

Referring to FIGS. 8 and 9, wherein like reference characters indicate like parts as above, the cylindrical wall 41 is spaced concentrically about the adaptor 36 between the septum 39 and an end wall of the housing 30. In this variant, the wall 41 is movable from the collapsed position of FIG. 8 to the expanded position of FIG. 9 during movement of the adaptor 36 into the housing 30.

The positioning of the wall 41 about the adaptor 36 provides a double seal. That is, while the seal ring 38 seals off the needle 35 from the environment outside the housing 30, the cylindrical wall 41 maintains the interior of the housing 30 in a sealed aseptic condition.

The invention thus provides a connector in which a hollow needle is self-contained in a sealed manner so as to preclude exposure of the needle.

The invention further provides a connector of relatively simple construction which can be adapted to various fluid transfer systems such as IV lines and Y-sites.

What is claimed is:

1. A connector comprising a housing; a hollow needle mounted in said housing; a rubber septum disposed in said housing in facing relation to a distal end of said needle; an adaptor extending coaxially of said needle on a side of said septum opposite said needle to define an internal chamber; and collapsible means maintaining said needle and said septum in opposed spaced relation relative to each other and being collapsible to permit said needle to pierce through said septum into communication with said chamber during relative movement therebetween.
2. A connector as set forth in claim 1 wherein said collapsible means is secured to said needle for movement therewith relative to said septum.
3. A connector as set forth in claim 1 wherein said collapsible means is integral with said septum for movement therewith relative to said needle.
4. A connector as set forth in claim 1 wherein said housing includes a flow path extending from and in communication with a proximal end of said needle.
5. A connector as set forth in claim 4 wherein said housing includes a male luer connector defining said flow path.
6. A connector as set forth in claim 1 wherein said adaptor is a female luer adaptor.
7. A connector as set forth in claim 1 wherein said housing has a cylindrical portion defining a flow path perpendicular to said needle and said needle has an aperture in a side wall opening into said flow path.
8. A connector comprising a housing having a hollow cylindrical portion defining a flow path for fluid and adapted to receive tubing at opposite thereof; a female adaptor extending radially of and in communication with said flow path in said cylindrical portion to define an internal chamber; a rubber septum in said adaptor separating said chamber from said flow path in said cylindrical portion; a hollow needle mounted in said housing in said coaxial relation to said septum, said needle having at least one aperture opening into said flow path of said cylindrical portion; and collapsible means disposed on said housing and secured to said needle for movement between an

extended position with said needle spaced from said septum and a collapsed position with said needle piercing said septum and extending into said chamber for conveying fluid therefrom into said flow path of said cylindrical portion of said housing.

9. A connector as set forth in claim 8 wherein said collapsible means includes an end wall secured to said needle and a collapsible cylindrical wall spaced concentrically about said needle and secured to said housing.

10. A connector as set forth in claim 8 wherein said housing has a hollow stub opposite said adaptor and in communication with said flow path, and wherein said needle is slidably mounted in said stub in sealed relation therewith.

11. A connector as set forth in claim 10 wherein said housing is made of plastic and said needle is made of metal.

12. A connector comprising

a housing having a male luer connector defining a flow path for fluid;

a hollow needle mounted in said housing coaxially of said connector and having a proximal end opening into said flow path of said connector;

a female adaptor slidably mounted in said housing coaxially of said needle to define an internal chamber;

a rubber septum disposed in sealed relation between said adaptor and said needle; and

collapsible means sealingly disposed between said housing and said adaptor and being movable from a first position to a second position to permit said needle to pierce through said septum into communication with said chamber during movement of said adaptor into said housing for conveying fluid from said chamber into said flow path of said male luer connector.

13. A connector as set forth in claim 12 wherein said collapsible means includes a collapsible cylindrical wall spaced concentrically about said needle and within said housing to move from an expanded position to a collapsed position during movement of said adaptor into said housing.

14. A connector as set forth in claim 13 wherein said cylindrical wall is integral with said septum.

15. A connector as set forth in claim 14 wherein said wall defines a second chamber and said housing has a passageway communicating with said second chamber with said flow path of said male luer connection.

16. A connector as set forth in claim 13 which further comprises an annular flange on said wall in sealing relation with said housing.

17. A connector as set forth in claim 12 wherein said collapsible means includes a collapsible cylindrical wall spaced concentrically about said adaptor to move from a collapsed position to an expanded position during movement of said adaptor into said housing.

18. A connector as set forth in claim 12 wherein said housing has a cylindrical wall concentric to and spaced from said male luer connection.

19. A connector as set forth in claim 12 which further comprises a sealing ring between said adaptor and said housing.

20. A connector comprising

a tube defining a flow path for fluid, said tube having a hollow stub extending radially of and in communication with said flow path;

a holder mounted in said stub;