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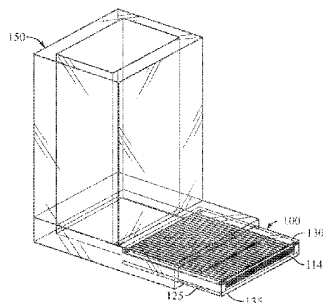


FIG. 1A

(57) Abstract: The embodiments provided herein relate to a water purification system and method utilizing a filter cartridge comprising a plurality of filter wafers stacked to form a plurality of channels for unfiltered water to flow through for purification. The water purification system is configured to utilize the exclusion zone phenomenon to separate impurities from water using hydrophilic surfaces and trifurcations to divert pure water from impurities. The filter cartridge comprising a plurality of filter wafers may be received by a water receptacle to provide a low-energy water purification system.

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