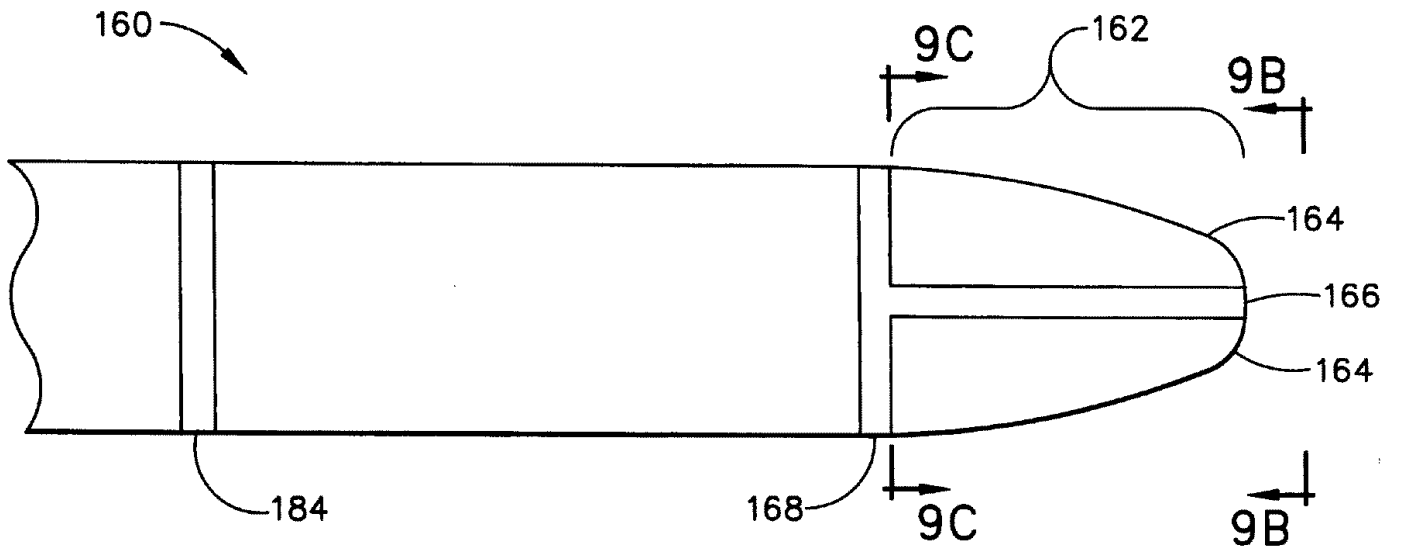
8a



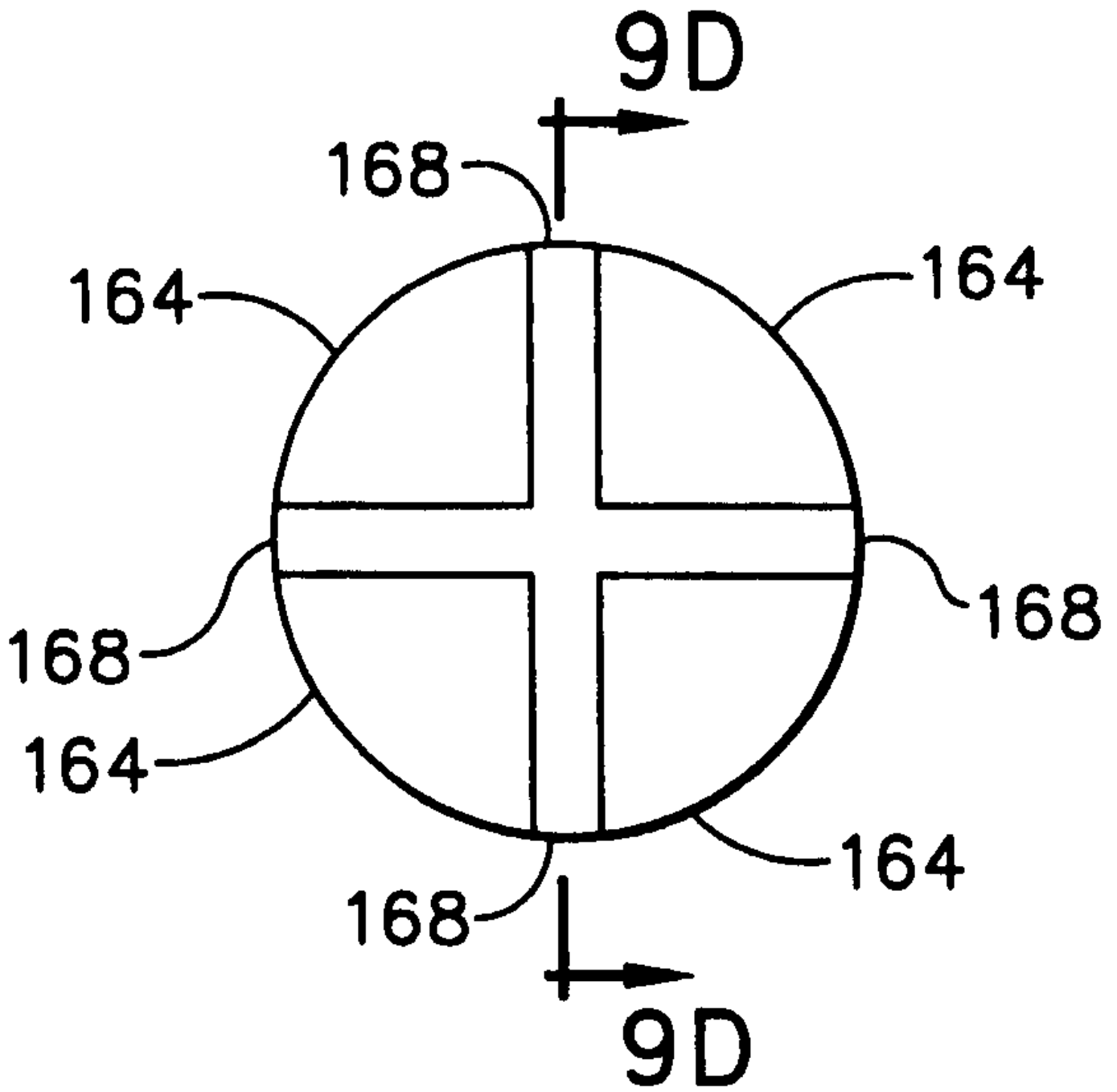
8b



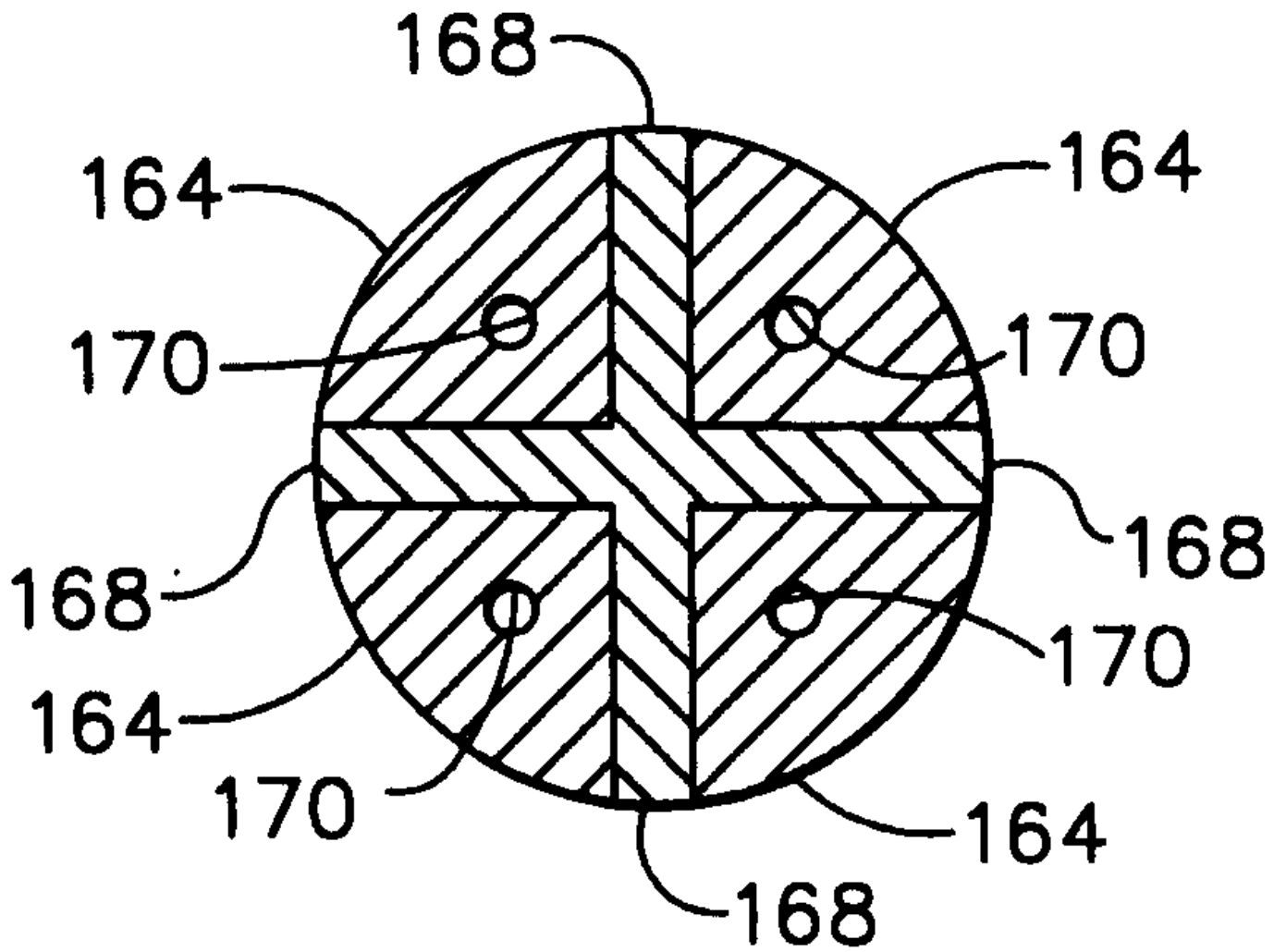
9a



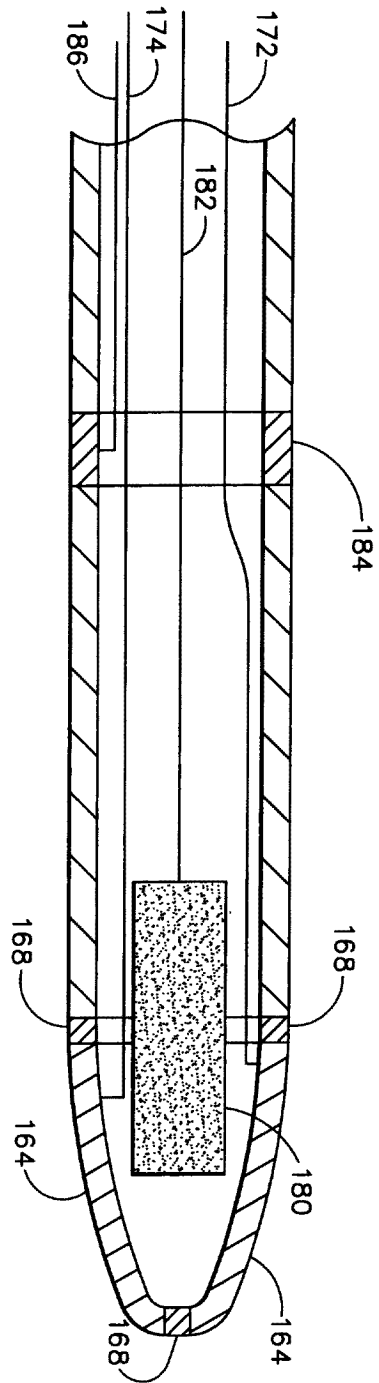
9b

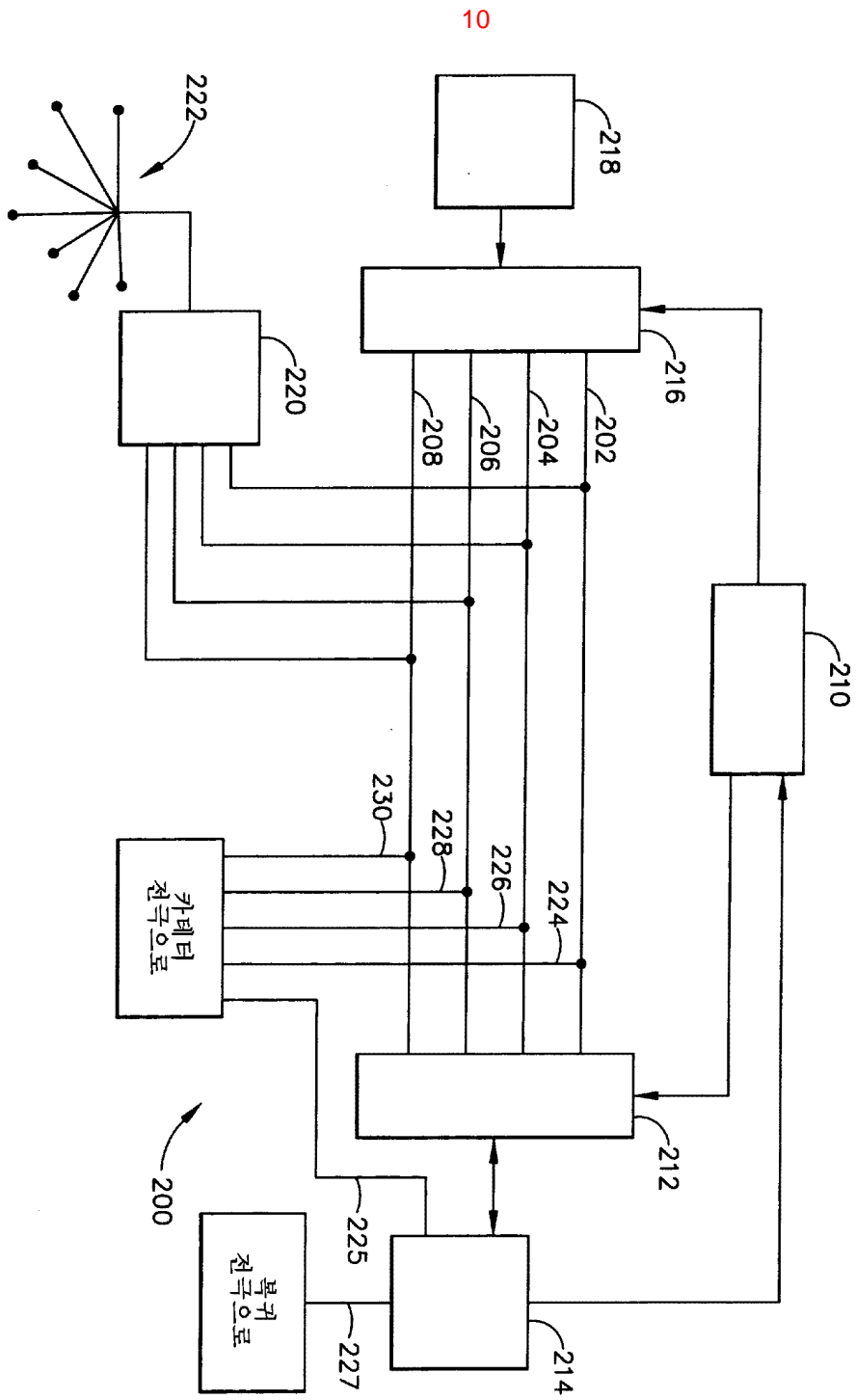


9c

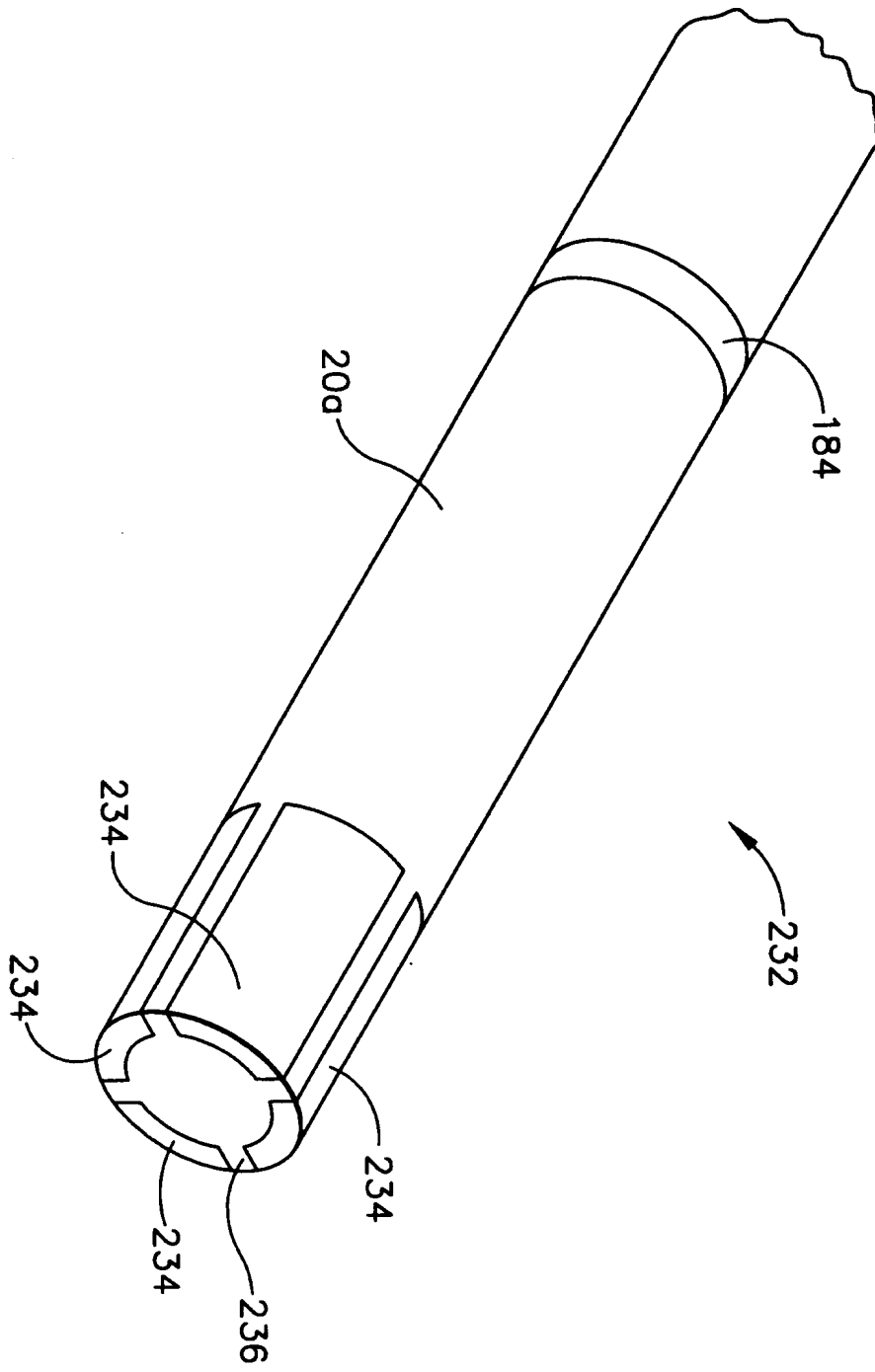


9d

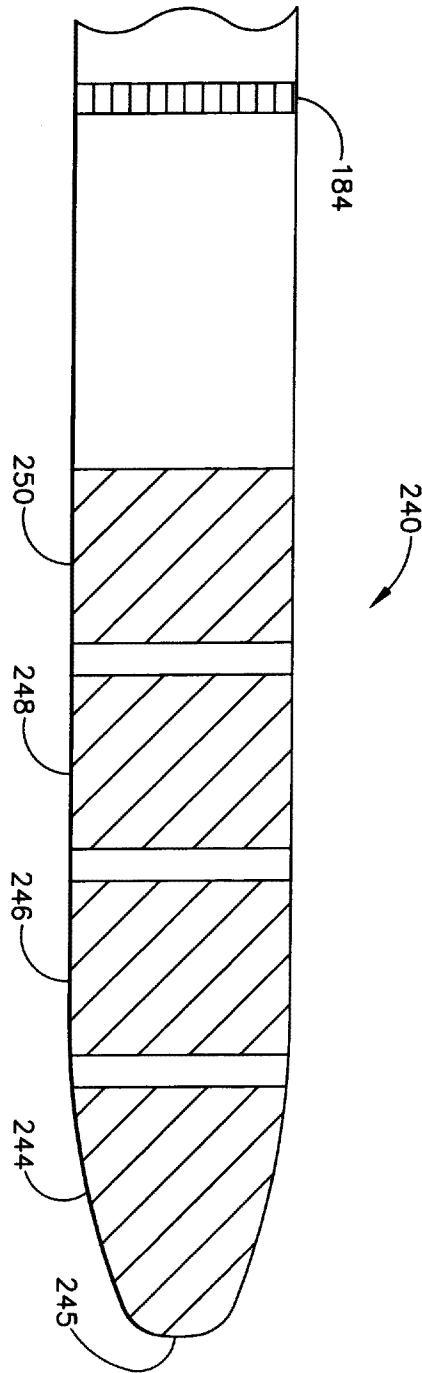




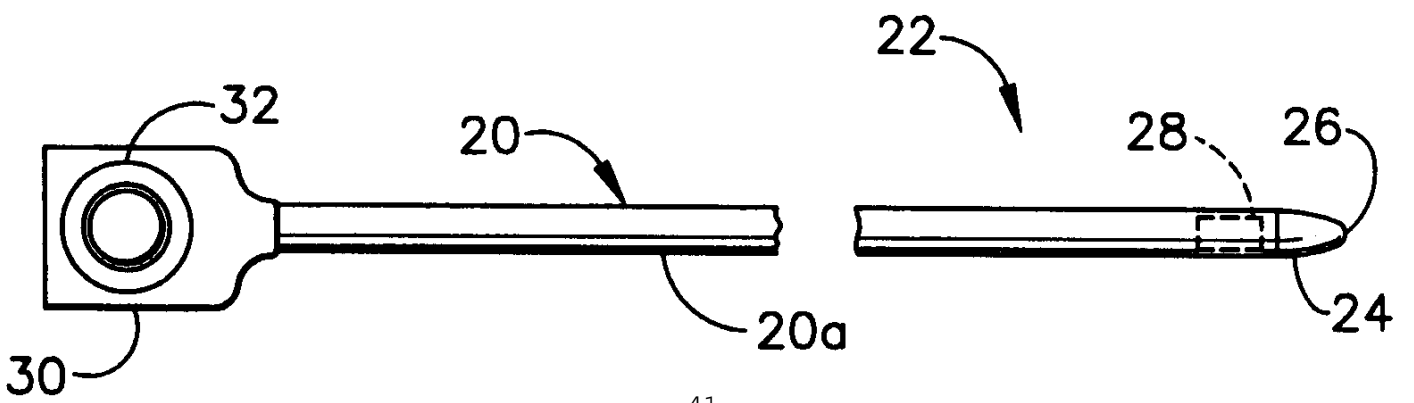
11



12



13a



13b

