CLAIMS

What is claimed is:

1. A take-up drum apparatus for a plurality of flexible high pressure fluid cleaning lance hoses comprising:

a base;

a hollow take-up drum assembly rotatably supported from the base via a rotary swivel, wherein the drum assembly includes a hollow cylindrical shell having a bottom plate, a cylindrical side wall, a high pressure fluid supply connection and a manifold positioned on the bottom plate of the shell for connection of one end of each of a plurality of flexible lance hoses to the high pressure fluid supply connection;

a support arm extending from the base outside of and across the side wall of the shell; and

one or more guide tubes supported by the support arm for guiding flexible lance hoses into and out of the take-up drum assembly.

2. The apparatus according to claim 1 wherein the base comprises a central socket for receiving a portion of the swivel and a set of three or more legs supporting the socket.

3. The apparatus according to claim 1 wherein the high pressure fluid supply connection is fastened to a stem of the swivel mounted in the socket.

4. The apparatus according to claim 1 wherein the take-up drum shell has a peripheral rim parallel to the bottom plate.

5. The apparatus according to claim 1 further comprising an inverted U shaped tube connecting the swivel to the manifold in the shell.

6. The apparatus according to claim 5 wherein the swivel comprises a bearing supported tubular shaft in a housing forming a stem adapted to be carried in the socket of the base.

7. The apparatus according to claim 6 wherein the bottom plate has a hub fastened to the tubular shaft of the swivel.

8. The apparatus according to claim 1 wherein the base has a central socket receiving a portion of the swivel, a plurality of legs radially extending from the socket, and the support arm positions the one or more guide tubes tangent to the cylindrical shell of the drum assembly.

9. The apparatus according to claim 8 wherein the swivel has a tubular shaft fastened to a hub on the bottom plate of the drum assembly and an inverted U shaped tube extends axially from the tubular shaft and radially to the manifold fastened to the bottom plate.

10. The apparatus according to claim 8 wherein the hub has a truncated conical shape.

11. A take-up drum apparatus for receiving, storing and dispensing a plurality of high pressure cleaning fluid hoses to and from a flexible lance drive apparatus, the drum apparatus comprising:

a base having three or more legs radiating from a central socket and a support arm extending from one of the legs;

a hollow take-up drum assembly rotatably supported from the base by a rotary swivel, wherein the drum assembly includes a hollow cylindrical shell having a cylindrical side wall merging with a bottom plate having a central hub, a peripheral annular rim around the side wall parallel to the bottom plate, and a manifold fastened to the bottom plate of the shell for connection of one end of each of a plurality of flexible lance hoses to a high pressure fluid supply connector through the swivel; and

one or more guide tubes carried by the support arm and directed tangent to the cylindrical shell.

12. The apparatus according to claim 11 wherein the high pressure fluid supply connection is fastened to a stem of the swivel mounted in the socket.

13. The apparatus according to claim 11 further comprising an inverted U shaped tube connecting the swivel to the manifold in the shell.

14. The apparatus according to claim 13 wherein the swivel comprises a bearing supported tubular shaft in a housing forming a stem adapted to be carried in the socket of the base.

15. The apparatus according to claim 14 wherein the shaft is fastened to one end of the inverted U shaped tube.

16. The apparatus according to claim 14 wherein the bottom plate has a hub fastened to the tubular shaft of the swivel.

17. The apparatus according to claim 11 wherein the swivel has a tubular shaft fastened to a hub on the bottom plate of the drum assembly and an inverted U shaped tube extends axially from the tubular shaft and radially to the manifold fastened to the bottom plate.

18. The apparatus according to claim 17 wherein the hub has a truncated conical shape.

19. A high pressure flexible lance cleaning apparatus comprising:

a pneumatic drive motor operating a plurality of drive rollers to move one or more flexible lance hoses into and out of a conduit to be cleaned; and

a take-up drum apparatus for receiving, storing and dispensing each of flexible lance hoses to and from the drive apparatus, the drum apparatus comprising:

a base having three or more legs radiating from a central socket and a support arm extending from one of the legs;

a hollow take-up drum assembly rotatably supported from the base by a rotary swivel, wherein the drum assembly includes a hollow cylindrical shell having a cylindrical side wall merging with a bottom plate having a central hub, a peripheral annular rim around the side wall parallel to the bottom plate, and a manifold fastened to the bottom plate of the shell for connection of one end of each

of a plurality of flexible lance hoses to a high pressure fluid supply connector through the swivel;

one or more guide tubes carried by the support arm and directed tangent to the cylindrical shell; and

a protective sleeve snout adapted to be connected between the one or more guide tubes and the drive motor for confining a path of the lance hoses between the drum assembly and the drive motor.

20. The apparatus according to claim 19 wherein the high pressure fluid supply connection is fastened to a stem of the swivel mounted in the socket.