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(54) Title: SYSTEMS AND METHODS FOR OPTICAL SCANNING AND IMAGING THROUGH A FLUID MEDIUM FOR NUCLEIC ACID SEQUENCING

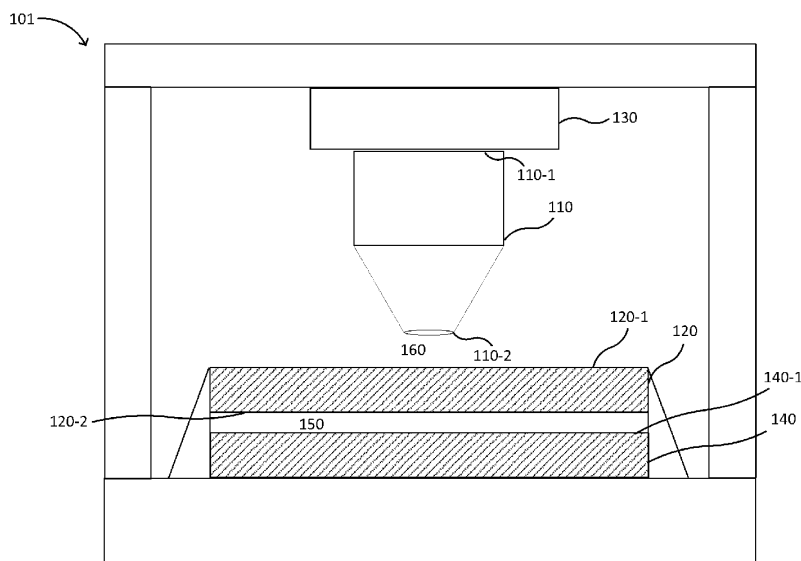


FIG. 1B

(57) Abstract: Methods and systems for nucleic acid sequencing, the systems may include an objective (110) coupled to an actuator (130), wherein the actuator (130) is configured to move the objective (110) over a surface of a substrate (120, 140). In some embodiments, a droplet (310) may be disposed on the surface of the substrate (120, 140), and the droplet (310) may be moved along with the objective (110). The distal end (110-2) of the objective (110) may include a material that provides a higher friction against the droplet (310) than a material of the surface of the substrate (120, 140). In some embodiments, the distal end (110-2) of the objective (110) may be immersed in a fluid (510) as it is moved over the surface of the substrate (120, 140). The substrate (120, 140) may include vertical walls (525) within a region to retain the fluid (510).

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