CLAIMS

1. A catheter assembly comprising:

a catheter hub having a distal end, a proximal end and a chamber therein;

a hollow tubular catheter having a proximal end and a distal end, the catheter being connected at its proximal end to the distal end of the catheter hub, the interior of the catheter opening into the chamber within the catheter hub;

a needle having a shaft and a sharpened needle tip;

a valve assembly disposed within the chamber of the catheter hub and comprising a generally tubular first valve portion and a second valve portion, wherein the second valve portion is in the form of a disc, and wherein the valve disc comprises one or a plurality of slits therein;

a valve opener moveable between a closed position, in which the second valve portion is closed, and an open position, in which the second valve portion is open, the valve opener having a passage extending longitudinally therethrough and/or around for passage of fluid;

a needle guard assembly comprising:

a housing having the needle extending therethrough and having a distal end and a proximal end, the housing being connected at its distal end to the proximal end of the catheter hub;

a needle guard disposed within the housing, the needle guard comprising:

a needle trap moveable between a ready position, in which the needle trap is held to one side of the shaft of the needle extending through the housing; and a protected position, in which the needle trap blocks the sharpened needle tip of the needle within the housing;

a resilient arm biasing the needle trap into the protected position, the resilient arm bearing against the inner wall of the housing to urge the needle trap into the protected position;

a coupling arm, in the ready position the coupling arm coupling the housing to the proximal end of the catheter hub, movement of the needle trap from the ready position to the protected position causing the coupling arm to release the housing from the catheter hub.

2. The catheter assembly according to claim 1, wherein the needle guard housing has a portion for extending into the proximal end of the catheter hub in the ready position.

3. The catheter assembly according to either of claims 1 or 2, wherein the needle trap is pivotally attached at a first end to the resilient arm.

4. The catheter assembly according to any of claims 1 to 3, wherein the needle trap and the resilient arm are folded together to one side of the needle shaft in the ready position.

5. The catheter assembly according to any preceding claim, wherein the needle trap comprises one or more lateral members extending in a proximal direction from each side of the needle trap.

6. The catheter assembly according to any preceding claim, wherein the needle trap comprises a retaining member preventing movement of the needle trap from the protected position to the ready position.

7. The catheter assembly according to any preceding claim, wherein the coupling arm engages with an exterior portion of the proximal end of the catheter hub.

8. The catheter assembly according to any preceding claim, wherein the coupling arm is connected to a second end of the needle trap.

9. The catheter assembly according to claim 8, wherein the coupling arm is pivotally connected to the needle trap.

10. The catheter assembly according to any preceding claim, wherein the coupling arm comprises an opening therein, the needle extending through the opening in the ready position.

11. The catheter assembly according to any preceding claim, further comprising means for limiting movement of the needle in the proximal direction relative to the needle guard assembly.

12. The catheter assembly according to claim 11, wherein the needle guard housing comprises a proximal wall having an opening therein, the needle shaft extending through the opening in the proximal wall, the opening for engaging with a bulge in the needle shaft having a radial dimension that is greater than that of the opening in the proximal wall.

13. The catheter assembly according to claim 12, wherein the region of the proximal wall adjacent the opening is reinforced.