

**United States Court of Appeals  
for the Federal Circuit**

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**GRIT ENERGY SOLUTIONS, LLC,**  
*Appellant*

v.

**OREN TECHNOLOGIES, LLC,**  
*Appellee*

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2019-1063

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. IPR2017-  
00768.

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Decided: April 30, 2020

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2 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

Before PROST, *Chief Judge*, NEWMAN and WALLACH,  
*Circuit Judges*.

Opinion for the court filed by *Chief Judge* PROST.

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

PROST, *Chief Judge*.

Grit Energy Solutions, LLC (“Grit Energy”) appeals the decision of the Patent Trial and Appeal Board (“Board”) in an inter partes review of claims 1–7 of U.S. Patent No. 8,585,341 (“the ’341 patent”), in which the Board found that Grit Energy had not met its burden of showing that the challenged claims were unpatentable as obvious. Grit Energy appealed. For the reasons below, we vacate and remand for further proceedings.

#### BACKGROUND

#### I

The ’341 patent covers a system for storing and discharging proppant—a material, such as sand or other particulates, that prevents ground fractures from closing during hydraulic fracturing. As shown in figure 7 of the ’341 patent, which is reproduced below, the proppant

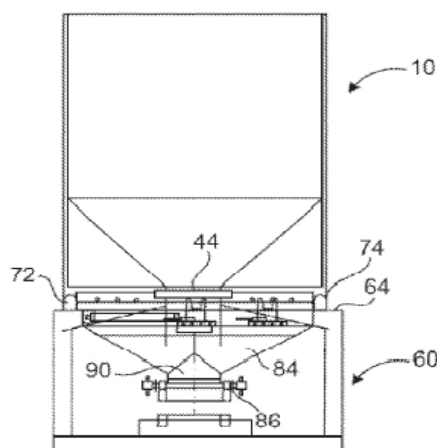


FIG. 7

discharge system includes container 10 positioned on top of support structure 60.

Figures 1 and 3 below represent perspective and cross-sectional views of container 10, respectively. Container 10

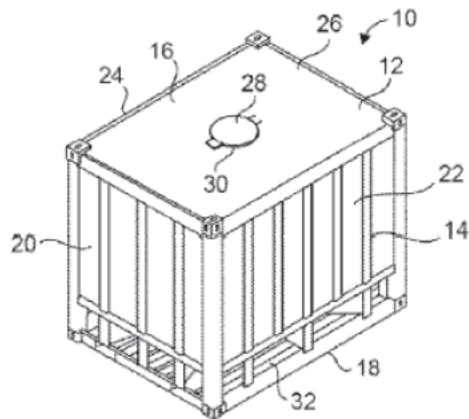


FIG. 1

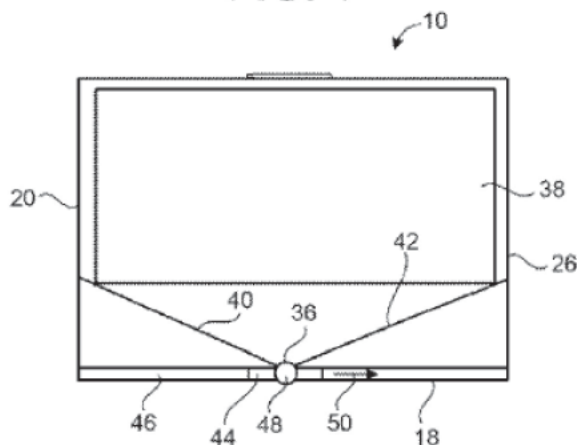


FIG. 3

includes inlet 28 for receiving proppant and outlet 36 through which proppant can be discharged. Gate 44 can be actuated to cover or uncover outlet 36, thereby preventing or permitting the discharge of proppant. Pin 48 protrudes from gate 44.

4 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

Figure 5 below depicts support structure 60. Support structure 60 includes actuator 78 with receptacle 76. Pin 48 fits inside receptacle 76 such that actuator 78 actuates the gate 44. When gate 44 is opened, proppant is discharged from outlet 36 to hopper 84 of support structure 60. Hopper 84 includes metering gate 90 for metering proppant onto conveyor 86.

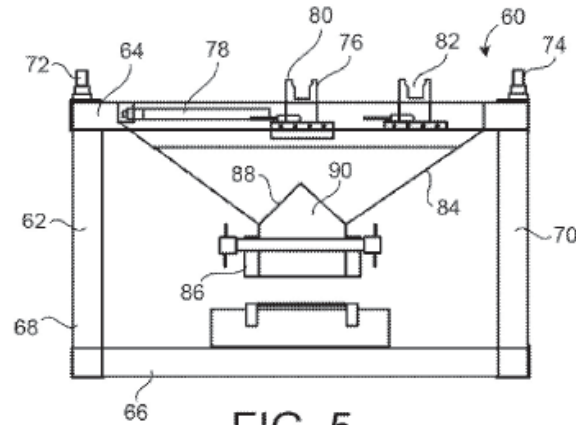


FIG. 5

Independent claim 1 is illustrative for purposes of this appeal and recites as follows:

1. A proppant discharge system comprising:

a container having a bottom and a pair of sidewalls and a pair of end walls and a top, said container having an inlet formed at or adjacent to said top, said container having an outlet formed at set bottom, *said container having a gate* slidably affixed at said outlet so as to be horizontally movable between a first position covering said outlet and a second position opening said outlet, *said gate having a pin fixedly affixed thereto*, said pin extending outwardly of said gate; and

*a support structure having a top surface and an actuator*, said container being removably positioned on said top surface of said support structure, *said actuator having a receptacle*, said actuator for

moving said receptacle horizontally adjacent said top surface of said support structure, *said pin of said gate engageable with said receptacle* when said container is positioned on said top surface of said support structure, said actuator for moving said gate from said first position to said second position.

'341 patent claim 1 (emphases added). Relevant to this appeal, claim 1 requires (a) the container to have a gate with a pin fixedly affixed thereto, and (b) the support structure to have an actuator with a receptacle (hereinafter “the '341 configuration”).

## II

Two prior art references are relevant to this appeal: U.S. Patent No. 7,252,309 (“Eng Soon”) and French Patent Application No. 2,640,598 (“Constantin”).

### A

Eng Soon relates to containerized handling of bulk materials. As shown in figure 10 below, Eng Soon discloses supply containers 10 that can be removably stacked and supported on top of stock containers 104'. As shown in figure 1a below, the base of each supply container 10 includes a base plate 20 that can slide open to permit material to discharge from the supply container 10 to the respective stock container 104' below. Stock containers 104' can each include an actuator. “[A] projection at the moving end of the actuator engages with a catch on the lower side of [the respective] base plate [20]” to couple the movement of base plate 20 with the actuator. Eng Soon col. 5 ll. 18–25.

It is undisputed that Eng Soon does not disclose the '341 configuration. According to Grit Energy, Eng Soon discloses the opposite of the '341 configuration, i.e., Grit

6 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

Energy contends that Eng Soon discloses the container's gate having the receptacle and the support structure's actuator having the pin (hereinafter "the opposite of the '341 configuration").

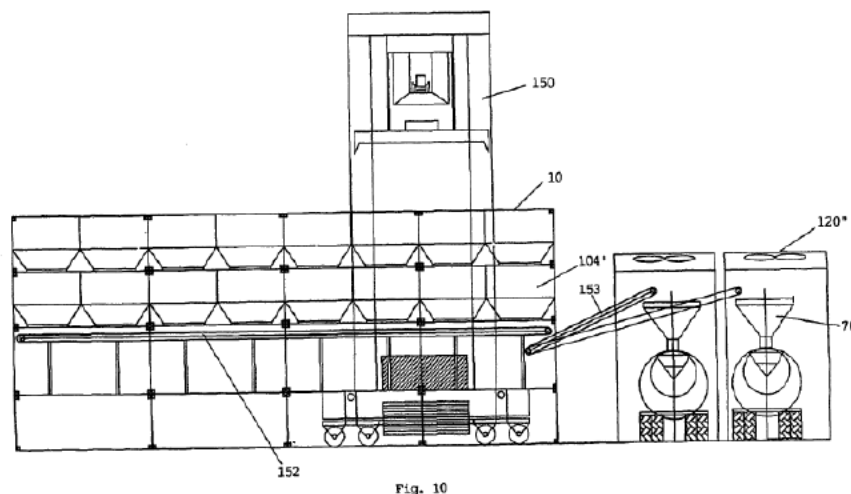


Fig. 10

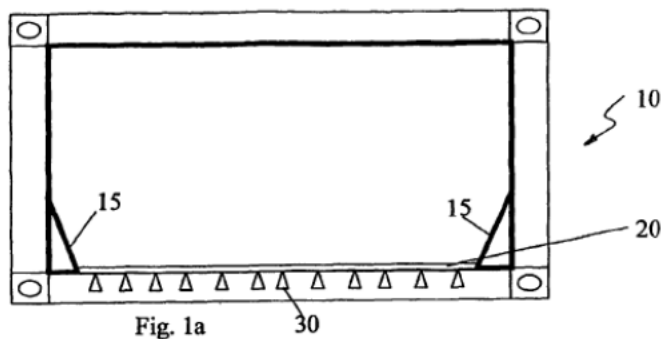


Fig. 1a

B

Constantin relates to a system for storing and transporting "powdery or granular products" from one container

to another. J.A. 172.<sup>1</sup> Constantin discloses a mobile container that can be removably positioned on top of, and supported by, a fixed container. Both containers have an “orifice[] used for transferring” product “from one container to another” and a shutter device for opening and closing their respective orifices. *Id.* The shutter devices include “means ensuring their mechanical connection when the orifices are placed facing each other so that the opening and closing maneuvers of one [shutter device] ensure[s] the simultaneous opening and closing of the other.” J.A. 173.

Constantin “illustrates” its purported invention by way of a “non-limiting example,” which is depicted in relevant part in figures 1 and 3 below. *Id.* In this example, fixed container 1 includes shutter device 3 with shutter blade 8 and actuator 4. Mobile container 7 includes shutter device 5 with shutter blade 9. As shown in figure 3, shutter blade 8 includes stud 15 that fits inside orifice 16 of shutter blade 9 so that actuator 4 actuates shutter blades 8 and 9 as a single unit.

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<sup>1</sup> When citing Constantin, we cite to the parties’ agreed-upon English translation, which can be found at J.A. 171–182.

FIG. 1

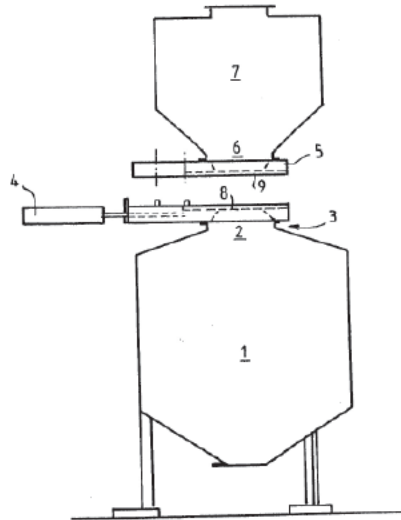
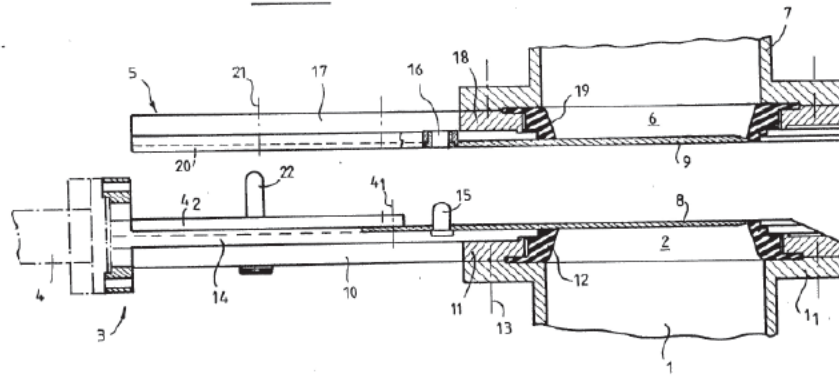


FIG. 3



It is undisputed that Constantin's non-limiting example, standing alone, discloses the opposite of the '341 configuration. More specifically, Constantin's example includes an actuator having the pin (Constantin's "actuating device" 4 having "stud" 15) and a gate having the receptacle (Constantin's "shutter blade" 9 with "orifice" 16).

In addition to this non-limiting example, claim 5 of Constantin provides that "the means for mechanical connection of the shutters are constituted by at least one stud (15) provided on one of the shutter blades (8) that lodges in



GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC 9

a corresponding orifice (16) of the blade of the other shutter.” J.A. 177. As discussed in more detail below, the parties dispute whether Constantin’s claim 5 discloses the ’341 configuration.

### III

Before the inter partes review leading to this appeal began, Oren Technologies, LLC (“Oren”) sued Grit Energy for infringing one or more claims of the ’341 patent. Several months after the case began, Grit Energy transferred ownership of all the products accused of infringement in that action. Later, in January 2017, Oren and Grit Energy jointly stipulated to dismissal “*without prejudice* [of] all claims and counterclaims related to” the ’341 patent. J.A. 2740 (emphasis added); *see also* J.A. 2741–43. Also in January 2017, Grit Energy filed a petition requesting inter partes review of claims 1–7 of the ’341 patent. *Grit Energy Sols., LLC v. Oren Techs., LLC*, No. IPR2017-00768, Paper 2 (P.T.A.B. Jan. 26, 2017) (“*Petition*”). The Board instituted inter partes review and ultimately determined that Grit Energy had not met its burden of showing that any of the challenged claims were unpatentable.

In relevant part, Grit Energy argued that claims 1–7 would have been obvious over Eng Soon and Constantin, either alone or in further view of additional prior art. The Board found that Grit Energy had not met its burden of proving that the challenged claims were unpatentable, reasoning that neither Eng Soon nor Constantin disclosed the ’341 configuration. With respect to Eng Soon, the Board relied on Grit Energy’s concession that Eng Soon disclosed, at most, a pin and receptacle in the opposite of the ’341 configuration.

With respect to Constantin, the Board highlighted Grit Energy’s concession that the embodiment Constantin depicted in figure 3 discloses only the pin and receptacle in the opposite of the ’341 configuration. The Board disagreed with Grit Energy that claim 5 of Constantin disclosed the

10 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

'341 configuration. Relying on the reference numerals included in Constantin's claim 5 in conjunction with Constantin's figure 3 to which the reference numerals refer, the Board equated claim 5's statement of "at least one stud (15) provided on one of the shutter blades (8)" as disclosing only "*stud 15 provided on shutter blade 8, which is attached to its actuator.*" *Grit Energy*, No. IPR2017-00768, Paper 27, at 17 (P.T.A.B. June 13, 2018) ("*Final Written Decision*"); *see also id.* ("[C]laim 5 recites, 'at least one *stud (15) provided on one of the shutter blades (8)* that lodges in a corresponding *orifice (16) of the blade of the other shutter.*' In other words, Constantin's claim 5 discloses *stud 15 provided on shutter blade 8, which is attached to its actuator.*"); *id.* ("Constantin's Figure 3, which we reproduce below, further illustrates the structure disclosed in claim 5."). For these reasons, the Board determined that Constantin's claim 5 also discloses the pin and receptacle only in the opposite of the '341 configuration. *Id.*

Grit Energy argued that a skilled artisan would interpret Constantin's statement in claim 5 that the stud is "provided on one of the shutter blades" and the orifice is provided on "the blade of the other shutter" as disclosing just that, i.e., that the stud and orifice can each be on either shutter blade. Grit Energy argued that, even though the claims include reference numerals to a figure depicting the stud and orifice in only the opposite of the '341 configuration, claim 5's reference to these numerals does not limit its disclosure. Grit Energy reasoned that (a) Constantin expressly indicates that its depicted embodiment was non-limiting, and (b) because such use of reference numerals does not limit claim scope under French patent law, such use should also not limit what the claims disclose.

The Board disagreed. The Board explained that "[u]nlike Constantin's claims 3 and 4, which explicitly recite shutter blade 8 *and* shutter blade 9, *claim 5 recites only shutter blade 8.*" *Id.* at 19. The Board also reasoned that "[t]here is no evidence that a person of ordinary skill would

understand French patent law and incorporate that law into their understanding of this technical reference.” *Id.* at 20 n.3. Having determined that neither Eng Soon nor Constantin disclosed the ’341 configuration, the Board rejected each of Grit Energy’s proposals for why a skilled artisan would have been motivated to combine Eng Soon and Constantin to arrive at the claimed invention.

In addition, the Board “disagree[d] with [Grit Energy’s] argument that transposing Eng Soon’s pin and receptacle would have been a simple substitution to achieve predictable results.” *Id.* at 22. First, the Board found that Grit Energy advanced this argument in a manner that relied on Constantin disclosing an actuator attached to a receptacle, which Constantin does not. Second, the Board determined that Oren “present[ed] persuasive evidence that swapping the location of Eng Soon’s pin and receptacle would result in a more expensive system.” *Id.* at 23.

Grit Energy requested rehearing, which the Board denied. In relevant part, Grit Energy argued that the Board misapprehended Constantin’s claim 5 by construing the parenthetical reference numerals as limiting. The Board rejected this argument as “miss[ing] the point.” *Grit Energy*, IPR2017-00768, Paper 29, at 6 (P.T.A.B. August 7, 2018) (“*Decision Denying Rehearing*”). The Board explained that even if “the reference numerals within the parentheticals are not limiting, [Grit Energy]’s argument conflates claim 5’s *interpretation* with what claim 5 *discloses*.” *Id.* The Board noted that just because “claim 5 might be interpreted broadly to cover a wide array of embodiments, this is not to say that claim 5 itself *discloses* that same wide array of embodiments.” *Id.* To illustrate this principle, the Board explained that while a claim reciting in its entirety “[a] cycle comprising a wheel” might “be interpreted broadly to cover tricycles, the claim itself does not *disclose* a tricycle.” *Id.* at 6–7.

Grit Energy appealed.

## DISCUSSION

On appeal, Grit Energy argues that the Board erred in determining that Grit Energy failed to meet its burden of showing that the challenged claims are unpatentable as obvious. In response, Oren defends the Board's decision and further contends that Grit Energy does not have Article III standing to appeal the Board's decision. We first address whether Grit Energy has standing in this case. Because we answer this question in the affirmative, we then address the merits of the Board's obviousness determination.

## I

Oren argues that Grit Energy does not have Article III standing to pursue this appeal.<sup>2</sup> We disagree.

We have jurisdiction to review final decisions of the Board under 28 U.S.C. § 1295(a)(4)(A). However, Article III of the Constitution restricts federal judicial power to the adjudication of "Cases" or "Controversies." U.S. Const. art. III, § 2; *see also Consumer Watchdog v. Wis. Alumni Res. Found.*, 753 F.3d 1258, 1261 (Fed. Cir. 2014) ("[A]lthough Article III standing is not necessarily a requirement to appear before an administrative agency, once a party seeks review in a federal court, 'the constitutional requirement that it have standing kicks in.'" (quoting *Sierra Club v. E.P.A.*, 292 F.3d 895, 899 (D.C. Cir. 2002))); *Cat Tech LLC v. TubeMaster, Inc.*, 528 F.3d 871, 879 (Fed. Cir. 2008).

As the party invoking federal jurisdiction, Grit Energy bears the burden of establishing standing. *Spokeo, Inc. v. Robins*, 136 S. Ct. 1540, 1547 (2016). To meet the Article III standing requirements, the party seeking relief

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<sup>2</sup> Oren Technologies, LLC filed a motion for leave to file a sur-reply and supplemental appendix. We grant this motion.

“must have (1) suffered an injury in fact, (2) that is fairly traceable to the challenged conduct of the defendant, and (3) that is likely to be redressed by a favorable decision.” *Id.* at 1547–48. To establish “injury in fact,” the party seeking relief must typically show an invasion of a legally protected interest that is concrete, particularized, and actual or imminent, as opposed to merely conjectural or hypothetical. *Id.* at 1548. Because petitioners have been authorized by statute to appeal adverse final written decisions, *see* 35 U.S.C. § 141(c), we have held that such petitioners “need not ‘meet all the normal standards for redressability and immediacy’” to establish injury in fact. *JTEKT Corp. v. GKN Auto. LTD.*, 898 F.3d 1217, 1219–20 (Fed. Cir. 2018) (citing *Phigenix v. Immunogen, Inc.*, 845 F.3d 1168, 1172 n.2 (Fed. Cir. 2017) (citations omitted)); *see also Mass. v. EPA*, 549 U.S. 497, 517–18 (2007); *Consumer Watchdog*, 753 F.3d at 1261 (“[W]here Congress has accorded a procedural right to a litigant, such as the right to appeal an administrative decision, certain requirements of standing—namely immediacy and redressability, as well as prudential aspects that are not part of Article III—may be relaxed.”).

In order to demonstrate the requisite injury in an appeal from a final written decision in an inter partes review, we have concluded that it is generally sufficient for the appellant to show that it has engaged in, is engaging in, or will likely engage in “activity that would give rise to a possible infringement suit.” *Consumer Watchdog*, 753 F.3d at 1262; *see also JTEKT Corp.*, 898 F.3d at 1220 (“Our cases establish that typically in order to demonstrate the requisite injury in an [inter partes review] appeal,” it is sufficient for “the appellant/petitioner [to] show that it is engaged or will likely engage ‘in an[] activity that would give rise to a possible infringement suit’” (second alteration in original) (internal citations omitted)); *Serco Servs. Co. L.P. v. Kelley Co., Inc.*, 51 F.3d 1037, 1038 (Fed. Cir. 1995) (whether “the declaratory plaintiff *has acted* . . . in a way

that could constitute infringement” is relevant to whether the declaratory plaintiff has standing (emphasis added)). “[A] petitioner who appeals from an [inter partes review] decision need not face ‘a specific threat of infringement litigation by the patentee’ to establish jurisdiction,” but rather need only “generally show a controversy ‘of sufficient immediacy and reality’ to warrant the requested judicial relief.” *E.I. DuPont de Nemours & Co. v. Synvina C.V.*, 904 F.3d 996, 1004 (Fed. Cir. 2018) (quoting *ABB, Inc. v. Cooper Indus., LLC*, 635 F.3d 1345, 1348 (Fed. Cir. 2011)).

Oren argues that Grit Energy neither committed nor plans to commit acts that create a sufficient threat of litigation to warrant finding that Grit Energy has standing to appeal the Board’s final written decision. Oren highlights that “Grit [Energy] has not identified a single pending case that ‘will directly affect or be directly affected by’ the Court’s decision in this appeal.” Appellee’s Opening Br. 31 (quoting Appellant’s Br. i, vi). Oren further points out that Grit Energy transferred ownership of all products accused of infringement in the original action and has not identified any concrete plans for future activity that would create a substantial risk of future infringement or would likely cause Oren to assert a claim of infringement.

Grit Energy contends that it has standing because Oren previously sued Grit Energy for infringement of one or more claims of the ’341 patent, and Oren is free to reassert those infringement claims. We agree. Grit Energy has engaged in acts that not only could give rise to a possible infringement suit, but *did* give rise to an infringement suit. Although that lawsuit has since been dismissed, the dismissal was without prejudice and the statute of limitations has yet to run, leaving Oren free to pursue its previous claims of infringement in the future. *See, e.g., Semtek Int’l Inc. v. Lockheed Martin Corp.*, 531 U.S. 497, 505 (2001) (“The primary meaning of ‘dismissal without prejudice’ . . . is dismissal without barring the plaintiff from returning later, to the same court, with the same underlying claim.”).

Furthermore, although Grit Energy transferred ownership of the products accused of infringement in that suit, that does not absolve Grit Energy of liability for actions it took before the transfer.<sup>3</sup> Under these circumstances, Grit Energy has shown that there exists a controversy of sufficient immediacy and reality to warrant the requested judicial relief.

Oren's arguments to the contrary are unavailing. For example, Oren contends that although its claims against Grit Energy pertaining to the '341 patent were dismissed without prejudice, Oren "dismissed its remaining claims against Grit *with prejudice* earlier this year." Appellee's Br. at 31. We fail to see how Oren's dismissal of claims *unrelated* to the '341 patent bears any relation to its claims of infringement of that patent. This does not negate the fact that Oren dismissed its claims pertaining to the '341 patent without prejudice.

Oren also argues that Grit Energy cannot prove standing because only present and potential future activities can confer standing, not past activities. We disagree. Past activities, like present and potential future activities, can create a controversy between two parties. *See, e.g., Serco Servs.*, 51 F.3d at 1038 (whether "the declaratory plaintiff *has acted* . . . in a way that could constitute infringement" is relevant to whether the declaratory plaintiff has standing (emphasis added)). Indeed, disputes between parties frequently relate to actions that occurred in the past, and the mere fact that such actions have not continued to the present does not necessarily dissipate a controversy over

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<sup>3</sup> Furthermore, Oren has not stipulated that it will not reassert its previous '341 patent infringement allegations against Grit Energy in the future. Oral Arg. at 14:03–14:18 (Judge: "Is this a stipulation in open Court that [Oren] will never sue [Grit Energy] on [the '341 patent]?" Oren's Counsel: "My client hasn't made that stipulation.").

those actions. Here, for example, Oren has already charged Grit Energy for infringement based on Grit Energy's past activities, and because the lawsuit was dismissed without prejudice and the statute of limitations has not yet run, Oren can still pursue those claims of infringement. Furthermore, given that activities that "will likely"—but might not—occur in the future can be sufficient to confer standing, *see, e.g., DuPont*, 904 F.3d at 1004–05; *JTEKT Corp.*, 898 F.3d at 1220, activities that have occurred can be sufficient to confer standing in appropriate circumstances as well.

For the foregoing reasons, we conclude that Grit Energy has standing to pursue this appeal.<sup>4</sup>

## II

Having determined that Grit Energy has standing to pursue this appeal, we next turn to the merits. We review the Board's decision "to ensure that they are not 'arbitrary, capricious, an abuse of discretion, . . . otherwise not in accordance with law . . . [or] unsupported by substantial evidence.'" *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 992 (Fed. Cir. 2017) (quoting 5 U.S.C. § 706(2)(A), (E)). "Substantial evidence is something less than the weight of the evidence but more than a mere scintilla of evidence. It is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *In re NuVasive, Inc.*, 842 F.3d 1376, 1379–80 (Fed. Cir. 2016) (internal citations and quotations omitted). "[I]n order to allow effective judicial review, . . . the agency is obligated to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's

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<sup>4</sup> Grit Energy also argues that it has third-party standing to pursue this appeal. Because we conclude that Grit Energy has standing in its own right, we do not reach the third party standing issue.



GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC 17

reasoning in reaching its conclusions.” *Pers. Web Techs.*, 848 F.3d at 992 (quoting *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1322 (Fed. Cir. 2016), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017)). “For judicial review to be meaningfully achieved within these strictures, the agency tribunal must present a full and reasoned explanation of its decision.” *In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002). While obviousness is ultimately a question of law, it is based on underlying findings of fact. *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000).

## A

Grit Energy contends that the Board’s determination that Constantin does not disclose the ’341 configuration is unsupported by substantial evidence. We agree.

In particular, we conclude that the Board’s finding rests on an erroneous reading of Constantin’s claim 5. Claim 5 recites in relevant part that “the means for mechanical connection of the shutters are constituted by at least one stud (15) provided on one of the shutter blades (8) that lodges in a corresponding orifice (16) of the blade of the other shutter.” J.A. 177. Claim 5 of Constantin expressly discloses that the stud is “provided on one of the shutter blades” and the orifice is provided on “the blade of the other shutter.” Thus, claim 5 plainly teaches that the stud and orifice can be either in the ’341 configuration or the opposite of the ’341 configuration.

The Board found that a skilled artisan would understand Constantin’s claim 5 as only disclosing the opposite of the ’341 configuration. The Board’s interpretation rests on claim 5’s inclusion of “8” in parentheses after “one of the shutter blades.” More specifically, the Board interpreted claim 5’s recital of “at least one stud (15) provided on one of the shutter blades (8)” as disclosing only “stud 15 provided on shutter blade 8,” as opposed to disclosing that the stud can be located on either one of the shutter blades.

18 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

*See Final Written Decision*, at 17 (emphasis removed). In our view, substantial evidence does not support the Board's determination that claim 5's parenthetical reference to shutter blade "8" limits its disclosure in such a manner.

Although claim 5 includes, in parentheses, reference numerals to Constantin's only embodiment, and although that embodiment depicts the stud and orifice in the opposite of the '341 configuration, claim 5's reference to these numerals does not limit the disclosure of the claims. Notably, Constantin expressly describes the referenced embodiment as a "non-limiting example." J.A. 173. The claims are broader than what is depicted by the non-limiting embodiment. That Constantin's claims include references to a narrower non-limiting example serves not to limit the disclosure provided by the claims to that non-limiting example, but rather to map the embodiment to the claims. The mere fact that a non-limiting example was mapped to Constantin's claim 5 does not detract from its clear disclosure that the stud is "provided on one of the shutter blades" and the orifice is provided on "the blade of the other shutter."

The Board reasoned that, unlike other claims in Constantin, which reference both shutter blades 8 *and* 9, claim 5's singular reference to shutter blade "8" evidences that claim 5 only discloses the stud on shutter blade 8. *Id.* at 19. However, the claims that include a reference to both shutter blades 8 and 9 do so for good reason: unlike claim 5, those claims expressly recite *both* shutters. For example, Constantin's claim 4 refers to "*the shutter blades* (8, 9)." J.A. 177 (emphasis added). Conversely, claim 5 refers only to "*one of the shutter blades.*" *Id.* (emphasis added). Thus, in mapping the non-limiting example to the claims, it would have been inappropriate to reference both shutters as opposed to only the particular shutter of the non-limiting embodiment that included the stud.

GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC 19

In denying Grit Energy's request for rehearing, the Board offered entirely new reasoning to support its conclusion. The Board described Grit Energy's argument relating to whether the reference numerals were limiting as "miss[ing] the point" and stated that even if "the reference numerals within the parentheses are not limiting, [Grit Energy's] argument conflates claim 5's *interpretation* with what claim 5 *discloses*." *Decision Denying Rehearing*, at 6. The Board elaborated that just because "claim 5 might be interpreted broadly to cover a wide array of embodiments, this is not to say that claim 5 itself *discloses* that same wide array of embodiments." *Id.* To illustrate this principle, the Board explained that while a claim reciting in its entirety "[a] cycle comprising a wheel" might "be interpreted broadly to cover tricycles, the claim itself does not *disclose* a tricycle." *Id.* at 6–7.

Our problem with the Board's analysis is that Constantin's claim 5 expressly discloses the '341 configuration in reciting that the stud is "provided on one of the shutter blades" and the orifice is provided on "the blade of the other shutter." Thus, although the Board's analysis might be correct in the abstract, it does not support the Board's conclusion in this case.

Therefore, we conclude that the Board's determination that Constantin does not disclose the '341 configuration is unsupported by substantial evidence.<sup>5</sup>

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<sup>5</sup> Although Oren submitted expert testimony that a skilled artisan would not read Constantin as disclosing a pin and receptacle in the '341 configuration, "we must disregard the testimony of an expert that is plainly inconsistent with the record." See *Homeland Housewares, LLC v. Whirlpool Corp.*, 865 F.3d 1372, 1378 (Fed. Cir. 2017).

20 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

## B

Having concluded that one of the Board's findings of fact is unsupported by substantial evidence, we now turn to the appropriate disposition of the case. We conclude that we must vacate and remand for the Board to reconsider Grit Energy's obviousness arguments. Some of Grit Energy's obviousness arguments relied on Constantin as the primary prior art reference, and others relied on Eng Soon as the primary prior art reference. We discuss both in turn.

The Board's rejection of Grit Energy's arguments relying on Constantin as the primary prior art reference rested on the Board's erroneous conclusion that Constantin does not disclose the '341 configuration. Because we conclude that Constantin does disclose the '341 configuration, we vacate and remand for the Board to reconsider these arguments.

The Board provided three reasons for rejecting Grit Energy's arguments relying on Eng Soon as the primary reference: (1) these arguments relied on Constantin for disclosing the '341 configuration, *Final Written Decision*, at 22–23; (2) "Patent Owner present[ed] persuasive evidence that swapping the location of Eng Soon's pin and receptacle would result in a more expensive system," *id.*; and (3) Grit Energy's contentions were inadequate because "it is not enough to argue that a [skilled artisan] *could* modify Eng Soon in a manner that meets the claims, without adequately explaining *why* a [skilled artisan] *would* make the modifications," *Decision Denying Rehearing*, at 9–10.

As we have explained, we reject the Board's first line of reasoning as unsupported by substantial evidence. Thus, the question remaining before us is whether the Board's second and third reasons provide an independent basis for affirmance.

As an initial matter, it's not clear whether the Board rejected Grit Energy's proposed combination only in light

of all three reasons in combination, or whether the Board considered some subset of one or more of the second and third reasons to alone provide a sufficient basis to reject Grit Energy's proposed combination. Regardless, we hold that the Board's second and third reasons do not provide an independent basis to affirm.

The Board's second reason—that swapping Eng Soon's pin and receptacle to the '341 configuration would result in a more expensive system—does not detract from each of Grit Energy's arguments as to why a skilled artisan would have been motivated to make the proposed modification. Grit Energy advanced at least two arguments for why a skilled artisan would have been motivated to make the proposed swap: (1) because the proposed swap amounts to nothing more than reorganizing familiar elements according to known methods to yield predictable results; and (2) because the swap would reduce the cost of the system. Although the Board's determination that the proposed swap would have increased the cost of the system might cut against the force of Grit Energy's second argument (i.e., that the swap would have reduced the cost of the system), the Board's determination does not necessarily detract from Grit Energy's first argument. Indeed, as we have previously held,

the fact that the two disclosed apparatus [sic] would not be combined by businessmen for economic reasons is not the same as saying that it could not be done because skilled persons in the art felt that there was some technological incompatibility that prevented their combination. Only the latter is telling on the issue of nonobviousness.

*Orthopedic Equip. Co., Inc. v. United States*, 702 F.2d 1005, 1013 (Fed. Cir. 1983). Thus, even if we accept the Board's factual determination that swapping Eng Soon's components would result in a more expensive system, that determination, standing alone, is insufficient to reject each of

22 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

Grit Energy's arguments as to why a skilled artisan would have been motivated to make the proposed swap.

Moreover, we conclude that the Board failed to adequately explain its reasoning in finding that swapping Eng Soon's pin and receptacle would result in a more expensive system. The Board was persuaded by the testimony of Oren's expert regarding the relative prices of Constantin's components. However, the Board did not explain how the relative prices of *Constantin's* components relate to the relative prices of swapping *Eng Soon's* components. While such a relation may exist, and while the Board is free to articulate that relation on remand, the Board did not articulate such a relation in the decision presently on appeal.

Furthermore, we reject the Board's third reason—i.e., that Grit Energy merely contended that a skilled artisan could make the change. To the contrary, Grit Energy's contention is and was that its proposed modification amounts to nothing more than reorganizing familiar elements according to known methods to yield predictable results. *E.g., Petition*, at 53–54. Such a contention is contemplated by *KSR*. See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

#### CONCLUSION

In view of the foregoing, we vacate the Board's decision and remand the matter for further proceedings.

#### VACATED AND REMANDED

#### COSTS

The parties shall bear their own costs.

**United States Court of Appeals  
for the Federal Circuit**

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**GRIT ENERGY SOLUTIONS, LLC,**  
*Appellant*

v.

**OREN TECHNOLOGIES, LLC,**  
*Appellee*

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2019-1063

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Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2017-00768.

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NEWMAN, *Circuit Judge*, concurring in part, dissenting in part.

I concur with the court’s holding that Grit Energy has standing to pursue this appeal. The district court’s dismissal of the infringement action without prejudice as to this patent and Appellant, provides sufficient continuing interest to support the appeal of this administrative action concerning the patent’s validity.

However, I respectfully dissent from the court’s treatment of the Constantin reference—French Patent Application No. 2,640,598 A1, published June 22, 1990—with agreed upon translation (“Constantin translation”). The Patent Trial and Appeal Board (“PTAB” or “Board”)

2 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

correctly viewed the Constantin reference.<sup>1</sup> It is improper for the reviewing court to change the text of a reference to enlarge its disclosure by removing explicit limitations, and then apply the new enlarged content as prior art.

***Constantin—French Patent  
Application No. 2,640,598***

Upon *inter partes* review (“IPR”) of U.S. Patent No. 8,585,341 (“the ’341 patent”) owned by Oren Technologies, the Board ruled that claims 1–7 are valid in view of combinations of references Constantin (“Device for Shutting Off Orifices Used for Transferring a Product, in Particular From One Container to Another”), Eng Soon (“Containerized Handling of Bulk Materials and Apparatus Therefor”), and Olson (“Collapsible, Stackable, Hard-Sided Container”). However, the panel majority disagrees with the Board’s reading of Constantin. My concern is with the majority’s treatment of Constantin, where the court edits claim 5 of Constantin to remove its reference numerals to the structure in the specification.

Constantin “discloses a mobile container for storing and transporting ‘powdery or granular products’ [and] that can be removably positioned over (and supported by) a fixed container, with each container having a sliding, gate-like shutter ‘for shutting off orifices used for transferring’ that product ‘from one container to another.’” Grit Energy Br. 9 (quoting Constantin translation at 1–3). Constantin’s claim 5 states:

5. Device according to any one of the preceding claims, characterized in that the means for mechanical connection of the shutters are constituted by at least one stud (15) provided on one of the

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<sup>1</sup> *Grit Energy Sols, LLC. v. Oren Techs., LLC*, No. IPR2017-00768, 2018 WL 3004632 (P.T.A.B. June 13, 2018) (“Bd. Op.”).



shutter blades (8) that lodges in a corresponding orifice (16) of the blade of the other shutter.

Constantin translation at 6. The court removes the reference numerals from claim 5 to remove the tie to the structure in Figure 3 of Constantin. With this exercise, the court holds that Constantin is not limited to the structure as disclosed in the specification.

At the PTAB, both parties presented testimony on the disclosure in Constantin and how it would be understood by persons in the field of the invention. The PTAB then held that Constantin would be understood as limited by the description in the specification, the structure in Figure 3, and the reference numerals in claim 5. My colleagues now hold that the Board erred, and that the Constantin disclosure is not subject to the limitations in the specification and the drawing and the reference numerals, which state the placement of the stud (15) and orifice (16) in the Constantin structure. Although no other placement for the stud and orifice is shown or suggested in Constantin, the court states that Constantin “plainly teaches that the stud and orifice can be either in the ’341 configuration or the opposite of the ’341 configuration.” Maj. Op. at 17. Nowhere can such teaching be found in Constantin.

To support its broadening of Constantin, the court points to the statement in Constantin that its examples are “non-limiting.” *Id.* at 18 (citing Constantin translation at 2). Such a statement indeed has a place when the inventor has described an invention broadly and presents representative examples within the described range. However, simply stating that examples are “non-limiting” does not remove explicit limitations of specific elements, and does not enlarge the disclosure to include substantive changes that are the obverse of that which is illustrated and exemplified.

Constantin’s disclosure in claim 5 is specifically tied, by the reference numerals, to the placement shown in

4 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

Constantin Figure 3. Constantin is explicit as to the placement of the stud and orifice relative to the actuator, and states: “The shutter blade 8 is connected . . . to the rod . . . of the actuating actuator 4” and “is provided with a stud 15 which protrudes on its upper face and which is intended to be housed in the orifice of corresponding shape and section 16 provided on the shutter blade 9” of the opposite container. Constantin translation at 4.

In contrast to Constantin’s explicit placement of the stud and orifice, other aspects of Constantin indeed describe or suggest alternative structures. For example, Constantin states that “an inverse arrangement may also be provided insofar as the fixed storage container 1 is intended for the gravity filling of a mobile container.” *Id.* But, no alternative is described or suggested as to the elements for which the court rewrites the Constantin reference by removing the reference numerals from claim 5 of Constantin.

Oren Technologies states, without contradiction, that:

Nowhere in its petition did Grit contend that it would have been obvious to swap the location of Constantin’s pin and receptacle—a modification that would have *significantly increased* manufacturing costs. . . . Grit repeatedly told the Board that it did not argue that it was obvious to swap . . . Constantin’s pin and receptacle because Constantin ‘disclosed those features as-is.

Oren Br. 3 (internal quotation marks omitted).

The Board’s view of Constantin is correct. The Board correctly found that Constantin does not show the stud-and-orifice configuration described in the ’341 patent. The Board reviewed Grit Energy’s argument that Constantin’s purpose was simply to couple the two shutter blades together, and the Board correctly held that serving the same

purpose does not enlarge the description in the specification. The Board explained:

Although the third paragraph [of Constantin] states generally that one of the shutters has an actuating means, there is nothing in this description to support Petitioner's argument that Constantin's claim 5 describes or suggests a receptacle (for engaging a stud on the opposite shutter blade) attached to the actuator device, as Petitioner would have us believe.

Bd. Op. at \*7. Additionally, the Board found that:

Constantin does not disclose an actuator having a receptacle and Petitioner and Dr. Wooley's argument that Constantin teaches that one could switch the location of stud 15 and orifice 16 is not supported. . . . [And,] Constantin does not describe the location of stud 15 and orifice 16 as a 'preferred embodiment. . . . Constantin's disclosure does not disclose or suggest that stud 15 could be switched for orifice 16 on the other shutter blade.

*Id.* (internal quotation marks and citations omitted). The Board stated that "Upon reviewing Constantin's claim 5, page 3, and after weighing the declaration testimony of Dr. Wooley and Mr. Smith," it credited the testimony of Oren's expert, Mr. Smith, and disagreed with Grit Energy's argument that Constantin broadly disclosed an "*orifice attached to the actuator device* and a stud attached to the opposing shutter blade," unlimited by the placement of these components. *Id.* at \*5. The Board concluded that "Constantin does not teach, disclose, or suggest an orifice attached to its actuator." *Id.* at \*8.

My colleagues propose to overcome the Board's conclusion by removing the reference numerals from Constantin's claim 5. This is not a viable view of the reference. The prior art must be viewed as it is written and as it would be

6 GRIT ENERGY SOLUTIONS, LLC v. OREN TECHNOLOGIES, LLC

understood by persons in the field of the invention—not as it might have been written to describe a different development. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 851 F.3d 1270, 1274–75 (Fed. Cir. 2017) (This court’s precedent “does not permit the Board to fill in missing limitations simply because a skilled artisan would immediately envision them.”).

My threshold concern is the court’s treatment of the content of the Constantin reference. The proper analysis is, whether the prior art in appropriate combination, guided by law and precedent, renders obvious the ’341 patent’s subject matter. It is inappropriate to edit a reference to remove its explicit limitations, and then to apply the judicially-enlarged disclosure as prior art.<sup>2</sup> I respectfully dissent.

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<sup>2</sup> My concern at this stage is the court’s action in re-writing the Constantin reference. In view of the court’s remand for further proceedings, I take no position on patentability.