The airfoils 90 may be constrained to pivot together (e.g., with a mechanical linkage, synchronized stepper motors, etc.), or the airfoils may be permitted to pivot independently of each other. As depicted in FIG. 21, a torsional biasing force 100 is applied to each of the airfoils 90. This biasing force 100 could be applied by any suitable means, such as, one or more rotary actuators, torsion springs, biasing devices 96, 98, etc.).

In the configuration of FIG. 22, the multiple airfoils 90 are both laterally and longitudinally spaced apart from each other. In addition, the airfoils 90 can be displaced in both lateral and longitudinal directions 102, 104 (e.g., using linear actuators, etc.), in order to position the airfoils as desired.

In the configuration of FIG. 23, the multiple airfoils 90 are longitudinally spaced apart. In some examples, the airfoils 90 could be directly inline with each other.

In the FIG. 23 example, the upstream airfoil 90 directs the flow of the fluid composition 36, so that it is advantageously directed toward the downstream airfoil. However, other purposes could be served by longitudinally spacing apart the airfoils 90, in keeping with the scope of this disclosure.

In the configuration of FIG. 24, airfoil-like surfaces are formed on the walls of the fluid switch 66. In this manner, the fluid composition 36 is preferentially directed toward the flow path 48 at certain conditions (e.g., high flow velocity, low viscosity, etc.). However, at other conditions (e.g., low flow velocity, high viscosity, etc.), the fluid composition 36 is able to flow relatively equally to the flow paths 46, 48.

50. A method of variably resisting flow in a subterranean well, the method comprising:

a structure displacing in response to a flow of a fluid composition; and

a resistance to the flow of the fluid composition changing in response to a ratio of desired to undesired fluid in the fluid composition changing.

51. The method of claim 50, further comprising exposing the structure to the flow of the fluid composition in at least first and second directions, and wherein the resistance to the flow changing further comprises the resistance to the flow changing further in response to a change in a proportion of the fluid composition which flows in the first and second directions.

52. The method of claim 50, further comprising the structure being increasingly biased in a first direction by the flow of the fluid composition increasingly in the first direction, and the structure being increasingly biased in a second direction by the flow of the fluid composition increasingly in the second direction.

53. The method of claim 52, wherein the first direction is opposite to the second direction.

54. The method of claim 52, wherein the first and second directions comprise at least one of the group including circumferential, axial, longitudinal, lateral, and radial directions.

The airfoils 90 may be constrained to pivot together (e.g., with a mechanical linkage, synchronized stepper motors, etc.), or the airfoils may be permitted to pivot independently of each other. As depicted in FIG. 21, a torsional biasing force 100 is applied to each of the airfoils 90. This biasing force 100 could be applied by any suitable means, such as, one or more rotary actuators, torsion springs, biasing devices 96, 98, etc.).

In the configuration of FIG. 22, the multiple airfoils 90 are both laterally and longitudinally spaced apart from each other. In addition, the airfoils 90 can be displaced in both lateral and longitudinal directions 102, 104 (e.g., using linear actuators, etc.), in order to position the airfoils as desired.

In the configuration of FIG. 23, the multiple airfoils 90 are longitudinally spaced apart. In some examples, the airfoils 90 could be directly inline with each other.

In the FIG. 23 example, the upstream airfoil 90 directs the flow of the fluid composition 36, so that it is advantageously directed toward the downstream airfoil. However, other purposes could be served by longitudinally spacing apart the airfoils 90, in keeping with the scope of this disclosure.

In the configuration of FIG. 24, airfoil-like surfaces 91 are formed on the walls of the fluid switch 66. In this manner, the fluid composition 36 is preferentially directed toward the flow path 48 at certain conditions (e.g., high flow velocity, low viscosity, etc.). However, at other conditions (e.g., low flow velocity, high viscosity, etc.), the fluid composition 36 is able to flow relatively equally to the flow paths 46, 48.

50. A method of variably resisting flow in a subterranean well, the method comprising:

a structure displacing in response to a flow of a fluid composition; and

a resistance to the flow of the fluid composition changing in response to a change in a ratio of desired to undesired fluid in the fluid composition changing.

51. The method of claim 50, further comprising exposing the structure to the flow of the fluid composition in at least first and second directions, and wherein the resistance to the flow changing further comprises the resistance to the flow changing further in response to a change in a proportion of the fluid composition which flows in the first and second directions.

52. The method of claim 50, further comprising the structure being increasingly biased in a first direction by the flow of the fluid composition increasingly in the first direction, and the structure being increasingly biased in a second direction by the flow of the fluid composition increasingly in the second direction.

53. The method of claim 52, wherein the first direction is opposite to the second direction.

54. The method of claim 52, wherein the first and second directions comprise at least one of the group including circumferential, axial, longitudinal, lateral, and radial directions.