

# CONSTITUTIONAL AVOIDANCE AND THE FEDERAL COMMON LAW OF PATENT SUBJECT MATTER ELIGIBILITY

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## INTRODUCTION

U.S. constitutional history is characterized by recurrent, often slow-building conflicts between Congress and the U.S. Supreme Court over the for-

mer's power to regulate the authority of the latter.<sup>1</sup> The first, most important, and most well-known of these conflicts is captured by *Marbury v. Madison*, in which the U.S. Supreme Court invalidated Section 13 of the 1789 Judiciary Act authorizing it to issue writs of mandamus pursuant to original jurisdiction.<sup>2</sup> Significant conflicts later included Congress's effort to circumscribe the Supreme Court's review of petitions invoking *habeas corpus* and to determine the content of rights subject to congressional enforcement authority under Section 5 of the Fourteenth Amendment.<sup>3</sup> This Article argues that a similarly slow-moving and direct confrontation is at hand over the U.S. Constitution's Patent Clause.

Despite the U.S. Constitution's textual commitment of authority over patent law to Congress, the U.S. Supreme Court has engaged the Legislative Branch in a contest over its scope and reach for nearly two centuries.<sup>4</sup> Through invocation of the common law, the Supreme Court has, over that period, fashioned exceptions to patent statutes that limit what inventors may exclusively claim, how they may claim it, and for how long.<sup>5</sup> The Court has often been opaque about whether its decisions were anchored in the Patent Clause itself or limited to statutory construction.<sup>6</sup>

Congress has not only amended the substance of patent law in response to judge-made exceptions; it has recurrently reorganized jurisdiction in federal courts and administrative agencies to achieve its objectives.<sup>7</sup> The most signifi-

<sup>1</sup> See LEAHY, THE PATENT REFORM ACT OF 2007, S. REP. NO. 110-259, at 1–2 (2008) (“The Constitution explicitly grants Congress the power to ‘promote the progress of science and useful arts . . . .’ The object of the patent law today must remain true to the constitutional command . . . .”); William Patry, *The Enumerated Powers Doctrine and Intellectual Property: An Imminent Constitutional Collision*, 67 GEO. WASH. L. REV. 359, 371–72 (1999).

<sup>2</sup> *Marbury v. Madison*, 5 U.S. (1 Cranch) 137, 175–76, 180 (1803).

<sup>3</sup> See, e.g., *Ex parte McCardle*, 74 U.S. (7 Wall.) 506, 514 (1868); *City of Boerne v. Flores*, 521 U.S. 507, 516–17, 536 (1997).

<sup>4</sup> *United States v. Duell*, 172 U.S. 576, 583 (1899) (“Since, under the Constitution, Congress has power ‘to promote the progress of science and useful arts, [’] . . . it follows that Congress may provide such instrumentalities in respect of securing to inventors the exclusive right to their discoveries as in its judgment will be best calculated to effect that object.”); Peter S. Menell, *Forty Years of Wondering in the Wilderness and No Closer to the Promised Land: Bilski’s Superficial Textualism and the Missed Opportunity to Return Patent Law to Its Technology Mooring*, 63 STAN. L. REV. 1289, 1307–08 (2011); David Philip Miller, *Of Patents, Principles, and the Construction of Heroic Invention: The Case of Neilson’s Hot Blast in Iron Production*, 160 PROC. AM. PHIL. SOC’Y 361, 362 (2016).

<sup>5</sup> H. Jared Doster, *The English Origins of the Judicial Exceptions to 35 U.S.C. § 101*, LANDSLIDE, Mar.–Apr. 2019, at 23, 23 (“The Supreme Court imported the judicial exceptions entirely from English common law.”).

<sup>6</sup> *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 154 (1950) (Douglas, J., concurring) (“[E]very patent case involving validity presents a question which requires reference to a standard written into the Constitution.”); Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 HARV. L. REV. 405, 459 (1989) (“Interpretive principles are often a product of constitutional norms.”).

<sup>7</sup> Act of Feb. 15, 1819, ch. 19, 3 Stat. 481, 481 (original jurisdiction in equity) (repealed 1836); Act of July 8, 1870, ch. 230, § 55, 16 Stat. 198, 206 (remedies at law if equitable

cant change occurred in 1982, when it created the U.S. Court of Appeals for the Federal Circuit, with exclusive intermediate appellate authority over patent cases.<sup>8</sup> Congress intended the Federal Circuit to serve the function of predictability and uniformity in the patent laws. The Supreme Court has, however, responded to the Federal Circuit with a more frequent and aggressive review approach. Between 2005 and 2015, the U.S. Supreme Court granted certiorari to review Federal Circuit opinions twenty-seven times, reversing twenty-two of them.<sup>9</sup>

The most recent tension between the Article I and Article III branches over patent law grew over the last decade. In its 2012 decision in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, the Supreme Court announced, through its “inventive concept” test for patent subject matter eligibility under 35 U.S.C. § 101, the latest iteration of its determination over the years that “more” is required for patent eligibility than what a simple reading of the statutory text would suggest.<sup>10</sup> In that case, Prometheus had discovered a novel measure of metabolites for purposes of adjusting drug administration, and it asserted that measure was therefore patent eligible under § 101.<sup>11</sup> The Supreme Court disagreed, ruling that, in essence, observing a measure of metabolites, when all else remained the same, was insufficient to satisfy the statute.<sup>12</sup> Because the observation of a measure was directed to a patent-ineligible concept, i.e., “laws of nature, natural phenomena, or abstract ideas,” the Supreme Court held that Prometheus did not satisfy the requirements for “patent-eligible” subject matter.<sup>13</sup>

Criticism from the patent bar and, more relevantly, from Congress was swift and severe. Patent attorneys called it “the worst patent decision in the history of the Supreme Court” and “impossible to apply.”<sup>14</sup> Congress proposed the comprehensive abrogation of long-standing judicial exceptions to patentabil-

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remedies insufficient); 28 U.S.C. § 1295 (establishing jurisdiction of U.S. Court of Appeals for the Federal Circuit).

<sup>8</sup> 28 U.S.C. § 1295(a)(1)–(4) (originally enacted as Federal Courts Improvement Act of 1982, Pub. L. 97-164, § 127(a), 96 Stat. 25, 37–38).

<sup>9</sup> Steven Seidenberg, *Tug-of-War Over Interpretations of Patent Law Continues Between Federal Circuit and SCOTUS*, A.B.A. J. (Jan. 1, 2016, 3:00 AM), [https://www.abajournal.com/magazine/article/tug\\_of\\_war\\_over\\_interpretations\\_of\\_patent\\_law\\_continues\\_between\\_federal](https://www.abajournal.com/magazine/article/tug_of_war_over_interpretations_of_patent_law_continues_between_federal) [perma.cc/K27T-VJX8].

<sup>10</sup> *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 70–72, 80–82, 86 (2012).

<sup>11</sup> *Id.* at 72.

<sup>12</sup> *Id.* at 77.

<sup>13</sup> *Id.* at 71–73.

<sup>14</sup> Mateo Aboy et al., *Mayo’s Impact on Patent Applications Related to Biotechnology, Diagnostics and Personalized Medicine*, 37 NATURE BIOTECHNOLOGY, 513, 513 (2019) (citation omitted) (“The Supreme Court’s decision . . . has been seen as a substantial threat to the future patentability of diagnostic and personalized medicine and described as a ‘game changer’ with potentially profound implications for the biotech industry. Patent attorneys have wholeheartedly agreed, calling it ‘the worst patent decision in the history of the Supreme Court’ and ‘almost impossible to apply.’”).

ity.<sup>15</sup> Last year, the Senate Judiciary Committee held hearings about “The State of Patent Eligibility in America,” focusing on potential reforms to § 101.<sup>16</sup>

In May 2019, Senators Chris Coons and Thom Tillis, both of whom were re-elected to six year terms in the 2020 elections, introduced legislation to reform patent law starting with § 101.<sup>17</sup> The draft bill proposed that (1) § 101 shall be construed in favor of eligibility; (2) no exception to subject matter eligibility, including abstract ideas, laws of nature, or natural phenomena, be used to determine patent eligibility; and (3) the eligibility of a claimed invention should be determined without regard to any considerations related to §§ 102, 103, or 112.<sup>18</sup> The bill would abrogate judicially created exceptions to § 101 and instead provide exclusive statutory categories of ineligible subject matter, such as “[f]undamental scientific principles; [p]roducts that exist solely and exclusively in nature; [p]ure mathematical formulas; [e]conomic or commercial principles; [and m]ental activities.”<sup>19</sup>

Congressional rejections of Supreme Court precedent have had some success in the past. The 1952 Patent Act is credited with rejecting a number of U.S. Supreme Court decisions that confused lower courts and patent attorneys.<sup>20</sup> This is especially true for the non-obviousness standard.<sup>21</sup> Under that

<sup>15</sup> Chris Coons & Thom R. Tillis, *Tillis and Coons: What We Learned at Patent Reform Hearings*, THOM TILLIS (June 24, 2019), <https://www.tillis.senate.gov/2019/6/tillis-and-coons-what-we-learned-at-patent-reform-hearings> [perma.cc/6E53-BH33]; see *The State of Patent Eligibility in America: Part I: Hearing Before the Subcomm. on Intell. Prop. of the S. Judiciary Comm.*, 116th Cong. (2019) [hereinafter *Hearings Part I*], <http://www.judiciary.senate.gov/meetings/the-state-of-patent-eligibility-in-america-part-i> [perma.cc/N5VA-D2XG]; *The State of Patent Eligibility in America: Part II: Hearing Before the Subcomm. on Intell. Prop. of the S. Judiciary Comm.*, 116th Cong. (2019), <https://www.judiciary.senate.gov/meetings/the-state-of-patent-eligibility-in-america-part-ii> [perma.cc/X384-EWSU]; *The State of Patent Eligibility in America: Part III: Hearing Before the Subcomm. on Intell. Prop. of the S. Judiciary Comm.*, 116th Cong. (2019) <https://www.judiciary.senate.gov/meetings/the-state-of-patent-eligibility-in-america-part-iii> [perma.cc/86NK-ZW2P].

<sup>16</sup> *Hearings Part I*, *supra* note 15, at 3 (statement of Q. Todd Dickinson, Senior Partner, Polsinelli, PC).

<sup>17</sup> Press Release, Thom R. Tillis, Chair, Subcomm. on Intell. Prop., S. Judiciary Comm., Sens. Tillis and Coons and Reps. Collins, Johnson, and Stivers Release Draft Bill Text to Reform Section 101 of the Patent Act (May 22, 2019), <https://www.tillis.senate.gov/2019/5/sens-tillis-and-coons-and-reps-collins-johnson-and-stivers-release-draft-bill-text-to-reform-section-101-of-the-patent-act> [perma.cc/GH9L-XYL2]; *2020 Senate Election Results*, U.S. SENATE: PERIODICAL PRESS, <https://www.periodicalpress.senate.gov/election-2020/> [perma.cc/JZA8-XNWG]; see also Emmarie Huetteman, *Senators Who Led Pharma-Friendly Patent Reform Also Prime Targets for Pharma Cash*, KHN (Mar. 24, 2020), <https://khn.org/news/senators-who-led-pharma-friendly-patent-reform-also-prime-targets-for-pharma-cash> [perma.cc/JX2L-EEYF].

<sup>18</sup> Tillis, *supra* note 17.

<sup>19</sup> Dennis Crouch, *Framework for Statutory Reform of Section 101*, PATENTLYO (Apr. 18, 2019), <https://patentlyo.com/patent/2019/04/framework-statutory-section.html> [perma.cc/53QK-F6VB].

<sup>20</sup> Karl B. Lutz, *The New 1952 Patent Statute*, 35 J. PAT. OFF. SOC’Y 155, 156–57 (1953).

<sup>21</sup> *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 257, 265, 267 (1850); 35 U.S.C. § 103.

inquiry, now codified at 35 U.S.C. § 103, a patent may not issue for an invention if it would have been obvious to a person having ordinary skill in the art to which the claimed invention pertains.<sup>22</sup> The Coons-Tillis proposal has the potential to force a direct confrontation over constitutional authority over the Patent Clause. The text of the Clause itself contains implied limits on Congress's authority (e.g., "limited Times" for inventors' exclusivity), and the Supreme Court has never clarified as to when it is interpreting "Inventors" and "Discoveries" as a constitutional matter.<sup>23</sup>

Beyond the preliminary statutory reaction, "pro-patent" advocates especially have called for Congress to consider stripping the U.S. Supreme Court of appellate jurisdiction over patent law altogether.<sup>24</sup> Under Article III, Section 2, Clause 2 of the U.S. Constitution, the "Exceptions Clause," Congress is authorized to regulate the appellate jurisdiction of the Supreme Court.<sup>25</sup> One proposal that has been considered at least as early as 1932, and certainly post *Mayo*, is removing the appellate jurisdiction over patents from the U.S. Supreme Court.<sup>26</sup> The intended effect would be establishing the U.S. Court of Appeals for the Federal Circuit as effectively the highest court of appeal for patent matters.

While the Supreme Court has acknowledged congressional authority to limit its appellate jurisdiction pursuant to the Exceptions Clause, it has imposed a number of stringent conditions for doing so. Aside from the political difficulty of convincing a majority in the House of Representatives and a supermajority in the Senate to circumscribe Supreme Court jurisdiction over patents, the legislation would undergo stringent review by the Justices who have, in other contexts, raised significant separation-of-powers concerns with jurisdiction limiting efforts.<sup>27</sup> A jurisdiction-stripping statute would impliedly communicate that Congress's authority over patents is not subject to Supreme Court review. Given statements made by the Court, it is just as likely, if not more so, that it will decisively emphasize its fundamental constitutional role in enforcing limits on Congress's authority over patents.

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<sup>22</sup> 35 U.S.C. § 103.

<sup>23</sup> U.S. CONST. art. I, § 8, cl. 8; Henry M. Hart, Jr., *The Power of Congress to Limit the Jurisdiction of Federal Courts: An Exercise in Dialectic*, 66 HARV. L. REV. 1362, 1364 (1953) ("If you think an 'exception' implies some residuum of jurisdiction, Congress could meet that test by excluding everything but patent cases.").

<sup>24</sup> Catherine Taylor, Note, *The Cessation of Innovation: An Inquiry into Whether Congress Can and Should Strip the Supreme Court of Its Appellate Jurisdiction to Entertain Patent Cases*, 92 CHI.-KENT L. REV. 679, 679, 695 n.120 (2017).

<sup>25</sup> Hart, *supra* note 23, at 1364 & n.13; Andrea Olson, *Defining the Article III Judicial Power: Comparing Congressional Power to Strip Jurisdiction with Congressional Power to Reassign Adjudications*, 53 CREIGHTON L. REV. 111, 120 (2019).

<sup>26</sup> *General Revision and Amendment of the Patent Law: Hearings before H Comm. on Patents*, 72nd Congress 20–22 (1932).

<sup>27</sup> See *infra* Section IV.B.

Indeed, while constitutional questions involving the Patent Clause have been relatively few and far between, the Supreme Court has in patent cases referred to its constitutional role in serving as ultimate interpreter of constitutional text, preserving the right to a jury, and controlling the final disposition of disputes dedicated to it by Article III, including respect for, and development of, federal common law.<sup>28</sup> The Supreme Court's institutional efforts to police the Judicial Power's essential features has led it to limit patent terms and (un)patentable "improvements," especially when supervising courts sitting in equity; preserve jury determinations of fact (the scope of which have ebbed and flowed over time); and, perhaps most importantly, respect precedent inherited from English common law.

Methodologically, this Article analyzes the textual structure and (extant) legislative history of the Patent Acts of 1790, 1793, 1836, 1870, and 1952, as well as the Federal Courts Improvement Act of 1982, which established the U.S. Court of Appeals for the Federal Circuit. The historical record is understandably more complete the more recent the relevant statute or decision. For example, Justices Marshall and Story "issued over 150 reported patent opinions prior to Justice Story's retirement in 1845, while expressing regret that so few of their patent decisions had been published."<sup>29</sup> There is similarly scant legislative history for the 1836 and 1870 Acts relative to that available for the 1952 Act and the 1982 Federal Courts Improvement Act.<sup>30</sup>

Within each of these epochs, it is argued, key Supreme Court decisions limited the reach of congressional expansion of patent availability, often through reference to patent subject matter eligibility.<sup>31</sup> Before 1952, the patentable subject matter statute overlapped in important ways with inquiries into novelty and non-obviousness now codified, respectively, at 35 U.S.C. § 102 and 35 U.S.C. § 103.<sup>32</sup>

Supreme Court jurisprudence has frequently left opaque whether its decisions were grounded in constitutional or statutory text. There is an unmistakable constitutional undercurrent to Supreme Court decisions resolved ambiguously according to statutory interpretation. While each subsequent major patent reform by Congress emphasized access, uniformity, and predictability of patents as important to the national interest, the Supreme Court prioritized the integrity of adjudications and, especially when reviewing judgments in equity, balancing, on the one hand, the Constitution's implied suggestion that invention

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<sup>28</sup> Sherry Knowles & Anthony Prosser, *Unconstitutional Application of 35 U.S.C. § 101 by the U.S. Supreme Court*, 18 J. MARSHALL REV. INTELL. PROP. L. 144, 160, 162–63, 167–68 (2018); Act of Apr. 10, 1790, ch. 7, § 1, 1 Stat. 109, 109–110.

<sup>29</sup> Kenneth J. Burchfiel, *Revising the "Original" Patent Clause: Pseudohistory in Constitutional Construction*, 2 HARV. J.L. & TECH. 155, 186 (1989).

<sup>30</sup> See generally Act of July 19, 1952, ch. 950, 66 Stat. 792.

<sup>31</sup> See 35 U.S.C. § 101.

<sup>32</sup> B. Zorina Khan, *Property Rights and Patent Litigation in Early Nineteenth-Century America*, 55 J. ECON. HIST. 58, 78 & n.35, 81–83 (1995); 35 U.S.C. §§ 102–03.

be promoted with market exclusivity and, on the other, the public interest in access to technology and the distrust of monopolies threaded through the inherited English common law.<sup>33</sup>

In the *Mayo* context, the Supreme Court made clear that its eligibility jurisprudence had survived as “inventive” concept after repeated legislative efforts to kill its ancestors: “something more,” once referred to as “invention,” and then more recently as the doctrine of “synergism.”<sup>34</sup> Over time, Congress equivocated in both the legislative texts accompanying adoption of new statutes and in the statutory language itself, leaving the Supreme Court free to revisit and reformulate eligibility exceptions.<sup>35</sup> The newest bipartisan proposals put forth in Congress leave no room for doubt—those proposals actively and explicitly endeavor to abrogate the common law of patents that dates to and precedes the adoption of the U.S. Constitution’s Patent Clause.<sup>36</sup>

With respect to abrogating the common law applied by the U.S. Supreme Court since the Founding, congressional efforts to force the Supreme Court to abandon precedent are likely to shine a light on the constitutional status of that precedent. For example, the first Patent Act codified the idea of an “inventor” as “the first and true” person to bring an invention to tangible existence.<sup>37</sup> Yet in the broader context of patent law, predating the U.S. Constitution, to “invent” was equivalent to introducing a product or process to society, even if not through an exercise of engineering or mental creativity.<sup>38</sup> Similarly, the word “discovery” poses complex interpretive problems as dictionaries used at the time defined “discovery” as “[t]he act of finding any thing hidden,” a definition that would have failed tests for patentability under many and perhaps most circumstances.<sup>39</sup> Congressional efforts to abrogate the common law in which these complexities are embedded will almost certainly require the Supreme Court to visit the constitutional backdrop to that common law to determine whether there is sufficient separation-of-powers relevance to constitutional terms such that judicial, rather than legislative, interpretation should prevail.

Although jurisdiction stripping appears as a less-likely legislative strategy at this point, any future effort to do so would run into similar constitutional barriers. The Patent Clause, like the writ of *habeas corpus*, is located in Article I of the Constitution and contains specific textual limitations. Indeed, in the pre-

<sup>33</sup> *Woodworth v. Hall*, 30 F. Cas. 572, 576 (C.C.D. Mass. 1846).

<sup>34</sup> See Giles S. Rich, *Laying the Ghost of the “Invention” Requirement*, 1 APLA Q.J. 26, 30, 43 (1973).

<sup>35</sup> Act of Apr. 2, 1982, Pub. L. No. 97-164, §§ 122, 403, 96 Stat. 25, 36, 57–58.

<sup>36</sup> Congress drafted and passed the America Invents Act of 2011 before the Court’s most recent interpretation of patent subject matter eligibility.

<sup>37</sup> The earliest U.S. patent laws protected the “first and true inventor.” Act of Apr. 10, 1790, ch. 7, § 5, 1 Stat. 109, 111.

<sup>38</sup> Alexander J. Kasner, *The Original Meaning of Constitutional Inventors: Resolving the Unanswered Question of the MadStad Litigation*, 68 STAN. L. REV. ONLINE 24, 26 (2015).

<sup>39</sup> *Id.* (“Mere discovery without filing or other public availability would have stretched the notion of invention.”).



Bill of Rights text, it is the only provision that actively conferred a “right” and constrains that right as to “authors” and “inventors” and only for “limited Times.”<sup>40</sup>

The likely outcome, then, is the type of constitutional brinkmanship that resulted in *City of Boerne v. Flores*—reserving to the Supreme Court alone the authority to determine the content of rights protected under the Fourteenth Amendment—and *Boumediene v. Bush*—reserving authority to determine the content of *habeas corpus* protections when Congress limits or precludes jurisdiction by federal courts to hear claims brought under the writ. Congressional attempts to abrogate the entire body of Supreme Court precedent regulating patent law is likely to have the self-defeating effect of urging the Supreme Court to constitutionalize, and therefore immunize, it from congressional modification.

Constitutionalizing patent eligibility would work adversely to Congress’s stated interests with respect to patents and innovation in the economy, and, more importantly, it is unnecessary. The Supreme Court has identified narrower, specific gaps in the current statutory language that Congress could easily address, and in a bipartisan way. Judges themselves have identified interpretive approaches to eligibility disputes that Congress could codify.<sup>41</sup>

Supreme Court jurisprudence is anchored not only in a large body of federal common law that is difficult to comprehensively override, but also in its constitutional role of interpreting the Patent Clause *and* ensuring that patent statutes do not infringe on other constitutionally protected rights. Entirely aside from the wisdom of abrogating judicially crafted exceptions to patent eligibility, this Article argues that sweeping efforts to jettison that body of common law would result in the constitutionalization of the common law of patent eligibility and that that result is constitutionally and practically undesirable. Congress should instead opt for less confrontational and more incremental approaches far more likely to address criticisms of the Supreme Court’s recent patent eligibility jurisprudence.

Part I of this Article will provide an overview of the constitutional framework and interpretive disputes embedded in the Patent Clause. Part II will analyze how these disputes have masked a long-standing constitutional conflict, up to and including the U.S. Supreme Court’s decisions in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* and, later, in *Alice Corp. v. CLS Bank*, through which Congress expands the availability and security of patents to innovators and the Supreme Court curtails that authority, largely through invocation of the Judicial Power. Part II will further explain that congressional criticism of patent eligibility jurisprudence fits within this broader structural conflict. Part III will evaluate proposed legislative targeting of the Supreme

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<sup>40</sup> Gene Quinn, *Patents, Copyrights, and the Constitution, Perfect Together*, IP WATCHDOG (Feb. 19, 2018), <https://www.ipwatchdog.com/2018/02/19/patents-copyrights-constitution/> [perma.cc/AQH3-J42D].

<sup>41</sup> See *infra* Section IV.C.2.

Court's "inventive concept" patent eligibility jurisprudence, including comprehensive abrogation of federal common law and jurisdiction stripping. Applying lessons from the Religious Freedom Restoration Act and the Military Commissions Act, the Article reasons that a comprehensive effort by Congress to jettison Supreme Court-fashioned exceptions to patent eligibility are likely to result in the constitutionalization of those exceptions. Part IV will ultimately advocate for more-tailored amendments to statutory language and rules of construction that specifically address disfavored opinions, as this approach is less likely to raise constitutional questions and more likely to resolve current problems.

## I. THE CONSTITUTIONAL FRAMEWORK

The federal interest in promoting invention and discovery was established in the original text of the U.S. Constitution, the power to realize that interest was vested in Congress, and the means by which it should do so was specified.<sup>42</sup> Article I, Section 8 of the U.S. Constitution provides Congress with the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."<sup>43</sup> Congress did so in 1790, soon after the Constitution was ratified and the new federal government was established.<sup>44</sup> The new Constitution, of course, gave Congress authority not only over patents, but also over how they would be adjudicated, by vesting it with authority to "constitute Tribunals inferior to the supreme Court" and to regulate the U.S. Supreme Court's appellate jurisdiction "both as to Law and Fact, with such Exceptions, and under such Regulations" as Congress might adopt.<sup>45</sup>

### A. *The Patent Clause*

Because the Patent Clause was adopted at the Constitutional Convention without debate, little is known about how the Clause's inclusion came to be in the Constitution.<sup>46</sup> The structure of the Clause itself calls for a unique interpretation of the powers given to Congress.<sup>47</sup> Other enumerated powers in the Constitution generally consist of "to" clauses, such as "[t]o borrow Money"<sup>48</sup> or "[t]o regulate Commerce,"<sup>49</sup> which delineate areas of regulation.<sup>50</sup> While the

<sup>42</sup> *McClurg v. Kingsland*, 42 U.S. (1 How.) 202, 204 (1843).

<sup>43</sup> U.S. CONST. art. I, § 8, cl. 8.

<sup>44</sup> Act of Apr. 10, 1790, ch. 7, § 2, 1 Stat. 109, 110–11; *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 6 (1966).

<sup>45</sup> U.S. CONST. art. I, § 8, cl. 9; *id.* art. III, § 2, cl. 2.

<sup>46</sup> Edward C. Walterscheid, *To Promote the Progress of Science and Useful Arts: The Background and Origin of the Intellectual Property Clause of the United States Constitution*, 2 J. INTELL. PROP. L. 1, 26 (1994).

<sup>47</sup> Dotan Oliar, *Making Sense of the Intellectual Property Clause: Promotion of Progress as a Limitation on Congress's Intellectual Property Power*, 94 GEO. L.J. 1771, 1775 (2006).

<sup>48</sup> U.S. CONST. art. I, § 8, cl. 2.

<sup>49</sup> *Id.* cl. 3.

Patent Clause contains one of these “to” clauses,<sup>51</sup> it also contains a “by” clause,<sup>52</sup> which adds interpretive difficulty.<sup>53</sup> At the time of the Constitutional Convention, the problems with state-issued patents were becoming more apparent, and a “uniform system of patents” was becoming more desirable.<sup>54</sup>

The Framers were also aware of English statutes that “curtailed the royal prerogative to bestow monopolies to Crown favorites over works and products they did not create.”<sup>55</sup> For that reason, the Framers were not about to give the Congress any general power to create monopolies.<sup>56</sup>

James Madison and Charles Pinckney proposed the Clause “in the closing days of the Constitutional Convention.”<sup>57</sup> Thomas Jefferson was also involved in the promulgation of the Patent Clause, early patent statute drafting, and implementation of that statute as a member of the initial committee on patents.<sup>58</sup> The Clause was passed without debate, subjecting its nature, scope, and context to speculation. While most commentators interpret this to indicate universal approval, some commentators suggest that

after several months of intense and sometimes acrimonious debate . . . [i]t may well have been that the delegates were tired, wanted to go home, and simply did not perceive this particular grant of power to the Congress to warrant any further debate, regardless of whether they considered it to have any particular significance.<sup>59</sup>

Edward Walterscheid has argued that the “commerce” and “necessary and proper” clauses also made the Patent Clause redundant.<sup>60</sup>

While Congress has the power to “act[] via legislation to promote the progress of science and useful arts, it must . . . do so by the means specified in the . . . Clause.”<sup>61</sup> This structural division between Congress and courts results

<sup>50</sup> Oliar, *supra* note 47, at 1774.

<sup>51</sup> U.S. CONST. art. I, § 8, cl. 8 (“To promote the Progress of Science and useful Arts . . .”).

<sup>52</sup> *Id.* (“[B]y securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries . . .”).

<sup>53</sup> Oliar, *supra* note 47, at 1774.

<sup>54</sup> Craig Allen Nard, *Legal Forms and the Common Law of Patents*, 90 B.U. L. REV. 51, 61 (2010).

<sup>55</sup> *Art. I, § 8, cl. 1 Origins and Scope of the Power*, LEGAL INFO. INST., <https://www.law.cornell.edu/constitution-conan/article-1/section-8/clause-8/origins-and-scope-of-the-power> [perm a.cc/W4H8-6AN3].

<sup>56</sup> *Id.*

<sup>57</sup> Nard, *supra* note 54, at 62.

<sup>58</sup> *See* COMM. ON THE JUDICIARY, REVISION OF TITLE 35, UNITED STATES CODE “PATENTS,” H. REP. NO. 82-1923, at 4 (1952) [hereinafter 1952 ACT REPORT].

<sup>59</sup> Walterscheid, *supra* note 46, at 26–27.

<sup>60</sup> *Id.* at 27–28; *see also* U.S. CONST. art. I, § 8, cl. 3, 18.

<sup>61</sup> Jeanne C. Fromer, *The Intellectual Property Clause’s External Limitations*, 61 DUKE L.J. 1329, 1362 (2012).

in a significant role for the common law.<sup>62</sup> In fact, “United States patent law is designed to invite, indeed require, a strong judicial voice.”<sup>63</sup>

*B. The Judicial Power and the Patent Clause*

As in other contexts, the Supreme Court, as the holder of the Judicial Power, has made explicit that power’s relevance to patent law, but has never precisely defined its reach or scope.<sup>64</sup> Article III’s command that the Judicial Power apply and be safeguarded even in inferior federal courts has vexed the cohesiveness and integrity of patent law. Well before the establishment of the Federal Circuit, Congress and the Supreme Court dueled over the reach and primacy of their authority when it came to sanctioning monopolies for creative works and inventions. Generally, Congress favored them as tools explicitly given to them by constitutional text. The Supreme Court, on the other hand, saw within patent law constitutional matters that touched the core of the Judicial Power: ultimate interpretation of limits on congressional reach, development of federal common law, and the role of the jury in disputes that implicated constitutional protections.

*1. Interpretive Ambiguity and the Patent Clause*

Congress may promote the progress of science and useful arts, but the Patent Clause specified the means by which it could do so: “to issue limited-term exclusive rights, more commonly known as monopolies, to authors and inventors for their writings and inventions.”<sup>65</sup> The specific nature of the Clause, namely the fact that it “explicitly defines the mechanism for exercising this power,” exemplifies what was important to the Framers.<sup>66</sup> Moreover, those monopolies must be for “limited Times,” and even the nature of the “Right” in question is subject to judicial interpretation.<sup>67</sup> Four dominant interpretations have emerged over time.

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<sup>62</sup> Craig Allen Nard & John F. Duffy, *Rethinking Patent Law’s Uniformity Principle*, 101 NW. U. L. REV. 1619, 1620–22, 1624–25 (2007).

<sup>63</sup> Nard, *supra* note 54, at 59; Kenneth J. Burchfiel, *The Constitutional Intellectual Property Power: Progress of Useful Arts and the Legal Protection of Semiconductor Technology*, 28 SANTA CLARA L. REV. 473, 491 (1988); DAN L. BURK & MARK A. LEMLEY, *THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT* 15 (2009).

<sup>64</sup> See *Plaut v. Spendthrift Farm, Inc.*, 514 U.S. 211, 217–18 (1995); *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1373 (2018) (“When determining whether a proceeding involves an exercise of Article III judicial power, this Court’s precedents have distinguished between ‘public rights’ and ‘private rights’ . . . . This Court has not ‘definitively explained’ the distinction between public and private rights . . . and its precedents applying the public-rights doctrine have ‘not been entirely consistent.’”).

<sup>65</sup> Walterscheid, *supra* note 46, at 54.

<sup>66</sup> *Id.*

<sup>67</sup> U.S. CONST. art. I, § 8, cl. 8.

First, there is an interpretation that the “to” clause is simply a preamble with no operative effect.<sup>68</sup> According to *Nimmer*:

We may assume that the men who wrote the Constitution regarded the system of private property *per se* as in the public interest. . . .

Therefore, the phrase “To promote the progress of science and useful arts . . .” must be read as largely in the nature of a preamble, indicating the purpose of the power but not in limitation of its exercise.<sup>69</sup>

This view is advanced in the leading copyright law treatise and the Eighth, Ninth, and D.C. Circuits (before 1982), as well as by legal scholars.<sup>70</sup>

The second interpretation is that the Patent Clause’s unique structure shows the Framers’ intent to limit Congress’s power through the “to” clause and grant Congress power through the “by” clause.<sup>71</sup> The support for this approach is derived from Supreme Court dicta in *Graham v. John Deere Co.*, a seminal decision more fully detailed below.<sup>72</sup> The Court stated, “Congress in the exercise of the patent power may not overreach the *restraints* imposed by the stated constitutional purpose.”<sup>73</sup> The Court rooted its reasoning in the originalist “abhorrence of monopol[ies]” held by the Framers.<sup>74</sup> The Fifth Circuit and the Court of Federal Claims (before 1982) adopted this interpretation.<sup>75</sup>

The third interpretation is the inverse of the second, that the Clause’s unique structure shows the Framers’ intent to limit Congress’s power through the “by” clause and grant power through the “to” clause.<sup>76</sup> This is derived from a structural comparison of the Clause to other enumerated powers.<sup>77</sup> All enumerated powers begin with a “to” clause, which grants power, and “by” clauses generally follow a grant of power.<sup>78</sup>

The fourth interpretation is that the Clause should be two powers, “one to promote the progress of science, by securing for limited times to authors the exclusive right to their writings (a copyright power); and another to promote

<sup>68</sup> Oliar, *supra* note 47, at 1781.

<sup>69</sup> 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 1.03[A] (2015); Adam Mossoff, *Patents as Constitutional Private Property: The Historical Protection of Patents Under the Takings Clause*, 87 B.U. L. REV. 689, 700–02 (2007).

<sup>70</sup> Oliar, *supra* note 47, at 1781–82; Brief for the Respondent at 18–19, *Eldred v. Ashcroft*, 537 U.S. 186 (2003) (No. 01-618), 2002 WL 1836720, at \*14.

<sup>71</sup> Oliar, *supra* note 47, at 1782.

<sup>72</sup> *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 3–4 (1966).

<sup>73</sup> *Id.* at 5–6 (emphasis added).

<sup>74</sup> *Id.* at 7–8.

<sup>75</sup> *Mitchell Bros. Film Grp. v. Cinema Adult Theater*, 604 F.2d 852, 859–60 (5th Cir. 1979); *Figueroa v. United States*, 66 Fed. Cl. 139, 149–50, 152 (2005); *Figueroa v. United States*, 57 Fed. Cl. 488, 498–99, 501 (2003).

<sup>76</sup> Oliar, *supra* note 47, at 1782.

<sup>77</sup> *Id.* at 1783; see Message from James Monroe to the House of Representatives (May 4, 1822), in 2 A COMPILATION OF THE MESSAGES AND PAPERS OF THE PRESIDENTS 713, 719–21 (James D. Richardson ed., 1897).

<sup>78</sup> See, e.g., U.S. CONST. art. I, § 8, cl. 2 (“To borrow Money on the credit of the United States . . .”).

the progress of useful arts, by securing for limited times to inventors the exclusive right to their discoveries (a patent power).<sup>79</sup> This view is based on Richard De Wolf's early copyright textbook.<sup>80</sup> It takes an originalist and intentionalist view that at the end of the eighteenth century the average reader of the Patent Clause would have read it this way, and the Framers intended it to be read this way.<sup>81</sup>

The second interpretation enjoys the greatest support from Supreme Court dicta and primary sources generated at the time of the Constitutional Convention.<sup>82</sup> This record reveals eight proposals for congressional powers under the Patent Clause.<sup>83</sup> Madison's and Pinckney's original proposals did not make reference to language referencing the promotion of progress in science and useful arts.<sup>84</sup> Those rejected proposals included "a great deal more congressional intervention into market dynamics, rendering legislators more susceptible to interest-group pressures."<sup>85</sup>

Madison and Pinckney were nationalists; other Convention members were confederationists.<sup>86</sup> The Constitution exemplifies a compromise between the two viewpoints, leading to the conclusion that the additional language was included to limit the power given.<sup>87</sup> The "promote progress" language was initially associated with more controversial proposals, which were rejected, and the language had been included to limit those proposed powers in the first place.<sup>88</sup>

The structure of the Clause shows an intent to "cabin congressional power" by setting "forth the specific means of exercising the enumerated power by permitting Congress to promote the progress of the useful arts . . . by granting *exclusive rights for limited times to inventors for their discoveries*."<sup>89</sup> The language and "decentralized nature of the [Clause] arguably reflects an aversion to

<sup>79</sup> Oliar, *supra* note 47, at 1783.

<sup>80</sup> See RICHARD C. DE WOLF, AN OUTLINE OF COPYRIGHT LAW 13–15 (1925).

<sup>81</sup> Oliar, *supra* note 47, at 1783.

<sup>82</sup> *Id.* at 1776.

<sup>83</sup> *Id.*

<sup>84</sup> John E. Mauk, *The Slippery Slope of Secrecy: Why Patent Law Preempts Reverse-Engineering Clauses in Shrink-Wrap Licenses*, 43 WM. & MARY L. REV. 819, 823–24 (2001) ("The origins of the Clause have been alternatively attributed to James Madison and Charles Pinckney.").

<sup>85</sup> Nard, *supra* note 54, at 63.

<sup>86</sup> Oliar, *supra* note 47, at 1777.

<sup>87</sup> Edward C. Walterscheid, "Within the Limits of the Constitutional Grant": *Constitutional Limitations on the Patent Power*, 9 J. INTELL. PROP. L. 291, 312 (2002); see also Fromer, *supra* note 61, at 1341.

<sup>88</sup> Oliar, *supra* note 47, at 1777.

<sup>89</sup> Nard, *supra* note 54, at 63; see also Edward C. Walterscheid, *Patents and the Jeffersonian Mythology*, 29 J. MARSHALL L. REV. 269, 275 (1995) ("Jefferson now resigned himself to the inevitability that Congress would have the authority to issue patents and copyrights. However, he still would have preferred a change in the Constitution regarding that authority.").

special legislation and a desire to check congressional overreaching.”<sup>90</sup> Overall, this suggests that the Framers, “did not wish to vest in Congress plenary powers over patents . . . but rather wanted to limit the exercise of these powers to the end of promoting progress in science and useful arts.”<sup>91</sup>

The delineation between cases involving constitutional scrutiny of congressional action under the Patent Clause and interpretive ambiguity under a statute has long characterized federal patent jurisprudence. For example, the 1836 Patent Act expanded the patent term and made it retroactive, largely in response to lobbying by patent holders who feared the end of their licensing and royalty revenues.<sup>92</sup> In 1839, Congress extended the patent term for a single invention mentioned by name.<sup>93</sup> The willingness of Congress to build in special interests into patent law confronted the Supreme Court with the constitutional problem of interpreting the “limited Times” provision in the Patent Clause. In *Bloomer v. McQuewan*, Chief Justice Taney wrote the Supreme Court’s opinion limiting the enforcement of patent rights against someone who had previously purchased the patented product and implicitly tied the decision to other constitutionally protected property rights.<sup>94</sup>

## 2. Federal Jurisdiction and the Patent Clause

Before the first federal Patent Act was passed by Congress, “patents were issued exclusively by colonial and later state legislatures.”<sup>95</sup> Despite the text, it is not clear the Framers intended to preclude state-issued patents. In fact “[t]he predominant early interpretation was that the Patent Clause gave Congress the right to reward ‘inventors’ with exclusive rights, while permitting the individual states to create such rights for other reasons, including grants to noninventor developers.”<sup>96</sup> By doing so, the Constitution divided the “territory of government-sanctioned exclusive rights.”<sup>97</sup> State patents were, however, less attractive because they did not provide exclusivity outside of their borders, and federal

<sup>90</sup> Nard, *supra* note 54, at 63–64; Malla Pollack, *The Democratic Public Domain: Reconnecting the Modern First Amendment and the Original Progress Clause (A.K.A. Copyright and Patent Clause)*, 45 JURIMETRICS J. 23, 27 (2004) (“The Clause limits Congress, demonstrating that the base right is in the public, not in the government, the inventors, nor the writers.”).

<sup>91</sup> Oliar, *supra* note 47, at 1811.

<sup>92</sup> Simon Lester & Huan Zhu, *Rethinking the Length of Patent Terms*, 34 AM. U. INT’L L. REV. 787, 792–93 (2019).

<sup>93</sup> Herbert Hovenkamp, *The Emergence of Classical American Patent Law*, 58 ARIZ. L. REV. 263, 290 (2016).

<sup>94</sup> 55 U.S. (14 How.) 539, 553–54 (1852); Adam Mossoff, *Who Cares what Thomas Jefferson Thought About Patents? Reevaluating the Patent “Privilege” in Historical Context*, 92 CORNELL L. REV. 953, 966 n.58 (2007).

<sup>95</sup> Hovenkamp, *supra* note 93, at 267; see Robert A. Cohen, *Patent Infringement and the Eleventh Amendment: Can the Sovereign Be Held Accountable?*, 49 IDEA 85, 102 (2008).

<sup>96</sup> Hovenkamp, *supra* note 93, at 277; ROBERT P. MERGES ET AL., *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* 127 (5th ed. 2010).

<sup>97</sup> Hovenkamp, *supra* note 93, at 278.

patents applied nationwide.<sup>98</sup> Obtaining patents in multiple states was “time consuming, expensive, and frequently frustrating.”<sup>99</sup>

Over the course of the 1820s and 1830s, judges concluded that the federal power to recognize “true invention” was exclusive, but the states held the power to “grant exclusive rights to developers and promoters.”<sup>100</sup> Even though “state-issued patents largely disappeared from the economic landscape” over those decades, the Supreme Court did not decisively determine the exclusivity of federal patents until 1964.<sup>101</sup>

Indeed, the role of states in the patent law of the early republic has been relatively marginalized. There has been inadequate effort to investigate the extent to which the interpretation of “invention” by federal courts played a role in securing patent law to the realm of federal jurisdiction.<sup>102</sup> Early disputes explicitly raised this issue, claiming that congressional action relevant to an “invention” was different than Congress acting pursuant to the Patent Clause.<sup>103</sup> The former actions would be limited to state court jurisdiction, while the latter could be raised in federal courts.

### 3. *Federal Common Law*

Federal common law refers to any rule of federal law by the federal courts in the absence of directly controlling constitutional or statutory provisions.<sup>104</sup> Federal common law remains controversial to the extent that, constitutionally, federal courts have only that authority Congress confers upon them.<sup>105</sup> There is no general authority, as state courts enjoy, to serve as common law courts.<sup>106</sup> Despite the constitutional framing, however, federal courts have issued, and

<sup>98</sup> Lawrence Kass, Comment, *Computer Software Patentability and the Role of Means-Plus-Function Format in Computer Software Claims*, 15 PACE L. REV. 787, 793 (1995).

<sup>99</sup> Walterscheid, *supra* note 46, at 22.

<sup>100</sup> Hovenkamp, *supra* note 93, at 278.

<sup>101</sup> *Id.* at 272; see also Andrew F. Halaby, “The Trickiest Problem with Functionality” Revisited: A New Datum Prompts a Thought Experiment, 63 N.Y.U. ANN. SURV. AM. LAW 151, 157–59 (2007) (discussing *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225 (1964) and *Compto Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234 (1964)).

<sup>102</sup> Act of Apr. 17, 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.” See Donald Shelby Chisum, *The Allocation of Jurisdiction Between State and Federal Courts in Patent Litigation*, 46 WASH. L. REV. 633, 635–36 (1971).

<sup>103</sup> Khan, *supra* note 32.

<sup>104</sup> Martha A. Field, *Sources of Law: The Scope of Federal Common Law*, 99 HARV. L. REV. 881, 890 (1986); Thomas W. Merrill, *The Common Law Powers of Federal Courts*, 52 U. CHI. L. REV. 1, 5 (1985).

<sup>105</sup> *Texas Indus., Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 640–41 (1981).

<sup>106</sup> Jeffrey A. Pojanowski, *Statutes in Common Law Courts*, 91 TEX. L. REV. 479, 487 (2013).



followed, common law since the Founding.<sup>107</sup> This is understandable. In many statutory schemes, there are gaps or ambiguities in the law; and legal rules must be formed or adapted to fit them.<sup>108</sup>

This is particularly true in the context of patent law.<sup>109</sup> Federal courts have been the essential developers of patent law, both before and after the establishment of appellate review by the Federal Circuit.<sup>110</sup> While the Patent Clause vests authority in Congress, “the common law has been the dominant legal force in the development of U.S. patent law for over two hundred years.”<sup>111</sup> “[W]hile Congress and the courts each have a hand in constructing the lattice-work of patent law, judges . . . are the principal architects,” supported by the Executive’s role in regulation, issuance, and post-issue review.<sup>112</sup> Congress has long depended upon the judiciary to fill gaps in the statutory patent regime.<sup>113</sup>

In the case of patent law, prior English precedent played an early and influential role. In *Pennock v. Dialogue*, for example, Justice Story wrote that “many of the provisions of our patent act, are derived from the principles and practice which have prevailed in the construction of the law of England,” and despite differences in constitutional purposes, their jurisprudence would nevertheless be instructive.<sup>114</sup> The U.S. Supreme Court has cited the 1841 English case of *Neilson v. Harford* in its § 101 jurisprudence more than any other, up to and including *Mayo*.<sup>115</sup> Federal common law plays an extraordinarily influential role in how the judicial power is wielded in patent law.

#### 4. Preservation of Jury Fact-Finding

The role of the jury is essential to both the U.S. constitutional framework and the exercise of the Judicial Power.<sup>116</sup> Article III speaks specifically to jury trials for “all Crimes,” and the Seventh Amendment “preserved” the jury trial right for suits at “common law” and further provided that “no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than ac-

<sup>107</sup> Stewart Jay, *Origins of Federal Common Law: Part One*, 133 U. PA. L. REV. 1003, 1007 (1985).

<sup>108</sup> *D’Oench, Duhme, & Co. v. Federal Deposit Ins. Corp.*, 315 U.S. 447, 472 (1942); 19 CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE AND PROCEDURE § 4514 (2d ed. 2016).

<sup>109</sup> See, e.g., *Plumtree Software, Inc. v. Datamize, LLC*, 473 F.3d 1152, 1162 (Fed. Cir. 2006); *Group One, Ltd. v. Hallmark Cards, Inc.*, 254 F.3d 1041, 1047 (Fed. Cir. 2001); *Pfaff v. Wells Elecs.*, 525 U.S. 55, 65–68 (1998).

<sup>110</sup> Rochelle Cooper Dreyfuss, *In Search of Institutional Identity: The Federal Circuit Comes of Age*, 23 BERKELEY TECH. L.J. 787, 787–89, 795, 802 (2008).

<sup>111</sup> Nard, *supra* note 54, at 53.

<sup>112</sup> *Id.* at 54 & n.14.

<sup>113</sup> J. Jonas Anderson, *Patent Dialogue*, 92 N.C. L. REV. 1049, 1068 (2014).

<sup>114</sup> *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 1, 2 (1829).

<sup>115</sup> See *Neilson v. Harford* [1841], 151 Eng. Rep. 1266, 1267, 1273; 8 M. & W. 806, 806, 822–23.

<sup>116</sup> Akhil Reed Amar, *The Bill of Rights as a Constitution*, 100 YALE L.J. 1131, 1190 (1991); William Baude, *The Judgment Power*, 96 GEO. L.J. 1807, 1810 (2008).

ording to the rules of the common law.”<sup>117</sup> It remains unclear which aspects of patent disputes might be fundamentally protected by the jury trial right, and there is at least a strong possibility that infringement especially may qualify as one of the torts protected by the Seventh Amendment.<sup>118</sup> Jury trials are a “fixture of modern patent litigation.”<sup>119</sup>

Under the 1790 Patent Act, Section 6 “seems to contemplate juries as well as judges considering the issue” of the “adequacy of the patent specification.”<sup>120</sup> This language was not included in the 1793 Patent Act, which “eliminat[ed] the requirement that *anyone* in government evaluate patents for validity,” although that legislative decision was against a backdrop where patent actions were available at law only, and juries would have been relatively common.<sup>121</sup> Congress vested federal courts with equitable jurisdiction over patents in 1819, and the availability of both legal and equitable remedies in the same action became available in 1870.<sup>122</sup> In *Oil States Energy Services, LLC v. Greene’s Energy Group, LLC*, the Supreme Court held that challenges to patent claims in certain circumstances could occur under the auspices of the United States Patent and Trademark Office (PTO) without a jury, but specifically reserved the question as to whether infringement claims sounding in tort may be so protected.<sup>123</sup>

The importance and role of the jury in patent law has ebbed and flowed over time.<sup>124</sup> In 1824, for example, Justice Story concluded that jury determination of fact was required for actions brought to cancel patents under Section 10 of the 1793 Patent Act.<sup>125</sup> Between 1870 and 1952, the jury trial for patent dis-

<sup>117</sup> Charles W. Wolfram, *The Constitutional History of the Seventh Amendment*, 57 MINN. L. REV. 639, 639–40, 645 n.20 (1973). The Supreme Court has, in fact, rejected the notion that “all” crimes enjoy a right to a trial by jury. See *Schick v. United States*, 195 U.S. 65, 68–69 (1904); *Callan v. Wilson*, 127 U.S. 540, 548–49 (1888). In making such determinations, the Court has relied on several of the sources discussed below. See *District of Columbia v. Clawans*, 300 U.S. 617, 624–25, 627 (1937); *District of Columbia v. Colts*, 282 U.S. 63, 72–73 (1930).

<sup>118</sup> *In re Lockwood*, 50 F.3d 966, 968, 972 (Fed. Cir.), *vacated sub nom.* *Am. Airlines, Inc. v. Lockwood*, 515 U.S. 1182 (1995); 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, 1854–55, 1861–62.

<sup>119</sup> Mark A. Lemley, *Why Do Juries Decide if Patents Are Valid?*, 99 VA. L. REV. 1673, 1674 (2013).

<sup>120</sup> *Id.* at 1693.

<sup>121</sup> *Id.* at 1694.

<sup>122</sup> *Id.* at 1694, 1695 n.99.

<sup>123</sup> *Oil State Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1370, 1379 (2018).

<sup>124</sup> Paul R. Gugliuzza, *The Procedure of Patent Eligibility*, 97 TEX. L. REV. 571, 638–39 (2019).

<sup>125</sup> Lemley, *supra* note 119, at 1696 (citing *Ex Parte Wood & Brundage*, 22 U.S. (9 Wheat.) 603, 615 (1824)); see also *Stearns v. Barrett*, 22 F. Cas. 1175, 1179 (C.C.D. Mass. 1816).

putes all but disappeared, and then surged again after patent attorneys discovered that juries tended to favor patentees in infringement claims.<sup>126</sup>

## II. THE CONSTITUTIONAL AMBIGUITY OF U.S. SUPREME COURT PATENT JURISPRUDENCE

### A. *The Judicial Power and Early Patent Disputes*

The U.S. Supreme Court inherited a robust body of patent common law from English courts.<sup>127</sup> The Court also inherited the common law's ambivalence about patents. Under the English Crown, patents were granted for a broad range of activities and did not necessarily implicate invention.<sup>128</sup> Indeed, they were maligned by many Founders—including by Thomas Jefferson—as often corrupt monopolies arbitrarily granted as a matter of royal prerogative.<sup>129</sup>

The forerunning statutes to what is now 35 U.S.C. § 101 have remained more or less the same since 1790. As numerous historians have noted, state and federal courts interpreted disputes under the “general patent law,” which included not only statutes passed after 1790, but the practice of English courts dating to 1624.<sup>130</sup> Courts, it is fair to say, grounded their dispositions in previous cases as much or more than they did the text of statutes.

The Supreme Court imported the judicial exceptions entirely from English common law . . . . In the early years of the United States, the Supreme Court imported English and British law to fill gaps in U.S. case law. Even today, the Supreme Court looks occasionally to old English law to trace the development of legal principles to their origins before U.S. independence.<sup>131</sup>

The 1790 Act delegated to the Secretary of State, the Secretary of War, and the Attorney General the authority to issue patents.<sup>132</sup> Applicants were required to provide a written description, together with drafts or models distinguishing the applicant's invention from prior art, and petition the executive branch officials, two of whom had to agree.<sup>133</sup> Only fifty-seven patents issued, and Congress amended the law in order to expand the availability of patents.<sup>134</sup>

<sup>126</sup> Lemley, *supra* note 119, at 1704, 1706.

<sup>127</sup> Doster, *supra* note 5.

<sup>128</sup> SAM F. HALABI, *INTELLECTUAL PROPERTY AND THE NEW INTERNATIONAL ECONOMIC ORDER* 4 (2018).

<sup>129</sup> See, e.g., Edmund W. Kitch, *Graham v. John Deere Co.: New Standards for Patents*, 49 J. PAT. OFF. SOC'Y 237, 249–50 (1967) (citing *Thompson v. Haight*, 23 Fed. Cas. 1040, 1041 (C.C.S.D.N.Y. 1826)).

<sup>130</sup> See, e.g., *Evans v. Eaton*, 16 U.S. (3 Wheat.) 454, 513 (1818); see also *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 379–81, 383 (1996).

<sup>131</sup> Doster, *supra* note 5.

<sup>132</sup> Act of Apr. 10, 1790, ch. 7, § 1, 1 Stat. 109, 110.

<sup>133</sup> *Id.* §§ 1–2.

<sup>134</sup> P.J. Federico, *Operation of the Patent Act of 1790*, 18 J. PAT. OFF. SOC'Y 237, 244, 251 (1936).

### 1. Federal Common Law

While there was a nascent, and ineffective, system for examination from 1790 to 1793, between 1793 and 1836, the determination of patent validity and infringement was left almost entirely to courts, often with the aid of juries, with occasional interventions by Congress like equitable jurisdiction for patent remedies given to federal circuit courts in 1819.<sup>135</sup> The 1793 Act “simplified the process [of patent applications], eliminating substantive government review and requiring only registration by the applicant.”<sup>136</sup> The 1793 Act required only that the patent applicant to “make oath that he believed himself to be the true inventor,” and the “administration of the law as to the issue of patents was committed to the Secretary of State and the Attorney-General.”<sup>137</sup> Under the 1793 Act, patents became widely available, and courts of law resolved validity and infringement claims with only money damages at stake.<sup>138</sup>

The 1793 Act generated the first Patent Clause cases to be heard by the U.S. Supreme Court, which focused on special patent extensions granted by Congress for the benefit of prolific inventor Oliver Evans.<sup>139</sup> Even in those dispositions, however, the Supreme Court made clear that the Judicial Power extends both to the extrapolation of the Patent Clause and to essential concepts like “invention” and “improvement.”<sup>140</sup>

Congress’s interest in expanding the availability and strength of patents is evidenced from intervening legislative measures. In 1800, Congress adopted treble damages for patent infringement.<sup>141</sup> In 1819, Congress extended original jurisdiction for equitable actions to federal circuit courts.<sup>142</sup> Remedies in equity and law in the same proceeding were not allowed until 1870.<sup>143</sup> Until then, a patentee who sued for infringement could recover only damages, and defendants generally raised defenses of invalidity.<sup>144</sup> The result was that an infringer could pay damages if economically feasible, then continue to infringe and risk another costly litigation effort by the plaintiff. Actions in equity, while more burdensome, could secure injunctions and equitable accounting.<sup>145</sup>

<sup>135</sup> See Act of July 4, 1836, ch. 357, § 17, 5 Stat. 117, 124; see also Act of July 8, 1870, ch. 230, § 55, 16 Stat. 198, 206.

<sup>136</sup> Hovenkamp, *supra* note 93, at 268.

<sup>137</sup> Chauncey Smith, *A Century of Patent Law*, 5 Q.J. ECON. 44, 46 (1890).

<sup>138</sup> Khan, *supra* note 32, at 62–63.

<sup>139</sup> P.J. Federico, *The Patent Trials of Oliver Evans* (pt. 2), 27 J. PAT. OFF. SOC’Y 657, 674–77 (1945).

<sup>140</sup> See, e.g., *Evans v. Eaton*, 16 U.S. (3 Wheat.) 454, 478–79 (1818).

<sup>141</sup> 7 DONALD S. CHISUM, CHISUM ON PATENTS § 20.02[1][a] (1978); see also P.J. Federico, *The Patent Trials of Oliver Evans* (pt. 1), 27 J. PAT. OFF. SOC’Y 586, 609 (1945).

<sup>142</sup> CHISUM, *supra* note 141, § 20.02[1][b]–[c].

<sup>143</sup> Act of July 8, 1870, ch. 230, § 55, 16 Stat. 198, 206; *Birdsall v. Coolidge*, 93 U.S. 64, 68–69 (1876).

<sup>144</sup> Lemley, *supra* note 119, at 1695, 1702–04.

<sup>145</sup> See e.g., *Agawam Co. v. Jordan*, 74 U.S. (7 Wall.) 583, 588, 593, 595 (1868); *Teese v. Huntingdon*, 64 U.S. (23 How.) 2, 7–10 (1859).

In *Tyler v. Tuel*, the U.S. Supreme Court interpreted Section 4 of the 1793 Act, which provided:

[I]t shall be lawful for any inventor, his executor or administrator to assign *the* title and interest in the said invention at any time, and *the* assignee, having recorded the said assignment in the office of the secretary of state, shall thereafter *stand in the place of the original inventor* both as to *right* and responsibility, and so the assignees of assigns to any degree.<sup>146</sup>

While the plain language of the statute appeared to promote value creation for inventors and gains from trade with other parties by allowing inventors to assign their inventions, the Supreme Court read into the statute a distinction between “assignees” and “licensees,” derived elsewhere from principles of property law, to reject legal standing by an assignee—who possessed a geographically limited scope of assignment—to sue for infringement.<sup>147</sup>

In the 1818 case of *Evans v. Eaton*, Justice Marshall interpreted the Constitution’s language as to “inventors” and “discoveries.”<sup>148</sup> In the 1780s, inventor Oliver Evans developed a system for cooling flour as it was produced from millstones—an improvement on the “hopper-boy,” a rotating rake that spread and stirred the flour.<sup>149</sup> Evans claimed patents for both the whole of the improved hopper-boy—that is, of the whole machine as his own invention—and, secondarily, only his improvement upon it.<sup>150</sup> The defendant in Evans’s infringement action argued that the entire machine could not be patented, as Evans did not invent it, and, as to the improvement, that Evans’s patent never claimed its nature and extent relative to known technology.<sup>151</sup> Justice Marshall rejected Evans’s argument that under the federal Patent Act, it was “not necessary for the patentee to show himself to be the first inventor or discoverer.”<sup>152</sup>

Evans’s counsel asserted that, by a special bill, Congress had in essence made a legislative determination that Evans was the inventor and therefore was entitled to judgment.<sup>153</sup> Justice Marshall rejected the claim as a matter of statutory construction, but clearly identified the relevant constitutional inquiry as to the scope of congressional authority:

Without inquiring whether Congress, in the exercise of its power ‘to secure for limited times, to authors and inventors, the exclusive right to their respective writings and discoveries,’ may decide the fact that an individual is an author or inventor, the court can never presume Congress to have decided that question in a general act, the words of which do not render such construction unavoidable.

<sup>146</sup> *Tyler v. Tuel*, 10 U.S. (6 Cranch) 324, 325 (1810) (quoting Act of Feb. 21, 1793, ch. 11, § 4, 1 Stat. 318, 322).

<sup>147</sup> *Id.* at 326; Adam Mossoff, *A Simple Conveyance Rule for Complex Innovation*, 44 TULSA L. REV. 707, 721–23 (2009).

<sup>148</sup> *Evans v. Eaton*, 16 U.S. (3 Wheat.) 454, 478, 480 (1818).

<sup>149</sup> *Id.* at 464–66, 472.

<sup>150</sup> *Id.* at 470–72.

<sup>151</sup> *Id.* at 472.

<sup>152</sup> *Id.* at 513–14.

<sup>153</sup> *Id.* at 513.

The words of this act do not require this construction. They do not grant to Oliver Evans the exclusive right to use certain specified machines; but the exclusive right to use his invention, discovery, and improvements; leaving the question of invention and improvement open to investigation, under the general patent law.<sup>154</sup>

“Without a critical inquiry into the accuracy with which the term *invention* or *discovery* may be applied to any other than the first inventor, the court considers this question as completely decided by the 6th section of the general patent act.”<sup>155</sup> In other words, Justice Marshall used an early type of the constitutional avoidance doctrine to dodge the question of whether Congress had exceeded its authority under the Patent Clause.

The Supreme Court imposed upon Evans an obligation as plaintiff “to show the extent of his improvement, so that a person understanding the subject may comprehend distinctly in what it consists.”<sup>156</sup> Now incorporated into broader patent law as “prior art” analysis, the decision nevertheless reflects an early limitation by the Court on Congress’s effort in 1793 to expand access to patents generally, and, through special legislation, to Oliver Evans specifically.<sup>157</sup> Indeed, Evans lost a second jury verdict and appealed again to the Supreme Court, although by that time he had died, and the patent had expired.<sup>158</sup>

In *Pennock v. Dialogue*, plaintiffs Pennock and Sellers had invented a way to improve the way hoses were made to make them tighter and resistant to air and water pressure, and had allowed the hoses to be manufactured and sold pursuant to an agreement with the manufacturer for seven years before obtaining a patent.<sup>159</sup> They sued defendant Dialogue, who did not have a contract with them, for patent infringement.<sup>160</sup> The circuit court charged the jury that an inventor who allowed others to use his invention, with or without his consent, without claiming his rights as an inventor abandoned his inchoate right to exclusive use of the invention.<sup>161</sup> The jury found for the defendant, and the circuit court entered judgment for him.<sup>162</sup>

A unanimous U.S. Supreme Court, relying in significant measure on English common law, determined that the commercial use of an invention without timely seeking patent protection forfeited the protection patents normally impart. Justice Story limited the availability of the patent to those who sought a

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<sup>154</sup> *Id.*

<sup>155</sup> *Id.* at 513–14 (emphasis added).

<sup>156</sup> *Id.* at 518.

<sup>157</sup> See *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1450 (Fed. Cir. 1984).

<sup>158</sup> Federico, *supra* note 139, at 679–81.

<sup>159</sup> *Pennock v. Dialogue*, 19 F. Cas. 171, 171–73 (C.C.E.D. Pa. 1825) (No. 10,941), *aff’d*, 27 U.S. (2 Pet.) 1 (1829).

<sup>160</sup> *Id.* at 171–72.

<sup>161</sup> *Id.* at 174.

<sup>162</sup> *Id.*

patent as expeditiously as the invention or improvement was known.<sup>163</sup> Quoting Lord Chief Justice Gibbs, Justice Story wrote:

“To entitle a man to a patent, the *invention* must be *new to the world*. The public sale of that which is afterwards made the subject of a patent, *though sold by the inventor only*, makes the patent void.” By “invention,” the learned judge undoubtedly meant, as the context abundantly shows, not the abstract discovery, but the *thing* invented; not the new secret principle, but the manufacture resulting from it.<sup>164</sup>

There was in fact little effort by Justice Story or the other Justices to surmise the plain meaning of the statute, which referred ambiguously to protection for inventions “not known or used before the application,” but rather the Supreme Court’s conclusion was based on the common law and its force upon a different constitutional and statutory provision.

## 2. Preservation of Jury Fact-Finding

The Seventh Amendment right to a jury trial in non-criminal cases turns on whether the cause of action could be better analogized to an action at law versus equity (or admiralty) as of 1791.<sup>165</sup> In the patent context, jury determinations of fact play a relatively unusual role in that, historically, factual questions about a patent’s validity often arose as a defense at law to a claim for infringement.<sup>166</sup>

In *Grant v. Raymond*, the Supreme Court fully considered the following assessment about the Judicial Power and the administrative authority to cancel a patent:

The vacating and cancelling the record of a patent is in its nature a judicial act. The act of 1793 treats it as such, *and provides two modes of such vacation*.

The common law, also, provides a mode. . . .

In England, the repealing of patents is always regarded as a judicial act.

The limitations, under which the court below thought the secretary [of state] could vacate one patent and issue another, show that the power he is expected to exercise is judicial. . . . The power of the secretary to act, then, depends upon his having adjudged the case to be one of mistake, and not a case of fraud. This is judicial power. How can the secretary make this judicial investigation.

1. He has no parties before him, and no power to bring persons before him. When done in court, this is done in the presence of *litigant parties*. 2. He cannot summon witnesses before him, and if they should come voluntarily, he cannot

<sup>163</sup> *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 1, 10–11 (1829).

<sup>164</sup> *Id.* at 20 (quoting *Wood v. Zimmer* (1815) 171 Eng. Rep. 161; 1 Holt 58).

<sup>165</sup> *Tull v. United States*, 481 U.S. 412, 417 (1987); *Parsons v. Bedford*, 28 U.S. (3 Pet.) 433, 446–47 (1830); *Slocum v. N.Y. Life Ins.*, 228 U.S. 364, 379 (1913); *Balt. & Carolina Line, Inc. v. Redman*, 295 U.S. 654, 656–57 (1935); *Dimick v. Schiedt*, 393 U.S. 474, 476 (1935).

<sup>166</sup> Lemley, *supra* note 119, at 1675.

administer an oath to them. Such oaths would be extrajudicial and nugatory. He cannot require the party's own oath.<sup>167</sup>

Delivering the opinion of the Supreme Court, Chief Justice Marshall nevertheless upheld the Secretary of State's authority to reissue a patent, notwithstanding its essential judicial character.<sup>168</sup> Historians and practitioners have tended to read *Grant v. Raymond* as, therefore, a case about how the Supreme Court deferred to Congress's desire to issue patents.<sup>169</sup> Yet Chief Justice Marshall only did so after confirming that the relevant factual inquiries had been submitted to, and determined by, the jury in the trial court.<sup>170</sup>

While the 1793 Patent Act was meant to liberalize the award of patents, and therefore patentable activity, the result was unpredictability. Although it became easier to obtain a patent, Congress structured patent litigation to default to protection, subject to defenses raised by accused infringers. Decisions issued by the Supreme Court restrained the proliferation of patents by limiting the parties who could sue for infringement,<sup>171</sup> imposing burdens on the purported patentee "to show the extent of his improvement, so that a person understanding the subject may comprehend distinctly in what it consists,"<sup>172</sup> and persistently reversing trial court actions that removed questions from the jury.<sup>173</sup>

#### B. *Constitutional Ambiguity Under the 1836 Patent Act*

The 1836 Patent Act was a sweeping rejection of the judicially managed system.<sup>174</sup> The Senate Report accompanying passage of the law recommended that, under the 1793 Act, inventors accept the injustice of infringement rather than "become involved in numerous and expensive lawsuits in distant and various sections of the country, to protect and confirm . . . rights."<sup>175</sup>

The 1836 Patent Act reinstated patent examination and professionalized it.<sup>176</sup> The Act created the modern Patent Office with an appointed commissioner who had the authority to appoint one or more "examining clerk[s]" to evalu-

<sup>167</sup> *Grant v. Raymond*, 31 U.S. (6 Pet.) 218, 229 (1832) (citations omitted).

<sup>168</sup> *Id.* at 241–42, 244, 249.

<sup>169</sup> Burchfiel, *supra* note 29, at 173–74, 185–86.

<sup>170</sup> *Grant*, 31 U.S. at 243 ("In the case under consideration those questions were not supposed by the circuit court to have been decided in the department of state, but were expressly submitted to the jury.")

<sup>171</sup> *Tyler v. Tuel*, 10 U.S. (6 Cranch) 324, 325–26 (1810) (incorporating the common law distinction between "assignment" and "license" to circumvent the intent of the 1793 Patent Act).

<sup>172</sup> *Evans v. Eaton*, 20 U.S. (7 Wheat.) 356, 387 (1822) (emphasis in original).

<sup>173</sup> *Id.* at 391–92; *Evans v. Hettich*, 20 U.S. (7 Wheat.) 453, 460–62, 467 (1822).

<sup>174</sup> Frank D. Prager, *Trends and Developments in American Patent Law from Jefferson to Clifford (1790–1870)* (pt. 2), 6 AM. J. LEGAL HIST. 45, 51–54 (1962).

<sup>175</sup> S. REP. NO. 24-338, at 3 (1836).

<sup>176</sup> Act of July 4, 1836, ch. 357, § 7, 5 Stat. 117, 119–120; EDWARD C. WALTERSCHEID, TO PROMOTE THE PROGRESS OF USEFUL ARTS: AMERICAN PATENT LAW AND ADMINISTRATION, 1798–1836, at 427–28 (1998).



ate applications for patentability.<sup>177</sup> This examiner looked at each “alleged new invention or discovery” to determine whether the thing described in the application “had been invented or discovered by any other person in this country prior to the alleged invention or discovery thereof by the applicant.”<sup>178</sup> In addition, the examiner ensured that the subject had not been “in public use or on sale with the applicant’s consent or allowance prior to the application.”<sup>179</sup> Once these conditions for patentability had been satisfied, “it [was the commissioner’s] duty to issue a patent.”<sup>180</sup>

The 1836 Act defined novelty as an act that an invention is patentably new if it has never been described in a public work and has not more than two years been in use and, in response to *Evans v. Eaton*, required a separate claims section for all patents.<sup>181</sup> It further created a special pathway through which inventors could obtain extensions through the Patent Office based on time, ingenuity, a specific evidence of costs, and profits.<sup>182</sup> This provision had the somewhat unusual, but predictable, effect that the more valuable an invention, the stronger the case the patentee could mount for an extension.<sup>183</sup> The 1836 Act also introduced a “provision for the registration in the Patent Office of assignments of patents, and of grants of exclusive rights to an invention in specified territories.”<sup>184</sup> The 1836 Act also gave the Patent Office the duty and “power to investigate the several claims of two or more inventors to the same invention, and decide which was the first inventor.”<sup>185</sup>

“The objective [of the 1836 Act] was to provide an adequate consideration of each application to the end that patents issued under such a system would have at least prima facie validity.”<sup>186</sup> The system “reward[ed] a true inventor by the allowance of an application, but also insuring [sic] that the public would be protected by rejection of unfounded claims to subject matter that was in the public domain.”<sup>187</sup>

The effect of the regime was to take questions upon which the Supreme Court’s jurisprudence had caused confusion—especially novelty and the fore-running judicial concepts of prior art—and dedicate them to the Patent Office.<sup>188</sup>

<sup>177</sup> Act of July 4, 1836, ch. 357, §§ 1–2, 5 Stat. 117–18.

<sup>178</sup> *Id.* § 7, at 119.

<sup>179</sup> *Id.*

<sup>180</sup> *Id.* at 120.

<sup>181</sup> *Id.* § 15, at 123.

<sup>182</sup> Khan, *supra* note 32, at 65, 75, 76 n.32.

<sup>183</sup> Smith, *supra* note 137, at 48.

<sup>184</sup> *Id.* at 50.

<sup>185</sup> *Id.* at 52.

<sup>186</sup> Lawrence C. Kingsland, *The United States Patent Office*, 13 L. & CONTEMP. PROBS. 354, 359 (1948).

<sup>187</sup> *Id.* at 360.

<sup>188</sup> Federico, *supra* note 139, at 677, 680.

1. *Federal Common Law*

The Supreme Court embarked on efforts to limit the 1836 Patent Act's reach from the earliest disputes brought under its terms. In 1852, the Supreme Court decided the first of several cases that interpreted patent eligibility of the 1836 Act. In *Le Roy v. Tatham*, the Supreme Court heard an appeal about the validity of a patent that described an invention that

consisted in the discovery, that, under certain conditions, and by the use and application of certain methods, lead, and some of its alloys, while in a set state, could, after being separated into parts, be re-united and welded, and thus formed into pipe; and also of the mode of doing this; producing thereby a new article of manufacture, wrought lead pipe . . . .<sup>189</sup>

Tatham was the assignee of the patent for the process described above and charged Le Roy with infringement.<sup>190</sup> Le Roy requested various jury instructions, including: "Proposition VII. That the using of a metal in a certain state, or at a certain temperature, alone, or in combination with a machine, was not the subject of a patent."<sup>191</sup> The trial court refused the above instruction and ultimately found the patent in question valid and infringed.<sup>192</sup> Le Roy appealed.<sup>193</sup>

The Supreme Court concluded that the patent was invalid on the basis that principles in the abstract were not patentable.<sup>194</sup> It is famous for its statement that "[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."<sup>195</sup> The Supreme Court did not anchor its analysis in the language of the 1836 Act nor in the Patent Clause, but rather upon the English case of *Househill Coal & Iron Co. v. Neilson*: "[a] patent is not good for an effect, or the result of a certain process, as that would prohibit all other persons from making the same thing by any means whatsoever. This, by creating monopolies, would discourage arts and manufactures, against the avowed policy of the patent laws."<sup>196</sup>

In *Atlantic Works v. Brady*, the Supreme Court considered a modification to a dredge boat that consisted of the following:

The combination of the 'mud-fan' attached to a rigid shaft, and a boat containing a series of water-tight compartments, E, so adjusted as to cause the boat to settle

<sup>189</sup> *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 167 (1852).

<sup>190</sup> *Id.* at 156–57.

<sup>191</sup> *Id.* at 163.

<sup>192</sup> *Id.* at 157, 163.

<sup>193</sup> *Id.* at 163.

<sup>194</sup> *Id.* at 175–77.

<sup>195</sup> *Id.* at 175; Paxton M. Lewis, Note, *The Conflation of Patent Eligibility and Obviousness: Alice's Substitution of Section 103*, 2017 UTAH L. REV. ONLAW 13, 16.

<sup>196</sup> *Le Roy*, 55 U.S. at 175; *Househill Coal & Iron Co. v. Neilson* (1843), 8 Eng. Rep. 616 (HL) (appeal taken from Scot.).

on an even keel as the compartments are filled with water, and a pump, B, for exhausting the water from all the compartments, substantially as set forth.<sup>197</sup>

The Supreme Court considered “the alleged invention [as] consist[ing] mainly in attaching a screw (which the patentee calls a mud-fan) to the forward end of a propeller dredge-boat, provided with tanks for settling her in the water.”<sup>198</sup> Referring generally to the “design of the patent laws,” the Supreme Court attributed importance to not granting one single party a monopoly over every advance made in a field:

The design of the patent laws is to reward those who make some substantial discovery or invention, which adds to our knowledge and makes a step in advance in the useful arts. . . . It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention.<sup>199</sup>

In *O’Reilly v. Morse*, the Supreme Court determined that Samuel Morse “was the first and original inventor of the Telegraph” and affirmed seven of his eight claims related to the invention.<sup>200</sup> The Supreme Court invalidated only Morse’s eighth claim, which he asserted to be the “exclusive right to every improvement where the motive power is the electric or galvanic current, and the result is the marking or printing intelligible characters, signs, or letters at a distance.”<sup>201</sup> The Supreme Court found this too broad, as it not only “shut[] the door against inventions of other persons” but also allowed Morse to “avail himself of new discoveries in the properties and powers of electro-magnetism which scientific men might bring to light.”<sup>202</sup>

Although the Supreme Court found the *Neilson* patent decisions persuasive as well, it decided that the dispute as to Morse’s eighth claim was decisively controlled by *LeRoy v. Tatham*.<sup>203</sup> Morse could not, as he purported to do, patent “electromagnetism” as it was:

[A]n effect produced by the use of electro-magnetism distinct from the process or machinery necessary to produce it. The words of the acts of Congress above quoted show that no patent can lawfully issue upon such a claim. For he claims what he has not described in the manner required by law. And a patent for such a claim is as strongly forbidden by the act of Congress, as if some other person had invented it before him.<sup>204</sup>

<sup>197</sup> *Atl. Works v. Brady*, 107 U.S. 192, 194 (1883).

<sup>198</sup> *Id.* at 195.

<sup>199</sup> *Id.* at 200.

<sup>200</sup> *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 108, 112 (1853).

<sup>201</sup> *Id.* at 112–13.

<sup>202</sup> *Id.* at 113.

<sup>203</sup> Efthimios Parasidis, *A Uniform Framework for Patent Eligibility*, 85 TUL. L. REV. 323, 336 (2010).

<sup>204</sup> *O’Reilly*, 56 U.S. at 120.

*O'Reilly* imposed both patentability and written description limitations in addition to those included in the 1836 Act.<sup>205</sup>

## 2. *Preservation of Jury Fact-Finding*

In *Gayler v. Wilder*, the Supreme Court considered a dispute over the development of a fire resistant safe, one version of which had been developed in 1842, but not widely used, and a second patented in 1843, which used the same material and construction.<sup>206</sup> Justice Taney's opinion deferred to the jury's determination that the prior art was not available to the public.<sup>207</sup> The Court held that the invention for the use of plaster of Paris in the construction of fireproof chests was novel under Section 14 of the Patent Act of 1836 (effectively the current 35 U.S.C. § 102) because the prior use of the invention by another inventor was neither made public nor published in the United States or elsewhere.<sup>208</sup>

Justice Taney conceded that the jury could have determined otherwise based on the evidence, and that a strict reading of the statute would have invalidated the patent, but determined that the Patent Act read as a whole justified a judicial exception to "first and original" for inventors who had resurrected forgotten or abandoned improvements that may satisfy the legislative purpose of bringing new technology to the use.<sup>209</sup> Because the jury was given sufficient

<sup>205</sup> Lemley, *supra* note 119, at 1698.

<sup>206</sup> *Gayler v. Wilder*, 51 U.S. (10 How.) 477, 477–78, 483–84, 486–87, 489–90 (1850).

<sup>207</sup> *Id.* at 498.

<sup>208</sup> *Id.* at 477.

<sup>209</sup> *Id.* at 496–97 ("In the case thus provided for, the party who invents is not strictly speaking the first and original inventor. The law assumes that the improvement may have been known and used before his discovery. Yet his patent is valid if he discovered it by the efforts of his own genius, and believed himself to be the original inventor. The clause in question qualifies the words before used, and shows that by knowledge and use the legislature meant knowledge and use existing in a manner accessible to the public. If the foreign invention had been printed or patented, it was already given to the world and open to the people of this country, as well as of others, upon reasonable inquiry. They would therefore derive no advantage from the invention here. It would confer no benefit upon the community, and the inventor therefore is not considered to be entitled to the reward. But if the foreign discovery is not patented, nor described in any printed publication, it might be known and used in remote places for ages, and the people of this country be unable to profit by it. The means of obtaining knowledge would not be within their reach; and, as far as their interest is concerned, it would be the same thing as if the improvement had never been discovered. It is the inventor here that brings it to them, and places it in their possession. And as he does this by the effort of his own genius, the law regards him as the first and original inventor, and protects his patent, although the improvement had in fact been invented before, and used by others. So, too, as to the lost arts. It is well known that centuries ago discoveries were made in certain arts the fruits of which have come down to us, but the means by which the work was accomplished are at this day unknown. The knowledge has been lost for ages. Yet it would hardly be doubted, if any one now discovered an art thus lost, and it was a useful improvement, that, upon a fair construction of the act of Congress, he would be entitled to a patent.").

evidence to weigh whether the previous safe was forgotten or abandoned, the statutory construction issue was secondary.

Perhaps the most significant Supreme Court decision under the 1836 Patent Act was *Hotchkiss v. Greenwood*.<sup>210</sup> The patent in that case was for “a new and useful improvement in making door and other knobs of all kinds of clay used in pottery, and of porcelain.”<sup>211</sup> The alleged improvement consisted of the following:

[M]aking the knobs of clay or porcelain, and in fitting them for their application to doors, locks, and furniture, and various other uses to which they may be adapted; but more especially in this, that of having the cavity in the knob in which the screw or shank is inserted, and by which it is fastened, largest at the bottom and in the form of dovetail, or wedge reversed, and a screw formed therein by pouring in metal in a fused state . . . .<sup>212</sup>

The plaintiffs claimed that the defendants infringed on their patents “for a new and useful improvement in making door and other knobs of all kinds of clay used in pottery, and of porcelain.”<sup>213</sup> The defendants claimed there was a “want of originality” and “the mode of fastening the shank to the knob, as claimed by the plaintiffs, had been known and used before, and had been used and applied to the fastening of the shanks to metallic knobs.”<sup>214</sup> The trial court refused to give the plaintiff’s requested instruction, and the jury found the patent invalid.<sup>215</sup> On appeal, the following jury instruction was at issue:

[I]f . . . the knob of clay was simply the substitution of one material for another, the spindle and shank being the same as before in common use, and also the mode of connecting them by dovetail to the knob the same as before in common use, and no more ingenuity or skill required to construct the knob in this way than that possessed by an ordinary mechanic acquainted with the business, the patent is invalid . . . .<sup>216</sup>

The Supreme Court affirmed the trial court’s decision and declared that “unless more ingenuity and skill . . . were required . . . than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention.”<sup>217</sup> The Court concluded that “[a]ll these [improvements] were well known, and in common use; and the only thing new is the substitution of a knob of a different material from that heretofore used in connection with this arrangement.”<sup>218</sup> The improvement here only resulted from a new material, not

<sup>210</sup> *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1850).

<sup>211</sup> *Id.* at 264.

<sup>212</sup> *Id.*

<sup>213</sup> *Id.*

<sup>214</sup> *Id.*

<sup>215</sup> *Id.* at 264–65.

<sup>216</sup> *Id.*

<sup>217</sup> *Id.* at 267.

<sup>218</sup> *Id.* at 265.

“any new mechanical device or contrivance.”<sup>219</sup> In affirming the trial court’s decision, the Court found “it is quite apparent that there was no error in the submission of the questions presented at the trial to the jury . . . . [T]he improvement is the work of the skillful mechanic, not that of the inventor.”<sup>220</sup>

The Supreme Court “did not cite any case law precedent to support the standard of patentability.”<sup>221</sup> Yet the question was focused on proper questions for the jury. The patentee-plaintiff requested the trial court to deliver an instruction that stated, “[I]t required skill and thought and invention to attach the knob of clay to the metal shank and spindle, so that they would unite firmly, and make a solid, substantial article of manufacture.”<sup>222</sup>

The Supreme Court refused to equate “thought” with “invention” and instead “accepted a third requirement for patentability, in addition to novelty and utility, namely, passing the challenged instruction’s skill-of-‘an ordinary mechanic acquainted with the business’-test”—that is, even if the step taken by the patentee were new, in a strict sense, it must be more than new and “ordinary.”<sup>223</sup> The language of the *Hotchkiss* test was eventually replaced with the “non-obviousness” language in 35 U.S.C. § 103.<sup>224</sup> In dissent, Justice Woodbury contested the majority’s conclusion on the jury issue, arguing that the question as to the requisite inventiveness of the knob should be determined by the jury.<sup>225</sup>

In *Wood v. Underhill*, the patentee-plaintiff sued the defendant for infringement, and the defendant argued that the claims made by the patent were too vague to satisfy the statutory requirement that the description of the claim “be in such full, clear, and exact terms as to enable anyone skilled in the art to which it appertains to compound and use the invention; that is to say, to compound and use it without making any experiments of his own.”<sup>226</sup> The description read:

Take of common anthracite coal, unburnt, such quantity as will best suit the kind of clay to be made into brick or tile, and mix the same, when well pulverized, with the clay before [it] is moulded; that clay which requires the most burning will require the greatest proportion of coal-dust; the exact proportion, therefore, cannot be specified; but, in general, three fourths of a bushel of coal-dust to one thousand brick will be correct. Some clay may require one eighth more, and some not exceeding a half-bushel. . . . If the heat is raised too high, the brick will swell, and be injured in their form. If the heat is too moderate, the coal-dust

<sup>219</sup> *Id.* at 266.

<sup>220</sup> *Id.* at 267.

<sup>221</sup> George M. Sirilla, 35 U.S.C. § 103: From *Hotchkiss* to *Hand to Rich*, the Obvious Patent Law Hall-of-Famers, 32 J. MARSHALL L. REV. 437, 460 (1999).

<sup>222</sup> *Hotchkiss*, 52 U.S. at 253–54.

<sup>223</sup> Sirilla, *supra* note 221, at 460–61.

<sup>224</sup> Edmund J. Sease & Robert A. Hodgson, *Plants Are Properly Patentable Under Prevailing U.S. Law and This Is Good Public Policy*, 11 DRAKE J. AGRIC. L. 327, 344–45 (2006).

<sup>225</sup> *Hotchkiss*, 52 U.S. at 253–54 (Woodbury, J., dissenting).

<sup>226</sup> *Wood v. Underhill*, 46 U.S. (5 How.) 1, 4 (1847).

will be consumed before the desired effect is produced. Extremes are therefore to be avoided.<sup>227</sup>

Justice Taney conceded that “qualities of clay generally differ so widely that the specification of the proportions stated in this case is of no value; and that the improvement cannot be used with advantage in any case, or with any clay, without first ascertaining by experiment the proportion to be employed,” but because the sufficiency was a fact question for the jury, the trial court erred by not allowing the jury to so determine.<sup>228</sup>

In *Corning v. Burden*, the Supreme Court considered the inventiveness of a machine for removing impurities from heated iron as it was removed from a furnace and made malleable. The patent’s specification described the patent as an improvement consisting of “the employment of a new and useful machine for rolling of puddlers’ balls,” but equivocal claims within the patent text suggested he was patenting the result of transforming hot iron masses from a furnace to malleable, workable iron, an unpatentable physical effect or process.<sup>229</sup> The Court found that the patent was for a machine and not for a process because it was the description of the invention in the specification upon which the government granted the patent.<sup>230</sup> Therefore, the Court overruled the lower court’s decision to charge the jury in the infringement case that the patent was for a new process, mode, or method.<sup>231</sup>

*Corning v. Burden* is frequently cited for Justice Grier’s elaboration of patentable versus non-patentable processes:

A process, *eo nomine*, is not made the subject of a patent in our act of Congress. It is included under the general term ‘useful art.’ . . . But where the result or effect is produced by chemical action, by the operation or application of some element or power of nature, or of one substance to another, such modes, methods, or operations, are called processes. A new process is usually the result of discovery; a machine, of invention. The arts of tanning, dyeing . . . and numerous others, are usually carried on by processes, as distinguished from machines . . .

But the term process is often used in a more vague sense, in which it cannot be the subject of a patent. Thus we say that a board is undergoing the process of being planed, grain of being ground, iron of being hammered, or rolled.<sup>232</sup>

*Corning* was essentially an evidence case. The Supreme Court concluded that, after the 1836 Act, patents were entitled to a presumption of validity and that the jury should have had the defendants’ (competing) patent read to them and should have weighed that presumption on the infringement claim.<sup>233</sup>

<sup>227</sup> *Id.* at 1–2.

<sup>228</sup> *Id.* at 5.

<sup>229</sup> *Corning v. Burden*, 56 U.S. (15 How.) 252, 268–69 (1853).

<sup>230</sup> *Id.* at 266–67, 269–72.

<sup>231</sup> *Id.* at 267, 271.

<sup>232</sup> *Id.* at 254, 267–68 (interpreting Act of July 4, 1836, ch. 357, § 6, 5 Stat. 117, 119 (codified at 35 U.S.C. § 112)).

<sup>233</sup> *Id.* at 270–71.

C. *The Merger of Law and Equity 1870–1952 and the Ascendance of the Federal Common Law of Patentability*

It is frequently claimed that the 1870 Patent Act did little to alter the 1836 scheme and, in fact, largely codified judicial developments.<sup>234</sup> But the law wrought significant changes to both patentability requirements and, more importantly, to the structure of patent litigation.

The Act made three changes to the patentability requirements. First, the Act combined the statutory language expressing both the novelty requirement and the statutory bars from the Patent Act of 1836 with the grace period of the Patent Act of 1839, resulting in one expression of all three of these concepts. Second, the Act changed the novelty requirement by adding a geographic restriction to the prohibition on obtaining a patent if the invention was “known or used before his or their discovery or invention thereof;” . . . . Third, the Act changed the novelty requirement by adding a prohibition on obtaining a patent if the invention was “patented, or described in any printed publication in this or any foreign country, before his invention or discovery thereof.” The Patent Act of 1870 also changed the specification requirements in two important respects. First, it added the best mode requirement. Second, it added a claiming requirement, which included what is now known as the definiteness requirement.<sup>235</sup>

The 1870 Act also responded to key Court decisions interpreting the 1836 Act. Marginal notations in the April 7 and the April 13 drafts identified *O’Reilly v. Morse*, *Corning v. Burden*, and *Wood v. Underhill* in particular.<sup>236</sup> All of these decisions addressed the patentability of abstract concepts or effects.<sup>237</sup>

Most importantly, Congress made actions at law and in equity available to patent owners “to prevent the violation of any right secured by patent.”<sup>238</sup> The result was the dramatic decline in the role of the jury in patent litigation:

[B]ecause 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. 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, 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.<sup>239</sup>

<sup>234</sup> Nard, *supra* note 52, at 71.

<sup>235</sup> David O. Taylor, *Confusing Patent Eligibility*, 84 TENN. L. REV. 157, 168–69 (2016) (footnotes omitted).

<sup>236</sup> See H.R. 1717, 41st Cong. §§ 24–25 (as reported by S. Comm. On Patents, Apr. 7, 1870, Apr 13, 1870).

<sup>237</sup> Joshua Sarnoff, *Shaking the Foundations of Patentable Subject Matter* 80–82 (Apr. 2, 2008) (unpublished manuscript), [https://www.brookings.edu/wp-content/uploads/2012/04/0114\\_patent\\_sarnoff.pdf](https://www.brookings.edu/wp-content/uploads/2012/04/0114_patent_sarnoff.pdf) [perma.cc/T6NR-4YB8].

<sup>238</sup> Act of July 8, 1870, ch. 230, § 55, 16 Stat. 198, 206; see also § 59, 16 Stat. at 207 (legal damage action was made applicable to “infringement of any patent”); § 52, 16 Stat. at 205.

<sup>239</sup> Lemley, *supra* note 119, at 1704.



The jury having been removed from fact questions, the Supreme Court freely reviewed the factual record issued by courts sitting in equity, often extensively so. In *Barbed Wire Patent*, for example, Justice Brown extensively reviewed the factual record, the credibility of witnesses, and the chronology of barbed wire technology to determine that the plaintiff's innovation had not been anticipated.<sup>240</sup> Indeed, in U.S. Supreme Court patent cases under the 1870 Act, there were frequently no references to the applicable statute or the U.S. Constitution at all, the analysis undertaken in light of common law precedents.<sup>241</sup>

English cases and U.S. Supreme Court decisions applying them persisted through the 1870 Patent Act. In *Risdon Iron & Locomotive Works v. Medart*, the Supreme Court, citing *Neilson*, rejected a pulley manufacturing process as an attempt to patent the function of a pulley.<sup>242</sup> Federal common law evolved into the most significant structural aspect of the Judicial Power in the patent context between 1870 and 1952. In *Westinghouse v. Boyden Power-Brake Co.*, a case generally known for the "reverse doctrine of equivalents," the majority invoked Justice Grier's distinction of patentable and non-patentable processes in *Corning v. Burden* to justify upholding Boyden's patent from the infringement challenge, while the dissent argued that Boyden's innovation had effectively "point[ed] to mere differences in form in the mechanical devices used," citing both English and U.S. precedent, including *Neilson* and *Morse*.<sup>243</sup>

Over the course of the 82 year period between 1870 and 1952, there were, in fact, few constitutional questions raised with respect to the Patent Clause, and the statutory interpretation questions were resolved through resort to precedent rather than the statutory text, although with unpredictable outcomes.<sup>244</sup> Controlled frequently by *O'Reilly v. Morse* and *Corning v. Burden*, the Supreme Court found enough "invention," or not, to satisfy the patentability re-

<sup>240</sup> *Barbed Wire Patent*, 143 U.S. 275, 285–92 (1892).

<sup>241</sup> See e.g., *Double-Pointed Tack Co. v. Two Rivers Mfg. Co.*, 109 U.S. 117, 120–21 (1883); *Miller v. Force*, 116 U.S. 22, 27–28 (1885); *Preston v. Manard*, 116 U.S. 661, 664 (1886); *Hendy v. Golden State & Miner's Iron Works*, 127 U.S. 370, 375–76 (1888); *St. Germain v. Brunswick*, 135 U.S. 227, 230 (1890); *Shenfield v. Nashawannuck Mfg. Co.*, 137 U.S. 56, 59 (1890); *Florsheim v. Schilling*, 137 U.S. 64, 76–77 (1890); *Cluett v. Clafin*, 140 U.S. 180, 182–83 (1891); *Adams v. Bellaire Stamping Co.*, 141 U.S. 539, 542 (1891); *Patent Clothing Co. v. Glover*, 141 U.S. 560, 563 (1891); *Pope Mfg. Co. v. Gormully & Jeffery Mfg. Co.*, 144 U.S. 238, 242–46, 248 (1892); *Knapp v. Morss*, 150 U.S. 221, 224–25, 227–29 (1893); *Morgan Envelope Co. v. Albany Perforated Wrapping Paper Co.*, 152 U.S. 425, 429, 432–35 (1894); *Dunham v. Dennison Mfg. Co.*, 154 U.S. 103, 111 (1894). *Contra* *Hollister v. Benedict & Burnham Mfg. Co.*, 113 U.S. 59, 67, 71, 73 (1885); *Thompson v. Boisselier*, 114 U.S. 1, 11 (1885).

<sup>242</sup> *Risdon Iron & Locomotive Works v. Medart*, 158 U.S. 68, 72–73 (1895).

<sup>243</sup> *Westinghouse v. Boyden Power-Brake Co.*, 170 U.S. 537, 555, 568–69, 573 (1898); *id.* at 577–79, 581 (Shiras, J., dissenting).

<sup>244</sup> See, e.g., *supra* notes 241–43 and accompanying text.

quirement in roughly half the cases it considered.<sup>245</sup> “Though most . . . were couched in terms of an ‘invention’ requirement . . . , no one seemed to know for sure what the ‘invention’ standard meant.”<sup>246</sup> As Judge Learned Hand wrote, the “invention” requirement was “as fugitive, impalpable, wayward and vague a phantom as exists in the whole paraphernalia of legal concepts.”<sup>247</sup>

### III. STEPS TOWARD CONSTITUTIONALIZATION OF PATENTABILITY

#### A. *Justice Black, Originalism, and the Return of Constitutional Scrutiny to Patent Law*

Justice Hugo Black was confirmed to the U.S. Supreme Court in 1937 and served as a Supreme Court Justice for 34 years. Justice Black’s time on the United States Supreme Court “marked the beginning of an important change in the Court’s attitude as to what the Constitution requires of the federal judiciary.”<sup>248</sup> The “political and social theory” of the change was “in many ways . . . a resurgence of the constitutional views of Jefferson and Madison,”<sup>249</sup> consistent with what is now generally regarded as “originalist” approaches to constitutional interpretation. Originalism means the “communicative content of the constitutional text is fixed at the time each provision is framed and ratified,” and “constitutional practice should be constrained by that communicative content of the text.”<sup>250</sup> It is a practice of strict construction, “purport[ing] to take the constitutional text as we find it and strictly interpret it according to its terms.”<sup>251</sup> This change brought “greater judicial restraint in dealing with legislation and also a restriction in the scope of the jurisdiction of the federal judiciary in dealing with the concerns of the several states.”<sup>252</sup>

<sup>245</sup> *Atl. Works v. Brady*, 107 U.S. 192, 202, 205 (1882); *Barbed Wire Patent*, 143 U.S. 275, 292 (1892); *Singer Mfg. Co. v. Cramer*, 192 U.S. 265, 285–86 (1904); *Eibel Process Co. v. Minn. & Ont. Paper Co.*, 261 U.S. 45, 63 (1923); *Kirsch Mfg. Co. v. Gould Mersereau Co.*, 6 F.2d 793, 794–95 (2d Cir. 1925); *Paramount Publix Corp. v. American Tri-Ergon Corp.*, 294 U.S. 464, 470, 472–74, 476–77 (1935); *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 90–91 (1941); *Marconi Wireless Tel. Co. v. United States*, 320 U.S. 1, 30–32, 34, 38, 54, 58 (1943); *Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.*, 321 U.S. 275, 279 (1944); *In re Shortell*, 142 F.2d 292, 294 1069 (C.C.P.A. 1944); *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 334–35 (1945).

<sup>246</sup> Andrew F. Halaby, *The “Inventive Concept” Test for Patent Eligibility Contravenes Congressional Intent*, 61 IDEA 38, 48–49 (2020).

<sup>247</sup> Jason Lief & Peter Schuyler, *Pharmaceutical Patents After KSR: What Is Not Obvious?*, 15 J. COM. BIOTECHNOLOGY 44, 44 (2009).

<sup>248</sup> Vincent M. Barnett, Jr., *Mr. Justice Black and the Supreme Court*, 8 U. CHI. L. REV. 20, 20 (1940).

<sup>249</sup> *Id.*

<sup>250</sup> Lawrence B. Solum, *Originalist Methodology*, 84 U. CHI. L. REV. 269, 269 (2017).

<sup>251</sup> Jack L. Landau, *Some Thoughts About State Constitutional Interpretation*, 115 PENN ST. L. REV. 837, 851 (2011).

<sup>252</sup> Barnett, *supra* note 248, at 20.

Shortly after joining the Court, Justice Black dissented in *Crown Cork & Seal Co. v. Ferdinand Gutmann Co.*, where the majority allowed a temporary application, made seven years before, to stand as the basis for granting the disputed patent, thereby increasing the total number of years during which the applicant could control the manufacture of the article.<sup>253</sup> Justice Black reasoned that doing so resulted in the patent holder enjoying a longer term of protection than Congress intended and, furthermore, limited the reach of patents to those that “promote the progress of science and the useful arts” as the Constitution required.<sup>254</sup> He also dissented in *General Talking Picture Corp. v. Western Electric Co.*, similarly arguing that the majority’s decision to allow a licensing arrangement to increase the patentee’s control of a product downstream violated strict construction of the statute and improperly aided monopoly.<sup>255</sup>

After Justice William O. Douglas joined the Court, Justice Black’s originalist interpretation filtered into the majority. In *Cuno Engineering Corp. v. Automatic Devices Corp.*, the Supreme Court considered an improvement to the automobile cigarette lighter through which the lighter would “automatically return[] . . . to its ‘off’ position after the heating coil had reached the proper temperature.”<sup>256</sup> Writing for a unanimous Supreme Court, Justice Douglas tied the requirement of invention to a limit of Congress’s authority under the Patent Clause:

We cannot conclude that his skill in making this contribution reached the level of inventive genius which the Constitution (Art. I, § 8) authorizes Congress to reward. He merely incorporated the well-known thermostat into the old “wireless” lighter to produce a more efficient, useful and convenient article.<sup>257</sup>

According to Justice Douglas, “invention” as a constitutional matter required a “flash of creative genius, not merely the skill of the calling” to satisfy the requirements for patentability.<sup>258</sup>

Concurring in the result of *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, in which the Court held invalid for lack of “invention” a patent on a device for efficiently unloading groceries before a cashier, Justices Douglas and Black made explicit the role of the Supreme Court in policing the reach of the Patent Clause:

It is worth emphasis that every patent case involving validity presents a question which requires reference to a standard written into the Constitution. Article I, § 8, contains a grant to the Congress of the power to permit patents to be issued. But unlike most of the specific powers which Congress is given, that grant is

<sup>253</sup> *Crown Cork & Seal Co. v. Ferdinand Gutmann Co.*, 304 U.S. 159, 172–75 (1938) (Black, J., dissenting).

<sup>254</sup> *Id.* at 172, 174.

<sup>255</sup> *Gen. Talking Picture Corp. v. W. Elec. Co.*, 305 U.S. 124, 128–30, 132–33 (1938) (Black, J., dissenting).

<sup>256</sup> *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 85–87 (1941).

<sup>257</sup> *Id.* at 85, 91.

<sup>258</sup> *Id.* at 90–91.

qualified. . . . The Congress acts under the restraint imposed by the statement of purpose in Art. I, § 8. The purpose is “To promote the Progress of Science and useful Arts . . . .” The means for achievement of that end is the grant for a limited time to inventors of the exclusive right to their inventions.<sup>259</sup>

*B. Congress’s Equivocal Reaction to the Supreme Court’s Assertion of Constitutional Authority over Patent Eligibility*

The 1952 Patent Act marked the first comprehensive effort to overhaul the patent laws since 1870.<sup>260</sup> The 1952 Act was an explicit rejection of U.S. Supreme Court jurisprudence that had tended to apply its “inventiveness” precedent with increasing exclusionary force from 1925 forward and, more explicitly, the resurrection of the Supreme Court’s role in policing the use of the Patent Clause. In 1942, the Second Circuit acknowledged that “a pronounced new doctrinal trend” at the Supreme Court encouraged it to void patents for lack of inventiveness.<sup>261</sup> “[T]he direct cause for the introduction of H.R. 5248 of the 80th Congress and H.R. 4798 of the 81st Congress was an attempt to counteract the effects of the *Cuno* case and, of course, to provide the long felt need for a statutory definition of invention.”<sup>262</sup>

Codified at 35 U.S.C. § 100, the law defined “invention” to mean “invention or discovery” to ensure that “a discovery could be patented as well as an invention, if it were embodied in one of the classes of patentable subject matter.”<sup>263</sup> The Reviser’s Note reflects that this was included “only to avoid repetition” and “was not a full definition in the usual sense but that it was a clarifying statement which needed to be read in conjunction with the other uses of the words ‘invent’ or ‘discover.’”<sup>264</sup>

The law also defined “process” to mean “process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.”<sup>265</sup> The original intent of this provision was “that a new use of a known material would be patentable and that it would not be necessary to

<sup>259</sup> *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 149, 153–54 (1950); *id.* at 54 (Douglas, J., concurring); Barnett, *supra* note 248, at 39 (“Black took occasion to express the view that since patents are aids to the development of monopoly, courts should construe the patent statutes strictly.”).

<sup>260</sup> See generally Taylor, *supra* note 235, at 166–71 (summarizing patent statute history).

<sup>261</sup> *Picard v. United Aircraft Corp.*, 128 F.2d 632, 636 (2d Cir. 1942).

<sup>262</sup> L. James Harris, *Some Aspects of the Underlying Legislative Intent of the Patent Act of 1952*, 23 GEO. WASH. L. REV. 658, 674 n.62 (1955).

<sup>263</sup> *Id.* at 662–63, 665; Brief of Amicus Curiae Austin Intellectual Property Law Association in Support of Neither Party at 10, *Bilski v. Doll*, 556 U.S. 1268 (2009) (No. 08-964), 2009 WL 2418473, at \*6 (“The creation of a separate definition of ‘process’ . . . in the 1952 Patent Act clearly indicates Congress’s intent that subject matter of processes in the Patent Act extend beyond what the common law had previously recognized as patentable . . . .” (quoting 35 U.S.C. § 100(b))).

<sup>264</sup> Harris, *supra* note 262, at 665.

<sup>265</sup> 35 U.S.C. § 100; *Ex parte Macy*, 1960 WL 7662 (B.P.A.I. Oct. 31, 1960).

disguise it as a process.”<sup>266</sup> The provision that ended up being enacted *does* require the new use to be described as a process, but “amounts to a clear recognition of this class of patentable subject matter.”<sup>267</sup> Its inclusion “was clearly intended to clarify and broaden the scope of patentable invention.”<sup>268</sup> The “process” definition was aimed at resolving Judge Grier’s bifurcation—and the long-running unpredictability—of patentable and non-patentable processes in *Corning v. Burden*.<sup>269</sup> The “non-obvious subject matter” provision at 35 U.S.C. § 103 was intended to express the subject of invention, a subjective concept, “clearly and simply in as objective terms as possible.”<sup>270</sup>

The “flash of genius decision” was a revision that was focused on transforming the language so “[p]atentability shall not be negated by the manner in which the invention was made.”<sup>271</sup> Congress intended, by this change, to have “the standard of invention . . . applied with moderation.”<sup>272</sup>—specifically, “intent to moderate the strict interpretation of the courts and to encourage the courts to take a more friendly attitude toward patents, a practice from which they had departed in certain cases.”<sup>273</sup>

The presumption of validity of patents was included in the Act and was “believed that this affirmative declaration by the Congress would be of real value in strengthening the presumption and in closing this so-called back door.”<sup>274</sup> “This, in reality, amounts to a recognition of the presumption of invention.”<sup>275</sup>

All of the above changes were utilized “to modernize and strengthen the patent laws, to give the patent right effectiveness, and to make the statute an understandable and well-written document.”<sup>276</sup> “It was the intention of the

<sup>266</sup> Harris, *supra* note 262, at 669; *Ex parte Siebach*, 1966 WL 7310 (B.P.A.I. Feb. 16, 1966).

<sup>267</sup> Harris, *supra* note 262, at 669.

<sup>268</sup> *Id.* at 671.

<sup>269</sup> See Harris, *supra* note 262, at 666 n.29.

<sup>270</sup> *Id.* at 671, 675; Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 CALIF. L. REV. 803, 813 (1988) (“Section 103 of the 1952 Act was the first formal attempt to structure judicial thinking about obviousness.”).

<sup>271</sup> Harris, *supra* note 262, at 677.

<sup>272</sup> *Id.* at 678; Anant S. Narayanan, Note, *Standards of Protection for Databases in the European Community and the United States: Feist and the Myth of Creative Originality*, 27 GEO. WASH. J. INT’L L. & ECON. 457, 491 (1994) (“Congress indicated its disapproval of the ‘flash of genius’ test by enacting a statute that made inventions patentable regardless of the manner in which they were conceived.”).

<sup>273</sup> Harris, *supra* note 262, at 679.

<sup>274</sup> *Id.* at 680; *Golden Bridge Tech., Inc. v. Apple, Inc.*, No. 12-cv-04882, 2015 WL 2064525, at \*1 (N.D. Cal. May 1, 2015) (“In enacting the 1952 Patent Act, Congress codified the ‘existing presumption of validity of patents’ . . .” (quoting *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S.Ct. 2238, 2243 (2011))); John F. Duffy, *Reasoned Decisionmaking vs. Rational Ignorance at the Patent Office*, 104 IOWA L. REV. 2351, 2372 (2019) (“Congress . . . finally codified a statutory presumption of validity in the 1952 Patent Act.”).

<sup>275</sup> Harris, *supra* note 262, at 680.

<sup>276</sup> *Id.* at 698 (footnotes omitted).

drafters to enhance the dignity of the grant in the eyes of the judiciary and the people so that their attitude toward the patent would be commensurate with the age and experience of the administrative agency issuing it.”<sup>277</sup>

The 1952 Patent Act was aimed specifically at patent-eligible subject matter.<sup>278</sup> The word “process” replaced the word “art” to avoid confusion with the latter term’s use elsewhere.<sup>279</sup> The legislative history made clear Congress’s view that, as a matter of § 101 subject matter eligibility, “anything under the sun that is made by man” could be patented.<sup>280</sup>

The 1952 Act also sought to clarify—and codify—how much of “something more,” beyond the prior art, is required for patentability. The judge-made version of this concept, referred to as “invention” as noted above,<sup>281</sup> had been “expressed in a large variety of ways in decisions of the courts and in writings.”<sup>282</sup> In the hope that doing so would “have a stabilizing effect and minimize great departures which have appeared in some cases,”<sup>283</sup> the 1952 Act replaced that judicial construct with a new § 103 “Conditions for patentability; non-obviousness subject matter,” with the question becoming whether the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious to a person having ordinary skill in the pertinent art.<sup>284</sup> If yes, then even if the claimed invention were new, it did not add “enough” of “something more” to permit patenting.<sup>285</sup> If no, then assuming the other statutory conditions for patenting had been met, the patent would be granted.<sup>286</sup>

<sup>277</sup> *Id.* at 698–99 (footnotes omitted).

<sup>278</sup> See 1952 ACT REPORT, *supra* note 58, at 6.

<sup>279</sup> See *id.*

<sup>280</sup> See *id.*; see also *Patent Codification and Revision: Hearing on H.R. 3760 Before Subcomm. No. 3 of the H. Comm. on the Judiciary*, 82d Cong. 37 (1951) [hereinafter *1952 Act Hearings*] (statement of P.J. Federico, Examiner in Chief, U.S. Pat. Off.); Mike Sikora, Note, *Mayo, Myriad, and a Muddled Analysis: Do Recent Changes to the Patentable Subject Matter Doctrine Threaten Patent Protections for Epigenetics-Based Inventions?*, 102 MINN. L. REV. 2229, 2234 (2018).

<sup>281</sup> See 1952 ACT REPORT, *supra* note 58, at 5, 7; Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. L. REV. 393, 405 (1960); Taylor, *supra* note 235, at 171; see also Giles S. Rich, *Escaping the Tyranny of Words—Is Evolution in Legal Thinking Impossible?*, 60 J. PAT. OFF. SOC’Y 271, 274–75 (1978) [hereinafter Rich, *Tyranny*]; Robert Desmond, Comment, *Nothing Seems “Obvious” to the Court of Appeals for the Federal Circuit: The Federal Circuit, Unchecked by the Supreme Court, Transforms the Standard of Obviousness Under the Patent Law*, 26 LOY. L.A. L. REV. 455, 468–69 (1993).

<sup>282</sup> 1952 ACT REPORT, *supra* note 58, at 7.

<sup>283</sup> *Id.*; see also *1952 Act Hearings*, *supra* note 280, at 38.

<sup>284</sup> 35 U.S.C. § 103. See generally P.J. Federico, *Origins of Section 103*, 5 APLA Q.J. 87 (1977).

<sup>285</sup> Giles S. Rich, *The Vague Concept of “Invention” as Replaced by Sec. 103 of the 1952 Patent Act*, 46 J. PAT. OFF. SOC’Y 855, 863–65 (1964).

<sup>286</sup> *E.g., id.* at 866; Rich, *supra* note 34, at 29; David O. Taylor, *Patent Reform, Then & Now*, 2019 MICH. ST. L. REV. 431, 447. *But see* George Edwards, *That Clumsy Word “Non-*

Notwithstanding passage of the 1952 Act, the Supreme Court, as well as lower federal courts, did not relinquish much of the federal common law that shaped the new patentability inquiry adopted by Congress. From the first disputes arising under the new law, federal courts concluded that federal common law had been unaffected.<sup>287</sup>

The most famous case in this line, and the first to interpret the new § 103, was the Court's 1966 decision in *Graham v. John Deere Co.*<sup>288</sup> The Court examined how the 1952 Patent Act affected the "traditional statutory and judicial tests of patentability and what definitive tests are now required."<sup>289</sup> The invention in dispute was "a combination of old mechanical elements, involv[ing] a device designed to absorb shock from plow shanks as they plow through rocky soil and thus to prevent damage to the plow."<sup>290</sup> The Court acknowledged that "the statutory emphasis on 'non-obviousness' rather than 'invention' was intended to correct the wide variance of interpretation of the less definite . . . 'invention' standard."<sup>291</sup> "Yet, in holding invalid the patent issued . . . , the Court asserted that the statutory nonobviousness standard of [S]ection 103 was meant to codify the 'prior judge-made requirement of "invention" first developed in *Hotchkiss v. Greenwood*,'" and repeated its conclusion that the Supreme Court was the final arbiter of the scope of Congress's authority under the Patent Clause.<sup>292</sup>

This treatment of § 103 left open the door for the Court to assert in future cases that the determination of whether "enough" of "something more" had been added was determined by *its* path leading up to passage of the 1952 Act, rather than merely the language of the Act itself.<sup>293</sup> In short, even after the 1952 Act, federal common law was to determine the scope of patentability. The Court has since walked through that door and well down the same road— notwithstanding that in the companion case to *Graham*, *United States v. Adams*, the Court upheld the validity of a wet battery patent by exclusive reference to § 103's nonobvious requirement, without reference to *Hotchkiss*.<sup>294</sup>

In the § 101 context, patentable subject matter, Supreme Court decisions continued to split. In *Gottschalk v. Benson*, Justice Douglas wrote for a unani-

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*obviousness*"/, 60 J. PAT. OFF. SOC'Y 3, 7–8 (1978) (denying that § 103 did not entirely supplant pre-existing "something more" standards established by case law).

<sup>287</sup> *New Wrinkle, Inc. v. Watson*, 206 F.2d 421, 422 (D.C. Cir. 1953); *General Motors Corp. v. Estate Stove Co.*, 203 F.2d 912, 918 (6th Cir. 1953) ("We are, however of the view that the principle stated in the *Great Atlantic and Pacific Tea Co.* case [in regard to standard of invention] is not modified by the new Act, but continues to be the law . . .").

<sup>288</sup> *Graham v. John Deere Co.*, 383 U.S. 1, 3 (1966).

<sup>289</sup> *Id.*

<sup>290</sup> *Id.* at 4.

<sup>291</sup> Halaby, *supra* note 246, at 51.

<sup>292</sup> *Id.* at 51–52. *See generally* Kitch, *supra* note 129, at 244–45, 255, 261–62 (discussing at length *Hotchkiss* and its historical context).

<sup>293</sup> Rich, *supra* note 34, at 27; *see also* Kitch, *supra* note 129, at 299.

<sup>294</sup> *United States v. Adams*, 383 U.S. 39, 51–52 (1966).

mous court that a computer program for converting binary-coded decimal numerals into binary numerals was unpatentable as a mere mathematical formula or abstraction.<sup>295</sup> The opinion made scant reference to § 101 and focused on whether the claimed process fell into judicial exceptions to subject matter eligibility. A 1978 6–3 decision authored by Justice Stevens, *Parker v. Flook*, used the term “inventive concept” as it rejected a patent on a method for updating alarm limits during catalytic conversion of hydrocarbons (such as petroleum), which relied in part on a mathematical formula, because the only novel feature of the method was the mathematical formula.<sup>296</sup> In a 1980 5–4 decision authored by Chief Justice Burger, *Diamond v. Chakrabarty*, the Court held a human-made microorganism patentable, with no reference to “inventive concept.”<sup>297</sup> A 1981 5–4 decision authored by Justice Rehnquist, *Diamond v. Diehr*, held that a claimed rubber-product molding process including an algorithm was subject-matter patent eligible, without any reference to “inventive concept.”<sup>298</sup>

The Court clarified the nonobviousness standard in its 1969 opinion in *Anderson’s-Black Rock Inc. v. Pavement Salvage Co.*<sup>299</sup> There, the Court held invalid as obvious a claimed invention in asphalt-paving-machinery technology.<sup>300</sup> While applying the statutory obviousness standard, the Court rested its decision on the pre-1952 Act “invention” standard, citing both *Graham’s* invocation of *Hotchkiss* as establishing the § 103 standard and its own 1950 opinion in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*<sup>301</sup> Justice Douglas, in a concurring opinion in *Great Atlantic*, planted the seed for a new articulation—“synergy”—of the old patentability standard as applied to combinations of old elements.<sup>302</sup>

<sup>295</sup> *Gottschalk v. Benson*, 409 U.S. 63, 65, 71–73 (1972); *see also, e.g.*, Robert P. Merges, *One Hundred Years of Solicitude: Intellectual Property Law, 1900–2000*, 88 CALIF. L. REV. 2187, 2229 (2000) (“The problem was that the decision was conceptually flawed, if not plain wrong. Great volumes of legal scholarship have documented over the intervening years what common experience also tells us: software is engineered, not discovered. . . . [P]erhaps Justice Douglas was simply searching for a way to keep this new subject matter out of the clutches of the patent system of which he was so suspicious. Whatever the reason, he made a major mistake.”).

<sup>296</sup> *Parker v. Flook*, 437 U.S. 584, 594 (1978).

<sup>297</sup> *Diamond v. Chakrabarty*, 447 U.S. 303, 305–06, 309 (1980).

<sup>298</sup> *Diamond v. Diehr*, 450 U.S. 175, 177, 184 (1981).

<sup>299</sup> *Anderson’s-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 62–63 (1969).

<sup>300</sup> *See id.* at 57–58, 62.

<sup>301</sup> *Id.* at 61–62; *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 150–51, 154 (1950).

<sup>302</sup> The concurrence in *Great Atlantic* asserted a constitutional limit on Congress’s power to mandate the patentability of mere “gadgets,” as opposed to advances serving scientific ends, and offered “inventive genius” as the Court’s historical test for differentiating inventions constitutionally entitled to protection from those not. *Great Atl. & Pac. Tea Co.*, 340 U.S. at 154–55 (Douglas, J., concurring); *see also* Merges, *supra* note 295.



### C. Congress Restructures Patent Law's Jurisdiction

#### 1. The Patent Law History Behind the Federal Circuit

In 1967, Congress created the Federal Judicial Center<sup>303</sup> “to conduct research and study of the operation of the courts of the United States.”<sup>304</sup> The Center appointed a committee, headed by Harvard Law Professor Paul Freund, that issued its report in December 1972.<sup>305</sup> Focusing on managing the Supreme Court’s workload, the committee primarily recommended creation of a national court of appeals lodged between the regional circuit courts and the Supreme Court, as well as changes in Supreme Court case review practices and Court operations.<sup>306</sup> The committee’s work launched a legislative evaluative process that ultimately culminated in the creation of the Federal Circuit.<sup>307</sup>

In late 1972, Congress created a Commission on Revision of the Federal Court Appellate System,<sup>308</sup> the “Hruska Commission,” after its chair, Senator Roman Hruska of Nebraska. The Hruska Commission focused on the structure of the federal intermediate appellate courts.<sup>309</sup> The Hruska Commission “extensive[ly] discuss[ed]” the prospect of creating a “specialized” patent appeal court—something the Commission noted had been proposed periodically over at least the preceding quarter century.<sup>310</sup> The Commission’s final report ruled out the prospect of a court for patent appeals, but nevertheless acknowledged the importance of uncertainty resulting from the structure of patent litigation during its deliberations.<sup>311</sup>

<sup>303</sup> Act of Dec. 20, 1967, Pub. L. No. 90-219, sec. 101, § 620, 81 Stat. 664, 664 (codified as amended at 42 U.S.C. § 620).

<sup>304</sup> See Alfred P. Murrah, *Preface* to FED. JUD. CTR., REPORT OF THE STUDY GROUP ON THE CASELOAD OF THE SUPREME COURT, at iii (1972).

<sup>305</sup> *Id.* at v.

<sup>306</sup> FED. JUD. CTR., *supra* note 304, at 1, 47–48; Sam F. Halabi and Nanette K. Laughrey, *Understanding the Judicial Conference Committee on International Judicial Relations*, 99 MARQ. L. REV. 239, 261 (2015).

<sup>307</sup> Halaby, *supra* note 246, at 54–55.

<sup>308</sup> Timothy J. O’Hearn, Comment, *Patent Law Reform Via the Federal Courts Improvement Act of 1982: The Transformation of Patentability Jurisprudence*, 17 AKRON L. REV. 453, 454 (1984).

<sup>309</sup> Harold C. Petrowitz, *Federal Court Reform: The Federal Courts Improvement Act of 1982—and Beyond*, 32 AM. U. L. REV. 543, 545–46 (1983).

<sup>310</sup> ROMAN L. HRUSKA ET AL., COMM’N ON REVISION OF THE FED. CT. APP. SYS., STRUCTURE AND INTERNAL PROCEDURES: RECOMMENDATIONS FOR CHANGE 28 (1975) [hereinafter HRUSKA REPORT].

<sup>311</sup> *Id.* at 13, 28. The Commission did so based on its perception that such a court might produce judicial “tunnel vision”; corresponding diminution in the influence specialist judges might have on regional circuit court reasoning; loss of regional court influence; undue judicial influence on policy within the “specialized” area; a disincentive to articulate judicial reasoning in those decisions; interest group capture; divergence of opinion within the patent bar; the preferences of the Seventh Circuit—which at the time bore the heaviest patent case-load—for retaining appellate jurisdiction in the regional circuit courts; and that the broader

The Commission retained patent law consultants James Gambrell and Donald Dunner,<sup>312</sup> and its final report noted “the consultants’ confirmation of the ‘particularly acute’ problem of inconsistent application of the patent law among the regional circuits, particularly as to patent validity, leading to disparity of results.”<sup>313</sup>

The Commission put forth this summary after hearing testimony from Gambrell and Dunner, who preferred a patent-focused appellate court to a national appeals court, but given concerns that had been asserted regarding the former, were amenable to the latter.<sup>314</sup> The implication was that if only enough interpretive opinions could be developed to offer guidance, then the law would be applied not only consistently, but correctly.<sup>315</sup>

By 1979, several intervening developments had prompted Congress to consider vestiges of those earlier proposals as a set of new proposals that became the Federal Courts Improvement Act of 1982.

These included, centrally, a proposal through the Department of Justice<sup>316</sup> (authored by professor Daniel J. Meador)<sup>317</sup> that a new intermediate appellate court be established on the same level as the regional circuits, to be formed by merging the Court of Claims and the Court of Customs and Patent Appeals (CCPA), and having the appellate jurisdiction of those courts as well as appellate jurisdiction in civil tax, environmental, and patent cases.<sup>318</sup>

Additionally, the Carter Administration had convened a domestic policy review on industrial innovation, which concluded that patent reform was desirable to maintain the United States’ international competitiveness in technological advances.<sup>319</sup>

Through Senator Edward Kennedy, the Carter Administration on March 15, 1979, introduced S. 677, entitled the Judicial Improvement Act of 1979,

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problems the Commission sought to address would not be remedied by the creation of “specialized” appellate tribunals. *Id.* at 28–29.

<sup>312</sup> See Halaby, *supra* note 246, at 56 (citing James B. Gambrell & Donald R. Dunner, *Study of the Problems, Consequences and Remedies in the Appellate Review of Decisions Involving Patent-Related Issues*, 216 BNA PAT., TRADEMARK & COPYRIGHT J. 1 (1975)).

<sup>313</sup> HRUSKA REPORT, *supra* note 310, at 151–52; Halaby, *supra* note 246, at 56 (footnotes omitted).

<sup>314</sup> See *Hearing on S. 21 and S. 537 Before the Subcomm. on Courts of the Committee S. Comm. on the Judiciary*, 97th Cong. 244 (1981) [hereinafter *May 1981 Senate Hearings*].

<sup>315</sup> See Daniel J. Meador, *Origin of the Federal Circuit: A Personal Account*, 41 AM. U. L. REV. 581, 615 (1992); see also *May 1981 Senate Hearings*, *supra* note 314.

<sup>316</sup> Meador, *supra* note 315, at 591.

<sup>317</sup> *Federal Courts Improvement Act of 1979: Hearings on S. 677 and S. 678 Before the Subcomm. on Improvements in Judicial Machinery of the S. Comm. on the Judiciary*, 96th Cong. 55 (1979) [hereinafter *1979 Act Hearings*] (statement of Erwin N. Griswold).

<sup>318</sup> Halaby, *supra* note 246, at 59.

<sup>319</sup> ZOLTAN J. ACS & ROGER R. STOUGH, PUBLIC POLICY IN AN ENTREPRENEURIAL ECONOMY 38 (2008).

which proposed the creation of a new intermediate appellate court to be known as the U.S. Court of Appeals for the Federal Circuit along these lines.<sup>320</sup>

As in testimony before the Hruska Commission, proponents of a new patent-focused appellate court argued the burden of uncertainty in appellate patent law adjudication. There, “proponents had focused on the uncertainty wrought by conflicted regional circuit dispositions and attitudes, and argued that this uncertainty created a drag on the patent system by promoting forum-shopping.”<sup>321</sup> Before the Subcommittee, proponents made these same arguments, but made the additional argument that this uncertainty disincentivized research and innovation.<sup>322</sup>

Subcommittee witnesses generally assumed that while the Supreme Court could review patent cases from the Federal Circuit if it chose,<sup>323</sup> it would follow past practice and not take many.<sup>324</sup>

Effective June 21, 1979, the Judiciary Committee reported out a new bill, S. 1477, which effected modifications to the earlier bills’ proposals.<sup>325</sup> The Committee report reflected broad acceptance of the “special need for national uniformity” in patent appeals<sup>326</sup>:

Based on the evidence it had compiled, the Hruska Commission singled out patent law as an area in which the application of the law to the facts of a case often produces different outcomes in different courtrooms in substantially similar cases. . . .

. . . .

The creation of the Court of Appeals for the Federal Circuit will produce desirable uniformity in this area of the law. . . .

Likewise, uniformity in the law will be a significant improvement from the standpoint of the businesses that rely on the patent system.<sup>327</sup>

A House counterpart, H.R. 3806, passed on September 15, 1980, and the House and Senate reached agreement on a compromise bill, H.R. 4482, in substantially the same form.<sup>328</sup>

The House Judiciary Committee’s September 5, 1980, report on H.R. 3806 echoed the Senate Judiciary Committee’s views on S. 1477. Noting, among other things, the views of the Hruska Commission’s patent law consultants<sup>329</sup> and the Industrial Research Institute in favor of the Federal Circuit’s creation,<sup>330</sup> the Committee reported:

<sup>320</sup> Judicial Improvement Act of 1979, S. 677, 96th Cong. (1979).

<sup>321</sup> Halaby, *supra* note 246, at 60.

<sup>322</sup> *E.g.*, 1979 Act Hearings, *supra* note 317, at 33 (statement of Daniel J. Meador).

<sup>323</sup> *Id.* at 39; *id.* at 484 (statement of Homer O. Blair).

<sup>324</sup> *Id.* at 47 (statement of Erwin N. Griswold).

<sup>325</sup> Petrowitz, *supra* note 309, at 552; S. REP. NO. 96-304 (1979) at 2, 10, 16.

<sup>326</sup> S. REP. NO. 96-304 at 10.

<sup>327</sup> *Id.* at 11–12.

<sup>328</sup> Petrowitz, *supra* note 309, at 552–53.

<sup>329</sup> H.R. REP. NO. 96-1300 (Sept. 5, 1980) at 19.

<sup>330</sup> *Id.* at 20.

Presently, there are three possible forums for patent litigation: the Court of Customs and Patent Appeals, a federal district court, or the Court of Claims. Although these multiple avenues of review do result in some actual unresolved conflicts in patent law, the primary problem in this area is uncertainty which results from inconsistent application of the law to the facts of an individual case. . . .

. . . .  
 . . . A single court of appeals for patent cases will promote certainty where it is lacking to a significant degree . . . .<sup>331</sup>

The Committee too assumed that the Supreme Court would continue to handle patent cases infrequently.<sup>332</sup> In April 1981 hearings before the House Judiciary Committee's Subcommittee on Courts, Civil Liberties, and the Administration of Justice, proponents of the House bill continued to press the adverse effects of uncertainty in application of the patent laws on American economic competitiveness.<sup>333</sup> "And they continued to cite 'attitudinal differences' as a cause, and the particular examples of obviousness and 'synergism' as manifestations of that uncertainty."<sup>334</sup> Witnesses also appeared to assume, as before, that the Supreme Court would continue to take relatively few patent cases.<sup>335</sup> They also disclaimed that the new appellate court would effectuate substantive change in the law.<sup>336</sup>

After "minor amendments" to H.R. 2405, the House Judiciary Committee reported out a "clean bill," H.R. 4482, on November 4, 1981.<sup>337</sup> "The House amended its bill and passed the measure on November 18, 1981."<sup>338</sup> The Senate passed the House bill, which became law as the Federal Courts Improvement Act of 1982 on April 2, 1982,<sup>339</sup> upon President Reagan's signature.<sup>340</sup>

<sup>331</sup> *Id.* at 19–20 (footnotes omitted); *see also id.* at 25 ("The second aspect of the subcommittee's inquiry was into industrial innovation as a key to increased productivity in the United States.").

<sup>332</sup> *Id.* at 20.

<sup>333</sup> *Court of Appeals for the Federal Circuit—1981: Hearings on H.R. 2405 Before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the H. Comm. On the Judiciary, 97th Cong. 1* (1981) [hereinafter *April 1981 House Hearings*] (Chair Kastenmeier's introductory remarks); *see also id.* at 12 (Howard T. Markey noting Judicial Conference of the United States' March 12, 1981, substantially identical proposal).

<sup>334</sup> *April 1981 House Hearings, supra* note 333, at 53 (statement of J. Jancin, President Elect, American Patent Law Association); Halaby, *supra* note 246, at 70 (footnote omitted).

<sup>335</sup> *April 1981 House Hearings, supra* note 333, at 50, 63 (Jancin); George C. Beighley, Jr., *The Court of Appeals for the Federal Circuit: Has It Fulfilled Congressional Expectations?*, 21 *FORDHAM INTELL. PROP. MEDIA & ENT. L.J.* 671, 701 (2011).

<sup>336</sup> *April 1981 House Hearings, supra* note 333, at 206 (Pauline Newman, responding to Kastenmeier).

<sup>337</sup> Petrowitz, *supra* note 309, at 552 n.81, 553.

<sup>338</sup> Halaby, *supra* note 246, at 76.

<sup>339</sup> Petrowitz, *supra* note 301, at 553.

<sup>340</sup> Meador, *supra* note 315, at 617.

2. *Congressional Expectations: “Invention” Dead, Uncertainty to Be Avoided, Supreme Court Intervention Expected to Continue to Be Limited*

“[T]he creation of the Federal Circuit had a clear substantive agenda: to strengthen patents.”<sup>341</sup> The fact that Congress considered, but ultimately rejected, the addition of other subject matter besides patents to the Federal Circuit’s jurisdiction strongly suggests that Congress accepted the view that patents are of special importance.<sup>342</sup>

Relatedly, Congress disfavored judicial interpretations that created undue uncertainty as to the ambit of protectable subject matter.<sup>343</sup>

Ultimately a consensus seems to emerge from examining the statements of judges and the legislative history that the purpose of Congress in creating the Federal Circuit was to create a court with subject matter jurisdiction over national issues that would promote uniformity of patent law, eliminate forum shopping in patent cases, and thereby increase and promote technological innovation in the United States.<sup>344</sup>

It was widely understood that Congress had adopted § 103’s obviousness requirement as part of the Patent Act of 1952 in order to dispose of past judicial management of the “invention” construct.<sup>345</sup>

Congress finally expected that the Supreme Court would infrequently review patent disputes.<sup>346</sup> There is no evidence that Congress intended to supplant or even circumscribe the Supreme Court’s constitutional authority to interpret the patent laws, although it had little reason to suspect that it would show any more or less deference than it had to regional circuit courts before the Federal Circuit’s creation.

D. *The U.S. Supreme Court Reverses Federal Circuit Patentability Jurisprudence*

1. *The Federal Circuit Extinguishes “Something More”*

After its establishment, the Federal Circuit responded consistently with Congress’s thusly described aims. In *Chore-Time Equipment v. Cumberland*

<sup>341</sup> *Merges*, *supra* note 295, at 2224; William M. Landes & Richard A. Posner, *An Empirical Analysis of the Patent Court*, 71 U. CHI. L. REV. 111, 112 (2004).

<sup>342</sup> *See, e.g., May 1981 Senate Hearings*, *supra* note 314, at 248 (“Tax, environmental, and trademark matters were originally included. Congress in its wisdom eliminated those three items.”).

<sup>343</sup> *E.g., Lee Petherbridge, Patent Law Uniformity?*, 22 HARV. J.L. & TECH. 421, 422–23 (2009); *Beighley*, *supra* note 335, at 673–74.

<sup>344</sup> *Beighley*, *supra* note 335, at 705, 736.

<sup>345</sup> *See, e.g., Rich*, *supra* note 34, at 33–34 (“The first policy decision underlying § 103 was to cut loose altogether from the century-old term ‘invention.’ It really *was* a term impossible to define, so we knew that any effort to define it would come to naught.”).

<sup>346</sup> *Halaby*, *supra* note 246, at 78.

*Corp.*,<sup>347</sup> the Federal Circuit jettisoned “synergy” as an applicable criterion for patent eligibility:

In determining patentability, we are guided, as we must be guided, by the statute. A requirement that an invention reflect “synergism” or achieve a “synergistic result,” before it may be held patentable appears nowhere in the statute . . . The test of obviousness under 35 U.S.C. § 103, as the statute makes plain, is whether the invention as a whole would have been obvious at the time it was made to one of ordinary skill in the art.<sup>348</sup>

That same month, affirming the invalidity determination in *Stratoflex v. Aeroquip Corp.*,<sup>349</sup> the Federal Circuit similarly criticized the trial court’s reference to “synergism” as “a symbolic reminder of what constitutes nonobviousness when a combination patent is at issue,” adding that “[a] requirement for ‘synergism’ or a ‘synergistic effect’ is nowhere found in the statute . . . . When present . . . synergism may point toward nonobviousness, but its absence has no place in evaluating the evidence on obviousness.”<sup>350</sup>

The Federal Circuit similarly acted early to suppress “inventive concept” jurisprudence as it had fitfully surfaced in district court orders.<sup>351</sup> As early as November 1983, reversing certain of the trial court’s invalidity determinations, the court observed:

Because it permeated so much of the district court’s analysis, we note more fully its frequent restriction of its consideration to 10% per second rate of stretching, which it called the “thrust of the invention”. That approach is repeated throughout Garlock’s briefs, which refer repeatedly to the “thrust of the invention”, to “the inventive concept”, and to the claims “shorn of their extraneous limitations”. That facile focusing on the “thrust”, “concept”, and “shorn” claims, resulted in treating the claims at many points as though they read differently from those actually allowed and in suit.

. . . .  
 . . . In determining obviousness, there is “no legally recognizable or protected ‘essential’, ‘gist’, or ‘heart’ of the invention.”<sup>352</sup>

## 2. *The Supreme Court Interprets § 101 in Light of Precedent*

More recent decisions from the U.S. Supreme Court, meanwhile, led “something more” to manifest itself under § 101’s subject matter eligibility regime, rather than the obviousness regime established by Congress under § 103.

<sup>347</sup> *Chore-Time Equip. v. Cumberland Corp.*, 713 F.2d 774 (Fed. Cir. 1983).

<sup>348</sup> *Id.* at 781; *see also* Desmond, *supra* note 281, at 473 (citation omitted); O’Hearn, *supra* note 308, at 464.

<sup>349</sup> *Stratoflex v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983).

<sup>350</sup> *Id.* at 1540.

<sup>351</sup> *See* EMI Grp. North Am., Inc. v. Cypress Semiconductor Corp., 268 F.3d 1342, 1349 (Fed. Cir. 2001).

<sup>352</sup> *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1547–48 (Fed. Cir. 1983) (quoting *Aro Mfg. Co. v. Convertible Top Replacement*, 365 U.S. 336, 345 (1961)); *see also In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997).

In his 2006 dissent from the Supreme Court's dismissal following grant of certiorari in *Laboratory Corp. of America v. Metabolite Laboratories, Inc.*, Justice Breyer invoked the judge-made exceptions to patentable subject matter.<sup>353</sup> Justice Breyer argued that one of the petitioner's claims, "[a] method for detecting a deficiency of cobalamin or folate in warm-blooded animals comprising the steps of: 'assaying a body fluid for an elevated level of total homocysteine; and['] 'correlating an elevated level of total homocysteine in said body fluid with a deficiency of cobalamin or folate,'" claimed an unpatentable law of nature inconsistent with 35 U.S.C. § 101.<sup>354</sup>

Justice Breyer fully tied the question for cert to the Patent Clause's constitutional underpinnings:

The relevant principle of law "[e]xclude[s] from . . . patent protection . . . laws of nature, natural phenomena, and abstract ideas." This principle finds its roots in both English and American law.<sup>355</sup> The principle means that Einstein could not have "patent[ed] his celebrated law that  $E=mc^2$ "; nor could Newton have patented the law of gravity." Neither can one patent "a novel and useful mathematical formula," the motive power of electromagnetism or steam, "the heat of the sun, electricity, or the qualities of metals."

. . . [T]he reason for the exclusion is that sometimes *too much* patent protection can impede rather than "promote the Progress of Science and useful Arts," the constitutional objective of patent and copyright protection. U.S. Const., Art. I, § 8, cl. 8.<sup>356</sup>

#### a. *Bilski v. Kappos (2010)*

The patent in dispute in *Bilski* "claim[ed] a procedure for instructing buyers and sellers how to protect against the risk of price fluctuations in a discrete section of the economy."<sup>357</sup> The Federal Circuit used the "machine-or-transformation test" and determined it was the sole test that should be used to determine patentability in a "process" dispute.<sup>358</sup> In other words, a "process" dispute is one in which the invention is claimed to be a "process" under § 101, which is defined as including "a new use of a known process, machine, manufacture, composition of matter, or material."<sup>359</sup>

The "machine-or-transformation test" is as follows: "[a] claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or ap-

<sup>353</sup> *Lab'y Corp. of Am. Holdings v. Metabolite Lab'ys, Inc.*, 548 U.S. 124, 132 (2006) (Breyer, J., dissenting).

<sup>354</sup> *Id.* at 129, 131.

<sup>355</sup> *See, e.g.*, *Le Roy v. Tatham*, 55 U.S. (14 How.) 156 (1852); *O'Reilly v. Morse*, 56 U.S. (15 How.) 62 (1853); *The Telephone Cases*, 126 U.S. 1 (1888).

<sup>356</sup> *Lab'y Corp. of Am. Holdings*, 548 U.S. at 126–27 (internal citations omitted). *See generally* Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839 (1990).

<sup>357</sup> *Bilski v. Kappos*, 561 U.S. 593, 598 (2010).

<sup>358</sup> *Id.*

<sup>359</sup> 35 U.S.C. §§ 100–01.

paratus, or (2) it transforms a particular article into a different state or thing.”<sup>360</sup> The Supreme Court stated that “[a]dopting the machine-or-transformation test as the sole test for what constitutes a ‘process’ . . . violates [the] statutory interpretation principles” of interpreting words under their “ordinary, contemporary, common meaning.”<sup>361</sup> Therefore, the machine-or-transformation test should instead be used as “a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101.”<sup>362</sup>

The Court also rejected the argument for a categorical exclusion of “business methods” from applying to the term “process.”<sup>363</sup> The Court found that “the Patent Act leaves open the possibility that there are at least some processes that can be fairly described as business methods . . . within patentable subject matter under § 101.”<sup>364</sup> The Court impliedly admonished the Federal Circuit, writing “nothing in today’s opinion . . . endor[s] interpretations of § 101 that the Court of Appeals for the Federal Circuit has used in the past.”<sup>365</sup>

The Court relied on the precedent of *Benson*,<sup>366</sup> *Flook*,<sup>367</sup> and *Diehr*<sup>368</sup> to determine the patent was ineligible because “they are attempts to patent abstract ideas.”<sup>369</sup> Conversely, the Court did not mention its 1976 precedent *Sakraida v. Ag Pro, Inc.*<sup>370</sup> or its 1966 precedent *Graham v. John Deere*.<sup>371</sup> Additionally, the majority and concurrence did not mention “inventive concept,” used later in *Mayo*.<sup>372</sup>

b. *Mayo Collaborative Services, v. Prometheus Laboratories, Inc.*  
(2012)

In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, the Supreme Court accepted review over another question related to patentable processes and unanimously held the patent claims were unpatentable laws of nature.<sup>373</sup> The Court even took a step further than the process inquiry to determine when an *application* of a law of nature is still unpatentable.<sup>374</sup>

<sup>360</sup> *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008).

<sup>361</sup> *Bilski*, 561 U.S. at 603.

<sup>362</sup> *Id.* at 604; Christian LaForgia, Note, *One Claim, One Statutory Class of Invention: How the Machine-or-Transformation Test Impacts Indefinite Analysis*, 38 RUTGERS COMPUT. & TECH. L.J. 117, 117–18 (2012).

<sup>363</sup> *Bilski*, 561 U.S. at 606.

<sup>364</sup> *Id.* at 609.

<sup>365</sup> *Id.* at 612.

<sup>366</sup> *Gottschalk v. Benson*, 409 U.S. 63 (1972).

<sup>367</sup> *Parker v. Flook*, 437 U.S. 584 (1978).

<sup>368</sup> *Diamond v. Diehr*, 450 U.S. 175 (1981).

<sup>369</sup> *Bilski*, 561 U.S. at 609.

<sup>370</sup> *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976).

<sup>371</sup> *Graham v. John Deere Co. of Kansas*, 383 U.S. 1 (1966).

<sup>372</sup> See *infra* Section IV.D.2.b.

<sup>373</sup> *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 92 (2012).

<sup>374</sup> *Id.* at 72.



The dispute involved “processes that help doctors who use thiopurine drugs to treat patients with autoimmune diseases determine whether a given dosage level is too low or too high.”<sup>375</sup> This purported to involve an application of natural law to “describ[e] the relationships between the concentration in the blood of certain thiopurine metabolites and the likelihood that the drug dosage will be ineffective or induce harmful side-effects.”<sup>376</sup>

The patents before us concern the use of thiopurine drugs in the treatment of autoimmune diseases . . . . When a patient ingests a thiopurine compound, his body metabolizes the drug, causing metabolites to form in his bloodstream. Because the way in which people metabolize thiopurine compounds varies, the same dose of a thiopurine drug affects different people differently, and it has been difficult for doctors to determine whether for a particular patient a given dose is too high, risking harmful side effects, or too low, and so likely ineffective.<sup>377</sup>

Prometheus Laboratories was the sole licensee of the patents, which Mayo bought and used.<sup>378</sup> However, Mayo announced it would begin using and selling its own version of the test, and Prometheus sued for infringement.<sup>379</sup> The district court granted summary judgement in favor of Mayo because the patents in question “effectively claim[ed] natural laws or natural phenomena.”<sup>380</sup> The Federal Circuit Court reversed, first finding that the patent satisfied the machine or transformation test.<sup>381</sup> The Supreme Court remanded in light of *Bilski*, and the Federal Circuit reaffirmed its decision, stating “that the . . . claims . . . do not encompass laws of nature or preempt natural correlations.”<sup>382</sup> The Supreme Court reversed.<sup>383</sup>

When describing the additional step further that patents involving laws of nature need to be patentable, the Court explained that “that process has [to have] additional features that provide practical assurance that the process is more than a drafting effort designed to monopolize the law of nature itself.”<sup>384</sup> The Federal Circuit found that the patent at issue involved processes that “transform[ed] the human body by administering a thiopurine drug and transform[ed] the blood by analyzing it to determine metabolite levels.”<sup>385</sup> Conversely, the Court explained that while the patent in this case “recites an ‘administering’ step, a ‘determining’ step, and a ‘wherein’ step[,] [t]hese

<sup>375</sup> *Id.*

<sup>376</sup> *Id.*

<sup>377</sup> *Id.* at 73.

<sup>378</sup> *Id.* at 75.

<sup>379</sup> *Id.*

<sup>380</sup> *Id.* at 76.

<sup>381</sup> *Id.*

<sup>382</sup> *Id.* at 76–77.

<sup>383</sup> *Id.* at 92.

<sup>384</sup> *Id.* at 77; Andrew C. Michaels, *Abstract Innovation, Virtual Ideas, and Artificial Legal Thought*, 14 J. BUS. & TECH. L. 1, 9–10 (2018).

<sup>385</sup> *Mayo*, 566 U.S. at 87–88.

additional steps are not . . . sufficient to transform the nature of the claim.”<sup>386</sup> Further, the steps in combination “add[] nothing to the laws of nature . . . not already present when the steps are considered separately.”<sup>387</sup>

Next, the Court rejected the argument that the laws of nature in this case were “narrow and specific” sufficient for patentability.<sup>388</sup> The Court rejected the proposition that applications minimally extended “beyond a law of nature” should receive patent protection.<sup>389</sup> Finally, the Court concluded that research requires patent protection, rejecting the argument that “denying patent coverage here will interfere significantly with the ability of medical researchers to make valuable discoveries, particularly in the area of diagnostic research.”<sup>390</sup>

The Court held the “relationships between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will prove ineffective or cause harm” as unpatentable “laws of nature.”<sup>391</sup> And, since the patents claimed a process rather than the law itself, the Court adopted the *Flook* term “inventive concept”—which it had not mentioned at all in *Bilski*—as the means to ensure “that a [patent on a] process that focuses upon the use of a natural law also contain[ing] other elements or a combination of elements . . . amount[ing] to significantly more than a patent upon the natural law itself.”<sup>392</sup>

The Court recognized that “too broad an interpretation of this exclusionary principle could eviscerate patent law” because “all inventions at some level . . . use . . . or apply laws of nature, natural phenomena, or abstract ideas.”<sup>393</sup> There may be a “patent-eligible *application*” of a law of nature; however, “one must do more than simply state the law of nature while adding the words ‘apply it.’”<sup>394</sup> Under the test articulated in *Mayo*, “patent eligibility arises when the claimed subject matter amounts to ‘significantly more than a patent upon the natural [phenomenon or] law itself.’”<sup>395</sup>

<sup>386</sup> *Id.* at 78; Ted G. Dane, *Are the Federal Circuit’s Recent Section 101 Decisions a “Specific Improvement” in Patent Eligibility Law?*, 26 FED. CIR. BAR J. 331, 342 (2017).

<sup>387</sup> *Mayo*, 566 U.S. at 79.

<sup>388</sup> *Id.* at 88; *see also* Mark A. Lemley et al., *Life After Bilski*, 63 STAN. L. REV. 1315, 1344 (2011).

<sup>389</sup> *Mayo*, 566 U.S. at 89.

<sup>390</sup> *Id.* at 91; Ryan Thorne, *Creating A More Permissive Patentability Standard Under Language from the TPP*, 36 CARDOZO ARTS & ENT. L.J. 277, 302 (2018) (“Starting with the *Mayo* decision . . . the patentability of diagnostic methods has become almost impossible.”).

<sup>391</sup> *Mayo*, 566 U.S. at 77.

<sup>392</sup> *Id.* at 72–73; *see also id.* at 82 (describing the patent claim in *Flook* as one in which, “putting the formula to the side, there was no ‘inventive concept’ in the claimed application of the formula”).

<sup>393</sup> *Id.* at 70–71 (alteration in original) (discussing the exclusionary principle that “laws of nature, natural phenomena, and abstract ideas” are not patentable).

<sup>394</sup> *Id.* at 72; Deborah Nathan, *Federal Circuit Affirms Invalidity of Patent on Prenatal Test*, 22 WESTLAW J. INTELL. PROP., at \*2 (2015).

<sup>395</sup> Sikora, *supra* note 280, at 2231 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

c. *Ass'n for Molecular Pathology v. Myriad Genetics (2013)*

In 2013's *Ass'n for Molecular Pathology v. Myriad Genetics*, the Court held that naturally occurring DNA, even if isolated, is not a "new . . . composition of matter" under § 101, but that synthetic DNA is patent-eligible.<sup>396</sup> In *Myriad*, the Supreme Court affirmed in part and reversed in part the Federal Circuit's decision regarding patents based on the discovery of "the precise location and sequence of two human genes, mutations of which can substantially increase the risks of breast and ovarian cancer."<sup>397</sup> The Court described Myriad as making "one such medical breakthrough" when it "discovered the precise location and sequence of" gene mutations that "can dramatically increase an individual's risk of developing breast and ovarian cancer."<sup>398</sup>

"Ostrer, along with medical patients, advocacy groups, and other doctors" filed suit to declare Myriad's patents invalid.<sup>399</sup> The district court granted summary judgment against Myriad because "[the claims] covered products of nature."<sup>400</sup> The Federal Circuit Court reversed.<sup>401</sup> The Supreme Court vacated the judgment and remanded in light of *Mayo*.<sup>402</sup> The Federal Circuit court affirmed in part and reversed in part, finding the patents eligible.<sup>403</sup> All the Federal Circuit judges wrote separately.<sup>404</sup> All the judges disagreed on the "patentability of isolated DNA," but agreed "that patent claims relating to cDNA met the patent eligibility requirements."<sup>405</sup>

In determining whether "Myriad's patents claim[ed] any 'new and useful composition of matter' . . . or instead claim naturally occurring phenomena,"<sup>406</sup> the Court balanced the fact that "Myriad did not create or alter any of the genetic information" but Myriad did "uncover[] the precise location and genetic sequence" of the genes.<sup>407</sup> "Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the" patentability inquiry, wrote the Court.<sup>408</sup>

<sup>396</sup> *Ass'n for Molecular Pathology v. Myriad Genetics*, 569 U.S. 576, 580, 589 (2013).

<sup>397</sup> *Id.* at 579–80.

<sup>398</sup> *Id.* at 582–83.

<sup>399</sup> *Id.* at 586.

<sup>400</sup> *Id.*

<sup>401</sup> *Id.*

<sup>402</sup> *Id.*

<sup>403</sup> *Id.*

<sup>404</sup> *Id.*

<sup>405</sup> *Id.* at 588; *Owning the Code the U.S. Supreme Court's Decision in Myriad Genetics Distinguishes Between DNA and cDNA*, GLASERWEIL (Dec. 18, 2013), <https://www.glaserweil.com/news-resources/owning-the-code-the-u.s.-supreme-courts-decision-in-myriad-genetics-disting> [perma.cc/W2QF-37QW] ("Myriad has significantly limited the patent eligibility of DNA. Genomic DNA is naturally occurring and thus patent ineligible.")

<sup>406</sup> *Myriad*, 569 U.S. at 590.

<sup>407</sup> *Id.*

<sup>408</sup> *Id.* at 591; see also *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 131 (1948) ("It is no more than the discovery of some of the handiwork of nature and hence is not patentable.").

d. *Alice Corp. v. CLS Bank International (2014)*

In *Alice Corp. v. CLS Bank International*,<sup>409</sup> the Supreme Court held invalid the “abstract idea of intermediated settlement” method, system, and media claims “relat[ing] to a computerized scheme for mitigating ‘settlement risk’—*i.e.*, the risk that only one party to an agreed-upon financial exchange will satisfy its obligation.”<sup>410</sup> The Court “articulated a new two-part test for determining when subject matter is patent eligible.”<sup>411</sup> This new test “led to a whirlwind of patent invalidations.”<sup>412</sup> In fact, “[I]itigants challenged patents based on this new standard, and in the first two years courts invalidated seventy percent of them.”<sup>413</sup>

The Supreme Court affirmed the Federal Circuit’s patent ineligibility conclusion.<sup>414</sup> The district court found all patents ineligible for protection.<sup>415</sup> The Federal Circuit initially reversed that finding, but after rehearing, the majority found two patents ineligible and affirmed a third patent’s ineligibility for protection by an equally-divided vote.<sup>416</sup> The plurality concluded that all of the patents were ineligible because the claims “‘draw on the abstract idea of reducing settlement risk by effecting trades through a third-party intermediary,’ and that the use of a computer to maintain, adjust, and reconcile shadow accounts added nothing of substance to that abstract idea.”<sup>417</sup>

The Supreme Court applied *Mayo*, its first occasion to do so in a computing patent context.<sup>418</sup> The Court found that “the claims at issue [were] directed to a patent-ineligible concept” because they “[were] drawn to the abstract idea of intermediated settlement.”<sup>419</sup> Further, the Court found the “claims, which merely require generic computer implementation, fail to transform that abstract idea into a patent-eligible invention.”<sup>420</sup> The court concluded that the “petition-

<sup>409</sup> *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208 (2014).

<sup>410</sup> *Id.* at 212–13.

<sup>411</sup> Sikora, *supra* note 280, at 2230; Lewis, *supra* note 195, at 14 (“[J]udges must decide if an invention is ‘an abstract idea or an inventive concept of an abstract idea.’ . . . Step two . . . engages the court to determine if the other elements of the claims are ‘well-understood, routine, conventional activit[ies].’”).

<sup>412</sup> Sikora, *supra* note 280, at 2231.

<sup>413</sup> *Id.*; Robert Sachs, *Two Years After Alice: A Survey of the Impact of a “Minor Case” (Part I)*, FENWICK: BILSKI BLOG (June 16, 2016), <https://www.fenwick.com/bilski-blog/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case> [perma.cc/VP4S-DJNW].

<sup>414</sup> *Alice*, 573 U.S. at 227.

<sup>415</sup> *Id.* at 214.

<sup>416</sup> *Id.* at 215.

<sup>417</sup> *Id.*

<sup>418</sup> Richard J. Stark, *Managing Fallout From ‘Bilski,’ ‘Mayo’ And ‘Alice,’* N.Y. L.J., Jan. 20, 2015, at 9, 12 <https://plus.lexis.com/api/permalink/e907ae2d-2662-43cb-8c3c-42d5391982b5/?context=1530671>.

<sup>419</sup> *Alice*, 573 U.S. at 218.

<sup>420</sup> *Id.* at 221; Corey M. Beaubien & Michael J. Druzinski, *The Supreme Court Gets Intellectual: A Look at How the Court is Reshaping IP Law in Significant Ways*, MICH. BAR J., Feb.

er's system and media claims add nothing of substance to the underlying abstract idea," therefore, "they too are patent ineligible."<sup>421</sup>

*Alice* is significant in important measure for the permanence it represents for the Supreme Court's § 101 jurisprudence.<sup>422</sup> In *Alice*, "the Supreme Court sent a unmistakable message reinforcing the doctrine of patent-ineligibility as a means of invalidating patents."<sup>423</sup> The Court also "instructed judges to look beyond the words of a claim when evaluating patent-eligibility and decide what they think is 'really' being claimed."<sup>424</sup> If, after doing so, the court determines "the gist thus divined can be said to be an abstract idea expressed in a few words . . . and the court finds nothing else 'significant' in the claim, then the claim is ineligible."<sup>425</sup>

Based on the Court's assertion that "something more" besides those "build-in[g] block[s] of human ingenuity" is required for subject matter eligibility,<sup>426</sup> the court is to search for an "inventive concept, i.e., an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'"<sup>427</sup>

First, notwithstanding that "all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,"<sup>428</sup> the court is to "determine whether the claims at issue are *directed to* one of those patent-ineligible concepts."<sup>429</sup> Though the Court cited *Mayo*, that decision had used neither the "directed to" construct nor the "drawn to" alternative appearing elsewhere in *Alice*.<sup>430</sup>

The Supreme Court has not taken up a subject matter eligibility case since *Alice*.

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2016, at 24, 24–25 ("Intermediated settlement is a fundamental economic practice and, the Court found, is therefore an abstract idea.").

<sup>421</sup> *Alice*, 573 U.S. at 227.

<sup>422</sup> Stark, *supra* note 418.

<sup>423</sup> *Id.*

<sup>424</sup> *Id.*

<sup>425</sup> *Id.*; Christian Dorman, "One If by Land, Two If by Sea": The Federal Circuit's Oversimplification of Computer-Implemented Mathematical Algorithms, 2018 U. ILL. J.L., TECH. & POL'Y 285, 291 (2018).

<sup>426</sup> *Alice*, 573 U.S. at 217 (alterations in original); Robert Daniel Garza, *Software Patents and Pretrial Dismissal Based on Ineligibility*, 24 RICH. J.L. & TECH. 1, 20 (2018) ("Rather, the 'inventive concept' in *Alice* Step Two refers to the requirement for § 101 subject matter eligibility.").

<sup>427</sup> *Alice*, 573 U.S. at 217–18 (quoting *Mayo Collaborative Servs., Inc. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 73 (2012)); *see also id.* at 221; Hung H. Bui, *A Common Sense Approach to Implement the Supreme Court's Alice Two-Step Framework to Provide "Certainty" and "Predictability,"* 100 J. PAT. & TRADEMARK OFF. SOC'Y 165, 202 (2018).

<sup>428</sup> *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 71).

<sup>429</sup> *Id.* (emphasis added).

<sup>430</sup> *See, e.g.,* *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980); Christopher M. Holman, *Patent Eligibility Post-Myriad: A Reinvigorated Judicial Wildcard of Uncertain Effect*, 82 GEO. WASH. L. REV. 1796, 1817–18 (2014).

IV. STATUTORY REVISION, JURISDICTION STRIPPING, AND THE  
CONSTITUTIONALIZATION OF PATENTABILITY

A. *Statutory Reform of § 101: Abrogating the Federal Common Law of Patents*

From 2005 to 2015, “the Supreme Court heard 27 patent appeals from the Federal Circuit, and the Court reversed 22 of them,” conclusively dispelling the congressional notion that the Supreme Court would continue to review few cases after establishment of the Federal Circuit.<sup>431</sup> In response to *Bilski*, *Mayo*, and *Alice* specifically, a new round of congressional review of the patent law has commenced, focusing on § 101.<sup>432</sup> One proposal would completely abrogate the whole body of judicially fashioned exceptions to patent eligibility and replace them with statutory exceptions: “(1) fundamental scientific principles; (2) products that exist solely and exclusively in nature; (3) pure mathematical formulas; (4) economic or commercial principles; and (5) mental activities.”<sup>433</sup>

As this Article has demonstrated, there is little reason to believe that these proposals would effect the sweeping changes Congress desires. “Principle,” even if further defined, has vexed patent law since before the founding. Consider a hypothetical case upon which the Supreme Court grants review over whether a defendant has properly asserted a defense of “fundamental scientific principle” in an infringement action. Assume the Justices, instead of precedent, resort only to dictionaries, a favored reference source. During its 2018–19 term, the Court referred to dictionaries forty-five times across opinions, concurrences, and dissents (favoring Black’s, the Oxford English Dictionary, and Webster’s).<sup>434</sup> Black’s defines a “principle” as “a basic rule, law, or doctrine; esp., one of the fundamental tenets of a system.”<sup>435</sup> Webster’s defines it as “a comprehensive and fundamental law, doctrine, or assumption.”<sup>436</sup>

As stated, the definitions would be as unlikely to yield clear, unambiguous results in disputes like *Bilski*, *Mayo*, and *Alice* as the application of prior precedent did. Barred from applying precedent as a matter of *stare decisis*, the Court could, and probably would, nevertheless use its own patent eligibility precedent for purposes of aid in defining terms. Indeed, one of the justifications for defin-

<sup>431</sup> Taylor, *supra* note 24, at 696.

<sup>432</sup> See David O. Taylor, *Patent Eligibility & Investment*, 41 CARDOZO L. REV. 2019, 2022, 2024–25, 2034–35 (2020) (citing *Ariosa Diags. v. Sequenom, Inc.*, 788 F.3d 1371 (Fed. Cir. 2015) (Linn, J., concurring)).

<sup>433</sup> KEVIN J. HICKEY, CONG. RSCH. SERV., R45918, PATENT-ELIGIBLE SUBJECT MATTER REFORM IN THE 116TH CONGRESS 33 (2019).

<sup>434</sup> Bruce Wessel & Brian Weissenberg, *The Role of Dictionaries in Last Terms High Court Decisions*, LAW360 (July 12, 2019, 2:32 PM), <https://www.law360.com/articles/1177874/the-role-of-dictionaries-in-last-term-s-high-court-decisions> [perma.cc/YB9Z-DYUN].

<sup>435</sup> *Principle*, BLACK’S LAW DICTIONARY (11th ed. 2019).

<sup>436</sup> *Principle*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/principle> [perma.cc/H5R2-GQTQ].

ing terms according to *stare decisis* is the clarity it gives Congress to revise statutes.<sup>437</sup> It is because “Congress is free to change this Court’s interpretation of its legislation,” that the Court adheres more strictly to the doctrine of *stare decisis*, or adherence to judicial precedents, in the area of statutory construction than in the area of constitutional interpretation, where amendment is much more difficult.<sup>438</sup>

Even if it did not use precedent in aid of definition as a result of a clear statement from Congress, it would then be drawn into the bewildering situation of weighing alternative approaches to statutory construction. It would almost certainly draw on other fields of law, as it did with its earliest decisions incorporating definitions and “principles” of property law into the patent statutes.

Indeed, the Court would inevitably be drawn to one of its core functional responsibilities under the U.S. Constitution: identifying the statute’s purpose.<sup>439</sup> This would have the paradoxical effect of making it more, rather than less, likely that the Court would “constitutionalize” patent eligibility jurisprudence. As analyzed in Part II, there remain essential ambiguities in the Patent Clause itself. “Inventors” and “discoveries” are constitutional terms, and there remain open questions as to where and how Congress may determine their content.<sup>440</sup> For nearly two centuries, the Supreme Court has balanced the individual incentive to invent and discover with the public values of access to knowledge and technology diffusion, not only as a statutory matter, but as a constitutional one.<sup>441</sup>

### 1. *The Analogy to City of Boerne v. Flores and the Religious Freedom Restoration Act*

Such balancing similarly typified Supreme Court freedom-of-exercise jurisprudence under Section 5 of the Fourteenth Amendment, which provided Congress authority “to enforce, by appropriate legislation” the Amendment’s Section 1 prohibition on states “mak[ing] or enforc[ing] any law,” depriving any person of “life, liberty, or property, without due process of law,” or denying any person the “equal protection of the laws”.<sup>442</sup> Leading up to Congress’s adoption of the Religious Freedom Restoration Act, the Supreme Court had balanced individuals’ First Amendment right to free exercise of religion against

<sup>437</sup> CONG. RSCH. SERV., R45153, STATUTORY INTERPRETATION: THEORIES, TOOLS, AND TRENDS 18 n.188 (2018).

<sup>438</sup> *Id.* at 19 n.188 (quoting *Ill. Brick Co. v. Illinois*, 431 U.S. 720, 737 (1977)).

<sup>439</sup> See *United States v. Heirs of Boisdoré*, 49 U.S. (8 How.) 113, 122 (1850) (“In expounding a statute, we must not be guided by a single sentence or member of a sentence, but look to the provisions of the whole law, and to its object and policy.”).

<sup>440</sup> See Rich, *Tyranny*, *supra* note 281, at 285–86 (recounting history of “requirement of invention”).

<sup>441</sup> See generally Adam Mossoff, *The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s*, 53 ARIZ. L. REV. 165 (2011).

<sup>442</sup> U.S. CONST. amend. XIV, §§ 1, 5.

facially neutral laws of general applicability.<sup>443</sup> The Supreme Court's decisions in *Sherbert v. Verner*, *Wisconsin v. Yoder*, and *Employment Division, Department of Human Resources v. Smith* provide the analytic framework for "laws that infringe upon an individual's free exercise of religion" and ultimately "led to the enactment of RFRA."<sup>444</sup>

In *Sherbert v. Verner*, the Court applied strict scrutiny to a South Carolina law that denied unemployment compensation to a plaintiff who refused to work "the Sabbath Day of her religion."<sup>445</sup> In *Wisconsin v. Yoder*, the Court applied strict scrutiny to a Wisconsin law that attempted to "enforce mandatory school attendance for all children until age sixteen," even when formal education is prohibited beyond eighth grade for children of the Amish religion.<sup>446</sup> The Court found that "the application of a facially neutral law may still impermissibly interfere with an individual's free exercise of religion."<sup>447</sup> In *Employment Division, Department of Human Resources v. Smith*, the Court rejected the strict scrutiny standard, finding it was "applicable only in situations where state unemployment compensation was conditioned on an applicant's willingness to disregard his religious beliefs in order to work."<sup>448</sup> The plaintiffs had been fired because they ingested a substance for sacramental purposes, but that substance was designated a controlled substance in Oregon, so the Oregon Department of Human Resources Employment Division denied unemployment benefits based on this being "work-related 'misconduct.'"<sup>449</sup> Further, the Court cautioned against "applying strict scrutiny to all laws that inhibit an individual's free exercise of religion" because that "would create a private right to ignore generally applicable laws."<sup>450</sup>

In response to *Smith*, Congress adopted the Religious Freedom Restoration Act, seeking to turn back Supreme Court precedent to its status under *Sherbert* and *Yoder*, applying strict scrutiny to religious based claims against state action. The Supreme Court struck down RFRA as applied against the states, ruling, effectively, that the content of the First Amendment's Free Exercise Clause was a determination reserved for the Supreme Court.<sup>451</sup> The majority decision "focused on whether the Enforcement Clause of the Fourteenth Amendment enables Congress to overturn a decision of the Supreme Court."<sup>452</sup>

<sup>443</sup> *City of Boerne v. Flores*, 521 U.S. 507, 513 (1997).

<sup>444</sup> Michael Van Arsdall, Note, *Enforcing the Enforcement Clause: City of Boerne v. Flores Chips Away at Congressional Power*, 48 CATH. U. L. REV. 249, 263 (1998).

<sup>445</sup> *Id.* at 263–64; *Sherbert v. Verner*, 374 U.S. 398 (1963).

<sup>446</sup> *Wisconsin v. Yoder*, 406 U.S. 205 (1972); Van Arsdall, *supra* note 444, at 265–66.

<sup>447</sup> Van Arsdall, *supra* note 444, at 266.

<sup>448</sup> *Emp. Div., Dept. of Human Res. v. Smith*, 494 U.S. 872 (1990); Van Arsdall, *supra* note 444, at 266–67.

<sup>449</sup> Van Arsdall, *supra* note 444, at 266–67.

<sup>450</sup> *Id.* at 268.

<sup>451</sup> *Id.* at 269–70; *City of Boerne v. Flores*, 521 U.S. 507, 512–13 (1997).

<sup>452</sup> Van Arsdall, *supra* note 444, at 272.



The pattern with respect to Supreme Court authority over exceptions to patentability is analogous. It may be the case that Congress could not reach agreement on the clear statement needed to effectively abrogate federal common law in the Supreme Court's view. In 1952, Congress expressed its intent delicately and accommodatingly—that “invention” had been “expressed in a large variety of ways in decisions of the courts and in writings” and that new § 103 would “have a stabilizing effect and minimize great departures.” The legislative history's upshot is that Congress viewed the “invention” standard as vague, subjective, and unworkable.<sup>453</sup> That was not enough to prevent *Graham*, which effectively read that language to incorporate its decisions from at least 1850.<sup>454</sup>

A more specific manifestation of this same argument is that the Supreme Court had made pronouncements—including, for example, 1969's *Anderson's-Black Rock's* rehashing of “invention” and reference to “synergy” as well as 1978's reference in *Parker v. Flook* to “inventive concept”—before the Federal Circuit was created, yet the legislative history of the Federal Circuit's creation evinces no explicit intention to upset these decisions.<sup>455</sup>

But if it did clearly attempt to overrule one or more Supreme Court precedents, especially those that explicitly tied standards for patentability to constitutional text, Congress would be inviting a Supreme Court response analogous to that in *City of Boerne*. That response would reserve for the Supreme Court alone ultimate control over the limits on congressional power to authorize patents, how long they may do so, and for which kinds of inventions and discoveries.

## 2. Constitutional Avoidance

In *City of Boerne*, the Supreme Court did not even attempt to apply the principle of constitutional avoidance, by which it attempts to save a statute by giving it a reading that avoids potential constitutional violation. The doctrine of constitutional avoidance has played a key role in managing the relationship between Congress and the Supreme Court with respect to patent eligibility. Under that doctrine, “the Court resolves cases on non-constitutional grounds whenever

<sup>453</sup> 1952 ACT REPORT, *supra* note 58; *see also* Taylor, *supra* note 235, at 181; *see also, e.g.*, Peter Hecker, Note, *How an Old Non-Statutory Doctrine Got Worked into the § 101 Test for Patent Eligibility*, 99 J. PAT. & TRADEMARK OFF. SOC'Y 4 (2017).

<sup>454</sup> Edmund Kitch, *Graham v. John Deere Co.: New Standards for Patents*, 1966 SUP. CT. REV. 293, 294–95 (1966) (“The decisions that the Court has rendered may assuage this fear. They expressly purport to follow the earlier decisions and to turn toward neither leniency nor harshness.”).

<sup>455</sup> Indeed, Subcommittee Chair Kastenmeier stated:

[T]he desirability or not of this legislation will not depend on their understanding of obviousness, synergism, or *Graham v. Deere*, because I am afraid that we may not be able to quite reduce all of those things to a sufficient understanding to necessarily base our view on this legislation this morning.

*April 1981 House Hearings, supra* note 333, at 207.

possible.”<sup>456</sup> This is a “cardinal principle” aimed at giving maximum effect to statutory purpose and limiting judicial interference in the law-making process.<sup>457</sup> If a court confronts two interpretations of a law, one of which satisfies constitutional scrutiny where the other fails, then the court must adopt the former.<sup>458</sup> This doctrine “can demand a limiting reading of a statute even where that statute, under a broader reading, has some or even a multitude of uncontroversial[] constitutional applications.”<sup>459</sup>

The justification for this doctrine can be summarized thus:

Courts must assume that their co-institution, the legislature, has enacted laws with due care. If they did not, the judicial branch could easily operate as a second Congress, advancing implausible readings of statutes and then leveraging those readings to invalidate the laws. The goal, in short, is to save the statute whenever possible.<sup>460</sup>

As with *City of Boerne*, it does not seem that the Court is likely to apply constitutional avoidance if the statute is a direct effort to overturn its patentability jurisprudence. Patentable subject matter “was given fresh prominence when the Supreme Court handed down the *Bilski v. Kappos* decision in June, 2010.”<sup>461</sup> The Court sustained the invalidity of the claims in question because they were “attempts to patent abstract ideas.”<sup>462</sup> The Court rooted this decision in “a long line of precedent . . . which, the opinion said, confers legitimacy despite the absence of any definition or even mention of the term ‘abstract’ in the text of the Patent Act.”<sup>463</sup>

In *Ass’n for Molecular Pathology v. Myriad Genetics*, the plaintiffs in lower courts raised constitutional claims with respect to the USPTO’s grant of Myriad’s patents—that they violated Article I, Section 8, Clause 8 of the Constitution and the First Amendment because “the patent claims cover products of nature, laws of nature and/or natural phenomena, and abstract ideas or basic human knowledge or thought.”<sup>464</sup> The district court found that because the patents at issue were invalid, “the Plaintiffs have received the relief sought in the Complaint and the doctrine of constitutional avoidance precludes this Court from reaching the constitutional claims against the USPTO.”<sup>465</sup> Sapna Kumar

<sup>456</sup> Dennis Crouch & Robert P. Merges, *Operating Efficiently Post-Bilski by Ordering Patent Doctrine Decision-Making*, 25 BERKELEY TECH. L.J. 1673, 1681 (2010).

<sup>457</sup> *Crowell v. Benson*, 285 U.S. 22, 62 (1932).

<sup>458</sup> *Id.*

<sup>459</sup> John M. Golden, *PTO Panel Stacking: Unblessed by the Federal Circuit and Likely Unlawful*, 104 IOWA L. REV. 2447, 2475 (2019).

<sup>460</sup> Derek E. Bambauer, *Paths or Fences: Patents, Copyrights, and the Constitution*, 104 IOWA L. REV. 1017, 1062 (2019) (footnotes omitted).

<sup>461</sup> Crouch & Merges, *supra* note 456, at 1676.

<sup>462</sup> *Id.*

<sup>463</sup> *Id.*

<sup>464</sup> *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Off.*, 702 F. Supp.2d 181, 184 (S.D.N.Y. 2010), *as amended* (Apr. 5, 2010).

<sup>465</sup> *Id.* at 238.

has persuasively argued that “[t]he Supreme Court missed an opportunity to spur broader legislative reform by failing to utilize the judicial canon of constitutional avoidance,” but the fact that the Federal Circuit and the Supreme Court left them unaddressed suggests that both bodies are unlikely to let the constitutional avoidance canon interfere with constitutional questions raised by the reforms now proposed in Congress.<sup>466</sup>

The order in which validity issues are addressed and decided on is often supported by the “lexical priority of Section 101.”<sup>467</sup> Under lexical priority, if there is a § 101 issue, “the relevant decision maker should deal with that issue first, before other requirements of patentability are even considered.”<sup>468</sup> While this is “certainly not illogical” when analyzing a patent case, it is “not the only order that makes sense.”<sup>469</sup> One scholar used the analogy of links in a chain to represent how patent claims could be analyzed.<sup>470</sup>

To do its job, each link in a chain must be sound. If any one link breaks, the chain will not work. When thinking about its overall performance, it is the overall effectiveness of the chain that counts; there is no reason to focus on any particular link, or any particular order. Put another way, each link can potentially be the subject of the first test. As soon as a single link fails, the chain is broken, so other links need not be tested or considered.<sup>471</sup>

The unique nature of patents means “no single, linear procedure will work in a foolproof way, even on a single patent.”<sup>472</sup> By straying from “the superficial appeal of lexical ordering,” and examining the complicated nature of analyzing § 101 and patentable subject matter, it is worth exploring how resolving this issue could be bypassed.<sup>473</sup>

Because patentability doctrines often overlap, “some amount of conscious ordering of analysis could serve to reduce the workload of decision makers to avoid having to decide disfavored doctrines.”<sup>474</sup> Specifically, “courts may invoke the constitutional avoidance canon in order to interpret the Patent Act more narrowly.”<sup>475</sup> In other words, “[i]f an ‘easier’ issue—one involving less controversy and requiring lower resource expenditures to correctly resolve—would conclusively resolve a case, the courts should decide the case on the basis of that issue, and express no opinion on § 101.”<sup>476</sup>

<sup>466</sup> Sapna Kumar, *Life, Liberty, and the Pursuit of Genetic Information*, 65 ALA. L. REV. 625, 672 (2014).

<sup>467</sup> Crouch & Merges, *supra* note 456, at 1679.

<sup>468</sup> *Id.*

<sup>469</sup> *Id.* at 1679–80.

<sup>470</sup> *Id.* at 1680.

<sup>471</sup> *Id.* at 1680–81.

<sup>472</sup> *Id.* at 1684.

<sup>473</sup> *Id.* at 1691.

<sup>474</sup> *Id.* at 1689.

<sup>475</sup> Christopher J. Walker, *Constitutional Tensions in Agency Adjudication*, 104 IOWA L. REV. 2679, 2697 (2019).

<sup>476</sup> Crouch & Merges, *supra* note 456, at 1681.

*B. Stripping Appellate Jurisdiction over Patents from the U.S. Supreme Court*

In light of acknowledgement about the limitations of complete abrogation of federal common law generally and § 101 reform specifically, some scholars, practitioners, and legislators have advocated stripping the Supreme Court of appellate jurisdiction over patent disputes altogether.<sup>477</sup> This would have the effect of vesting the Federal Circuit with ultimate appellate jurisdiction over patent disputes.<sup>478</sup>

Shaping federal law through management of the structure of adjudication is rooted in Article I and Article III of the Constitution, which provide, respectively, that Congress may “constitute Tribunals inferior to the supreme Court” and that the Supreme Court’s appellate jurisdiction is subject to “such Exceptions, and . . . such Regulations as the Congress shall make,” the Exceptions Clause.<sup>479</sup> Congress’s authority over the “jurisdiction of the federal courts is plenary.”<sup>480</sup> While Article III’s language describing the congressional power over the Supreme Court’s jurisdiction “is more direct, [it is] albeit still not decisive” as to the specific authority it bestows.<sup>481</sup> The Supreme Court has “treated the Exceptions Clause as giving Congress wide . . . latitude in assigning and withdrawing the Supreme Court’s appellate jurisdiction.”<sup>482</sup>

The text of Article III suggests that the Constitution “vests the federal courts with the ‘judicial Power’ to decide issues of federal law[.] [I]t also gives Congress broad power to regulate federal jurisdiction,” including to make exceptions to it.<sup>483</sup> This congressional authority includes the “power not to grant the federal courts jurisdiction over a category of disputes altogether” and eliminating jurisdiction “previously vested in Article III courts, whether based on the estimated value or claims . . . or based simply on . . . subject matter.”<sup>484</sup> Therefore, “Congress may generally enact a statute that strips federal jurisdiction

<sup>477</sup> Taylor, *supra* note 24, at 679.

<sup>478</sup> Christopher A. Cotropia, “*Arising Under*” Jurisdiction and Uniformity in Patent Law, 9 MICH. TELECOMMS. & TECH. L. REV. 253, 254–55 (2003).

<sup>479</sup> U.S. CONST. art. I, § 8, cl. 9; U.S. CONST. art. III, § 2, cl. 2; Brian T. Fitzpatrick, *The Constitutionality of Federal Jurisdiction-Stripping Legislation and the History of State Judicial Selection and Tenure*, 98 VA. L. REV. 839, 848 (2012).

<sup>480</sup> Hart, *supra* note 23, at 1364; Olson, *supra* note 25, at 117. *But see* Akhil Reed Amar, *A Neo-Federalist View of Article III: Separating the Two Tiers of Federal Jurisdiction*, 65 B.U. L. REV. 205, 271–72 (1985).

<sup>481</sup> Olson, *supra* note 25, at 119.

<sup>482</sup> *Id.* at 120.

<sup>483</sup> Tara Leigh Grove, *The Article II Safeguards of Federal Jurisdiction*, 112 COLUM. L. REV. 250, 251 (footnote omitted) (quoting U.S. CONST. art III, §§ 1–2); *see also id.* at 268–86 (2012) (discussing jurisdiction-stripping efforts during the Roosevelt, Eisenhower, Carter, and Reagan administrations).

<sup>484</sup> Olson, *supra* note 25, at 114.

over a class of cases without violating Article III so long as that statute does not violate some other provision of the Constitution.”<sup>485</sup>

There is “no case law that directly precludes Congress from completely stripping the appellate jurisdiction from the Supreme Court with respect to patent cases.”<sup>486</sup> Congress has in fact limited the appellate jurisdiction of the Supreme Court fairly regularly over time, although in ways that were oriented toward mutual interests in efficient adjudication, rather than an outright constitutional powerplay.<sup>487</sup>

### 1. *Constitutional Limitations*

There are, however, limits to this congressional power. First, Congress’s power to strip jurisdiction is still subject to limitations such as due process, equal protection, and separation of powers.<sup>488</sup> When exercising power over the federal courts, Congress must not “unlawfully encroach[] upon the judiciary’s powers under Article III of the U.S. Constitution.”<sup>489</sup>

Supreme Court jurisprudence, most importantly in the context of *habeas corpus* review, has set forth broad standards that a jurisdiction-stripping statute must meet. These standards give some indication as to the Court’s ultimate view as to which branch is the final arbiter. Such a statute must raise no core separation of powers conflicts, and the intent of Congress to foreclose review must be clear.<sup>490</sup>

Any effort to completely preclude appellate jurisdiction is likely to run into at least two limitations. First, there is the real possibility, grounded mostly in dicta, that the Supreme Court will determine that it possesses constitutional status as an interpreter of the Patent Clause that lies outside the reach of the Exceptions Clause. Indeed, while speaking somewhat cavalierly in the seminal work on the Exceptions Clause, Henry Hart wrote that “[i]f you think an ‘ex-

<sup>485</sup> KEVIN M. LEWIS, CONG. RSCH. SERV., LSB10100, JURISDICTION STRIPPING: WHEN MAY CONGRESS PROHIBIT THE COURTS FROM HEARING A CASE? 2 (2018) (internal quotations omitted).

<sup>486</sup> Taylor, *supra* note 24, at 689.

<sup>487</sup> Henry P. Monaghan, *Jurisdiction Stripping Circa 2020: What The Dialogue (Still) Has to Teach Us*, 69 DUKE L.J. 1, 27 (2019).

<sup>488</sup> Michael Gerhardt, *The Constitutional Limits to Court-Stripping*, 9 LEWIS & CLARK L. REV. 347, 348 (2005) (“Both the Fifth Amendment Due Process Clause and its equal protection component constrain how Congress may withdraw federal jurisdiction. There is no question, for instance, that it may not pass a law forcing African-Americans or women to litigate some or all of their constitutional claims in state courts without any possibility of review in the Supreme Court, while leaving everyone else access to Article III courts for their constitutional claims. Such a law would be subject to heightened scrutiny and lacks any substantial or compelling justification.”).

<sup>489</sup> LEWIS, *supra* note 485, at 1.

<sup>490</sup> See *Boumediene v. Bush*, 553 U.S. 723, 781–82 (2008).

ception' implies some residuum of jurisdiction, Congress could meet that test by excluding everything but patent cases."<sup>491</sup>

Second, patent litigation almost always involves questions of federal common law (other than substantive patent law) in related legal domains like antitrust law.<sup>492</sup> The Supreme Court precedent that suggests it is the final arbiter of Patent Clause questions is anchored in the common law resistance to the monopolies patents grant. Even if Congress managed to adopt jurisdiction stripping legislation, it would be difficult to draft such a bar and evade Supreme Court jurisdiction over antitrust questions that would arise in the course of patent litigation.<sup>493</sup>

## 2. *The Analogy to Boumediene v. Bush, Habeas Corpus, and the Military Commissions Act*

Like the Patent Clause, the Suspension Clause is located in Article I of the U.S. Constitution and prohibits suspension of the writ of habeas corpus "unless when in Cases of Rebellion or Invasion the public Safety may require it."<sup>494</sup> The writ of habeas corpus, as with the common law of patents, long pre-dated the U.S. Constitution, and the body of law informing it has been thereafter authoritative for interpretation.<sup>495</sup> After the U.S. invasion of Afghanistan in 2001, U.S. armed forces captured and detained approximately 800 individuals who were designated "enemy combatants" in an effort to evade the protections accorded "prisoners of war" under the Geneva Conventions, four treaties that establish the standards of international law for humanitarian treatment in war to which the United States is a party and which are codified in U.S. law.<sup>496</sup>

While the academic literature committed to various aspects surrounding the detention of aliens in Guantanamo Bay, their designation as enemy combatants, and the measures Congress could take to deprive federal courts of jurisdiction over those claims is large, a relatively succinct summary suffices for purposes of understanding the analogy to the Patent Clause. First, Congress passed the Detainee Treatment Act of 2005 (DTA), Section 1005(e) of which amended 28 U.S.C. § 2241 to provide that "no court, justice, or judge shall have jurisdiction to . . . consider . . . an application for . . . habeas corpus filed by or on behalf of

<sup>491</sup> Hart, *supra* note 23, at 1364.

<sup>492</sup> David R. Steinman & Danielle S. Fitzpatrick, *Antitrust Counterclaims in Patent Infringement Cases: A Guide to Walker Process and Sham-Litigation Claims*, 10 TEX. INTELL. PROP. L.J. 95, 95 (2001) ("The antitrust laws have become the weapon of choice for defendants facing patent infringement claims.")

<sup>493</sup> Tara Leigh Grove, *The Structural Safeguards of Federal Jurisdiction*, 124 HARV. L. REV. 869, 916 (2011).

<sup>494</sup> U.S. CONST. art. I, § 9, cl. 2.

<sup>495</sup> Hart, *supra* note 23, at 1400 n.104 (quoting *Eisentrager v. Forrestal*, 174 F.2d 961 (D.C. Cir. 1949)).

<sup>496</sup> See *Hamdan v. Rumsfeld*, 548 U.S. 557, 568–71 (2006); 18 U.S.C. § 2441(d)(1). There are also three protocols, the last of which the United States has joined, but not those defining "protected persons" and "humane treatment."

an alien detained . . . at Guantanamo,” and gave the D.C. Court of Appeals “exclusive” jurisdiction to review “enemy combatant” decisions made by specialized tribunals formed by the Department of Defense.<sup>497</sup>

In *Hamdan v. Rumsfeld*, the Court held the DTA inapplicable to cases pending when the DTA was enacted.<sup>498</sup> Congress responded with the Military Commissions Act of 2006 (MCA), Section 7(a) of which amended § 2241(e)(1) to deny jurisdiction with respect to habeas actions by detained aliens determined to be enemy combatants,<sup>499</sup> while § 2241(e)(2) was amended to deny jurisdiction as to “any other action against the United States . . . relating to any aspect of the detention, transfer, treatment, trial, or conditions of confinement” of a detained alien determined to be an enemy combatant.<sup>500</sup> MCA Section 7(b) provided that the 2241(e) amendments

shall take effect on the date of the enactment of this Act, and shall apply to all cases, without exception, pending on or after [that] date . . . which relate to any aspect of the detention, transfer, treatment, trial, or conditions of detention of an alien detained . . . since September 11, 2001.<sup>501</sup>

In *Boumediene v. Bush*, the D.C. Court of Appeals concluded that MCA Section 7 stripped it, and all federal courts, of jurisdiction to consider petitioners’ habeas applications; that petitioners were not entitled to habeas or the protections of the Suspension Clause; and that it was therefore unnecessary to consider whether the DTA provided an adequate and effective substitute for habeas.<sup>502</sup>

The U.S. Supreme Court rejected the D.C. Court of Appeals conclusion with respect to MCA Section 7. Invoking *Marbury v. Madison* (1803), the Court concluded:

The Nation’s basic charter cannot be contracted away like this. The Constitution grants Congress and the President the power to acquire, dispose of, and govern territory, not the power to decide when and where its terms apply. To hold that the political branches may switch the Constitution on or off at will would lead to a regime in which they, not this Court, say “what the law is.”<sup>503</sup>

The Supreme Court concluded that “[t]he habeas court must have sufficient authority to conduct a meaningful review of both the cause for detention and the Executive’s power to detain.”<sup>504</sup> With respect to jurisdiction-stripping attempts by Congress over U.S. Supreme Court appellate authority, a similarly limiting construction is likely.

<sup>497</sup> Detainee Treatment Act of 2005, Pub. L. 109–148, § 1005(e), 119 Stat. 2739, 2741–43.

<sup>498</sup> *Hamdan*, 548 U.S. at 574–76, 581–84.

<sup>499</sup> Military Commissions Act of 2006, Pub. L. 109–366, § 7(a), 120 Stat. 2600, 2635–36.

<sup>500</sup> *Id.*

<sup>501</sup> *Id.* § 7(b), at 2636.

<sup>502</sup> *Boumediene v. Bush*, 553 U.S. 723, 735 (2008).

<sup>503</sup> *Id.* at 727.

<sup>504</sup> *Id.* at 783.

### 3. *The Federal Circuit's Limitations as a Specialized Court*

Even if a patent appeal jurisdiction-stripping statute survived Supreme Court scrutiny, it is not clear that the effect would be a more patent-friendly reading of § 101. Because the Federal Circuit judges enjoy presidential appointment, Senate confirmation, life tenure, and their pay may not be reduced,<sup>505</sup> they would seem to effectively embody the Judicial Power, assuring authoritative finality of disputes while respecting constitutional principles of equal protection and due process. Indeed, the Supreme Court allowed non-jury determinations as to certain patent validity questions at the USPTO in part because parties could appeal to the Federal Circuit, allowing an appropriate exercise of the Judicial Power.<sup>506</sup> Moreover, the claims that come before the court are largely statutory. There does not seem to be much of a risk that something essential to separation of powers might be lost.

But if little is to be lost, what might be gained? It has often been argued—and this Article has shown it as part of the legislative history—that the primary motivation for creating the Federal Circuit was uniformity, not substance.<sup>507</sup> The Federal Circuit is asserted to be “specialized,” but the judges appointed to the Federal Circuit are not specially trained in patent law, nor do they consider themselves as patent judges.<sup>508</sup> “[P]atent cases comprise less than half of the Federal Circuit’s caseload.”<sup>509</sup> Federal Circuit judges do not wish to be “pigeonholed as lesser than their generalist colleagues on other intermediate federal appellate courts.”<sup>510</sup> Indeed, Shubha Ghosh has argued for stripping jurisdiction of the Federal Circuit precisely because “the Federal Circuit decides cases . . . shaping areas of law in ways inconsistent with Congress’s intent and potentially creating conflicts with other circuits that have jurisdiction over copyright, contract, and trademark questions.”<sup>511</sup>

#### C. *The Case for Incrementalism*

Congress has been most successful, even if that success is moderate, at addressing Supreme Court precedent it disfavors when it addresses those decisions individually and amends the patent statutes accordingly. § 103’s non-

<sup>505</sup> Grove, *supra* note 493, at 876, 884.

<sup>506</sup> Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC, 138 S. Ct. 1365, 1379 (2018).

<sup>507</sup> Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 3 (1989).

<sup>508</sup> Michael Goodman, *What’s So Special About Patent Law?*, 26 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 797, 809 (2016).

<sup>509</sup> Paul R. Gugliuzza, *Rethinking Federal Circuit Jurisdiction*, 100 GEO. L.J. 1437, 1439 (2012); Joseph R. Re, *Brief Overview of the Jurisdiction of the U.S. Court of Appeals for the Federal Circuit Under § 1295(a)(1)*, 11 FED. CIR. BAR J. 651, 652 (2002).

<sup>510</sup> Shubha Ghosh, *Jurisdiction Stripping of the Federal Circuit?*, 52 AKRON L. REV. 391, 394 (2018).

<sup>511</sup> *Id.* at 393.



obviousness jurisprudence is largely regarded as an effective approach to the uncertainty that resulted over decades from *Hotchkiss v. Greenwood* in 1850.<sup>512</sup> Although *Graham v. John Deere Co.* interpreted 35 U.S.C. § 103 as a codification of *Hotchkiss*,<sup>513</sup> that may be the ultimate balance to be struck between Congress and the Supreme Court as to patentability.

The Supreme Court is aware that its decisions in *Mayo* and *Alice* may “eviscerate” patent law if construed too broadly. Rather than abrogate all of § 101 jurisprudence, Congress is likely to satisfy the demands of innovators by identifying the weaknesses and ambiguities the Supreme Court has identified.<sup>514</sup> An incrementally amended § 101 may do more for inventors and innovation than an outright constitutional confrontation.

### 1. Supreme Court Guidance on Statutory Amendment

#### a. Redefine “Process”

The Supreme Court itself has given guidance on potential amendments to statutory text far less sweeping than Coons-Tillis and other proposals. In *Bilski*, the Court identified that the language of § 101 included “expansive terms,” signaling Congress’s intent “that the patent laws . . . be given wide scope.”<sup>515</sup> In discussing precedent, however, the Court noted that the “three specific exceptions to § 101’s broad patent-eligibility principles” were absent from the requirements laid out in the statutory text.<sup>516</sup> Interestingly, the Court went on to determine that “courts should not read into the patent laws limitations and conditions which the legislature has not expressed.”<sup>517</sup> The Court justified these two conclusions by stating that “the existence of these well-established exceptions [does not] give[] the Judiciary *carte blanche* to impose other limitations that are inconsistent with the text and the statute’s purpose and design.”<sup>518</sup>

In fact, “Section 101 is a dynamic provision designed to encompass new and unforeseen inventions.”<sup>519</sup> The Court seemed to note that Congress may want to reconsider how § 101 could be reworked in order to protect patent applicants while “not granting monopolies over procedures that others would discover by independent, creative application of general principles.”<sup>520</sup> The Court

<sup>512</sup> Sirilla, *supra* note 221, at 445–46, 462 (“The 1952 enactment of § 103 of Title 35, United States Code, also deserves a large part of the credit for the current strength of our patent system.”).

<sup>513</sup> *Id.* at 527–29.

<sup>514</sup> *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 71 (2012).

<sup>515</sup> *Bilski v. Kappos*, 561 U.S. 593, 601 (2010) (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980)).

<sup>516</sup> *Id.* (listing “laws of nature, physical phenomena, and abstract ideas”).

<sup>517</sup> *Id.* at 602 (internal quotations omitted).

<sup>518</sup> *Id.* at 603.

<sup>519</sup> *Id.* at 605 (internal quotations omitted).

<sup>520</sup> *Id.* at 606.

noted that it was not taking a stance on “where that balance ought to be struck,” but the “Information Age” brings “new difficulties for the patent law,” something for which a balance needed to be found.<sup>521</sup> The concurrence by Justice Stevens and joined by Justices Ginsburg, Breyer, and Sotomayor, stated that “[t]he text of the Patent Act does not on its face give much guidance about what constitutes a patentable process.”<sup>522</sup> Specifically, it noted that the statutory definition of “process” is circular and “not especially helpful.”<sup>523</sup> It went on to identify that there is not much legislative guidance on the business methods issue.<sup>524</sup>

*b. Different Rules for Different Patents*

In *Mayo*, the Court emphasized, again, the balance that needs to be struck between granting patents and “inhibit[ing] future innovation premised upon them.”<sup>525</sup> Further, while “[p]atent protection is, after all, a two-edge sword,” “patent law’s general rules must govern inventive activity in many different fields of human endeavor, with the result that the practical effects of rules that reflect a general effort to balance these considerations may differ from one field to another.”<sup>526</sup> In conclusion the Court stated that “we must hesitate before departing from established general legal rules lest a new protective rule that seems to suit the needs of one field produce unforeseen results in another . . . . [W]e must recognize the role of Congress in crafting more finely tailored rules where necessary.”<sup>527</sup> This language seems to indicate the Court’s desire for Congress to alter § 101 by “crafting more finely tailored rules” where it would better suit the needs of various fields of patent law.

*2. Rules of Construction: Avoidance of Patent Eligibility Questions*

Congress routinely adopts rules of construction of general applicability and specific to statutory schemes. When analyzing a patent case, “[o]ne procedural question relevant to patent eligibility . . . is whether a court must analyze eligibility ‘at the threshold.’”<sup>528</sup> In other words, must a court resolve eligibility first, “before resolving other issues of patentability and infringement.”<sup>529</sup> If not, the court may be able to “avoid deciding eligibility and resolve the case on other grounds.”<sup>530</sup>

<sup>521</sup> *Id.*

<sup>522</sup> *Id.* at 622.

<sup>523</sup> *Id.*

<sup>524</sup> *Id.* at 649.

<sup>525</sup> *Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 86 (2012).

<sup>526</sup> *Id.* at 92.

<sup>527</sup> *Id.*

<sup>528</sup> Gugliuzza, *supra* note 124, at 591. This is referred to as “the threshold view.”

<sup>529</sup> *Id.*

<sup>530</sup> *Id.*

There is already a percolating judicial approach to this problem. Some Federal Circuit judges and scholars have argued that “courts should *never* address eligibility if a case can be resolved on other grounds.”<sup>531</sup> It is entirely within proper canons of construction to determine that § 101

be considered only when doing so is absolutely necessary to determine the validity of a claim or claims in a patent . . . [and] any claim that can be invalidated under one of the less controversial and less complex requirements for patentability—§§ 102, 103, and 112, for instance—ought to be disposed of without considering subject matter patentability.<sup>532</sup>

One benefit of the avoidance approach is “cut[ting] down the total cost of deciding validity issues, given that § 101 is the most vague and contentious of all the validity doctrines.”<sup>533</sup> Additionally, it could attribute “greater respect for patent tribunals, by removing them whenever possible from the controversial business of deciding cases under § 101.”<sup>534</sup> Overall, if § 101 was made “a rare and unusual basis for deciding patent cases, it would make the entire validity-determination process more certain and less problematic.”<sup>535</sup>

Recent studies support the feasibility of deciding cases on non § 101 grounds.<sup>536</sup> The first study “examined the prosecution history files of over 1,500 recently issued US patents” and “found that 84% of the patent applications that had been rejected for lacking subject matter eligibility were also rejected as either anticipated or obvious.”<sup>537</sup> The second study “reviewed a set of 117 recently released opinions of the Board of Patent Appeals and Interferences . . . that decided an issue of subject matter eligibility” and found in 94 percent of those opinions “each claim questioned on subject matter eligibility grounds also stood rejected on at least one other ground.”<sup>538</sup> The overlap of the patentability doctrines can be explained by the fact that “[a]ll of the patentability doctrines seek to ensure that granted patents are not overreaching but instead are given their appropriate scope.”<sup>539</sup>

In 2012, Judge Plager of the Federal Circuit advocated for an eligibility avoidance view: “courts should ‘avoid the swamp of verbiage that is § 101’ and insist that litigants first address all of the Patent Act’s other patentability re-

<sup>531</sup> *Id.*

<sup>532</sup> Crouch & Merges, *supra* note 456, at 1674.

<sup>533</sup> *Id.* at 1691; Gugliuzza, *supra* note 124, at 599.

<sup>534</sup> Crouch & Merges, *supra* note 456, at 1691.

<sup>535</sup> *Id.*

<sup>536</sup> *Id.* at 1686 (“[A] substantial number of patent claims lacking subject matter eligibility under § 101 also fail to satisfy at least one other validity test.”).

<sup>537</sup> *Id.* See generally Christopher A. Cotropia et al., *Do Applicant Patent Citations Matter?*, 42 RSCH. POL’Y 844 (2013) (showing unpublished data generated by a study that was conducted at the patent level, not claim-by-claim).

<sup>538</sup> Crouch & Merges, *supra* note 456, at 1686 (2010).

<sup>539</sup> *Id.* at 1688.

quirements.”<sup>540</sup> Plager advocated that avoiding § 101 “would make patent litigation more efficient, conserve judicial resources, and bring a degree of certainty to the interests of both patentees and their competitors in the marketplace.”<sup>541</sup> Conversely, “the threshold view” is also Federal Circuit authority and is “irreconcilable” with Plager’s view.<sup>542</sup> This threshold view is also supported by notions of quick and inexpensive litigation.<sup>543</sup> Finally, there is also a “compromise position” that embraces the notion that “courts should have discretion about when, exactly, to address the issue of eligibility.”<sup>544</sup> This has been articulated by Judge Lourie on the Federal Circuit.<sup>545</sup> Judge Lourie believes that district courts have the discretion to “control their dockets and the conduct of proceedings before them, including the order of issues presented during litigation.”<sup>546</sup>

### CONCLUSION

This Article has demonstrated that the Supreme Court has regularly curtailed Congress’s otherwise plenary authority over patent law through the exercise of the Judicial Power: interpreting constitutional and statutory text, safeguarding features of adjudication like jury determinations of fact, and, most influentially, developing federal common law. This structural feature of the patentability cycle explains the Court’s interpretation of the otherwise sweeping 1952 Patent Act in 1966 and the Court’s evident rejection of the authority Congress appeared to dedicate to the Federal Circuit after 1982. The implications for current patent reform proposals are at least twofold.

First, it is not clear that complete abrogation of federal common law would accomplish what Congress intends. From the earliest judicial constructions of patent statutes, courts looked to related bodies of jurisprudence in order to adduce statutory purpose. In the contemporary context of patent litigation, this means almost certain construction influenced by antitrust counterclaims that accompany infringement defenses.

Second, the Supreme Court suggested its role as ultimate interpreter of the Patent Clause as early as 1818 and arguably as early as 1810. Given the uncertainty and unpredictability that has resulted from its decisions, especially with respect to patent eligible subject matter, attempting to force the constitutional question in patent law may cause more, not less, disruption. Rather than endeavor to comprehensively reform patentable subject matter under § 101, Congress is likely to succeed in restoring clarity by carefully analyzing the invita-

<sup>540</sup> Gugliuzza, *supra* note 124, at 595; *MySpace, Inc. v. GraphOn Corp.*, 672 F.3d 1250, 1260 (Fed. Cir. 2012).

<sup>541</sup> Gugliuzza, *supra* note 124, at 595; *MySpace*, 672 F.3d at 1260.

<sup>542</sup> Gugliuzza, *supra* note 124, at 595.

<sup>543</sup> *Id.* at 596.

<sup>544</sup> *Id.*

<sup>545</sup> *Id.*

<sup>546</sup> *Id.*

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tions to interpretation issued in those decisions and adopting an incremental approach to amendment, cognizant that drastic changes to patent law have often resulted in stringent interpretations by the Supreme Court.

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