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(54) Title: MASS FILTER

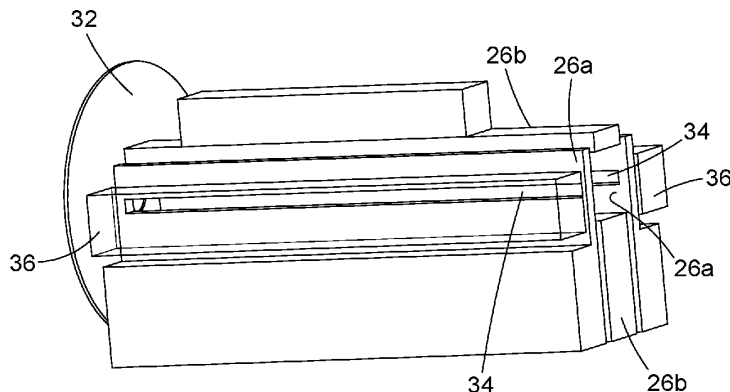


FIG. 4A

(57) Abstract: A mass filter comprising a plurality of mass filtering electrodes (26a, 26b) for mass filtering ions passing therethrough, wherein at least a first of these electrodes (26a) comprises a first gap (34) therethrough. Voltage supplies are arranged and configured to apply voltages to the mass filtering electrodes (26a, 26b) such that ions having mass to charge ratios within a mass transmission window are confined by the electrodes and are transmitted through the mass filter, whereas at least some ions having mass to charge ratios outside of said mass transmission window are unstable and pass through the first gap (34) such that they are filtered out by the mass filter. A first collector electrode (36) is arranged so as to receive the ions that are transmitted through the first gap (34), and the voltage supplies apply a DC potential difference between the first mass filtering electrode and the first collector electrode so as to urge the ions that are transmitted through the first gap onto the first collector electrode.

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