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- (54) **PARTICLE MANIPULATION**
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(57) **ABSTRACT**

An apparatus which manipulates particles suspended in a fluid includes a duct for the flow of the fluid in which the particles are suspended, and a mechanism for establishing an acoustic standing wave field across the width of the duct, the duct being formed with an expansion in width downstream of the standing wave field. In use, the particles in the fluid are displaced into a series of parallel bands by the acoustic standing wave field. The particles remain in these bands as the fluid flows downstream from the section in which the standing wave field is present. When the fluid reaches the expansion of the duct, the stream of fluid expands accordingly in width and, in so doing, the bands of particles are spread further apart, so increasing the spacing between adjacent bands. The bands can then be observed or separated from the duct.

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11 Claims, 2 Drawing Sheets

