
INTELLECTUAL PROPERTY

THE AMERICA INVENTS ACT MAY BE CONSTITUTIONALLY INFIRM IF IT REPEALS THE BAR AGAINST PATENTING AFTER SECRET COMMERCIAL USE

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Note from the Editor:

This paper analyzes the constitutionality of the new conditions for patentability set forth in the recently passed America Invents Act. As always, The Federalist Society takes no position on particular legal or public policy initiatives. Any expressions of opinion are those of the author. The Federalist Society seeks to foster further discussion and debate about the structure of the U.S. intellectual property system. To this end, we offer links below to various sides of this issue and invite responses from our audience. To join the debate, you can e-mail us at info@fed-soc.org.

Related Links:

- America Invents Act, Pub. L. No. 112-29: <http://www.govtrack.us/congress/bills/112/hr1249/text>
 - Implementation of the Leahy-Smith America Invents Act, House Judiciary Committee Report, Serial No. 112-128: http://judiciary.house.gov/hearings/printers/112th/112-128_74258.PDF
 - Patents in the 21st Century: The Leahy-Smith America Invents Act, Westlaw Journal Expert Commentary Series: <http://www.mofo.com/files/Uploads/Images/120206-Patents-21st-Century.pdf>
 - The America Invents Act: A Patent Law Game-Changer, The Brookings Institution, David Kappos, Director of the U.S. Patent and Trademark Office: http://www.brookings.edu/events/2011/09/30-patent-reform#ref-id=20110930_kappos
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I. INTRODUCTION

The America Invents Act¹ (AIA) is perhaps the most sweeping and consequential patent legislation since 1870. It contains a provision that will become effective on March 16, 2013, but its constitutional implications have yet to be discussed. The provision sets forth new conditions for patentability provided in 35 U.S.C. § 102(a) as amended under the AIA. This paper discusses an important constitutional aspect of this provision; this paper is not about the “first-to-file” elements of § 102 under the AIA but rather it seeks to answer the following question: Does the U.S. Constitution empower Congress to grant patents to inventors on their inventions *after* they have had an *unlimited* period of exclusive commercial use of the invention? Current law bars a patent for inventions exploited commercially more than one year before the patent application date (the “grace period”); in contrast, the AIA is purported to repeal that bar for secret commercial use of the invention, where such use does not disclose the invention to the public. Inventions that easily fall into this category are methods of manufacture, process, or composition of matter which cannot be learned from the end product sold to the public.

This constitutional question has not received prior public attention because the AIA drafters did not discuss the meaning

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of the new § 102 until *after* the Senate voted and passed the bill (S. 23). A day after the vote, a “clarification” of the relevant provision was entered into the Congressional Record as a “colloquy”—an exchange that never actually took place on the Senate floor. The colloquy substantially changes the ordinary meaning of the statutory text to a meaning that had never been discussed publically—Senators had no opportunity to either learn of the “intended” construction or to debate it.

To be sure, some authors have not been persuaded that the courts will agree with the Senate colloquy’s interpretation of the statute and have argued that the AIA does not actually repeal the bar against patenting after secret commercial use, but rather that it vitiates the one-year grace period.² While it is uncertain whether or not the U.S. courts would actually interpret the new statute as the colloquy intends, this paper analyzes AIA’s § 102 under such a construction. Analyzing the statute under this construction is important now that the AIA’s House Report actually incorporates by reference the Senate colloquy to explain the meaning of the statute³ and because the U.S. Patent and Trademark Office (USPTO) appears to have similarly adopted that construction.⁴

After March 15, 2013 the AIA would enable companies to extend their commercial exclusivity for certain inventions indefinitely by exploiting and profiting secretly from certain technologies for years and then take out patents on these technologies for another 20 years. It would delay disclosure and abolish an essential pillar of the patent bargain established under the U.S. Constitution. The following describes why the provision would likely raise substantial constitutional challenges.

To begin, the Constitution empowers Congress to grant patents on inventions, but that authority is bounded by Article I, Section 8, Clause 8:

The Congress shall have power . . . To 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.

That is, Congress may not amend the patent laws to secure exclusive rights that are not of “limited times” or to *retard* the “progress of the useful arts.” As shown below, features of the AIA appear to exceed these constitutional limits on Congress’ power.

II. THE REPEAL OF THE “FORFEITURE” BAR MAY EXCEED THE “LIMITED TIMES” AND “PROGRESS” LIMITS ON CONGRESS’ AUTHORITY

Under current law, an inventor has one year from any public or commercial use of an invention to file an application for patent on that invention, else the right to patent is forfeited. Existing patent law provides in pertinent part the following:

35 U.S.C. § 102 Conditions for Patentability; Novelty and Loss of Right to Patent.

A person shall be entitled to a patent unless —

(a)...

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

Over nearly two centuries of American jurisprudence, the meaning of the terms “public use” and “on sale” have been meticulously laid out in constitutionally-based holdings of precedential case law spanning more than 640 federal cases as reviewed in detail in two American Law Reports.⁵ Under current law, a company with a new technology cannot have things both ways: the company must either file for a patent on the technology with reasonable diligence, thereby giving the public fair notice of its patent right, or else irreversibly choose to use the invention without patent protection, keeping it a trade secret. A company cannot commercially exploit the invention in secret for more than a year, and then, when commercial circumstances change, or when a leak of its secret is imminent, reconsider and seek a delayed patent right to sue competitors.

The foremost purpose of this bar is to encourage prompt disclosure and to prevent an inventor from exploiting the commercial value of an invention while *delaying* unduly the beginning of the patent term. As Judge Markey noted, “our Forefathers had some experience with that from the Guilds in Europe and did not want a secret technology. They created the patent system to encourage disclosures.”⁶ Thus, current law preserves several important interests. It prevents removal of inventions from the public, after the public has justifiably come to believe those inventions are freely available to all as a consequence of prolonged commercial activity, and it prevents extension of the inventor’s exclusive period beyond the constitutionally-based “limited time” set by Congress.⁷

A. The “Forfeiture” Rule of Current Patent Law is Constitutionally mandated

This limit on the time to file a patent application after its first commercial exploitation is grounded in the U.S. Constitu-

tion. From the Patent Act of 1790 to the present day, any sale or public use of an article, if not closely followed by filing a patent application, has acted as a forfeiture of patent protection for any idea embodied in the article or its manufacture. The U.S. Supreme Court recognized that Article I, Section 8, Clause 8 of the Constitution vests in Congress authority, “unlike the power often exercised in the sixteenth and seventeenth centuries by the English Crown . . . It was written against the backdrop of the practices . . . of the Crown in granting monopolies to court favorites in goods or businesses which *had long before been enjoyed by the public.*”⁸ The Court observed that “Congress *may not* authorize the issuance of patents whose effects are . . . to restrict free access to materials *already available.*”⁹ The Court articulated these principles and the grounds for the “public use” and “on sale” bar more than 180 years ago in *Pennock v. Dialogue*:

As long as an inventor keeps to himself the subject of his discovery, the public cannot be injured: and even if it be made public, but accompanied by an assertion of the inventor’s claim to the discovery, those who should make or use the subject of the invention would at least be put upon their guard. But if the public, with the knowledge and the tacit consent of the inventor, is permitted to use the invention without opposition, it is a *fraud upon the public* afterwards to take out a patent.¹⁰

The *Pennock* decision was anchored to constitutional grounds as follows:

While one great object was, by holding out a reasonable reward to inventors and giving them an exclusive right to their inventions *for a limited period*, to stimulate the efforts of genius; the main object [of patent law] was “to promote the progress of science and useful arts;” and this could be done best, by giving the public at large a right to make, construct, use, and vend the thing invented, *at as early a period as possible*; having a due regard to the rights of the inventor. If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should for a long period of years retain the monopoly, and make, and sell his invention publicly, and thus gather the whole profits of it, . . . and then . . . he should be allowed to take out a patent, and thus exclude the public from any farther use than what should be derived under it during [the patent term,] it would *materially retard the progress of science and the useful arts*, and give a premium to those who should be least prompt to communicate their discoveries.¹¹

Thus, invoking the Constitution, *Pennock* held that an inventor could not extend the period of patent protection by postponing the application for the patent while exploiting the invention commercially. Nearly thirty years after the *Pennock* decision, the Supreme Court reiterated the constitutional grounds to the “public use” and “on sale” bar in *Kendall v. Winsor*:

The true policy and ends of the patent laws enacted under this government are disclosed in that article of the Constitution, the source of all these laws, viz., “to promote the progress of science and the useful arts,”

contemplating and necessarily implying their extension, and increasing adaptation to the uses of society. By correct induction from these truths, it follows that the inventor who designedly, and with the view of applying it *indefinitely and exclusively* for his own profit, withholds his invention from the public *comes not within the policy or objects of the Constitution* or acts of Congress. *He does not promote*, and, if aided in his design, *would impede, the progress of science and the useful arts.*¹²

It is important to note that the contemporaneous meaning of the word “progress” as used in the Intellectual Property Clause was not the contemporary meaning ascribed to this term today—that of a “qualitative improvement” in technology. Rather, “progress,” in this instance, means “spread,” i.e. “diffusion,” “distribution” or “dissemination.”¹³ If an inventor is allowed to patent an invention after a significant period of selling the patented product without disclosure, “progress” is retarded because a delayed patent application would delay disclosure, the public access to the inventive concepts (as opposed to the inventive product), and the ability of the public to use this knowledge.

The Framers’ writings around the time of the Constitution’s adoption provide strong corroboration that they viewed Congress’ power “to promote the progress of the useful arts” as confined to securing exclusive rights only to inventors who are diligent and not unduly dilatory in disclosing and filing patent applications on their inventions. A common refrain that undergirds these writings is the need for caution in crafting and granting exclusive rights. First, Thomas Jefferson, having certain aversions for granting exclusive rights, recognized that “[c]onsidering the exclusive right to invention as given not of natural right, but for the benefit of society, I know well the difficulty of drawing a line between the things which are worth to the public the *embarrassment* of an exclusive patent, and those which are not.”¹⁴ Second, sometime after leaving the presidency, James Madison wrote a series of “detached memoranda,” one of which states Madison’s justification for the Intellectual Property Clause of the Constitution:

Monopolies tho’ in certain cases useful ought to be granted with caution, and guarded with strictness agst abuse . . . There can be no just objection to a temporary monopoly in [books and useful inventions]: *but it ought to be temporary*, because under that limitation a sufficient recompence and encouragement may be given. The limitation is particularly proper in the case of inventions, because *they grow so much out of preceding ones* that there is the less merit in the authors: and because for the same reason, the discovery *might be expected in a short time from other hands.*¹⁵

This excerpt demonstrates that the “sufficient recompence” Madison envisioned ought to be for *timely* disclosure of inventions in a manner that facilitates the evolving invention process about which he wrote—by securing a period of exclusive right that *matches* the temporal characteristics of sequential inventions and *commences shortly after* the invention or discovery without undue delay. What necessarily flows from

Madison’s constructs is as follows: because inventions “grow so much out of preceding ones” (that were *disclosed to the public*), an inventor who commercially exploits the invention in secret for years, delays related follow-up inventions and improvements by others, and thereby *retards* the “progress of the useful arts.” Moreover, should an exclusive right be given to such inventor with a term *commencing* after years of secret commercial use of the invention, the delayed disclosure of the invention may constitute no real consideration or value imparted to the public because by that time, “the discovery might be expected . . . from other hands” anyway. There can be little doubt that Thomas Jefferson could *not* have meant that such a one-sided hollow “bargain” could be “worth to the public the embarrassment of an exclusive patent.” As the Supreme Court observed, permitting inventors to take out patents only after years of secret commercial exclusive exploitation would frustrate Madison’s vision of early disclosure as an essential element of the *sequential* invention process, extend patentees effective exclusive term beyond the “limited time” set by the patent term, and would be further inconsistent with Madison’s “guarded” plan for granting exclusive rights “with strictness agst abuse.”

Judge Learned Hand reviewed the law and produced a detailed analysis with an oft-cited opinion that captured the constitutional principles on the subject of secret commercialization that fails to inform the public about the invention: “[i]t is a condition upon the inventor’s right to a patent that he shall not exploit his discovery competitively after it is ready for patenting; he must content himself with either secrecy or legal monopoly.”¹⁶

B. The AIA May Contradict the U.S. Constitution by Securing to Inventors an Indefinite Period of Exclusive Right to Their Inventions

As the previous section demonstrates, the Framers recognized that the constitutional goal of “promoting the progress of the useful arts” is inextricably linked to ensuring that the exclusive right is of “limited time.” If inventors are afforded unlimited or unspecified exclusive period to exploit their inventions, they would have less incentive to disclose their invention early. As of March 16, 2013, the AIA would enable companies to extend their commercial exclusivity indefinitely by exploiting and profiting secretly from certain technologies for years and then taking out patents on these technologies. By its nature, this provision is retroactive; it would also permit for the first time market incumbent companies to “evergreen” old secret technologies into a windfall of patents on subject matter for which patent protection had been previously forfeited. The AIA provides in pertinent part the following:

102 (a) Novelty; Prior Art.—

A person shall be entitled to a patent unless—

(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention;”

First, note that in § 102(a)’s title, the phrase “loss of right to patent” found in the old statute is removed. However, the reader who cannot otherwise discern in this language an

exemption for *secret* commercial exploitation and for products that are used for commercial gain or offered for sale but do not readily reveal the invention for “reverse engineering” is by no means alone. In fact, the plain reading of new § 102 suggests otherwise—that the bar for secret commercial use is preserved and that the one-year grace period for such use prior to filing a patent application is eliminated.¹⁷ There is much ambiguity in this language and the meaning of the new statutory term “or otherwise available to the public.” Nevertheless, it is purported to repeal the meaning of the terms “public use” and “on sale” as set forth in nearly two centuries and more than 640 federal cases. This ambiguity apparently led to a Senate “colloquy” in which Senator Leahy explained:

One of the implications of the point we are making is that subsection 102(a) was drafted in part to *do away with precedent under current law* that private offers for sale or private uses or secret processes practiced in the United States that result in a product or service that is then made public may be deemed patent-defeating prior art. *That will no longer be the case.* In effect, the new paragraph 102(a)(1) imposes an overarching requirement for availability to the public, that is a public disclosure, which will limit paragraph 102(a)(1) prior art to subject matter meeting the public accessibility standard that is well-settled in current law, especially case law of the Federal Circuit¹⁸

This interpretation, however, appears contrary to the “limited time” constitutional imperative. At the time of the Framing, the word “limited,” meant what it means today: “confine[d] within certain bounds,” “restrain[ed],” “circumscribe[d],” or “not [left] at large.”¹⁹ The word “limited” was also used in defining the term “definite,” and the antonym “unlimited” was used to define the term “discretionary.”²⁰ It is important to recognize that the *exclusive right* which Congress is to *secure* for *limited times* to inventors is unmoored to specific administrative instruments such as patents or registrations. Because an invention that is patentable under the AIA would not have been previously known or available to the public, the inventor (or a permitted user) would necessarily be the exclusive user during the secret exploitation period, which is an exclusive period. Under the AIA, however, the *total* exclusive period that Congress will have “*secured*” for the inventor would not be “definite” or “circumscribed.” It would be of an *unlimited* term because a “discretionary” decision as to when the last twenty years of the exclusive period begins—when a patent application is filed—is left to the inventor.

It is worth noting that prior to 1861, when inventors *were* accorded some discretion to extend their exclusive period, it was *after* they have made the pertinent disclosure, as Congress set a definite limit of seven years for patent extensions. In 1861, Congress amended the term of patents, from a fourteen-year term plus opportunity for a seven-year extension to a flat seventeen years with no extension permitted.²¹ Clearly, providing inventors *discretion* as to the length of their exclusive period does not appear to be cabined within the constitutional framework.

III. THE ILLUSORY “HARMONIZATION” PRETEXT

New § 102 under the AIA is purported to achieve a greater degree of “harmonization” with international patent laws.²² However, while foreign patent law denies a patent on subject matter available in the prior art or in publicly available information that may be learnt from available products, pre-AIA U.S. patent law, *in addition*, identifies conditions for the “loss of right to patent” that are not based on prior art. It proscribes patenting after certain *abandonment* and *forfeiture* acts of the inventor who does not timely seek a patent after commencing with commercial exploitation of the invention. Proponents of the AIA too often glossed over these differences and conflated “prior art” that defeats a patent with inventor actions and/or inactions that *abandon* or *forfeit* the right to a patent. As explained above, these latter legal requirements are grounded in the U.S. Constitution.

Other countries’ legislators are not bound by a constitution that requires that their patent system “promote the progress of useful arts” or that exclusive rights be secured to inventors for “limited time.” Other countries’ legislatures may have the power to favor certain activities and selected parties in a way that our Framers forbade. Within its constitutional directives “to promote the progress of useful arts,” the U.S. Congress has also deemed it in the public interest to provide a robust grace period of *limited time* to allow inventors time to vet and perfect their invention by public testing and early marketing activities prior to filing an application.

Proponents of repealing the bar against patenting after secret commercial use have argued that allowing patents in such circumstances would result in disclosures that would otherwise not take place. This rationale is predicated on the fact that only inventions that are otherwise unknown to the public, despite years of secret commercial use, would be patentable. However, this argument of increased disclosure ignores the fundamentals of adaptive applicant behavior in the face of incentives to patent later—fewer disclosures will be made early and a greater portion of those disclosures made later may constitute an inadequate consideration for a patent grant because by that time, “the discovery might be expected from other hands.” This shift in the timing of disclosure runs counter to the U.S. Constitutional framework under which U.S. patent applicants disclose the most,²³ a framework that produces the highest number of patents per capita in the world.²⁴

The effort to shoehorn foreign patent priority concepts in order to transform a well-developed 200 year-old American patent system that has a proven record as the best in the world into foreign structures that are inconsistent with the U.S. Constitution and its laws can prove challenging, if not futile. This effort would likely be met with legal challenges on constitutional grounds.

IV. CONCLUSION

This paper raises the question: Does the U.S. Constitution empower Congress to grant patents to inventors on their inventions *after* they have had an *unlimited* period of exclusive commercial use of the invention? As explained above, the answer is probably *no*. In interpreting new § 102 under the AIA, courts

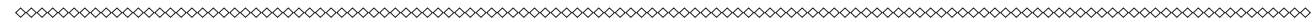
are likely to encounter these constitutional questions, creating substantial uncertainty. The ALR Reports²⁵ on cases addressing “public use” and “on sale” list sixteen Supreme Court cases, the majority of which were decided after enactment of the Patent Acts of 1839 and 1870. These Acts codified certain changes in the grace period and clarified the parties affected by the “public use” and “on sale” bar. Note that although these changes were substantially less dramatic than those made under the AIA, it took *more than two decades* of Supreme Court decisions to achieve legal certainty regarding the key aspects of “public use” and “on sale” law, wherein no further Supreme Court intervention was subsequently required for a century. Therefore, under the AIA, one should expect decades of legal uncertainty as to only one aspect of the new § 102—the clarification of the term “otherwise available to the public” and the new meaning (if any) of the terms “public use” and “on sale.” One should also expect increased litigation to resolve these legal uncertainties in hundreds of Federal Circuit and Federal District court decisions that would replace the 640 decisions listed in the ALR Reports. This does not include any period during which the constitutionality of the AIA may be challenged in the courts.

Whereas U.S. courts would not be bound by the meaning given to the statute in a colloquy of two Senators after the bill’s passage, it is uncertain how the new § 102 under the AIA would be interpreted. What is virtually certain, however, is that courts will be required to presume that in this statutory change, Congress “intends its amendment to have real and substantial effect.”²⁶ While the courts must grant the AIA the full measure of deference owed to federal statutes, if a certain desired construction appears unconstitutional, as new § 102 does, the Supreme Court has explained that “every reasonable construction must be resorted to, in order to save a statute from unconstitutionality.”²⁷ A “fairly possible” construction²⁸ that does so is one in which the terms “public use” and “on sale” have their historically accepted meanings, which in turn means that the one-year grace period is eliminated for inventions on “public use” or “on sale” prior to filing an application. Unfortunately, this likely outcome will deny inventors U.S. patent protection that would not be denied under foreign patent laws.²⁹

Endnotes

- 1 Pub. L. No. 112-29, 125 Stat. 284–287 (2011).
- 2 See Harold C. Wegner, The “Gold Standard” Grace Period Under Fire, Paper prepared for the Fordham University School of Law Nineteenth Annual Conference, International Intellectual Property Law & Policy, (April 28-29, 2011), at 5–6, 17–24, available at <http://fordhamipconference.com/wp-content/uploads/2011/04/Wegner.pdf>; Ron D. Katznelson, Section 2 of America Invents Act: the undisclosed story of legislative obfuscation, (April 17, 2011), available at <http://bit.ly/Public-Use>.
- 3 H.R. REP. NO. 112-98, pt. 1, at 43 (2011) (citing 157 CONG. REC. S1496–97 (daily ed. March 9, 2011)).
- 4 Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy-Smith America Invents Act, 77 Fed. Reg. 43759, 43765 (proposed July 26, 2012), available at <http://www.gpo.gov/fdsys/pkg/FR-2012-07-26/html/2012-17898.htm>.
- 5 Kurtis A. Kemper, *When Is Public Use of Invention, More Than One Year Before Patent Application, for Experimental Purposes, so that 35 U.S.C.A. § 102(b) Does Not Prevent Issuance of Valid Patent*, 171 A.L.R. FED. 39 (2010); William G. Phelps, *When does on-sale bar of 35 U.S.C.A. § 102(b), which*

- denies patentability to invention that has been on sale for more than one year prior to date of patent application, prevent issuance of valid patent*, 155 A.L.R. FED. 1 (2010).
- 6 Howard T. Markey, *Some Patent Problems*, 80 F.R.D. 203, 206 (1978) (discussing the patent bargain).
 - 7 General Elec. Co. v. U.S., 654 F.2d 55, 61 (Ct.Cl. 1981).
 - 8 Graham v. John Deere Co., 383 U.S. 1, 5 (1966) (emphasis added).
 - 9 *Graham*, 383 U.S. at 6. (emphasis added).
 - 10 Pennock v. Dialogue, 27 U.S. 1, 4 (1829) (emphasis added).
 - 11 *Pennock*, 27 U.S. at 19 (emphasis added).
 - 12 Kendall v. Winsor, 62 U.S. 322, 328 (citing U.S. CONST. art. I, § 8, cl. 8) (emphasis added).
 - 13 Vivian Fong, *Are We Making Progress: The Constitution as a Touchstone for Creating Consistent Patent Law and Policy*, 11 U. PA. J. CONST. L. 1163 (2009); see also Orrin G. Hatch & Thomas R. Lee, *To Promote the Progress of Science: The Copyright Clause and Congress’ Power to Extend Copyrights*, 16 HARV. J.L. & TECH. 1 (2002-2003); Malla Pollack, *What is Congress Supposed to Promote?: Defining “Progress” in Article I, Section 8, Clause 8 of the United States Constitution, or Introducing the Progress Clause*, 80 NEB. L. REV. 754 (2001).
 - 14 Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), in THE WRITINGS OF THOMAS JEFFERSON (Andrew A. Lipscomb & Albert Ellery Bergh eds., 1905) (emphasis added), available at http://press-pubs.uchicago.edu/founders/documents/a1_8_8s12.html.
 - 15 James Madison, *Aspects of Monopoly One Hundred Years Ago*, 128 HARPER’S MAG. 489, 490 (March 1914) (emphasis added), available at <http://books.google.com/books?id=UWICAAAIAAJ&pg=PA489>.
 - 16 Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co., 153 F.2d 516, 520 (2nd Cir. 1946), cert. denied, 328 U.S. 840 (1946); see also Bonito Boats v. Thunder Craft Boats, 489 U.S. 141, 149 (1989) (quoting *Metallizing Engineering* with approval).
 - 17 See Wegner, *supra* note 2; Katznelson, *supra* note 2. Reading the proposed statute in its plainest meaning, it appears that the Senate has created the strange result discussed in a recent brief article on the grace period. See Ron D. Katznelson, Section 2 of America Invents Act Will Deny Inventors U.S. Patent Protection that Would Not Be Denied Under Foreign Patent Laws, (Mar. 6, 2011) [hereinafter Katznelson, U.S. Inventors], available at <http://bit.ly/Grace-Period-USA>.
 - 18 157 CONG. REC. S1496 (daily ed. Mar. 9, 2011) (statement of Sen. Leahy) (emphasis added), available at <http://www.gpo.gov/fdsys/pkg/CREC-2011-03-09/pdf/CREC-2011-03-09-pt1-PgS1496.pdf#page=1>.
 - 19 SAMUEL JOHNSON, A DICTIONARY OF THE ENGLISH LANGUAGE (7th ed. 1785); see THOMAS SHERIDAN, A COMPLETE DICTIONARY OF THE ENGLISH LANGUAGE (6th ed. 1796) (“confine[d] within certain bounds”); WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1312 (1976) (“confined within limits”; “restricted in extent, number, or duration”).
 - 20 Johnson, *supra* note 19.
 - 21 Act of Mar. 2, 1861, ch. 88, § 16, 12 Stat. 249 (1861).
 - 22 America Invents Act, H.R. 1249, 112th Cong. § 3(q) (2011) (Enactment “will harmonize the United States patent registration system with the patent registration systems commonly used in nearly all other countries throughout the world . . . [and will] promote a greater sense of international uniformity and certainty in the procedures used for securing the exclusive rights of inventors to their discoveries.”)
 - 23 E. Archontopoulos et al., *When small is beautiful: Measuring the evolution and consequences of the voluminosity of patent applications at the EPO*, 19 INFO. ECON. & POL’Y 103, 125 (June 2007) (showing that U.S. originated patent applications have the largest average number of pages in the disclosure part of the application.)
 - 24 ORG. FOR ECON. COOPERATION & DEV., DIVIDED WE STAND—WHY INEQUALITY KEEPS RISING 96 (2011) (U.S. tops the list in Figure 1.13. Patents per capita), available at <http://dx.doi.org/10.1787/9789264119536-5-en>.
 - 25 Kemper, *supra* note 5; Phelps, *supra* note 5.



26 *Pierce County, Wash. v. Guillen*, 537 U.S. 129, 145 (2003) (“[W]hen Congress acts to amend a statute, we presume it intends its amendment to have real and substantial effect . . . That reading gives the amendment no real and substantial effect and, accordingly, cannot be the proper understanding of the statute.”) (internal citations and quotations omitted); *Duncan v. Walker*, 533 U.S. 167, 174 (2001) (“It is our duty to give effect, if possible, to every clause and word of a statute.”) (internal citations and quotations omitted).

27 *Hooper v. California*, 155 U. S. 648, 657 (1895).

28 *Crowell v. Benson*, 285 U.S. 22, 62 (1932) (“When the validity of an act of the Congress is drawn in question, and even if a serious doubt of constitutionality is raised, it is a cardinal principle that this Court will first ascertain whether a construction of the statute is fairly possible by which the question may be avoided.”).

29 See *Katznelson, U.S. Inventors*, *supra* note 17.

