



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/015,327	01/27/2011	Stephen David Worthington	H0027804_5706-33800	2414
14941	7590	11/20/2019	EXAMINER	
HONEYWELL/WICK PHILLIPS			TERRELL, EMILY C	
Honeywell International Inc			ART UNIT	
115 Tabor Road			PAPER NUMBER	
PO Box 377			2689	
MORRIS PLAINS, NJ 07950			NOTIFICATION DATE	
			DELIVERY MODE	
			11/20/2019	
			ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentservices-us@honeywell.com  
wppatents@wickphillips.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* STEPHEN DAVID WORTHINGTON, JERRY  
WAYNE EVANS, and PATRICK GERARD HOGAN

---

Appeal 2018-001876  
Application 13/015,327  
Technology Center 2600

---

Before JAMES B. ARPIN, JOHN F. HORVATH, and  
MICHAEL M. BARRY, *Administrative Patent Judges*.

HORVATH, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

Appellant<sup>1</sup> seeks review, under 35 U.S.C. § 134(a), of the Examiner's rejection of claims 3–5 and 8–24, all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE and enter NEW GROUNDS OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

---

<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 Honeywell International, Inc. Appeal Br. 3.

## CLAIMED SUBJECT MATTER

The invention is directed to systems and methods for detecting, generating, and reporting robust man-down alarms. Spec. ¶ 1. The system includes a plurality of wireless detectors 110 communicating with central station 140. *Id.* ¶¶ 22–24.

Each of detectors 110 includes gas sensor 210, microcontroller 230, motion sensor 250, and radio 260, and sends data including gas alarms and man-down alarms to central station 140. *Id.* ¶¶ 26–30, 37–43. When gas detected by gas sensor 210 exceeds a threshold, microcontroller 230 instructs radio 260 to send a gas alarm to central station 140. *Id.* ¶¶ 28–29, 39–40. Similarly, when motion from motion sensor 250 is not detected for a predetermined period of time, microcontroller 230 instructs radio 260 to send a man-down alarm to central station 140. *Id.* ¶¶ 30, 41–42.

Central station 140 subsequently processes the data sent by detectors 110. *Id.* ¶¶ 44–45. For each detector, central station 140 determines whether the data sent from that detector includes a gas alarm and/or a man-down alarm. *Id.* ¶¶ 46–51. If the data includes a man-down alarm, central station 140 can also determine whether the man-down alarm is a false alarm. *Id.* ¶¶ 36, 52. To do this, central station 140 first determines whether the data from the given detector includes a gas alarm. *Id.* ¶ 53. If it does, the man-down alarm is not a false alarm. *Id.* ¶ 54. If it does not, central station 140 considers the data received from *other* detectors to determine whether the man-down alarm received from the given detector is a false alarm. *Id.* ¶ 55 (“[I]f the method 600 determines that the alarm packet from the first detector does not include a gas alarm . . . then a plurality of *other detectors*

in the vicinity of the first detector can be checked . . . .”) (emphasis added). Thus, a man-down alarm received from a given detector can only be identified as a false alarm if the data received from *other* detectors in the vicinity of the given detector do not have gas alarms and do not have man-down alarms. *Id.* ¶¶ 56–57.

Claim 9, reproduced below, is illustrative of the claimed subject matter:

9. A system comprising:
    - a detector comprising:
      - at least one gas sensor;
      - a motion sensor;
      - control circuitry, wherein the control circuitry is configured to correlate information from the motion sensor with information from the at least one gas sensor; and
      - two-way communications hardware; and
    - a central station in two-way communication with the detector, wherein the control circuitry is configured to:
      - determine an alarm event based on a first signal received from the at least one gas sensor when a predetermined threshold of hazardous gas in an ambient atmosphere is sensed;
      - transmit a gas alarm signal to the two-way communications hardware during the alarm event;
      - determine a man-down event based on a second signal received from the motion sensor when the motion sensor does not detect movement for a predetermined period of time, and
      - transmit a man-down alarm signal to the two-way communications hardware during the man-down event,
- wherein the two-way communications hardware is configured to:
- transmit the gas alarm signal and the man-down alarm signal to the central station, and

wherein the central station is configured to correlate the second signal from the motion sensor with the first signal from the at least one gas sensor, and determine if the man-down alarm signal is a false alarm based on the correlation of the second signal with the first signal, wherein the false alarm is indicative of a user of the detector not being unconscious or incapacitated.

#### REFERENCES

The references relied on by the Examiner are:

Name	Reference	Date
Bieback	US 6,121,881	Sept. 19, 2000
Zhou	US 6,847,892 B2	Jan. 25, 2005
Campman	US 7,538,666 B2	May 26, 2009
Johnson	US 8,330,605 B2	Dec. 11, 2012
Montenero	US 2010/0081411 A1	Apr. 1, 2010

#### REJECTIONS

Claims 3–5, 8–17, and 19–21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bieback, Campman, and Zhou. Final Act. 3–13.

Claim 18 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Bieback, Campman, Zhou, and Montenero. *Id.* at 13–16.

Claims 22–24 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bieback, Campman, Zhou, and Johnson. *Id.* at 16–18.

#### OPINION

We have reviewed the Examiner’s rejection in light of Appellant’s arguments that the Examiner has erred. Because we agree with at least one of Appellant’s dispositive arguments, we reverse the Examiner’s rejections of claims 3–5 and 8–24. However, because we also find at least one limitation in claims 3–5 and 8–24 lacks written description support in the

Specification, we reject claims 3–5 and 8–24 under 35 U.S.C. § 112 ¶ 1 for lack of written description, and designate the rejection a new ground of rejection.

*Obviousness of Claims 3–5 and 8–24*

Claim 9 recites a system that includes a central station that receives a first gas signal and a second motion/man-down signal from a detector, and “correlate[s] the second signal from the motion sensor with the first signal from the at least one gas sensor, and determine[s] if the man-down alarm signal is a false alarm based on the correlation.” Appeal Br. 28. Claims 3–5, 8, and 10–16 contain the same limitation by virtue of their dependence from claim 9. *Id.* at 26–29; 35 U.S.C. § 112 ¶ 5.

Claim 17 recites a method that includes receiving gas and motion sensor signals from a remote location, “correlating the received gas sensor signal and the received motion sensor signal; and determining that the man-down alarm is a false alarm based on the correlating.” Appeal Br. 30. Claims 18–24 contain the same limitation by virtue of their dependence from claim 17. *Id.* at 30–32; 35 U.S.C. § 112 ¶ 5.

In rejecting independent claims 9 and 17 as obvious over the combined teachings of Bieback, Campman, and Zhou, the Examiner admits that:

[t]he combination of Bieback and Campman does not explicitly state the central station is configured to correlate the second signal from the motion sensor with the first signal from the at least one gas sensor, and determine if the man-down alarm signal is a false alarm based on the correlation.

Final Act. 5. Rather, the Examiner finds Zhou teaches this limitation by disclosing and describing a “privacy mode” feature. *Id.* at 5–6 (citing Zhou, 12:6–25).

Appellant argues that the portion of Zhou cited by the Examiner “only teaches the generation of [a] ‘flag,’ which is used to prevent a false alarm, and does not disclose any false alarm. In other words, the system of *Zhou* is expressly set up to avoid ever generating a false alarm.” Appeal Br. 14. We agree with Appellant.

Zhou discloses a device (e.g., device 100) that includes “a sensor for determining or measuring a desired parameter, . . . a processor for determining whether or not one or more alert conditions are satisfied and a wireless transceiver for transmitting the measured parameter data and the position data to a central station.” *Zhou*, 1:46–54. Zhou further discloses incorporating a “privacy mode” into device 100, thereby allowing device 100 to “temporarily stop reporting information.” *Id.* at 12:6–7. When device 100 is in privacy mode, a flag is set in a platform database (PD 300) of the central station/ application service provider (ASP 200), that “prevent[s] further polling of the [d]evice 100 by the ASP 200 and a false alarm that the unit is not functioning properly.” *Id.* at 12:18–22. Thus, Zhou’s privacy mode prevents central station/ASP 200 from polling device 100, thereby preventing central station/ASP 200 from generating a false alarm indicating that device 100 is not functioning properly simply because device 100 is not reporting information in response to the polling. *Id.* Zhou’s privacy mode does not, as the Examiner contends, determine if a man-down alarm is a false alarm based on the correlation of received gas and motion sensor signals.

Accordingly, for the reasons discussed above, we reverse the Examiner’s rejections of claims 3–5 and 8–24.

*New Grounds of Rejection for Claims 3–5, 8–17, and 19–22*

Independent claims 9 and 17 recite a central station configured to receive a first signal from a gas sensor in a remote detector and a second signal (i.e., a man-down alarm) from a motion sensor in the same remote detector, and to “correlate the second signal from the motion sensor with the first signal from the at least one gas sensor, and determine if the man-down alarm signal is a false alarm based on the correlation.” Appeal Br. 28, 30. Appellant identifies Figure 5 of the Drawings and paragraphs 17, 19, and 44 through 51 of the Specification as providing written description support for determining whether a man-down alarm is a false alarm according to the claimed method. *Id.* at 9–10. We disagree.

Figure 5 of the Drawings is reproduced below.

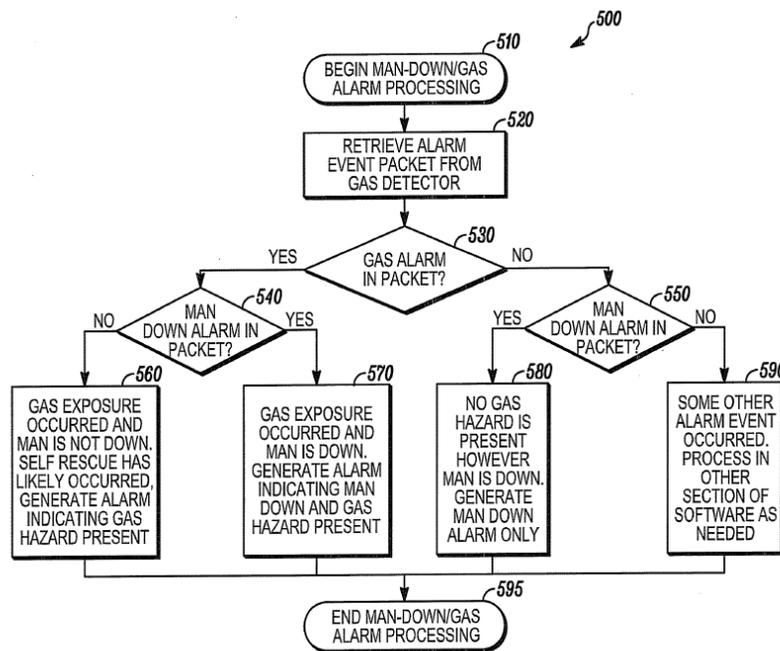


FIG. 5

Figure 5 is a “flow diagram of a method of tracking and monitoring alarm signals.” Spec. ¶¶ 13, 44. The method involves a central station receiving an alarm packet from a detector (520), and generating either a gas alarm (560), a gas and man-down alarm (570), or a man-down alarm (580) depending upon whether the received packet contains a gas alarm (530) and/or a man-down alarm (540/550). *Id.* ¶¶ 44–51. Nothing in the description of Figure 5 regarding generating a man-down alarm either with (570) or without (580) a gas alarm, discloses determining whether the man-down alarm is a false alarm by correlating the man-down alarm with the gas alarm.

The Specification does disclose a method for determining whether a man-down alarm received from a detector is a false alarm by correlating “information from several sources,” including “from a motion sensor” and “from a gas and/or temperature sensor.” *Id.* ¶ 17. This disclosure is ambiguous, however, in that it fails to sufficiently describe whether the information from the several sources that is correlated is obtained from the same detector that issued the man-down alarm or from different detectors. *Id.* This ambiguity is resolved in paragraph 19 of the Specification, which discloses that:

[I]nformation from *multiple detectors in the same area* can be correlated to determine the likelihood of a legitimate man-down event occurring. When a plurality of detectors are in the same area, when at least one of the detectors detect a lack of movement for a predetermined period of time, and when all, substantially all, a majority, or even one of the detectors detect a high level of a hazardous gas, systems and methods in accordance with the present invention can determine that a legitimate man-down event is likely.

*Id.* ¶ 19 (emphasis added). This disclosure—i.e., that determining whether a man-down alarm received from a first detector is a false alarm requires correlating information received from the first detector with information received from other detectors in the same area—is confirmed elsewhere in the Specification. Specifically, this disclosure is confirmed in Figure 6, which is reproduced below.

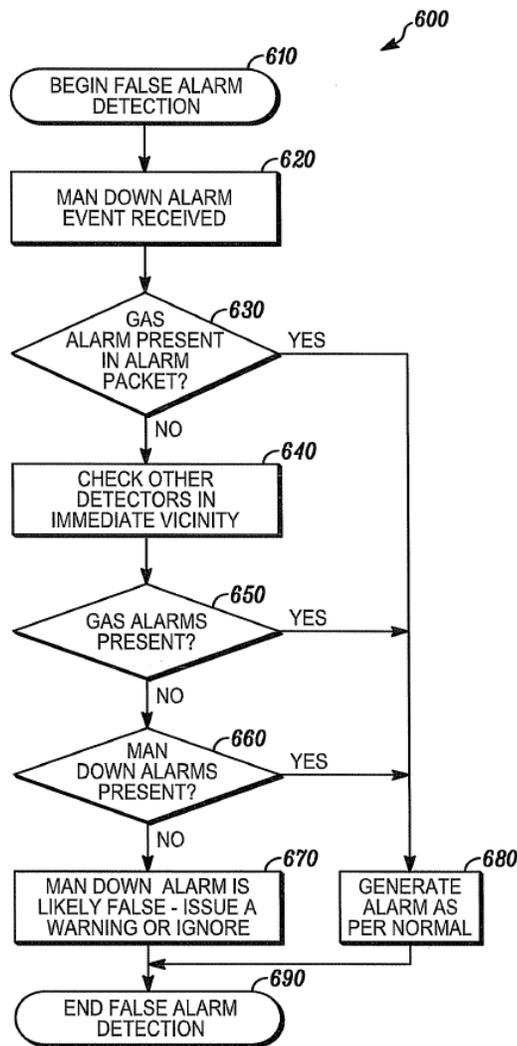


FIG. 6

Figure 6 is a “flow diagram of a method of detecting for false alarms in accordance with the present invention.” *Id.* ¶¶ 14, 52. When a central station receives a man-down alarm (620), but not a gas alarm (630) from a first detector, it checks (640) information received from “*a plurality of other detectors* in the vicinity of the first detector.” *Id.* ¶¶ 53–55 (emphasis added). If no gas alarms (650) or man-down alarms (660) are detected in the information received from the *other detectors*, the man-down alarm received from the first detector is determined to be a false alarm (670). *Id.* ¶¶ 56–57. Thus, the Specification discloses that determining whether a man-down alarm received from a first detector is a false alarm requires correlating the man-down and gas alarms received from the first detector with the man-down and gas alarms received from *other* detectors.

Independent claims 9 and 17, and dependent claims 3–5, 8, 10–16, and 19–22, purport to claim an invention that determines whether a man-down alarm received from a detector is a false alarm by correlating the man-down alarm received from that detector with the gas alarm received from that same detector. Appeal Br. 26–31. Specifically, claim 9 recites a system comprising “*a detector comprising: at least one gas sensor; [and] a motion sensor,*” and determining if a received man-down alarm is a false alarm by “*correlat[ing] the second signal from the motion sensor with the first signal from the at least one gas sensor.*” Appeal Br. 27 (claim 9) (emphasis added). Similarly, claim 17 recites receiving “*a gas sensor signal from a detector*” and “*a motion sensor signal from the detector,*” and determining if a received man-down alarm is a false alarm by “*correlating the received gas sensor signal and the received motion sensor signal.*” *Id.* at 30 (claim 17) (Claims App’x) (emphasis added). Thus, the claims encompass systems and

methods that determine whether a detector's man-down alarm is a false alarm by considering only the gas sensor signal received from that detector without considering gas sensor signals received from other detectors in the vicinity. For the reasons discussed above, the written description provided in the Specification does not clearly disclose such an invention. Rather, the written description discloses determining whether a man-down alarm received from a detector is a false alarm by correlating the man-down and gas alarms received from that detector with man-down and gas alarms received from *other* detectors in the vicinity. *See* Spec. ¶¶ 17, 19, 53–57, Fig. 6.

Accordingly, for the reasons discussed above, we reject claims 3–5, 8–17, and 19–22 under 35 U.S.C. § 112 ¶ 1 for lack of written description. *See Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991) (finding the purpose of the written description requirement is to “convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the applicant] was in possession of *the invention*,” where the invention is “*whatever is now claimed*.”).

*New Grounds of Rejection for Claims 3–5 and 8–16*

Independent claim 9 requires a detector having at least one gas sensor, a motion sensor, and control circuitry “configured to correlate information from the motion sensor with information from the at least one gas sensor.” Appeal Br. 27. Claims 3–5, 8, and 10–16 contain the same limitation by virtue of their dependence from claim 9. *Id.* at 26–29; 35 U.S.C. § 112 ¶ 5. Appellant fails to identify any disclosure in the Specification or Drawings that provides written description support indicating that the detector's

control circuitry is configured to correlate information from the detector's motion sensor with information from the detector's gas sensor. *See* Appeal Br. 9. Nor do we find any.

The Specification describes the operation of the detector's control circuitry (i.e., microcontroller 230, Fig. 2) in paragraphs 29 and 30. Specifically, microcontroller 230 “generate[s] a gas alarm signal” and “transmit[s] the gas alarm signal to [a] radio module 260” whenever microcontroller 230 receives a signal from gas sensor 210 that “indicates a presence of a predetermined gas in the ambient atmosphere or indicates that the amount of a hazardous gas in the ambient atmosphere has reached a predetermined threshold.” Spec. ¶ 29. Microcontroller 230 also “generate[s] a man-down signal” and “transmit[s] the man-down signal to the radio module 260” whenever “[motion] sensor 250 determines that the user has not moved for a predetermined period of time.” *Id.* ¶ 30. Nothing in these, or any other, passages of the Specification indicates that microcontroller 230 is “configured to correlate information from the motion sensor with information from the at least one gas sensor” as recited in claims 3–5 and 8–16.

Accordingly, for the reasons discussed above, we reject claims 3–5 and 8–16 under 35 U.S.C. § 112 ¶ 1 for lack of written description. *See Vas-Cath*, 935 F.2d at 1563–64.

## CONCLUSION

The rejection of claims 3–5, 8–17, and 19–21 under 35 U.S.C. § 103(a) as unpatentable over Bieback, Campman, and Zhou is reversed.

The rejection of claim 18 under 35 U.S.C. § 103(a) as unpatentable over Bieback, Campman, Zhou, and Montenero is reversed.

The rejection of claims 22–24 under 35 U.S.C. § 103(a) as unpatentable over Bieback, Campman, Zhou, and Johnson is reversed.

Claims 3–5, 8–17, and 19–22 stand newly rejected under 35 U.S.C. § 112 ¶ 1 for lack of written description.

#### DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed	New Ground
3–5, 8–17, 19–21	103(a)	Bieback, Campman, Zhou		3–5, 8–17, 19–21	
18	103(a)	Bieback, Campman, Zhou, Montenero		18	
22–24	103(a)	Bieback, Campman, Zhou, Johnson		22–24	
3–5, 8–17, 19–22	112 ¶ 1	Written Description			3–5, 8–17, 19–22
3–5, 8–16	112 ¶ 1	Written Description			3–5, 8–16
<b>Overall Outcome</b>				3–5, 8–24	3–5, 8–17, 19–22

#### TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Rather, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, Appellant must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. . . .

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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

REVERSED; 37 C.F.R. § 41.50(B)