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(54) Title: AIR DETECTION AND MEASUREMENT SYSTEM FOR FLUID INJECTOR

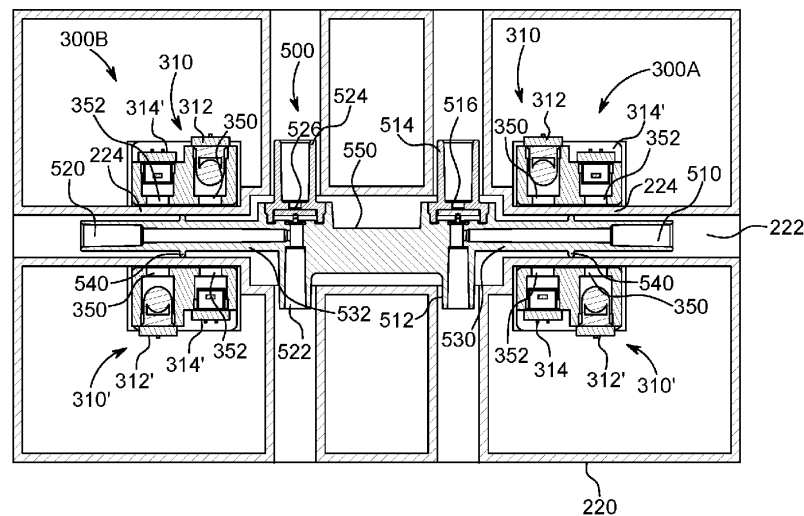


FIG. 10

(57) Abstract: A fluid injector system includes at least one injector for pressurizing and delivering at least one fluid from at least one fluid reservoir, at least one fluid path section in fluid communication with the at least one injector and having a predetermined index of refraction, and a first proximal sensor and a first distal sensor arranged along the at least one fluid path section. Each of the first proximal sensor and the first distal sensor includes an emitter configured to emit light through the at least one fluid path section, and a detector configured to receive the light emitted through the at least one fluid path section and generate an electrical signal based on the received light. The fluid injector system further includes at least one processor programmed or configured to determine, based on a difference in the electrical signals generated by the first proximal sensor and the first distal sensor, at least one property of a content of the at least one fluid path section.

[Continued on next page]

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