

CLAIMS

1. A catheter assembly comprising:
 - a flexible catheter;
 - a catheter hub;
 - a needle having a distal tip, the needle disposed in the flexible catheter and moving from a first position that exposes the needle to a second position;
 - an outer member that is configured to engage and disengage the catheter hub;
 - an inner member engaged to and movably disposed in the outer member; and
 - a needle protection member disposed proximally from the catheter hub, and encloses at least a portion of the needle when the needle is in the second position;wherein
 - when the needle is moved to the second position, the inner member axially moves relative to the outer member to allow the outer member to disengage from the catheter hub.
2. The catheter assembly according to claim 1, wherein when the needle is in the first position, the inner member engages the catheter hub.
3. The catheter assembly according to claim 1, wherein the outer member includes a slot that extends through a bottom wall of the outer member.
4. The catheter assembly according to claim 3, wherein the inner member includes an elastic leg on a bottom surface of the inner member, a distal end of the elastic leg includes a protrusion that is configured to engage the slot of the outer member.
5. The catheter assembly according to claim 4, wherein the protrusion of the inner member is engaged to the slot of the outer member when the needle is in the first and second positions.

6. The catheter assembly according to claim 4, wherein the protrusion of the inner member is disposed at a distal end of the slot of the outer member when the needle is in the first position.
7. The catheter assembly according to claim 4, wherein the protrusion of the inner member is disposed at a proximal end of the slot of the outer member when the needle is moved toward the second position.
8. The catheter assembly according to claim 4, wherein the elastic leg of the inner member comprises a cantilever arm.
9. The catheter assembly according to claim 3, wherein the slot is adjacent to a distal end of the outer member.
10. The catheter assembly according to claim 1, wherein the inner member deforms in the outer member to provide retention.
11. The catheter assembly according to claim 10, wherein the inner member axially moves in the outer member upon applying a predetermined force.
12. The catheter assembly according to claim 1, wherein the inner member includes a slot that extends through a bottom wall of the inner member; and
the outer member includes an elastic leg, a distal end of the elastic leg includes a protrusion that is configured to engage the slot of the inner member.
13. The catheter assembly according to claim 1, wherein the needle protection member comprises a resilient clip, the resilient clip is disposed in the inner member.
14. The catheter assembly according to claim 1, wherein the needle protection member comprises an integrally formed resilient clip.