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(22) 2004 01 27
2004 01 27
(86) PCT/US2002/015888 (87) WO 2003/011356
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(30) 60/308,380 2001 07 27 (US)

(71) , 07417-1880, , 1

(72) . 07004 44

10956 51

. 07450 261

. 10987 186

(74) :

(54)

. , 가 , , 가
. 1 가 2 가
2 1 .

, .

, (barrel) , 가

, 가

, .

, .

, 가 2

, 가 (stopcock) 가

/

, 가

, ,

, 가

가

3,402,713 , (collar)

, (Dunnican) 가

, 2,711,171 .

, (bead) 가

, 가

(blasting)

2

5,312,377 ,

(stiffning insert)가

가 4,589,871 ,

5,851,201 , 6,217,560 B1

(texturing)

2,902,995 가 4,040,421 2,764,978 ,

9,781 , 4,676,530 가 . 4,36

s) 가 , (luer slip connector portion
가
가
2
(shot molding) 가 2 가
가

la) 가 가 가 (cannu
가
1 가 2 1
가 2
가
가
가

ot) , 2 가 - (multi-sh
가 1 1
2

- 1 ,
- 2 .
- 3 2 .
- 4 , 가 ,
- 5 .
- 6 가 .
- 7 .

8 7 8-8 .

9 .

10 9 10-10 .

11 2 .

12 11 12-12 .

13 3 .

14 13 14-14 .

15 4 .

16 15 .

17 16 17-17 .

18 5 .

19 18 19-19 .

20 6 .

21 20 21-21 .

22 7 .

23 22 23-23 .

24 8 .

25 24 .

26 .

27 .

28 9 .

29 28 .

(28) 1 (22) 1 , 4 10 6 (20) (24) (24) (24) 6
 (22) (26) (28) 가 가 .

(24) (luer tip) , (male luer fitting) 가 .

가 .

(20), (28),

(30) , (32) , (20)

(26) (32) (22)

, / 가 .

(28) 3 (lumen) (36) , , (36) 가 (34) (40;lumen) 가 (38)

(20) 가 (26) ,

(36) , 가 .

(34) (42) (44)

가 (46) (45) (45) 가

(38) 6 , 7 (48) (49) (45) 가

가 가

가 (50) (46) 6 , 7

가 (38) (50) (52) (52)

(38) (52) 가 가 ,

가 (28) 가 (24) 가 .

,

,

,

1 , (34)

, 가 가

(Santoprene)
(Advanced Elastomre Systems)

1 10 , (34) (56) (58) ,

(60) (62) (64)(9 가

) . 2 1

(66) 9 가
가 (64)
(68) (60)
가 (34) 2 가
SANTOPRENE (68) 55 (durometer hardness)(A) SANT
OPRENE 171-55, 281-55 ASTM D2240 (34) 가 SA
(5)) 가 (60) (68) 2 (66) (64) 가
NTOPRENE (60) (60)
(36) (56)
1 10 가 (68) (36)
(60) (56) (34) (68) 3
(56) (68)가 (56) (28)
(56) 0.076 mm (0.003 inch)
(68) 1 10 (56) 0.152 mm (0.006 inch)
(60) (56)
가
1 10 가 가
가
9, 10 (6) (65) (67) 가 (67) (6)
(36) (68)가 가
가 가 9 (66) 0.254 mm (0.010
) 가 (67) (34) 58
56 60 (68)가 (60)
가 (68)가
(68)가 (34)가
(66) (64) (68) (60)

. (66) (69) (69) (60) (65,67)
 . 10 , .
 (28) 1 (46)가 (38) 가
 (70) 가 (24) (70)가 (34)
 (60) (46)가 가 4 가
 (42) 가 (28) 가 (42) (52) (54) 5 (3
 8) 7 (50) 가 가 ,
 6 (68) (24) 가 (28) , ,
 (56) (60) (24) (66)
 (56) , (24) 가 가
 (62) (collar)()
 가 (36) (24) , (68) 2
 가 , , 가 , (68)
 , , , ,
 11 , 12 1 10 (128) 1
 10 2 , (64) (34) , ,
 (168)가 , (67)
 , (168) (60) (64) 가
 가 ,
 (28,128) SANTOPRENE 가 , 2
 , 2 , SANTOPRENE
 (mold) . SANTOPRENE 2
 () SANTOPRENE
 NE 가
 13 , 14 (228) , 1 12 (66)가
 4 (266) (34) . 4 (64) (60)
 (266) . 4 (268)
 (36)
 (34)
 15 17 4 (368) (60) (328)
 (364) , (370) (368)
 2 (372) (364) (36) (368)
 (56) , 가 (368) (372)
 ()

. , (368) (56)
 . 1 12 , 2
 . (368)가 ,
 .
 18 19 5 (60) (4
 68) 15 17 (64)
 . 4 (36)
 . (66)가 ,
 3 4 (428) (64) (coextensive).
 4 5
 . 가 ,
 , 가 (56) 가 ,
 , 18 19
) (56) (476) (36) (64) (476)
 , (468)
 (468) (56)
 .
 20 21 6 (528) (564)
 (566,576) (56)
 . (566)
 . (566)
 (568) (56)
 (60) (36) (568)
 (56) (56) 가 (36)
 , (568)
 9 7 (628) 22 23 18 1
 , (668) / (664)
 /
 8 24 27 (734) (734)
 (768) (728) (764) (764)
 (770) , (77
 2) (770) (764)
 (768)가 가 (multi-shot)
 가 ,
 . (736)
 .
 28 , (768) (72) (24) (734) (736)
 (734) (24)
 .
 ,
 (gap) (768) (772) (734)
 (756)
 . ()
 ,
 .
 가 가 가 ,
 가 , 가

28 29 9 (866) (868) (834) (836)
(868) (866) (868)
가
(868) 가

가

(57)

1.
가 , 가 ;
가 , 가 ;
가 , 가 ;

2.
1 ,

3.
1 ,
가

4.
1 ,
가

5.
4 ,
56 60

6.
1 ,

- .
- 6 7. ,
- ,
- 7 8. ,
- ,
- 1 9. ,
- ,
- 9 10. ,
- 9 11. ,
- 가
- 9 12. ,
- ,
- 9 13. ,
- 가
- 13 14. ,
- 56 60
- 12 15. ,
- ,
- 1 16. ,

가 , 가 ,

16 17.

18. 가 1 ;

2 가 2 ;

가 ; , , , 가 , 1 2 .

18 19.

18 20. 가 .

18 21.

18 22.

18 23. 가 .

23 24.

25.
18 ,
,
.

26.
22 ,
,
.

27.
21 ,
2 (two shot)
.

28.
27 ,
,
.

29.
18 ,
1 2

30.
1 ;
1 2 ;
1 , , ,
가 , ; ,
2 가 2
;

31.
30 ,
.

32.
30 ,
2 가

33.
32 ,
2

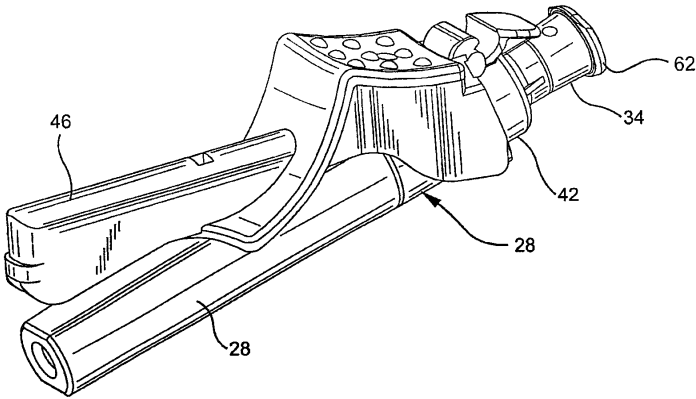
34.

32 ,
1 가 2 가 .

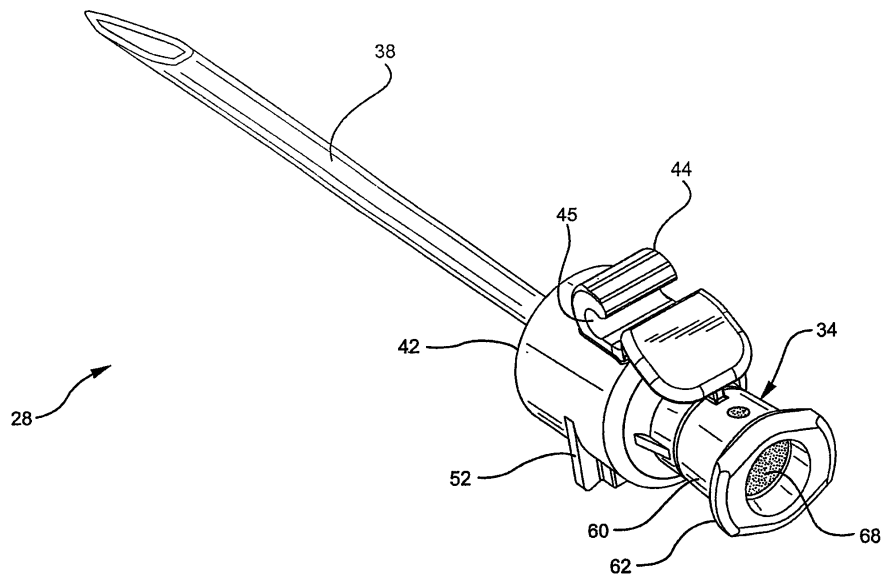
35.
33 ,
1 가 가 .

36.
35 ,
가 , ,
.

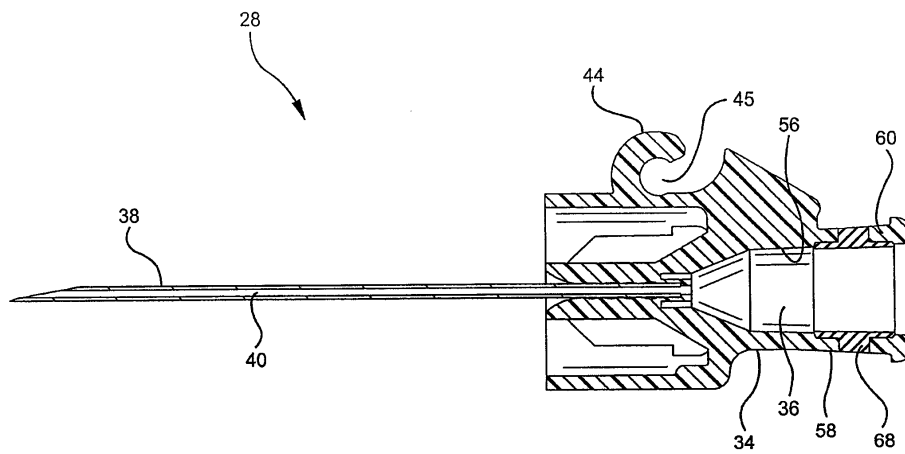
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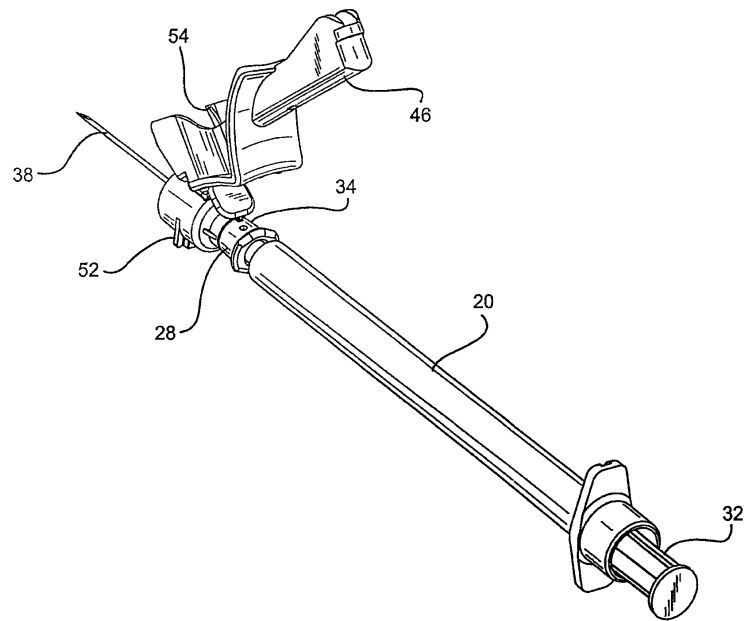
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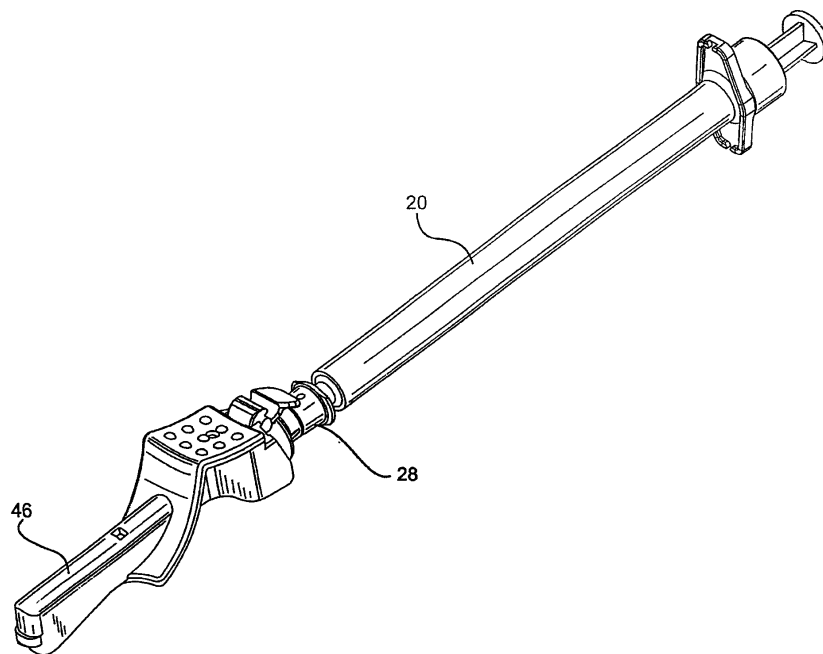
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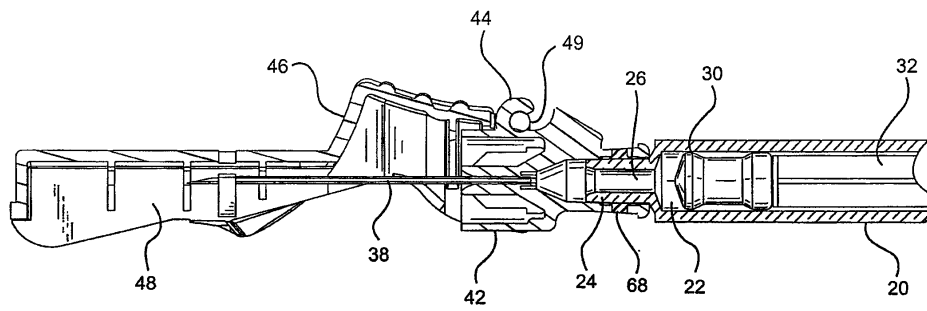
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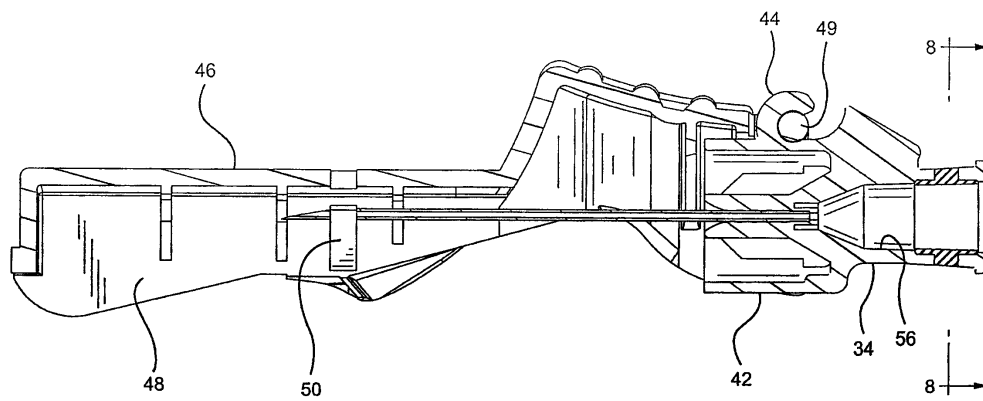
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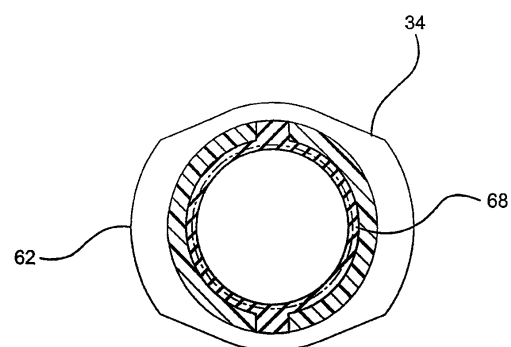
6



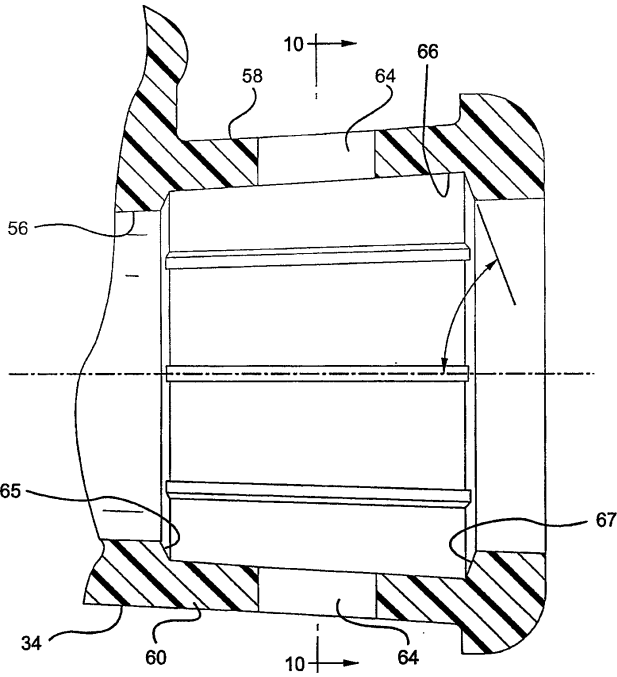
7



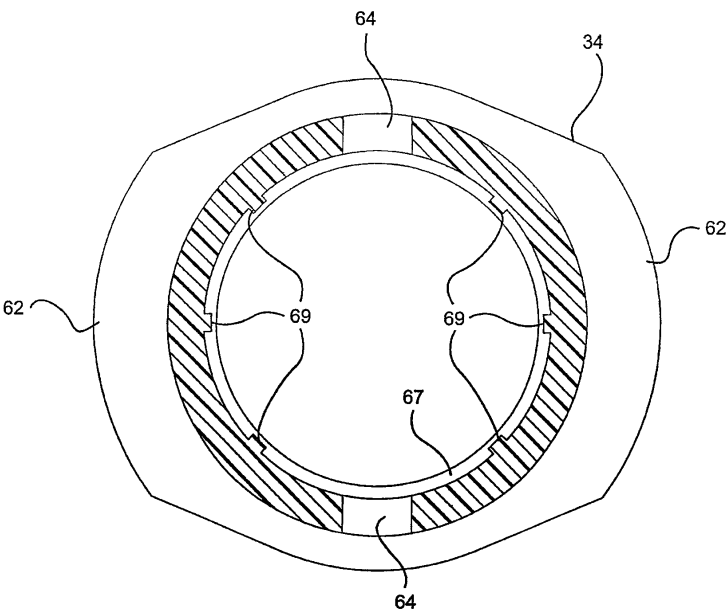
8



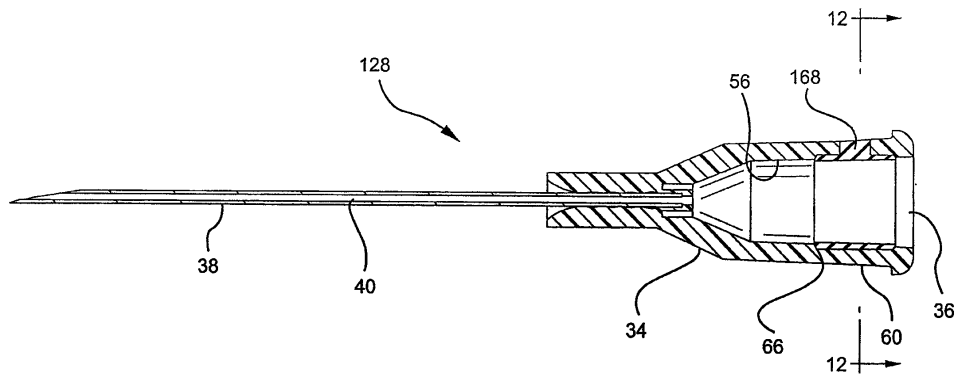
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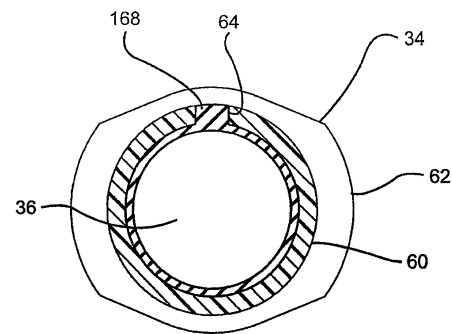
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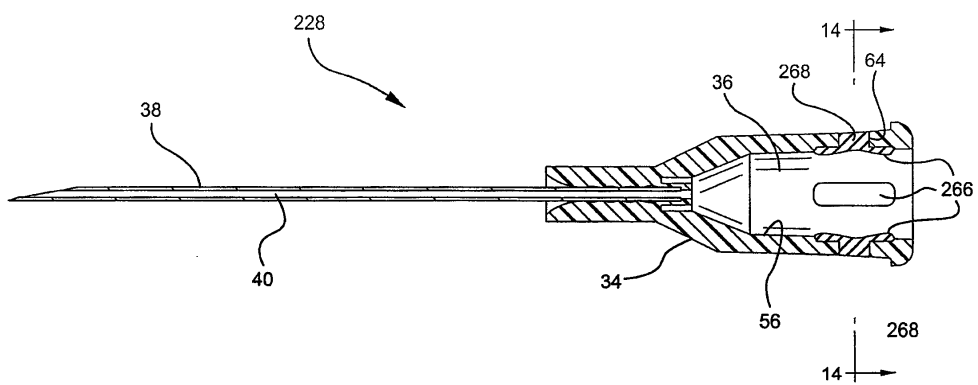
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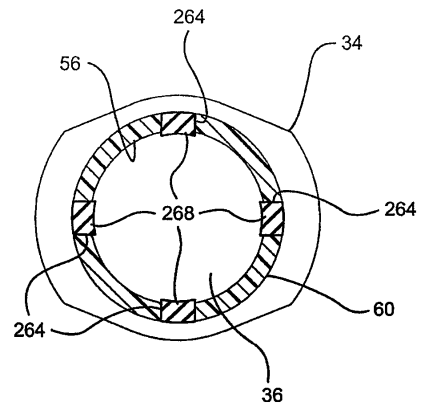
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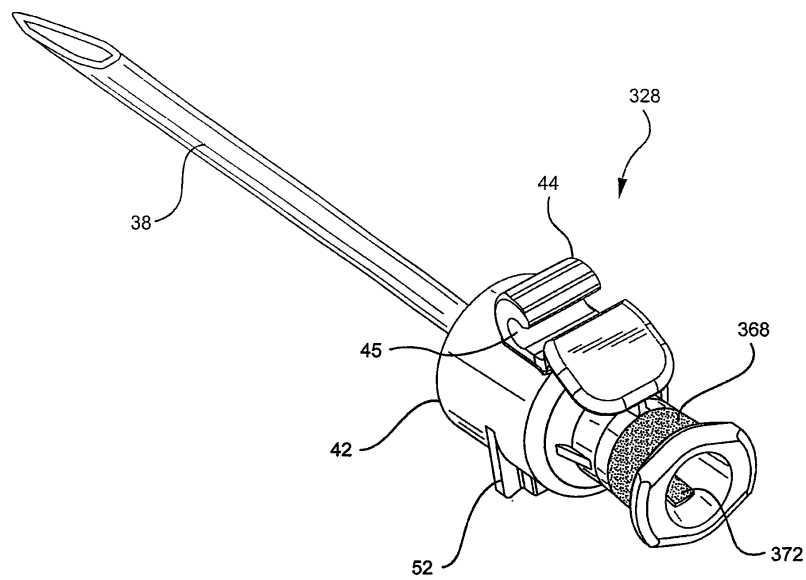
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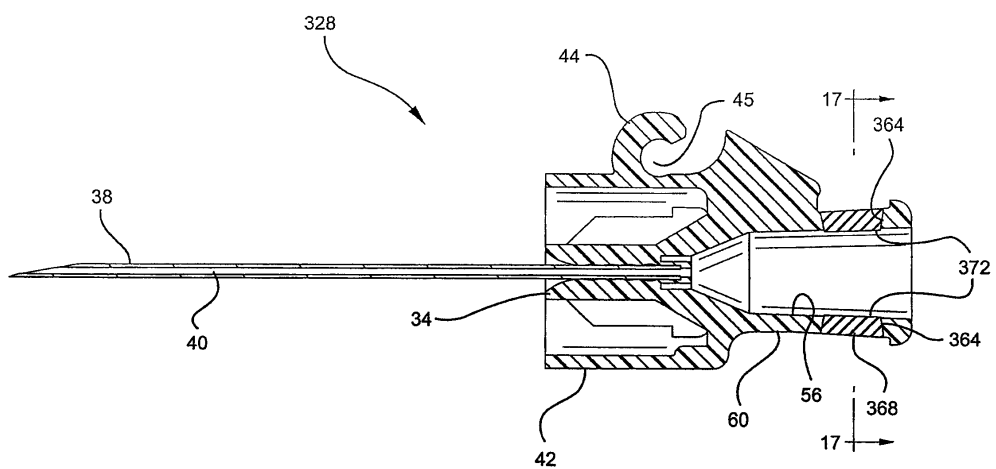
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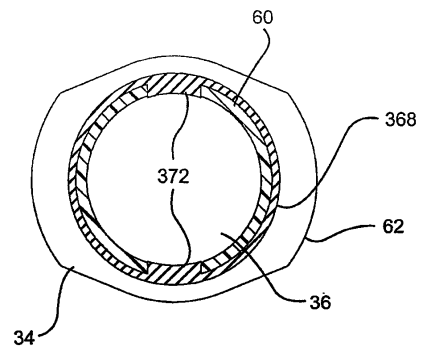
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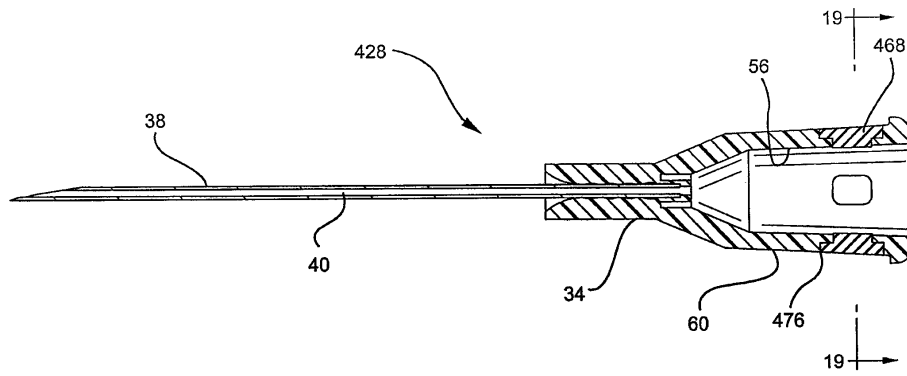
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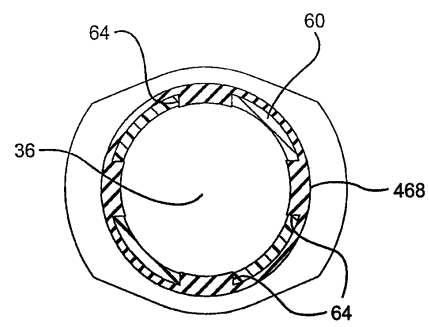
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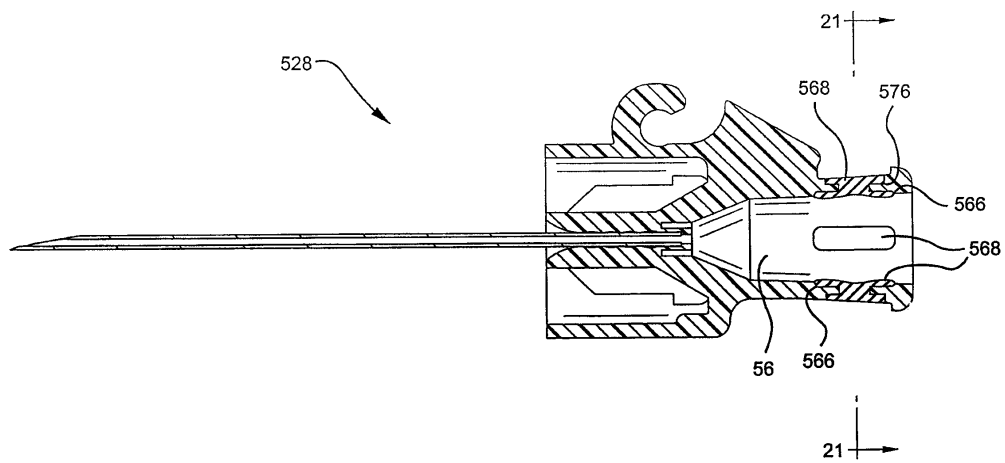
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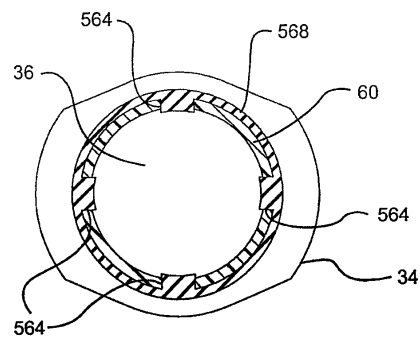
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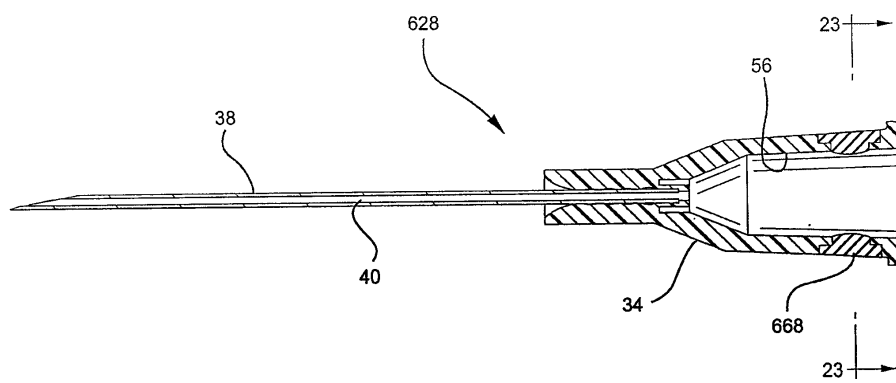
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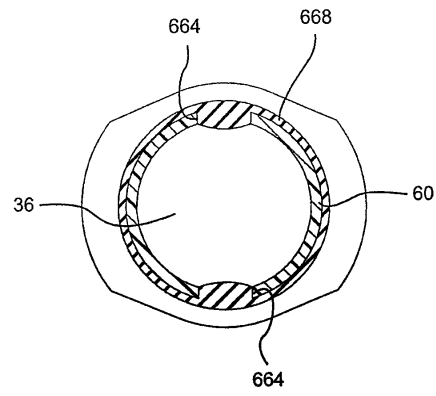
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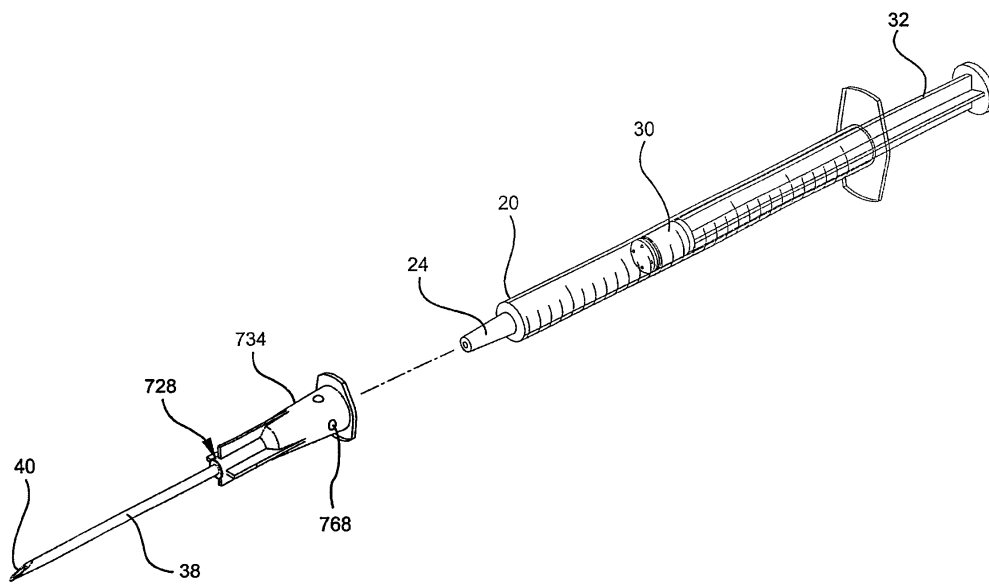
22



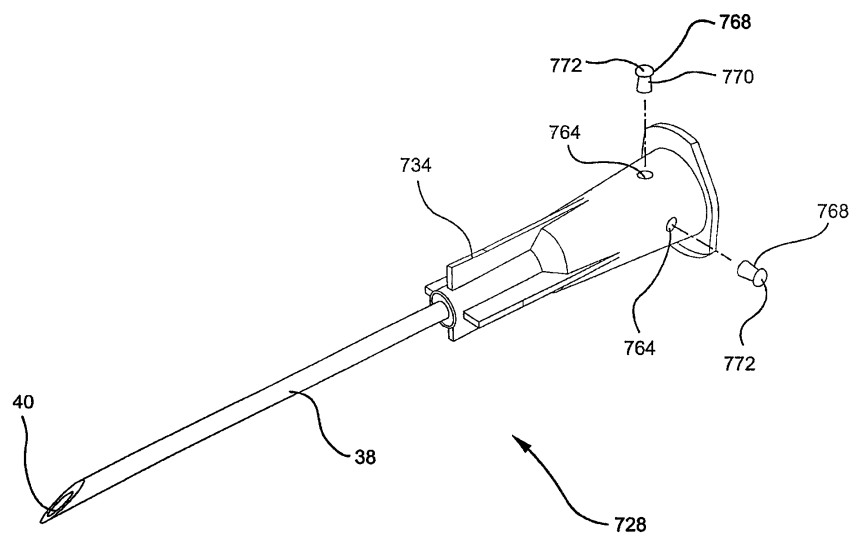
23



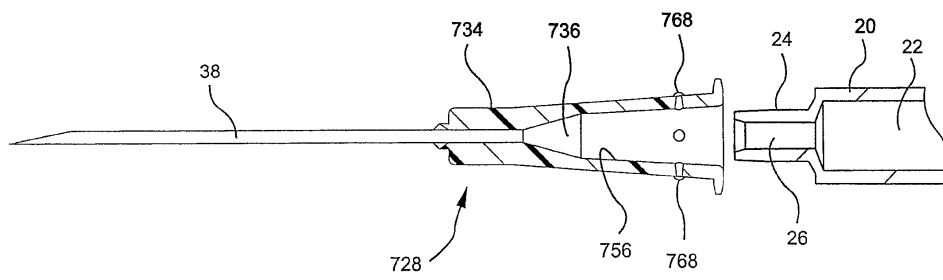
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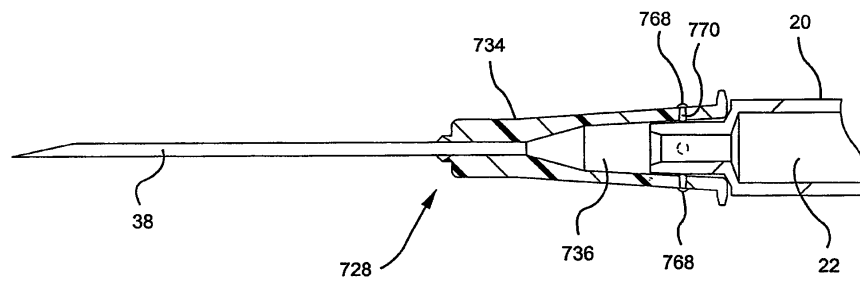
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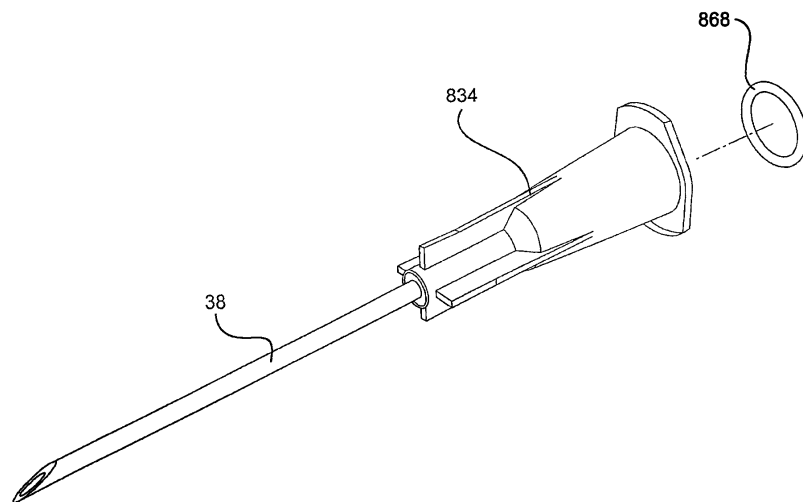
26



27



28



29

