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(54) Title: ACOUSTOPHORETIC DEVICE WITH UNIFORM FLUID FLOW

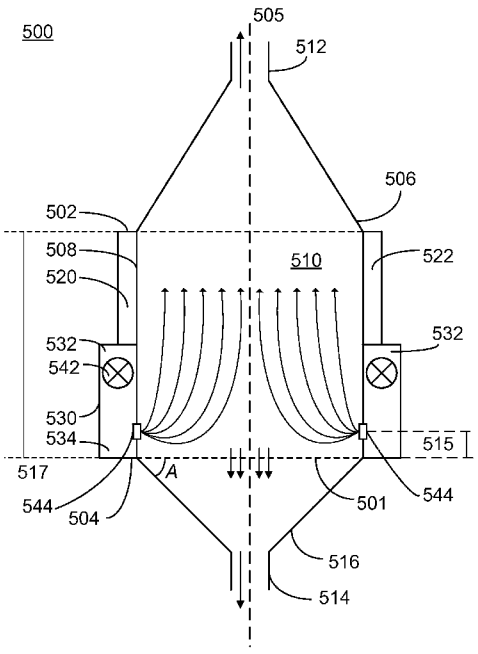


FIG. 17

(57) Abstract: An acoustophoresis device which includes a substantially vertical flow path of the fluid mixture in order to improve separation of particles / secondary fluid from a primary fluid is disclosed. The vertical flow path reduces velocity non-uniformities in the acoustic chamber resulting from gravity forces. The device includes an acoustic chamber in which multidimensional acoustic standing waves are generated. The fluid can be introduced into the acoustic chamber using a dump diffuser in which a plurality of inlets enter near the bottom of the acoustic chamber such that flow symmetry reduces both, gravity driven flow non-uniformities, and any flow interference effects between inlet mixture flow into the acoustic chamber and the continuous gravity driven particle cluster drop out.

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