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**Schultz et al.**

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(54) **ION MOBILITY TOF/MALDI/MS USING DRIFT CELL ALTERNATING HIGH AND LOW ELECTRICAL FIELD REGIONS**

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(52) **U.S. Cl.** ..... **250/287**; 250/287; 250/292

(58) **Field of Classification Search** ..... 250/287, 250/292

See application file for complete search history.

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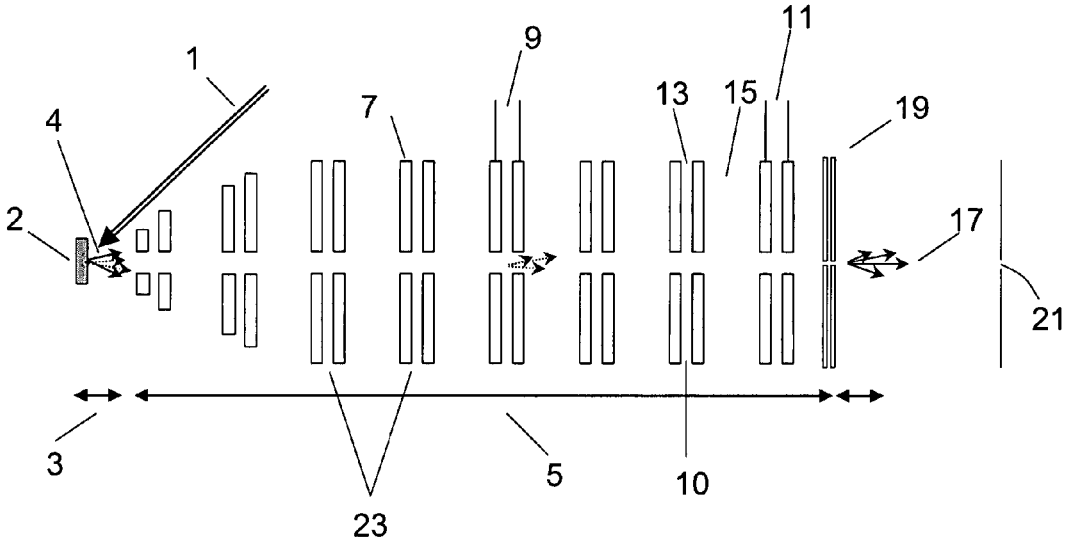
(57) **ABSTRACT**

Improved ion focusing for an ion mobility drift cell allows for improved throughput for subsequent detection such as mass detection. Improved focusing is realized by the use of alternating regions of high and low electric fields in the ion mobility drift cell.

**50 Claims, 25 Drawing Sheets**