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WHY DO JURIES DECIDE IF PATENTS ARE VALID?

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THE jury trial is a fixture of modern patent litigation. Lawyers, scholars, and judges take for granted that when a patent case goes to trial, that trial will almost always be before a jury.[1] And that jury will decide most, though not all, of the significant issues in dispute—including whether the patent is valid. The dynamics of the jury system drive both the structure of patent litigation and its outcome. Jurors are more likely than judges to rule for patentees. Lay jurors are reluctant to second-guess the Patent and Trademark Office ("PTO") and invalidate a patent the PTO has issued. And the fact that the parties are gearing up for a jury trial affects the high cost of patent litigation, the structure of pretrial proceedings, and the willingness of the parties to settle and on what terms.[2]

This regime is built on an uncertain foundation. For while patent lawyers today take for granted the power of the jury to decide whether the PTO made a mistake in issuing a patent, the role of the jury in patent cases is a recent and unusual phenomenon with a murky history. After all, we don't normally ask juries to review the decision of an administrative agency, at least outside the criminal enforcement context. The Administrative Procedure Act ("APA") presupposes that judges, not juries, review agency decisions.[3] The Supreme Court has held that there is no constitutional right to jury review of administrative agency decisions.[4] And as the Supreme Court held in 1999, the PTO is an administrative agency subject to the normal rules of the APA.[5]

The result is a puzzle. Why do we assume that juries will review PTO decisions when we don't do so in other areas of law? The answer can't

[1] I reviewed all 624 patent trials held in the United States between January 1, 2000 and June 30, 2011, using data collected from Lex Machina. Of those, 466, or 74.7%, were jury trials. Many of the remainder were pharmaceutical cases in which no damages were at stake and therefore no right to a jury trial existed. See Mark A. Lemley et al., Rush to Judgment? Trial Length and Outcomes in Patent Cases, 41 AIPLA Q.J. 169, 172, 174 (2013).

[2] See, e.g., id. at 171.

[3] Administrative Procedure Act, 5 U.S.C. § 706 (2006).

[4] Atlas Roofing Co. v. Occupational Safety & Health Review Comm'n, 430 U.S. 442, 455 (1977); Cox v. United States, 332 U.S. 442, 453 (1947).

[5] Dickinson v. Zurko, 527 U.S. 150, 154–55 (1999).

be that "we've always done it that way," because that's not true. For much of American history, and as recently as forty years ago, less than five percent of patent trials were before juries at all. Indeed, even today we don't always let juries determine patent validity; validity can be determined in a bench trial in a number of instances, and by administrative agencies with no trial at all in still others.[6]

Perhaps the answer is "the Seventh Amendment requires it because we did it that way in 1791,"[7] though—surprisingly—no precedential opinion has ever resolved this question. But as I show in this Article, the history is rather more complicated. Juries did evaluate the validity of some (though by no means all) patents in the eighteenth century, but they didn't review the work of an administrative agency in the sense they do today. Further, a jury's determination that a patent was invalid simply provided a personal defense to infringement; it didn't mean (as it does today[8]) that the patent was nullified. Indeed, judgments that a patent was invalid as to everyone were the province of the writ of *scire facias*, which required petitioning the King or, in one early American case, Congress. *Scire facias* actions were conducted in chancery, not law, courts, though they were treated as actions at law.

Curiously, while the right to a jury trial on patent validity issues is widely assumed, there is in fact no solid support in modern case law for such a right. The one case to hold that there was such a right, the Federal Circuit panel opinion in *In re Lockwood*,[9] drew a sharp dissent from three members of the appellate court,[10] was taken on certiorari by the Supreme Court, and was then vacated by that Court after the patentee

[6] See infra Sections II.B–D.

[7] The Seventh Amendment provides that:

> 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.

U.S. Const. amend. VII.

Accordingly, courts considering whether the Seventh Amendment compels a jury trial have asked whether the cause of action and remedy are ones that courts in England in 1791 would have tried to a jury. See infra Section I.A.

[8] See Blonder-Tongue Labs. v. Univ. of Ill. Found., 402 U.S. 313, 350 (1971) (holding that invalidation of patent estops patentee from later asserting that patent against third parties).

[9] 50 F.3d 966, 980 (Fed. Cir. 1995).

[10] Id. at 980–81 (Nies, J., dissenting).

withdrew its jury trial demand rather than face Supreme Court review.[11] Nonetheless, both courts and lawyers have based two decades of practice on that uncertain foundation. The resulting practice is a hybrid one that is hard to link to any historical practice. I argue that the time is ripe for Supreme Court review of the putative right to have a jury decide whether patents are valid. When the Court does take the case, it is unlikely to find such a right to exist in the broad form lawyers and judges currently assume, though how the Court will rule may depend on the lens it uses to think about the Seventh Amendment.

A patent system without a right to jury trial on validity would look rather different than it does today. Many of the changes would be desirable. Litigation would be simpler in some respects, and outcomes might look rather different. And while it is probably unthinkable to most patent lawyers that many patent cases would be tried to judges rather than juries, the facts that we decided patent cases without juries for most of our history, that no other country in the world (even England) uses juries to decide patent validity, and that we have developed a number of administrative patent revocation mechanisms that parallel the jury system, suggest that the patent system can and will survive in a world without jury trials on validity. If, on the other hand, the Court decides there is a constitutional right to have juries decide validity, today's courts are not applying it broadly enough, and many of the things we treat as equitable would have to be tried to juries.

Because the right to a jury trial is a function of English legal practice at the founding of the Republic, I begin in Part I by reviewing the treatment of patent validity in England in the late eighteenth century, the period that matters for Seventh Amendment analysis. Part II considers the practice in the United States, noting the early divergence between English and U.S. practice. Part II also explores the period from 1836 to 1938, the period during which both the modern patent system and the modern administrative state came into being and in which juries essentially disappeared from the patent landscape. It then turns to the changes that have occurred since the merger of law and equity in 1938, including the quite recent rise of the jury in patent cases, and the surprising dearth of cases considering whether there is a constitutional right to a jury trial on patent validity. Finally, in Part III, I consider how the Supreme Court

[11] Am. Airlines v. Lockwood, 515 U.S. 1182, 1182 (1995); John F. Duffy, The Federal Circuit in the Shadow of the Solicitor General, 78 Geo. Wash. L. Rev. 518, 523 (2010).

might decide the issue in light of this history, what a decision in either direction would mean for patent practice, and what the decision would tell us about how to understand the Seventh Amendment.

I. THE JURY'S ROLE IN EVALUATING PATENT VALIDITY AT THE TIME OF THE FOUNDING

A. Why Do We Care What Courts Did in England 230 Years Ago?

Before I delve into the history of jury trials in patent cases, it is worth asking why we should care. The answer lies in the Seventh Amendment, which provides: "In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved . . . ."[12] The term "preserved" has been interpreted by the Supreme Court to require an historical inquiry into what the practice was at common law in 1791, when the amendment was passed. As the Supreme Court put it in *Baltimore & Carolina Line v. Redman*, "The right of trial by jury thus preserved is the right which existed under the English common law when the Amendment was adopted."[13] This is not simply a matter of constitutional originalism—a desire to be faithful to the intent of the Founders. Rather, the Court views the Seventh Amendment right to a jury trial as affirmatively based on history, and hence unchanging in a sense different from other constitutional provisions. The relevant question is what existed to be "preserved" in 1791.[14]

In determining whether the Constitution requires a matter be tried to a jury, the Court asks:

> [F]irst, whether we are dealing with a cause of action that either was tried at law at the time of the founding or is at least analogous to one that was. If the action in question belongs in the law category, we then

[12] U.S. Const. amend. VII.

[13] Balt. & Carolina Line, Inc. v. Redman, 295 U.S. 654, 657 (1935); see also Curtis v. Loether, 415 U.S. 189, 193 (1974) ("[T]he thrust of the [Seventh] Amendment was to preserve the right to jury trial as it existed in 1791 . . . .").

[14] United States v. Wonson, 28 F. Cas. 745, 750 (C.C.D. Mass. 1812) (No. 16,750) (Story, J.). For discussion of this historical test, see, for example, Darrell A.H. Miller, Text, History, and Tradition: What the Seventh Amendment Can Teach Us About the Second, 122 Yale L.J. 852, 872–93 (2013); Charles W. Wolfram, The Constitutional History of the Seventh Amendment, 57 Minn. L. Rev. 639, 639–43 (1973).

> ask whether the particular trial decision must fall to the jury in order to preserve the substance of the common-law right as it existed in 1791.[15]

Several facts about this inquiry are notable for our purposes. First, the question is what courts *in England* did at the time of the Founding, not necessarily what state or federal courts in the new United States did in the early days of the Republic. While early U.S. practice is relevant because it may shed light on the norms that prevailed in England, and because courts at the time generally thought they were elucidating a single natural law, it was the English jury trial that the Seventh Amendment sought to preserve.[16] As we will see, English and American patent practice diverged in important respects soon after 1791, so the focus on English practice is significant.

Second, courts in England in 1791 were divided between courts of law and courts of equity. Only courts of law could convene juries; equity or chancery courts had no power to do so.[17] Thus, the right of jury trial that the Seventh Amendment preserved "in Suits at common law" was only applicable to causes of action that were tried in England in the law courts in 1791. Some actions in England were entirely legal, and others were entirely equitable. But for a number of actions, plaintiffs could proceed either in law or in equity, depending on what sort of remedy they sought: damages (awardable only in law) or an injunction (awardable only in equity). The matter is even more complicated than that, because the English equity courts—the courts of chancery—had some subsidiary jurisdiction over legal matters as well. Thus, not only the nature of the action asserted but also the court in which it was filed and the remedy sought would determine whether an action was one at common

[15] Markman v. Westview Instruments, 517 U.S. 370, 376 (1996) (citation omitted).

[16] Granfinanciera, S.A. v. Nordberg, 492 U.S. 33, 42 (1989); Tull v. United States, 481 U.S. 412, 417–18 (1987); *Balt. & Carolina Line*, 295 U.S. at 657; Dimick v. Schiedt, 293 U.S. 474, 476 (1935). For discussion outside the patent context, see Patrick Devlin, Jury Trial of Complex Cases: English Practice at the Time of the Seventh Amendment, 80 Colum. L. Rev. 43, 72–77 (1980), and James Oldham, On the Question of a Complexity Exception to the Seventh Amendment Guarantee of Trial by Jury, 71 Ohio St. L.J. 1031, 1032 (2010).

[17] Indeed, in instances when an English chancery court wished to convene a jury to provide an advisory verdict, it had to suspend the chancery proceedings, request that the King's Bench (a law court) summon a jury, and then have the King's Bench remand the case to chancery to deliver a judgment. See 3 Edward Coke et al., A Systematic Arrangement of Lord Coke's First Institute of the Laws of England 328 n.D (London, S. Brooke 1818); Edward Coke, The Fourth Part of the Institutes of the Laws of England; Concerning the Jurisdiction of the Courts 79 (London, W. Clarke & Sons 1817); 1 William Holdsworth, A History of English Law 452 (6th ed. 1938).

law in England in 1791. The United States, by contrast, did not divide the federal courts into separate law and equity benches, though federal judges would sit either in law or in equity, not both, for much of the nineteenth century.

Finally, as the Court noted in *Markman v. Westview Instruments*, the relevant question for Seventh Amendment purposes is not merely whether an action was tried in the law courts in England in 1791, nor even just the nature of the remedy sought, but whether the particular issue presented was one the court deemed necessary to be decided by the jury in order to preserve the substance of the jury trial right.[18] Accordingly, as the Supreme Court has noted, "The Seventh Amendment question depends on the nature of the *issue* to be tried rather than the character of the overall action."[19]

While *Markman* expresses a historical view based on the law-equity distinction, that is far from the only basis on which the Supreme Court has decided Seventh Amendment cases. Elsewhere, the Court has suggested a second distinction: It may be the nature of the remedy, rather than the nature of the action, that determines the issue.[20] *Markman* suggests that a third distinction—whether a question is one of law or of fact—may also play a significant role in the analysis, since cases that presented purely legal rather than factual issues were not generally given to juries even if they were argued in the law courts.[21] Finally, the Seventh Amendment analysis seems to turn on a fourth issue—whether the rights at issue are public or private rights. A jury trial is not required where public rights are at issue, which may explain why administrative agency decisions are not traditionally subject to a jury's review.[22]

The result is a bit of a judicial hodgepodge, in which the issue presented, the remedy sought, the court in which it was traditionally sought

[18] 517 U.S. at 376–78.

[19] Ross v. Bernhard, 396 U.S. 531, 538 (1970) (emphasis added).

[20] *Tull*, 481 U.S. at 417–18.

[21] 517 U.S. at 376, 378, 384, 388, 391 (focusing on whether claim construction was a question of law, fact, or a "mongrel practice" at English common law).

[22] Granfinanciera, S.A. v. Nordberg, 492 U.S. 33, 42 n.4 (1989) ("If a claim that is legal in nature asserts a 'public right,' . . . then the Seventh Amendment does not entitle the parties to a jury trial if Congress assigns its adjudication to an administrative agency or specialized court of equity. The Seventh Amendment protects a litigant's right to a jury trial only if a cause of action is legal in nature and it involves a matter of 'private right.'" (citation omitted)); Atlas Roofing Co. v. Occupational Safety & Health Review Comm'n, 430 U.S. 442, 450 (1977).

in England, whether the question is one of fact or law, and the public interest in the outcome all play a role at various times and in various cases.

B. English Patent Practice Before the Revolution

Invention patents in England originated in the 1500s as a means for the Crown to lure immigrants with desirable skills to England by offering them an open letter of privilege from the Crown.[23] Patents in this period were not granted merely to new inventions, or even to ideas newly imported from elsewhere. Particularly during the reign of James I, exclusive patent rights were granted to favored merchants for a wide variety of common arts, including the making of playing cards[24] and the running of taverns.[25] Royal favor rather than inventive acumen drove the grant of patents during the late sixteenth and early seventeenth centuries.[26]

Abuses of the patent right were common during that period. One curious case involved Mompesson and Mitchell, who held the exclusive patent for making gold and silver lace. After Parliament heard complaints of their abuses—which included making inferior lace from copper and seeking imprisonment of infringers who actually made real gold lace—the King revoked the patent and the House of Lords punished Mompesson and Mitchell.[27] This was one of the abuses that led Parliament to pass the Statute of Monopolies of 1623, which outlawed most patents and other exclusive privileges other than patents for invention.[28]

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[23] See, e.g., Ramon A. Klitzke, Historical Background of the English Patent Law, 41 J. Pat. Off. Soc'y 615, 623–24 (1959) (discussing how patents were like passports granted to productive foreigners in the sixteenth century); Adam Mossoff, Rethinking the Development of Patents: An Intellectual History, 1550–1800, 52 Hastings L.J. 1255, 1259–60 (2001) (same). Indeed, the term "letters patent" derives from the Latin "pateo" or "patere," meaning "to lie open," a reference to the public nature of the granting document. Mossoff, supra, at 1259; see also Webster's Third New International Dictionary 1654 (1976).

[24] The Case of Monopolies, (1602) 77 Eng. Rep. 1260 (K.B.) 1260; 11 Co. Rep. 84a, 8b.

[25] Robert Patrick Merges & John Fitzgerald Duffy, Patent Law and Policy: Cases and Materials 5 (5th ed. 2011).

[26] For a discussion of this history and how it began to change, see Mossoff, supra note 23.

[27] The case is reported in Lewis Edmunds, The Law and Practice of Letters Patent for Inventions 7–8 (London, Stevens & Sons, Ltd. 1890). As Edmunds reports it, after the King revoked the patent, "[t]he Lords confiscated the estate of Mompesson, who had escaped, and degraded him of his knighthood. Mitchell was also degraded, fined 1,000 [pounds], carried through the streets of London on a horse, with his face to the tail, and imprisoned for life." Id. at 8.

[28] Statute of Monopolies, Statutes at Large, 1623, 21 Jac., c. 3, §§ 1, 6 (Eng.).

Consistent with the idea that patents were royal grants of privilege,[29] only the King had the power to revoke a patent during this period. Neither Parliament nor the courts could do so.[30] That remained true even after the enactment of the Statute of Monopolies. Most of the decisions regarding patents after 1624 were actually made not by the King himself but by the Privy Council, a body of the King's advisors who had the power both to enforce patents and to revoke a royal patent for "inconveniency."[31] "Inconveniency" included both issues of public policy—abuse of the patent and failure to work it—and some of what we would think of today as patent validity questions—novelty of invention and prior invention by another.[32] Thus, when the Privy Council adjudicated a patent revocation proceeding against Thomas Lombe for silk engines, it considered both whether an identical engine had been made or used in England before Lombe did so, and whether the effect of the patent was to restrain trade or create a monopoly.[33]

[29] W.M. Hindmarch, A Treatise on the Law Relative to Patent Privileges for the Sole Use of Inventions: And the Practice of Obtaining Letters Patent for Inventions 3 (Harrisburg, Pa., I.G. M'Kinley & J.M.G. Lescure 1847) ("[I]nventors are *never entitled as of right* to letters patent . . . but they must obtain them from the Crown by petition, and *as a matter of grace and favour* . . . .") (emphasis in original).

[30] Thus, the dispute over the novelty of the patent for "Turkye haftes for knives" in E. Wyndham Hulme, History of the Patent System Under the Prerogative and at Common Law, 16 L.Q. Rev. 44, 45 (1900), and the ore-melting patent in *Bircot's Case* (1572), *reported in* 3 Edward Coke, The Third Part of the Institutes of the Laws of England: Concerning High Treason, and Other Pleas of the Crown and Criminal Causes 182–83 (London, E. & R. Brooke 1797), were both presented to the Privy Council. And in 1626, the Privy Council took over a common law case in which the defendant challenged a patent, denying the court jurisdiction because of the "dangerous consequence and far trenching upon the prerogative" that would result from "the strict trial of common law." Edward C. Walterscheid, The Early Evolution of the United States Patent Law: Antecedents (*Part 3*), 77 J. Pat. & Trademark Off. Soc'y 771, 774 (1995) (quoting State Papers, Domestic (1626)).

[31] Statute of Monopolies, c. 3, § 6; see Oren Bracha, Owning Ideas: A History of Anglo-American Intellectual Property 21–23 (June 2005) (unpublished S.J.D. dissertation, Harvard Law School), available at http://www.utexas.edu/law/faculty/obracha/dissertation.

[32] Bracha, supra note 31, at 21–23; see also id. at 59 ("[A]rguments about novelty and priority of invention were indiscriminately used alongside arguments about specific social benefits and harmful effects associated with an invention."). Indeed, Lord Coke gave as an example of an "inconvenient" patent a new mill that would have replaced workers and, because of its efficiency, "turn[ed] so many laboring men to idleness." Edward Coke, supra note 30, at 183–84. That surely has nothing to do with the validity of the patent; it represents a (bad) public policy judgment.

[33] National Archives Public Record Office (PRO) PC 2/86, fo. 294. This case is reported in S.D. Bottomley, Patent Cases in the Court of Chancery, 1714–1758, J. Legal Hist. (forthcoming 2013) (manuscript at 1–3).

The Privy Council was the primary means for revoking patents until as late as 1753.[34] It also started out with primary responsibility for enforcing patents. But as grants of invention patents became more common in the 1700s, the English courts increasingly found themselves adjudicating infringement suits. In some of those suits, accused infringers called into question the validity of the underlying patent, either on the ground that it had not been granted to the true inventor or that the inventor had not sufficiently described the invention.[35] Both law and equity courts could hear such defenses in England during the 1700s, though patent cases before 1750 appear to have been brought primarily in equity.[36] But unlike validity disputes as we understand them today, such a defense was not a challenge to the patent itself. At most a court could deny relief to the patentee in the case before it because it believed the patent did not comply with the law; it had no power to revoke the patent or to prevent a patent from being asserted against other defendants in subsequent cases.

[34] See, e.g., Christine MacLeod, Inventing the Industrial Revolution: The English Patent System, 1660–1800, at 19 (1988); E. Wyndham Hulme, Privy Council Law and Practice of Letters Patent for Invention from the Restoration to 1794, 33 L.Q. Rev. 63, 63, 193 (1917) (suggesting that the Privy Council had primary jurisdiction over patent law until 1753 and continued to have concurrent jurisdiction until 1794). For discussion of the role of the Privy Council, see Mossoff, supra note 23, at 1275–88.

Sean Bottomley offers evidence that the Court of Chancery was more involved in patent matters than previously thought during the first half of the eighteenth century. Bottomley, supra note 33, at 1 (arguing that chancery courts were the primary means of enforcing patents during the first half of the eighteenth century). Notably, Bottomley is discussing primarily patent enforcement, not patent revocation efforts. The first reported patent *scire facias* actions are *Rex v. Jacob* in 1782 and *Rex v. Arkwright* in 1785, 1 James Oldham, The Mansfield Manuscripts and the Growth of English Law in the Eighteenth Century 734, 767 (1992), though it seems clear that the procedure was well established before then in unreported decisions.

[35] Notably, England had no system for formal examination of patents at that time. While the Crown traditionally granted patents, by the latter half of the eighteenth century it did so in response to a pro forma registration system. An inventor who wanted a patent had to jump through many hoops to obtain one, but each of those hoops was procedural. No government official substantively examined the invention to decide if it was worthy of a patent. See Walterscheid, supra note 30, at 779–80.

[36] Edward Walterscheid reports that before 1750, "[t]here are almost no records of common law actions and not many of actions at equity." Edward C. Walterscheid, The Early Evolution of the United States Patent Law: Antecedents (*Part 4*), 78 J. Pat. & Trademark Off. Soc'y 77, 100 (1996). But he is referring to reported decisions, and there is good evidence suggesting that there were many unreported decisions during that time. Bottomley, supra note 33, at 7; cf. H. Tomás Gómez-Arostegui, The Untold Story of the First Copyright Suit Under the Statute of Anne in 1710, 25 Berkeley Tech. L.J. 1247, 1331–38 (2010) (discussing some of the unreported copyright cases during this period). Gómez-Arostegui estimated to me that there are hundreds of such unreported cases.

In 1753, after a particularly complex patent case proceeded simultaneously in the Privy Council (via a request for revocation) and in the English courts (via a perjury proceeding based on testimony offered to the Privy Council), the Council granted the courts concurrent jurisdiction to revoke a patent.[37] Under this post-1753 procedure, a party that wanted to revoke a patent proceeded by a writ of "*scire facias*," a writ that started out in the 1200s as a rough equivalent to the modern-day "order to show cause."[38] The court could issue a writ of *scire facias*, requiring the owner of the patent to appear in court and defend the patent, lest the court issue an order to the Crown revoking the patent for inconveniency.[39] Because the Crown granted the patent in the first instance, it was thought to have an interest in the proceeding, and so the Attorney General was a party and had to approve the proceeding,[40] but any citizen could bring a *scire facias* action as of right in the name of the Crown.[41] *Scire facias* was not the only way to revoke a patent—the Privy Council retained that power as well until 1847—but it was the only judicial means to revoke a patent.[42] And once

[37] Bracha, supra note 31, at 60 n.127. Bottomley suggests that the case in question, involving a medicine patent by one Dr. James, constituted an embarrassment for the Privy Council because it ruled in the patentee's favor despite overwhelming evidence of prior invention, and that evidence was later published by the losing party. Bottomley, supra note 33, at 4.

[38] Statute of Westminster, 2d, 1285, 13 Edw., c. 11, 39, *printed in* 1 The Statutes of the Realm 71 (n.p., 1810). "*Scire facias*" literally means "you are to make known." Black's Law Dictionary 1464 (9th ed. 2009). For detail on *scire facias*, see Thomas Campbell Foster, A Treatise on the Writ of Scire Facias *2–7 (London, V. & R. Stevens & G.S. Norton 1846).

[39] English *scire facias* actions were available not only for what we would today call inequitable conduct ("fraud"), but also for invalidity of the patent grant. 2 William C. Robinson, The Law of Patents for Useful Inventions § 726 (Boston, Little, Brown, & Co. 1890).

[40] William Hands, The Law and Practice of Patents for Inventions 16 (London, W. Clarke & Sons 1808) ("[A] writ of scire facias . . . issues out of the Court of Chancery, at the instance of any private person, but in the name of the King, leave to issue it must therefore be previously obtained from the Attorney General.").

[41]

> "Where a patent is granted to the prejudice of the subject, the king, *of right*, is to permit him upon his petition to use his name for the repeal of it." Every person is presumed to have such an interest in a patent for an invention that, if he alleges that it is illegal or void, he is entitled, as of right, to a *scire facias in the name of the queen*, in order to repeal it.

Attorney Gen. ex rel. Hecker v. Rumford Chem. Works, 32 F. 608, 618 (C.C.R.I. 1876) (quoting R v. Butler, (1685) 83 Eng. Rep. 659 (K.B.) 659–61; 3 Lev. 220, 220–23) (citing Queen v. Aires, (1717) 88 Eng. Rep. 762 (K.B.); 10 Mod. 354). Professor Helen Gubby argues that *scire facias* actions were often brought at the instance of competitors. Helen Gubby, Developing a Legal Paradigm for Patents 20 (2012).

[42] *Rumford Chem. Works*, 32 F. at 619 ("No instance can be found, it is believed, of any other proceeding in England than a *scire facias* to repeal letters patent for an invention.");

the courts had the power to adjudge patent validity, the Privy Council largely got out of the business of doing so; it last revoked a patent in 1779, and few applications for revocation were filed after that time.[43]

The writ of *scire facias* "is in nature of a bill in Chancery" in patent cases.[44] Indeed, the title "chancellor" was thought by Lord Coke to derive from the Latin *cancellando*, applied because of the power of the chancellor to cancel letters patent of the king.[45] Accordingly, in England in the eighteenth century, only chancery courts had the power to revoke a patent upon request of a private citizen.[46] And chancery courts had no power to convene a jury.[47]

Hindmarch, supra note 29, at 64 ("The only means which the law provides for the repealing of letters patent, is by action of *scire facias* at the suit of the Queen.").

[43] Bracha, supra note 31, at 61 n.129; Hulme, supra note 34, at 193–94.

[44] 8 Matthew Bacon, A New Abridgement of the Law 620 (Henry Gwyllim et al. eds., Philadelphia, T. & J.W. Johnson rev. ed. 1852) (1809); 3 William Blackstone, Commentaries *260–61 ("Where the Crown has unadvisedly granted anything by letters patent, which ought not to be granted, or where the patentee has done an act that amounts to a forfeiture of the grant, the remedy to repeal the patent is by writ of *scire facias* in chancery."); William Hands, The Law and Practice of Patents for Inventions 16 (London, W. Clarke & Sons 1808) (stating a patent "may be absolutely *vacated* on a writ of scire facias, which issues out of the Court of Chancery"); Y.B. 12 & 13 Edw. 3 cvii. (1338), *reprinted in* Year Books of the Reign of King Edward III, at cvii (Luke Owen Pike ed., London, Longman & Co. 1885); cf. Foster, supra note 38, at v (noting that the writ of *scire facias* is "required in a great variety of instances, the practice in each being distinct, and in many of them depending on different rules"). Patent *scire facias* actions, then, could be brought only in chancery. But the chancery court, while a court of equity, also held a subsidiary legal jurisdiction—the so-called Petty Bag jurisdiction. See *Rumford Chem. Works*, 32 F. at 618. *Scire facias* actions seem to have been part of the chancery court's subsidiary common law jurisdiction. Theodore F.T. Plucknett, A Concise History of the Common Law 392 n.2 (5th ed. 1956) ("There seem no grounds for the suggestion . . . that there is anything 'equitable' about *scire facias*.").

[45] Coke, The Fourth Part of the Institutes of the Laws of England, supra note 17, at 88 (describing the "highest point of [the chancellor's] jurisdiction" as being "to cancell the kings letters patents under the great seal, and damming the inrolment thereof, by drawing strikes through it like a lettice"); 1 Joseph Story, Commentaries on Equity Jurisprudence as Administered in England and America § 40 (W.H. Lyon, Jr. ed., 14th ed. 1918) (1877). By contrast, some modern etymology traces the term to the Latin "*cancellarius*" and early English "canceler," meaning "man at the barrier." Random House Unabridged Dictionary 344 (2d ed. 2005).

[46] The Crown, by contrast, could initiate a proceeding either in chancery or in the King's Bench, under the principle that "the King, by his prerogative, may sue in what Court he pleases." Magdalen College Case, (1615) 77 Eng. Rep. 1235 (K.B.) 1247–48; 11 Co. Rep. 66 b, 74 b–75 a.; AG v. Vernon, (1684) 23 Eng. Rep. 468 (Ch.) 469–70; 1 Vern. 277, 277–81. *Vernon* was a suit to cancel a patent brought in equity, not law, though that seems to be because the patent was recorded in the records of the Chancellor of the Duchy of Lancaster rather than in the Court of Chancery, so the normal writ of *scire facias* was thought not to apply. Id.

[47] 3 Coke et al., supra note 17, at 328.

That does not mean, however, that juries had no role in deciding the validity of patents in eighteenth-century England. Juries could pass on the validity of a patent in two circumstances. First, a chancery court might seek the advice of a jury in assessing the facts underlying a *scire facias* petition. Because chancery courts could not summon juries, the procedure in such a case was to have the Lord Chancellor deliver the record to the King's Bench for a jury trial and return the verdict to the Chancellor for consideration and judgment.[48] We have little evidence on how common this practice was in England in the 1700s, because there are few records of *scire facias* proceedings before 1785.[49] At least *R. v. Arkwight* and *Else* were sent by the Court of Chancery to the King's Bench for a jury trial, and it seems likely that others were as well. This practice is consistent with the idea that the jurisdiction of the chancery courts over *scire facias* actions was legal, not equitable. The Chancellor remained responsible for rendering judgment, though how much power the court had to ignore the jury verdict remained unclear until well into the nineteenth century.[50]

Second, and more commonly, when a patentee sued for damages at common law rather than seeking an injunction in equity, matters of fact—including what factual issues existed concerning validity—were given by the law courts to the jury.[51] This practice was fairly widespread by 1791; there are a number of English cases around that period in which a jury passed on either the novelty of the invention or the adequa-

[48] Holdsworth, supra note 17, at 452.

[49] That is not to say there were no such proceedings; rather, the problem is that they were not reported and are very hard to find. Starting in the late eighteenth century, reporting practices improved, and we have records of six patent *scire facias* actions between 1785 and 1800: Rex v. Arkwright, (1785) 1 CPC 53 (K.B.); R v. Eley, (1790) Times (Lon.), Dec. 9, 1790, at 3; Rex v. Else, (1785) 1 CPC 104 (K.B.); R v. Miles, (1797) Times (Lon.), Feb. 21, 1797, at 3; Rex v. Boileau (1799); Rex v. Jacob (1782); see also 1 Oldham, supra note 34, at 767.

[50] In 1846, in *Bynner v. The Queen*, (1846) 115 Eng. Rep. 1373, 1387; 9 Q.B. 523, 553, the Exchequer Chamber (the appeals court above the King's Bench) reviewed conflicting decisions on the power to revoke a patent and concluded that where a jury had found a patent invalid on referral from the Court of Chancery, the actual cancellation of the patent by the Chancery Court was "a mere ministerial act" the court was compelled to perform. On the advisory nature of a jury in equity practice, see, for example, 2 Joseph Story, Commentaries on the Constitution of the United States 553 (Melville M. Bigelow ed., William S. Hein & Co. 5th ed. 1994) (1891); Fleming James, Jr., Right to a Jury Trial in Civil Actions, 72 Yale L.J. 655, 655, 665 (1963).

[51] Patentees could—and frequently did—request a "special jury": that is, a jury composed entirely of lords and gentlemen, rather than commoners. Gubby, supra note 41, at 25–26.

cy of the patentee's written specification.[52] Indeed, even patent enforcement actions brought in chancery courts were often referred to the law courts for trial of patent validity when it was disputed.[53]

Before concluding from cases like *Boulton & Watt* and *Liardet* that modern patent validity claims require a jury trial under the Seventh Amendment, however, it is worth noting several differences between patent practice in England at the time and modern patent validity litigation. First, a ruling in the law courts could not invalidate a patent altogether, as a ruling of invalidity does today.[54] In the law courts, invalidity as we understand it today didn't exist. The doctrines we think of today as rendering a patent invalid instead provided personal defenses to a particular infringer. But a finding that such a defense applied had no application beyond that particular case. Patentees in eighteenth-century England could—and did—file suit to enforce a patent even after a court had concluded that the patent was invalid. Indeed, in the *Arkwright* cases, the patentee sued Mordaunt and lost for an inadequate specification, then sued Nightingale on the same patent and won, and then was sued by the government in a *scire facias* action and lost.[55]

[52] See, e.g., Boulton & Watt v. Bull, (1795) 126 Eng. Rep. 651 (C.P.) 656, 660; 2 H. BL. 463, 473, 480 (adequacy of specification was for jury to decide); Tennant, (1802), *in* John Dyer Collier, An Essay on the Law of Patents for New Inventions 117, 117 (London, A. Wilson 2d ed. 1803); Liardet v. Johnson, (1780) 62 Eng. Rep. 1000 (K.B.) 1002; 1 Y. & C. C. C. 527, 529–30 (novelty and adequacy of specification both submitted to the jury along with infringement); Hulme, supra note 34, at 283–88 (discussing *Liardet*). However, in *Boulton & Watt*, the issue seems to have been merely whether the specification was clear enough for the jury to understand it, not whether it violated what we would think of today as the enablement requirement. 126 Eng. Rep. 651 (C.P.) at 660; cf. 35 U.S.C. § 112(a) (2006) (requiring "exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same"). Some have also argued that *Liardet* represented a sharp break with the past in requiring a written specification sufficient to educate the reader about the invention. See John N. Adams & Gwen Averley, The Patent Specification: The Role of *Liardet v. Johnson*, 7 J. Legal Hist. 156, 156–59 (1986).

[53] Thus, in *Kay v. Mills* (1747), PRO C33/383, fo. 698, the Chancery Court granted an injunction, but only for a year, pending resolution of an action at common law where the parties were "to be bound by the event of such tryall of such action as to the validity of the said letters patent."

[54] See Blonder-Tongue Labs. v. Univ. of Ill. Found., 402 U.S. 313, 334, 350 (1971) (establishing the principle that a patentee whose patent is held invalid in court cannot sue others for infringing the same patent).

[55] Arkwright v. Nightingale, (1785) Dav. Pat. Cas. 37 (C.P.) 37–39, 60 (finding specification of the same patent sufficient; jury trial); R v. Arkwright, (1785) 1 Hayward's Pat. Cas. 263 (K.B.) (revoking patent in *scire facias* claim instituted by twenty-two makers of cotton goods challenging the Arkwright patent); Arkwright v. Mordaunt, (1781) (unreported) (cited in R v. Arkwright (1816) Dav. Pat. Cas. 61 (C.P.) 69) (finding specification insufficient; jury

Courts trying private patent disputes didn't worry too much about the validity of the patents; they viewed the private suit as a commercial dispute between two parties, not as something that implicated larger public interests. As Lord Loughborough wrote in *Arkwright v. Nightingale*:

> [N]othing could be more essentially mischievous than that questions of property between A. and B. should ever be permitted to be decided upon considerations of public convenience or expediency. The only question that can be agitated here is, which of the two parties in law or justice ought to recover?[56]

That is not to say that the English courts thought patents had no public significance; rather, the courts treated the public interest in invalidating bad patents as a matter for a *scire facias* proceeding, as indeed later happened in *Arkwright*.

The only way to actually invalidate a patent in the modern sense of the word was to bring a *scire facias* action for revocation. And it was the Chancellor, not the jury, who held the final power to revoke a patent using *scire facias*. The fact that *scire facias* was a common law proceeding conducted in the first instance in an equity court meant that the distinction between legal and factual issues was more important than in the law courts. While chancery courts could and did refer validity questions to juries at common law, they did so only when there was a disputed issue of fact that was necessary to the resolution of the validity issue.[57] They

trial). The cases can be found in John Davies, A Collection of the Most Important Cases Respecting Patents of Invention and the Rights of Patentees 37, 61, 69 (London, W. Reed 1816). For discussions, see John Hewish, From Cromford to Chancery Lane: New Light on the Arkwright Patent Trials, 28 Tech. & Culture 80, 80–86 (1987) (discussing the *Arkwright* cases); Waltersheid, supra note 36, at 101–02 n.132 (same).

[56] Arkwright v. Nightingale, (1785) 1 Web. P.C. 60 (C.P.) 61.

[57] See *The Queen v. Neilson*, (1842) 1 Web. P.C. 665 (Ch.) 668:

> [T]his writ issues from the common law side of the Court of Chancery–it is returnable in Chancery; and being issued and returnable in that manner, the Chancellor has jurisdiction. In some cases, all the further proceedings are before the Chancellor, as, if there be a demurrer; and it is only when there are issues in fact that the record is sent to the Court of Queen's Bench.

See also Coke, The Fourth Part of the Institutes of the Laws of England, supra note 17, at 79:

> The Chancery "hath power to hold plea of [*scire facias*] for repeal of the kings letters patents . . . . In these if the parties descend to issue [of fact], this court cannot try it by jury, but the lord chancelour or lord keeper delivereth the record by his proper hands into the kings bench to be tried there; . . . and after triall had to be remanded into the chancery, and there judgement to be given. But if there be a demurrer in law, it shall be argued and adjudged in" the Court of Chancery.

decided legal issues for themselves. And the question of invalidity was not itself a question of fact. Rather, as the court said in *Arkwright*, the question of whether a patent was "contrary to the law, and mischievous to the state, and therefore void . . . was merely a consequential one; it stated no fact which could be tried by a jury."[58] Similarly, in *Hill v. Thompson*, Lord Eldon stated that while the question of whether the description of the invention could be understood, was a fact question, the question of "whether or not the patent is defective in attempting to cover too much, [was] a question of law."[59] The House of Lords affirmed a number of *scire facias* revocations by the chancery court in the period before 1791 without finding a jury necessary.[60] Whether a jury was convened, then, depended on whether the case required resolution of a disputed issue of fact.[61]

Second, the scope of the patent right was very different in the eighteenth century than it is today, and accordingly so was the nature of validity proceedings. Patents today are defined by the scope of legal "claims" written by patent lawyers and approved by the PTO. Those claims are peripheral in nature; that is, they attempt to set the outer bounds of the patentee's legal right, in much the same way that a fence

See also 3 Blackstone, supra note 44, at *49 ("[I]f any cause comes to issue in this court, that is, if any fact be disputed between the parties, the chancellor cannot try it, having no power to summon a jury; but must deliver the record . . . into the court of king's bench . . . .").

[58] R v. Arkwright, (1785) 1 CPC 53 (K.B.) 61, *reported in* 1 Thomas Robert Williams, An Abridgement of Cases Decided in the Courts of Law 93 (London, 1798). In *R v. Arkwright*, Justice Buller rejected the idea that the jury should be given the question of inconvenience: "It is a question of law whether it is prejudicial or not." Id.; see also Collier, supra note 52, at 124. But while the court there refused to present the issue of inconvenience to the jury, it did so in part because the government's argument was made as a legal matter and the government had not pled particular facts to support that conclusion. To similar effect is *R v. Butler*, (1685) 83 Eng. Rep. 659 (K.B) 660–61; 3 Lev. 220, 221–22, where the Crown proceeded in chancery to annul a patent using *scire facias*, and the House of Lords approved the procedure, noting that a jury was unnecessary.

[59] Hill v. Thompson, (1817) 36 Eng. Rep. 239 (Ch.) 242; 3 Mer. 622, 630.

[60] R v. E. Archipelago Co., (1853) 118 Eng. Rep. 452 (K.B.) 452; 1 EL. & BL. 310, 310; Cumming v. Forrester, (1820) 37 Eng. Rep. 656 (Ch.) 657; 2 JAC. & W. 334, 338; R v. Aires, (1717) 88 Eng. Rep. 762 (K.B.) 762; 10 Mod. 354, 354; *Butler*, (1685) 85 Eng. Rep. 659 (K.B) 659–61; 3 Lev. 220, 221–22; see also Hindmarch, supra note 29, at *401–02.

[61] When there was a disputed issue of fact and also a question of law, the Court of Chancery could choose to transmit the whole record to the King's Bench and have the King's Bench rule on the legal question. Jeffreson v. Morton, (1668) 85 Eng. Rep. 540 (K.B.) 575–78; 2 Wms. Saund. 6, 23, 24–28. But it was the judge, not the jury, who ruled on the legal issue in King's Bench.

might bound real property.[62] Patentees accordingly seek to write patent claims that are as broad as possible. And that breadth makes patent claims more likely to be invalid, because the patent must be for a new invention, and "that which infringes if later anticipates if earlier."[63] Put another way, a patent in the eighteenth century covered a specific machine. A patent today covers a potentially limitless group of machines that fit within the words of the claims. Because today's claims are broader, they are more likely to be invalid because they include within them machines that others have already invented. Further, because the patentee must describe and enable one of skill in the art to make and use the "full scope" of the patent claims, broader patent claims are more vulnerable to rejection for an insufficient description.[64]

By contrast, patents in the eighteenth century didn't have claims at all. The focus on the invention was not on how broadly the patentee claimed the principle but on the machine the patentee had in fact made.[65] Under this "central claiming" system, a patent was much less likely to be invalid for overreaching.[66] The invention was novel unless someone else happened to have built the very same machine before. There was no concept of "obviousness" of a novel invention,[67] which is the invalidity doctrine that today we think of as the "ultimate condition" of patentability.[68] And while courts in the eighteenth century did begin to require a written description of the invention, in a central claiming system, that description need be only of the machine the patentee actually developed, not the full range of possible devices that fit within the broad scope of a

[62] For a discussion of the move to peripheral claiming, see, for example, Dan L. Burk & Mark A. Lemley, Fence Posts or Sign Posts? Rethinking Patent Claim Construction, 157 U. Pa. L. Rev. 1743, 1748–50 (2009).

[63] Polaroid Corp. v. Eastman Kodak Co., 789 F.2d 1556, 1573 (Fed. Cir. 1986) (quoting Peters v. Active Mfg. Co., 129 U.S. 530, 537 (1889)).

[64] The Incandescent Lamp Patent, 159 U.S. 465, 474–76 (1895) (enablement); Ariad Pharm., v. Eli Lilly & Co., 598 F.3d 1336, 1341–42, 1358 (Fed. Cir. 2010) (en banc) (written description).

[65] "Prior to 1790 nothing in the nature of a claim had appeared either in British patent practice or in that of the American states." Karl B. Lutz, Evolution of the Claims of U.S. Patents, 20 J. Pat. Off. Soc'y 134, 134 (1938).

[66] Burk & Lemley, supra note 62, at 1788.

[67] John F. Duffy, Inventing Invention: A Case Study of Legal Innovation, 86 Tex. L. Rev. 1, 33 (2007) (discussing the absence of an obviousness doctrine in English law at this time). Obviousness was added to U.S. patent law by *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 265–67 (1850).

[68] See generally, John F. Witherspoon, Nonobviousness—The Ultimate Condition of Patentability (1980).

modern peripheral patent claim.[69] Indeed, English patents in the eighteenth century often didn't even have what we would recognize today as a specification, instead providing a condensed "schedule" that sketched out the invention.[70] The result was that invalidity was a much less significant issue for patent law than it is today, which explains why there were many fewer cases raising the issue, whether as a defense to an infringement suit or in a *scire facias* action. And many of the most important issues of patent law, including patentable subject matter, obviousness, statutory bars, and written description, did not exist at all in England.

Third, the role of the jury was much more circumscribed in the 1700s than it is today. Today we tend to give juries responsibility for deciding ultimate questions as long as those questions involve issues of fact. We may ask a jury to render a general verdict (vote for patentee or defendant), or perhaps to render a special verdict on an ultimate legal question (is the patent obvious?). But we don't often ask juries to rule solely on specific issues of fact, leaving the normative questions for the judge.[71]

That broad grant of authority to juries is a quite recent development in patent law. When courts gave patent issues to juries in eighteenth-century England, they did so with very specific instructions that limited the role of the jury to resolving only truly factual disputes, such as the credibility of witnesses. They did not hesitate to give the jury their opinion as to which way the facts were leaning, and they often resolved the most important issues with instructions such as "if you believe witness *X*, you must find for the plaintiff."[72] In *Arkwright v. Nightingale*, Lord Loughborough's charge to the jury was "simply whether you believe

[69] Joseph S. Cianfrani, An Economic Analysis of the Doctrine of Equivalents, 1 Va. J.L. & Tech. 1, ¶¶ 5–8 (1997).

[70] See, e.g., Edward C. Walterscheid, To Promote the Progress of Useful Arts: American Patent Law and Administration, 1798–1836, at 297 (1998); Michael J. Risch, America's First Patents, 64 Fla. L. Rev. 1279, 1288 (2012).

[71] A notable exception is the Northern District of California Model Patent Jury Instructions § 4.3b (Nov. 2011), which provide alternative instructions on obviousness, one of which asks only for rulings on specific questions of fact.

[72] For example, see 2 Thomas Green Fessenden, An Essay on the Law of Patents for New Inventions 138 (Boston, Charles Ewer 1822) (reporting Judge Stevens's charge to the jury in a patent suit by Eli Whitney over the cotton gin) ("Judge Stevens remarked . . . that from the testimony now produced, his opinion is, that the plaintiff must have received his first impressions from a machine previously in use on a similar principle; and that an improvement had been made as to the teeth, by which the merit of Mr. Whitney's invention was diminished. . . . For these reasons, Judge Stevens had some doubts whether the plaintiff ought to recover.").

five witnesses who have sworn to a positive fact."[73] Professor James Oldham suggests that these sorts of directions were common in patent cases at the time.[74] Jurors, in turn, could give their opinions on the evidence at any time, even before all the evidence had been heard,[75] a procedure that sounds bizarre to modern ears but which might reflect the rather different role the jury was thought to play in English courts at the time.

The lessons from English history, then, are somewhat equivocal. Juries did often decide factual questions underlying issues of patent validity, though their decisions were much more circumscribed in scope and in number than they are today. What we think of today as a ruling of patent invalidity—the voiding of a patent—was reserved for the chancery courts under the writ of *scire facias*. Under that writ, the case would be sent to the law courts for a jury trial only if validity depended on a disputed issue of fact.

II. AMERICAN PRACTICE

A. The Early Divergence Between English and American Practice

Early American courts, unlike their English counterparts, did not always maintain a sharp distinction between law and equity. Many, but not all, colonial courts had separate equity divisions, and the newly created federal courts gave both legal and equitable powers to the same judges, albeit sitting either "in law" or "in equity" depending on the nature of the action brought before them.

Patents existed in the colonies well before the revolution, though patents for invention were rare. The first patent in North America was granted in Massachusetts in 1641,[76] with occasional grants by various

[73] Gubby, supra note 41, at 197. Another example is the instruction of Judge Denman in *Cochrane v. Braithwaite*, 1 CPC 493, 501 (1832). He said:

> Several of the defendants' witnesses have given it as their opinion that an apparatus constructed in the manner set forth in the plaintiffs' specification would not work, but I do not think any mere opinion of this sort is to be put in competition with the positive testimony of such men as Brunel, Bramah, Birkbeck, Turrell and Partington, who all swore that they had actually seen the plaintiffs' apparatus at work.

[74] James Oldham, English Common Law in the Age of Mansfield 68 (2004).

[75] Gubby, supra note 41, at 29–30.

[76] Manufactures of the United States in 1860; Compiled from the Original Returns of the Eighth Census, Under the Direction of the Secretary of the Interior, at cxcix (Washington, Gov't Printing Office 1865) ("Salt-making was commenced at Salem in 1636, and in 1641

colonies thereafter.[77] But most patents in the colonies were grants of government privilege over land or markets, not patents for invention.[78] As was common in the colonies (though not in England), the patent was granted by the Massachusetts General Court, the colony's legislature, not by the Crown or the governor.[79] And patent litigation was apparently unknown in the colonies; I can find no report of colonial patent lawsuits or revocation proceedings before the American Revolution. Instead, if a party wanted a legislative patent grant revoked, they petitioned the legislature to do so.[80]

In the 1780s, under the Articles of Confederation, the federal government had no power to issue patents. At that time, states became more active in granting patents for invention, and different states issued competing patents covering steamboats.[81] The conflict between the steamboat inventors over patent rights issued by different states was one of the driving forces behind assigning patent rights to the federal government in the U.S. Constitution.[82]

Samuel Winslow was allowed, for 10 years, the exclusive right of making salt in Massachusetts by a new method.").

[77] Bracha, supra note 31, at 97–102.

[78] See, e.g., E. Burke Inlow, The Patent Grant 36 (1950) ("A careful study of the entire colonial period reveals that only the merest handful of patents were issued for industrial or manufacturing purposes . . . ."); Richard B. Morris, Government and Labor in Early America 33 (Columbia Univ. Press 1946) ("[T]he practice of issuing patents of monopoly to founders of new industries . . . never took deep root in the colonies.").

[79] Bracha, supra note 31, at 108 ("[T]he colonial patent grant was a somewhat haphazard institution that bore strong traces of its English origins and yet acquired different local character."). English patent owners could pay an additional fee to have their patents valid in the colonies, though only a minority ever did so, and there is no record of such a patent being enforced in the colonies.

[80] Id. at 110; cf. Livingston v. Van Ingen, 9 Johns. 507, 508–09 (N.Y. 1812) (litigating the consequences of New York's revocation of the 1787 patent to John Fitch for the steamboat and a subsequent grant to Robert Livingston; both parties assumed the legislature had the power to revoke the patent it had granted).

[81] See Jack L. Shagena, Who *Really* Invented the Steamboat? Fulton's *Clermont* Coup 113–390 (2004) (mentioning eight different inventors, including Robert Fulton, but also William Henry, James Rumsey, John Fitch, Oliver Evans, Nathan Read, Samuel Morey, and John Stephens). For discussion of these conflicts, see Michael F. Martin, The End of the First-to-Invent Rule: A Concise History of Its Origin, 49 IDEA 435, 451–53 (2009); Frank D. Prager, The Steam Boat Interference, 1787–1793, 40 J. Pat. Off. Soc'y 611, 613–15 (1958); Edward C. Walterscheid, Priority of Invention: How the United States Came to Have a "First-to-Invent" Patent System, 23 AIPLA Q.J. 263, 270 (1995).

[82] See, e.g., Robert P. Merges et al., Intellectual Property in the New Technological Age 127 (5th ed. 2010) (identifying the conflict between the states over the inventor of the

The first federal patent statute was enacted in 1790 in the first Congress.[83] Building on the English patent system, in which the Crown issued the patent, the new Patent Act provided for high-level ministerial involvement in deciding whether to grant a patent. Under the 1790 Act, three cabinet secretaries had to review each patent application, and two of them had to agree in order to issue a patent.[84] The Act provided that any party could petition a court to cancel a patent, but only for fraud or what we would describe today as inequitable conduct, and only within the first year after the patent was issued.[85] Section 6 of the Act provided that a defendant suing for infringement could raise a challenge to the adequacy of the patent specification, and its language—"verdict and judgment shall be for the defendant"—seems to contemplate juries as well as judges considering the issue.[86] Notably, however, that language disappeared from the parallel section of the 1793 Act.[87]

Only fifty-seven patents were issued between 1790 and 1793.[88] We know very little about most of them, in part because a fire destroyed early patent office records.[89] Very few of those patents were enforced before 1800, though one case was decided: a New York case at common law, but tried without a jury.[90] We do know, however, that in the one reported instance of an effort to revoke a 1790 Act patent, the complainant didn't go to court at all, in law or in equity. Instead, following the colonial practice, he went to Congress, which appointed a committee in 1794

steamboat as a motivator for the constitutional grant of patent power to the federal government).

[83] Act of April 10, 1790, ch. 7, § 1, 1 Stat. 109, 109 (amended 1794).

[84] Patent Act of 1790, ch. 7, § 1, 1 Stat. 109–112. For discussion of the Act, see P.J. Federico, Operation of the Patent Act of 1790, 18 J. Pat. Off. Soc'y 237, 237 (1936).

[85] Patent Act of 1790, ch. 7, § 5, 1 Stat. 109–112. Inequitable conduct involves deliberate misrepresentations to the patent office that cause them to issue a patent they otherwise would not, either by affirmatively lying to the PTO or hiding critical pieces of prior art. Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276, 1292–93 (Fed. Cir. 2011) (en banc).

[86] Patent Act of 1790, ch. 7, § 6, 1 Stat. 109–112; see also B.D. Daniel, The Right of Trial by Jury in Patent Infringement Cases, 28 Rev. Litig. 735, 756 (2009) (making this point).

[87] Act of Feb. 21, 1793, ch. 11, § 6, 1 Stat. 318, 322.

[88] Federico, supra note 84, at 244.

[89] See, e.g, Kenneth W. Dobyns, The Patent Office Pony: A History of the Early Patent Office 107–08 (1994).

[90] B. Zorina Khan, Property Rights and Patent Litigation in Early Nineteenth-Century America, 55 J. Econ. Hist. 58, 90 tbl.8 (1995). There appear to have been other cases filed that did not result in a judgment. A bill enacted in June 1794 restored patent actions that had been cut off by the replacement of the 1790 Act with the new 1793 Patent Act. Act of June 7, 1794, ch. 58, 1 Stat. 318, 393. That bill would have been entirely unnecessary if there were no patent disputes pending in February 1793.

to consider whether to revoke the patent as improvidently granted.[91] The committee in turn referred the matter to the courts for adjudication.[92]

The idea that cabinet secretaries must review every patent application quickly proved unworkable. In 1793, Congress went to the opposite extreme, eliminating the requirement that *anyone* in government evaluate patents for validity. Instead, from 1793 to 1836 the United States operated a registration system, under which anyone who filed a patent application was entitled to a patent, the validity of which was tested (if at all) in the courts.[93]

After 1800, federal subject matter jurisdiction was exclusive; patentees could no longer sue in state court.[94] Importantly, unlike English practice, the 1790 and 1793 Acts provided federal subject matter jurisdiction only in law, not in equity, courts.[95] It wasn't until 1819 that Congress enacted federal subject matter jurisdiction over patent cases in equity.[96] That doesn't mean federal equity courts never heard patent cases; they often did, but only when the parties were of diverse citizenship. Nonetheless, the fact that patentees couldn't necessarily file suit in equity in the early days of the Republic skewed American patent litigation—and thus validity defenses—towards law, not equity, courts because they were the only federal courts in which the patentee could be sure his case would be heard.[97]

[91] H.R. Journal, 3d Cong., 1st Sess. 206 (1794) (reporting a petition of Jonathan Jenkins requesting a repeal of letters patent granted to Benjamin Folger for separating and rendering whale oil to produce candles; Jenkins argued that the patent had been obtained "surreptitiously, and from false suggestions").

[92] See A.W. Greely, Public Documents of the First Fourteen Congresses, 1789–1817, at 149 (Gov't Printing Office 1900). I can find no record of further action being taken.

[93] Act of Feb. 21, 1793, ch. 11, § 1, 1 Stat. 318, 318–20.

[94] Patent Act of 1800, ch. 25, § 3, 2 Stat. 37, 38. That Act eliminated the phrase "or any other court having competent jurisdiction" from the 1793 Patent Act, leaving patent suits to be brought only "in the circuit court of the United States, having jurisdiction thereof." For discussion of this history, see Donald Shelby Chisum, The Allocation of Jurisdiction Between State and Federal Courts in Patent Litigation, 46 Wash. L. Rev. 633, 635–36 (1971).

[95] Root v. Ry. Co., 105 U.S. 189, 191 (1881) (discussing the history of the Acts); Livingston v. Van Ingen, 15 F. Cas. 697, 699 (C.C.D.N.Y. 1811) (No. 8420).

[96] Act of Feb. 15, 1819, ch. 19, 3 Stat. 481, 481.

[97] Because jurisdiction over patent cases is exclusively in the federal courts, Rev. Stat. § 629, ¶ 9 (1897) (codified at 28 U.S.C. § 1338(a)), patentees cannot simply sue in state court. If they could not get diversity jurisdiction in equity, they had no choice but to seek relief in the law courts.

Patent litigation gradually increased over this period as more patents issued under the registration system.[98] Defendants in infringement suits tended to raise validity issues as personal defenses to the suit in question. Some of that litigation occurred at law, and some at equity, depending largely on diversity of citizenship and (especially after 1819) on whether the patentee sought injunctive relief or damages.[99] Indeed, some equity courts refused injunctive relief if a patent was of doubtful validity, preferring to leave the determination of the validity issue to the law courts.[100] This was a departure from the normal equity practice in non-patent cases at the time, suggesting a willingness to treat patent validity as a legal matter even when filed in an equity court.[101]

The defendant challenged validity in roughly a third of the litigated cases[102] and won about sixty percent of those cases.[103] By several decades into the nineteenth century, the norm was for a validity issue to come to the courts as a defense to an infringement suit, for that suit to occur at law, and for the validity issues to be tried before a jury.[104]

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[98] Professor Zorina Khan reports a total of six patent cases decided between 1800 and 1809, compared with thirty-seven in the 1810s, thirty-six in the 1820s, and thirty-seven in the 1830s. Patent litigation took off after the Patent Act of 1836, with 198 cases filed in the 1840s and 415 in the 1850s. Khan, supra note 90, at 63 tbl.1. The first U.S. patent case to empanel a jury was in 1804. Reutgen v. Kanowrs, 20 F. Cas. 555 (C.C.D. Pa. 1804) (No. 11,710).

[99] While the same courts heard both law and equity cases, during this period, a case was either filed in law or in equity, so a plaintiff had to choose in any given action between seeking damages and seeing injunctive relief. Zorina Khan reports that between 1800 and 1839, 24.1% of all patent disputes were filed in equity, with the balance in law. Khan, supra note 90, at 65 n.18. It was not until the Patent Act of 1870 that patentees were authorized to obtain both damages and injunctive relief in the same proceeding. See Patent Act of 1870, ch. 230, § 52, 16 Stat. 198.

[100] See Winans v. Eaton, 30 F. Cas. 181, 187 (C.C.N.D.N.Y. 1854) (No. 17,861); Sullivan v. Redfield, 23 F. Cas. 441, 452 (C.C.N.Y. 1825) (No. 13,597). But while *Sullivan* traces that practice to English equity, it does not appear to have been common in England before 1791. As we have seen, the actual English practice was to grant injunctive relief for a limited period and then await a decision at law confirming the validity of the patent. See supra note 53.

[101] Indeed, only five years later the Supreme Court declared that "[i]t is well known, that in civil causes, in courts of equity and admiralty, juries do not intervene, and that courts of equity use the trial by jury only in extraordinary cases to inform the conscience of the court." Parsons v. Bedford, 28 U.S. (3 Pet.) 433, 446 (1830).

[102] Khan reports a total of 41 validity challenges out of the 116 cases decided between 1800 and 1839, or 35.6%. Khan, supra note 90, at 63 tbl.1, 78 tbl.6.

[103] Id. at 71 tbl.5 (reporting patentees won 29 cases and lost 47, for a win rate of 38.2%).

[104] See, e.g., Washburn v. Gould, 29 F. Cas. 312, 320 (C.C.D. Mass. 1844) (No. 17,214) (charging jury that "if it should so happen, that your minds are led to a reasonable doubt on

The growing practice of litigating patents in the law courts during that period coincided with a rarity of *scire facias* actions or their American equivalent. The 1793 Act, like its 1790 predecessor, did contain a provision allowing a court to cancel a patent for what we would think of today as inequitable conduct—actual deception in the filing of the patent.[105] Unlike the 1790 Act, which envisioned cancellation when the public was actually misled regardless of the patentee's intent,[106] the 1793 Act introduced the requirement that the deception "shall fully appear to have been made, for the purpose of deceiving the public."[107] In one early Supreme Court case involving litigation over that section, the Court rejected the claim that a patent could be revoked for fraud on the basis of a summary proceeding. Nor could it happen in an infringement proceeding. Instead, the Court said Section 10 required an action "in the nature of a *scire facias*."[108] Justice Story went on to say that that action was one on which a jury must decide any factual questions at issue.[109] But the issue was not entirely clear; in 1815, Chief Justice Marshall wrote in the analogous context of revocation of land patents that "a Court of equity appears to be a tribunal better adapted to this object than a Court of law."[110]

In England, the Attorney General was a party to a *scire facias* action, because the Crown was thought to have an interest in the question of whether the King's grant would be revoked. Like the English *scire facias* proceeding, Justice Story held that revocations in the United States, while proceedings brought by private complainants, required the partici-

the question, inasmuch as it is incumbent on the defendant to satisfy you beyond that doubt, you will find for the plaintiff").

[105] Patent Act of 1793, ch. 11, § 10, 1 Stat. 318, 323; Patent Act of 1790, ch. 7, § 5, 1 Stat. 109, 111. *Stearns v. Barrett* held that "[t]he scire facias in such a case ought to contain a direct allegation or suggestion that the patent was obtained surreptitiously or upon false suggestion; and to call upon the defendant for that cause only, to show cause why the patent should not be repealed." Patent Act of 1793, ch. 11 n.(a), 1 Stat. 318, 320 (citing Stearns v. Barrett, 22 F. Cas. 1175, 1180 (C.C.D. Mass. 1816) (No. 13,337)). For discussion of the ambiguity on the patentee's state of mind required, see David McGowan, Inequitable Conduct, 43 Loy. L.A. L. Rev. 945, 948 (2010).

[106] Patent Act of 1790, ch. 7, § 5, 1 Stat. 109, 109–12.

[107] Patent Act of 1793, ch. 11, § 6, 1 Stat. 318, 322.

[108] Ex Parte Wood & Brundage, 22 U.S. (9 Wheat.) 603, 614 (1824); see also *Stearns v. Barrett*, 22 F. Cas. at 1179.

[109] *Ex Parte Wood*, 22 U.S. at 615. Justice Story was an expert on equity jurisprudence. See 1 Joseph Story, Commentaries on Equity Jurisprudence, as Administered in England and America, at i (n.p., 13th ed. 1886).

[110] Polk's Lessee v. Wendal, 13 U.S. (9 Cranch) 87, 99 (1815).

pation of the government.[111] Indeed, the role of the government was viewed as so central to the revocation of a patent that a patentee whose patent had been held invalid in a jury proceeding could not even voluntarily declare his own patent void; instead, he had to petition the Secretary of State to repeal the patent.[112] Patentees would seek to repeal their own patents in order to obtain a (possibly valid) replacement patent; the 1793 Act permitted the issuance of a replacement patent, but did not permit the patentee to hold more than one patent at a time.[113]

The distinction between a crown-approved patent in England and the registration system of the 1793 Act, coupled with statutory changes to the jurisdiction of U.S. courts that moved some actions from equity to law, meant that early American patent practice diverged rather quickly from prior English practice.[114] The most relevant American analogy—the 1790 Act—provides little guidance, simply because there is so little precedent involving patents granted between 1790 and 1793. Nonetheless, the limited precedent from the 1790 Act suggests that, as in England, juries could and did consider factual questions in validity disputes when they were presented as defenses to an infringement suit filed at law. And juries also considered fact questions (though not legal issues) in the rare revocation proceedings under the 1793 Act.

B. The Jury in U.S. Patent Litigation from 1836 to 1938

1. The 1836 Act and the Development of a Modern Patent System

In 1836, Congress passed the first thing that could be called a modern patent statute.[115] Neither a grant by high-level government officials nor a pro forma registration system, the 1836 Act established what we know today as the Patent and Trademark Office, an administrative agency devoted to examining and issuing patents.[116] Administrative agencies were

[111] *Ex Parte Wood*, 22 U.S. at 615.

[112] Morris v. Huntington, 17 F. Cas. 818, 821 (C.C.D.N.Y. 1824) (No. 9831).

[113] Shaw v. Cooper, 32 U.S. (7 Pet.) 292, 306 (1833); Odiorne v. Amesbury Nail Factory, 18 F. Cas. 578, 579 (C.C.D. Mass. 1819) (No. 10,430).

[114] Cf. Andrew P. Morriss & Craig Allen Nard, Institutional Choice & Interest Groups in the Development of American Patent Law: 1790–1865, 19 Sup. Ct. Econ. Rev. 143, 144 (2011) (noting significant early changes in U.S. patent law).

[115] Patent Act of 1836, ch. 357, § 1, 5 Stat. 117, 117–18.

[116] For discussion of the workings of the early patent office, see Dobyns, supra note 89, at 4; see also Kara W. Swanson, Authoring an Invention: Patent Production in the Nineteenth-Century United States, *in* Making and Unmaking Intellectual Property: Creative Production in Legal and Cultural Perspective 41, 42–45 (Mario Biagioli et al. eds., 2011).

a rare species in 1836, and did not exist at all in England before the Revolution, where patents were granted as matters of formality and without examination.[117] Judicial review of this new agency was accordingly not a continuation of English practice but a new thing entirely. Courts in the nineteenth century were willing to allow juries to review decisions of the new agencies that sprung up with the Industrial Revolution, at least to the extent that a wrongful decision could give rise to tort liability.[118] But they never suggested that jury review of those decisions was required by the Constitution, because there was no analogous practice in England before 1791. Indeed, the Supreme Court has since held that there is no constitutional right to jury review of administrative agency decisions.[119]

The period from 1836 to 1870 also saw the introduction of many of the doctrines of patent validity we would recognize today. Courts considered whether inventions were known or used by others, not just in the context of inventorship disputes, but in the context we recognize today as invalidation by prior art.[120] They introduced the doctrine of obviousness for the first time.[121] They developed limitations on patentable subject matter and a scope-based doctrine of undue breadth that survives today in the doctrines of enablement and written description.[122] And most importantly, lawyers began to rely on patent claims to define the scope of their invention, meaning that these new validity doctrines were judged for the first time against a peripheral claim rather than merely being compared to the patentee's actual device.[123]

Juries heard certain sorts of challenges to the legitimacy of the new agency's decisions under the 1836 Act as validity defenses in cases brought at law rather than equity.[124] And as in England, the successful

[117] Gubby, supra note 41, at 196; Adams & Averley, supra note 52, at 160.

[118] E.g., Miller v. Horton, 26 N.E. 100, 103 (Mass. 1891) (permitting a tort suit against government health commissioners who had a horse killed). Notably, there is a significant difference between holding a government agency liable for a tortious act and giving a jury the power to review the decision to take the act in the first place.

[119] Cox v. United States, 332 U.S. 442, 453 (1947) (citing Yakus v. United States, 321 U.S. 414 (1944)).

[120] See Duffy, supra note 67, at 33–43.

[121] Hotchkiss v. Greenwood, 52 U.S. (11 How.) 248, 269 (1851).

[122] O'Reilly v. Morse, 56 U.S. (15 How.) 62, 113 (1854).

[123] Burk & Lemley, supra note 62, at 1744.

[124] While Congress provided for jurisdiction over patent cases in both the law and equity courts by this time, whether a patentee proceeded in law or in equity depended on whether the patentee wanted money damages or injunctive relief.

assertion of such a defense benefited only the defendant, and did not revoke the patent.[125] Indeed, a number of early U.S. cases involved juries reaching contradictory decisions on patent validity.[126]

The 1836 Patent Act did not include a specific private cause of action for *scire facias* cancellation for fraud or inequitable conduct, but only in the case of what we would today call an interference proceeding between competing inventors.[127] As a result, revocation proceedings that would actually declare a patent invalid and therefore void all but disappeared from U.S. law after 1836.

But even if the statute didn't provide a private cause of action for revocation, why not proceed by *scire facias* in equity? The answer is that in the nineteenth century, the Supreme Court indicated that the *scire facias* writ was not generally available in U.S. courts as a matter of equity jurisdiction.[128] When Congress narrowed the legal cancellation proceeding in the 1836 Act, litigants and courts seemed to assume that because the statute didn't create a private right of action to cancel a patent, only the U.S. government could bring a *scire facias* action.[129] And the government rarely did so.[130]

Nonetheless, there were two circumstances in which private parties could seek to declare a patent void under the 1836 Act. First, despite the elimination of private *scire facias*, a party who could show inequitable conduct by the patentee could prevent that patentee from enforcing the patent in a court of equity, originally under the equitable doctrine of "unclean hands,"[131] but eventually in its own right under the doctrine of

[125] See infra notes 185–87 and accompanying text (discussing the elimination of that doctrine in 1971).

[126] See, e.g., Blake v. Smith, 3 F. Cas. 604, 605–07 (C.C.S.D.N.Y. 1845) (No. 1502) (noting that a jury in New York had overturned a patent that a jury in Connecticut had upheld, Blake v. Sperry, 3 F. Cas. 607 (C.C.D. Conn. 1843) (No. 1503), and ordering a new trial in New York in hopes of reaching consistent conclusions).

[127] Patent Act of 1836, ch. 357, § 16, 5 Stat. 117, 123–24.

[128] See, e.g., Mowry v. Whitney, 81 U.S. (14 Wall.) 434, 440 (1871); cf. United States v. Stone, 69 U.S. (2 Wall.) 525, 535 (1864) ("A patent is the highest evidence of title, and is conclusive as against the Government, and all claiming under junior patents or titles, until it is set aside or annulled by some judicial tribunal. In England this was originally done by *scire facias*, but a bill in chancery is found a more convenient remedy.").

[129] See *Mowry*, 81 U.S. at 440–41; see also United States v. Am. Bell Tel. Co., 128 U.S. 315, 369 (1888).

[130] *American Bell* discusses six prior cases in which the United States brought suit to cancel a patent. But many of those were land patent cases. See 128 U.S. at 365–68.

[131] Keystone Driller Co. v. Gen. Excavator Co., 290 U.S. 240, 244 (1933).

unenforceability for inequitable conduct.[132] While inequitable conduct does render a patent unenforceable in equity, it is not a revocation proceeding in a true sense, as it applied in the nineteenth century only as a limit on the power of equity courts to aid a wrongdoer, and did not limit the law courts from awarding damages.[133] Nonetheless, it is worth noting that at that time and even today, inequitable conduct is an equitable doctrine to be decided by the judge, not a jury.[134]

A closer analogy to a revocation proceeding was the sole provision in the 1836 Act for private *scire facias*, which was available only in the case of a disagreement between two patentees over which one was the true inventor.[135] This is the equivalent of Section 102(g) of the 1952 Act, providing for invalidity of a patent first invented by another,[136] and Section 102(a) of the 2011 America Invents Act, providing for invalidity of a patent first filed by another.[137] Notably, the Supreme Court held that a proceeding of this sort was a proceeding in equity, not law. As the Court said in *Mowry v. Whitney*, "though in this country the writ of *scire facias* is not in use as a chancery proceeding, the nature of the chancery jurisdiction and its mode of proceeding have established it as the appropriate tribunal for the annulling of a grant or patent from the government."[138]

Similarly, when the government brought a proceeding to annul a patent, that case proceeded in equity, not law. The principle was well established in land grant patent cases.[139] But it was also the practice in invention patent cases. In *United States v. American Bell Telephone Co.*, the United States brought an action in equity to cancel two pioneering

[132] See Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276, 1292–93 (Fed. Cir. 2011) (en banc) (discussing the early development of the inequitable conduct doctrine out of unclean hands).

[133] *Keystone Driller*, 290 U.S. at 244–45.

[134] See Agfa Corp. v. Creo Prods., 451 F.3d 1366, 1373 (Fed. Cir. 2006).

[135] Patent Act of 1836, ch. 357, § 16, 5 Stat. 117, 123–24.

[136] 35 U.S.C. § 102(g) (2006).

[137] 35 U.S.C. § 102(a) (Supp. 2011).

[138] 81 U.S. (14 Wall.) 434, 440 (1871).

[139] See, for example, United States v. Stone, 69 U.S. (2 Wall.) 525, 535–36 (1864):

> It is contended here, by the counsel of the United States, that the land for which a patent was granted to the appellant was reserved from sale for the use of the Government, and, consequently, that the patent is void. And although no fraud is charged in the bill, we have no doubt that such a proceeding in chancery is the proper remedy, and that if the allegations of the bill are supported, that the decree of the court below cancelling the patent should be affirmed.

patents issued to Alexander Graham Bell for the telephone on grounds of fraud on the patent office.[140] The case was consolidated with private claims to cancel those patents by others claiming to be the true inventors.[141] Bell objected that the government had no power under the patent statute to revoke or annul a patent because the 1836 Act had eliminated the statutory action for *scire facias*. The Court rejected that argument, noting that it would be remarkable for the government to have no power to undo a grant it had been induced to make by fraud (the claim in *American Bell*). Rather, only the courts had the power to reject the grant; the proper procedure was for the United States, having concluded that the patent was invalid or fraudulently obtained, to file suit to have a court nullify that patent.[142] And the Court concluded that the United States could exercise that power only through a bill in equity. Noting that the Statute of 1870 provided for an applicant who was denied a patent to bring a proceeding in equity in the District of Columbia courts,[143] the Court said proceedings to revoke a patent similarly belonged in equity:

> These provisions, while they do not in express terms confer upon the courts of equity of the United States the power to annul or vacate a patent, show very clearly the sense of Congress that if such power is to be exercised anywhere it should be in the equity jurisdiction of those courts. 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 judicial department of the government, and this can only be effected by proper proceedings taken in the courts of the United States.
>
> . . . .
>
> . . . [T]hough in this country the writ of *scire facias* is not in use as a chancery proceeding, the nature of the chancery jurisdiction and its

[140] *Am. Bell*, 128 U.S. at 316.

[141] Dolbear v. Am. Bell Tel. Co., 126 U.S. 1, 3 (1888). For a discussion of the history, see Christopher Beauchamp, The Telephone Patents: Intellectual Property, Business, and the Law in the United States and Britain, 1876–1900, 9 Enterprise & Soc'y: Int'l J. Legal Hist. 591, 592 (2008).

[142] See McCormick Harvesting Mach. Co. v. Aultman, 169 U.S. 606, 612 (1898) ("Had the original patent been procured by fraud or deception it would have been the duty of the Commissioner of Patents to have had the matter referred to the Attorney General with the recommendation that a suit be instituted to cancel the patent . . . .").

[143] Patent Act of 1870, ch. 230, § 52, 16 Stat. 198.

> mode of proceeding have established it as the appropriate tribunal for the annulling of a grant or patent from the government.[144]

What is notable about these cases is that in all three circumstances in which a party (public or private) sought to annul or revoke a patent under the 1836 Act, that party had to proceed in equity. Courts at law could consider arguments going to the validity of patents in denying relief, just as English law courts could, and those arguments could be presented to juries. But when it came to actually invalidating a patent under the new validity issues developed by the courts during this period, as Chief Justice Marshall wrote in the analogous context of land patents, "a Court of equity appears to be a tribunal better adapted to this object than a Court of law."[145]

2. The 1870 Act and the Disappearance of Law Courts

The Patent Act of 1870 made a number of modifications to the patent system, from solidifying the PTO bureaucracy[146] to the establishment of various requirements for novelty, statutory bars, enablement, and inventorship that continue in much the same language to this day. It also required that patentees include claims, giving rise to the modern peripheral claiming system (and hence making validity a more important issue than it had been).[147] For our purposes, the most important provision was Section 55, which vested in all federal courts, whether sitting in equity or in law, the power to award damages for patent infringement.[148] Because a

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[144] *Am. Bell*, 128 U.S. at 364, 369.

[145] Polk's Lessee v. Wendal, 13 U.S. (9 Cranch) 87, 99 (1815).

[146] The statute provided for a specific number of individual PTO employees, including examiners, and permitted the hiring of various other lower-level employees, including, remarkably, "copyists of drawings" and, separately, "female copyists." Patent Act of 1870, ch. 230, §§ 2–3, 16 Stat. 198, 198–99.

[147] Id. § 26. For discussion of this history, see 1 Anthony W. Deller, Patent Claims § 4 (2d ed. 1971); Burk & Lemley, supra note 62, at 1766–71. Claims existed before that time, but only optionally, and they were frequently central rather than peripheral claims. See Risch, supra note 70, at 1288.

[148]

> *And be it further enacted*, That all actions, suits, controversies, and cases arising under the patent laws of the United States *shall be originally cognizable, as well in equity as at law*, by the circuit courts of the United States, or any district court having the powers and jurisdiction of a circuit court, or by the supreme court of the District of Columbia, or of any Territory; *and the court shall have power, upon bill in equity filed by any party aggrieved, to grant injunctions according to the course and principles of courts of equity*, to prevent the violation of any right secured by patent, on such terms

court could order an injunction only "upon a bill in equity," the effect of this provision was that a patentee no longer had to sue in one court to obtain damages and in a different court to seek injunctive relief. The patentee could have both damages and an injunction from the same judge—but only if they sued in equity.

Patent litigation took off beginning in the 1870s and 1880s, as many of the iconic inventions of American life (including the sewing machine, the telephone, and the light bulb) made their way into court.[149] And that trend only accelerated over the intervening decades, as courts were called upon to resolve patent disputes involving barbed wire,[150] railroad inventions,[151] movie projectors,[152] automobiles,[153] airplanes,[154] and radios,[155] among other foundational technologies.[156] And because peripheral

> as the court may deem reasonable; and *upon a decree being rendered in any such case for an infringement, the claimant [complainant] shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby,* and the court shall assess the same or cause the same to be assessed under its direction, and the court shall have the same powers to increase the same in its discretion that are given by this act to increase the damages found by verdicts in actions upon the case; but all actions shall be brought during the term for which the letters-patent shall be granted or extended, or within six years after the expiration thereof.

Patent Act of 1870, ch. 230, § 55, 16 Stat. 198, 206 (emphasis added).

[149] For discussion of the litigation surrounding each invention, see, for example, Mark A. Lemley, The Myth of the Sole Inventor, 110 Mich. L. Rev. 709, 715–45 (2012); Adam Mossoff, The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s, 53 Ariz. L. Rev. 165, 193–94 (2011); Lea Shaver, Illuminating Innovation: From Patent Racing to Patent War, 69 Wash. & Lee L. Rev. 1891, 1926–33 (2012); Ryan L. Lampe & Petra Moser, Do Patent Pools Encourage Innovation? Evidence from the 19th-Century Sewing Machine Industry 9 (Nat'l Bureau of Econ. Research, Working Paper No. 15,061, 2009), available at http://ideas.repec.org/p/nbr/nberwo/15061.html.

[150] The Barbed Wire Patent, 143 U.S. 275, 275–77 (1892) (equity case).

[151] See, e.g., Westinghouse v. Boyden Power Brake Co., 170 U.S. 537, 569 (1898); Steven W. Usselman, Regulating Railroad Innovation: Business, Technology, and Politics in America, 1840–1920, at 97–154 (2002).

[152] David E. Fisher & Marshall Jon Fisher, Tube: The Invention of Television 41 (1996) (discussing litigation over the invention of the movie projector).

[153] See, e.g., Columbia Motor Car Co. v. C.A. Duerr & Co., 184 F. 893, 901 (2d Cir. 1911).

[154] See, e.g., Wright Co. v. Paulhan, 177 F. 261, 264 (C.C.S.D.N.Y. 1910) (L. Hand, J.) (holding the Wright brothers' patent to be pioneering and so entitled to broad scope), rev'd, 180 F. 112 (2d Cir. 1910).

[155] See, e.g., Marconi Wireless Tel. Co. of Am. v. United States, 320 U.S. 1, 38 (1943); Radio Corp. of Am. v. Radio Eng'g Labs., 293 U.S. 1, 2–11 (1934).

[156] See Lemley, supra note 149, at 715–33 (discussing these various disputes).

claiming came into its own with the 1870 Act,[157] validity as we understand the term today became a real issue in patent litigation for the first time in these decades. But because under the 1870 Act a patentee who wanted both an injunction and damages had to proceed in a court of equity, virtually none of the patent cases decided in this period were tried to a jury.[158] Indeed, the dominance of equity in patent litigation was so complete that by 1940, seventy years after the Patent Act of 1870 and the first year for which we have records, only 2.5% of patent suits were tried to a jury,[159] and most were likely cases where the patent had reached the end of its life and so only damages, not an injunction, were at issue.

Before 1870, in short, juries did resolve validity questions when they were raised as a personal defense in an infringement suit at law, just as they did in England at common law. But when courts considered whether to invalidate a patent altogether during that period, they did so at equity. After 1870, the use of juries in patent cases essentially disappeared, and judges took over not only the role of invalidating patents in revocation proceedings but also the job of deciding personal defenses in patent infringement suits. By 1940, the jury was a forgotten memory in patent litigation; no one living could recall a time when it was otherwise.

C. The Jury, Rediscovered: Practice from 1938 to 1982

In 1938, law and equity were merged in the U.S. courts.[160] After 1938, patentees had no reason to prefer equity over law; they could get both injunctive relief and damages from the same court without styling the proceeding as equitable. Freed of this constraint, we might reasonably expect to see jury trials spike immediately after 1938, returning at least to their mid-nineteenth-century levels. That, however, didn't happen. As Figure 1 shows, jury trials remained uncommon for decades after the

[157] Although, as one historian has observed, as early as 1850 "judges were . . . beginning to express more frequently the idea that in seeking to ascertain the invention 'claimed' in a patent the inquiry should be limited to interpreting the summary, or 'claim.'" Lutz, supra note 65, at 145. "The idea that the claim is just as important if not more important than the description and drawings did not develop until the Act of 1870 or thereabouts." 1 Deller, supra note 147, § 4.

[158] See, e.g., 3 William C. Robinson, The Law of Patents for Useful Inventions § 932 n.5 (1890) (noting that almost all cases were tried in equity).

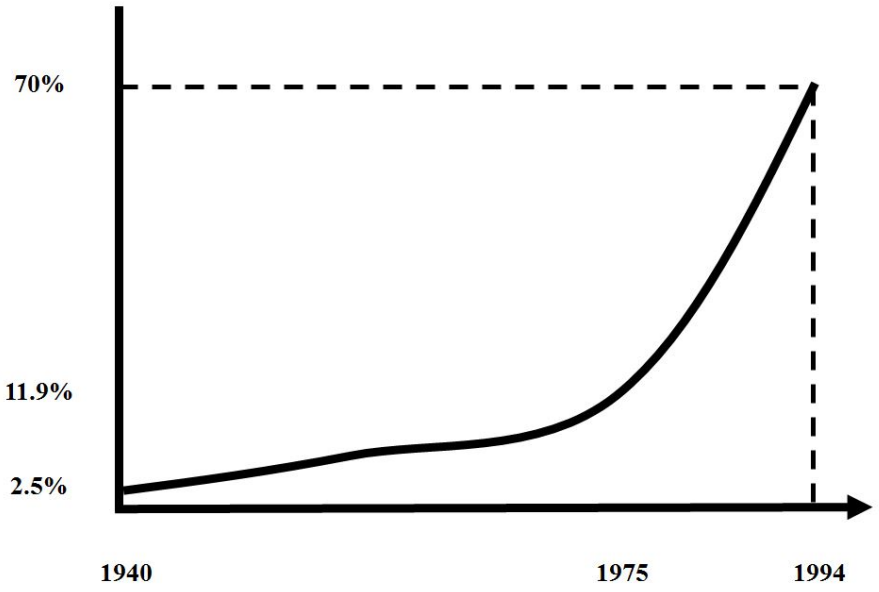
[159] See Gary M. Ropski, Constitutional and Procedural Aspects of the Use of Juries in Patent Litigation (Part I), 58 J. Pat. Off. Soc'y 609, 610 (1976).

[160] Fed. R. Civ. P. 2 (effective Sept. 16, 1938, as amended to Dec. 1, 2012).

merger of law and equity. Only 3.4% of the patent cases tried between 1940 and 1959 were tried to a jury.[161]

We don't know exactly why neither party sought a jury trial in the decades after 1938. One possible explanation is innate conservatism. From the perspective of a patent lawyer trying a case in the 1940s, convening a jury was something new and untested—neither they nor anyone in their firms had likely ever done it that way before. If they even knew that people a century before had done so, they might have dismissed it as a product of a bygone era of simpler technologies. Modern (1950s) technology was judged too complex for a jury to understand, so it made no sense to give them the patent questions. And trying a complex technical case to a jury involved very different skills than trying the same case to a judge. As one prominent patent lawyer put it in 1993, looking back on this era, patent lawyers "used to always have a fear of juries."[162]

Figure 1: Rise of Patent Jury Trials



[161] Ropski, supra note 159.

[162] Don W. Martens, Remarks at the Tenth Annual Judicial Conference of the United States Court of Appeals for the Federal Circuit, 146 F.R.D. 205, 375 (1993).

Nonetheless, the conservatism explanation is not entirely satisfactory. The evidence that juries favor patentees is overwhelming.[163] Even assuming no one knew that at the time, it wouldn't have taken too much experimentation to figure it out. And indeed lawyers did figure it out beginning in the late 1970s, as jury trials skyrocketed from 8.3% in 1978 to 70% in 1994 and have remained over 70% ever since.[164] When information about the desirability of juries did get out, it traveled fast. The question is why no one figured it out in the forty years after the merger of law and equity.

A second plausible explanation is that while patentees were free in theory to seek juries after the merger, in practice courts deprived them of the ability to do so. There is some reason to think that early post-1938 courts confronted with a jury trial demand made it a general practice to try the equitable claim first and the legal claim thereafter.[165] Because most of those equitable and legal issues, including validity, overlapped, the party who lost in the equitable phase of the trial would be collaterally estopped from rearguing the same facts in front of the jury.[166] In practice, because judges treated both validity and infringement as part of the equitable portion of the case, this meant that juries would hear only damages issues. Dividing the trial in this way made sense to judges, not only because it was consistent with the almost-universal practice before 1938, but because there was no need to convene a jury at all unless the patent had already been held valid and infringed.

The common practice of holding jury trials after bench trials on validity may explain why only 3.4% of patent cases ended up being tried to juries in the two decades after 1938. But it can't be the whole explanation. In 1959, the Supreme Court held in *Beacon Theatres v. Westover* that the Seventh Amendment prevented judges from deciding an equitable issue first if there was a right to a jury trial on the related legal is-

[163] See, e.g., Lemley, Kendall & Martin, supra note 1, at 175.

[164] Herbert F. Schwartz, Fed. Jud. Ctr., Patent Law and Practice 130 (2d. ed. 1995) (tabulating data through 1994); Lemley, Kendall & Martin, supra note 1, at 175 (reporting data since 2000).

[165] See, e.g., Bellavance v. Plastic-Craft Novelty Co., 30 F. Supp. 37, 38–39 (D. Mass. 1939).

[166] For discussion of this practice, see Ralph W. Launius, Some Aspects of the Right to Trial by Jury in Patent Cases, 49 J. Pat. Off. Soc'y 112, 112–13 (1967); see also Thermo-Stitch, Inc. v. Chemi-Cord Processing Corp., 294 F.2d 486, 488–91 (5th Cir. 1961).

sue.[167] *Beacon Theatres* involved a declaratory judgment action in which the plaintiff sought a declaration that it was not violating the antitrust laws; the defendant counterclaimed, alleging that it did violate the antitrust laws. The Court held that the plaintiff could not avoid the defendant's right to a jury trial on the antitrust claims by first trying the equitable declaratory judgment claims; to do so would effectively undo the Seventh Amendment right to a jury trial on the underlying claims.

After *Beacon Theatres*, it was clear that if there was a Seventh Amendment right to a jury trial on validity issues, district courts could no longer avoid that jury trial by resolving validity as an equitable matter; instead, they would have to try the validity issues to the jury first and conform their decision in equity to the jury's verdict. And after *Dairy Queen v. Wood*, if there was a right to a jury trial, the fact that most of the issues in the case were equitable, not legal, wouldn't matter either—the jury must take precedence.[168]

Nonetheless, patentees still didn't turn to juries in the wake of *Beacon Theatres*. From 1960 through 1970, less than five percent of patent cases were tried to juries,[169] though toward the end of that period commentators began to discuss the possibility.[170] Perhaps this too was innate conservatism. But it is equally possible that no one involved with the patent system thought there was a Seventh Amendment right to a jury trial of patent validity issues.

One reason they might have thought there was no such right is that since 1836, a patent has been granted by an administrative agency after substantive review. There was not much developed administrative law in the early nineteenth century, because there weren't many administrative agencies. But by 1946 the enormous growth of the administrative state had given rise to the Administrative Procedure Act, which set out in detail the procedures administrative agencies must follow in making decisions and the standards for judicial review of those agency decisions.[171] Notably, those procedures all presuppose that a judge, not a jury, is reviewing the agency decision. They involve review of agency adjudica-

[167] 359 U.S. 500, 510–11 (1959).

[168] 369 U.S. 469, 472–73 (1962).

[169] Ropski, supra note 159, at 610–11.

[170] For discussion, see, for example, George B. Newitt & Jon O. Nelson, The Patent Lawyer and Trial by Jury, 1 J. Marshall J. Prac. & Proc. 59, 59–63 (1967); Donald Zarley, Jury Trials in Patent Litigation, 20 Drake L. Rev. 243, 243–44 (1971).

[171] 5 U.S.C. §§ 551–559 (2006).

tions for legal errors or determination of whether an agency's factual conclusions were supported by "substantial evidence."[172] Courts are expected to defer to agency decisions. Outside of the criminal context, juries are not usually required to pass on agency decisions, and certainly not while applying a deferential standard of review, which the 1952 Patent Act requires.[173] It is judges, not juries, who traditionally review the decisions of administrative agencies.

Indeed, shortly after the passage of the APA, the Supreme Court held that, even in a criminal proceeding, there is no right to a jury trial to review an administrative agency decision.[174] In *Cox v. United States*, the defendants were convicted of leaving a wartime civilian labor camp, to which they had been sent after objecting to military service during World War II.[175] The Selective Service Board had classed them as conscientious objectors; the defendants argued that they should have been classed instead as ministers of religion exempt from civilian service. The statute in question made the Board's decision final on the classification issue.[176] But defendants Cox and Thompson challenged that determination, arguing that it violated their rights to a jury trial to be unable to present the misclassification argument to the jury. The Court rejected that argument in sweeping terms:

> The concept of a jury passing independently on an issue previously determined by an administrative body or reviewing the action of an administrative body is contrary to settled federal administrative practice; the constitutional right to jury trial does not include the right to have a jury pass on the validity of an administrative order.[177]

In the wake of *Cox*, it seems plausible that parties and courts thought that while they might be able to take a patent damages case to the jury, they would have no right to have the jury decide questions of patent validity in that case. This is especially plausible because the Supreme Court has repeatedly described the ultimate question of patent validity as

[172] 5 U.S.C. § 706 (2006).

[173] 35 U.S.C. § 282 (2006). In *Microsoft Corp. v. i4i Ltd. Partnership*, 131 S. Ct. 2238, 2242–43 (2011), the Court held that the statutory presumption of validity must be overcome by "clear and convincing evidence."

[174] Cox v. United States, 332 U.S. 442, 453 (1947).

[175] Id. at 443.

[176] Id. at 448.

[177] Id. at 453.

a question of law, not fact.[178] While juries can sometimes rule on legal questions,[179] there is no Seventh Amendment right to have those questions decided by a jury; a jury's ruling on a legal question is always advisory. And if there were no Seventh Amendment right to a jury trial on validity, *Beacon Theatres* did not require trial courts to change their practice of deciding the equitable issues first and estopping the jury from reaching a different conclusion.

But if this was the attitude, it wasn't unanimous. Scholars in the 1960s began to suggest that there might be a right to a jury trial in a pa-

[178] See, e.g., KSR Int'l Corp. v. Teleflex, Inc., 550 U.S. 398, 427 (2007) (holding that "[t]he ultimate judgment of obviousness is a legal determination"); Graham v. John Deere Co., 383 U.S. 1, 17 (1966) (citing Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp., 340 U.S. 147, 155 (1950) (Douglas, J., concurring)). Nor was *Graham* alone. It was common in the nineteenth century for the Court to refer to validity as a question of law. See, e.g., Mahn v. Harwood, 112 U.S. 354, 358 (1884) ("In cases of patents for inventions, a valid defense not given by the statute often arises where the question is, whether the thing patented amounts to a patentable invention. This being a question of law, the courts are not bound by the decision of the commissioner . . . ."); cf. Dunbar v. Myers, 94 U.S. 187, 196 (1876) ("[T]he question is now well settled, that the question whether the alleged improvement is or is not patentable, is, in an equity suit, a question for the court."). Indeed, the Supreme Court in the nineteenth century even spoke of invalidity as a jurisdictional requirement that the court could raise on its own motion in equity. See Richards v. Chase Elevator Co., 158 U.S. 299, 301 (1895) ("We have repeatedly held that a patent may be declared invalid for want of novelty, though no such defense be set up in the answer."); Slawson v. Grand St., P.P. & F.R. Co., 107 U.S. 649, 652 (1883) (holding that the question of validity is always open to the consideration of the court whether raised as a defense or not); Glue Co. v. Upton, 97 U.S. 3, 4 (1877) (finding it unnecessary to decide the issue presented because the Court concluded on its own motion that the patent was invalid); Brown v. Piper, 91 U.S. 37, 43–44 (1873) (same). Many of these cases arose in disputes over priority of invention, where the Court was troubled that both parties had an incentive to argue the invention was patentable, since each hoped to obtain a patent for it. Thus, in *Hill v. Wooster*, the Court said:

> The parties to the present suit appear to have been willing to ignore the question as to patentability in the present case, and to have litigated merely the question of priority of invention, on the assumption that the invention was patentable. But neither the circuit court nor this court can overlook the question of patentability.

132 U.S. 693, 698 (1890). While one might today question the idea that invalidity is unwaivable, the rule that it is a question of law remains. In *Microsoft Corp. v. i4i Ltd. Partnership*, the Court reiterated that "the ultimate question of patent validity is one of law." 131 S. Ct. at 2242–43 (quoting *Graham*, 383 U.S. at 17). Justice Breyer, concurring, emphasized that many of the most important validity issues are legal, not factual questions, to which the presumption of validity did not apply. Id. at 2253; see also In re Lockwood, 50 F.3d 966, 970 n.4 (Fed. Cir. 1995) ("[T]he inquiry into obviousness is but one component of the ultimate legal conclusion of validity *vel non* . . . .").

[179] Kinetic Concepts, Inc. v. Smith & Nephew, Inc., 688 F.3d 1342, 1356–58 (Fed. Cir. 2012).

tent case.[180] And at least some lawyers began to listen in the 1970s. By 1979, more than ten percent of patent cases were tried to juries for the first time in over a century.[181]

As courts began to give patent cases to juries in the late 1970s, they began to confront the question of what issues belonged before the jury. Notably, when it came to validity, the regional circuits were hesitant to give juries unfettered power to decide questions of patent validity. None of the circuits simply gave the validity question to the jury outright. Rather, circuits took two approaches. Some circuits, including the Ninth, took the position that the ultimate question of validity was a question of law reserved for the judge,[182] but that if there was a dispute of fact, juries could hear the validity issues at trial and render an advisory verdict that the court was free to disregard.[183] Other circuits thought that even that went too far, because once a jury rendered a verdict on an issue the judge would be tempted to (improperly) defer to the jury's decision rather than render its own independent judgment. Accordingly, the Seventh Circuit refused to let juries render even an advisory verdict on the ultimate question of validity and, instead, submitted particular fact questions to the jury for resolution.[184] None of these courts thought there was a Seventh Amendment right to have the jury try the ultimate validity issue. To the contrary, even when a jury was called upon to resolve a disputed question of fact related to validity, courts were reluctant to let the jury have even an advisory role on an issue they clearly thought the judge was obligated to resolve.

One final development in this period is worthy of note. Throughout U.S. and English history, a jury had no power to nullify a patent. While accused infringers could assert a defense of invalidity, that defense was

[180] See, e.g., Launius, supra note 166, at 116; Newitt & Nelson, supra note 170, at 59; Zarley, supra note 170, at 254–55; Zachary Shimer, Comment, Jury Trials in Declaratory Relief Actions: The Right Exists, But Under What Circumstances?, 6 UCLA L. Rev. 678, 682, 686, 692 (1959); John Michael Townsend, Comment, Right to Trial by Jury in Declaratory Judgment Actions, 3 Conn. L. Rev. 564, 597–98 (1971).

[181] Schwartz, supra note 164.

[182] See, e.g., Bergman v. Aluminum Lock Shingle Corp. of Am., 251 F.2d 801, 809 (9th Cir. 1958) (Pope, J., concurring) ("I think that [the court's] opinion performs a particularly useful service in doing away with a frequent misapprehension that the question of the validity of a claim of a patent is solely one of fact.").

[183] See, e.g., Sarkisian v. Winn-Proof Corp., 688 F.2d 647, 651 (9th Cir. 1982) (en banc) (per curiam).

[184] See, e.g., Roberts v. Sears, Roebuck & Co., 723 F.2d 1324, 1333 (7th Cir. 1983) (en banc).

personal to them; the patent was not invalid unless it was nullified in a *scire facias* proceeding or revoked by the government. Patentees could and did enforce "invalid" patents against others. That ended in 1971. In *Blonder-Tongue Laboratories v. University of Illinois Foundation*, the Supreme Court held that the doctrine of collateral estoppel extended to bar a patentee from asserting a patent held invalid in one proceeding against any other defendant in a subsequent case.[185] This doctrine of "offensive, non-mutual" collateral estoppel represented a fundamental shift in patent litigation. After *Blonder-Tongue*, a patentee puts its legal right at risk every time it files a patent suit.[186] Lose on infringement, and you are free to sue someone else whose device works in a different way. But lose on validity in one case and your rights of enforcement end as to everyone else. *Blonder-Tongue* emphasized the public interest in weeding out invalid patents, pointing to a series of Supreme Court cases of the same era concerned with the social costs of invalid patents.[187]

The result of *Blonder-Tongue* is that an invalidity defense in litigation now looks more like a revocation proceeding than a personal defense to infringement. Indeed, courts have recognized that infringement and invalidity are now different proceedings with different scopes. In *Cardinal Chemical*, the Supreme Court held that a finding of non-infringement no longer rendered a claim for invalidity moot, because after *Blonder-Tongue*, a ruling of invalidity has a greater effect than simply defeating the infringement case before the court.[188]

Before 1971, an invalidity defense in an infringement case looked somewhat like an old English infringement case, which could have been brought either in law or in equity. A jury's decision on invalidity had no effect beyond preventing the plaintiff from recovering in that case. After 1971, an invalidity defense looks a lot more like a revocation proceeding

[185] 402 U.S. 313, 350 (1971).

[186] See, e.g., John R. Allison, Mark A. Lemley & Joshua Walker, Patent Quality and Settlement Among Repeat Patent Litigants, 99 Geo. L.J. 677, 678–79 (2011) (discussing how *Blonder-Tongue* makes patentees more risk averse).

[187] See, e.g., Lear, Inc. v. Adkins, 395 U.S. 653, 663–64 (1969) (quoting Pope Mfg. Co. v. Gormully, 144 U.S. 224, 234 (1892)); Walker Process Equip. v. Food Mach. & Chem. Corp., 382 U.S. 172, 177 (1965) (quoting Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945)).

[188] Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 98 (1993). For similar reasons, the Federal Circuit has held that if a defendant wins infringement in the district court, it cannot defend that judgment on appeal by showing invalidity; if it wants to argue invalidity, it must separately appeal a finding on validity, because the two rulings are no longer coterminous. Radio Sys. Corp. v. Lalor, 709 F.3d 1124, 1132 (Fed. Cir. 2013).

or an old *scire facias* action. Indeed, once an invalidity ruling defeats a patent for all time, it's hard to imagine what purpose would be served by a separate nullity proceeding.

D. Juries and the Seventh Amendment in the Federal Circuit

The United States Court of Appeals for the Federal Circuit was created in 1982 to unify all patent appeals in a single appellate court.[189] It also had the effect, and arguably the purpose, of moving the law substantively in a more patent-friendly direction.[190] Because the creation of the Federal Circuit followed quickly on the wave of jury trials in patent cases, the Federal Circuit was quickly confronted with a number of appeals from jury verdicts on patent validity. In a number of early cases, the Federal Circuit affirmed jury verdicts that ruled on patent validity, either by implicitly deciding the ultimate question in rendering a general verdict or by issuing an advisory opinion in the circuits that permitted those opinions.[191] While those early opinions did not confront the Seventh Amendment question directly, some early Federal Circuit decisions suggested that the court would follow the Seventh Circuit's approach, limiting the role of a jury to answering specific factual questions. In *Structural Rubber Products Co. v. Park Rubber Co.*, for example, the trial court had given the issues of novelty and non-obviousness to the jury.[192] The Federal Circuit remanded for a new trial, chastising the district court for ignoring the teaching of *Graham* that obviousness was a question of law, explaining that juries were unlikely to know what obviousness was, and suggesting that an appropriate solution would be to use special verdict forms that gave the jury only the specific factual questions at issue, not the underlying legal question of obviousness.[193]

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[189] Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25, 37–39 (1982) (codified as amended at 28 U.S.C. § 1295 (2012)).

[190] See, e.g., William M. Landes & Richard A. Posner, An Empirical Analysis of the Patent Court, 71 U. Chi. L. Rev. 111, 112 (2004) (demonstrating that the creation of the Federal Circuit was associated with the strengthening of patent rights).

[191] Sun Studs, Inc. v. ATA Equip. Leasing, 872 F.2d 978, 984, reh'g en banc granted, 882 F.2d 1583, 1584, reh'g en banc declined and original opinion reinstated, 892 F.2d 73 (Fed. Cir. 1989); DMI, Inc. v. Deere & Co., 802 F.2d 421, 427 (Fed. Cir. 1986); Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1547 (Fed. Cir. 1983).

[192] 749 F.2d 707, 709 (Fed. Cir. 1984).

[193] Id. at 723–24. While the court did not require such a procedure, it strongly suggested it. Further, it quoted extensively from James W. Moore et al., Moore's Manual: Federal Practice and Procedure § 22.08[1] (1983), to the effect that only the specific disputed facts, not the ultimate legal question, would be given to the jury under a special verdict approach. And

The Seventh Amendment issue was not squarely presented to the Federal Circuit until 1995. In *In re Lockwood*, the patentee lost his infringement case on summary judgment, but the defendant's declaratory judgment counterclaim for invalidity was still pending.[194] The defendant moved to strike the patentee's jury demand, arguing that with the ruling on infringement there was no longer any legal damages remedy at issue in the case and hence no need for a jury trial. Lockwood sought a writ of mandamus to reinstate the jury demand. The three-judge Federal Circuit panel granted the writ, holding that the history described in Part I indicated that juries were deciding the validity of patents in England before 1791.[195] Three other Federal Circuit judges dissented from the court's refusal to rehear the case en banc; they concluded that the English history did not support the conclusion that patent validity was an issue primarily for the jury before 1791, and also decided that the validity of a patent was affected with a public interest, thereby invoking the "public rights" exception to the Seventh Amendment.[196] The Supreme Court granted certiorari to resolve the issue.[197] While the case was pending in the Supreme Court, Lockwood withdrew his jury demand in an effort to make the case go away.[198] Because the case was rendered irrelevant by the deliberate act of the party who had prevailed below, the Court vacated the Federal Circuit's opinion in *Lockwood* under the voluntary cessation doctrine.[199] When that happens, the Federal Circuit's opinion is eliminated as precedent, and the district court's ruling (in this case striking the jury demand) is reinstated. Indeed, the Supreme Court instructed the district court to "proceed with the case," presumably without a jury.[200]

it seems clear that the court meant a special verdict to be something more than just the jury deciding obviousness separately from other issues, for the district court had done that in the first trial and the Federal Circuit found that insufficient. *Structural Rubber*, 749 F.2d at 712, 720–21.

[194] In re Lockwood, 50 F.3d 966, 968–69 (Fed. Cir. 1995).

[195] Id. at 969, 976.

[196] Id. at 980–81 (Nies, J., dissenting from order denying rehearing en banc).

[197] Am. Airlines v. Lockwood, 515 U.S. 1121 (1995).

[198] Respondent's Motion to Dismiss, *Am. Airlines*, 515 U.S. 1121 (1995) (No. 94-1660), 1995 WL 848568, at *1.

[199] *Am. Airlines*, 515 U.S. at 1182.

[200] Id.

The result has been a curious vacuum on this important issue.[201] In the last decade, only three Federal Circuit panel decisions have confronted the Seventh Amendment issue, and none directly on the question of validity. Those Federal Circuit decisions have followed the *Lockwood* opinion without much further analysis, notwithstanding its vacatur,[202] though district court opinions have questioned the application of *Lockwood* to declaratory judgment actions.[203] But there is no particularly clean statement of the law one way or the other, given the clear split among Federal Circuit judges and the unresolved interest at the Supreme Court. And there is no precedential Federal Circuit decision holding

[201] Commentators have focused on the Seventh Amendment issue in the context of infringement, not invalidity. See, e.g., Eileen M. Herlihy, The Ripple Effect of Seventh Amendment Decisions on the Development of Substantive Patent Law, 27 Santa Clara Computer & High Tech. L.J. 333, 341–42 (2011) (focusing on claim construction, the doctrine of equivalents, and prosecution history estoppel); Devon Curtis Beane, Note, Whose Right Is It Anyway?: The Evisceration of an Infringer's Seventh Amendment Right in Patent Litigation, 2011 U. Ill. L. Rev. 1853, 1853–55. One exception is Barry S. Wilson, Comment, Patent Invalidity and the Seventh Amendment: Is the Jury Out?, 34 San Diego L. Rev. 1787, 1789–90 (1997) (noting just after *Lockwood* was vacated that this important issue remained unresolved).

[202] In *Tegal Corp. v. Tokyo Electron America, Inc.*, 257 F.3d 1331, 1340 (Fed. Cir. 2001), the first precedential decision to consider a Seventh Amendment issue after *Lockwood*, the Federal Circuit said "our analysis [in *Lockwood*] has been neither supplanted nor questioned. Although no longer binding, we find its reasoning pertinent." The court in that case found no right to a jury trial where there was no claim for damages at issue. Id. at 1339. So there was no need to rely on *Lockwood* at all. Nonetheless, *Tegal* seems to have worked a *sub rosa* rehabilitation of a controverted and vacated decision into binding law. *In re Tech. Licensing Corp.*, 423 F.3d 1286, 1291 (Fed. Cir. 2005), presented the same issue and followed *Tegal*. *Lockwood* was distinguished in *Agfa Corp. v. Creo Products*, 451 F.3d 1366, 1373–75 (Fed. Cir. 2006), which rejected *Lockwood*'s conclusion that *scire facias* proceedings in England were applicable only to issues like inequitable conduct. The court pointed out that "fraud" under the English patent registration system encompassed a much broader array of conduct than does modern inequitable conduct law. Id. at 1374–75. *Agfa* concluded that there was no right to a jury trial on inequitable conduct because it was analogous to the *scire facias* procedure. Id. at 1375. The court thought that meant that it was therefore equitable, not legal, though as we have seen the English history doesn't support that conclusion. The writ of *scire facias* issued from the Court of Chancery, but as part of its subsidiary common law jurisdiction.

[203] See, e.g., MedImmune, Inc. v. Genentech, Inc., 535 F. Supp. 2d 1020, 1026–28 (C.D. Cal. 2008). In that case the declaratory judgment plaintiff was licensed, so the patentee could not sue for infringement, but the Supreme Court opinion allowed the licensee to sue to invalidate the patent. MedImmune, Inc., v. Genentech, Inc., 549 U.S. 118, 138 (2007). The district court concluded that the fact that the patentee could not sue for infringement made this unlike a case typically tried at law in England, because damages were not an available remedy. Accordingly, the court struck the patentee's jury trial demand. The case settled while a petition for a writ of mandamus was pending.

what *Lockwood* held before it was vacated—that there is a Seventh Amendment right to a jury trial on validity issues. Each of the precedential cases citing *Lockwood* in fact found that there was no right to a jury trial on the facts of the case before it.[204] Instead, despite some unpublished case law to the contrary,[205] there seems to be an assumption in the Federal Circuit and among patent lawyers that there is a Seventh Amendment right to a jury trial, but no clear doctrinal basis supports that assumption.

So the prevailing practice today requires jury trials on patent validity—or at least sometimes it does. In fact, there are at least five sets of circumstances in which the validity of a patent is decided by a court or administrative agency without any right to a jury trial. First, since 1980, the patent statute has provided a number of administrative revocation procedures: ex parte re-examination, inter partes re-examination, and after the America Invents Act of 2011, post-grant opposition, supplemental examination, and a special post-grant opposition proceeding for business method patents.[206] These administrative proceedings before the patent office can narrow a patent or invalidate it entirely at the behest of a third party. Indeed, they can even invalidate for all time a patent that the Federal Circuit has previously held valid and infringed.[207] And as with court invalidations, once the patent is gone, it's gone, even though previous courts had held the same patent valid. The patentee has the right of direct appeal to the Federal Circuit from these administrative revocation proceedings, but no right to seek jury review of the administrative agency's decision.[208] Similarly, when a patent applicant is dissatisfied with the PTO's refusal to grant a patent, it can either appeal that

[204] See supra note 202.

[205] See In re Impax Lab. Inc., 171 F. App'x 839, 840 (Fed. Cir. 2006). In *Impax*, the patentee had sued for both damages and injunctive relief, but later withdrew its damages claim and moved to strike the defendant's jury demand, since the only remedies remaining in the case were equitable. That situation is analogous to *Lockwood*, where the case started off as a case at common law but the possibility of damages was removed during litigation. Nonetheless, the Federal Circuit concluded that *Technology Licensing Corp.* did not allow a jury trial once the only remaining issues were equitable. The ruling seems at odds with the vacated *Lockwood* opinion, which the court did not discuss.

[206] Leahy-Smith America Invents Act, Pub. L. No. 112-19, 125 Stat. 284–341 (2011) (codified in scattered sections of 35 U.S.C.).

[207] See, e.g., In re Baxter Int'l, Inc., 678 F.3d 1357, 1364–65 (Fed. Cir. 2012); In re Constr. Equip. Co., 665 F.3d 1254, 1255–56 (Fed. Cir. 2011).

[208] Kappos v. Hyatt, 132 S. Ct. 1690, 1694, 1700 (2012).

refusal to the Federal Circuit or file a de novo action in district court.[209] But in neither case does a jury review the PTO's decision.[210]

Administrative revocation proceedings can deprive accused infringers of their right to a jury trial as well. A party that brings an inter partes review or post-grant opposition proceeding must give up its right to challenge validity in court, not only on issues actually decided by the administrative agency, but even for arguments that could have been but were not raised.[211]

Second, patent enforcement can occur in parallel in district court and at the International Trade Commission ("ITC").[212] Patent validity is a defense in an ITC enforcement action, just as it is in district court. An ITC ruling that a patent is invalid can be appealed to the Federal Circuit but cannot be challenged directly in a district court before a jury. Because the statute requires district courts to stay their proceedings until a pending ITC action is resolved,[213] when both courts and the ITC are presented with a validity issue, it is the ITC's administrative law judge, not the jury, who will get the first crack at deciding validity. It is clearly not the case, then, that a patent can only be invalidated by a jury; the ability of both the PTO and other administrative agencies to invalidate a patent, subject only to appellate judicial review under the APA, seems well established.[214]

[209] Id. at 1694; see also 35 U.S.C. § 146 (Supp. 2011).

[210] Streck, Inc. v. Research & Diagnostic Sys., 665 F.3d 1269, 1279 (Fed. Cir. 2012) (explaining that district court hears evidence and testimony in a § 146 proceeding).

[211] 35 U.S.C. §§ 315, 325 (Supp. 2011).

[212] 19 U.S.C. § 1337 (2006). For discussion, see generally Colleen V. Chien & Mark A. Lemley, Patent Holdup, the ITC, and the Public Interest, 98 Cornell L. Rev. 1 (2012).

[213] 28 U.S.C. § 1659(a) (2006).

[214] The Federal Circuit approved this procedure over a Seventh Amendment objection in *Ninestar Technology Co. v. ITC*, 667 F.3d 1373, 1384 (Fed. Cir. 2012), which involved a civil penalty imposed by the ITC. Even though a monetary award was normally the province of the law courts, the court concluded that the ITC was a new administrative proceeding unknown to the common law with a new remedy, and one that affected public rights, making it exempt from the Seventh Amendment.

Notably, however, validity decisions of the ITC do not have issue-preclusive effect, even when affirmed by the Federal Circuit. Tandon Corp. v. U.S. Int'l Trade Comm'n, 831 F.2d 1017, 1019 (Fed. Cir. 1987) ("[O]ur appellate treatment of decisions of the Commission does not estop fresh consideration by other tribunals."). By contrast, legal precedents established in ITC appeals are binding on subsequent parties. See Powertech Tech. Inc. v. Tessera, Inc., 660 F.3d 1301, 1308 (Fed. Cir. 2011) ("[C]ourts are nonetheless bound by stare decisis to abide by any legal precedents established by our court in [prior ITC appeals] . . . .").

Both of the prior examples involve administrative agency action. Perhaps courts are different. In fact, however, the third example confirms that courts too can invalidate patents in circumstances in which there is no recognized right to a jury trial. The most common example involves suits to enforce a pharmaceutical patent against a generic drug manufacturer. Under the Hatch-Waxman Act, the generic drug manufacturer generally cannot enter the market unless and until the patentee either forbears from filing suit or the suit is resolved.[215] The act of infringement in a generic drug case is the mere act of filing a statement of intention to enter the market with the FDA.[216] As a result, generic drug cases generally don't include a cause of action for damages, because the defendant isn't in the market. Since only an injunction is at issue, courts deciding pharmaceutical patent cases do not give the case to a jury, because they view the case as analogous to one tried at equity, not law, in England in the eighteenth century.[217] The pharmaceutical cases accept what seems to be conventional wisdom about the law-equity distinction: that it is the remedy at stake, and not the fact that a patent may be held invalid, that triggers entitlement to a jury trial.[218]

Fourth, even cases in which patentees sue for damages are tried to judges, not juries, in one important instance. Suits against the federal government for infringement are authorized under 28 U.S.C. § 1498, but the patentee cannot seek an injunction; its only statutory remedy is "reasonable and entire compensation."[219] Those cases are brought in the Court of Federal Claims, an Article I court; appeal from the Court of Claims is to the Federal Circuit.[220] And trials in the Court of Claims are to judges, not juries, even though damages are the only remedy available.[221] In at least one instance, therefore, the law has refused to recognize

[215] 21 U.S.C. § 355(j)(2)(A)(vii) (2006). If a patentee files suit, approval of the generic's application to enter the market is automatically stayed for thirty months. § 355(j)(5)(B)(iii). After that time, a generic still involved in litigation can enter the market "at risk" of losing the suit and having to pay a subsequent damages judgment, though they rarely do.

[216] 35 U.S.C. § 271(e)(2) (2006).

[217] In re Tech. Licensing, 423 F.3d 1286, 1287–88 (Fed. Cir. 2005); Tegal Corp. v. Tokyo Electron Am. Corp., 257 F.3d 1331, 1340 (Fed. Cir. 2001).

[218] Indeed, despite *Lockwood*, even when a damages remedy is originally available but later barred, unpublished Federal Circuit decisions have found no right to a jury trial. See, e.g., In re Impax Labs, Inc., 171 F. App'x 839, 840 (Fed. Cir. 2006).

[219] 28 U.S.C. § 1498 (2006).

[220] Id. §§ 171–79, 1295(a)(3).

[221] See Rules of the Court of Federal Claims (Aug. 30, 2013), available at http://www.uscfc.uscourts.gov/sites/default/files/court_info/20130813_rules/13.08.30%20Fi

any right to jury trial on patent validity even in a court action when damages are at stake.

A final limitation on the right to jury trial under Federal Circuit precedent is the law-fact distinction. Even at common law in England, questions of law were reserved for the judge. The same is true in federal court today. And many of the most important questions of patent validity, including patentable subject matter, on sale bar, obviousness, and enablement, are questions of law, not fact.[222] Justice Breyer's concurrence in *Microsoft Corp. v. i4i Limited Partnership* emphasizes this point in arguing that the clear and convincing evidence standard does not apply to those legal questions.[223] Neither, presumably, would any Seventh Amendment right to a jury trial. Indeed, in 2012, the Federal Circuit held in *Bard Peripheral Vascular v. W.L. Gore & Assocs*. that whether a defendant's infringement of a patent was willful was a question of law to be decided in the final instance by a judge, even though resolving that question required deciding whether the defendant's invalidity defense was reasonable.[224] The Federal Circuit observed that many validity disputes were ultimately questions of law, not fact, even though willfulness as a whole is a question of fact. The court concluded that judges, not juries, were best positioned to evaluate the reasonableness of a validity defense. It then suggested a hybrid reminiscent of pre-1995 practice:

> [C]onsidering the objective prong of *Seagate*, the judge may when the defense is a question of fact or a mixed question of law and fact allow the jury to determine the underlying facts relevant to the defense in the first instance, for example, the questions of anticipation or obviousness. . . . [However,] the ultimate legal question of whether a reasonable person would have considered there to be a high likelihood of in-

nal%20Version%20of%20Rules.pdf (omitting counterparts to Federal Rules of Civil Procedure 38 and 39 because the Court of Federal Claims does not conduct jury trials).

[222] Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17 (1966) (citing Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp., 340 U.S. 147, 155 (1950) (Douglas, J., concurring)); Dunbar v. Myers, 94 U.S. 187, 196 (1876) ("[T]he question is now well settled, that the question whether the alleged improvement is or is not patentable, is, in an equity suit, a question for the court."). And in *Microsoft Corp. v. i4i Ltd. Partnership*, 131 S. Ct. 2238, 2242–43 (2011), the Court reiterated that "the ultimate question of patent validity is one of law."

[223] *Microsoft Corp.*, 131 S. Ct. at 2253 (Breyer, J., concurring).

[224] Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., 682 F.3d 1003, 1006–07 (Fed. Cir. 2012).

> fringement of a valid patent should always be decided as a matter of law by the judge.[225]

While *Bard* by its terms applies only to validity determinations in a willfulness inquiry, the logic of giving the jury only the fact questions, not the ultimate legal issue, would seem to apply to validity disputes more generally.

The result is an odd mix of approaches to jury trials on patent validity. The law seems to assume juries will decide validity—except when it doesn't. And the uneasy legal case for a Seventh Amendment right to jury trial on validity in Federal Circuit jurisprudence must contend with a number of exceptions that are hard to square with such a right.

III. THE FUTURE OF THE PATENT VALIDITY JURY TRIAL

A. Patents, Juries, and the Supreme Court

We have been in a holding pattern for nearly two decades since *Lockwood*. During that time, jury trials have become the norm in patent cases on ultimate questions of validity as well as infringement and damages issues. But the Supreme Court has never spoken on the issue,[226] and the division on the Federal Circuit, coupled with the grant of certiorari in *Lockwood*, suggests that while patent lawyers and judges commonly as-

[225] Id. at 1008; cf. Commil USA, LLC v. Cisco Sys., 720 F.3d 1361, 1372 (Fed. Cir. 2013) (assuming a Seventh Amendment right to a jury trial on validity, but finding that that right was not violated by retrial of the question whether a validity defense was reasonable, when the latter question was part of an infringement inquiry); id. at 1376 (O'Malley, J., concurring in part and dissenting in part) (finding that a partial retrial violates the Seventh Amendment Reexamination Clause).

[226] Curiously, in a 1936 case involving a patent suit in the Court of Claims, the Supreme Court included dictum that "[v]alidity and infringement are ultimate facts on which depends the question of liability. In actions at law they are to be decided by the jury." United States v. Esnault-Pelterie, 299 U.S. 201, 205 (1936). Nonetheless, the Court went on to discuss the procedures in the Court of Claims, where the judge, not the jury, decides validity. Id. at 203 n.3. The Court offered no citation to support its statement, and did not discuss or consider the Seventh Amendment, nor reconcile that statement with the fact that it was reviewing a case at law that was nonetheless tried before a judge. The statement is all the more curious because it came after nearly seventy years of universal practice that judges, not juries, decided patent cases in the wake of the Patent Act of 1870. Should the Court take the issue up, this isolated sentence is unlikely to be dispositive. As the Court put it this spring in refusing to rely on a single sentence of dictum, "[i]s the Court having once written dicta calling a tomato a vegetable bound to deny that it is a fruit forever after?" Kirtsaeng v. John Wiley & Sons, 133 S. Ct. 1351, 1368 (2013).

sume there is a Seventh Amendment right to a jury trial, the legal support for such a right is far from airtight. The fact that the issue hasn't been resolved definitively in the last twenty years may have more to do with that assumption than with the settled nature of the law.

Were the Supreme Court to take the issue, however, it is far from clear that they would conclude there is such a right. And if they did, any such right would probably be far more limited than current practice.

The year after the *Lockwood* case fizzled, the Supreme Court decided its only foray into the Seventh Amendment and patent law. In *Markman v. Westview Instruments*,[227] the issue was whether the construction of patent claims, which determines the scope of the patent, was an issue for the judge or the jury. The Court began by observing that "there is no dispute that infringement cases today must be tried to a jury, as their predecessors were more than two centuries ago."[228] But that did not resolve the question before the Court. Rather, it led to a second question:

> [W]hether a particular issue occurring within a jury trial (here the construction of a patent claim) is itself necessarily a jury issue, the guarantee being essential to preserve the right to a jury's resolution of the ultimate dispute. . . .
>
> . . . [T]he answer to the second question "must depend on whether the jury must shoulder this responsibility *as necessary to preserve the 'substance of the common-law right of trial by jury.'*" "'Only those incidents which are regarded as fundamental, as inherent in and of the essence of the system of trial by jury, are placed beyond the reach of the legislature.'"[229]

[227] 517 U.S. 370 (1996).

[228] Id. at 377. The Court's only other statement on patent jury trials and the Seventh Amendment came in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, which presented an infringement question, not validity. The Court said:

> Because resolution of whether, or how much of, the application of the doctrine of equivalents can be resolved by the court is not necessary for us to answer the question presented, we decline to take it up. The Federal Circuit held that it was for the jury to decide whether the accused process was equivalent to the claimed process. There was ample support in our prior cases for that holding. . . . Whether, if the issue were squarely presented to us, we would reach a different conclusion than did the Federal Circuit is not a question we need decide today.

520 U.S. 17, 38–39 (1997).

[229] *Markman*, 517 U.S. at 377–78 (quoting Tull v. United States, 481 U.S. 412, 426 (1987) (internal quotation marks omitted)).

So even if infringement and damages are tried to a jury, it doesn't follow under *Markman* that all issues must be tried to the jury. Rather, the question is whether those particular issues were tried to a jury at old English common law, and, even if so, whether the jury's resolution of those issues is so central to the common law right that it must be preserved.

There are several reasons to doubt that the Supreme Court will find a Seventh Amendment right to have a jury determine validity, particularly not the complete right *Lockwood* seems to envision. But the answer is likely to depend on the theory of the Seventh Amendment the Court adopts. Because the Seventh Amendment jurisprudence is, frankly, a bit of a muddle, I organize the discussion according to different theories under which the Seventh Amendment might be thought to apply.

First, while the question is not free from doubt, I think that the closest analogy to a modern invalidity claim in England before 1971 was not the personal defense that was occasionally raised based on an unclear specification or prior invention by another, but rather the writ of *scire facias*. Only a *scire facias* action could nullify a patent, as modern invalidity rulings do. After *Blonder-Tongue*, a modern invalidity proceeding has the practical effect of nullification, not merely a personal defense. *Scire facias* was a legal action in England, albeit one brought in what is normally considered an equity court; juries were available if there were disputed issues of fact. But by 1836, U.S. law seemed to treat the nullification of a patent in a *scire facias*-style proceeding as a matter for the equity courts.[230] A Supreme Court concerned primarily with the law-equity distinction as it stood in England in 1791, as in *Tull v. United States*,[231] might look at a modern patent validity challenge as a legal ac-

[230] In *Markman*, the Court noted that its "formulations of the historical test do not deal with the possibility of conflict between actual English common-law practice and American assumptions about what that practice was, or between English and American practices at the relevant time." Id. at 376 n.3. The issue of patent validity presents just such a conflict. In the case of such a conflict, *Markman* suggests it is English, not early American, practice that controls: "Since Justice Story's day, *United States v. Wonson*, 28 F. Cas. 745, 750 (No. 16,750) (C.C.D. Mass. 1812), we have understood that '[t]he right of trial by jury thus preserved is the right which existed under the English common law when the Amendment was adopted.'" Id. at 376 (quoting Balt. & Carolina Line v. Redman, 295 U.S. 654, 657 (1935)).

[231] 481 U.S. 412 (1987). For criticism of the law-equity focus, see, for example, Douglas Laycock, The Triumph of Equity, 56 Law & Contemp. Probs. 53, 78 (1993) (stating that the law-equity distinction is a "dysfunctional proxy for a series of functional choices"); Doug Rendleman, The Trial Judge's Equitable Discretion Following *eBay v. MercExchange*, 27 Rev. Litig. 63, 97 (2007) ("It would be salutary, I submit, for the profession to discard the nonfunctional terminology of separate legal and equitable discretion."); Robert S. Stevens, A

tion in which a jury would resolve a disputed issue of fact, but not the overall issue of patent validity.

Second, the decision to grant a patent today is done by an administrative agency, something that did not exist in England before 1791. The Supreme Court has generally taken the position that judges, not juries, review the decisions of administrative agencies, and has held that there is no constitutional right to jury review of agency decisions.[232] The fact that patent validity is now determined in the first instance by an administrative agency subject to the Administrative Procedure Act[233] is an important difference from English practice, one that—like the development of claim construction in *Markman*—makes modern patent validity look very different than those determinations that were made by juries centuries ago. The rise of administrative revocation proceedings like reexamination and post-grant opposition (first developed in 1980 and greatly expanded in 2011) points to the administrative law nature of the patent grant, further distinguishing it from older practice.[234] And courts—including even the Federal Circuit, a decade before *Lockwood*—have not been willing to hold that the Seventh Amendment undermines the ability of administrative agencies to review patents.[235] To the contrary, the Federal Circuit has recently confirmed that the PTO has the power to revoke even patents that juries have upheld as valid.[236] Thus, a Court focused on

Plea for the Extension of Equitable Principles and Remedies, 41 Cornell L.Q. 351, 351 (1956) (criticizing the law-equity distinction as merely historical).

[232] Atlas Roofing Co. v. Occupational Safety & Health Review Comm'n, 430 U.S. 442, 450 (1977); Cox v. United States, 332 U.S. 442, 453 (1947).

[233] Dickinson v. Zurko, 527 U.S. 150 (1999).

[234] On the implications of integrating patent law into the broader field of administrative law, see Stuart Minor Benjamin & Arti K. Rai, Who's Afraid of the APA? What the Patent System Can Learn from Administrative Law, 95 Geo. L.J. 269, 317–35 (2007).

[235] See, for example, PatLex Corp. v. Mossinghoff, 758 F.2d 594, 604–05 (Fed. Cir. 1985) (upholding the constitutionality of the 1980 patent reexamination statute against a Seventh Amendment challenge):

> The massive body of jurisprudence that suffered the evolution of administrative agencies in the federal government insisted on fair opportunity for judicial review and full respect for due process. When these standards are met, the Constitution does not require that we strike down statutes, otherwise having a reasonable legislative purpose, that invest administrative agencies with regulatory functions previously filled by judge and jury.

For an argument that *PatLex* was wrongly decided and that patents cannot be reexamined without running afoul of the Seventh Amendment, see Megan Keane, Essay, Patent Reexamination and the Seventh Amendment, 77 Geo. Wash. L. Rev. 1101 (2009).

[236] See, e.g., In re Baxter Int'l, Inc., 678 F.3d 1357, 1365 (Fed. Cir. 2012). Were the Court to hold that there is a Seventh Amendment right to a jury trial on ultimate issues of validity,

the role of the administrative state is likely to conclude that review of an agency decision—what a court must do when it evaluates patent validity today—is rather different than what law courts did under the old English patent registration system. And as *Markman* indicated, the fact that patent practice differs today from the pre-1791 English practice may mean that the historical test, while instructive, is not determinative.

Third, the Court has long spoken of patents as rights affected with a public interest. In *Lear, Inc. v. Adkins*,[237] the Court held that state law could not bar a licensee from challenging the validity of the patent it had licensed. *Lear*'s conclusion reflected an affirmative policy judgment that invalidating weak patents served the public good. The Court emphasized "the important public interest in permitting full and free competition in the use of ideas which are in reality a part of the public domain."[238] Nor was *Lear* alone. The Court has repeatedly emphasized the importance of testing weak patents and protecting the public from monopolies based on invalid patents.[239] The Court's discussion of the public's "paramount interest in seeing that patent monopolies spring from backgrounds free from fraud or other inequitable conduct"[240] suggests that the Court thinks of patent validity as a matter of public, not private rights. A Supreme Court focused on the public rights elements of Seventh Amendment jurisprudence is likely to conclude that patents are instruments of public, not private, policy to which the Seventh Amendment does not apply.

Finally, the Supreme Court is likely to be sensitive to historical practice in the United States even if that practice is not strictly what the Con-

this post-judicial reexamination might violate the second clause of the Seventh Amendment, which prevents the reexamination of jury verdicts except "according to the rules of the common law." U.S. Const. amend. VII.

[237] 395 U.S. 653, 671 (1969).

[238] Id. at 670.

[239] See, e.g., Microsoft Corp. v. i4i Ltd. P'ship, 131 S. Ct. 2238, 2253 (2011) (Breyer, J., concurring) (offering measures designed to "increase the likelihood that discoveries or inventions will not receive legal protection where none is due"); MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 137 (2007) (holding that licensees have standing to challenge patent validity or infringement without repudiating their licenses); United States v. Glaxo Grp., 410 U.S. 52, 57 (1973) (emphasizing "public interest in free competition" in concluding that licensee in antitrust suit "may attack the validity of the patent under which he is licensed even though he has agreed not to do so in his license"); Blonder-Tongue Labs. v. Univ. of Ill. Found., 402 U.S. 313, 349–50 (1971) (allowing alleged infringer to claim estoppel where patent previously declared invalid).

[240] Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 816 (1945).

stitution requires.[241] If validity had always been tried to juries in the United States, we might reasonably expect the Court to be reluctant to upset that practice even if the evidence suggested that it wasn't required in England before 1791. But as Part II demonstrates, there is no such long tradition of juries deciding validity in the United States. In the early days of the Republic, juries sometimes decided validity issues, though equity courts did so as well, and nullity proceedings were brought only in equity. Further, for most of the last 150 years, including the time in which the modern requirements of validity were developed and applied, judges, not juries, decided those validity questions. And not until the last generation have juries begun deciding validity in a majority of cases or in circumstances that ended up nullifying the patent. A Court concerned with preserving a traditional right is unlikely to find that right to exist in a practice that was uncommon before 1978 and not truly prevalent until the late 1980s.

Thus, it seems plausible, though by no means certain, that the Supreme Court would find no Seventh Amendment right to have a jury decide patent validity as a general matter. The issue is likely to turn on how strongly the Court ties its jurisprudence to the English law-equity distinction. A Court that focuses on English law may well find a right to have juries decide validity questions; a Court that is focused on its own precedents, on the growth of the administrative state, or on the public interest in invalidating bad patents, will not.

Even if the Court finds a Seventh Amendment right to have juries decide patent validity, I think it is quite likely that the scope of any such right would be far more circumscribed than current practice suggests, for two reasons.

First, many of the most important issues in a modern validity dispute did not exist at all in 1791, or existed at most in a very different form. In part because it had no claims, English patent practice had no doctrine of patentable subject matter, no statutory bars, no doctrine of obviousness, no doctrine of scope-related enablement, and only a limited notion of invalidity based on the prior art. In *Markman*, the Court focused on the absence of claim construction in England in finding that jury claim construction couldn't have been essential to the preservation of the common

[241] Cf. Martin H. Redish & Daniel J. La Fave, Seventh Amendment Right to Jury Trial in Non-Article III Proceedings: A Study in Dysfunctional Constitutional Theory, 4 Wm. & Mary Bill Rts. J. 407, 415 (1995) ("[T]he Seventh Amendment's historic directive does not require photographic reproduction of historical procedures.").

law right. Similarly, even if the Court were to find that individual validity defenses of the kind that existed in England before 1791 should be committed to the jury, it might well conclude that new and broader validity doctrines that developed in the nineteenth century after the rise of peripheral claiming were not sufficiently analogous to the validity issues decided in the English law courts. That is particularly plausible given that American courts treated those new, broader issues as equitable in revocation proceedings starting with the 1836 Act. If so, whether the Court finds a jury trial right may well depend on whether it confronts a prior inventor dispute or a dispute over adequate description (things English juries did sometimes decide) or instead a question of obviousness or breadth-related enablement. And a jury trial right that was limited to the sorts of validity decisions actually made in English common law would end up being fairly limited, particularly after 2011, when disputes over who is the first inventor have been removed from the law with the transition to a first-to-file regime.[242] So a court focused—like *Markman*—on the nature of the issue tried will not find a close analog to most modern validity disputes in English patent practice, suggesting that expansion of the jury's role into these new areas is not required.

Second, many of these new validity doctrines are denominated questions of law, not fact. Indeed, the Supreme Court in the past has referred to patent validity as an ultimate question of law.[243] Justices Breyer, Scalia, and Alito, concurring in *Microsoft Corp. v. i4i Limited Partnership* just two years ago, emphasized this point and its implications for the validity determination.[244] Traditionally, juries decide factual questions, not legal questions.[245] While the law-fact distinction is controversial as a

[242] America Invents Act, 35 U.S.C. § 102(a) (Supp. 2011).

[243] Sakraida v. Ag Pro, Inc., 425 U.S. 273, 280 (1976); Graham v. John Deere Co., 383 U.S. 1, 17 (1966) (citing Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp., 340 U.S. 147, 155 (1950) (Douglas, J., concurring)); Mahn v. Harwood, 112 U.S. 354, 358 (1884) ("[A] valid defence not given by the statute often arises where the question is, whether the thing patented amounts to a patentable invention. This being a question of law, the courts are not bound by the decision of the commissioner . . . ."); cf. Dunbar v. Myers, 94 U.S. 187, 196 (1876) ("[T]he question is now well settled, that the question whether the alleged improvement is or is not patentable, is, in an equity suit, a question for the court."). And in *Microsoft Corp.*, the Court reiterated that "the ultimate question of patent validity is one of law." 131 S. Ct. at 2242–43.

[244] *Microsoft Corp.*, 131 S.Ct. at 2253 (Breyer, J., concurring).

[245] "We have also spoken of the line as one between issues of fact and law." *Markman*, 517 U.S. at 378 (citing cases).

matter of Seventh Amendment jurisprudence,[246] *Markman* referred to it,[247] and Justice Breyer's concurrence in *Microsoft* suggests that the Court thinks it matters for the way in which courts approach validity.[248] The law-fact distinction may be particularly appropriate here, since the origin of *scire facias* actions in the Court of Chancery meant that juries and the law courts never saw patent validity challenges unless they presented factual rather than legal issues. And the Supreme Court has backed away from its strong holding in *Beacon Theatres*, holding in a subsequent case that in appropriate circumstances a district court sitting in equity can resolve facts that later bind a jury.[249] A Supreme Court attracted to the law-fact distinction, either in general or in the specific context of legal questions presented in English equity courts, will find that most consequential issues of patent validity today are questions of law, not fact.[250]

Even a Court that was unwilling to reject a jury trial right altogether is likely to be attracted to the idea that juries decide only traditional factual disputes, not newly developed legal validity questions. That is particularly true because both the Seventh and Ninth Circuits took a version of that approach before the Federal Circuit was created. Indeed, even early

[246] For criticism of the law-fact distinction, see Leon Green, Judge and Jury 270–71 (1930); Ronald J. Allen & Michael S. Pardo, Essay, The Myth of the Law-Fact Distinction, 97 Nw. U. L. Rev. 1769, 1770 (2003); Stephen A. Weiner, The Civil Jury Trial and the Law-Fact Distinction, 54 Calif. L. Rev. 1867, 1867–68, 1932 (1966).

For defense of the law-fact distinction, see, for example, Richard D. Friedman, Standards of Persuasion and the Distinction Between Fact and Law, 86 Nw. U. L. Rev. 916, 917–19 (1992); Eileen M. Herlihy, Appellate Review of Patent Claim Construction: Should the Federal Circuit Be Its Own Lexicographer in Matters Related to the Seventh Amendment?, 15 Mich. Telecomm. & Tech. L. Rev. 469, 504 (2009); Henry P. Monaghan, Constitutional Fact Review, 85 Colum. L. Rev. 229, 232–39 (1985).

The law-fact distinction has never been pristine. Juries sometimes offer verdicts on legal questions, though they are advisory verdicts. Similarly, judges can and do determine facts in appropriate circumstances, as *Markman* indicates.

[247] 517 U.S. at 378.

[248] 131 U.S. at 2253 (Breyer, J., concurring).

[249] Parklane Hosiery Co. v. Shore, 439 U.S. 322, 333–36 (1979). The Court noted that common law courts at the time of the founding would defer to prior determinations of factual issues by equity courts. Id. at 333 (citing Brady v. Daly, 175 U.S. 148, 158–59 (1899); Smith v. Kernochen, 48 U.S. (7 How.) 198, 217–18 (1849); Hopkins v. Lee, 19 U.S. (6 Wheat.) 109 (1821); David L. Shapiro & Daniel R. Coquillette, The Fetish of Jury Trial in Civil Cases: A Comment on *Rachal v. Hill*, 85 Harv. L. Rev. 442, 448–58 (1971)).

[250] Cf. Hanovia Chem. & Mfg. Co. v. David Buttrick Co., 127 F.2d 888, 890 (1st Cir. 1942) ("[N]o general statement can be made concerning the classification of the broad question of patentable invention as either one of fact or as one of law.").

Federal Circuit decisions seemed to assume that was the rule. The Federal Circuit has in the last two decades endorsed the practice of sending the ultimate question of validity to the jury, largely by default. That approach departs from both historical practice and the way the regional circuits had treated the question. Recent history has not been kind to such Federal Circuit insularity.[251] When the Seventh Amendment issue is presented to the Court, it is likely to prove no exception. A jury would still have a role in validity under this more limited approach, but its role would be limited to resolving subsidiary factual disputes, not ultimate legal questions, and perhaps only the limited sorts of factual disputes of the kind English juries were actually likely to hear.[252]

B. Implications of Finding No Right to a Jury Trial

What would change if the Supreme Court concluded there was no Seventh Amendment right to a jury trial? At first blush, the answer might seem to be "quite a lot." The empirical evidence is overwhelming that juries are far more likely than judges to hold patents valid.[253] As a result, patentees very much want to get to a jury trial,[254] and accused infringers very much want to resolve the case before trial. This has a variety of secondary effects on patent practice. Patentees file suit in jurisdic-

[251] See, e.g., *MedImmune, Inc.*, 549 U.S. at 137 (reversing Federal Circuit decision setting an exclusive test for declaratory judgment jurisdiction that differed from the rules in other areas of law); eBay Inc. v. MercExchange, L. L. C., 547 U.S. 388, 390–91 (2006) (reversing the Federal Circuit decision adopting a rule that patentees were automatically entitled to injunctive relief, despite the general rules of equity); *Dickinson*, 527 U.S. at 152 (reversing the Federal Circuit decision that held the general rules of the APA don't apply to patent law).

[252] Cf. Dennison Mfg. Co. v. Panduit Corp., 475 U.S. 809, 811 (1986) (holding that the appellate court in an obviousness case must defer to "the subsidiary determinations of the District Court, at the least"). For arguments that juries are properly limited to finding facts, not making normative legal decisions, see Rishi S. Suthar, What Jury? A New Approach to Obviousness After *KSR v. Teleflex*, 18 J. Intell. Prop. L. 295, 320–23 (2010); David S. Welkowitz, Who Should Decide? Judges and Juries in Trademark Dilution Actions, 63 Mercer L. Rev. 429, 431–32 (2012).

[253] See, e.g., John R. Allison & Mark A. Lemley, Empirical Evidence on the Validity of Litigated Patents, 26 AIPLA Q.J. 185, 212 (1998) (reporting that juries find patents valid 67% of the time, while judges find validity 57% of the time in bench trials and 28% of the time in pretrial motions); Lemley, Kendall & Martin, supra note 1, at 175 (finding the strongest statistical predictor of validity in a trial to be trial by jury); Kimberly A. Moore, Judges, Juries, and Patent Cases—An Empirical Peek Inside the Black Box, 99 Mich. L. Rev. 365, 368 (2000) ("[J]uries are significantly more likely to find patents valid, infringed, and willfully infringed than judges.").

[254] Patentees are overwhelmingly the ones to demand a jury trial. See Kimberly A. Moore, Jury Demands: Who's Asking?, 17 Berkeley Tech. L.J. 847, 855 (2002).

tions where they are more likely to make it to trial.[255] Accused infringers often rush to file declaratory judgments in order to choose jurisdictions that are more amenable to summary judgment.[256] Accused infringers spend more time working up issues that are amenable to summary judgment than issues that will require them to try their case before a jury. Courts seeking to diminish the role of juries in patent cases have reclassified questions as legal rather than factual in part because the effect is to give those questions to the judge rather than the jury.[257]

If there were no right to jury trial on patent validity, juries would presumably hear only disputed claims about infringement and damages. But since *Markman*, very few infringement issues present genuine factual disputes, because all the real action is in determining the scope of the patent right, and the Federal Circuit has said that is a question for the judge, not the jury.[258] That means that jury trials will primarily happen on the issue of damages. Since roughly seventy-five percent of patent cases are resolved against the patentee before we get to the damages phase,[259] we would see many fewer jury trials even leaving aside the likelihood that judges would reject more patent claims on the merits than juries do.

Jury trials in patent cases are extraordinarily expensive;[260] reducing their number would presumably result in both quicker and cheaper resolution of patent disputes. And a jury trial focused on damages would encourage (or perhaps even require) that damages be separated from infringement and validity and tried separately. That would be desirable for

[255] See Mark A. Lemley, Where to File Your Patent Case, 38 AIPLA Q.J. 401, 403 (2010).

[256] Fifteen percent of patent cases are declaratory judgment actions. Moore, supra note 254, at 858–59.

[257] See, e.g., *Markman*, 517 U.S. at 372; John R. Allison & Mark A. Lemley, The (Unnoticed) Demise of the Doctrine of Equivalents, 59 Stan. L. Rev. 955, 958 (2007).

[258] See, e.g., Advanced Fiber Techs. Trust v. J & L Fiber Servs., 674 F.3d 1365, 1372–73 (Fed. Cir. 2012) (holding that judges can construe the construction of claims); O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., 521 F.3d 1351, 1360–63 (Fed. Cir. 2008) (holding that claim construction—the interpretation of terms used to construe patent claims—is an issue for the judge, not the jury). After *O2 Micro*, "[w]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it." Id. at 1362.

While the doctrine of equivalents may present an issue for the jury—an issue the Court left unresolved in *Warner-Jenkinson*, see supra note 228—very few doctrine of equivalents cases survive today. See Allison & Lemley, supra note 257, at 958.

[259] Paul M. Janicke & LiLan Ren, Who Wins Patent Infringement Cases?, 34 AIPLA Q.J. 1, 3–5 (2006).

[260] AIPLA, Report of the Economic Survey 34 (2013) (reporting median jury trial fees of $5.5 million per side in suits with over $25 million at risk).

a number of reasons. Not only would it save time and money in the cases where a damages trial proved unnecessary, but bifurcation would also cause the parties to focus more attention than they currently do on the damages phase of the case, and likely produce better damages decisions.[261]

Eliminating jury trials would also allow a certain degree of judicial specialization. A number of commentators have proposed allowing some judges to specialize in patent matters. Some have worried that generalist judges may not be up to the task of handling a specialized and technical field like patent law, while others have pointed to the efficiency benefits of some limited specialization.[262] Congress recently created the Patent

[261] On the problems with damages calculation in current law, and ideas for how to address them, see Daralyn J. Durie & Mark A. Lemley, A Structured Approach to Calculating Reasonable Royalties, 14 Lewis & Clark L. Rev. 627, 628–29 (2010).

Some might find it odd that juries would primarily have a role only on an issue—damages—that they are arguably least well suited to address. While I agree that if we were writing on a blank slate we might question the wisdom of giving patent damages issues to juries, the Seventh Amendment provenance of the jury as decider of patent cases involving claims for money damages is impeccable.

[262] See, for example, Rochelle Cooper Dreyfuss, The Federal Circuit: A Case Study in Specialized Courts, 64 N.Y.U. L. Rev. 1, 48 (1989):

> A trial judge who has never read a technical document before is less likely to interpret it correctly, no matter how many expert witnesses are called to testify, than an appellate judge who has extensive experience in dealing with such matters. Thus, it seems somewhat peculiar to allow a layman's decision to stand on a technical issue . . . when the experienced judges of the [Federal Circuit], and the experts they employ, think that the finding is wrong, but not "clearly erroneous."

See also Kimberly A. Moore, Are District Court Judges Equipped to Resolve Patent Cases?, 15 Harv. J.L. & Tech. 1, 38–39 (2001).

Others have not been so sanguine, arguing against too much specialization and pointing to the Federal Circuit as an example. See, e.g., Paul R. Gugliuzza, Rethinking Federal Circuit Jurisdiction, 100 Geo. L.J. 1437, 1445 (2012); Craig Allen Nard & John F. Duffy, Rethinking Patent Law's Uniformity Principle, 101 Nw. U. L. Rev. 1619, 1622–24 (2007). Notably, David Schwartz found that experienced patent judges fare no better at claim construction on appeal than do novices. David L. Schwartz, Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases, 107 Mich. L. Rev. 223, 225 (2008); cf. Mark A. Lemley, Su Li & Jennifer M. Urban, Does Familiarity Breed Contempt Among Judges Deciding Patent Cases, Stan. L. Rev. (forthcoming April 2014) (finding that specialization may affect outcomes in patent cases).

For discussions of specialized courts more generally, see, for example, Rochelle Cooper Dreyfuss, Specialized Adjudication, 1990 BYU L. Rev. 377, 410 (1990); Sarang Vijay Damle, Note, Specialize the Judge, Not the Court: A Lesson from the German Constitutional Court, 91 Va. L. Rev. 1267, 1267–69 (2005); cf. Edward K. Cheng, The Myth of the Generalist Judge, 61 Stan. L. Rev. 519, 525–26 (2008) (noting that generalist judges already specialize to some extent). But see Daniel J. Meador, A Challenge to Judicial Architecture: Modifying the Regional Design of the U.S. Courts of Appeals, 56 U. Chi. L. Rev. 603, 611–

Pilot Project to allow district judges to specialize in patent cases to a limited extent.[263] But if juries must make the substantive decisions at the end of the day, the benefits of any such specialization are necessarily limited. Remove juries from the process of deciding validity, and judges will gain more experience with patent cases, particularly in districts participating in the Patent Pilot Program. The reduced incentive for forum shopping may drive further specialization, as patent cases in a particular field naturally start to cluster in districts where innovation is common.[264] And whether or not specialization improves substantive outcomes,[265] it is likely to make them more predictable.

If you are a patent owner used to angling for a jury, this may seem a catastrophic outcome—both because you may be less likely to win your case and because, for many patent trolls, the high cost and uncertainty of patent litigation are good things, driving defendants to settle even weak cases.[266] In fact, however, the practical implications may not be as immediate or as dramatic as patentees fear. First, the fact that there is no right to a jury trial on validity does not mean that courts have no discretion to convene juries. As we have seen, some circuits convened advisory juries before 1982, while others convened juries to rule only on subsidiary factual issues.[267] And juries have become the norm over the past thirty years, so that most federal judges cannot remember a time when they did not give validity issues to the jury. That practice may well continue even if the judge is the ultimate decision-maker on many validity

15 (1989) (arguing that the Federal Circuit is not a specialist court, and other federal courts aren't generalist courts; rather, they exist on a spectrum).

[263] Patent Cases Pilot Program, Pub. L. No. 111-349, 124 Stat. 3674 (2011).

[264] See Jeanne C. Fromer, Patentography, 85 N.Y.U. L. Rev. 1444, 1447–48 (2010) (proposing to end forum shopping in order to create a form of natural specialization in districts).

[265] See Lemley, Li & Urban, supra note 262, at 4–5 (finding that more experienced judges are significantly less likely to rule for the patentee). But many commentators have complained about using juries to decide patent cases. See, e.g., S. Leslie Misrock & F. Scott Kieff, Latent Cures for Patent Pathology: Do Our Civil Juries Promote Science and the Useful Arts? (Sept. 19, 1996) (unpublished manuscript) (on file with Virginia Law Review Association).

[266] These "bottom feeder" patent trolls represent a significant fraction of all patent suits filed today. See, e.g., Mark A. Lemley & A. Douglas Melamed, Missing the Forest for the Trolls, 113 Colum. L. Rev. (forthcoming Jan. 2014), available at http://ssrn.com/abstract=2269087; Colleen Chien, Patent Trolls by the Numbers 1–3 (Mar. 13, 2013) (unpublished manuscript), available at http://ssrn.com/abstract=2233041.

[267] By contrast, it is less clear that courts have the power even to convene advisory juries on equitable issues. See B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1423 (Fed. Cir. 1997) (raising but not deciding the issue, and citing conflicting authorities).

issues. If judges regularly convene advisory or subsidiary-fact juries, and particularly if they defer to the findings of those juries (in practice if not in law), patentees may still push for jury trials on validity, and the desire for a favorable jury may still lead both to forum shopping and to more expensive trials. But at a minimum, the role of the jury will be much more constrained than it has been in recent years, because courts will no longer owe deference to those juries, except perhaps on specific factual issues. And over time, that lessened role may both empower judges to resolve more validity issues without trial and to hold smaller jury trials on specific issues divorced from the non-jury legal issues, much as they have done with respect to inequitable conduct or other equitable issues.

Second, how the patentee win rate would change in the absence of a jury is harder to predict with confidence than one might expect. Since juries find patents valid much more often than judges do, switching from juries to judges in validity determinations might lead to more patents held invalid. It is true that juries today rule for the patentee more often than do judges, but some of that may be due to selection effects. Certainly the low patentee win rate at summary judgment (twenty-eight percent)[268] reflects both case selection—the weaker cases are weeded out before trial—and the asymmetry of the patent litigation process, in which the patentee needs to win every issue to prevail, while the defendant generally needs to win only one.[269] A closer analog is a bench trial, since it is presumably a case that survived summary judgment. Jury trials are still significantly more patent-friendly than bench trials, though the numbers are much closer.[270] That result does not appear to be driven by the types of cases that are tried by a judge rather than a jury.[271] Nonetheless, outcomes of bench trials held because the patentee wasn't sophisticated enough to realize that juries favored patentees may be

[268] Allison & Lemley, supra note 253, at 212.

[269] For discussion of this asymmetry, see Mark A. Lemley, The Fractioning of Patent Law, *in* Intellectual Property and the Common Law 504, 504–06 (Shyamkrishna Balganesh ed., 2013).

[270] Patentees win fifty-seven percent of bench trials and sixty-seven percent of jury trials on validity. Allison & Lemley, supra note 253, at 212.

[271] Lemley, Kendall & Martin, supra note 1, at 176, find that the disparity between jury and bench trial plaintiff win rates is unaffected by taking out pharmaceutical and Abbreviated New Drug Application ("ANDA") cases, which have different structures and incentives than ordinary patent disputes because of the strong regulatory incentives for pharmaceutical patent owners to pursue even weak cases in order to delay generic entry.

skewed for other reasons. And there may be other idiosyncratic reasons to think those cases are different than the norm. So while bench trials would likely lead to more invalidity rulings, the difference may not be as dramatic as the current numbers suggest.

A final implication may be to accelerate the existing trend towards separation of validity and infringement issues. A century ago, a U.S. patent trial resolved validity and infringement in an integrated proceeding. By contrast, in many other countries, like Germany, validity and infringement are entirely separate, with the courts resolving only infringement and leaving validity review to the technical boards of appeal within the patent office.[272] The U.S. system has been moving increasingly towards a bifurcated system as we vest more and more power in the PTO to consider the validity of issued patents and as the rise of *Markman* hearings and summary judgments encourage piecemeal adjudication of patent issues in court.

Bifurcating validity and infringement is both good and bad. Specialization is generally desirable; the European system arguably produces more accurate evaluations of a patent's validity than would a lay jury. But bifurcation also raises the risk that a patent claim will be treated "like a nose of wax which may be turned and twisted in any direction,"[273] with both parties urging inconsistent positions before different tribunals depending on whether the issue is validity or infringement.

If there is no Seventh Amendment right to a jury trial on validity, even if validity and infringement are not resolved in separate proceedings, it may become the norm to have them resolved on summary judgment or after issue-specific evidentiary hearings, only a few of which will involve a jury. While doing so might at first glance look like a further separation, in fact resolving these issues pretrial may have the opposite effect. By uniting both infringement and validity with *Markman* hearings, pre-trial resolution of validity issues may make it less, not more, likely that parties and courts end up taking inconsistent positions on the scope of the patent.

[272] See, e.g., James Pooley & Vicki Huang, Multi-National Patent Litigation: Management of Discovery and Settlement Issues and the Role of the Judiciary, 22 Fordham Intell. Prop. Media & Ent. L.J. 45, 48–51 (2011) (discussing Germany and Japan's bifurcated patent litigation systems, under which infringement claims are tried to a court while validity defenses are tried to a special board at the patent office).

[273] White v. Dunbar, 119 U.S. 47, 51 (1886).

Removing the jury from patent validity determinations—or circumscribing its role—would work a major change in modern patent litigation. But it would by no means spell the death knell for patentees or patent enforcement. After all, the industry that relies most on patents, and where they seem to do the most good, is the pharmaceutical industry.[274] And pharmaceutical patent cases are virtually never tried before juries because they rarely involve a claim for damages.[275] As the pharmaceutical example suggests, a patent system cannot only survive but flourish without jury trials. True, there are many differences between pharmaceutical patent cases and other patent suits. But, if nothing else, the pharmaceutical experience demonstrates that judges can fairly evaluate the validity of patents.

C. Implications of a Seventh Amendment Right to a Jury Trial on Validity

What if there is a broad Seventh Amendment right to have a jury decide patent validity, as the Federal Circuit held in *Lockwood*? While ordinary patent litigation wouldn't change, taking seriously the idea of a Seventh Amendment right to decide all validity questions would likely have some significant and underappreciated implications for patent practice. To find such a broad right, the Supreme Court would have to conclude that the question of validity itself belonged before a jury, regardless of whether the question was one of law or fact, regardless of whether the jury was reviewing the decision of an administrative agency, and regardless of the legal or equitable nature of the remedy. The history I discuss in Part I blows up the myth that patent issues were tried to juries only if damages were at issue. Both equitable infringement suits in Chancery and *scire facias* actions were referred to juries to resolve fact disputes, despite the fact that neither involved claims for damages.

[274] See James Bessen & Michael J. Meurer, Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk 15–16 (2008) (arguing that the patent system works in the pharmaceutical and chemical industries but fails elsewhere); Dan L. Burk & Mark A. Lemley, The Patent Crisis and How the Courts Can Solve It 32–33 (2009) (discussing how pharmaceutical patent issues are very different than those other industries face).

[275] See supra note 1. Indeed, in an unpublished decision the Federal Circuit has rejected a Seventh Amendment right to a jury trial even when the pharmaceutical patentee asked for future damages from expected entry at risk, as opposed to past damages. In re Apotex, Inc., 49 F. App'x 902, 903 (Fed. Cir. 2002).

As noted in the previous Part, there are a number of circumstances today in which we decide validity in a way that will bind patentees without giving either party a jury trial right, including ITC exclusion proceedings, pharmaceutical Abbreviated New Drug Application ("ANDA") suits, reexamination proceedings, and suits against the government. Some of those are justified on the theory that the cases would traditionally have been brought in equity because they don't involve a claim for money damages. But that theory doesn't square with English practice. As we saw in Part I, the English chancery courts transferred issues of validity to the King's Bench for trial in *scire facias* actions. And even when patentees sued in equity, seeking injunctive relief, the Court of Chancery would grant only a temporary injunction, waiting on the law court to assess the patent before granting more permanent relief. So if the Court finds a Seventh Amendment right to a jury trial based on the traditional English law-equity distinction, that right will extend to cases in which a plaintiff seeks only injunctive relief, such as pharmaceutical ANDA suits and post-*MedImmune* validity challenges.

The rule that cases against the Federal government are tried to judges (Article I judges, no less), not juries, is also arguably problematic under a broad reading of the Seventh Amendment. So too is the current Federal Circuit rule that allows district courts to decide inequitable conduct in a bench trial before ruling on invalidity.[276] Because inequitable conduct now requires proof of patent invalidity,[277] *Beacon Theatres* means that if there is a right to have a jury decide invalidity, *Agfa* is wrong and judges can never decide inequitable conduct without waiting for and then deferring to a jury's determination of invalidity. And we even might have to rethink the idea that a reexamination proceeding at the PTO can trump a judicial finding of validity.[278]

Second, a strong constitutional right to have juries decide validity would require us to rethink either our commitment to the idea that many patent validity issues are legal, not factual, questions, or our more general commitment to the whole idea of the law-fact distinction. If juries are required to decide things that we have traditionally thought of as questions of law, we need to reconsider our traditional ideas of what it is

[276] Agfa Corp. v. Creo Prods., 451 F.3d 1366, 1369 (Fed. Cir. 2006).

[277] Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276, 1292–93 (Fed. Cir. 2011) (en banc).

[278] See, e.g., *Baxter Int'l*, 678 F.3d at 1358; In re Constr. Equip. Co., 665 F.3d 1254, 1254–55 (Fed. Cir. 2011).

that juries have the power to decide, and with it the question of what deference appellate courts owe to district court decisions.[279]

Finally, for the Court to find a constitutional right to decide validity it would have to overrule or at least dramatically limit *Cox v. United States*. Doing so would open up the idea that jury trials are appropriate in other areas of administrative law, with significant implications for administrative law and for a variety of substantive disciplines where that is not the norm, ranging from the Food and Drug Administration to the Securities and Exchange Commission.

CONCLUSION

For the past thirty-five years, patent lawyers and courts have taken for granted that juries decide whether patents are valid, and (at least implicitly) assumed that there was a constitutional right to have juries do so. But in fact the dominant role of the jury in modern patent law is an historical anomaly. For most of U.S. history, juries did not decide patent validity. And English practice before 1791—the key question under the Seventh Amendment—is ambiguous. When English courts considered invalidating a patent altogether, they did so in the chancery courts, referring validity questions to the jury only when there was a particular factual dispute. While there are reasonable arguments on both sides, it is likely that the Supreme Court would not find a Seventh Amendment right to have juries decide whether patents are valid, at least not the broad right to decide ultimate legal questions that patent lawyers seem to assume today. And if the Court did find such a right, it would significantly change a number of aspects of patent practice, requiring juries in cases and on issues that now lack them.

A ruling that there was no right to have juries determine validity would also significantly change patent practice, affecting both the efficiency of patent litigation and probably the outcome. Some of those changes would be good, others bad, while other changes (like invalidat-

[279] The Federal Circuit has been criticized for usurping the district court's fact-finding role. See, e.g., Ted L. Field, "Judicial Hyperactivity" in the Federal Circuit: An Empirical Study, 46 U.S.F. L. Rev. 721, 723 (2012) (finding that the Federal Circuit reverses district courts more often than other circuits); William C. Rooklidge & Matthew F. Weil, Essay, Judicial Hyperactivity: The Federal Circuit's Discomfort with Its Appellate Role, 15 Berkeley Tech. L.J. 725, 726 (2000). The court has recently agreed to reconsider its refusal to defer in one important area: claim construction. Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp., 500 F. App'x 951, 951–52 (Fed. Cir. 2013).

ing more patents) may be good *or* bad depending on one's perspective. But removing juries from validity determinations wouldn't cause the sky to fall on the patent system, which operated for over a century without jury trials at all. And whether or not it makes sense as a policy matter for juries to decide patent validity, it is not clear that the Constitution requires it.