CLAIMS

1. A needle assembly comprising:

a needle with a needle tip attached to a needle hub comprising an opening and an interior cavity;

a blood collection device connected to the needle hub and comprising:

a frusto-conical shaped tip extending from a body comprising a wall and defining an interior cavity to store blood;

a gas permeable vent disposed on the wall; and

wherein the frusto-conical shaped tip of the blood collection device projects into the opening of the needle hub and into the interior cavity of the needle hub to receive blood flashback, and the frusto-conical shaped tip of the blood collection device has an opening comprising a movable stem located within an interior space of the frusto-conical shaped tip of the blood collection device; and

wherein the needle defines a lengthwise axis and wherein the movable stem is located off the lengthwise axis.

2. The needle assembly of claim 1, wherein the frusto-conical shaped tip of the blood collection device is a Luer tip.

3. The needle assembly of claim 1, further comprising a catheter hub with a catheter tube and wherein the needle extends through the catheter tube.

4. The needle assembly of claim 3, wherein a needle guard is positioned inside an interior cavity of the catheter hub.

5. The needle assembly of claim 1, wherein the movable stem is connected to a non-symmetrical activator having an apex.

6. A method for manufacturing a needle assembly comprising:

forming a needle hub comprising an opening and an interior cavity and attaching a needle to a distal end of the needle hub and projecting the needle through a catheter hub and a catheter tube;

forming a blood collection device comprising:

a frusto-conical shaped tip extending from a body comprising a wall and defining an interior cavity with a storage capacity; and

a gas permeable vent disposed on the wall;

projecting the frusto-conical shaped tip into the opening and into the interior cavity of the needle hub so that the interior cavity of the needle hub and the interior cavity of the blood collection device are in fluid communication; and

wherein the frusto-conical shaped tip comprises an opening comprising a movable stem movable within the interior space of the frusto-conical shaped tip with an activator having an apex and the movable stem is attached to the activator at the apex.

7. The method of claim 6, further comprising projecting a proximal end of the needle into the interior cavity of the needle hub so that the frusto-conical shaped tip of the blood collection device surrounds the proximal end of the needle.

8. The method of claim 6, further comprising placing a needle guard inside an interior cavity of the catheter hub.

9. The method of claim 6, wherein the body of the blood collection device is made from a compressible plastic material.

10. The method of claim 8, further comprising a valve and a valve opener located inside the interior cavity of the catheter hub.

11. A needle assembly comprising:

a catheter hub having a catheter tube coupled to a needle connected to a needle hub having a needle hub interior cavity, said needle projecting through the catheter hub and the catheter tube;

a blood collection device connected to the needle hub and comprising:

a body defining a body interior cavity to store blood; and

a tip extending distally from the body into the needle hub interior cavity, the tip having an opening comprising a movable stem located within an interior space of the tip;

wherein the needle defines a lengthwise axis and wherein the movable stem is located off the lengthwise axis.

12. The needle assembly of claim 11, wherein the blood collection device further comprises a gas permeable vent disposed on the body of the blood collection device to vent air from the body interior cavity.

13. The needle assembly of claim 11, wherein the movable stem is connected to a non-symmetrical activator having an apex.

14. The needle assembly of claim 13, wherein the activator has a plurality of diffuser holes to provide air paths of fluid paths between a distal interior section located distally of the activator and a proximal interior section located proximally of the activator.

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