

No. 17-1072

IN THE
Supreme Court of the United States

IN RE: STEVEN C. CHUDIK,

Petitioner.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED
STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

**SUPPLEMENT TO THE PETITION
FOR A WRIT OF CERTIORARI**

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Steven C. Chudik respectfully supplements his petition for a writ of certiorari filed January 30, 2018, and calls this Court's attention to the decision of the Court of Appeals for the Federal Circuit on February 12, 2018 entitled *In re Kenneth Andrew Hodges*, Appeal No. 2017-1434, a copy of which is appended hereto.

ADDITIONAL REASON FOR GRANTING THE PETITION

In *Hodges*, the Court of Appeals reverted to the doctrine of stare decisis, and relied in part upon the same principle of law which it had followed in *In re Chudik*, 851 F.3d 1365, 1371, 1373-1375 (Fed. Cir., March 27, 2017).

Specifically, the Federal Circuit said in *Hodges* (Slip Op. pp. 9-10):

“Because...the only permissible finding that can be drawn from Rasmussen is that it does not disclose the claim limitation at issue, we reverse the Board's anticipation determination with respect to Rasmussen as to appealed claims 1-3, and 5-8. See *Corning*, 873 F.3d at 903; *In re Chudik*, 851 F.3d 1365, 1371, 1373-75 (Fed. Cir. 2017) (reversing the Board's anticipation rejection during examination and concluding from the prior art figures that the references do not disclose the relevant limitations without modification....”

As pointed out in Dr. Chudik's pending Petition, the Court of Appeals simply brushed aside, i.e., “modified,” Leonard et al.'s “sliding surface” and “articulating”

glenohumeral joint. Those are structural requirements of the prior art reference. They had to be altered or dismissed in order to sustain the Board of Appeals. In fact, that was done notwithstanding the appellate court's earlier precedential decisions, and notwithstanding, now, its current stance in *Hodges*. To Dr. Chudik, it seems as though his March 2017 decision, including its reliance upon cited precedents, should have prevailed in August. Those precedents should not have been ignored.

Respectfully submitted,

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APPENDIX

**APPENDIX — OPINION OF THE UNITED STATES
COURT OF APPEALS FOR THE FEDERAL
CIRCUIT, DATED FEBRUARY 12, 2018**

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2017-1434

IN RE: KENNETH ANDREW HODGES,

Appellant.

February 12, 2018, Decided

Before LOURIE, O'MALLEY, and WALLACH,
Circuit Judges.

Opinion for the court filed by *Circuit Judge*
O'MALLEY.

Opinion concurring-in-part and dissenting-in-part
filed by *Circuit Judge* WALLACH.

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. 12/906,222

O'MALLEY, *Circuit Judge*

Appellant Kenneth Andrew Hodges appeals from
examination of U.S. Patent Application No. 12/906,222
("222 application"), in which the Patent Trial and Appeal
Board ("Board") affirmed the examiner's rejection of

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all claims as anticipated and/or obvious. *See Ex Parte Kenneth Andrew Hodges*, No. 2014-009710, 2016 WL 6441834 (P.T.A.B. Oct. 28, 2016). For the following reasons, we reverse the Board’s anticipation determinations, vacate its obviousness determinations, and remand for further proceedings.

I. Background**A. The ’222 Application**

Entitled “System and Method for Operating a Drain Valve,” the ’222 application is directed to a valve assembly for draining contaminants, condensation, and other fluids that adversely affect the efficiency and function of a pressurized system. As shown in Figure 1 below, the claimed assembly includes a single “valve body” 12, which defines an inlet seat 18 and an outlet seat 20 downstream thereto; two valves 14 and 16; and a sensor 40 for measuring fluid pressure between the valves:

Image materials not available for display.

FIG.1

J.A. 48-52, 60. The ’222 application explains that the sensor generates a “signal” 42 reflective of the fluid pressure in the chamber between the valves and transmits the signal to an indicator 44, such as a pressure gauge. J.A. 51. The signal can then be compared to a predetermined limit to generate a control signal, which, in turn, can be used to control or adjust one or more of the two valves to drain fluid as appropriate. J.A. 51-52.

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The '222 application contains 20 claims,¹ but the parties agree that the claims at issue on appeal stand or fall with independent claim 1, which recites:

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.

J.A. 56 (emphases added).

B. The Patent Office's Prior Art Rejections

Two prior art references are at issue on appeal: (1) U.S. Patent No. 5,531,241 to Rasmussen ("Rasmussen"), and (2) U.S. Patent No. 3,262,464 to Frantz ("Frantz").

1. During prosecution, Hodges canceled claim 4 and added claim 21.

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Rasmussen discloses “[a] condensate removal device” that senses pressure levels within the system and purges condensate in response to such levels. Rasmussen col. 2, l. 41; *see id.* col. 2, ll. 42-54. In particular, a sensor within the device measures pressure changes corresponding to condensate levels in the reservoir. *Id.* col. 4, ll. 21-28. When the sensor measures a high condensate level, it provides a signal that causes a plunger to move away from a valve seat, thereby opening a drain path for the condensate. *Id.* col. 4, ll. 40-48, 49-52; *see also id.* fig.7 (depicting a pressurized system that includes, inter alia, drain valve 10, inlet port 17A, and an unlabeled valve above inlet port 17A).

Frantz discloses “valves for draining condensate from pressurized reservoirs.” Frantz col. 1, ll. 11-12. One valve is automatic and the other is manual, *see id.* col. 2, ll. 16-19, and both are “[m]ounted at specified positions in the body,” *id.* col. 2, l. 15. Although Frantz teaches that “it ordinarily will be preferred to actuate the automatic valve by fluid pressure,” *id.* col. 2, ll. 42-44, it also discloses an “air-actuated automatic valve [that] must have [a] second element and seat to enable it to limit the duration of the draining,” *id.* col. 2, ll. 49-51. In the air-actuated version, the automatic valve “preferably is a differential piston with its larger or enlarged head fixed to or rigid with the stem.” *Id.* col. 2, ll. 51-54.

The examiner found that: (1) Rasmussen anticipates claims 1-3, 5-8, and 15-20 of the '222 application under 35 U.S.C. § 102(b), (2) Frantz anticipates claims 1, 2, 9, 10, 14-18, 20, and 21 under § 102(b), and (3) the two references

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collectively render all claims obvious under § 103.² The Board affirmed the examiner’s rejections, and Hodges appealed the Board’s ruling with respect to claims 1-3, 5-8, and 21 only. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II. Discussion

A. The Board’s Finding that Rasmussen Anticipates the Claims Is Unsupported by Substantial Evidence

As described above, the Board affirmed the examiner’s rejection of certain claims as anticipated by Rasmussen. A prior art reference anticipates a patent’s claim when the four corners of the document “describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.” *Spansion, Inc. v. Int’l Trade Comm’n*, 629 F.3d 1331, 1356 (Fed. Cir. 2010) (internal quotation marks omitted). “Anticipation is a question of fact that we review for substantial evidence.” *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341

2. Congress amended §§ 102 and 103 when it passed the Leahy-Smith America Invents Act (“AIA”). Pub. L. No. 112-29, §§ 3(b)-(c), 125 Stat. 284, 285-87 (2011). But, because the ’222 application was filed in October 2010 and never contained a claim having an effective filing date on or after March 16, 2013 (the effective date of the statutory changes enacted in 2011), or a reference under 35 U.S.C. §§ 120, 121, or 365(c) to any patent or application that ever contained such a claim, pre-AIA §§ 102 and 103 apply. *See id.* § 3(n)(1), 125 Stat. at 293.

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(Fed. Cir. 2016); *see also Redline Detection, LLC v. Star Envirotech, Inc.*, 811 F.3d 435, 449 (Fed. Cir. 2015) (noting that we review the Board’s “factual findings for substantial evidence and its legal conclusions de novo”).

At issue on appeal is claim 1’s recitation of an “inlet seat” that is “define[d]” by a “valve body.” The examiner found that Rasmussen inherently discloses such an inlet seat within an unlabeled valve depicted in Rasmussen’s Figure 7 above inlet port 17A. *See Hodges*, 2016 WL 6441834, at *2 (summarizing, and tacitly agreeing with, the examiner’s finding that Rasmussen discloses “an inlet seat (within the valve above condensate inlet port 17A)”); *see also* J.A. 117 (examiner stating in his final rejection that Rasmussen’s unlabeled valve “would inherently include a member (second member) that seals against a seat (inlet seat)”); J.A. 200 (examiner stating the same in a non-final rejection); J.A. 206 (examiner stating in a non-final obviousness rejection that Rasmussen discloses an “inlet seat (i.e., the seat inherent to the valve above [inlet port] 17A)”). Hodges conceded this point during examination, and the Patent Office does not allege that the Board erred in this regard.³

3. *See, e.g.*, J.A. 104 (Hodges stating during examination that Rasmussen discloses “a second member (valve) that seals against an inlet seat (inside the valve)”; J.A. 251 (in his brief to the Board, Hodges characterizing the examiner as having found that Rasmussen discloses an inlet seat “inside the unnumbered valve” “shown schematically in Fig. 7 above [inlet port] 17A,” but not contesting that finding); J.A. 256 n.1 (Hodges acknowledging in his brief to the Board that Rasmussen discloses an “inlet seat in the valve above [inlet port] 17A”); Appellee’s Br. 10 (Patent

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Thus, as the Board noted, the propriety of the examiner's rejection turns on whether Rasmussen's unlabeled valve containing the inlet seat is "define[d]" by Rasmussen's valve body—i.e., whether it "can properly be considered to be a part of Rasmussen's drain valve body." *Hodges*, 2016 WL 6441834, at *2. The Board found that it could. In particular, the Board found that Rasmussen's unlabeled valve is "connected to, and therefore allow[s] or prevent[s] flow into, inlet port 17A," and that the seat of the unlabeled valve would therefore "be 'an internal part' of and contained within the 'outer casing' of drain valve 10." *Id.* That finding is unsupported by substantial evidence.

As shown in the annotated version of Rasmussen's Figure 7 included in Hodges' opening brief, the unlabeled valve (shown in red above inlet port 17A) resides above the housing 11 that contains the other valve components (shown in yellow):

Image materials not available for display.

FIG.7

Appellant's Br. 22 (citing Rasmussen fig.7 (annotated)); *see also* Appellee's Br. 5 (annotating Rasmussen's Figure 7 to point to the same valve); J.A. 118 (examiner's rejection pointing to the same valve). As shown, the unlabeled

Office relying on Hodges' concession that Rasmussen discloses a sensor that is downstream "of the inlet seat in the valve above [inlet port] 17A").

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valve—and, therefore, the inlet seat therein⁴ — is not “an internal part” of and “contained within” the outer casing of the drain valve. To the contrary, Figure 7 clearly shows that the valve is external to and outside Rasmussen’s casing. Accordingly, the only permissible factual finding that can be drawn from Rasmussen is that the inlet seat within the unlabeled valve is *not* “define[d]” by the “valve body,” as required by the claims.⁵ *See Owens Corning v. Fast Felt Corp.*, 873 F.3d 896, 903 (Fed. Cir. 2017) (reversing the Board’s obviousness determination that was contrary to the “one permissible factual finding” that could be drawn from the record).

4. The dissent states that we improperly “assume[]” that Rasmussen’s inlet seat is located within the unlabeled valve, and that this assumption is inconsistent with, and mutually exclusive of, the Board’s “assumption” that “the inlet seat is located *at* inlet port 17A.” Dissent at 5 (emphasis added). As we note above, however, the Board and examiner found that Rasmussen’s inlet seat is contained *within* its unlabeled valve, which, in turn, is located *above* and connected to inlet port 17A. And, as also described above, the parties do not dispute that finding.

5. In fact, it seems that the unlabeled valve is not part of Rasmussen’s disclosed invention at all. The valve is not depicted in any of Rasmussen’s other figures—even though those same figures depict inlet port 17A and an upper main cylinder “housing,” *see, e.g.*, Rasmussen figs.1-2, 6—nor is it described in Rasmussen’s specification. This lack of description suggests that the valve is not itself part of Rasmussen’s valve assembly, and that it is depicted in Figure 7 merely to show how the assembly interfaces with an external fluid pressure system. *See id.* col. 3, ll. 3-4 (“FIG. 7 is a graphic illustration of a high condensate level within the valve system installed on a fluid pressure system.”).

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As sole support for its contrary findings, the Board asserted that “the positioning of Rasmussen’s unlabeled valve is *similar* to the positioning of [the ’222 application’s] second member 16, which extends away from valve body 12, ostensibly to allow second member 16 to be controlled.” *Hodges*, 2016 WL 6441834, at *2 (emphasis added). The Board neither supported its assertion of similarity, however, nor explained how the positioning of the unlabeled valve in Rasmussen’s Figure 7 would enable a skilled artisan to “practice the invention without undue experimentation.” *Spansion*, 629 F.3d at 1356 (internal quotation marks omitted). And, even if Rasmussen’s unlabeled valve is ostensibly “similar to” the ’222 application’s second member 16 in some respects, it is different in the only respect that is relevant to the claims at issue—i.e., it is not an internal part of or contained within the valve body. We therefore conclude that substantial evidence does not support the Board’s anticipation findings.⁶

The Patent Office shoulders the burden during initial examination of establishing that the examined claims are anticipated. *See* 35 U.S.C. § 102 (“A person shall be entitled to a patent unless[]”); *cf. In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (“If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent.”). Because the Board failed to meet that burden

6. We also note that the examiner stated in his obviousness rejection that it is at least “arguable” that Rasmussen does not disclose “a valve body which defines an inlet seat.” *Hodges*, 2016 WL 6441834, at *5 (quoting examiner); *see also, e.g.*, J.A. 25.

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here, and because the only permissible finding that can be drawn from Rasmussen is that it does not disclose the claim limitation at issue, we reverse the Board’s anticipation determination with respect to Rasmussen as to appealed claims 1-3 and 5-8. *See Corning*, 873 F.3d at 903; *In re Chudik*, 851 F.3d 1365, 1371, 1373-75 (Fed. Cir. 2017) (reversing the Board’s anticipation rejection during examination and concluding from the prior art figures that the references do not disclose the relevant limitations without modification, and noting that, “[t]hough our review of an anticipation finding is deferential, we have not hesitated to reverse the Board when substantial evidence does not support its findings”); *In re Rambus, Inc.*, 753 F.3d 1253, 1258 (Fed. Cir. 2014) (reversing the Board’s anticipation findings during reexamination based in part on our review of the prior art figures); *cf. Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1366 (Fed. Cir. 2016) (reversing the Board’s obviousness determination and noting that “this is not a case where a more reasoned explanation than that provided by the Board can be gleaned from the record”); *In re Rouffet*, 149 F.3d 1350, 1359 (Fed. Cir. 1998) (“Absent any proper motivation to combine part of Levine’s teachings with Freeburg’s satellite system, the [Patent Office’s] rejection of Rouffet’s claim over these references was improper and is reversed.”); *Synopsys, Inc. v. ATopTech, Inc.*, 685 F. App’x 951, 955-56 (Fed. Cir. 2017) (reversing the Board’s anticipation ruling where the portions of the prior art reference relied upon by the Board did not support its findings).⁷

7. The dissent asserts that we may reverse the Board’s patentability determinations in only two circumstances—i.e., when the Board (1) “committed legal error and no further factual

*Appendix***B. The Board's Finding that Frantz Anticipates the Claims Is Similarly Unsupported by Substantial Evidence**

The Board also affirmed the examiner's determination that Frantz anticipates the claims. In particular, the Board agreed with the examiner that Frantz's piston stem 14⁸ and piston head 18 collectively constitute the claimed "sensor" because they sense pressure insofar as they move in response to the pressure applied thereto. *Hodges*, 2016 WL 6441834, at *3. The Board also adopted the examiner's construction of "signal" as "an act, event, or the like that causes or incites some action." *Id.* Based on that construction, the Board determined that Frantz's piston stem and head generate a "signal," as required by the claims, in the form of a mechanical force determined by the pressure in the valve chambers. *Id.*

findings are required," or (2) "made erroneous factual findings and only one permissible factual finding exists." Dissent at 2-3 (internal quotation marks omitted). Whether or not the dissent is correct that these are the *only* two circumstances in which reversal is permitted, its conclusion that this case does not fit within the second circumstance is incorrect. As described above, the Board's finding that the inlet seat within Rasmussen's unlabeled valve is contained in Rasmussen's housing is plainly contrary to the only permissible factual finding that can be drawn from Rasmussen itself. This case therefore fits squarely within the second circumstance identified by the dissent.

8. Although the Board refers to Frantz's "stem 14" as "piston 14," *see, e.g., Hodges*, 2016 WL 6441834, at *3, we use the term "stem" here for consistency with Frantz's disclosures, *see* Frantz col. 2, ll. 52-54 ("[T]he automatic valve 6 preferably is a differential piston with its larger or enlarged head 18 fixed or rigid with the stem 14" (emphases added)).

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As an initial matter, we note that the Patent Office does not attempt to defend the Board’s anticipation finding as to Frantz on appeal. *See* Appellee’s Br. 2 n.5 (“The USPTO is not addressing the Frantz anticipation rejection on appeal.”). This is for good reason, as the Board’s anticipation finding is predicated on an erroneous construction of “signal,” and Frantz does not disclose a sensor that generates and transmits a signal under any reasonable construction of that term.

During examination, claim terms are given their broadest reasonable interpretation consistent with the specification as understood by those of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). We review claim construction de novo except for subsidiary factual findings based on extrinsic evidence, which we review for substantial evidence. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841-42, 190 L. Ed. 2d 719 (2015).

The ’222 application explains that the sensor “may transmit the signal to an indicator, such as a pressure gauge or alarm system, to provide a visual or audible indication of the operability of the drain valve,” and that a controller can “compare[] the signal to a predetermined limit and generate[] a control signal based on this comparison.” J.A. 51 (numerals omitted). It is clear from this description that the signal must at least be capable of being compared to a “predetermined limit.”

The Board’s construction is inconsistent with this description. The Board construed “signal” as

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encompassing “an act, event, or the like that causes or incites some action,” which would encompass virtually any mechanical component within the valve drain that moves in response to the flow of fluid through the drain. The Board attempted to justify its construction by noting that the ’222 application specification refers to a pressure gauge that can provide a visual indication of the operability of the drain valve, and concluded from that passage that the recited signal can constitute “movement of the needle of pressure gauge 44 in response to the sensed pressure.” *Hodges*, 2016 WL 6441834, at *3-4 (citing J.A. 51). Such a reading of the ’222 application is unreasonable. The portion of the specification to which the Board cites states that the sensor “generates a signal,” which, in turn, can be transmitted to a pressure gauge “to provide a visual . . . indication of the operability of the drain.” J.A. 51. In other words, the recited “signal” causes the pressure gauge to provide a visual indication. The passage does not suggest, however, that the signal itself can constitute “movement of” the pressure gauge’s needle “in response to the sensed pressure,” as the Board concluded. *Id.*

The Board’s strained interpretation of “signal” is therefore unreasonably broad and inconsistent with the ’222 application. As such, it does not accord with the broadest reasonable interpretation standard. See *In re Smith Int’l, Inc.*, 871 F.3d 1375, 1382-83 (Fed. Cir. 2017) (stating that “the Board cannot construe the claims so broadly that its constructions are *unreasonable* under general claim construction principles,” and that giving claim terms “a strained breadth in the face of the otherwise different description in the specification

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[is] unreasonable” (internal quotation marks omitted)); *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016) (“While the broadest reasonable interpretation standard is broad, it does not give the Board an unfettered license to interpret the words in a claim without regard for the full claim language and the written description.”).

Under any reasonable construction of “signal,” Frantz’s piston stem and head combination cannot fairly be characterized as a sensor that generates such a signal, much less one that is “reflective of a pressure downstream of [the] inlet seat,” as claimed by the ’222 application. Indeed, the movement of Frantz’s piston cannot be compared to a predetermined limit, as described in the ’222 application. The only permissible factual finding that can be drawn from Frantz is that it does not disclose a sensor that generates a “signal” under any reasonable construction of that term. Indeed, the Patent Office’s refusal to defend the Board’s decision only underscores the lack of evidence supporting the Board’s finding, and we will not give the Patent Office a second chance to reject the claims on grounds that it is unwilling or unable to defend on appeal.

We therefore reverse the Board’s anticipation determination based on Frantz as to appealed claims 1-2 and 21. *See Smith*, 871 F.3d at 1382-84 (reversing the Board’s anticipation finding predicated on an unreasonably broad claim construction); *In re Skvorecz*, 580 F.3d 1262, 1267-68 (Fed. Cir. 2009) (reversing the Board’s rejection of reissue claims predicated on an incorrect construction, and noting that “[a]nticipation cannot be found, as a matter

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of law, if any claimed element or limitation is not present in the reference”).

C. The Board Did Not Provide an Adequate Evidentiary Basis or Explanation for Its Determination that the Claims Would Have Been Obvious

Finally, the Board determined that the claims would have been obvious over Rasmussen in view of Frantz, *see Hodges*, 2016 WL 6441834, at *5, and, alternatively, Frantz in view of Rasmussen, *see id.* at *5-6.⁹ We review the Board’s obviousness determinations de novo and its factual findings underlying those determinations for substantial evidence. *See In re Adler*, 723 F.3d 1322, 1325 (Fed. Cir. 2013); *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000).

The Board concluded in a single paragraph that the claims would have been obvious over Rasmussen in view of Frantz because the unlabeled valve depicted in Rasmussen’s Figure 7 could be made part of Rasmussen’s drain valve body such that the seat of the unlabeled valve would be “an internal part’ of and contained within the ‘outer casing’ of drain valve 10.” *Hodges*, 2016 WL 6441834,

9. At oral argument, Hodges stated that he does not contest motivation to combine. Oral Arg. at 4:44-55, *In re Hodges* (No. 2017-1434), <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2017-1434.mp3> (Q: “You don’t dispute the findings with respect to the motivation to combine Rasmussen and Frantz, right?” A: “No, I don’t, Your Honor, because I dispute the *prima facie*—the existence of all the elements, and it’s based on . . . anticipation.”).

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at *5. But the Board did not explain how Rasmussen’s drain valve assembly could be so modified. In another paragraph, the Board agreed with the examiner that it also “would have been obvious to a skilled artisan to include Rasmussen’s sensor in Frantz’s valve body for the purposes of generating a control signal that purges a high condensate level from Frantz’ *[sic]* [main] chamber.” *Id.* (internal quotation marks omitted). But the Board did not explain how such a sensor would be downstream of the inlet seat and generate a signal reflective of a pressure downstream of said inlet seat, as required by the claims. Instead, the Board merely determined that the claims would have been obvious over Frantz in view of Rasmussen “[f]or the same reasons as presented above.” *Id.* The Board made no findings, moreover, regarding the obviousness factors laid out in *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966).

Our review of the Board’s decision “is rooted not just in the law of obviousness but in basic principles of administrative law.” *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 992 (Fed. Cir. 2017). The Board must therefore “explicate its factual conclusions, enabling us to verify readily whether those conclusions are indeed supported by ‘substantial evidence’ contained within the record.” *Gartside*, 203 F.3d at 1314; *see also Power Integrations, Inc. v. Lee*, 797 F.3d 1318, 1326-27 (Fed. Cir. 2015) (holding that the Board’s reasoning must be set out “in sufficient detail to permit meaningful appellate review”). The Board did not do so here. Unlike the Board’s anticipation determinations, which contravene the only permissible findings that can be drawn from the prior

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art under the proper constructions of the relevant claim terms, the Board’s obviousness determinations involve “potentially lawful but insufficiently or inappropriately explained” factual findings, *In re Van Os*, 844 F.3d 1359, 1362 (Fed. Cir. 2017) (internal quotation marks omitted)—i.e., that Rasmussen’s valve assembly could be modified such that the unlabeled valve above inlet port 17A could become an internal part of the drain valve body and upstream of the sensor and outlet seat, or, alternatively, that Frantz’s drain valve could be modified so as to include a sensor downstream of the inlet seat that generates a signal reflective of a pressure downstream of that seat. The Board has failed to explain its reasoning to allow us to determine whether such findings would be lawful.

When faced with similarly deficient factual findings, “we have consistently vacated and remanded for further proceedings.” *Id.* (collecting cases); *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1046 (Fed. Cir. 2017) (“Although the [Board] made a factual finding, this finding did not have an adequate basis in the record, and the [Board] did not adequately explain its reasoning. Thus, we vacate and remand for additional [Board] findings and explanation.”); *Personal Web Techs.*, 848 F.3d at 994 (vacating and remanding “for the Board to reconsider the merits of the obviousness challenge, within proper procedural constraints”); *see also Fla. Power & Light Co. v. Lorion*, 470 U.S. 729, 744, 105 S. Ct. 1598, 84 L. Ed. 2d 643 (1985) (explaining that, when an agency’s fact-findings and explanation are deficient, “the proper course, except in rare circumstances, is to remand to the agency for additional investigation or explanation”). We therefore

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vacate the Board's obviousness rejections with respect to appealed claims 1-3, 5-8, and 21, and remand for further factual findings and explanation on this score.

III. Conclusion

We have considered the parties' remaining arguments and find them unpersuasive. Accordingly, we reverse in part and vacate in part the Board's ruling, and remand for proceedings consistent with this decision.

**REVERSED IN PART, VACATED IN PART,
AND REMANDED**

COSTS

No costs.

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WALLACH, *Circuit Judge*, concurring-in-part and dissenting-in-part.

I agree with the majority's decisions to: (1) reverse the U.S. Patent and Trademark Office's ("USPTO") Patent Trial and Appeal Board's ("PTAB") determination that U.S. Patent No. 3,262,464 ("Frantz") anticipates the asserted claims of U.S. Patent Application No. 12/906,222 ("the '222 application"), *see* Maj. Op. 11-14; and (2) vacate and remand the PTAB's determination that the asserted claims of the '222 application would have been obvious over U.S. Patent No. 5,531,241 ("Rasmussen") in view of Frantz, *see id.* at 14-16. However, I believe the majority goes too far in reversing the PTAB's anticipation finding with respect to Rasmussen. *See id.* at 5-10.

When an agency fails to make requisite factual findings or to explain its reasoning, "the proper course, *except in rare circumstances*, is to remand to the agency for additional investigation or explanation. The reviewing court is not generally empowered to conduct a *de novo* inquiry into the matter being reviewed and to reach its own conclusions based on such an inquiry." *Fla. Power & Light Co. v. Lorion*, 470 U.S. 729, 744, 105 S. Ct. 1598, 84 L. Ed. 2d 643 (1985) (first emphasis added). By reversing the PTAB's determination that Rasmussen anticipates the asserted claims of the '222 application, the majority engages in the very *de novo* inquiry against which the Supreme Court has cautioned. *See* Maj. Op. 5-10. Therefore, I respectfully dissent-in-part.

*Appendix***DISCUSSION****I. This Court’s Authority to Reverse the PTAB’s Patentability Determinations Is Limited**

In accordance with Supreme Court guidance, “when the [PTAB]’s action is potentially lawful but insufficiently or inappropriately explained, we have consistently vacated and remanded for further proceedings.” *In re Van Os*, 844 F.3d 1359, 1362 (Fed. Cir. 2017) (internal quotation marks omitted) (collecting cases). Our precedent, however, has identified two “rare circumstances” where we may reverse the PTAB’s ultimate patentability determinations, generally because the relevant facts are undisputed. *Fla. Power & Light*, 470 U.S. at 744. First, we may reverse when the PTAB has committed legal error and no further factual findings are required. *See Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1365, 1366 (Fed. Cir. 2015) (stating that we may only decide a matter in the first instance when it is “*purely legal*” and that “we must not ourselves make factual and discretionary determinations that are for the agency to make” (citations omitted) (emphasis added)); *see also In re Smith Int’l, Inc.*, 871 F.3d 1375, 1384 (Fed. Cir. 2017) (reversing where the PTAB’s “findings depended on an incorrect claim construction” and where “[i]t [was] undisputed that [the prior art references] do not teach or render obvious the missing elements”); *Smith & Nephew, Inc. v. Rea*, 721 F.3d 1371, 1380 (Fed. Cir. 2013) (reversing where the PTAB’s obviousness determination “was mainly the result of . . . analytical errors . . . , not the [PTAB]’s resolution of factual questions” and “the facts [we]re largely undisputed”

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(footnote omitted)). Second, we may reverse when the PTAB made erroneous factual findings and “only one permissible factual finding” exists. *Owens Corning v. Fast Felt Corp.*, 873 F.3d 896, 903 (Fed. Cir. 2017); *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1366 (Fed. Cir. 2016) (reversing where “a more reasoned explanation than that provided by the [PTAB]” was unavailable based on the record); *cf. In re Rouffet*, 149 F.3d 1350, 1358-59 (Fed. Cir. 1998) (applying this principle to motivation to combine).

II. The Majority Exceeds Its Appellate Authority in Reversing the PTAB’s Determination that Rasmussen Anticipates the Asserted Claims of the ’222 Application

The majority attempts to fit its reversal of the PTAB’s determination that Rasmussen anticipates the asserted claims of the ’222 application into the second of the rare circumstances allowing reversal.¹⁰ *See* Maj. Op. 10 n.7.

10. The majority bases its reversal of the PTAB’s determination that Frantz anticipates the asserted claims of the ’222 application on the first circumstance, i.e., legal error. *See* Maj. Op. 12. I agree with that decision because, as in *In re Smith International*, the majority correctly reverses the PTAB’s claim construction, a legal issue, *see Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1362 (Fed. Cir. 2016) (“Claim construction is ultimately a question of law that this court reviews *de novo*.” (citation omitted)), and the USPTO does not contest that Hodges prevails under the rejected claim construction, *see In re Smith Int’l*, 871 F.3d at 1384; *see also* Appellee’s Br. 2 n.5 (“The USPTO is not addressing the Frantz anticipation rejection on appeal.”). However, had the USPTO contested whether Frantz anticipates the asserted claims under the proper construction, the PTAB

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I believe the majority exceeds its appellate authority by making an unsupported factual finding in the first instance and by failing to demonstrate that no other factual finding would be “permissible.” *Owens Corning*, 873 F.3d at 903.

As an initial matter, the sole support for the majority’s finding is an “annotated version of Rasmussen’s Figure 7,” Maj. Op. 7, but this annotated version was provided neither by the PTAB nor by a person having ordinary skill in the art—it was provided by Appellant Kenneth Andrew Hodges’ (“Hodges”) counsel and is not included in the record. If only one factual finding were “permissible,” *Owens Corning*, 873 F.3d at 903, the majority would not need to rely on an extra-record annotated figure created by Hodges’s counsel to support that finding, *see Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017) (“Attorney argument is not evidence.”); *Axiom Res. Mgmt., Inc. v. United States*, 564 F.3d 1374 (Fed. Cir. 2009) (“The focus of judicial review of agency action remains the administrative record . . .”).

Moreover, relying upon Hodges’s counsel’s annotated version of Rasmussen Figure 7, the majority finds that

would be required to make factual findings as to anticipation in the first instance. Because the USPTO did not do so here, the majority’s fact findings in its anticipation analysis under the proper construction are inappropriate. *See* Maj. Op. 13 (finding, in the first instance, that “Frantz’s piston stem and head combination cannot fairly be characterized as a sensor that generates such a signal, much less one that is ‘reflective of a pressure downstream of [the] inlet seat’” and that “the movement of Frantz’s piston cannot be compared to a predetermined limit”).

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“the unlabeled valve—and, therefore, the inlet seat therein—is not ‘an internal part’ of and ‘contained within’ the outer casing of the drain valve.” Maj. Op. 7-8 (footnote omitted). However, the majority provides no support for that finding.¹¹ In contrast, in its equally-unsupported factual findings, the PTAB found that “[t]he unlabeled valve is illustrated in [Rasmussen] Figure 7 as being *connected to . . . inlet port 17A*,” such that “the seat of the unlabeled valve would be ‘an internal part’ of and contained within the ‘outer casing’ of drain valve 10.” *Hodges*, 2016 WL 6441834, at *2. Therefore, the majority assumes that the inlet seat is located within the unlabeled valve and that the entire unlabeled valve is *outside*

11. In apparent reference to its summary of the PTAB’s and examiner’s findings, *see* Maj. Op. 6, the majority states that “the [PTAB] and [E]xaminer found that Rasmussen’s inlet seat is contained *within* its unlabeled valve, which, in turn, is located *above* and connected to inlet port 17A” and that “the parties do not dispute that finding.” Maj. Op. 7 n.4. However, the citations provided by the majority do not support this conclusion. The Examiner never stated that the inlet seat was “within” the unlabeled valve, *see* J.A. 117, 200, 206, and the PTAB only stated as much in inaccurately summarizing the Examiner’s findings, *see Ex Parte Hodges*, No. 2014-009710, 2016 WL 6441834, at *2 (P.T.A.B. Oct. 28, 2016) (“The [E]xaminer finds that Rasmussen . . . includ[es], inter alia, . . . an inlet seat (within the valve above condensate inlet port 17A) . . .” (footnote omitted)), as the majority concedes, *see* Maj. Op. 6 (stating that the PTAB was “summarizing, and *tacitly* agreeing with” the Examiner’s finding (emphasis added)). Moreover, even if the majority is correct that the inlet seat is “within” the unlabeled valve, the PTAB never found that the unlabeled valve consists only of the portions of the annotated version of Rasmussen Figure 7 that are depicted in red, as opposed to including protrusions that extend therefrom.

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the outer casing of the drain valve, whereas the PTAB assumed that the inlet seat is located at inlet port 17A and that the entirety of inlet port 17A is *within* the outer casing of the drain valve. Because neither the majority nor the PTAB supported their assumptions, and each is mutually exclusive of the other, I cannot join either finding. *See Personal Web Techs., LLC v. Apple Inc.*, 848 F.3d 987, 992 (Fed. Cir. 2017) (stating that “effective judicial review” is premised upon record-supported factual findings and accompanying analysis (internal quotation marks and citation omitted)). Indeed, if only one of those findings were permissible, Supreme Court guidance dictates that it would be the PTAB’s and, ipso facto, affirmance would be appropriate.

III. The Majority Errs in Its Reliance upon 35 U.S.C. § 102

The majority’s conclusion that “[t]he [USPTO] shoulders the burden during initial examination of establishing that the examined claims are anticipated,” such that reversal is appropriate where the USPTO “fail[s] to meet that burden” in the first instance, also gives me great pause. Maj. Op. 9. As its primary support for this proposition, the majority relies upon the language in 35 U.S.C. § 102 (2006)¹² that “[a] person shall be entitled to

12. Congress amended § 102 when it passed the Leahy-Smith America Invents Act (“AIA”). Pub. L. No. 112-29, § 3(b)(1), 125 Stat. 284, 285-87 (2011). However, because the ’222 application never contained a claim having an effective filing date on or after March 16, 2013 (the effective date of the statutory changes enacted in 2011), or a reference under 35 U.S.C. §§ 120, 121, or 365(c) to

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a patent unless—.” *See id.* The majority reads too much into § 102.

First, over dissenting opinions, multiple panels of this court have rejected the proposition that § 102 mandates reversal without remand when an unpatentability decision by the PTAB lacks the requisite factual findings or explanation.¹³ *Compare L.A. Biomed. Research Inst. at Harbor-UCLA Med. Ctr. v. Eli Lilly & Co.*, 849 F.3d 1049, 1068 n.9 (Fed. Cir. 2017) (“Although the dissent urges that we should resolve the obviousness question without a remand, it would be improper for us to do so in the absence of the necessary factual findings by the [PTAB].” (citations omitted)), *Icon*, 849 F.3d at 1049 (vacating and remanding for failure to make the requisite factual findings and attendant explanation), and *In re Van Os*, 844 F.3d at 1362 (vacating and remanding for further explanation), *with L.A. Biomed.*, 849 F.3d at 1072 (Newman, J., concurring-in-part and dissenting-in-part) (“It was expected that in the normal course questions of patentability under [§§] 102 and 103 would be reliably and speedily resolved. . . . I don’t say that remands are never appropriate, but remands should be rare.”), *Icon*, 849 F.3d at 1049 (O’Malley, J., concurring-in-part and dissenting-in-part) (“I write separately because I believe

any patent or application that ever contained such a claim, the pre-AIA § 102 applies. *See id.* § 3(n)(1), 125 Stat. at 293.

13. Although these opinions concerned obviousness under 35 U.S.C. § 103 rather than anticipation, the dissenting judges appear to contend that § 102 places the burden on the USPTO for both obviousness and anticipation determinations.

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that remand is not the appropriate remedy in examination appeals in which the [US]PTO has not carried its burden of establishing unpatentability.” (internal quotation marks and citation omitted) (citing 35 U.S.C. § 102)), and *In re Van Os*, 844 F.3d at 1362 (Newman, J., concurring-in-part and dissenting-in-part) (similar). We are bound by prior precedent. See *Deckers Corp. v. United States*, 752 F.3d 949, 959 (Fed. Cir. 2014) (“[A] later panel is bound by the determinations of a prior panel, unless relieved of that obligation by an en banc order of the court or a decision of the Supreme Court.”).

Second, even if § 102 did place the burden on the USPTO, nothing in § 102 suggests that the USPTO could not satisfy the burden on remand. Therefore, before concluding that § 102 prohibits the PTAB from satisfying its burden on remand, the court would need to consider the interplay between the relevant statutory schemes—in light of the administrative law standards in Title 5, the judicial review function in Title 28, and the patent principles of Title 35 of the U.S. Code—an inquiry that should be undertaken with the assistance of briefing by the parties. Otherwise, we risk ruling that the introductory clause of § 102 supersedes the general rule that, when an appellate court is tasked with reviewing deficient agency decisions, “the proper course, *except in rare circumstances*, is to remand to the agency for additional investigation or explanation,” *Fla. Power & Light*, 470 U.S. at 744 (emphasis added), and the Supreme Court has repeatedly cautioned against the creation of such patent-specific rules, see, e.g., *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 137 S. Ct. 954, 964, 197

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L. Ed. 2d 292 (2017) (citing approvingly the proposition that “patent law is governed by the same common-law principles, methods of statutory interpretation, and procedural rules as other areas of civil litigation” (internal quotation marks, alterations, and citation omitted)); *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 136 S. Ct. 1923, 1934, 195 L. Ed. 2d 278 (2016) (cautioning the Federal Circuit against applying a “rigid formula” and instructing that we should focus on “the longstanding considerations [the Supreme Court] ha[s] identified as having guided both Congress and the courts”).

CONCLUSION

By reversing the PTAB’s determination that Rasmussen anticipates the asserted claims of the ’222 application, the majority departs from the default rule that deficient agency decisions should be vacated and remanded. In doing so, the majority improperly acts as the fact-finder and dramatically over-reads § 102. For these reasons, I respectfully dissent from that portion of the majority’s analysis.