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.
12/906,222	10/18/2010	Kenneth Andrew Hodges	GWZ-28	9688

22827 7590 10/28/2016

DORITY & MANNING, P.A.
POST OFFICE BOX 1449
GREENVILLE, SC 29602-1449

EXAMINER
MCCALISTER, WILLIAM M

ART UNIT	PAPER NUMBER
3753	

MAIL DATE	DELIVERY MODE
10/28/2016	PAPER

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.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KENNETH ANDREW HODGES

Appeal 2014-009710
Application 12/906,222
Technology Center 3700

Before STEFAN STAICOVICI, ARTHUR M. PESLAK, and SEAN P. O'HANLON, *Administrative Patent Judges*.

O'HANLON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Kenneth Andrew Hodges (Appellant)[1] appeals under 35 U.S.C. § 134 from the Examiner's Non-Final decision transmitted on December 12, 2013 ("Non-Final Act.") rejecting claims 1–3 and 5–21.[2] We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

---

[1] According to Appellant, the real party in interest is Graham-White Manufacturing Company. App. Br. 2. References herein to the Appeal Brief ("App. Br.") are to the replacement brief filed on May 15, 2014.
[2] Claim 4 is canceled. *Id.*

SUMMARY OF DECISION

We AFFIRM.

SUMMARY OF INVENTION

Appellant's claimed invention "generally involves a system and method for operating a drain valve." Spec. ¶ 1. Claims 1 and 15, reproduced below from pages 1 and 2, respectively, of the Appeal Brief, Claims Appendix (with paragraph structure modified), are illustrative of the claimed subject matter:

> 1. A drain valve comprising:
> a. a valve body, wherein said valve body defines an inlet seat and a first outlet seat downstream of said inlet seat;
> b. a first member, wherein said first member has a first position in sealing engagement with said first outlet seat and a second position separated from said first outlet seat;
> c. a second member, wherein said second member has a first location in sealing engagement with said inlet seat; and
> d. a sensor downstream of said inlet seat, wherein said sensor generates a signal reflective of a pressure downstream of said inlet seat.
>
> 15. A method for operating a drain valve comprising:
> a. moving a first element in a valve body to allow fluid flow through said valve body;
> b. moving a second element in said valve body to allow fluid flow through said valve body;
> c. sensing a pressure in said valve body.

REJECTIONS

Claims 1–3, 5–8, and 15–20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rasmussen (US 5,531,241, iss. July 2, 1996).

Claims 1, 2, 9, 10, 14–18, 20, and 21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Frantz (US 3,262,464, iss. July 26, 1966).

Claims 1–3, 5–8, and 15–20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rasmussen and Frantz.

Claims 1–3 and 5–21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frantz and Rasmussen.

Claims 9–14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Frantz, Hunt (US 4,972,872, iss. Nov. 27, 1990), and Rasmussen.

ANALYSIS

Anticipation Based on Rasmussen

Claims 1–3 and 5–8

The Examiner finds that Rasmussen discloses all of the elements of independent claim 1, including, *inter alia*, a valve body (drain valve 10)[3] defining an inlet seat (within the valve above condensate inlet port 17A) and a first outlet seat (valve seat 41) downstream from the inlet seat. Non-Final Act. 4; *see also* Ans. 13. Appellant traverses, arguing that the Examiner has misconstrued the term "valve body." App. Br. 9. According to Appellant, "valve body" means "'an outer casing that contains the internal parts of a valve'" (*id.* at 7, 9), and, therefore, Rasmussen fails to disclose a valve body, and the inlet seat identified by the Examiner is within a different valve body than the first outlet seat. *Id.* at 9–10; *see also* Reply Br. 3–4.

[3] Parentheticals refer to the terminology of the cited references.

The propriety of this rejection is determined by whether or not the valve (the "unlabeled valve") illustrated in Rasmussen Figure 7 above inlet port 17A (*see* Reply Br. 4) can properly be considered to be a part of Rasmussen's drain valve body. The Examiner finds that it can, while Appellant argues it cannot. We think the Examiner has the better position.

The unlabeled valve is illustrated in Figure 7 as being connected to, and therefore allowing or preventing flow into, inlet port 17A. As such, the seat of the unlabeled valve would be "an internal part" of and contained within the "outer casing" of drain valve 10. As correctly noted by the Examiner (*see* Ans. 13), the positioning of Rasmussen's unlabeled valve is similar to the positioning of Appellant's second member 16, which extends away from valve body 12, ostensibly to allow second member 16 to be controlled via hand wheel 38. Spec. ¶ 21, Fig. 1. We therefore find the Examiner's interpretation of the unlabeled valve as part of the body of drain valve 10 to be reasonable based on the disclosure in the Specification. As such, Appellant's arguments do not apprise us why Appellant's second member 16 can be considered part of the valve body while Rasmussen's unlabeled valve cannot.

Accordingly, for the foregoing reasons, we affirm the rejection of independent claim 1, as well as of its dependent claims 2, 3, and 5–8, as being anticipated by Rasmussen.

Claims 15–20

The Examiner finds that Rasmussen discloses all of the elements of independent claim 15 similarly as discussed above with respect to claim 1. Non-Final Act. 4; *see also* Ans. 13. Appellant traverses, presenting

arguments similar to those presented with respect to claim 1. App. Br. 10; Reply Br. 4–5. For the same reasons as presented above, we also affirm the rejection of claim 15, as well as of its dependent claims 16–20, as being anticipated by Rasmussen.

Anticipation Based on Frantz

Claims 1, 2, and 21

The Examiner finds that Frantz discloses all of the elements of independent claim 1, including, *inter alia*, a valve body (base section 4, seat insert 23, and upper section 25 in combination) including an inlet seat (valve seat 50) and a sensor (piston stem 14 and piston head 18 in combination) downstream from the inlet seat. Non-Final Act. 5–6. The Examiner expounds that "[Frantz's] head 18 is seen as a *mechanical* sensor because it moves in response to pressure applied thereto," and that "[Frantz's] sensor 18 generates a force which is determined by the pressure in chambers [main chamber] 2, [outlet passage] 8, [and pressure chamber] 30, and which force controls operation of first valve member 11 [and] is seen as a mechanical 'signal.'" Ans. 14. Appellant acknowledges that "[a] 'device that responds to a physical stimulus (as heat, light, sound, *pressure*, magnetism, or a particular motion) and transmits a resulting impulse (as for measurement or operating a control)' may be a sensor," but argues that Frantz's "head does not generate a signal" and that "movement of the head in response to pressure does not constitute a sensor that generates a signal." App. Br. 12 (emphasis added); *see also* Reply Br. 5–6.

The Examiner proposes to define "signal" as "'an act, event, or the like that causes or incites some action'" (Non-Final Act. 6), and Appellant

proposes to define "signal" as "a 'detectable physical quantity or impulse (as a voltage, current, or magnetic field strength) by which messages or information can be transmitted'" (App. Br. 12). We note that each of these proposed definitions comports with a dictionary definition of the term. *See, e.g.*, http://www.merriam-webster.com/dictionary/signal (last visited October 20, 2016). The propriety of this rejection is determined by whether or not movement of Frantz's piston 14 constitutes a signal. The Examiner finds that it does, while Appellant argues it does not. We think the Examiner has the better position.

Claim terms are to be given their broadest reasonable interpretation, as understood by those of ordinary skill in the art and taking into account whatever enlightenment may be had from the Specification. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). Pursuant to that standard, the claim language should be read in light of the Specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Here, the Specification explains that:

> The sensor 40 may comprise a pressure sensor that measures a pressure downstream of the inlet seat 18 and generates a signal 42 reflective of the pressure downstream of the inlet seat 18. The sensor 40 may transmit the signal 42 to an indicator 44, such as a *pressure gauge* or alarm system, to provide a *visual* or audible indication of the operability of the drain valve 10.

Spec. ¶ 23 (emphasis added). We interpret this disclosure as establishing that the recited signal can include a reaction due to or movement resulting from pressure—a visual pressure gauge indication of pressure measured by a pressure sensor. In other words, the signal can be movement of the needle of pressure gauge 44 in response to the sensed pressure. *Compare id.* at

Figs. 1, 2, and 4 (showing the needle of pressure gauge 44 in various positions). As the Examiner's proposed definition of "signal" is consistent with how the term is used in the Specification, and Appellant's proposal is not, we adopt the Examiner's definition of "signal." Accordingly, we find that movement of Frantz's piston 14 constitutes a signal, and, therefore, we affirm the rejection of independent claim 1, as well as of its dependent claims 2 and 21, as being anticipated by Frantz.

Claims 9 and 10

The Examiner finds that Frantz discloses all of the elements of independent claim 9. Non-Final Act. 6–7. Appellant has not addressed this rejection of claim 9, nor of its dependent claim 10. *See* App. Br. 11–14. Accordingly, Appellant has waived any argument of error, and we summarily sustain the rejection of claims 9 and 10 as being anticipated by Frantz. *See Hyatt v. Dudas*, 551 F.3d 1307, 1314 (Fed. Cir. 2008) (explaining that summary affirmance without consideration of the substantive merits is appropriate where an appellant fails to contest a ground of rejection).

Claim 14

Independent claim 9 is substantially similar to claim 1, but additionally requires the valve body to include a second outlet seat and, rather than a sensor, an actuator that compares a pressure downstream of the inlet seat to a predetermined limit. App. Br., Claims Appendix, pp. 1–2. Claim 14 depends directly from claim 9 and further requires that "said

actuator generates a control signal in response to the pressure between said inlet seat and said second outlet seat." *Id.* at 2.

The Examiner finds that Frantz discloses all of the elements of claim 14. Non-Final Act. 7. Appellant traverses, presenting arguments similar to those presented above with respect to claim 1. App. Br. 12–13. For the same reasons as presented above, we affirm the rejection of claim 14 as being anticipated by Frantz.

Claims 15–18

The Examiner finds that Frantz discloses all of the elements of independent claim 15. Non-Final Act. 7–8. Appellant has not addressed this rejection of claim 15, nor of its dependent claims 16–18. *See* App. Br. 11–14. Accordingly, Appellant has waived any argument of error, and we summarily sustain the rejection of claims 15–18 as being anticipated by Frantz.

Claim 20

Claim 20 depends directly from claim 15 and further requires "generating a control signal based on the pressure in said valve body." App. Br., Claims Appendix, p. 3. The Examiner finds that Frantz discloses all of the steps of claim 20. Non-Final Act. 8. Appellant traverses, presenting arguments similar to those presented above with respect to claim 1. App. Br. 13–14. For the same reasons as presented above, we affirm the rejection of claim 20 as being anticipated by Frantz.

Obviousness Based on Rasmussen and Frantz

Claims 1–3 and 5–8

The Examiner finds that Rasmussen discloses the invention substantially as claimed in independent claim 1, "with arguable exception to a valve body which defines an inlet seat and a first outlet seat." Non-Final Act. 9. The Examiner finds that "Frantz teaches that it was known in the art at the time of invention to form a functionally equivalent valve body (4, 25) which comprises a similar inlet seat (50) and first outlet seat (23) downstream of the inlet seat," and reasons that it would have been obvious to a skilled artisan to similarly position Rasmussen's unlabeled valve in the valve body "for the purpose of . . . creating a more ready-to-use assembly." Non-Final Act. 9–10. Appellant traverses, arguing that the Examiner failed to "articulate how [Rasmussen] may be modified by the teachings in [Frantz] to yield a working drain valve" because the Examiner has not identified how "the second member taught by [Rasmussen] . . . [would have] a first location in sealing engagement with the inlet seat" and that Rasmussen's sensor "is upstream of every seat (e.g., 26, 41) in the valve (10)." App. Br. 14–15; *see also* Reply Br. 6–7. (Appellant also repeats arguments regarding Rasmussen and Frantz individually, which are unpersuasive for the reasons set forth above. App. Br. 15–16; *see also* Reply Br. 7.)

We are not persuaded by Appellant's arguments. The Examiner proposes to explicitly make Rasmussen's unlabeled valve a part of the body of drain valve 10; the Examiner has not proposed to modify Rasmussen's unlabeled valve. Non-Final Act. 9–10; Ans. 15. As noted above, because the unlabeled valve is part of the body of drain valve 10, the seat of the

unlabeled valve would be "an internal part" of and contained within the "outer casing" of drain valve 10. The seat would also be upstream of sensor 42A. *See* Rasmussen Figs. 4, 7.

Accordingly, for the foregoing reasons, we affirm the rejection of claim 1, as well as of its dependent claims 2, 3, and 5–8, as being unpatentable over Rasmussen and Frantz.

Claims 15–20

The Examiner finds independent claim 15 to be unpatentable over Rasmussen and Frantz similarly as discussed above with respect to claim 1. Non-Final Act. 9–10. Appellant traverses, presenting arguments similar to those presented with respect to claim 1. App. Br. 16–17. For the same reasons as presented above, we affirm the rejection of claim 15, as well as of its dependent claims 16–20, as being unpatentable over Rasmussen and Frantz.

Obviousness Based on Frantz and Rasmussen
Claims 1–3, 5–8, and 21

The Examiner finds that Frantz discloses the invention substantially as claimed in independent claim 1, "with arguable exception to a sensor downstream of said inlet seat, wherein said sensor generates a signal reflective of pressure downstream of the inlet seat." Non-Final Act. 10. The Examiner finds that Rasmussen teaches such a sensor, and reasons that it would have been obvious to a skilled artisan to include Rasmussen's sensor in Frantz's valve body "for the purpose of generating a control signal that purges a high condensate level from Frantz' [main] chamber (2)." *Id.* at 10–

11. Appellant traverses, presenting arguments similar to those presented above with respect to claim 1. App. Br. 17–18. For the same reasons as presented above, we affirm the rejection of claim 1, as well as of its dependent claims 2, 3, 5–8, and 21, as being unpatentable over Frantz and Rasmussen.

Claims 9–13

The Examiner finds independent claim 9 unpatentable over Frantz and Rasmussen. Non-Final Act. 10–11. Appellant has not addressed this rejection of claim 9, nor of its dependent claims 10–13. *See* App. Br. 17–19. Accordingly, Appellant has waived any argument of error, and we summarily sustain the rejection of claims 9–13 as being unpatentable over Frantz and Rasmussen.

Claim 14

The Examiner finds independent claim 14 unpatentable over Frantz and Rasmussen. Non-Final Act. 10–11. Appellant traverses, presenting arguments similar to those presented above with respect to claim 1. App. Br. 18. For the same reasons as presented above, we affirm the rejection of claim 14 as being unpatentable over Frantz and Rasmussen.

Claims 15–19

The Examiner finds independent claim 15 unpatentable over Frantz and Rasmussen. Non-Final Act. 12. Appellant has not addressed this rejection of claim 15, nor of its dependent claims 16–19. *See* App. Br. 17–19. Accordingly, Appellant has waived any argument of error, and we

summarily sustain the rejection of claims 15–19 as being unpatentable over Frantz and Rasmussen.

Claim 20

The Examiner finds claim 20 unpatentable over Frantz and Rasmussen. Non-Final Act. 13. Appellant traverses, presenting arguments similar to those presented above with respect to claim 1. App. Br. 18–19. For the same reasons as presented above, we affirm the rejection of claim 20 as being unpatentable over Frantz and Rasmussen.

Obviousness Rejection Based on Frantz, Hunt, and Rasmussen

Claims 9–13

The Examiner finds independent claim 9 unpatentable over Frantz, Hunt, and Rasmussen. Non-Final Act. 13–14. Appellant has not addressed this rejection of claim 9, nor of its dependent claims 10–13. *See* App. Br. 19. Accordingly, Appellant has waived any argument of error, and we summarily sustain the rejection of claims 9–13 as being unpatentable over Frantz, Hunt, and Rasmussen.

Claim 14

The Examiner finds that Frantz discloses the invention substantially as defined in claim 14, "but arguably lacks an actuator comparing a pressure downstream of the inlet seat to a predetermined limit." Non-Final Act. 13. The Examiner finds that Hunt discloses such an actuator (indicator controller 50), and reasons that it would have been obvious to a skilled artisan to include Hunt's actuator in Frantz's valve body "for the purpose of

automatically moving the first element to drain the chamber according to a pressure sensed in the chamber." *Id.* The Examiner also finds that "Rasmussen suggests that automatic control of a valve member based on sensed pressure is useful and well known in the drain valve art." *Id.* The Examiner expounds that Hunt teaches the use of an actuator, and Frantz and Rasmussen teach the location at which to place Hunt's actuator. Ans. 16. Appellant traverses, arguing that "the actuator (50) taught by Hunt is operatively connected upstream of the inlet seat (22) of the valve (10)." App. Br. 19. (Appellant also repeats arguments regarding Frantz individually, which are unpersuasive for the reasons set forth above. *Id.*)

We are not persuaded by Appellant's arguments. Although Hunt's pressure tap 40 is positioned upstream from its valve seat 22, the Examiner proposes to position a similar tap in Frantz's main chamber 2. Non-Final Act. 13. When so positioned, the pressure tap would be downstream of Frantz's inlet port 3 and seat 50. *See* Frantz Fig. 4.

Accordingly, for the foregoing reasons, we affirm the rejection of claim 14 as being unpatentable over Frantz, Hunt, and Rasmussen.

DECISION

The Examiner's decision to reject claims 1–3 and 5–21 is affirmed.

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).

AFFIRMED