periphery thereof, and retained by a retainer washer **373** secured by a screw **375** to the end of the manifold extension **354**. Each of the stator blocks **368**, **370** and **372** is cylindrical in configuration and is constructed of a synthetic resin having high strength and a low coefficient of friction. Each of the stator blocks is provided with a radially extending passageway. Thus, the stator block **368** defines the radial passageway **376** which extends from a connection nipple **378** at the outer periphery of the block inwardly to a point of intersection with an annular fluid collection channel **380** formed in the stator block around the manifold extension **354**. The annular fluid collection channel **380** is positioned to receive fluid discharged through a port **382** formed through the outer wall of the manifold extension **354** to intersect the bore **356**.

The stator block **370** simmilarly defines a radial passageway **384** which extends from a connection nipple **385** and opens at its inward end in an annular fluid collection channel **386**. The annular fluid collection channel **386** is positioned around manifold extension **354** at a location to transfer fluid through a port **388** which opens through the outer wall of the manifold extension to intersect the axial bore **358**. Lastly, the stator block **372** defines the radial passageway **390** which extends from a connection nipple **392** to an annular fluid collection channel **394** located at its inner end. The annular fluid collection channel **394** registers with a port **396** which opens through the wall of the manifold extension **354** into the axial bore **360**.

The synthetic resin stator blocks **368**, **370** and **372** are stationary during operation of the reel assembly **22** and are mounted in a fixed position on a bracket **398** which is supported upon a plate extension **400** from the base **402** of the pillow block **344**.

In the operation of the embodiment of the tube bundle reel assembly **22** depicted in FIGS. **13–16**, the power fluid to be charged to the pump carried in the tubing **60** is introduced through any suitable conduit connected to the nipple **378**. The power fluid passes through the radial passageway **376**, through the port **382** and on into the axial bore **356** in the manifold extension **354**. Upon entering the enlarged cylindrical end portion of the connector block **346**, the power fluid passes out through the radial passageway **362** into the nipple **348**, and from this nipple enters the tubing **60**. This charging of the power fluid is facilitated by the stationary status of the synthetic resin stator blocks in relation to the cylindrical manifold extension **354** of the connector block **356** which rotates with the drum **324**. The nipple **378** and passageway **376** are continuously communicated with the port **382** and axial bore **356** by means of the annular fluid collection channel **380**.

In similar fashion, exhaust power fluid carried to the surface in the tubing **62** is passed from this tubing into the nipple **350**, from the nipple **350** through the radial passageway **364** and ultimately into the axial bore **358** formed in the connector block **346** and extending on into the manifold extension **354**. The exhaust power fluid is ultimately removed via the nipple **385** carried by the stator block **370**.

The course of a fluid sample delivered by the pump to the surface via the tubing **64** is similar to that described as experienced by the exhaust power fluid, except that the pumped sample passes through the axial bore **360** and is ultimately collected via the collection nipple **392** carried at the radially outer end of the radial passageway **390** formed in the synthetic resin stator block **372**.

Although certain preferred embodiments of the present invention have been herein described in order to afford clear examples of the principles of construction and utilization which underlie the invention, it will be understood that various changes and innovations of the specific structures used, and their arrangements relative to each other within the pump assembly, can be undertaken without departure from the basic principles underlying the invention. Changes and innovations of this type are therefore deemed to be circumscribed by the spirit and scope of the invention except as the same may be necessarily limited by the appended claims or reasonable equivalents thereof.

What is claimed is:

1. A fluid-powered sampling pump system comprising:

a tube bundle reel assembly;

a tube bundle reeled upon said reel assembly and including:

a fluid sample tubing;

a power fluid charging tubing; and

an exhaust power fluid tubing;

a pump connected to one end of said tube bundle for lowering into the earth, said pump comprising:

a hollow cylindrical upper motor piston chamber defining an axially extending fluid passageway in the wall thereof for receiving pressurized power fluid from said power fluid charging tubing, and further defining an axially extending fluid passageway in the wall thereof for delivering exhaust power fluid to said exhaust power fluid tubing;

an upper motor piston in said upper motor piston chamber;

a hollow cylindrical lower motor piston chamber;

means detachably interconnecting said upper and lower motor piston chambers and positioned therebetween to facilitate independent removal of said motor piston chambers from the pump;

a lower motor piston in said lower motor piston chamber;

means interconnecting said upper and lower motor pistons for concurrent movement within their respective piston chambers;

a lower pump piston chamber connected to said lower motor piston chamber;

an upper pump piston chamber connected to said upper motor piston chamber;

an upper pump piston connected to said upper motor piston and having a portion positioned in said upper pump piston chamber for reciprocation therein during the concurrent reciprocation of said upper motor piston;

a lower pump piston having a portion positioned in said lower pump piston chamber and connected to said lower motor piston for reciprocation in said lower pump piston chamber when said lower motor piston undergoes reciprocation;

a lower pump valve subassembly connected to said lower pump piston chamber and including an intake valve and a discharge valve;

an upper pump valve subassembly connected to said upper pump piston chamber and including an intake valve and a discharge valve;

manifold tubing means commonly interconnecting said discharge valves to said fluid sample tubing of said tube bundle;