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(54) Title: METHODS AND APPARATUS FOR TRAPPING AND ACCUMULATION OF IONS

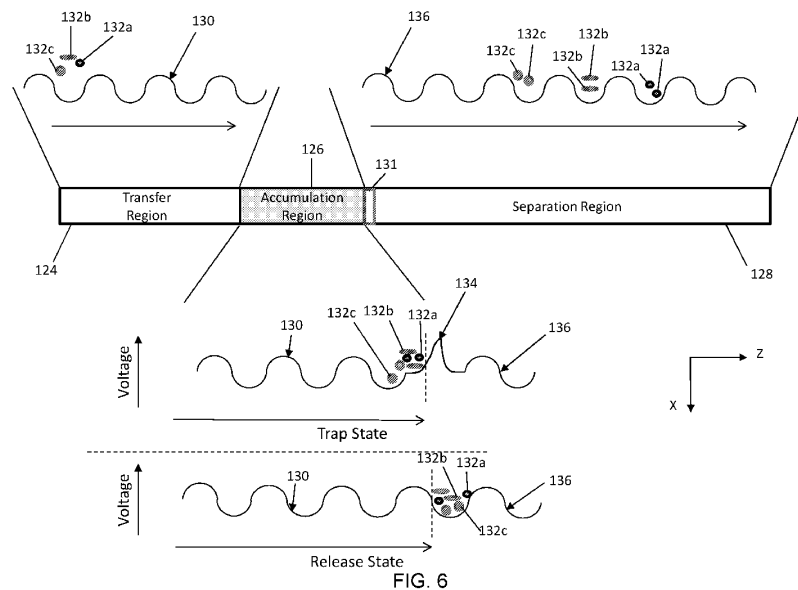


FIG. 6

(57) Abstract: Methods and apparatus for ion accumulation are disclosed. An apparatus for ion accumulation includes multiple regions. A first region receives and transfers ions to a second region using a first drive potential. The second region is switchable between a first state where it generates a first electric field preventing ions from further movement and entering a third region, and a second state where it generates a second electric field that guides the ions toward the third region. When in the first state, the ions are prevented from further movement by the first electric field, which causes the ions to accumulate in the second region. When in the second state, the ions are moved from the second region to the third region by the second electric field. A method of accumulating ions involves switching an electric field applied to a region between a trap state and a release state.

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