

Both of the aforementioned problems encountered with tracheostomy tubes of the prior art are extremely dangerous to patients undergoing respiratory care. The present invention avoids these problems. Also, as noted hereinbefore, the corrugated 46 flexible tube means 12 will absorb and cushion the thrust created by the pulsations of the respirator, thus eliminating the abrasive action and motion to the tracheal mucosa by the tracheostomy tubes of the prior art. This latter feature of the present invention permits long term respiratory support 10 while decreasing the possibility of fistulae.

As can be readily understood from the foregoing description of the invention, the present structure can be configured in different modes to provide the ability 15 to furnish respiratory care to a patient through a tracheostomy means.

Accordingly, modifications and variations to which the invention is susceptible may be practiced without departing from the scope and intent of the appended claims. 20

What is claimed is:

1. A portable closure means, comprising:

an inflatable cuff-like means, said inflatable cuff-like means being capable of being removably insertable 25 within a pipe-like structure, said pipe-like structure having a flow passageway therethrough, said inflatable cuff-like means having a plurality of interfacing flutes, said plurality of interfacing flutes having a configuration of corrugated-like convoluted rings located around the exterior periphery of said inflatable cuff-like means, said corrugated-like convoluted rings being adjoining and adjacent to each other in interface, said corrugated-like convoluted rings forming said flutes and providing a 35 flexibility to prevent kinking;

a plurality of constricting bands, said constricting bands being located around said inflatable cuff-like means, each of said plurality of constricting bands being located individually in a respective crease of 40 and between a pair of said adjoining and adjacent interfacing flutes; and

an inflating means, said inflating means being connected to said inflatable cuff-like means and communicating internally therewith and therebetween, 45 said inflatable cuff-like means being capable of internally closing said flow passageway through said pipe-like structure into which said inflatable cuff-like means has been removably inserted and subsequently inflated by said inflating means, said inflating means having an air inlet means, a check valve means, and an inflating tube-like means, said inlet means being a structure having a capability to receive and mate with the end of a pump means, said check valve means being located within said 55 air inlet means, said check valve means becoming a part of said air inlet means structure, said inflating tube-like means being hollow and open ended, said inflating tube-like means having a first end and a second end, said first end of said inflating tube 60 means being affixed to said air inlet means and communicating internally therewith, said second end of said inflating tube-like means being affixed to said inflatable cuff-like means and communicating internally therewith, the interior of said inflat- 65 able cuff-like means, said inflating tube-like means, and said air inlet means thereby communicating internally therethrough.

2. A closure means as recited in claim 1 and additionally, a pump means, said pump means being removably affixed to said air inlet means, said pump means being capable of inflating said cuff-like means through said inflating means. 5

3. A closure means as recited in claim 2, wherein said cuff-like means is capable of internally closing said flow passageway of said pipe-like structure and thereby controlling a flow of gaseous and liquid matter there- through when said cuff-like means is inflated by the operation of said pump means.

4. A closure means as recited in claim 1 and additionally, an air reservoir means, said air reservoir means having an inlet means and an outlet means, said air reservoir means being located and inserted between said air inlet means and said first end of said inflating tube-like means, said inlet means of said air reservoir means being affixed to said air inlet means and communicating internally therewith, said outlet means of said air reservoir means being affixed to said first end of said inflating tube-like means and communicating internally there- with. 15

5. A closure means as recited in claim 4, wherein said cuff-like means is capable of internally closing said flow passageway of said pipe-like structure and thereby controlling a flow of gaseous and liquid matter there- through when said cuff-like means is inflated by the operation of said pump means. 20

6. A portable closure means, comprising:

an inflatable cuff-like means, said inflatable cuff-like means having a passageway therethrough, said inflatable cuff-like means being capable of being removably insertable within a pipe-like structure, said pipe-like structure having a flow passageway therethrough, said inflatable cuff-like means having a plurality of interfacing flutes, said plurality of interfacing flutes having a configuration of corru- gated-like convoluted rings located around the exterior periphery of said inflatable cuff-like means, said corrugated-like convoluted rings being adjoining and adjacent to each other in interface, said corrugated-like convoluted rings forming said flutes and providing a flexibility to prevent kinking; 30

a plurality of constricting bands, said constricting bands being located around said inflatable cuff-like means, each of said plurality of constricting bands being located individually in a respective crease of and between a pair of said adjoining and adjacent interfacing flutes; and 35

an inflating means, said inflating means being connected to said inflatable cuff-like means and communicating internally therewith and therebetween, said inflatable cuff-like means being capable of internally closing said flow passageway through said pipe-like structure into which said inflatable cuff-like means has been removably inserted and subsequently inflated by said inflating means, said inflating means having an air inlet means, a check valve means, and an inflating tube-like means, said inlet means being a structure having a capability to receive and mate with the end of a pump means, said check valve means being located within said 40 air inlet means, said check valve means becoming a part of said air inlet means structure, said inflating tube-like means being hollow and open ended, said inflating tube-like means having a first end and a second end, said first end of said inflating tube 45 means being affixed to said air inlet means and communicating internally therewith, said second end of said inflating tube-like means being affixed to said inflatable cuff-like means and communicating internally therewith, the interior of said inflat- 50 able cuff-like means, said inflating tube-like means, and said air inlet means thereby communicating internally therethrough.