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14/926,508	10/29/2015	Carl Bright	OKC03680	1618
33900	7590	03/03/2020	EXAMINER	
Hall Estill Attorneys at Law (MDMMY) 100 NORTH BROADWAY SUITE 2900 OKLAHOMA CITY, OK 73102-8820			VALENTINER, JEREMY SCOTT	
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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* CARL BRIGHT

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Appeal 2018-006650  
Application 14/926,508  
Technology Center 2800

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Before ADRIENE LEPIANE HANLON, MICHAEL P. COLAIANNI, and  
LILAN REN, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the  
Examiner's decision to reject claims 1–20. We have jurisdiction under  
35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37  
C.F.R. § 1.42. Appellant identifies the real party in interest as IBall  
Instruments LLC (Appeal Br. 1).

Appellant's invention is directed to "a portable Mudlogging gas detection system [that] determines the total amounts and various composition of an incoming mixture of gases extracted from a drilling fluid" (Spec. 1:3-5).

Claim 1 is representative of the subject matter on appeal:

1. An apparatus comprising:

- a portable case housing at least one computing device connected to a wide band infrared emitter configured to emit focused infrared light into a Fourier Transform Infrared (FTIR) interferometer;
- a gas cell housed within the portable case and adapted to receive a sample gas and a processed light from the FTIR interferometer to irradiate the sample gas;
- a detector positioned in the portable case to collect unabsorbed processed light from the gas cell;
- a controller of the at least one computing device adapted to measure a first testing condition within the portable case and alter a second testing condition within the portable case in response to a predicted testing condition within the portable case computed by the controller based on the first testing condition measured by the controller;
- at least one redundant detector positioned in the portable case and configured to detect hydrocarbons in the gas sample from the FTIR interferometer; and
- at least one pump connected to the gas cell and positioned to move the gas sample from the gas cell to the detector during the first testing condition and to the at least one redundant detector positioned in the portable case in response to the predicted testing condition.

Appeal Br. 12 (Claims App.)

Appellant appeals the following rejections<sup>2</sup>:

1. Claims 1–9, 15–18, and 20 are rejected under 35 U.S.C. § 103 as unpatentable over Gunn (US 2013/0334412 A1, published Dec. 19, 2013)) in view of Bright (US 2014/0208840 A1, published July 31, 2014).
2. Claims 10–14 are rejected under 35 U.S.C. § 103 as unpatentable over Ganguli (US 2004/0015300 A1, published Jan. 22, 2004) in view of Bright, and Wong (US 2015/0053861 A1, published Feb. 26, 2015).
3. Claim 19 is rejected under 35 U.S.C. § 103 as unpatentable over Gunn in view of Bright, and Wong.

Appellant argues the claims as a group with claim 1 as representative of the group (Appeal Br. 7). Any claim not argued separately will stand or fall with our analysis of the rejection of argued claim 1. *See also* 37 C.F.R. § 41.37(c)(1)(vii).

#### FINDINGS OF FACT & ANALYSIS

The Examiner’s findings and conclusions regarding Gunn, Bright, Ganguli, and Wong with respect to claim 1 are located on pages 6 to 10 of the Final Office Action.

Appellant argues that none of Gunn, Bright, Ganguli, and Wong teach or suggest a computing device having a controller that alters a second testing condition in response to a predicted testing condition computed on a first

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<sup>2</sup> The Examiner withdrew the 35 U.S.C. §112(b) rejection of claims 1–20 (Ans. 3).

testing condition (Appeal Br. 8). Appellant contends that a person of ordinary skill in the art would have understood from pages 5 to 6 of the Specification that the controller 190 detects a first testing condition and then predicts a testing condition and alters the second testing condition (Appeal Br. 8). Appellant argues that Bright does not predict future test conditions or proactively alter test conditions (Appeal Br. 8). Appellant contends that Bright alters detector activation, detector calibration, or testing environment after a threshold testing accuracy has been met (Appeal Br. 8). Appellant argues that Bright uses a reactive control operation, not a predictive testing condition, to correct problems with threshold accuracy (Appeal Br. 9). Appellant contends that Bright teaches away from using a predictive operation (Appeal Br. 9). Appellant contends that there is no motivation, except for impermissible hindsight, to combine Bright's teachings with Gunn or Ganguli and Wong to arrive at the subject matter of claim 1 (Appeal Br. 9–10).

Contrary to Appellant's arguments, the Examiner finds that the Specification does not provide the specific "prediction algorithm" in its software code or instructions on how the prediction is made (Ans. 5). The Examiner finds that Bright's self-calibration process which uses environmental conditions to compute new gas detection thresholds to ensure outputted gas results have not been jeopardized by errant, mis-calibrated, or inappropriate test detectors is no different from Appellant's disclosed method (Ans. 5–6). The Examiner finds that Bright's predetermined logical algorithm (PLA) has the ability to simultaneously compare readings from all three detectors and makes logical considerations, including shutting down a sensor (Ans. 6). The Examiner finds:

Here, **Bright** discloses the controller which can predict future test conditions or proactively alter test conditions by being able to compare measurements, *i.e. first testing condition*, to correct and self-calibrate "unexplained and unexpected detector results" by correcting a calibration point and self-calibrating a sensor to alter a second testing condition, *i.e. predicted testing condition to alter a second testing condition* (**Bright: ¶¶76-80**).

(Ans. 6).

Appellant does not dispute these findings (no Reply Brief was filed).

We agree with the Examiner that Bright does not discourage or otherwise teach away from using predictive operations (Ans. 7). The Examiner properly finds the Specification does not distinguish the claimed predictive operations relative to what is disclosed in Bright. Although Appellant argues that there is a difference between Bright's "reactive processing" and the claimed predictive methodology, Appellant does not explain why the Examiner's claim construction is improper (Ans. 4-6). We have reviewed the Specification, including pages 5 and 6 cited by Appellant, and we find that the Examiner's construction is supported. The Specification discloses that the ability to proactively predict testing conditions is based upon prior logged environmental and operational conditions (Spec. 6:10-12). Bright discloses after threshold accuracy has not been met (i.e., an operational condition) then the gas detectors may go through a self-calibrate mode (¶ 104). In self-calibrate mode, new gas detection thresholds are determined and used (¶ 104). The Examiner reasonably finds that Bright's new thresholds values and their use correspond to the second testing condition computed based on the first testing condition measured by the controller (Ans. 6).

Appellant's arguments about the lack of motivation to combine Bright's teachings with Gunn or Ganguli and impermissible hindsight are not persuasive. Bright and Gunn are each directed to measuring a gas sample in a drilling fluid. The Examiner's reasons for the modification of Gunn with Bright's teachings is to respond to readings and select the best possible detector to provide the most accurate measurements (Final Act. 10). Appellant does not show reversible error in this finding of the Examiner (Appeal Br. 10). The Examiner's rejection is not based on impermissible hindsight, but rather the teachings of the references and what those teachings would have been suggested to a person of ordinary skill in the art.

On this record, we affirm the Examiner's § 103 rejections.

#### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-9, 15-18, 20	103	Gunn, Bright	1-9, 15-18, 20	
10-14	103	Ganguli, Bright, Wong	10-14	
19	103	Gunn, Bright, Wong	19	
<b>Overall Outcome</b>			1-20	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

Appeal 2018-006650  
Application 14/926,508

AFFIRMED