

No. _____

**In The
Supreme Court of the United States**

—◆—

OIL STATES ENERGY SERVICES, LLC,

Petitioner,

v.

GREENE'S ENERGY GROUP, LLC,

Respondent.

—◆—

**On Petition For A Writ Of Certiorari
To The United States Court Of Appeals
For The Federal Circuit**

—◆—

PETITION FOR A WRIT OF CERTIORARI

—◆—

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QUESTIONS PRESENTED

1. Whether *inter partes* review—an adversarial process used by the Patent and Trademark Office (PTO) to analyze the validity of existing patents—violates the Constitution by extinguishing private property rights through a non-Article III forum without a jury.

2. Whether the amendment process implemented by the PTO in *inter partes* review conflicts with this Court’s decision in *Cuozzo Speed Technologies, LLC v. Lee*, 136 S. Ct. 2131 (2016), and congressional direction.

3. Whether the “broadest reasonable interpretation” of patent claims—upheld in *Cuozzo* for use in *inter partes* review—requires the application of traditional claim construction principles, including disclaimer by disparagement of prior art and reading claims in light of the patent’s specification.

**PARTIES TO THE PROCEEDINGS
AND RULE 29.6 STATEMENT**

The parties to the proceedings include those listed on the cover.

Oil States Energy Services, L.L.C., formerly known as Stinger Wellhead Protection, Inc., is a wholly owned subsidiary of Oil States Energy Services Holding, Inc., which is a wholly owned subsidiary of Oil States International, Inc., a publicly traded company.

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PETITION FOR A WRIT OF CERTIORARI

Petitioner Oil States Energy Services respectfully submits this petition for a writ of certiorari to review the judgment of the U.S. Court of Appeals for the Federal Circuit.



OPINIONS AND ORDERS BELOW

The order denying panel rehearing and rehearing *en banc* (App., *infra* 37-38) is unreported. The panel order disposing of the case without opinion (App., *infra* 1-2) is unreported and available at 639 F. App'x 639 (Fed. Cir. May 4, 2016). The opinion and order of the Patent Trial and Appeal Board (App., *infra* 3-36) is unreported and available at 2015 WL 2089371 (PTAB May 1, 2015).



STATEMENT OF JURISDICTION

The court of appeals entered its order denying rehearing on July 26, 2016. An application to extend the time to file a petition for a writ of certiorari was granted on October 14, 2016, making the petition due on or before November 23, 2016. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).



CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

The Seventh Amendment of the United States Constitution provides:

In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.

35 U.S.C. §§ 311-316 are attached in the Appendix (App., *infra* 39-48).



STATEMENT

Patents create property rights, protected by the Constitution. Once a patent is granted, it “is not subject to be revoked or canceled by the president, or any other officer of the Government” because “[i]t has become the property of the patentee, and as such is entitled to the same legal protection as other property.” *McCormick Harvesting Mach. Co. v. C. Aultman & Co.*, 169 U.S. 606, 608-09 (1898).

In 2011, Congress passed the America Invents Act to combat what it perceived as inefficiencies in patent litigation. The Act allows the PTO’s Patent Trial and Appeal Board (the Board) to review existing patents and extinguish those rights in an adversarial process. See 35 U.S.C. §§ 311(a) & 318(a); *Google Inc. v. Jongerius*

Panoramic Techs., LLC, No. IPR 2013-00191, Paper No. 50, at 4 (PTAB, Feb. 13, 2014). This is known as *inter partes* review. 37 C.F.R. § 42.100(a); H.R. REP. NO. 112-98, pt. 1, at 46-47 (2011). *Inter partes* review commences when a party—often an alleged patent infringer—asks the Board to reconsider the PTO’s issuance of an existing patent and invalidate it on the ground that it was anticipated by prior art or obvious. 35 U.S.C. § 311(b).

Historically, though, suits to invalidate patents would have been tried before a jury in a court of law. The Constitution thus provides patent owners with a right to a jury and an Article III forum. *Inter partes* review violates these rights.

Without ruling on the constitutionality of *inter partes* review, this Court recently affirmed that such review may consider patent claims under their “broadest reasonable construction.” *Cuozzo*, 136 S. Ct. at 2136. The PTO’s treatment of potential amendments to patents in *inter partes* review directly conflicts with that standard. As the patent office itself has noted, the broadest reasonable interpretation standard only makes sense when a patent holder (or potential patent holder) has the ability to engage in the back-and-forth process for amending the patent. See MANUAL OF PATENT EXAMINING PROCEDURE (M.P.E.P.) § 2258(G) (9th ed., 2015). Yet in *inter partes* review, there is no practical ability to amend and no ability to rebut arguments offered *sua sponte* by the Board. Even if patent owners have no right to an Article III forum, they must receive a fair opportunity to be heard. See 5 U.S.C. §§ 554 & 556.

The *Cuozzo* standard also requires clarification. Currently, it is unclear if traditional principles of claim construction—disparagement of prior art and reading claims in light of the specification—apply under a patent’s broadest reasonable interpretation. And the Federal Circuit has acknowledged the conundrum of using a standard in *inter partes* review that was developed for use in the very different context of a patent application. See *PPC Broadband, Inc. v. Corning Optical Commc’n RF, LLC*, 815 F.3d 747, 752 (Fed. Cir. 2016). After *Cuozzo*, proper application of claim construction standards—vital in the context of extremely valuable patents—requires guidance from this Court, and this question presents an issue of importance warranting this Court’s attention.

1. During hydraulic fracturing (“fracking”) procedures, fluid is pumped into oil and gas wells to stimulate or increase production. See App. 5. The fluid, which can be abrasive and corrosive, is often pumped into the well at pressures up to 15,000 pounds per square inch. JA67, 1:18-23, 791. The wellheads that sit on top of oil and gas wells are not designed to withstand continuous exposure to fracking fluids, and if left unprotected the wellheads can be severely damaged. *Ibid.* Murray Dallas, an employee of Stinger Wellhead Protection, Inc. (now a subsidiary of Oil States), twice attempted to solve this problem. See *id.* at 57-73, 247-78.

2. The first attempted solution was disclosed in Canadian Patent Application No. 2,195,118 (the ’118

Application).¹ This solution relied on using hydraulic pressure first to push a “mandrel” (essentially, a protective tube) into the wellhead and then to push the mandrel down onto the casing, forming a seal between the bottom end of the mandrel and the top end of the casing—pipe that is already cemented in place to form the well. JA287, 3:8-24. Fracking fluid could then be pumped through the mandrel and into the casing without contacting the wellhead equipment.

Unfortunately, using hydraulic pressure failed to form a sufficient seal with the casing. *Id.* at 897. Dallas explained: “[I]t was a failure. It wouldn’t seal, wouldn’t create a seal for us.” *Id.* at 991. Dallas determined that the ’118 design was “useless” and “just scrapped the whole idea.” *Id.* at 961.

3. Dallas’s second solution came in Patent No. 6,179,053 (the ’053 Patent), the patent at issue here. The new design “utilize[d] * * * mechanical lockdowns.” JA992. Instead of pushing down on the mandrel with constant hydraulic pressure, the new design used a mechanical lockdown to “lock” the mandrel in place after it had been inserted. *Id.* at 57, Abstract; *id.* at 70, 7:6-32.

The ’053 Patent criticized the earlier design’s reliance on hydraulic pressure: “[A] hydraulic lockdown mechanism is considered less secure than a mechanical lockdown mechanism” because it “is dependent on

¹ The same disclosure is found in U.S. Patent No. 5,819,851.

maintenance of the hydraulic fluid pressure in the setting tool.” *Id.* at 68, 3:2-9. “Since fluid pressure may be lost for a variety of reasons, persons in the industry are generally less inclined to endorse or accept a hydraulic lockdown mechanism.” *Ibid.* The ’053 Patent explained the “need for a lockdown mechanism for securing a mandrel * * * in an operative position * * * which provides a broader range of adjustment while ensuring a secure mechanical lockdown for maximum security.” *Id.* at 68, 3:42-46.

The redesign brought another significant advantage as well. Because the design did not rely on the same hydraulic pressure both to insert the mandrel and to hold it in place, the device used to insert the mandrel (the “setting tool”) could be removed after the mandrel was locked in its operating position. *Id.* at 70, 7:6-32. The shorter height was both more convenient for well operators and safer for workers. See *id.* at 67-68, 2:62-3:2; *id.* at 626 ¶ 10.

The ’053 Patent criticized the height required by the non-removable setting tool of the previous design. Because “the setting tool is not removable from the mandrel during a well treatment,” the device disclosed in the ’118 Application “has a high profile.” *Id.* at 67-68, 2:63-3:2. “A well tool with a high profile is not convenient because access to equipment mounted thereto, such as a high pressure valve, is impeded by the height of the valve above ground.” *Ibid.*

4. In 2012, Oil States filed an infringement suit against Greene’s Energy Group in the Eastern District

of Texas. During the course of the litigation, the district court, applying the “ordinary meaning” standard and traditional principles of claim construction, construed the ’053 Patent to be distinct from the ’118 Application. See JA509 (construing the term “second lockdown mechanism” to “lock the mandrel in the operative position without hydraulic pressure”). Following the *Markman* order, and almost one year into the litigation as the case was nearing the close of discovery, Greene’s petitioned for *inter partes* review. *Id.* at 306.

5. The Board granted review and construed the claims of the ’053 Patent under the “broadest reasonable interpretation” standard, holding that the ’053 Patent was anticipated by the ’118 Application. That decision was predicated on the construction of two claim terms. First, the Board held that the “second lockdown mechanism” was broad enough to cover a device that (a) relies only on hydraulic pressure to lock the mandrel in position; and (b) was integrally incorporated with the setting tool. App. 12-18. Second, the Board held, contrary to positions taken by both sides’ technical experts, that “locking” did not require maintaining the mandrel in position while operating the tool. *Id.* at 18-19. The Board concluded that the ’053 Patent’s claims were fairly encompassed by the earlier ’118 Application. *Id.* at 29.

6. Oil States moved to amend the ’053 Patent to explicitly align the claims with the specification’s consistent description of a lockdown mechanism that was both mechanical and separate from the setting tool. JA764-81.

When *inter partes* reviews were first instituted, the PTO limited motions to amend to 15 pages—with double-spacing and 14-point font. 37 C.F.R. §§ 42.24(a)(1)(v) & 42.6(a)(2). The motion was required to contain a verbatim recitation of each proposed amended claim, constructions of new claim terms (to the extent necessary to show distinction over the prior art), written description support for all claims in the patent (not just new ones), and substantive arguments establishing that the proposed amended claims were patentable over the known universe of prior art, including proving, as necessary, nonobviousness through potentially complex secondary considerations. See 37 C.F.R. § 42.121(b)(1). Because of the amendment rules in place at the time, Oil States provided a chart to the Board that identified where each claim element was disclosed.²

The Board denied the motion to amend because, according to the Board, Oil States had not “demonstrated” or sufficiently “explained” where and how each and every new claim element was disclosed in the original patent specification. App. 32-34. There was no suggestion by Greene’s that such “demonstration” or “explanation” was either required or lacking—the requirement was developed solely by the PTO. In reaching its conclusion, the Board refused to consider the evidence in the chart offered by Oil States.

² The PTO has since amended the rules to extend the page limit from 15 to 25 pages. Amendments to the Rules of Practice for Trials Before the Patent Trial and Appeal Board, 80 Fed. Reg. 28,561, 28,562 (May 19, 2015).

The Board also concluded that Oil States failed to provide “express” construction of two claim terms—one of which was defined in the claim itself and discussed at length by Oil States’ technical expert, and the other of which involved simply adding the word “assembly” to the claim’s preamble, a cosmetic change that had no bearing on the patentability of the claims. *Id.* at 35.

7. Oil States appealed the Board’s determination to the Federal Circuit, arguing that the Board erred in construing the claims at issue. First, Oil States argued that the Board ignored the patent’s discussion of the shortcomings of the prior art tool and its explanation—clear in the specification of the patent—that the ’053 Patent did not suffer from these drawbacks. Brief of Patent Owner-Appellant at 18-33, *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, (No. 2015-1855), 639 F. App’x 639 (Fed. Cir. 2016) (mem.). A patent’s “disparagement of the prior art” ordinarily plays an important role in claim construction when the Federal Circuit is reviewing a determination on patent claims. Second, Oil States argued that the Board erred in rejecting the evidence that the ’118 Application failed to enable the ’053 Patent. *Id.* at 35-43.

Oil States also argued that *inter partes* review was contrary to Article III and the Seventh Amendment of the Constitution, *id.* at 52-56, but the Federal Circuit’s decision in *MCM Portfolio LLC v. Hewlett-Packard Co.*, 812 F.3d 1284 (Fed. Cir. 2015), was handed down before the close of briefing and foreclosed that argument. Oil

States also noted—pre-*Cuozzo*—that the virtual unavailability of amendments in the *inter partes* review process counseled against use of the “broadest reasonable interpretation” standard. Brief of Patent Owner-Appellant at 18 n.2.³

Following oral argument, a panel of the Federal Circuit affirmed without opinion under that court’s Rule 36. App. 1-2. The court of appeals then denied panel rehearing and rehearing *en banc*. *Id.* at 37-38.



REASONS FOR GRANTING THE PETITION

Inter partes review violates the Constitution. Suits to invalidate patents must be tried before a jury in an Article III forum, not in an agency proceeding.

But even if *inter partes* review were constitutional, its application by the Board violates both this Court’s and Congress’s directives concerning the rights of patent holders to protect their property rights through the amendment process. The Board has recognized that the amendment process is critical to the application of a broadest reasonable interpretation standard, yet patent-holder amendments in *inter partes* review are effectively unavailable. The Board’s implementation of *inter partes* review in this way is contrary to congressional intent and cannot be reconciled with the broadest reasonable interpretation standard, either.

³ The government intervened on appeal to defend the constitutionality of *inter partes* review and its application in this case.

Finally, the Board's application of the broadest reasonable interpretation standard has created intolerable confusion in the Federal Circuit. Different panels have reached different conclusions about how this standard interacts with traditional principles of claim construction. As a result, a patent holder's rights depend on the panel drawn rather than the patent drafted.

The Court should grant the petition and either declare *inter partes* review unconstitutional or else resolve the confusion in its administration.

I. *Inter Partes* Review Conflicts With This Court's Cases Upholding The Constitutional Guarantees Of A Jury And An Article III Court For Patent Invalidation.

This Court has long held that patent "infringement cases today *must* be tried to a jury, as their predecessors were more than two centuries ago." *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 377 (1996) (emphasis added). At a minimum, the Constitution requires that an Article III judge adjudicate all cases in law and in equity arising under federal law. U.S. CONST. art. III. Contrary to this Court's precedent, the Board's *inter partes* review proceeding provides neither the jury nor the Article III forum guaranteed by the Constitution.

A. This Court’s Precedent Confirms That The Seventh Amendment Provides Patent Owners With A Right To A Jury In Invalidation Proceedings.

The Seventh Amendment ensures a jury trial “[i]n Suits at common law.” U.S. CONST., amend. VII. The “thrust of the Amendment was to preserve the right to jury trial as it existed in 1791.” *Curtis v. Loether*, 415 U.S. 189, 193 (1974). Beyond that, this Court has held that the Seventh Amendment “also applies to actions brought to enforce statutory rights that are analogous to common-law causes of action ordinarily decided in English law courts in the late 18th century, as opposed to those customarily heard by courts of equity or admiralty.” *Granfinanciera, S.A. v. Nordberg*, 492 U.S. 33, 42 (1989).

In 1791, “[a]n action for patent infringement is one that would have been heard in the law courts of old England.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 992-93 (Fed. Cir. 1995). And it had been that way for 200 years before that, too. See *Darcy v. Allein* (1601) 77 Eng. Rep. 1260 (KB); see also Oren Bracha, *Owning Ideas: A History of Anglo-American Intellectual Property* 33 (June 2005) (unpublished Ph.D. thesis, Harvard Law School), <https://law.utexas.edu/faculty/obracha/dissertation/pdf/chapter1.pdf> (noting that, in *Darcy*, “none of the parties disputed that the common law court had jurisdiction to decide the validity of the patent”). The only other way for a patent to be revoked at that time would have been a writ *scire facias*—essentially a show-cause order as to why the patent

should not be revoked—that could be filed in the Chancery courts. And even in those instances, any disputed facts were tried to a jury in the common law courts. See, e.g., *Ex Parte Wood & Brundage*, 22 U.S. 603, 614-15 (1824) (“[I]t is ORDERED * * * that the said Judge do award a process, in the nature of a *scire facias*, to the patentees, to show cause why the said patent should not be repealed * * * and that if the issue be an issue of fact, the trial thereof be by a jury.”).⁴

As this Court has held in the copyright context—indistinguishable from patents in this regard—“the common law and statutes in England and this country granted copyright owners causes of action for infringement [and those suits were] tried in courts of law, and thus before juries.” *Feltner v. Columbia Pictures Television, Inc.*, 523 U.S. 340, 348-49 (1998). It is thus clear that patent infringement cases—including invalidity defenses where damages are sought—are the province of the jury. See *Markman*, 517 U.S. at 377; *Tegal Corp. v. Tokyo Electron Am., Inc.*, 257 F.3d 1331, 1340 (Fed. Cir. 2001).

Disregarding this long line of precedent, *inter partes* review takes a patent infringement claim out of the jury’s hands and entrusts it to bureaucrats. In support of this regime, the PTO has argued that “patents

⁴ While the dividing line between law and equity can be difficult to draw and has spawned debate over whether a jury should be required in every case, see Mark A. Lemley, *Why Do Juries Decide If Patents Are Valid?*, 99 VA. L. REV. 1673, 1674-77, 1710-19 (2013), the issue here is that the option must be open to patent holders and not foreclosed by *inter partes* review proceedings.

are a quintessential public right closely intertwined with a federal regulatory program,” thus giving the agency power to revoke patents. Brief for Intervenor—Director of the United States Patent and Trademark Office at 2, *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, (No. 2015-1855), 639 F. App’x 639 (Fed. Cir. 2016) (mem.). Ignoring the proper historical analysis mandated by this Court’s cases, the Federal Circuit has agreed, holding that patent rights are mere “public rights” of the sort outside Seventh Amendment protection. *MCM Portfolio*, 812 F.3d at 1293.

Yet patents are certainly more than that. As even the PTO has recognized, patents are a property right, complete with the most important characteristic of private ownership—the right of exclusion. See *General information concerning patents*, USPTO (Oct. 2015), <https://www.uspto.gov/patents-getting-started/general-information-concerning-patents> (“A patent for an invention is the grant of a property right to the inventor[—]the right to exclude others * * *”). Even more important is that the private right exists wholly apart from the government once granted. See *United States v. Am. Bell Tel. Co.*, 128 U.S. 315, 370 (1888) (“[The subject of the patent] has been taken from the people, from the public, and made the private property of the patentee * * *”). That is why “[o]nce a patent is issued, the patentee must enforce the patent without aid of the USPTO.” *General information concerning patents*, USPTO, *supra*. If the patent were as tied to a public regulatory scheme as the PTO contends, the agency would also be responsible for violations of the patent. But that has never been the case.

Congress’s attempt to “streamline” patent litigation by permitting the Board to resolve invalidity defenses thus impermissibly supplants the jury trial and creates a conflict with this Court’s jurisprudence. Indeed, turning over patent invalidation to agency judges renders *Markman* a dead letter. This Court’s teaching that patent “infringement cases today *must* be tried to a jury” is now easily bypassed by an alleged infringer using *inter partes* review to nullify it. See *Markman*, 517 U.S. at 377. This Court should not permit that workaround of the constitutional jury-trial guarantee.

Doubtless Congress and the PTO believe that *inter partes* review is more efficient. But the Seventh Amendment enshrines the right to jury in the Constitution precisely because of the possibility that a future legislature would find juries to be inefficient or inconvenient. *Inter partes* review is inconsistent with this guarantee. This Court’s review is needed to resolve the conflict on this exceptionally important issue and enforce the Constitution’s jury-trial right.⁵

⁵ The recent denials of certiorari in *Cooper v. Lee*, No. 15-955, its later iteration in *Cooper v. Square, Inc.*, No. 16-76, and *MCM Portfolio LLC v. Hewlett-Packard Co.*, No. 15-1330, do not militate against review here. First, *Cooper v. Lee* arose in an odd procedural posture—the patent holder sued the Board after it instituted *inter partes* review and the district court dismissed the suit based on failure to exhaust administrative remedies—so it was unclear that the Court could even reach the Article III question. And like its predecessor, *Cooper*’s second petition for certiorari abandoned the Seventh Amendment challenge. Second, in *MCM Portfolio*, this Court’s review might have made no difference to the

B. This Court’s Precedent Confirms That Patent Owners Have A Right To An Article III Forum For Invalidation Proceedings.

Even if the Board’s determination of invalidity in this case did not violate the Seventh Amendment, it nonetheless violated Article III and this Court’s precedent. This Court has “long recognized that, in general, Congress may not ‘withdraw from judicial cognizance any matter which, from its nature, is the subject of a suit at the common law, or in equity, or admiralty.’” *Stern v. Marshall*, 564 U.S. 462, 484 (2011) (quoting *Murray’s Lessee v. Hoboken Land & Improvement Co.*, 59 U.S. 272, 284 (1855)). *Inter partes* review hopelessly conflicts with that mandate.

If a suit is within federal jurisdiction, then the test for Article III is whether the case “is made of ‘the stuff of the traditional actions at common law tried by the courts at Westminster in 1789.’” *Ibid.* (quoting *N. Pipeline Constr. Co. v. Marathon Pipe Line Co.*, 458 U.S. 50, 90 (1982) (Rehnquist, J., concurring in judgment)).

Patent infringement cases are. See, e.g., *Boulton & Watt v. Bull* (1795) 126 Eng. Rep. 651, 656, 660 (CP). Subject to the caveat of disputed facts being tried to a jury, these suits were raised in England during the Eighteenth Century either in actions at law or suits in

ultimate outcome of the case, given that the validity of the patent in issue was more dubious. The instant case presents neither problem—and the lack of a published opinion is no barrier to review given that the Federal Circuit has already issued a published opinion in *MCM Portfolio* thoroughly discussing the issue.

equity. 2 JOSEPH STORY, COMMENTARIES ON EQUITY JURISPRUDENCE 236-39, §§ 930-34 (Melville M. Bigelow ed., Little, Brown, & Co., 13th ed. 1886). Either way, as *Stern* teaches, they fit comfortably within the Article III tradition.

Given this backdrop, it is unsurprising that this Court has long held that once a patent is granted, it “is not subject to be revoked or canceled by the president, or any other officer of the Government” because “[i]t has become the property of the patentee, and as such is entitled to the same legal protection as other property.” *McCormick*, 169 U.S. at 608-09. That is why this Court has held in the context of land patents that “we do not believe that * * * the man who has obtained a patent from the government can be called to answer in regard to that patent before the officers of the land department of the government.” *Iron Silver Mining Co. v. Campbell*, 135 U.S. 286, 301-02 (1890). “The only authority competent to set a patent aside, or to annul it, or to correct it for any reason whatever, is vested in the courts of the United States, and not in the department which issued the patent.” *McCormick*, 169 U.S. at 609.⁶

⁶ In *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 604 (Fed. Cir. 1985), the Federal Circuit held that *McCormick* did not foreclose the Commissioner from canceling a patent under a change made to the patent statute in 1980 that purported to allow such action. Act of Dec. 12, 1980, Pub. L. No. 96-517, 94 Stat. 3015 (1980) (codified at 35 U.S.C. §§ 301-307 (1981)). But *Patlex* pre-dates and was effectively overruled by *Stern*. Moreover, *inter partes* review is qualitatively different than a reexamination proceeding. An *inter partes* review is adjudicatory in nature and instigated by an

To be sure, “there [i]s a category of cases involving ‘public rights’ that Congress could constitutionally assign to ‘legislative’ courts for resolution.” *Stern*, 564 U.S. at 485. But patents do not fall into that category. A patent has been recognized for centuries as a private property right, so patent infringement cases do not rely on congressional grace for an Article III court. Cf. *Granfinanciera*, 492 U.S. at 54-55 (rejecting the argument that a fraudulent conveyance suit came within the “public rights” exception because it took place in a bankruptcy proceeding and holding that “[i]f a statutory right is not closely intertwined with a federal regulatory program Congress has power to enact, *and* if that right neither belongs to nor exists against the Federal Government, then it must be adjudicated by an Article III court” (emphasis added)); see also *Stern*, 564 U.S. at 2615.

The power sought to be exercised by the board in *inter partes* review is a “prototypical exercise of judicial power.” *Stern*, 564 U.S. at 494. That is because a final, binding judgment is being entered on a *cause of action*—patent invalidation—that stems from the common law and does not depend on any agency regulatory regime as it predates the agency by centuries. *Ibid.* “[S]uch an exercise of judicial power may [not] be taken from the Article III Judiciary simply by deeming it part of some amorphous ‘public right.’” *Id.* at 495. And to do so with patent invalidation conflicts with this Court’s mandate that “Congress may not ‘withdraw

adverse party seeking to invoke an affirmative defense against a patent infringement claim.

from judicial cognizance any matter which, from its nature, is the subject of a suit at the common law, or in equity.’” *Id.* at 484 (quoting *Murray’s Lessee*, 59 U.S. at 284).

In sum, patent infringement cases—complete with invalidity defenses—were “traditional actions at common law” and therefore “the responsibility for deciding that [type of] suit rests,” if not with juries then at a minimum, “with Article III judges in Article III courts.” *Ibid.* (quoting *N. Pipeline*, 458 U.S. at 90 (Rehnquist, J., concurring in judgment)); see also *Am. Bell*, 128 U.S. at 365 (“Patents are sometimes issued unadvisedly or by mistake * * * * In such cases courts of law will pronounce them void * * * * That is a judicial act, and requires the judgment of a court.”). Even if good reasons exist to allow the agency to revoke patents through *inter partes* review, this Court’s “deference in matters of policy cannot * * * become abdication in matters of law.” *NFIB v. Sebelius*, 132 S. Ct. 2566, 2579 (2012). The Constitution prohibits *inter partes* review, and this Court’s review is needed to resolve the conflict and ensure the Article III forum for such disputes that the Constitution requires.

II. The PTO’s Standards For Amending Patents Conflict With The Broadest Reasonable Interpretation Standard Upheld In *Cuozzo* And The Statutory Scheme.

Part of the balance struck by Congress in enacting *inter partes* review was providing patent owners with

the right to amend their patents to avoid invalidation. 35 U.S.C. § 316(d). In fact, this Court’s approval of the broadest reasonable interpretation standard in *Cuozzo* relied heavily on the assumption that *inter partes* review was meant to serve as a form of reexamination—a process that enables a patent holder to amend disputed claims. *Cuozzo*, 136 S. Ct. at 2144-45. But *inter partes* review has become unmoored from the larger scheme of patent enforcement. The Board has adopted regulations and interpretations that impose requirements beyond what Congress established for amendments. This violates both the APA’s prohibition on arbitrary and capricious agency action, as well as congressional guidance for *inter partes* review set forth in the United States Code. As a result, this Court’s review is needed to bring the PTO’s treatment of potential amendments into line with those statutes.⁷

In *inter partes* review, the patent holder may offer a “reasonable number of substitute claims,” 35 U.S.C. § 316(d), provided that they do not “enlarge the scope of the claims of the patent or introduce new matter.” § 316(d)(3). The patent holder is given one opportunity to amend any and all claims. § 316(d)(1) (“During an *inter partes* review * * * the patent owner may file 1

⁷ The Federal Circuit recently agreed to address some of the issues with the amendment process *en banc*. Supplemental Brief for Appellant Aqua Products, Inc. on Rehearing En Banc, *In re Aqua Prods., Inc.*, No. 2015-1177 (Fed. Cir. Sept. 26, 2016), ECF No. 65, 2016 WL 5817674. Given the lack of meaningful opportunity to amend the patent in this case, the Court may want to hold this petition for the Federal Circuit’s resolution of *Aqua*. *Aqua* does not, however, address the conflict with *Cuozzo*.

motion to amend the patent * * * *”). In practice, however, the opportunity to amend is all but nonexistent.

First, the Board has arbitrarily assumed that it may go outside of the regulations and demand more from a patent holder seeking to amend a claim than is required by law. While the regulations demand that the motion to amend simply “set forth” written support for the amendment from the original specification, 37 C.F.R. § 42.121(b), the Board now insists that the patent owner go further and “explain” how the identified portions each support every element of the proposed claims. In this case, for example, the Board determined that the written support Oil States set forth in its detailed chart was inadequate because it did not, according to the Board, sufficiently “explain” how each identified portion supported every element of the proposed claims. Adding requirements outside of the regulation at the time of the *inter partes* trial, however, violates the APA. 5 U.S.C. § 706(2)(A) & (D) (“The reviewing court shall hold unlawful and set aside agency action [that is] arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; [or] without observance of procedure required by law * * * *”).

Second, the Board has assumed that it may *sua sponte* reject amended claims based on issues and arguments never suggested before the final hearing, either by the Board or the opposing party. Even worse, the Board can develop arguments against amendments *after* the hearing without providing the patent holder advance notice of the Board’s objections or the basis for them, let alone an opportunity to respond.

37 C.F.R. § 42.121(a)(1). This is an affront to due process and the Administrative Procedure Act. 5 U.S.C. § 706(2)(A) & (D).

Here, the Board *sua sponte* refused the proposed amendments because—at least in the Board’s estimation—they were not adequately explained and included undefined terms. Putting aside the fact that the regulation does not require such explanation, see 37 C.F.R. § 42.121(b), the motion to amend did set forth the (unopposed) support, as required by the PTO’s regulations, and the terms at issue would have been easily defined by—or well known to—one ordinarily skilled in the art. Yet there was no chance to explain that to the Board because of its *sua sponte* action. The combination of the single-chance rule with the Board’s approach of developing its own anti-amendment arguments and interpretations—without giving the patent holder a chance to respond—doomed the proposed amendments and violated the APA. See 5 U.S.C. § 556(d) (providing a party in an agency adjudication the opportunity “to submit rebuttal evidence * * * as may be required for a full and true disclosure of the facts”).

Third, and underlying its other errors, the Board distorts congressional direction to incorrectly require the patent holder to prove the suitability of an amendment. See 37 C.F.R. § 42.121(a)(2)(i) (requiring that motions to amend “respond to a ground of unpatentability involved in the trial”). While this should force a patent holder to show that the proposed amendment responds to a ground raised at the trial, the burden of

proof concerning patentability should still lie with the petitioner. 35 U.S.C. § 316(e) (“In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.”). Instead, the agency places the burden on the patent holder—and absolves the petitioner of any burden by virtue of the Board’s own *sua sponte* arguments—thus turning the statute on its head and making it virtually impossible to amend.

On top of these substantive issues sits draconian process limitations imposed by the Board on any patent holder wishing to amend. When *inter partes* reviews were first instituted, the PTO enacted a 15-page limitation—with double-spacing and 14-point font—on motions to amend. 37 C.F.R. §§ 42.24(a)(1)(v) & 42.6(a)(2). The predictable result is that amendments have been virtually unavailable to patent holders. Indeed, the Board had granted only four motions to amend (one of which was unopposed) in nearly three years when this case came before it. Brad M. Scheller, *PTAB Grants Fourth Motion to Amend in an IPR Proceeding*, THE NATIONAL LAW REVIEW (June 17, 2015), <http://www.natlawreview.com/article/ptab-grants-fourth-motion-to-amend-ipr-proceeding>.⁸

⁸ The PTO later recognized the process problem and has since amended the rules to extend the page limit from 15 to 25 pages. Amendments to the Rules of Practice for Trials Before the Patent Trial and Appeal Board, 80 Fed. Reg. at 28,562. This, of course, does not ameliorate the statutory and other substantive

But as the PTO itself recognizes, using the broadest reasonable interpretation standard is only appropriate when there is an opportunity to amend. See M.P.E.P. § 2258(G) (“In a reexamination proceeding involving claims of an expired patent, claim construction pursuant to the principle[s] set forth by the court in *Phillips* * * * should be applied since the expired claim[s] are not subject to amendment.”); 1 Patent Office Litigation § 4:70 (justifying the shift from the broadest reasonable interpretation to the standard used by district courts because “claims may not be amended in an expired patent and the sole basis for the ‘broadest reasonable interpretation’ rubric is the ability to amend claims”). A panel of the Federal Circuit has recognized this as well. *In re CSB-System Int’l, Inc.*, 832 F.3d 1335, 1342 (Fed. Cir. 2016) (“The policy underlying our embrace of [broadest reasonable interpretation] in limited circumstances does not extend to cases where a patent expires during a reexamination because the patent owner’s ability to amend is substantially diminished when this occurs regardless of the stage of the reexamination.”).

Conversely, without a meaningful opportunity to amend, presumably even the agency would agree that broadest reasonable interpretation would be incorrect. The agency has made the same concession to this Court previously. See Oral Argument at 29:30, *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131 (2016) (No. 15446) (“[The PTO] has expressly used [broadest

shortcomings of the amendment process in a “broadest reasonable interpretation” regime.

reasonable interpretation] when it is possible for claim amendments to be made because it promotes the improvement of patent quality that Congress was interested in promoting in the America Invents Act by eliminating overly broad claims.”).

Yet the agency, after choosing to use the broadest reasonable interpretation standard in *inter partes* review, turned around and virtually precluded patent holders from amending their claims. Ironically, the agency has justified the restricted amendment capabilities of patent holders precisely because *inter partes* review “proceedings are not examinational in nature; they are adjudicatory proceedings.” Letter from Scott C. Weidenfeller, Associate Solicitor, United States Patent and Trademark Office, to Admiral Daniel E. O’Toole, Clerk of the Court, United States Court of Appeals for the Federal Circuit at 7 (Apr. 27, 2015) (ECF No. 50), *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292 (Fed. Cir. 2015) (No. 2014-1542). The PTO cannot have it both ways—and to behave otherwise is the epitome of caprice. The amendment regime established by the agency undermines Congress’s directives for both *inter partes* review and agency action.

If the Board, as here, allows itself the freedom to *sua sponte* find fault with the language of any potential amendment—based on arguments against the claim language that were not raised by the other side—and to ignore the plain text of the language in the patent and the meaning that a person of ordinary skill in the art would have used in defining those terms, there is nothing a patent holder can do. And the Board’s ability

to side-step amendments with an unsupported nod to a process failure only exacerbates the situation, underscoring the folly of allowing the “experts” to interpret these claims without consulting the patent holder. In all events, the Board’s practical foreclosure of patent amendments in *inter partes* review is at odds with the current interpretive standard and the APA’s prohibition on arbitrary and capricious agency action.

Having persuaded this Court that the broadest reasonable interpretation standard is appropriate in *inter partes* review, the agency must accept the consequences of that choice—a meaningful opportunity for patent holders to amend their claims. That will only come from enforcing the statutory burden on *inter partes* petitioners and limiting the Board’s authority to decide just those claims and arguments raised by the parties, not ones injected *sua sponte* to which the patent holder cannot respond. The PTO’s regulations and practice are in conflict with both the statute and the APA, as well as this Court’s acceptance of the broadest reasonable interpretation standard. Review is thus warranted to resolve the conflict.

III. The Federal Circuit Is Conflicted In Its Application Of Traditional Principles Of Claim Construction.

Traditional principles of claim construction require reading a patent as a whole, and interpreting the text of individual claims in light of the entire document—including disparagement of prior art and

reading claims in light of the specification. See, e.g., *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001) (“Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.”).

This case, however, demonstrates the uncomfortable fit between giving a claim term its “broadest” reading, and yet still accounting for other portions of the patent that can inform the meaning of that same term. See *PPC Broadband*, 815 F.3d at 752 (“While such an approach may result in the broadest definition, it does not necessarily result in the broadest reasonable definition in light of the specification.”). The Federal Circuit has been unable consistently to account for both. In light of *Cuozzo*, the interaction of these traditional principles of interpretation with the broadest reasonable interpretation standard warrants review by this Court to resolve the Federal Circuit’s evident confusion.

Because the proper interpretation of claims is the heart of patent law, the Federal Circuit has developed an extensive body of law governing claim construction. These principles include rules for construing claims when a patentee acts as his own lexicographer and, as relevant here, when a patentee disavows the full scope of claim terms. *Thorner v. Sony Comput. Entm’t Am.*

LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012); see also *Chicago Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 677 F.3d 1361, 1372 (Fed. Cir. 2012) (finding disclaimer where the patent was for the “express purpose of remedying these perceived deficiencies” in the prior art); *SafeTCare Mfg., Inc. v. Tele-Made, Inc.*, 497 F.3d 1262, 1270 (Fed. Cir. 2007) (finding disclaimer where the patent “makes clear that [an] attribute of the invention is important in distinguishing the invention over the prior art”).

These rules play a critical role in claim construction. Whether these rules continue to apply as the Board gives claims their “broadest reasonable interpretation” is critically important for the rights of patent holders.

The patent at issue in this case expressly disparaged the prior art, and its abstract identified precise deficiencies in the prior art that the new invention solved. In district court litigation, such steps control the construction of specific patent claims. See, e.g., *Openwave Sys., Inc. v. Apple Inc.*, 808 F.3d 509, 517 (Fed. Cir. 2015) (finding disclaimer where the specification “repeatedly disparage[d] [earlier devices] for their failure to meet the demands of the market”). Indeed, in this case, the district court followed the patent’s disparagement teachings in construing the claims in its *Markman* order.

Likewise, the Federal Circuit has confirmed that such principles apply to decisions by the Board, too.

See *In re Man Mach. Interface Techs. LLC*, 822 F.3d 1282, 1286 (Fed. Cir. 2016) (“The broadest reasonable interpretation of a claim term cannot be so broad as to include a configuration expressly disclaimed in the specification.”). Even *inter partes* review decisions are to account for the specification of the patent and only give a claim term its broadest *reasonable* interpretation. *PPC Broadband*, 815 F.3d at 752.

Yet in *PPC Broadband*, where the Federal Circuit stressed that “reasonable” in the standard would have to account for context, the court recognized that it was “a close and difficult case because of the standard that the Board uses to construe claims.” *Id.* at 756. The panel went on to note that application of the *Phillips* standard from district court litigation would have—as it did in the district court here—yielded a “straight-forward” result. “But this case is much closer under the broadest reasonable interpretation standard given the ordinary meanings attributable to the term at issue.” *Ibid.* Unfortunately, given the murkiness of the law here, many Federal Circuit panels will be willing to punt on a “close and difficult case.” See Philip P. Mann, *When the going gets tough . . . Rule 36!*, IP LITIGATION BLOG (Jan. 14, 2016), <http://www.iplitigationblog.com/2016/01/articles/uncategorized/when-the-going-gets-tough-rule-36/> (arguing that the Federal Circuit relies on summary affirmance under Rule 36 to “side-step difficult issues on appeal and simply affirm”). Such was the case here.

The Board concluded that the patent claims should be construed to include the same two aspects of the prior art that the patent disparaged—a result directly at odds with those traditional principles of claim construction. First, under the “broadest reasonable interpretation” standard, the Board construed the claims of the ’053 Patent to suffer the very deficiencies disparaged in the prior art with respect to the “setting tool,” concluding that the “lockdown mechanism” and “setting tool” could be the same apparatus, App. 18, causing the ’053 Patent to have exactly the same unwieldy “high profile” as the prior art that it disparaged. But the Board’s analysis did not consider disparagement by the ’053 Patent—dispositive on this issue—in its claim construction.

The ’053 Patent disparaged the ’118 Application’s approach of using a non-removable “setting tool” both to insert the mandrel into the well and to hold the mandrel in place. See JA67, 2:48-51 (explaining that under the tool described in the ’118 Application, “[t]he mandrel is not separable from the hydraulic setting tool and the setting tool is used to hydraulically lock the mandrel in an operative position”). Because the setting tool “must be fairly long” and “is not removable from the mandrel,” the tool described by the ’118 Application “has a high profile” (*i.e.*, is very tall). *Id.* at 67, 2:63-66. “A well tool with a high profile is not convenient because access to equipment mounted thereto, such as a high pressure valve, is impeded by the height of the valve above ground.” *Id.* at 67-68, 2:66-3:2. The ’053 Patent explained that the goal of its invention was

to provide a “lockdown mechanism having a low profile.” *Id.* at 68, 3:56.

Second, the Board held that “lockdown mechanism” was broad enough to cover a tool that relied exclusively on hydraulic pressure to hold the mandrel in position. (Indeed, without such a broad construction, counsel for the *inter partes* review petitioner conceded that the invalidity argument would fail. See Transcript of Proceedings from Feb. 11, 2015, at 14, *Greene’s Energy Grp., LLC v. Oil States Energy Servs. LLC*, No. IPR2014-00216, 2015 WL 2089371 (PTAB May 1, 2015).) Ordinary principles of claim construction, however, preclude construing the claims of the ’053 Patent to cover such a lockdown mechanism. The ’053 Patent repeatedly and expressly disparaged the hydraulic mechanism of the ’118 Application (which was also embodied in U.S. Patent No. 5,819,851). A hydraulic lockdown mechanism is “less secure than a mechanical lockdown mechanism” because it “is dependent on maintenance of the hydraulic fluid pressure,” which “may be lost for a variety of reasons.” JA68, 3:2-9. As a result, “persons in the industry are generally less inclined to endorse or accept a hydraulic lockdown mechanism.” *Ibid.* To solve these problems, the ’053 Patent taught the need for “a secure mechanical lockdown for maximum security.” *Id.* at 68, 3:42-46.

But the Board’s application of the “broadest reasonable interpretation” standard did not even address the ’053 Patent’s disparagement of hydraulic lockdown mechanisms. As a result, the Board construed the claims of the ’053 Patent to cover the very hydraulic

mechanism that the '053 Patent criticized and sought to replace. Proper application of traditional claim construction principles would have avoided that result—making this case an ideal vehicle for this Court to consider the application of those principles in the “broadest reasonable interpretation” context.

In sum, this Court’s approval of the broadest reasonable interpretation standard did not end the confusion within the Federal Circuit concerning critical issues of claim construction. Some panels apply traditional canons of claim interpretation, including recognizing the significance of statements disparaging certain aspects of the prior art, while others—such as the one here—rubberstamp Board decisions that ignore the same well-established principles. This Court should clarify how these crucially important legal issues should be addressed.

IV. The Constitutionality And Administration Of Patent Adjudications Is Unquestionably Important And Squarely Presented Here.

When Congress enacts a regulatory measure that is directly at odds with the Constitution, the issue inherently warrants this Court’s review. When the policy causes losses in the trillions of dollars—and potentially risks even more in the future—the urgency of this Court’s review is only increased. Even if *inter partes* review were constitutional, the cost of the agency’s actions in implementing it are enormous and

will continue to grow. This Court’s review is needed now.

With over 2.1 million patents currently in force—worth over \$886 billion—it is difficult to overstate their impact on our economy. See Richard Baker, *America Invents Act Cost the US Economy over \$1 Trillion*, PATENTLYO (June 8, 2015), <http://patentlyo.com/patent/2015/06/america-invents-trillion.html>. Likewise, it is difficult to overstate the toll *inter partes* review is taking on the patent system. The Board invalidates almost 80 percent of the patents it reviews—almost ten thousand claims through March of 2016. *PTAB Statistics*, USPTO (Mar. 31, 2016), <https://www.uspto.gov/sites/default/files/documents/2016-3-31%20PTAB.pdf>. Hence former Chief Judge Rader’s accurate prediction that Board judges would be “acting as death squads, killing property rights.” Tony Dutra, *Rader Regrets CLS Bank Impasse, Comments on Latest Patent Reform Bill*, Bloomberg BNA (Oct. 28, 2013), <http://www.bna.com/rader-regrets-cls-n17179879684>.

According to one estimate, *inter partes* review has, thus far, destroyed \$546 billion of the United States economy by invalidating patents, and wiped out about \$1 trillion in value by devaluing the companies holding those patents. See Baker, *supra*. Even worse, that number is likely underestimated since “[i]t does not include lost opportunities, disincentives to innovation, the inability to raise money due to the decrease in collateral, and the loss of jobs without those investments.” *Ibid.*

And while one might think that only weak patents are being wiped out by this process, “experience has shown that the opposite is true. The IPR procedure is only being used against the best United States patents. This is because of pure economics” and the high monetary costs to an *inter partes* petitioner. *Ibid.* In addition, hedge funds—parties that would lack standing in an Article III court—can initiate *inter partes* review against companies and thus drive down patent owners’ stock prices. Peter J. Pitts, ‘*Patent Death Squads*’ vs. *Innovation*, WALL ST. J. (June 10, 2015), <http://www.wsj.com/articles/patent-death-squads-vs-innovation-1433978591>. The fund makes money “shorting” the stocks of patent holders and then subjecting them to the review process to reduce the value of the company.

Beyond the constitutional shortcomings of *inter partes* review, the confusion in its administration by both the Board and the Federal Circuit give rise to concern as well. It is known that “the uncertainty of administrative and judicial outcome and the high cost of resolution are a disincentive to both innovators and competitors.” *CLS Bank Int’l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1321 (Fed. Cir. 2013) (en banc) (Newman, J., concurring in part, dissenting in part), *aff’d*, 134 S. Ct. 2347 (2014). Unless and until the Board provides patent holders a meaningful opportunity to amend claims challenged in *inter partes* review, and unless and until the Federal Circuit construes claims in a manner consistent with its prior jurisprudence, innovation will continue to be stifled.

This case exemplifies the problems with both the *inter partes* review system and the Federal Circuit's jurisprudence implementing it—questions that are critical to the patent system and deserving of review. Certiorari should be granted to resolve these questions.

V. Notwithstanding The Federal Circuit's Cursory Treatment, This Case Is An Appropriate Vehicle To Resolve The Important Questions Presented.

This case is an appropriate vehicle for addressing the important questions concerning the proper administration of patent law moving forward. If *inter partes* review is unconstitutional, this Court will need to say so. If *inter partes* review is constitutional, then the schisms in the Federal Circuit's jurisprudence require resolution. There are no additional legal or factual issues to complicate this Court's analysis of those important questions. The issues were briefed in the Federal Circuit and are properly before this Court.

The absence of a reasoned opinion from the Federal Circuit should not present an obstacle to certiorari for two primary reasons.

First, the constitutionality of *inter partes* review has already been examined by the Federal Circuit and that court will be reticent to invalidate a scheme with which it is becoming increasingly entangled. There is nothing to be gained from waiting any longer on these issues.

Second, a grant of certiorari in this case would serve as a salutary reminder to the Federal Circuit about the appropriate use of one-word affirmances. As a former Chief Judge of the Federal Circuit has said, it's a tool that is appropriate "where it is not necessary to explain, even to the loser, why he lost." The Seventh Annual Judicial Conference of the Court of Appeals for the Federal Circuit, 128 F.R.D. 409, 420 (May 24, 1989) (remarks of Hon. Howard T. Markey, C.J., Court of Appeals for the Federal Circuit). But the Federal Circuit goes far beyond that these days.

In a case where the district court and the Board reached opposite conclusions on a claim construction, and the Board ignored the evidence on which the district court relied, it cannot be the case that it is unnecessary for the Federal Circuit to explain its reasoning. Yet it is unfortunately not surprising given the Federal Circuit's use of that mechanism to resolve almost 50 percent of its cases. Jason Rantanen, *Data on Federal Circuit Appeals and Decisions*, PATENTLYO, (June 2, 2016), <http://patentlyo.com/patent/2016/06/circuit-appeals-decisions.html> (showing that the percentage of Rule 36 opinions in appeals from district courts has increased from 21 percent to 43 percent in less than a decade). This is an especially staggering number considering that it includes many difficult cases, such as the one here. Cf. Mann, *supra*.

If the Federal Circuit is willing to let the Board's opinion serve as a proxy for its own, this Court should not hesitate to take the Federal Circuit up on the offer. The Federal Circuit's questionable practice should not

be permitted to “cert proof” issues that are otherwise cleanly presented and worthy of this Court’s review.



CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted,

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App. 1

639 Fed.Appx. 639

United States Court of Appeals,
Federal Circuit.

OIL STATES ENERGY SERVICES, LLC,
Appellant,

v.

GREENE'S ENERGY GROUP, LLC,
Appellee.

No. 2015-1855.

|
May 4, 2016.

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2014-
00216.

Attorneys and Law Firms

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MOORE, O'MALLEY, and HUGHES, Circuit Judges.

JUDGMENT

PER CURIAM.

THIS CAUSE having been heard and considered,
it is

ORDERED and ADJUDGED:

AFFIRMED. See Fed. Cir. R. 36.

ENTERED BY ORDER OF THE COURT

May 4, 2016
Date

/s/ Daniel E. O'Toole
Daniel E. O'Toole
Clerk of Court

App. 3

2015 WL 2089371 (Patent Tr. & App. Bd.)

Patent Trial and Appeal Board

Patent and Trademark Office (P.T.O.)

GREENE'S ENERGY GROUP, LLC,
PETITIONER,

v.

OIL STATES ENERGY
SERVICES, LLC, PATENT OWNER.

Case IPR2014-00216

Patent 6,179,053 B1

May 1, 2015

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Before SCOTT E. KAMHOLZ, WILLIAM A. CAPP,

and JAMES A. TARTAL

Administrative Patent Judges

TARTAL

Administrative Patent Judge

FINAL WRITTEN DECISION

35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Greene’s Energy Group, LLC (“Petitioner”) filed a reformatted Petition (Paper 6, “Pet.”) requesting an *inter partes* review of claims 1 and 22 of U.S. Patent No. 6,179,053 B1 (Ex. 1001, “the ‘053 patent”). Based on the information provided in the Petition, we instituted a trial pursuant to 35 U.S.C. § 314(a) of claims 1 and 22 of the ‘053 patent as anticipated under 35 U.S.C. § 102 by Dallas ‘118.¹ Paper 12 (“Inst. Dec.”).

After institution of trial, Oil States Energy Services, LLC (“Patent Owner”) filed a Patent Owner’s Response (Paper 20, “PO Resp.”) and Petitioner filed a Reply (Paper 35, “Reply”). Patent Owner also filed a Motion to Amend (Paper 23, “Mot.”) proposing substitute claim 28 if claim 1 is found unpatentable, and substitute claim 29 if claim 22 is found unpatentable. Petitioner filed an Opposition to the Motion to Amend (Paper 36, “Opp.”), and Patent Owner filed a Reply (Paper 44, “PO Reply”). A transcript of the Oral Hearing conducted on February 11, 2015, is entered as Paper 52 (“Tr.”).

We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, Petitioner has shown by a

¹ Canadian Patent Application 2,195,118 (Ex. 1003, “Dallas ‘118”). In this decision, the cited page numbers of Dallas ‘118 correspond to the numbers centered at the bottom of the pages of Exhibit 1003.

preponderance of the evidence that claims 1 and 22 of the '053 patent are unpatentable, and Patent Owner's Motion to Amend is denied.

A. The '053 Patent

The '053 patent, titled "Lockdown Mechanism for Well Tools Requiring Fixed-Point Packoff," relates to an apparatus and method for securing a mandrel of a well tool in an operative position in which the mandrel is packed off against a fixed-point in a well. Ex. 1001, Abstract, 1:6-10. The '053 patent issued on January 30, 2001, from Application No. 09/373,418, filed August 12, 1999 ("the '418 application).

According to the '053 patent, the servicing of oil and gas wells to stimulate production requires pumping generally corrosive and abrasive fluids under high pressure. *Id.* at 1:16-20. Such fluids purportedly can cause irreparable damage if they are pumped directly through the spool and valves that make up a wellhead. *Id.* at 1:21-23. The '053 patent states that it is well known to isolate a wellhead by inserting a mandrel through the wellhead to prevent damage from stimulation fluids. *Id.* at 1:23-30. At the bottom end of the mandrel, a packoff (fluid seal)² assembly usually is provided to isolate the wellhead from the stimulation fluids. *Id.* at 1:32-36.

² The parties agree "packoff" means a fluid seal. *See* Pet. 13; PO. Resp. 9; Ex. 1001, 1:32-36.

App. 6

If the packoff assembly seals against the inside of the production tubing or casing, however, then the smaller internal diameter of the mandrel used will reduce the flow rate at which stimulation fluids may be pumped into the well. *Id.* at 1:43-47. To avoid such a reduction in flow rate, the '053 patent proposes a lockdown mechanism for securing a mandrel requiring a fixed-point packoff in an operative position in the well. *Id.* at 2:43-45. "The fixed-point for packoff may be a bit guide mounted to the top of a casing, * * * an annular step above back pressure valve threads of a tubing hanger, * * * or any other type of fixed-point location used for packoff in a wellhead, a casing, a tubing or downhole tool." *Id.* at 5:34-39. According to the '053 patent, such an arrangement permits the internal diameter of the mandrel to be the same as that of the well tubing or casing. *Id.* at 1:62-67.

As described by the '053 patent, the mandrel is locked in an operative position only when both first and second lockdown mechanisms are in respective lockdown positions. *Id.* at 4:5-7. The first lockdown mechanism includes a base member for connection to a wellhead and a locking member for detachably engaging the base member. *Id.* at 4:10-13. The second lockdown mechanism has a range of adjustment adequate to ensure that the mandrel can be moved into the operative position and locked down while the first lockdown mechanism is in the lockdown position. *Id.* at 4:13-17.

Figure 2 of the '053 patent is reproduced below.

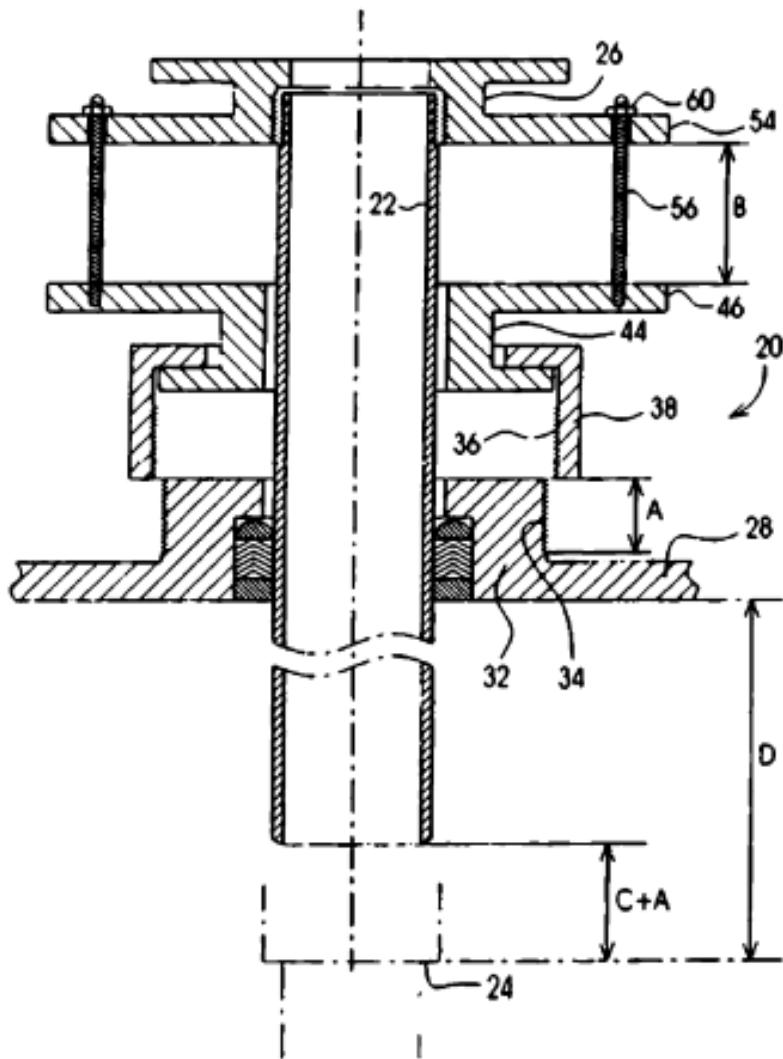


Figure 2 shows a cross-sectional view of one embodiment of an apparatus for securing mandrel 22 of a well tool in an operative position in which mandrel 22 may be packed-off against fixed-point 24 in a well. Ex. 1001, 7:6-9. Base plate 28 may be mounted on the top of a wellhead while it is disengaged from the other parts of apparatus 20. *Id.* at 7:8-10. The other parts of apparatus 20 remain connected to the top end of mandrel 22, and are moved with mandrel 22 when it is inserted into the wellhead by a setting tool (not shown in Figure 2). *Id.* at 7:10-12. Upper flange 46 of connector 44 remains spaced from lower flange 54 of mandrel head 26 as mandrel 22 is inserted through the wellhead. *Id.* at 7:15-19. For safe engagement to restrain the high fluid pressures during a well treatment to stimulate production, after mandrel 22 is inserted through the wellhead, a first locking mechanism is set by engaging threads 34-36 by rotating lockdown nut 38. *Id.* at 5:60-61, 7:19-22.

At this stage, the bottom end of mandrel 22 is still above fixed-point 24 for packoff. *Id.* at 7:22-24. After lockdown nut 38 is fully engaged, mandrel 22 is stroked down until the bottom end of mandrel 22 packs-off against fixed-point 24. *Id.* at 7:24-27. A second lockdown mechanism then is set by rotating nuts 60 down against flange 54 of mandrel head 26 to prevent a fluid seal on the lower end of mandrel 22 from being forced away from fixed-point 24. *Id.* at 7:27-32. Connector 44 may be replaced by an integral hydraulic cylinder. *Id.* at 7:51-54. A piston in the hydraulic cylinder is fixed to the mandrel so that when pressurized

hydraulic fluid is injected in the chamber above the piston, the mandrel is forced downward to packoff against the fixed point. *Id.* at 7:57-58, 8:21-27, Fig 7.

B. Challenged Claims 1 and 22

Petitioner challenges claims 1 and 22, which read:

1. An apparatus for securing a mandrel of a well tool in an operative position requiring fixed-point packoff in the well, comprising:

a first and a second lockdown mechanism arranged so that the mandrel is locked in the operative position only when both the first and the second lockdown mechanism are in respective lockdown positions;

the first lockdown mechanism adapted to detachably maintain the mandrel in proximity to the fixed-point packoff when in the lockdown position, the first lockdown mechanism including a base member for connection to a wellhead of the well and a locking member for detachably engaging the base member; and

the second lockdown mechanism having a range of adjustment adequate to ensure that the mandrel can be moved into the operative position and locked down in the operative position while the first lockdown mechanism is in the lockdown position.

22. A method for lockdown of a mandrel of a well tool in an operative position in which the mandrel is packed off against a fixed-point in the well, comprising steps of:

- a) mounting above a wellhead of the well an apparatus for securing the mandrel of the well tool in the operative position, comprising a first and a second lockdown mechanism arranged so that the mandrel is locked in the operative position only when both the first and second lockdown mechanisms are in respective lockdown positions; the first lockdown mechanism being adapted to detachably maintain the mandrel in proximity to the fixed-point for packoff, and including a base member for connection to a top of a wellhead of the well and a locking member for detachably engaging the base member; and the second lockdown mechanism having a range of adjustment to ensure that the mandrel can be moved into the operative position and locked down in the operative position while the first lockdown mechanism is in the lockdown position;
- b) after inserting the mandrel through the wellhead into proximity to the fixed-point in the well, engaging the locking member of the first lockdown mechanism with the base member so that the mandrel is only moveable within the range of adjustment;
- c) moving the mandrel into the operative position if the mandrel is not yet packed off against the fixed-point; and
- d) locking the second lockdown mechanism in the lockdown position.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claims of unexpired patents are construed by applying the broadest reasonable interpretation, in light of the specification. 37 C.F.R. § 42.100(b); see *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1278-1282 (Fed. Cir. 2015). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning, as understood by a person of ordinary skill in the art, in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

In our Decision to Institute we made a number of initial claim construction determinations that Patent Owner does not contest in its Response and that Petitioner does not address in its Reply. We determined the broadest reasonable construction of “operative position,” consistent with its usage in the Specification of the ‘053 patent and its plain meaning, is “a position in which the mandrel is packed off against a fixed-point in the well.” Inst. Dec. 8-9. We also determined that no express construction of “fixed-point” is necessary, because the ‘053 patent states that a bit guide attached to the top end of a casing provides a fixed-point for packoff of the mandrel, and Dallas ‘118 discloses such a bit guide (Ex. 1001, 2:39-40). Inst. Dec. 9. We also determined that the meaning of “mandrel” does not require that it be of an adjustable length. *Id.* at 12. We also declined to adopt Petitioner’s assertion that steps

of claim 22 required a particular order. Inst. Dec. 12-13. With respect to “first lockdown mechanism” and “second lockdown mechanism,” we determined that Petitioner had not overcome the rebuttable presumption that § 112, ¶ 6 does not apply to such claim limitations that lack the term “means.” *See, e.g., Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004); *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002). Inst. Dec. 9-12. Having considered whether any of these determinations should be changed in light of the evidence introduced during trial, we are not persuaded any modification is necessary.

1. “second lockdown mechanism”

Patent Owner argues that “second lockdown mechanism” would be understood by a person of ordinary skill in the art to mean “a lockdown mechanism separate from a setting tool which locks the mandrel in position without hydraulic pressure.” PO Resp. 10. In particular, Patent Owner argues that a “second lockdown mechanism” would be understood to be 1) mechanical, and 2) separate from a setting tool. *Id.*

- a) The “Second Lockdown Mechanism” is Not Limited to a Mechanical Apparatus

In support of its contention that a “second lockdown mechanism” must be mechanical, Patent Owner

identifies several statements in the '053 patent Specification:

The apparatus includes a mechanical lockdown mechanism to secure the tool to the wellhead and maintain the mandrel in proximity to the fixed-point for packoff, and a mechanical or a hydraulic mechanism to move the mandrel into the operative position while the mechanical lockdown mechanism is in a lockdown position. A second mechanical locking mechanism is provided to ensure the mandrel is maintained in the operative position in the event that hydraulic pressure is lost.

Ex. 1001, Abstract.

In addition, a hydraulic lockdown mechanism is considered less secure than a mechanical lockdown mechanism. The hydraulic lockdown mechanism is dependent on maintenance of the hydraulic fluid pressure in the setting tool. Since fluid pressure may be lost for a variety of reasons, persons in the industry are generally less inclined to endorse or accept a hydraulic lockdown mechanism.

Ex. 1001, 3:2-9.

Therefore, there exists a need for a lockdown mechanism for securing a mandrel of a well tool in an operative position requiring fixed-point packoff in the well which provides a broader range of adjustment while ensuring a secure mechanical lockdown for maximum security.

Ex. 1001, 3:40-45.

Patent Owner further asserts that each embodiment described in the '053 patent uses a second lockdown mechanism that mechanically locks the mandrel in the operative position. PO Resp. 11-14. Patent Owner offers the Declaration of Gary R. Wooley in support of is [sic] proposed construction. Ex. 2012 ¶¶ 55-57. Patent Owner also notes that in related proceedings between the parties, the district court, relying upon the portion of the Abstract set forth above, construed “second lockdown mechanism” as the “second part of the apparatus that interacts with the first lockdown mechanism to lock the mandrel in the operative position without hydraulic pressure.” PO Resp. 14 (citing District Court Markman Order, Ex. 2008, 16).³

Patent Owner’s argument that “second lockdown mechanism” should be construed to mean “a lockdown mechanism * * * which locks the mandrel in position without hydraulic pressure,” is untenable in light of the manner in which the term is used in the claims of the '053 patent.

Claim 8, which depends from claims 2 and 1, recites:

An apparatus as claimed in claim 2 wherein the first member of the second lockdown mechanism includes a piston fixed to the

³ Petitioner contends that the district court *sua sponte* adopted a construction of “second lockdown mechanism” requiring that it operate “without hydraulic pressure” without argument from the parties, and Patent Owner’s Declarant, Mr. Wooley, confirms that the construction adopted by the district court was not proposed by Patent Owner. *See* Tr. 14:1-7; Ex. 2012 ¶ 57.

mandrel and the second member of the second lockdown mechanism includes a cylinder connected with the locking member of the first lockdown mechanism, the piston being adapted to be reciprocated within the cylinder using fluid pressure.

Ex. 1001, 11:13-19. Patent Owner offers no explanation for how a “second lockdown mechanism” that purportedly must operate without hydraulic pressure nevertheless includes a piston adapted to be reciprocated in a cylinder using fluid pressure, as required by claim 8. *See also id.* at 11:20-22 (claim 9, reciting the apparatus of claim 8, requires “wherein a maximum stroke of the piston within the cylinder determines the range of adjustment of the second lockdown mechanism”). Certain claims of the ‘053 patent require expressly a “mechanical” lockdown mechanism. The absence of the “mechanical” qualifier in broader claims implies that those claims were not intended to be limited to a mechanical lockdown mechanism. For example, Claim 10, which depends from claims 8, 2, and 1, recites that “the second lockdown mechanism comprises a mechanical locking mechanism adapted to ensure the mandrel is maintained in the operative position in the event that the fluid pressure is lost.” Ex. 1001, 11:23-27; *see also* 11:47-65 (claim 14 reciting “a mechanical lockdown mechanism”). Interpreting “lockdown mechanism” to require a mechanical apparatus operating without hydraulic pressure would render the use of “mechanical” to describe the lockdown mechanism in other claims superfluous. *See Biocon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006) (stating “claims are

interpreted with an eye toward giving effect to all terms in the claim” (citations omitted)).

Moreover, contrary to Patent Owner’s argument, we agree with Petitioner that the ‘053 patent describes the use of a hydraulic mechanism as a second lockdown mechanism. *See* Reply 3-5. With regard to an embodiment shown in Figure 5 of the ‘053 patent, which corresponds to the apparatus of claim 10, the ‘053 patent Specification explains that the mandrel is forced downwardly to packoff against the fixed-point under a force exerted on the piston by the pressurized hydraulic fluid. Ex. 1001, 8:24-27. As the ‘053 patent explains, “the mandrel [] is locked down in its operative position by the hydraulic force [].” Ex. 1001, 8:30-31. The embodiment described further includes an additional mechanical feature “to ensure that the mandrel is secured in the operative position” (Ex. 1001, 31-34). Collectively, the Specification and claims of the ‘053 patent make clear that a second lockdown mechanism may be hydraulic, and that an additional mechanical feature further may be added to the second lockdown mechanism, not that the second lockdown mechanism must be mechanical. Accordingly, we conclude that the meaning of “second lockdown mechanism” as used in the ‘053 patent is not limited to a mechanical apparatus, but instead encompasses any machinery for maintaining the mandrel in a fixed position.

b) The “Second Lockdown Mechanism” is
Not Limited to an Apparatus Separate
from a Setting Tool

In support of its contention that a “second lockdown mechanism” must be separate from a setting tool, Patent Owner points out that the embodiments in the ‘053 patent Specification show the setting tool and second lockdown mechanism as separate features. PO Resp. 15-19. According to Patent Owner, the “setting tool” is “used to ‘insert the mandrel * * * to an operative position * * * to stimulate production.’” PO Response 15 (quoting Ex. 1001, 8:35-48). Patent Owner also suggests that a “setting tool” is “the portion of the overall structure that moves the mandrel down through the wellhead toward the operative position.” *Id.* at 29. Patent Owner identifies three instances in which the Specification “describes the setting tool as being a separate structure that can be removed.” *Id.* at 21. Patent Owner also argues that it was an object of the invention to provide a lockdown mechanism having a low profile, which is achieved by using a separate and removable setting tool. *Id.* at 23. Patent Owner’s proposed construction is supported by Mr. Wooley.⁴ Ex. 2012 ¶¶ 50-54.

⁴ Patent Owner’s argument that “second lockdown mechanism” should be construed to be separate from the “setting tool” was rejected in the related district court proceeding as “not helpful because it introduces the unnecessary and ambiguous term ‘setting tool.’” District Court Markman Order, Ex. 2008, 15.

The term “setting tool” does not occur in any claim of the ‘053 patent. The term also is not expressly defined in the ‘053 patent. Based on the evidence presented, we determine that Patent Owner has not clearly shown what a “setting tool” includes or excludes, much less that the second lockdown mechanism must be separate from any “setting tool.” To the extent any embodiment depicts an unclaimed feature described as a “setting tool” as separate from the second lockdown mechanism, the claim language does not preclude that separate element from being incorporated into the second lockdown mechanism. We decline to import limitations from a preferred embodiment into the claim. *See Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1354 (Fed. Cir. 2012) (“While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims.”). Accordingly, we conclude that the meaning of “second lockdown mechanism” as used in the ‘053 patent is not limited to an apparatus separate from a setting tool.

2. “lock”

Claims 1 and 22 require that the “mandrel is locked in the operative position only when both the first and second lockdown mechanism are in respective lockdown positions.” Patent Owner proposes two constructions for the term “lock”: (1) “the mandrel does not move away from the operative position during the normal course of operation,” and (2) “to ensure that the mandrel is safely secured in the operative position to

prohibit the displacement of the mandrel during a well treatment to stimulate production.” PO Resp. 24, 26. The second construction follows the definition provided by Patent Owner’s Declarant, Mr. Wooley. Ex. 2012 ¶ 58. Patent Owner contends its proposed construction is consistent with a dictionary definition of “lock” as meaning “to make fast or immovable, as by engaging parts.” PO Resp. 24 (quoting WEBSTER’S UNABRIDGED DICTIONARY 1128 (2d ed. 2001) (Ex. 2016), entry 17 for “lock”). Patent Owner also asserts that Petitioner’s Declarant, Mr. Shackelford, agreed that “lock” means the mandrel would not move from its operative position during the normal course of operation. PO Resp. 25.

Petitioner does not provide an express construction of the term “lock,” but instead argues that the ‘053 patent “defines the term ‘lock’ to include hydraulic force applied to hold a mandrel in an operative position.” Reply 2-3. In particular, Petitioner identifies statements in the ‘053 patent that (1) “[t]he mandrel [] is locked down in its operative position by the hydraulic force P2,” and (2) a particular structure is “used to hydraulically lock the mandrel in an operative position.” Reply 4-5 (quoting Ex. 1001, 2:48-51, 8:30-31).

Neither party has shown that the term “lock” is used in the ‘053 patent in any way other than its ordinary and customary manner. Because the claim expressly recites that the “mandrel is locked in the operative position,” repeating the same language in the construction of “lock” would render such claim language superfluous. See *Biocon, Inc.*, 441 F.3d at 950.

Nor is there anything in the use of “lock” in the ‘053 patent that would require its definition to incorporate “during a well treatment to stimulate production,” as Patent Owner proposes. Indeed, neither claim 1 nor 22 requires “a well treatment to stimulate production.” Nor has Petitioner provided a rationale to link a means used to “lock,” such as hydraulic pressure, to the meaning of “lock.” We apply its ordinary and customary meaning, as understood by a person of ordinary skill in the art, in the context of the entire patent disclosure. We recognize that one ordinary and customary meaning of lock, as suggested by Patent Owner, is “to make fast or immovable, as by engaging parts.” Prelim. Resp. 24.

B. Anticipation by Dallas ‘118

Petitioner must demonstrate by a preponderance of the evidence that the challenged claims are unpatentable to prevail. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). Petitioner contends that claims 1 and 22 of the ‘053 patent are anticipated by Dallas ‘118. Pet. 41-47. Dallas ‘118 is the Canadian Patent Application counterpart to U.S. Patent No. 5,819,851 (“the ‘851 patent”), with the disclosures of both documents being essentially identical.⁵ See PO Resp. 4. L. Murray Dallas

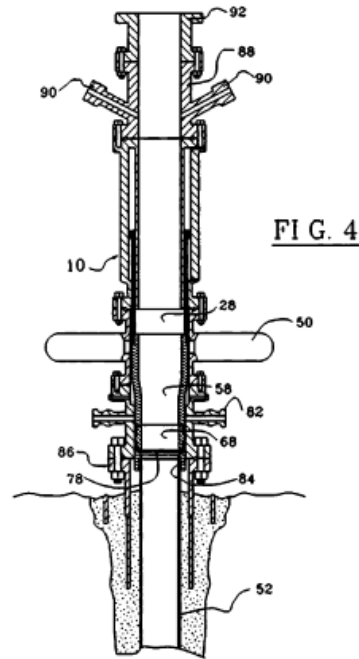
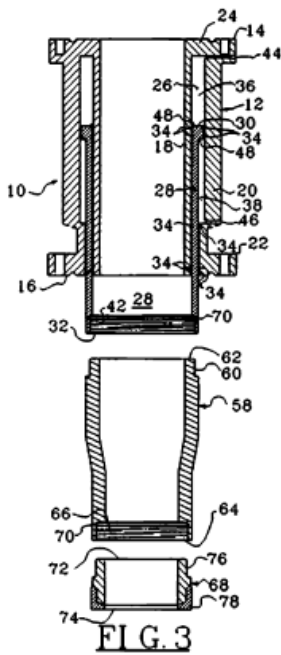
⁵ The parties agree that the ‘851 patent is not prior art to the ‘053 patent. Joint Stipulation Regarding the ‘851 Patent, Paper No. 10. Patent Owner does not dispute that Dallas ‘118 is prior art to the ‘053 patent.

is the sole named inventor on the face of the '053 patent, the '851 patent, and Dallas '118.

“To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter.” *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1566 (Fed. Cir. 1996). Enablement requires that “the prior art reference must teach one of ordinary skill in the art to make or carry out the claimed invention without undue experimentation.” *Minnesota Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1301 (Fed. Cir. 2002). The determination of whether “undue experimentation” is required may include consideration of factors such as (1) the quantity of experimentation; (2) the amount of direction or guidance present; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

1. Summary of Dallas '118

Dallas '118 describes an apparatus and method for protecting blowout preventers (BOPs) from high pressures and exposures to abrasive or corrosive fluids during well fracturing or stimulation treatments. Ex. 1003, 4. Figures 3 and 4 of Dallas '118 are reproduced below.



Figures 3 and 4 depict cross-sectional views of BOP protector 10, with Figure 4 further including related spools mounted on a wellhead above a BOP. Ex. 1003, 9. Figure 3 shows mandrel extension 58 connectable to the bottom of mandrel 28. *Id.* at 14. Mandrel packoff assembly 68 is connectable to the bottom of mandrel extension 58. *Id.* The bottom of mandrel packoff assembly 68 includes annular seal 78, which sealingly engages a top of the well casing. *Id.* BOP protector 10 includes bottom flange 22 adapted for fluid tight connection with a top end of a BOP or a casing spool. *Id.* at 10. Figure 4 shows BOP protector 10 stroked down through both BOP 50 and well tubing head 82 into sealing contact with bit guide 84 attached to the top of casing 52. *Id.* at 15. According to Dallas '118, hydraulic

fluid injected through hydraulic fluid port 44 into upper chamber 36, shown in Figure 3, should be maintained at a pressure of about 1000 psi while BOP protector 10 is in use to seat annular seal 78 against bit guide 84 with enough force to ensure a fluid tight seal. *Id.* Stimulation fluids then may be pumped through unions 90 of high pressure valve spool 88 mounted to the top of BOP protector 10. *Id.* at 16-17.

2. *Dallas '118 Discloses Every Element of Claims 1 and 22*

Claim 1 requires a first lockdown mechanism that includes a base member for connection to a wellhead of the well, and a locking member for detachably engaging the base member. Claim 22 contains a similar requirement. We agree with Petitioner that bottom flange 22 of Dallas '118 corresponds to the base member of a first lockdown mechanism, and that bolts through the bores in lower flange 22 correspond to a locking member, as claimed in the '053 patent. *See* Pet. 42.

Claim 1 further requires a second lockdown mechanism having a range of adjustment adequate to ensure that the mandrel can be moved into the operative position, and locked down in the operative position while the first lockdown mechanism is in the lockdown position. Claim 22 contains a similar requirement. We agree with Petitioner that the hydraulic cylinder mechanism of Dallas '118, which ensures a fluid tight seal between annular seal 78 and bit guide

84 by maintaining a pressure of about 1000 psi in upper chamber 36, corresponds to the recited second lockdown mechanism. *See* Pet. 36, 44.

Patent Owner asserts that the hydraulic mechanism taught in Dallas '118 does not correspond to the claimed second lockdown mechanism because it relies on hydraulic pressure. PO Resp. 28. Patent Owner's argument is unpersuasive because we conclude, in construing "second lockdown mechanism," that the claimed element is not limited to a mechanical apparatus for the reasons discussed above. Patent Owner also asserts that the hydraulic setting tool taught in Dallas '118 does not correspond to the claimed second lockdown mechanism because it is not separate from a setting tool. *Id.* at 29. Patent Owner's argument is unpersuasive because we conclude, in construing "second lockdown mechanism," that the claimed element is not limited to an apparatus separate from a setting tool.

Claim 1 further requires that the first and second lockdown mechanisms are arranged "so that the mandrel is locked in the operative position only when both the first and the second lockdown mechanism are in respective lockdown positions." Claim 22 contains a similar requirement. We agree with Petitioner that mandrel 28 of Dallas '118 is locked in an operative position only when tool 10 is locked down on the wellhead and the piston at the top 30 of mandrel 28 is locked down, forcing assembly 69 against bit guide 84. *See* Pet. 32 (citing Ex. 1003, 13:25-14:1, Ex. 1002 ¶ 76.)

We are not persuaded by Patent Owner’s argument that Dallas ‘118 discloses holding a mandrel in place to form a fluid-tight seal but not “affirmatively ‘locking’ the mandrel in place such that it does not move during normal operation of the tool.” PO Resp. 30. Dallas ‘118 states that a fluid tight seal between annular seal 78 and bit guide 84 is ensured by maintaining a pressure of about 1000 psi in upper chamber 36, and that the “hydraulic fluid pressure in the upper chamber 36 should be maintained at about 1,000 psi at all times while the BOP protector 10 is in use.” Ex. 1003, 15:26-31. Patent Owner argues that ensuring a fluid-tight seal is formed is “fundamentally different from ‘locking’ or ‘securing’ the mandrel in an operative position.” PO Resp. 30. Patent Owner, however, offers no sufficient explanation of the purported “fundamental difference.”

Patent Owner’s argument is also unpersuasive because it is inconsistent with the treatment of the ‘851 patent in the ‘053 patent itself.⁶ The ‘053 patent states that the “setting tool [of the ‘851 patent] is used to hydraulically lock the mandrel in an operative position,” and that it is “very convenient for securing a mandrel of a well tool in the operative position.” Ex. 1001, 2:48-51, 58-62. Patent Owner’s argument that a hydraulic apparatus is insufficient to lock the mandrel in place is also inconsistent with one of the disclosed embodiments of the ‘053 patent, which makes clear that “[t]he mandrel 72 is locked down in its operative position by

⁶ As noted above, the Dallas ‘118 disclosure mirrors the disclosure of the ‘851 patent.

the hydraulic force P2.” Ex. 1001, 8:30-31. Patent Owner offers no explanation for why we should disregard the disclosure of the ‘053 patent, which expressly equates ensuring a fluid-tight seal, such as disclosed by Dallas ‘118, to locking the mandrel in an operative position. Petitioner has demonstrated by a preponderance of the evidence that Dallas ‘118 discloses every element of claims 1 and 22.

3. *Dallas ‘118 Does Not Fail to Enable a Device that “Locks” the Mandrel in an Operative Position*

Patent Owner suggests that we should look “[b]eyond the exact semantics that were used in describing [Dallas ‘118],” and focus instead on its contention that the tool described in Dallas ‘118 “did not work to protect a wellhead during hydraulic fracturing operations by reliably securing the mandrel in the operative position.” PO Resp. 32. Patent Owner concedes that the tool described in Dallas ‘118 was used in operation, but alleges it “failed approximately 50% of the time,” and “began to fail at pressures much lower than those typically used in fracking.” *Id.* Patent Owner proceeds to provide various reasons why the tool described in Dallas ‘118 was not reliable, including the “inherently unpredictable nature of the device,” “substantial pressure swings caused by changes in the pumping rate of fracking fluid,” “vibration and transient pressure spikes during a fracking operation,” “sway and vibration of the tool” due to its height, “the compressibility of hydraulic fluid,” the temperature differential between

fluid flowing through the mandrel and the ambient air, and the condition of the bit guide. PO Resp. 33-39. From this, Patent Owner insists it would have taken undue experimentation for one of ordinary skill in the art to practice the invention of the challenged claims using the disclosure of Dallas '118. *Id.* at 39. We disagree.

Patent Owner's contention that Dallas '118 lacks enablement is premised on Patent Owner's contention that "locked" should be construed to mean protecting "a wellhead during hydraulic fracturing operations by reliably securing the mandrel in the operative position." PO Resp. 32. For the reasons discussed above, we decline to adopt Patent Owner's construction of "locked" as it attempts to incorporate limitations concerning the use of the claimed apparatus and its reliability, which are not present in the claim language. Accordingly, Patent Owner's argument that Dallas '118 lacks enablement is not persuasive because Patent Owner is demanding enablement of features not set forth in claims 1 and 22 of the '053 patent.

Patent Owner's argument that Dallas '118 lacks enablement is also not supported by the evidence. The record in this proceeding makes clear that not only was the tool of Dallas '118 sufficiently enabled to teach one of ordinary skill in the art to make or carry out the anticipating subject matter without undue experimentation, the tool was in fact made, and in fact carried out the anticipating subject matter. L. M. Dallas October 28, 2014 Deposition Transcript, Ex. 1009, 109:15-110:15. Patent Owner further wants us to ignore the

disclosure of the '053 patent itself, which expressly states that the tool of the '851 patent (the same tool as that of Dallas '118) is "very convenient for securing a mandrel of a well tool in the operative position."

Patent Owner's arguments on experimentation also are not persuasive. The issues Patent Owner raises with regard to the reliability of the prior art tool do not demonstrate that undue experimentation would be necessary to enable one of ordinary skill in the art to make or carry out the claimed invention. Patent Owner argues that the seal formed by the setting tool in Dallas '118 "failed approximately 50% of the time," and, therefore, concedes it also worked approximately 50% of the time. *Hildreth v. Mastoras*, 257 U.S. 27, 34 (1921) ("The machine patented may be imperfect in its operation; but if it embodies the generic principle and works * * * it is enough."); *Decca Ltd. v. United States*, 544 F.2d 1070, 1077 (Ct. Cl. 1976) ("The mere fact that the system has some drawbacks, or that under certain postulated conditions it may not work * * * does not detract from the operability of the disclosed equipment to perform its described function."). Mr. Dallas further testified that the tool of the '851 patent (the same tool as that of Dallas '118) "would be fine on low pressure, small valve, low stroke applications." L. M. Dallas March 13, 2014 Deposition Transcript, Ex. 1008, 160:2-11. Claims 1 and 22 of the '053 patent are not directed to any particular pressure, valve size, or stroke application. Petitioner's Declarant, Mr. Shackelford, further explained that the hydraulic system of the Dallas '118 tool could readily be designed for a known working

pressure so that it would always have a net downward force holding the seal in place. Ex. 2015, 79:11-20. Nor are the claims tied to any particular rate of reliability for securing or locking the mandrel in place. Weighing the *Wands* factors, we determine that the quantity of experimentation, state of the prior art, presence of working examples (including the use in practice of the setting tool described in Dallas '118), and the nature of the invention (using conventional features) support a conclusion that a preponderance of the evidence demonstrates that the anticipatory subject matter of Dallas '118 was enabled, permitting one of ordinary skill in the art to carry out the invention of claims 1 and 22 of the '053 patent. *See Wands*, 858 F.2d at 737.

4. Conclusion

Having considered the parties' contentions and supporting evidence, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1 and 22 are anticipated by Dallas '118.

C. Patent Owner's Motion to Amend

In its Motion to Amend, Patent Owner proposes substitute claim 28, contingent on claim 1 being found unpatentable, and substitute claim 29, contingent on claim 22 being found unpatentable. Mot. 4. We determine that claims 1 and 22 are unpatentable and, therefore, reach the merits of Patent Owner's Motion to Amend.

Entry of the proposed amendments is not automatic, but occurs only upon Patent Owner having demonstrated the patentability of the proposed substitute claims. As the moving party, Patent Owner bears the burden of proof to establish that it is entitled to the relief requested and, therefore, bears the burden of proof in demonstrating adequate written description support and patentability of the proposed substitute claims. 37 C.F.R. §§ 42.20(c), 42.121(b).

Patent Owner's proposed substitute claim 28 is reproduced below, with additions relative to claim 1 underlined and deletions in brackets.

28. An apparatus for securing a mandrel of a well tool in an operative position requiring fixed-point packoff above the casing of the well and within a tubing head spool of a [in the] wellhead assembly, the apparatus comprising:

a setting tool that is arranged to insert a bottom end of the mandrel through the wellhead, and is removable from the other portions of the apparatus;

a first and a second mechanical lockdown mechanism that are separate from the setting tool and arranged so that the mandrel is locked in the operative position only when both the first and the second mechanical lockdown mechanism are in respective lockdown positions;

the first mechanical lockdown mechanism adapted to detachably maintain the mandrel

in proximity to the fixed-point packoff when in the lockdown position,

the first mechanical lockdown mechanism including a base member for connection to a wellhead of the well and a locking member for detachably engaging the base member; [and]

the second mechanical lockdown mechanism having a range of adjustment adequate to ensure that the mandrel can be moved into the operative position, and then locked down in the operative position without the use of hydraulic pressure while the first mechanical lockdown mechanism is in the lockdown position; and

the mandrel including a packoff assembly that seals against the fixed-point packoff within the tubing head spool.

Mot. 1-2. The amendments Patent Owner proposes to claim 22 in proposed substitute claim 29 are substantively the same as the changes proposed in substitute claim 28. Patent Owner does not distinguish its arguments for the patentability of claim 29 from its arguments for the patentability of claim 28. Patent Owner contends that two features of the proposed substitute claims are novel: (1) a removable setting tool, separate from the first and second lockdown mechanisms, arranged to insert the mandrel through the wellhead; and, (2) a mechanical second lockdown mechanism that operates without the use of hydraulic power. *Id.* at 6. Patent Owner acknowledges in its Motion that the prior art discloses “wellhead isolation tools with a

separate setting tool.” *Id.* at 8 (citing U.S. Patent No. 4,241,786 (Ex. 2020, “Bullen”)). Patent Owner also acknowledges there are references which disclose well-head isolation tools that include one or more mechanical lockdown mechanisms. *Id.* (citing U.S. Patent No. 4,632,183 (Ex. 1004, “McLeod”)). Patent Owner asserts the prior art references identified do not, however, disclose “the particular features of the proposed amended claims.” *Id.*

1. *Written Description Support*

Pursuant to 37 C.F.R. § 42.121(b), a motion to amend in an *inter partes* review must set forth “[t]he support in the original disclosure of the patent for each claim that is added or amended,” and “[t]he support in an earlier-filed disclosure for each claim for which benefit of the filing date of the earlier filed disclosure is sought.” Patent Owner provided virtually no discussion of the support for its proposed substitute claims in its Motion to Amend, relying instead on a chart purportedly showing where each element of the proposed substitute claims was disclosed in the Specification, claims, and Figures of the ‘053 patent and the ‘418 application. *See* Mot. 4 (citing Exhibit 2021). Patent Owner’s Declarant, Mr. Wooley, does not address written description support in his Declaration that accompanies the Motion to Amend. *See* Ex. 2017. The chart of written description support provided by Patent Owner contains only string citations with no discussion of how the cited disclosures pertain to the additional claim language. Indeed, those citations are not

tailored to a specific disclosure, but instead encompass, among other things, all nine figures in the '418 application. *See* Ex. 2021. During oral argument, Patent Owner sought to narrow the citations relied upon as written description support, but failed to remedy the problem of insufficient explanation linking the citations to the amended language. *See* Tr. 61:4-64:20.

The determination of whether there is written description support turns on whether the original disclosure of the application relied upon reasonably conveys to a person of ordinary skill in the art that the inventor had possession of the claimed subject matter as of the filing date. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The proposed substitute claims introduce the term “wellhead assembly,” a term that does not appear in the '418 application or the '053 patent. Patent Owner’s string citation to various disclosures, none of which identify a “wellhead assembly,” is insufficient to demonstrate written description support absent some explanation. The same is true with regard to the proposed addition of language requiring both an apparatus for securing the mandrel “within a tubing head spool of a wellhead assembly” and a setting tool “arranged to insert a bottom end of the mandrel through the wellhead.” A string citation does not explain how the original disclosure of the application relied upon reasonably conveys to a person the features intended to be encompassed by the proposed substitute claims. In particular, we cannot discern from Patent Owner’s conclusory discussion how the original disclosure describes both securing the

mandrel within the wellhead assembly and inserting the mandrel through the wellhead, particularly where Patent Owner further argues a distinction between inserting a mandrel “into” a wellhead as opposed to “through” a wellhead. *See* PO Reply. 1-2. Accordingly, we conclude Patent Owner has not satisfied its burden of showing written description support for the proposed substitute claims 28 and 29.

2. *Claim Interpretation*

Patent Owner bears the burden in a motion to amend to show a patentable distinction of each proposed substitute claim over the prior art. *See* 37 C.F.R. § 42.20(c). This includes providing a construction of new claim terms sufficient to support the distinction of the proposed substitute claim over the prior art. Patent Owner introduces the new claim terms “wellhead assembly” and “setting tool” in the proposed substitute claims, but provides no express construction of either term.

Absent any discussion of what is encompassed by the recited “wellhead assembly,” it is unclear how the term differs from the use of “wellhead,” alone, elsewhere in the claim. This is particularly problematic, as discussed above, when attempting to discern what is claimed as a setting tool “arranged to insert a bottom end of the mandrel through the wellhead,” relative to the claimed apparatus for securing a mandrel “above the casing of the well and within a tubing head spool of a wellhead assembly.”

In its Motion to Amend, Patent Owner also does not provide a construction for “setting tool.” We note that Patent Owner was aware that the district court had previously suggested the term “setting tool” was “ambiguous.” District Court Markman Order, Ex. 2008, 15. In reply to Petitioner’s opposition to the Motion, Patent Owner argues that “the defining characteristics of the ‘setting tool’” are set out in the claim language as: (1) “arranged to insert a bottom end of the mandrel through the wellhead,” and, (2) “separate from” the first and second lockdown mechanisms and thus “removable.” PO Reply 1. Patent Owner proceeds to dispute the construction of “setting tool” proposed by Petitioner’s Declarant, Mr. Perkin, but fails to offer any express construction of the term itself. Petitioner’s Declarant, Mr. Perkin, defined “setting tool” as “any device that is used to align the mandrel with the wellhead so that the mandrel can be inserted without interference.” Perkin Decl., Ex. 1014 ¶ 44. Patent Owner’s Declarant, Mr. Wooley, testified that “setting tool” is “usually the name given to a device for inserting some sort of tool.” Ex. 1011, 61:17-21. Absent a clear explanation of what is claimed, Patent Owner’s assertion that a particular reference does not teach “any kind of setting tool” is conclusory and not persuasive. *See* Mot. 9. Patent Owner has not provided a sufficient construction of the term “setting tool” by merely pointing to other claim language or by disputing Petitioner’s proposed construction.

By failing to articulate adequately a construction of “setting tool” or “wellhead assembly,” Patent Owner

has not satisfied its burden of showing a patentable distinction of each proposed substitute claim over the prior art.

3. Conclusion

We conclude Patent Owner has not come forward with sufficient evidence to establish proposed substitute claims 28 and 29 have adequate written description support. We further conclude Patent Owner has not supported sufficiently the distinction of the proposed substitute claims 28 and 29 over the prior art by failing to provide adequately the necessary construction of the proposed amendments to claims 1 and 22. For these reasons, we deny Patent Owner's Motion to Amend.

III. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1 and 22 of U.S. Patent No. 6,179,053 B1 are unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Amend is denied; and

FURTHER ORDERED that, because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

NOTE: This order is nonprecedential.

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

OIL STATES ENERGY SERVICES, LLC,
Appellant

v.

GREENE'S ENERGY GROUP, LLC,
Appellee

2015-1855

Appeal from the United States Patent and Trade-
mark Office, Patent Trial and Appeal Board in No.
IPR2014-00216.

**ON PETITION FOR PANEL REHEARING
AND REHEARING EN BANC**

Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK,
MOORE, O'MALLEY, REYNA, WALLACH, TARANTO, CHEN,
HUGHES, and STOLL, *Circuit Judges*.

PER CURIAM.

ORDER

Appellant Oil States Energy Services, LLC filed a
combined petition for panel rehearing and rehearing
en banc. The petition was referred to the panel that

heard the appeal, and thereafter the petition for rehearing en banc was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing en banc is denied.

The mandate of the court will issue on August 2, 2016.

FOR THE COURT

July 26, 2016

Date

/s/ Peter R. Marksteiner

Peter R. Marksteiner

Clerk of Court

35 U.S.C.A. § 311

Inter partes review

(a) **In general.**—Subject to the provisions of this chapter, a person who is not the owner of a patent may file with the Office a petition to institute an inter partes review of the patent. The Director shall establish, by regulation, fees to be paid by the person requesting the review, in such amounts as the Director determines to be reasonable, considering the aggregate costs of the review.

(b) **Scope.**—A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 and only on the basis of prior art consisting of patents or printed publications.

(c) **Filing deadline.**—A petition for inter partes review shall be filed after the later of either—

- (1) the date that is 9 months after the grant of a patent; or
- (2) if a post-grant review is instituted under chapter 32, the date of the termination of such post-grant review.

35 U.S.C.A. § 312

Petitions

(a) **Requirements of petition.**—A petition filed under section 311 may be considered only if—

(1) the petition is accompanied by payment of the fee established by the Director under section 311;

(2) the petition identifies all real parties in interest;

(3) the petition identifies, in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim, including—

(A) copies of patents and printed publications that the petitioner relies upon in support of the petition; and

(B) affidavits or declarations of supporting evidence and opinions, if the petitioner relies on expert opinions;

(4) the petition provides such other information as the Director may require by regulation; and

(5) the petitioner provides copies of any of the documents required under paragraphs (2), (3), and (4) to the patent owner or, if applicable, the designated representative of the patent owner.

(b) Public availability.—As soon as practicable after the receipt of a petition under section 311, the Director shall make the petition available to the public.

35 U.S.C.A. § 313

Preliminary response to petition

If an inter partes review petition is filed under section 311, the patent owner shall have the right to file a preliminary response to the petition, within a time period set by the Director, that sets forth reasons why no inter partes review should be instituted based upon the failure of the petition to meet any requirement of this chapter.

35 U.S.C.A. § 314

Institution of inter partes review

(a) Threshold.—The Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.

(b) Timing.—The Director shall determine whether to institute an inter partes review under this chapter pursuant to a petition filed under section 311 within 3 months after—

- (1) receiving a preliminary response to the petition under section 313; or
- (2) if no such preliminary response is filed, the last date on which such response may be filed.

(c) **Notice.**—The Director shall notify the petitioner and patent owner, in writing, of the Director’s determination under subsection (a), and shall make such notice available to the public as soon as is practicable. Such notice shall include the date on which the review shall commence.

(d) **No appeal.**—The determination by the Director whether to institute an inter partes review under this section shall be final and nonappealable.

35 U.S.C.A. § 315

Relation to other proceedings or actions

(a) **Infringer’s civil action.**—

(1) **Inter partes review barred by civil action.**—An inter partes review may not be instituted if, before the date on which the petition for such a review is filed, the petitioner or real party in interest filed a civil action challenging the validity of a claim of the patent.

(2) **Stay of civil action.**—If the petitioner or real party in interest files a civil action challenging the validity of a claim of the patent on or after the date on which the petitioner files a petition for inter partes review of the patent, that civil action shall be automatically stayed until either—

(A) the patent owner moves the court to lift the stay;

(B) the patent owner files a civil action or counterclaim alleging that the petitioner or real party in interest has infringed the patent; or

(C) the petitioner or real party in interest moves the court to dismiss the civil action.

(3) Treatment of counterclaim.—A counterclaim challenging the validity of a claim of a patent does not constitute a civil action challenging the validity of a claim of a patent for purposes of this subsection.

(b) Patent owner's action.—An inter partes review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, real party in interest, or privy of the petitioner is served with a complaint alleging infringement of the patent. The time limitation set forth in the preceding sentence shall not apply to a request for joinder under subsection (c).

(c) Joinder.—If the Director institutes an inter partes review, the Director, in his or her discretion, may join as a party to that inter partes review any person who properly files a petition under section 311 that the Director, after receiving a preliminary response under section 313 or the expiration of the time for filing such a response, determines warrants the institution of an inter partes review under section 314.

(d) Multiple proceedings.—Notwithstanding sections 135(a), 251, and 252, and chapter 30, during the

pendency of an inter partes review, if another proceeding or matter involving the patent is before the Office, the Director may determine the manner in which the inter partes review or other proceeding or matter may proceed, including providing for stay, transfer, consolidation, or termination of any such matter or proceeding.

(e) Estoppel.—

(1) Proceedings before the Office.—The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision under section 318(a), or the real party in interest or privy of the petitioner, may not request or maintain a proceeding before the Office with respect to that claim on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

(2) Civil actions and other proceedings.—The petitioner in an inter partes review of a claim in a patent under this chapter that results in a final written decision under section 318(a), or the real party in interest or privy of the petitioner, may not assert either in a civil action arising in whole or in part under section 1338 of title 28 or in a proceeding before the International Trade Commission under section 337 of the Tariff Act of 1930 that the claim is invalid on any ground that the petitioner raised or reasonably could have raised during that inter partes review.

35 U.S.C.A. § 316

Conduct of inter partes review

(a) Regulations.—The Director shall prescribe regulations—

- (1)** providing that the file of any proceeding under this chapter shall be made available to the public, except that any petition or document filed with the intent that it be sealed shall, if accompanied by a motion to seal, be treated as sealed pending the outcome of the ruling on the motion;
- (2)** setting forth the standards for the showing of sufficient grounds to institute a review under section 314(a);
- (3)** establishing procedures for the submission of supplemental information after the petition is filed;
- (4)** establishing and governing inter partes review under this chapter and the relationship of such review to other proceedings under this title;
- (5)** setting forth standards and procedures for discovery of relevant evidence, including that such discovery shall be limited to—
 - (A)** the deposition of witnesses submitting affidavits or declarations; and
 - (B)** what is otherwise necessary in the interest of justice;
- (6)** prescribing sanctions for abuse of discovery, abuse of process, or any other improper use of the

proceeding, such as to harass or to cause unnecessary delay or an unnecessary increase in the cost of the proceeding;

(7) providing for protective orders governing the exchange and submission of confidential information;

(8) providing for the filing by the patent owner of a response to the petition under section 313 after an inter partes review has been instituted, and requiring that the patent owner file with such response, through affidavits or declarations, any additional factual evidence and expert opinions on which the patent owner relies in support of the response;

(9) setting forth standards and procedures for allowing the patent owner to move to amend the patent under subsection (d) to cancel a challenged claim or propose a reasonable number of substitute claims, and ensuring that any information submitted by the patent owner in support of any amendment entered under subsection (d) is made available to the public as part of the prosecution history of the patent;

(10) providing either party with the right to an oral hearing as part of the proceeding;

(11) requiring that the final determination in an inter partes review be issued not later than 1 year after the date on which the Director notices the institution of a review under this chapter, except that the Director may, for good cause shown, extend the 1-year period by not more than 6 months,

and may adjust the time periods in this paragraph in the case of joinder under section 315(c);

(12) setting a time period for requesting joinder under section 315(c); and

(13) providing the petitioner with at least 1 opportunity to file written comments within a time period established by the Director.

(b) Considerations.—In prescribing regulations under this section, the Director shall consider the effect of any such regulation on the economy, the integrity of the patent system, the efficient administration of the Office, and the ability of the Office to timely complete proceedings instituted under this chapter.

(c) Patent Trial and Appeal Board.—The Patent Trial and Appeal Board shall, in accordance with section 6, conduct each inter partes review instituted under this chapter.

(d) Amendment of the patent.—

(1) **In general.**—During an inter partes review instituted under this chapter, the patent owner may file 1 motion to amend the patent in 1 or more of the following ways:

(A) Cancel any challenged patent claim.

(B) For each challenged claim, propose a reasonable number of substitute claims.

(2) **Additional motions.**—Additional motions to amend may be permitted upon the joint request of the petitioner and the patent owner to materially advance the settlement of a proceeding under

section 317, or as permitted by regulations prescribed by the Director.

(3) Scope of claims.—An amendment under this subsection may not enlarge the scope of the claims of the patent or introduce new matter.

(e) Evidentiary standards.—In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.
