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(71) 55133-3427 . . 33427

(72) . 55133-3427 . . 33427

55133-3427 . . 33427

55133-3427 . . 33427

(74)

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(54)

(152) (154) (150, 158)가 (154) (152)
, (152) (20), (154) (20) (23), (154, 10)
(23) (12) 가 (26, 155) (20) (10)
(156) (26, 155) (26, 155) (12)
(14) (26, 155)

, , , ,

가 ,

가

Pt

y. Lrd.

'POLY BRIGHT'

/

(,)

가 ,

(,

) (,

)

/

/

가

(,)

가 ,

(a)

(,)

, (b)

가

, (c)

가

()

()

가

가

1%

10%



1a 1 1a-1a 1

2a 2c

3a 3c

3a' 3a

4

4a 4c , 4

5a 5b ,

5c

6

7

8

9a

9b 9a

1 (10) 1a 1 1a-1a (10)

(10) (10) (11) (13) (14)

(12) (10) (14) (12) (10) (14)

20) (10) (11) 가 (,) (23) (10) (10) (1

0) (10) (26) (16) (16) (10) (10)

(16) (12) , 1 (18) 2 (16) (10)

(16) 가 (16) 1a 'd' , 'd'

1% 10% , 1 0.5% 30% (18) 2 (20)

(10) (11) 1a , (14)

(14) (10) (16) (12)

(10) , 1 (18) (10) 가

(13) , (26) (26) 가 (16) 180° 가

(10) 가 2a 2c 가 , 2b

(110b) , 2c (110c) 2a (110a)

2c

가 (, , , , , , ,)

25mm , 5mm 14mm ,가 7mm 12mm 100m 1mm

(14)

가 (14) 'TEFLON FEP' , 가

1mm 가 , 0.2mm 0.4mm 25mm

() ()

, 2- n-

(가)

n- (Tg) 가 54

WO 99/59804 , PCT

WO 01/47696 ,

5,298,327 ()

PCT

가

가

90° , 20° 가 70° , 30° 60° 10° 0° 80°

20% , 10%)

(

가

(가) .

3a 3 V ,

가 (66) (65) 가 (62) (62) (60) , (66) V / (60) 가 (60) (hea

ter)(63)() 3a' (66) 가
 (66) (61) (69) (69) (67) (66) 가
 (60) (66) 가 3b (60) 60
) (62) (66) 275 (60) 5 (66) 60
 1 (66) 가 (60)가 (66) (60)
 (60) (62) 3c (65) (66) (66)
 3c (68) (68) (66) (66) (69)
 (67) (67) (68)

4 (80) (80)
 (82) (84) (82) 6 (82) (100) (84)
 6 (102) (87, 88)
 (82) (84) (80) (80) (87, 88)
 (80) (82) (87) 가 (86) (86) ()
 98) 2 (89) (94) 4a (86) (86)
 (86) (88) (89) (89) 'a'
 2 (90, 92) (88) (88) (88) 'b' 가
 'b' 20° 150° 45° 90° (86b)
 'b' 60° 4b (88) 가 'c' (106a)
 4b 4a (106a) 'c' 0.1mm 3mm (106a)
 0.2mm 2mm (86c) 가 4c 4c 4a
 (88) (4b 4c) 가

4 (86) (82) (88) (98)
 (86) (88) (86) (88)
 (86) (84) (88) (88)
 (82) (84) (102) 가 (86)
 C- (82) (84) 가 (86)
 가 (102)

(30)가 (30) 5a (34)
 (32) (32) (32) (sprocket), ANSI 35 , ANSI 24
 (44) (32) , ANSI 40 (32) (36) (36)
 (spur gear) (32) (33) () (34)
 (38) (38) (40) (40)

(30) (42)[(49) (47)] (38) (40)
 가 (5b) (36) (32) (44)가 (42) (43)
 (42) (38) (30)가 (32) (34)
 가 (38) (38) 5c (42) 5c
 (42) (46) (46) (42) (42) (49)
 (47)

(32) (30) (32)

(116) (110) (112) 가 6 (110)

(114) (112) (112) (112)

() (110) (119) / 가 (112)

) (110) (124) (112) (118)

(110) (112) (124)가 (122) (112) (118)

126)[(126) (111) (118)] (124) (124)가 (

) (128) (114) (128) (124) (124) (126)

(124) (128) (112) (118) (126)

(126) (128) 가 가

(118) (126) (110) (118) (126)

(118) (126) 가 (118) (112) 가

(가)

() 가

(150) (154) 7 (150)

(152) 'STREAMLIGHT STINGER'(

) 'MAGLITE'(

) 'LIGHT PUMP'(

) 'POWERHOUSE METAL HALIDE ILLUMINATOR'(

)

(154) (159) (155)

(155) (156) (154) (159)

(152) (154) (156) (155)

(154) (156) (155)

8 (162) (162) (164) (160) (158)

(162) 8

(160) (160) (HID) 가

8 (160) (166) (160)

(160) (162) (160) (162)

(168) (168)

(162) (168)

7699 WO 96/19347 PCT WO 95/17303, WO 95/17691, WO 95/17692, WO 95/1 PCT

(168)

(160) (170)

(162) 1

(167) (163) (162)

(163) (165) (1)

(162) (160) (162)

(164) (167) (164) (1)

60) (167)

(168) (160) (162) (168) (162)

(160) (162) (168) (160) (168) (160) (160)

9a 가 (180) (182) (182) 9a

(184) (185) (187) (189) (184) (185) (187) (184)

(189) (187) (186)

(184) (185) (189) (189) 가 9b (184)

(182) (186) (182)

(189) (186) (191) (182) (184) 8

(182) (186)

—

가 10mm

1

('POLY 100')

() 10mm ± 0.5mm

0.2mm ± 0.05mm

140mm 가

60° 6.35mm 가 , 3.0mm 1mm 가
 가 (WG 5
 'PHI') 가 2,812kg/cm²
 가 , 0.2mm
 (67212 , 'STREAMLIGHT STINGER') 가
 (Leica) , 512

2

가 , 6.35mm 가 4.0mm , 140mm
 60° 5 (12.7cm) C- 가 가 , C-
 11.5 (29.2cm) C- 가 , C-
 가 512
 , 1

[1]

온도 (°C)	양각 시간 (초)	광소자의 깊이 (mm)	피복재 상태
79	60	0.2	손상되지 않은 피복재
104	60	0.2	절삭된 피복재
121	60	0.2	절삭된 피복재
149	60	0.2	절삭된 피복재; 버블로 녹여진 피복재
149	10	0.2	절삭된 피복재; 버블로 녹여진 피복재

3

가 , 5a 가 ANSI 35(0.95cm) ANSI 25(가
 가 0.635cm) , ANSI 40 가
 가 1.27cm 가
 , 16 , 7.62cm (NB48)가 가
 (,) 1.27cm가 (,) 2mm
 가 , 2mm 0.5mm

가 , 7.62cm 2 (NB48) 1mm
 (,) 가 ,)
 (499kg/cm² 1300kg/cm²)
 (1mm NB48)
 가 , ± 15%

양각된 광소자 깊이 (mm)	양각 압력 (kg/cm ²)
0.1	597.6
0.3	808.5

4
 Light Gauge (Coherent Auburn Group)
 (4)
 188mm 9.0mm 9.1mm
 (3M VM2000)
 가 가
 'STREAMLIGHT STINGE'
 R'
 2

[2]

양각된 깊이 (mm)	단부광 (lumens)	추출된 빛의 퍼센트 (%)
대조구(없음)	10.3	0
0.4	7.8	24.2
0.5	6.1	40.8

5
 5a
 (NB48)
 가 가 가 ()
 '2000-WATT SPEED RAY'
 A) (B)
 A , 6.35mm ± 1.27mm 가
 1.015mm ± 0.25mm 35 ° ± 5 °
 124mm 1 가 124mm 4

[3]

섬유	섬유 직경 (mm)	광소자의 깊이 (mm)	기어면 (mm)	피복재	양각 온도 (°C)	단부광 (lumens)	추출된 빛 (%)
노치 없음	9.2	N/A	N/A	원상태	N/A	11.4	N/A
0.635 mm	9.4	1.0	N/A	절삭	N/A	10.5	7.9
A	9.2	0.2	0.5	절삭	22	5.3	53.5
B	9.0	0.2-0.3	0.5	원상태	100	6.3	44.7
C	9.4	0.3	0.5	원상태	107	6.4	43.9
D	9.3	0.5	0.5	원상태	110	5.6	50.9
E	9.0	0.2	1.0	원상태	22	5.3	53.5

6

가

10mm (가) ()
 (5) .

10mm 1mm (3) .
 0.25mm .

15mm

180° , 'U' 가 'U'
 180° , 'U' 가 'U' .

() 4 . 4

60bpm

512

4 가

[4]

섬유의 형태	노치된 섬유		양각된 섬유	
	피복재 찢어짐	섬유 파손	피복재 찢어짐	섬유 파손
1	8	24	40	71
2	7	21	59	68
3	4	19	61	67
평균	6.3	21.3	53.3	68.7

7

5 10mm 7 7
 9 0.65mm , 0.60mm

8

가 , PVC) 0.9mm 1mm 가 , PVC (4) . 10mm PVC (PVC

(57)

- 1.
- (a) ,
- (b) ,

가

가

- 1 2.
- 2 3.
- 2 4.
- 2 5.
- 2 6.
- 2 7.
- 2 8.

360 °

180 °

가

가

가

2 9. , .

2 10. , 가 - .

2 11. , .

2 12. , .

2 13. , 1% 10% .

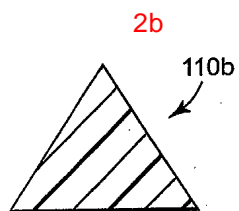
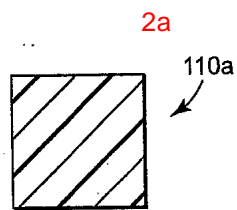
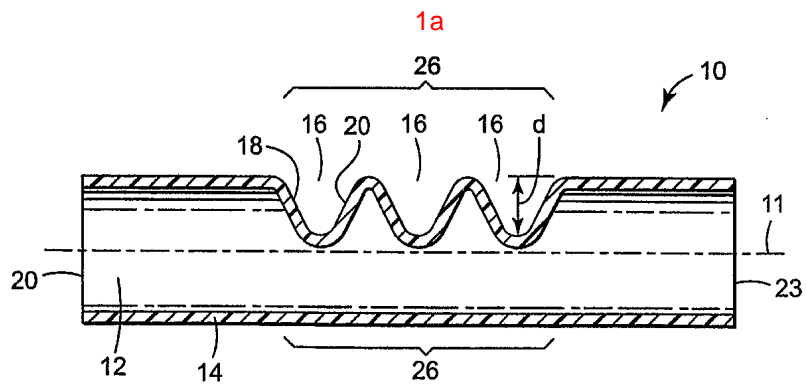
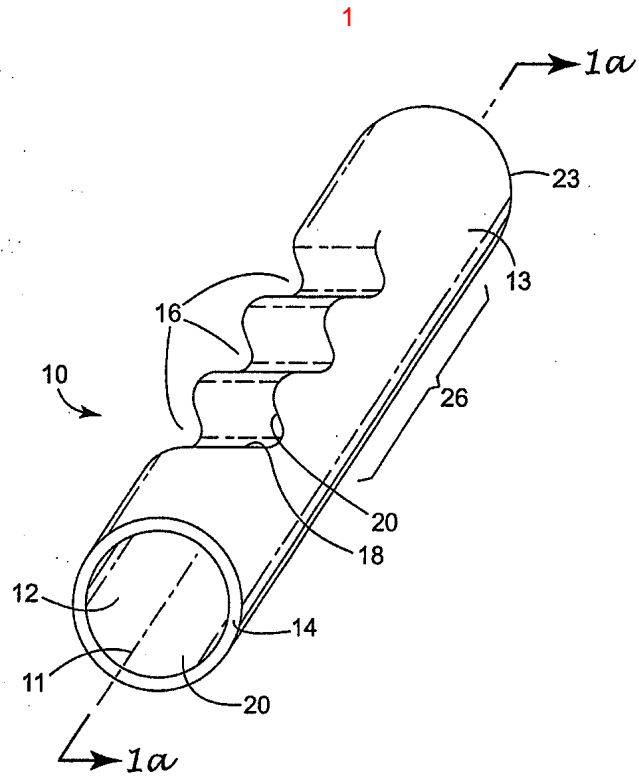
2 14. , 1 1 2 2 ,
1 가 2 .

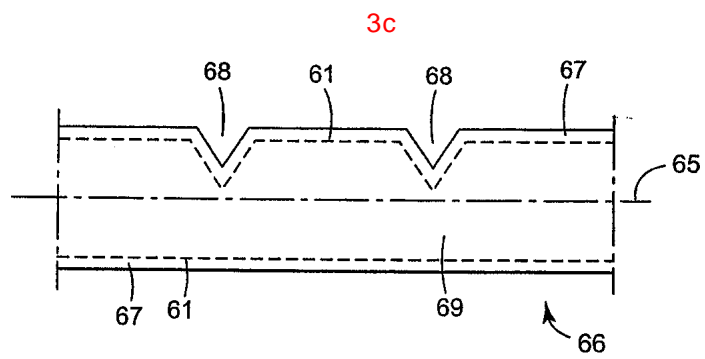
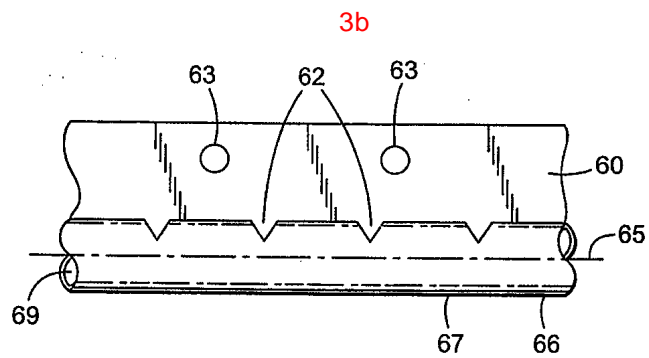
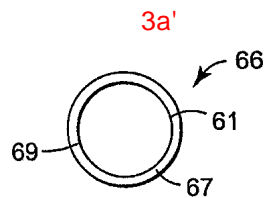
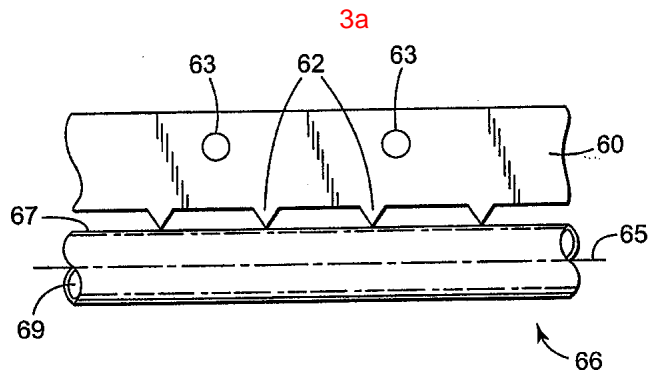
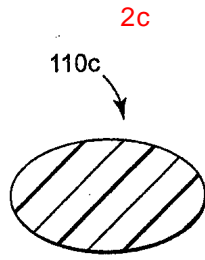
2 15. , 가 , 1mm 25mm .

2 16. , 1mm .

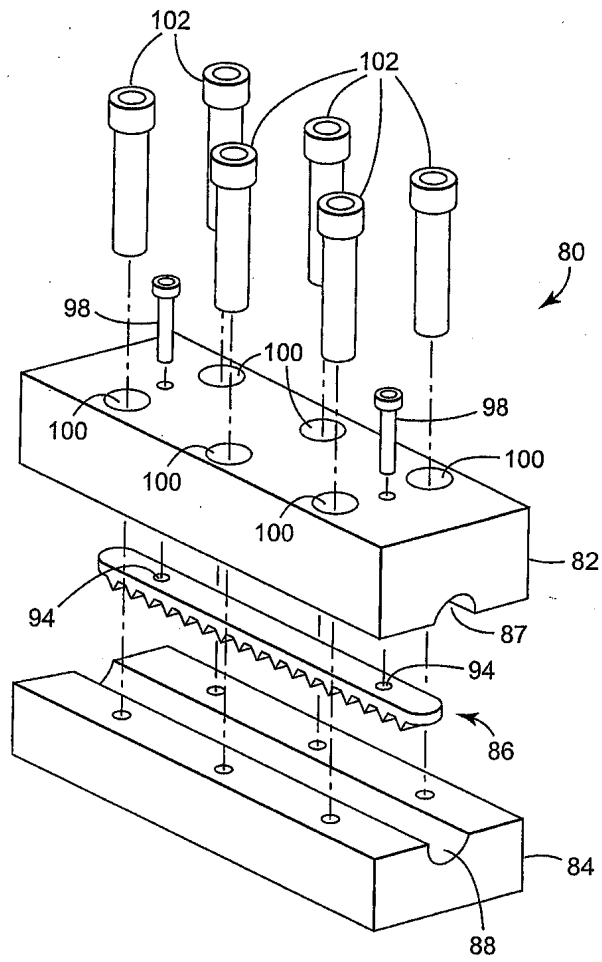
2 17. , .

2 18. , 10 ° 80 ° .

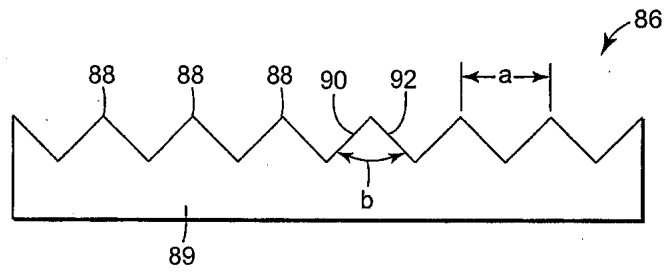




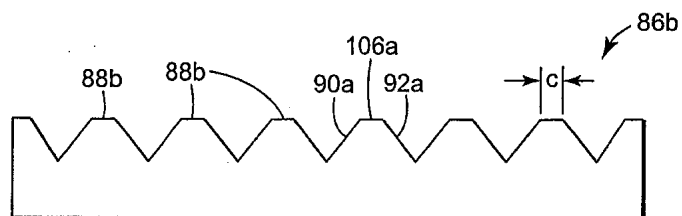
4



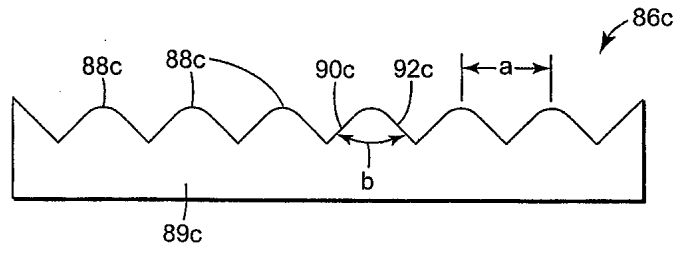
4a



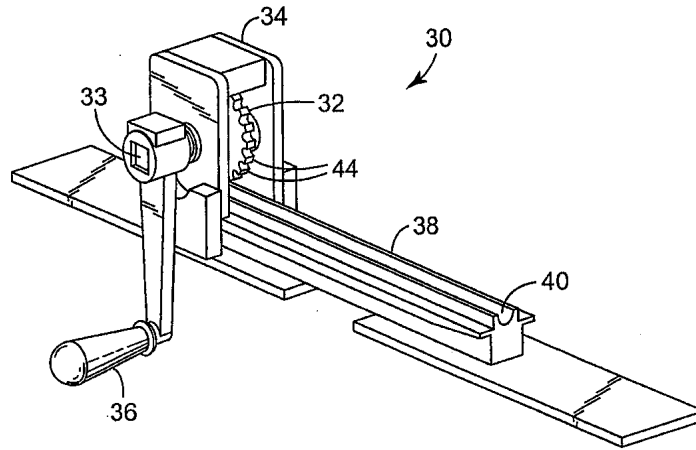
4b



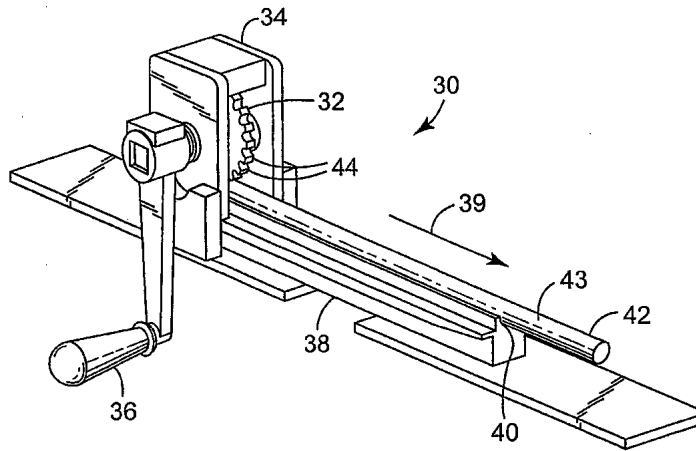
4c



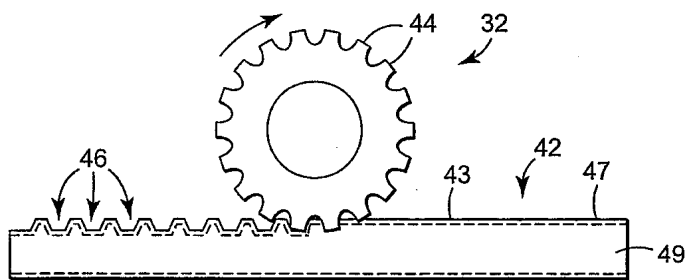
5a



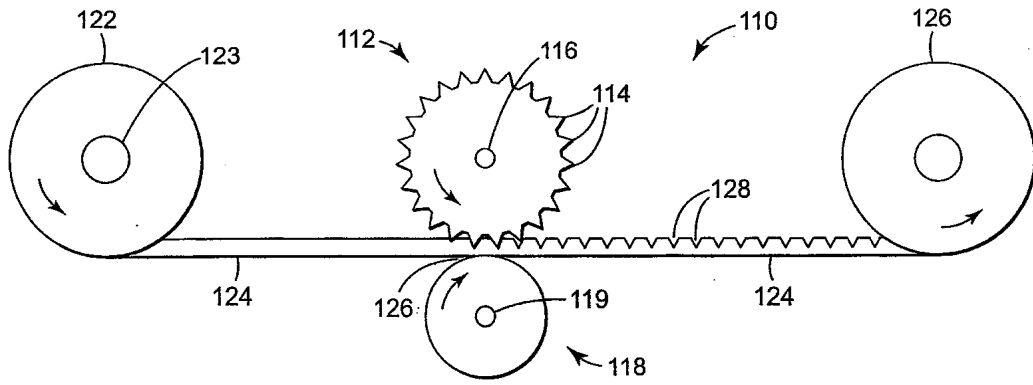
5b



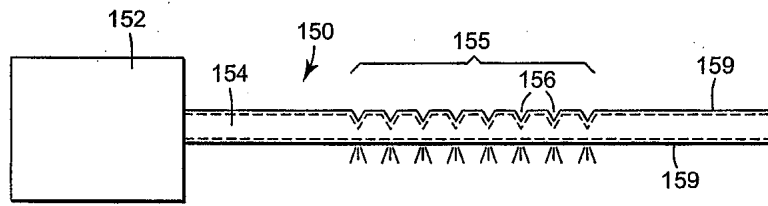
5c



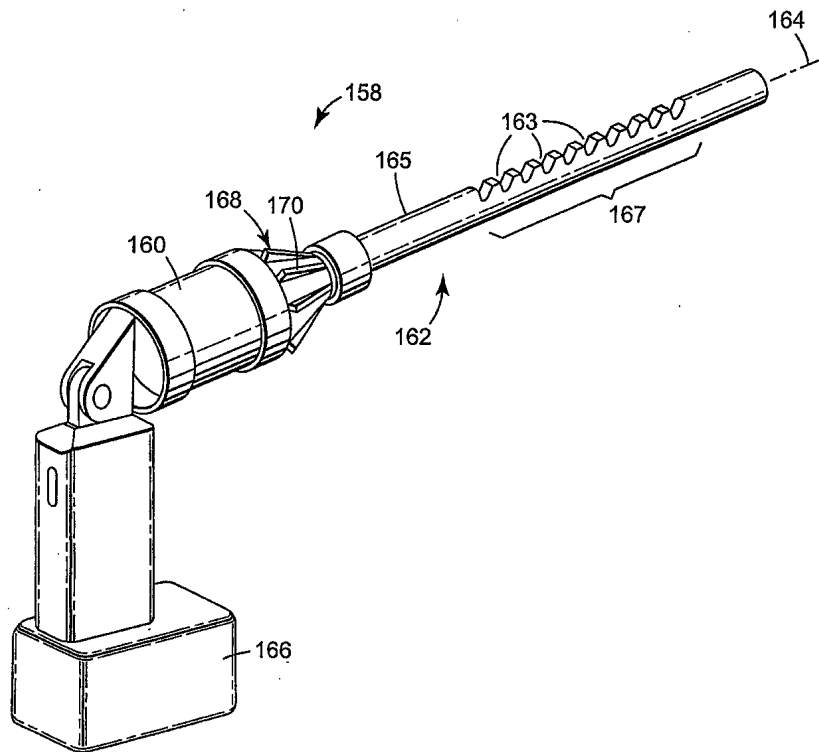
6



7



8



9a

