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(54) Title: PORTABLE DETECTION SYSTEM FOR DETECTING A PATHOGEN OR VIRUS

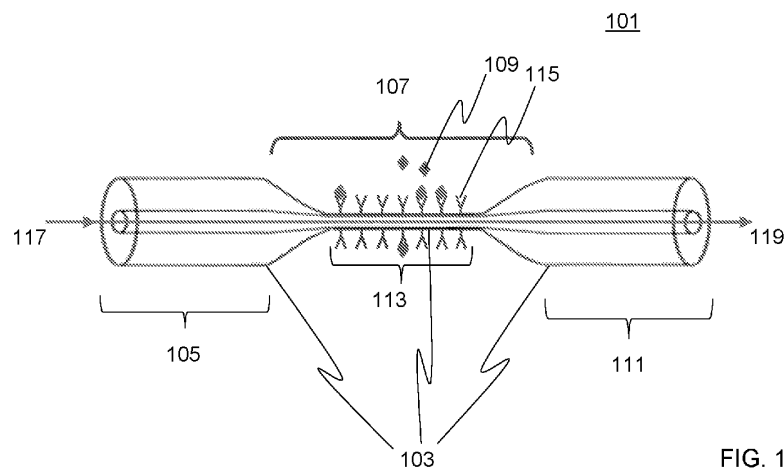


FIG. 1

(57) Abstract: A portable detection system for detecting a pathogen or virus, the portable detection system comprising: at least one light source for generating an input optical signal; at least one optical sensor comprising at least one optical fibre having at least one tapered sensing region with at least one coating that reacts with a pathogen being detected, wherein the optical sensor is arranged to receive the input optical signal, communicate the input optical signal through the tapered sensing region and communicate an output optical signal from the tapered sensing region; at least one photodetector for detecting power intensity of the output optical signal, wherein the photodetector is arranged to generate an output signal based on a change in power intensity of the output power at a resonant wavelength that corresponds with the pathogen; and at least one microcontroller for controlling the light source, optical sensor and photodetector; wherein the portable detection system is arranged to cause an output to be generated based on the output signal, wherein the output is associated with the pathogen being detected.

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