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(54) Title: OPTICAL DETECTOR FOR DETECTING GAS AND SUSPENDED MATTER

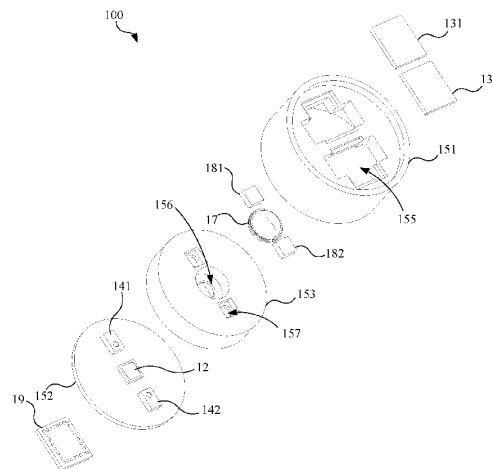


FIG. 2

(57) Abstract: An optical detector (100, 200, 300) for detecting gas and suspended matter therein includes a test chamber (111, 113), at least one light source (12), a sensing object (131, 133), a test optical sensor (141) and a processor (19). The test chamber (111, 113) accommodates a gas to be analyzed. The at least one light source (12) emits an incident light that enters the test chamber (111, 113). The sensing object (131, 133) is exposed to gas in the test chamber (111, 113), receives the incident light, and reflects or transmits a portion of the incident light to form a test light. The test optical sensor (141) receives the test light and generates a detected spectral signal. The processor (19) receives the detected spectral signal and calculates a detection result according to the detected spectral signal.

[Continued on next page]

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