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(54) Title: OPTICAL SENSOR, OPTICAL ARRANGEMENT AND METHOD FOR DETERMINING A REAL-TIME FLUID PROPERTY OF PARTICLES IN A TURBID MEDIUM

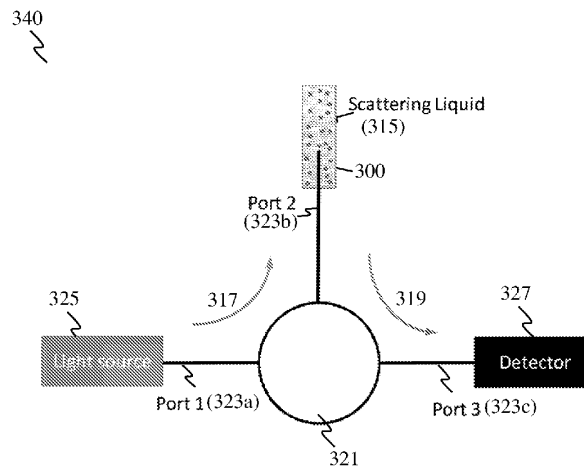


FIG. 3

(57) Abstract: According to embodiments of the present invention, an optical sensor is provided. The optical sensor includes a single piece of optical fiber including a modified fiber tip and a distal end opposite to the modified fiber tip. The distal end may be configured to optically communicate with an external light source and an external detector. The modified fiber tip may be configured to be positioned within a turbid medium to deliver light from the external light source to particles in the turbid medium, at least minimize the light being back reflected at the modified fiber tip and receive backscattered light from the particles for determining a real-time fluid property of the particles in the turbid medium by the external detector. According to further embodiments of the present invention, an optical apparatus, an optical arrangement, and a method for determining a real-time fluid property of the particles are also provided.

[Continued on next page]

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