Claims

1. A catheter insertion device comprising:

a housing having a longitudinal dimension with a proximal end, a distal end and a cavity extending between said distal end and proximal end, said distal end having an opening;

a catheter extending through said opening of said housing, said catheter having distal end and a proximal end coupled to a catheter hub received in said cavity of said housing and being movable from a first retracted position to a second extended position relative to said housing, said catheter extending from said distal end of said housing;

an introducer needle positioned in said housing, said introducer needle having a proximal end coupled to said housing and a distal end extending through said catheter; and

an actuator assembly comprising a body in said housing, said body being movable in a longitudinal direction of said housing and operatively connected to said catheter and catheter hub, said body being movable from a first position to a second position toward said distal end of said housing to move said catheter hub and catheter over said introducer needle toward said distal end of said housing and said distal end of said introducer needle, and said body of said actuator assembly configured to prevent said catheter hub and catheter from movement toward said proximal end of said housing.

2. The catheter insertion device of claim 1, wherein said actuator assembly includes an actuator button for sliding said body within said housing.

3. The catheter insertion device of claim 2, wherein said body is coupled to said catheter hub and separable from said catheter hub, and said actuator assembly further comprises an actuator body operatively connected to said body for sliding said body within said housing.

4. The catheter insertion device of claim 3, wherein said actuator body includes at least one tab for sliding over said body in a direction toward said proximal end of said housing, and where said at least one tab engages said body to slide said body in a direction toward said distal end of said housing.

5. The catheter insertion device of claim 3, wherein said actuator body includes an indexing assembly configured for moving said body toward said distal end of said housing and preventing sliding movement of said body toward said proximal end of said housing.

6. The catheter insertion device of claim 5, wherein said housing includes an indexing assembly configured to enable movement of said body toward said distal end of said housing and preventing sliding movement of said body toward said proximal end of said housing.

7. The catheter insertion device of claim 3, wherein said actuator body includes a plurality of spaced-apart flexible tabs for engaging a complementing surface on said body and sliding said body toward said distal end of said housing by sliding movement of said actuator body toward distal end of said housing.

8. The catheter insertion device of claim 7, wherein said housing includes a plurality of spaced-apart flexible tabs for engaging a complementing surface on said body allowing sliding of said body toward said distal end of said housing and preventing sliding of said body toward said proximal end of said housing.

9. The catheter insertion device of claim 3, wherein said body is a needle safety assembly having a spring clip for blocking a distal opening in said body when said introducer needle is withdrawn from said catheter, and a washer to prevent separation of said introducer needle from said body.

10. A catheter insertion device comprising:

a housing having a proximal end, a distal end, and a cavity extending between said distal end and proximal end;

a catheter having a catheter hub received in said cavity of said housing and being movable from a first retracted position to a second extended position relative to said housing, said catheter extending from said distal end of said housing;

an introducer needle positioned in said housing, said introducer needle having a proximal end coupled to said housing and a distal end extending through said catheter;

a body having a proximal end, and a distal end coupled to said catheter hub, said body being movable in a longitudinal direction of said housing toward said distal end and said housing is configured to prevent said body from moving toward said proximal end of said housing; and

an actuator body coupled to said housing and to said body, said actuator body being movable from a first position to a second position to move said body and catheter hub toward said distal end of said housing.

11. The catheter insertion device of claim 10, wherein said actuator body includes an indexing mechanism configured to allow sliding movement of said body toward said distal end and resisting movement of said body toward said proximal end.

12. The catheter insertion device of claim 10, wherein said housing includes an indexing mechanism configured to allow sliding movement of said body toward said distal end of said housing and resisting movement of said body toward said proximal end.

13. The catheter insertion device of claim 11, wherein said actuator body is connected to an actuator button for sliding said actuator body within said housing.

14. The catheter insertion device of claim 10, wherein said body is separable from said catheter hub and said catheter.

15. The catheter insertion device of claim 10, wherein said actuator body includes at least one first tab for sliding over said body in a direction toward said proximal end of said housing and where said at least one tab engages said body to slide said body in a direction toward said distal end of said housing when said actuator body slides toward said distal end of said housing.

16. The catheter insertion device of claim 15, further comprising at least one second tab for engaging said body and resisting sliding movement of said body toward said proximal end of said housing.

17. The catheter insertion device of claim 16, wherein said at least one second tab is coupled to said housing.

18. The catheter insertion device of claim 16, wherein said actuator body includes a plurality of said first tabs for engaging a complementing surface on the body for sliding said body toward said distal end of said housing in a step-wise manner by sliding movement of said actuator body toward distal end of said housing.

19. The catheter insertion device of claim 18, further comprising a plurality of said second tabs extending from said housing for engaging said body and allowing sliding of said body toward said distal end of said housing and preventing sliding of said body toward said proximal end of said housing.

20. The catheter insertion device of claim 10, wherein said body includes a spring clip for blocking an opening in said body when said introducer needle is withdrawn from said catheter, and a washer to prevent separation of said introducer needle from said body.

21. A catheter insertion device comprising:

a housing having proximal end, a distal end, and a cavity extending between said distal end and proximal end;

a catheter having a catheter hub received in said cavity of said housing and being movable from a first retracted position to a second extended position relative to said housing, said catheter extending from said distal end of said housing;

an introducer needle positioned in said cavity of said housing, said introducer needle having a proximal end coupled to said housing and a distal end extending through said catheter;

a body having a proximal end, and a distal end coupled to said hub, said body being movable in a longitudinal direction of said housing toward said distal end and being prevented from moving toward said proximal end of said housing;

an actuator body coupled to said housing and being movable from a first position to a second position to slide within said housing, said actuator body having a ratcheting mechanism for engaging said body to move said body and catheter hub toward said distal end of said housing; and

said housing having a ratcheting mechanism for engaging said body allowing movement of said body toward said distal end of said housing and resisting movement of said body toward said proximal end of said housing.

22. The catheter insertion device of claim 21, wherein said ratcheting mechanism of said actuator body comprises a plurality of flexible first tabs on said actuator body projecting at an incline toward said distal end of said housing for engaging said body to move said body toward said distal end when said actuator body slides toward said distal end.

23. The catheter insertion device of claim 22, wherein said ratcheting mechanism of said housing comprises a plurality of flexible second tabs on said housing projecting at an incline toward said distal end of said housing, said plurality of flexible second tabs enabling said body to move toward said distal end of said housing and resist movement of said body toward said proximal end of said housing.