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- (54) **Title:** DOWNHOLE THERMAL ANOMALY DETECTION FOR PASSIVE RANGING TO A TARGET WELLBORE

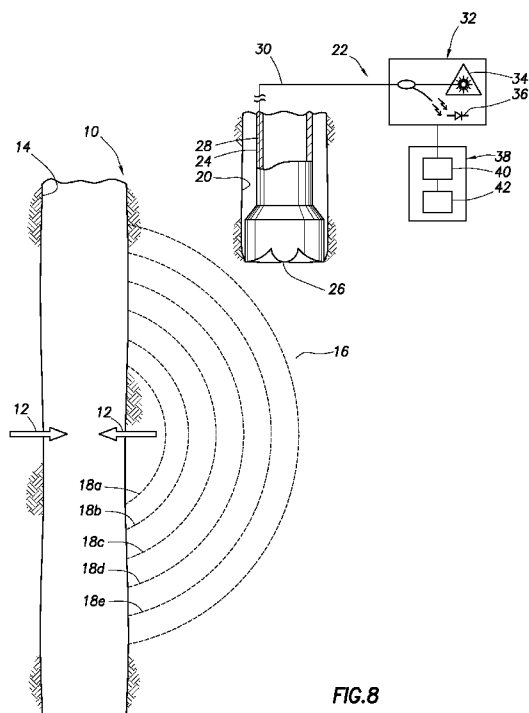


FIG. 8

(57) **Abstract:** A method can include measuring temperature along a relief wellbore, thereby detecting a temperature anomaly in an earth formation penetrated by the relief wellbore, and determining a location of an influx into a target wellbore, based on the temperature anomaly detecting. A thermal anomaly ranging system for use with a subterranean well can include a temperature sensor in a relief wellbore that penetrates an earth formation, the temperature sensor detecting a temperature anomaly in the formation, and the temperature anomaly being caused by an influx into a target wellbore. Another method can include measuring optical scattering in an optical waveguide positioned in a relief wellbore, thereby detecting a temperature anomaly in an earth formation penetrated by the relief wellbore, and determining a location of an influx into a target wellbore, based on the temperature anomaly detecting.



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