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(54) Title: **EXTREME FLOW RATE AND/OR HIGH TEMPERATURE FLUID DELIVERY SUBSTRATES**

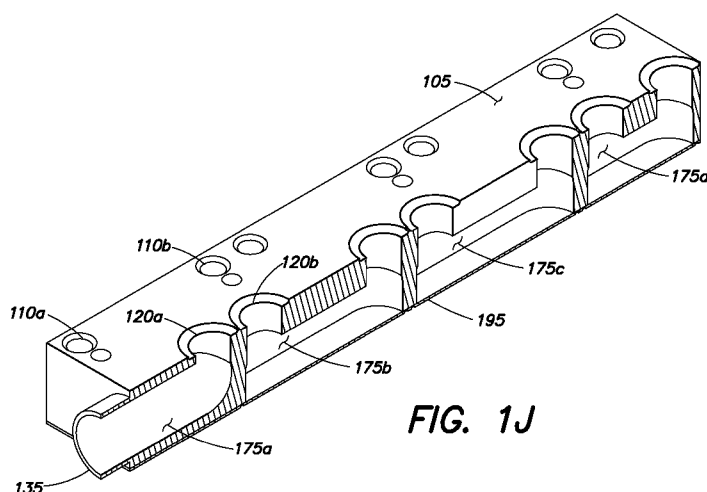


FIG. 1J

(57) Abstract: A flow substrate including a body having a first surface and a second opposing surface, a plurality of pairs of ports defined in the first surface of the body, a plurality of fluid pathways extending between each respective pair of ports and in fluid communication with each port of the respective pair of ports, and at least one cap. Each fluid pathway is formed in the second surface of the body. The at least one cap has a first surface constructed to seal at least one fluid pathway, and a second opposing surface. At least one of the body and the at least one cap includes a weld formation formed in at least one of the second surface of the body and the second surface of the at least one cap constructed to surround the at least one fluid pathway and facilitate welding of the at least one cap to the body along the weld formation.

