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(54) **Title:** ELECTROPHORESIS CASSETTES AND INSTRUMENTATION

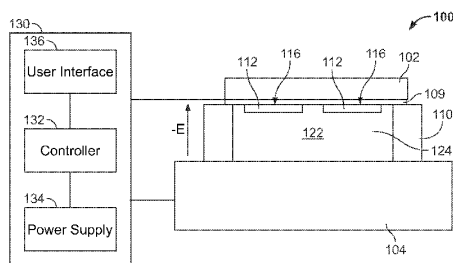


FIG. 1A

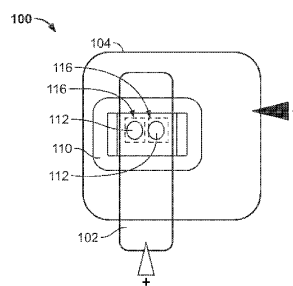


FIG. 1B

(57) **Abstract:** Various implementations of electrophoretic systems and instruments are provided to improve electrophoresis and ease of use. Various electrophoretic systems and instruments utilize different electrode designs that can result in uniform electromigration of analytes. The electrophoretic systems and instrumentations optimize the size and/or location of electrodes relative to a sample, thereby increasing uniformity of electric field and reducing or minimizing drift of analyte migration. In addition, the electrophoresis systems and instruments provide a solution to conveniently check for electrical connections in the systems and instruments, and alert users of potential improper electrical connections, prior to performing electrophoresis.

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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