structured polymeric layer. Optionally, cap layer **724** may be a material such as a spunlaced, spunbond, blown microfiber or carded nonwoven. Polymers may be chosen such that the cap layer **92** can be secured to the structured surface **76** without using an adhesive. Such a polymer could be chosen such that the cap layer becomes securely welded to the structured surface by applying heat, for example, as from an ultrasonic welding operation. In some applications, the cap layer may be formed from more than one layer (e.g., an initial nonwoven layer covered by a linoleum layer). In this situation, the nonwoven layer may act as a debris filter above the structured surface, and may also serve to increase the effective surface presented for laying down or adhering the linoleum layer.

[**0094**] The potential source may comprise essentially any means capable of establishing a potential difference along a plurality of the flow channels **82** to encourage liquid movement from a first location to a second location. The potential is sufficient to cause, or assist in causing, liquid flow through a plurality of flow channels **82**, which is based in part on the fluid characteristics of any particular application. As shown in **FIG. 3***a*, the potential source **78** may comprise a vacuum generator (V) that is conventionally or otherwise connected to an optional collector receptacle **96**. The collector receptacle **96** is fluidically connected to the manifold **88** by way of a conventional flexible tube **98**. Thus, liquid can be drawn from outside the capillary module **94** into the inlets **84**, through channels **82**, through manifold **88**, through tube **98**, and into the collection receptacle **96**. The receptacle **96** may advantageously be operable to empty its contents or may be otherwise connected to conventional drainage systems.

[**0095**] In the case where the potential source **78** comprises a vacuum generator (V), the vacuum provided to the channels **82** via manifold **88** can be sufficient to adequately seal the cap layer **92** to the peaks **90**. That is, the vacuum itself will hold the cap layer **92** against peaks **90** to form discrete channels **82**. Preferably, each of the channels **82** that are defined by the structured surface **76** is closed off by the cap layer **92** so as to define a maximum number of discrete channels **82** capable of independently accommodating the potential. Liquid crossover between channels **82** may be effectively minimized, and the potential provided from an external source can be more effectively and efficiently distributed over the structured surface **76** of layer **75**. When the potential source **78** comprises a vacuum generator, manifold **88** need not be sealed to channels **82** but may be simply placed adjacent an open section of channels **82**.

[**0096**] Connection between a microstructure-bearing surface, or capillary module, to a fluid conveyance or potential source can be achieved through a detachable or affixed manifold or manifolds as required. Multiple potential sources may also be employed depending on the particular adaptation or application. Pressure differential is an efficient liquid flow motivation method or potential that may be used to drive flow across a microstructure-bearing surface. Pressure differential can be established readily through use of a pumping system and applied either in the form of positive or negative pressure.

[**0097**] Other potential sources **78** may be used in the present invention instead of or in conjunction with a vacuum generation device (V). Essentially any manner of causing or encouraging liquid flow through the channels **82**, is contemplated for using this invention. The potential source is separate from the channeled structure and/or capillary module, or in other words is not intrinsic to the channeled structure and/or capillary module. That is, the invention does not rely solely on the properties of the channeled structure to cause liquid movement, for example, by capillary action. Examples of other potential sources include but are not limited to, vacuum pumps, vacuum aspirators, pressure pumps and pressure systems such as a fan, magneto hydrodynamic drives, magnetic systems, acoustic flow systems, centrifugal spinning, hydrostatic heads, gravity, absorbents, and any other known or later developed fluid drive system utilizing the creation of a potential difference that causes or encourages liquid flow to at least to some degree. Additionally, any applied field force that acts directly on the liquid such as a centrifugal force or magnetic field that causes liquid to move within the channels of the invention may be considered a liquid motive potential. In addition, the potential source may operate to move liquid onto the structured surface rather than remove liquid off of or away from the structured surface. Liquid may also be caused to flow through channels by the action of a siphon where atmospheric pressure creates the potential to move liquid in the channels. In an application of the present invention in an aircraft, the pressurization of the aircraft may be employed to achieve the pressure differential required to define a potential for liquid flow.

[**0098**] Although the liquid transport device shown in **FIG. 3***a* has a structured surface **76** comprising multiple V-shaped peaks **90** (e.g., as shown in **FIG. 2***a*), other topography configurations for the structured surface **76** are contemplated. In addition, in some embodiments, two or more structured surfaces may be overlaid to increase flow capacity (see, e.g., **FIG. 3***b*). Such an arrangement likewise multiplies the possible configurations for relative channel orientation among the stacked layers of structured surfaces, as well as the possible arrangements for application of a potential to one or more of the layers. The stacked layers may comprise different channel configurations and/or numbers of channels, depending on a particular application. Furthermore, this type of stacked construction can be particularly suitable for applications that are restricted in width and therefore require a relatively narrow fluid transport device from which a certain fluid transfer capacity is desired. Thus, a narrow device can be made having increased flow capacity. The layers in the stack may be bonded to one another in any number of conventional ways as described herein, or they may simply be stacked upon one another such that the structural integrity of the stack can adequately define discrete flow channels. This ability may be enhanced, as described above, when a vacuum is utilized as the potential source. The stack could include multiple connectors to allow multiple potential sources of varying potential to be attached to as subsets in the stack.

[**0099**] As seen in **FIG. 3***a*, the layer **75** is mounted to a substrate **100** by suitable adhesive means **102** therebetween. The adhesive means **102** is preferably a pressure sensitive adhesive, but may comprise other fastening arrangements, such as opposed two part mechanical fasteners, other adhesive compositions or tapes, hook and loop fasteners, and opposed fields such as electrical or magnetic. The adhesive layer means **102** may simply be a layer of pressure sensitive adhesive which is continuous or discontinuous, or the adhesive thereon may be formed to have a microstructured