

Public Disclosure and Moving the World Forward: Why We Need the America Invents Act

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Background and Introduction

Article I, Section 8, Clause 8 of the Constitution empowers Congress “[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.”¹ Often referred to colloquially as the intellectual property clause, this portion of the Constitution explicitly specifies the means through which Congress may achieve its goal. It is no surprise, then, that the passage of the Leahy-Smith America Invents Act in the fall of 2011 created uproar in the legal community.

In particular, section 3 of the Act has received sharp criticism. The root of this criticism stems from a change in the requirements for patentability.² Whereas the United States previously followed a so-called first-to-invent scheme, the Act instead grants patent rights to the first inventor to file.³ According to the Act, Congress believed that this conversion would “promote the progress of science and useful arts by securing for limited times to inventors the exclusive rights to their discoveries and provide inventors with greater certainty regarding the scope of protection provided by the grant of exclusive

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1. U.S. CONST. art. VIII, § 8, cl. 8.
2. Michael A. Glenn & Peter J. Nagle, *Article I and the First Inventor to File: Patent Reform or Doublespeak?*, 50 IDEA 441, 441 (2009-10).
3. Leahy-Smith America Invents Act, 35 U.S.C. § 3 (2011).

rights to their discoveries.”⁴ Additionally, the Act states that this conversion “will promote harmonization of the United States’ patent system with the patent systems commonly used in nearly all other countries throughout the world with whom the United States conducts trade.”⁵

Section 3 of the Leahy-Smith Act also amends the terms used in section 100.⁶ It adds statutory definitions for the following: inventor, joint inventor, joint research agreement, effective filing date, and claimed invention.⁷ According to subsection (a), “the term ‘inventor’ means the individual, or if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.”⁸ Additionally, the “terms ‘joint inventor’ and ‘coinventor’ mean any one of the individuals who invented or discovered the subject matter of a joint invention.”⁹ The Act also defines “effective filing date” for a claimed invention as “the actual filing date of the patent or the application for the patent containing a claim to the invention.”¹⁰

Within the context of the international community, the United States was one of only a handful of nations to implement a first-to-invent regime.¹¹ Under this system, inventions in the United States had two steps: “(1) conception of the invention and (2) reduction to practice of the invention.”¹² Conception was defined as the point in time when an inventor conceives of an invention and diligently reduces it to practice.¹³ Examples of diligent pursuit include filing a patent application and practicing the invention.¹⁴ Therefore, the first conceiver is entitled to a patent, even if another inventor files an application and reduces the invention to practice before the original inventor, so long as the first conceiver diligently pursues his

4. 35 U.S.C. § 102.

5. 35 U.S.C. § 100.

6. *Id.*

7. 35 U.S.C. § 100(a).

8. 35 U.S.C. § 100(f).

9. 35 U.S.C. § 100(g).

10. 35 U.S.C. § 100(i)(1).

11. Michael F. Martin, *The End of the First-to-Invent Rule: A Concise History of its Origin*, 49 IDEA 435, 439 n.16 (2009).

12. Korbinian Kopf, *Establishing Priority of Invention in the USA*, KLUWER PATENT BLOG (June 16, 2010), <http://kluwerpatentblog.com/2010/06/16/establishing-priority-of-invention-in-the-usa/>.

13. *Id.*

14. *Id.*

invention.¹⁵ Those who filed first were assumed to have a prima facie right to the invention, but that presumption was rebuttable.¹⁶ In such instances where the first conceiver filed later, “the first conceiver would have to bring interference proceedings against the second to prove that they were the true inventor.”¹⁷ Based on the determination of the United States Patent and Trademark Office (“USPTO”), the patent will be granted to the original inventor accordingly.¹⁸

Section 135 of the Leahy-Smith Act also sets forth a derivation proceeding to ensure that the first to file is an original inventor and did not derive his invention from another inventor:

An applicant for patent may file a petition to institute a derivation proceeding in the Office. The petition shall set forth with particularity the basis for finding that an inventor named in an earlier application derived the claimed invention from an inventor named in the petitioner’s application and, without authorization, the earlier application claiming such invention was filed. Any such petition may only be filed within 1 year after the first publication of a claim to an invention that is the same or substantially the same as the earlier application’s claim to the invention, shall be made under oath, and shall be supported with substantial evidence.¹⁹

This note will argue that the Leahy-Smith Act is constitutional under the intellectual property clause. The alternative views regarding the Act—namely those believed to be unconstitutional—will be discussed, and the textual differences between the original statute and the Act will be unpacked. The new first-inventor-to-file regime will be examined within this context.

15. *Id.*

16. *Id.*

17. Richard Clement and Shelley Rowland, *United States Switches from First-to-Invent to First-Inventor-to-File System in 2013*, JDSUPRA LAW NEWS (2013), <http://www.jdsupra.com/legalnews/united-states-switches-from-first-to-inv-86923/>.

18. *Id.*

19. 35 U.S.C. § 135 (a).

I. Alternative Views On the Constitutionality of the Leahy-Smith Act

Legal scholarship has been published regarding the constitutionality of the Leahy-Smith Act, contending that it is in direct conflict with the intellectual property clause.²⁰ Jonathan S. Massey's article succinctly states scholars' primary concern regarding its legitimacy:

Congress is authorized to make patents available only to "inventors" and only for their "discoveries." At the time of the Constitution's framing, the common understanding of an "inventor" was the same as it is today: "one who produces something new; a deviser of something not known before," in the words of Samuel Johnson's 1787 dictionary.²¹

Moreover, he argues that, "[the] same dictionary defined 'discoverer' as 'one that finds anything unknown before.' Only the first inventor can discover something 'not known before.' A second 'inventor' is an oxymoron; that person merely rediscovered that which was already discovered by the first inventor."²² When the first inventor makes a new discovery, the constitutional directives are not held in suspension. Rather, the intellectual property clause secures exclusive rights on the first and true inventor, and that constitutionally recognized property cannot be divested by an earlier USPTO filing by a different person.²³

Most importantly, Massey states that administrative expediency cannot trump the Constitution.²⁴ In looking at the intent of the framers, early acts of Congress are often highly probative of constitutional intent because of the fifty-five delegates at the Convention, nineteen later served as Senators and thirteen as Representatives. What Massey discovered was that the first patent statutes strongly support the first-to-invent standard:

20. Jonathan S. Massey, *Why First to File Is Unconstitutional*, OHIOPATLEG, <http://ohiopatleg.wordpress.com/america-invents-act-is-unconstitutional/why-first-to-file-is-unconstitutional/> (last visited Mar. 30, 2012).

21. *Id.*

22. *Id.*

23. *Id.*

24. *Id.*

The Patent Act of 1790, enacted in the second session of the First Congress . . . provided for repeal of a patent “if it shall appear that the patentee was not the first and true inventor.” The 1793 statute also required that the applicant “swear or affirm that he does verily believe, that he is the true inventor or discoverer of the art, machine, or improvement, for which he solicits a patent.”²⁵

In fact, Chief Justice John Marshall explained that the law recognized a property right in the inventor “from the moment of invention,” which was “only perfected by the patent.”²⁶ Furthermore, one of the Supreme Court’s earliest patent opinions—*Pennock v. Dialogue*—supports the assertion that under the Constitution, “the right is created by the *invention*, and not by the *patent*.”²⁷ In essence, Massey’s belief that the Act is unconstitutional stems from the definition of inventor, and the critical points in time used to measure said definition.

II. Substantive Differences Between the 1952 Act and the Leahy-Smith Act

Under the United States’ Patent Act of 1952, the invention date had three key points: conception, reduction to practice, and filing.²⁸ Under the Leahy-Smith Act, this process is streamlined into two stages: public disclosure and filing.²⁹ For example, if a second filer is first to publicly disclose the invention, then that public disclosure gives the second filer priority over the first filer.³⁰ In this instance, the new regime is not a pure first-inventor-to-file system because the first inventor has a grace period that will allow him to obtain the patent even if he is not first to file. This misnomer is relevant because criticism regarding the Leahy-Smith Act’s constitutionality focuses on this incorrect labeling.

It is illustrative to look at the priority of invention more closely. Under the new regime of the Leahy-Smith Act, the first applicant to

25. *Id.*

26. *Id.*

27. 27 U.S. 1, 7 (1829) (emphasis in original).

28. 35 U.S.C. § 102.

29. *Id.*

30. *Id.*

file will likely win patent protection. However, two key exceptions exist.³¹ As mentioned previously, the first exception applies when the second filer was the first to publicly disclose the invention within the one-year, pre-filing grace period.³² A second exception exists when the first inventor to file derived his invention from the second filer.³³ Under the latter scenario, a separate derivation proceeding is held to determine whether the first filer in fact derived invention from the second filer.³⁴ This proceeding can be seen as analogous to the interferences under the 1952 Act because it affords third parties the ability to challenge the originality of a claimed patent. In other words, an inventor is able to secure the patent if he publicly discloses before the second inventor files. This characteristic makes the Leahy-Smith Act analogous to the 1952 Act, mischaracterizing the Leahy-Smith Act as a first-to-file system.

Despite that similarity, the Leahy-Smith Act does introduce a grace period that did not exist under the 1952 Act.³⁵ Accordingly, the inventor's own disclosures and the subsequent third party disclosures are exempted.³⁶ The first inventor, then, has a grace period of one year from the date of disclosure to allow time to file.³⁷ Because this is, in effect, an entirely new variable introduced through the Leahy-Smith Act, it is unclear at this time how it will affect patent prosecution and patent litigation.

In sum, the first filer wins the patent except under three likely scenarios. First, the first filer obtained the invention directly or indirectly from the second filer. Within this scenario, a derivation proceeding determines whether the first filer derived his invention, and is the heir to interferences under the 1952 Act.³⁸ Second, the first filer abandons the application prior to publication or issuance. Third, the second filer was first to publicly disclose the invention. This is the most important exception because it represents the key change under the new regime—it changes the United States' patent granting procedure to a system that can be more accurately described as first inventor to file.

31. *Id.*

32. 35 U.S.C. § 102(b).

33. 35 U.S.C. § 102.

34. 35 U.S.C. § 135.

35. 35 U.S.C. § 102(b).

36. 35 U.S.C. § 102.

37. 35 U.S.C. § 102(b).

38. 35 U.S.C. § 135.

A. Leahy-Smith Act Key Terms

The changes brought under the Leahy-Smith Act go beyond wholesale additions. Along with introducing concepts such as the grace period, the first-inventor-to-file system redefines familiar legal doctrines.³⁹ The definition of prior art in section 102(a) is now rooted in the time of filing and has no geographic restrictions.⁴⁰ Whereas the 1952 Act limited its geographic scope to the United States, the new Act takes the whole world into consideration.⁴¹ In turn, these changes yield progressive and forward-thinking benefits. First, it eliminates uncertainty by placing the United States in line with the international community, which favors a first-to-file regime. Accordingly, the new Act is more responsive to prevailing trends in intellectual property because it acknowledges the march towards globalization as devices, such as iPhones and Android, are used beyond the United States' borders. Viewed in this light, the Leahy-Smith Act can be seen as working with, as opposed to against, the prevailing intellectual property shift towards international harmonization.

Looking at the text of section 102(a) under the new Act is also informative. It states that, for novelty and prior art, "a person shall be entitled to a patent unless . . . 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."⁴² In addition, the patent will not be granted if "the claimed invention was described in a patent issued [to another] . . . or in [another's] application to patent published . . . [that] was effectively filed before the effective filing date of the claimed invention."⁴³ Thus, these portions of the text create five categories of prior art in 102(a)(1) and a sixth category in 102(a)(2).⁴⁴ This language is critical because it establishes the shift towards a first-inventor-to-file system. At a fundamental level, it states that the second filer cannot obtain a patent because the first filer's earlier filing makes that application prior art relative to the second filer. Moreover, that section also creates the abandonment exception—if the first filer abandons his application prior to publication, then the second filer can still get a patent.

39. 35 U.S.C. § 102(a).

40. 35 U.S.C. § 102(e).

41. *Id.*

42. 35 U.S.C. § 102.

43. *Id.*

44. *Id.*

Furthermore, section 102(a)(1) establishes five categories of prior art: patents, printed publications, public uses, on sale material, and otherwise available to the public.⁴⁵ This also illustrates some of the changes between the 1952 Act and the Leahy-Smith Act. It establishes that prior art is measured at the time of public disclosure or filing, rather than conception; this highlights the key change under a first-inventor-to-file regime. Additionally, geographic restrictions are removed completely. All categories are global, including public use and on sale.⁴⁶ The phrase “otherwise available to the public” has also been added, which seems analogous to the “known . . . by others” language under the 1952 Act.⁴⁷

Not everything in this section differs from the 1952 version. The common-law definition of “printed publication” still applies, although the addition of “otherwise available to the public” category may make some cases easier. Importantly, “public use” is still a category, and the interpretation set forth in the key precedents remains good law. As stated in *Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co.*, a secret, non-informing use is a “public use” for evaluating any patent applications by the user, but it is not for evaluating any applications by a third party.⁴⁸ Therefore, a non-informing use is a public disclosure relative to the party engaging in the non-informing use.⁴⁹ However, according to *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, that same use is not considered a public disclosure to a third party.⁵⁰ Some may assert that the statute overrules these cases so that the inventor’s own secret commercial exploitation will not bar that inventor from later seeking a patent. That would reverse centuries of United States patent law, dating back to the Supreme Court’s decision in *Pennock v. Dialogue*.⁵¹ Such a drastic and paradigm change seems unlikely under the new Act.

A few intuitive rationales support this view. First, it is a standard canon of statutory construction that reenactment of statutory language with a known legal meaning constitutes the known meaning. Second, the entirety of a Senate colloquy focused on the grace

45. 35 U.S.C. § 102(a).

46. *Id.*

47. 35 U.S.C. § 102.

48. 153 F.2d 516, 519 (2d Cir. 1946).

49. *Id.*

50. 721 F.2d 1540, 1550 (Fed. Cir. 1983).

51. *Pennock v. Dialogue*, 27 U.S. 1, 1 (1829).

period.⁵² Within that context, only one sentence can be interpreted as supporting the opposite view:

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.⁵³

Still, even that sentence did not suggest congressional intent to make that kind of paradigm shift in patent law regarding non-informing uses. Third, Congress does not “hide elephants in mouseholes.” In other words, the canons of statutory interpretation disfavor broad legislative change through discrete and seemingly trivial actions. Fourth, remarks in legislative history are not the statutory text. These types of comments are often unreliable because the speakers could be focusing on a different issue, which is the case here.

The exceptions and grace period are set forth in 102(b).⁵⁴ The new language in section 102(b) has a simple structure because paragraph (b)(1) provides all the exceptions to section 102(a)(1) categories of prior art.⁵⁵ Paragraph (b)(2) provides all the exceptions to a first filed United States patent application under 102(a)(2).⁵⁶

B. Illustrations of the Grace Period Exemption

The implications of the new grace period can be demonstrated through examples rooted in the statute’s text. For example, assume that Andrew Alford publishes an article disclosing his invention in June of 2015. In December 2015, he files for a patent. His June disclosure is not part of the prior art under (b)(1)(A) because Andrew was the source of disclosure. Continuing with this example, assume that Barbara Askins stole Andrew’s invention. Then,

52. 157 CONG. REC. S1496, S1496-97 (daily ed. Mar. 9, 2011) (statement of Sen. Leahy), <http://www.gpo.gov/fdsys/pkg/CREC-2011-03-09/pdf/CREC-2011-03-09-pt1-PgS1496.pdf>.

53. *Id.*

54. 35 U.S.C. § 102(b).

55. *Id.*

56. *Id.*

Barbara placed Andrew's invention for sale. Andrew will be protected under the new statute; since the disclosure came indirectly from Andrew by way of Barbara's illicit activities, the disclosure will be removed from the prior art through (b)(1)(A). If Barbara instead attempted to file a patent that covers Andrew's invention, Andrew would again be protected under (b)(2)(A). Since Barbara derived his patent application from Andrew's work, the former's activities will not bar the latter from obtaining the patent. In other words, if Andrew files after Barbara under the given circumstances, Andrew can still preserve priority through the section 102 grace period.

Section (b)(2)(B) also contains intuitive protections for first inventors. Assume that inventor Charles Alderton publicly discloses his invention in June of 2015. Then, he files for a patent in December 2015. In August 2015, Dan Hayes independently publishes his own research that, in effect, is identical to Charles' work. Dan however rushes to the USPTO and files for patent protection in September 2015. Charles is still protected, but this time under (b)(2)(B). Since he disclosed before Dan's publication and filing, Charles is able to preserve priority with his December application. Both of Dan's activities are not included in the prior art relative to Charles, and Charles is able to obtain the patent even though he was the second filer. This, in turn, remains true to the text of the Constitution, which states that patents should be granted to the first inventor.

The changes that result from these grace period considerations underline the more subtle wrinkles caused by the Leahy-Smith Act. Since a thumb is placed on the scale in favor of public disclosure, the new Act creates an incentive to publish or risk obtaining weaker grace period protection. Under the 1952 Act, a second filer could obtain priority over a first filer by demonstrating that he conceived the invention first. This process has been categorically removed under the new Leahy-Smith Act. Instead, a second filer can secure patent protection over the first filer by demonstrating that he published behind the prior art. At this point, the significance of this change is not clear, and without any actual litigation, its implications are tentative at best.

However, one thing is certain: by favoring public disclosure over conception, the new regime places an emphasis on certainty. Conception, on the other hand, can take place in private and thus does not require the same level of verification. Simply put, public disclosure requires appreciation from a third party. Inversely, public disclosures can also be seen as a major limit on the first-inventor-to-file system because the second applicant, with an earlier public

disclosure, can beat the first filer. Again, the new regime has not yet been implemented, so at this point it is not clear how this will affect patent law. But, the aforementioned considerations indicate that there is room for interpretation with these categories of grace period events, and thus there is room for significant complexity and litigation. Where the disclosure in an applicant's early publication is not identical to the disclosure in a later piece of prior art, the USPTO and courts will need to decide what portion of the prior art gets excluded because it had been disclosed previously in the applicant's early publication. Nonetheless, the new system should be easier to administer than interferences because the relevant dates for analysis are more clearly defined.

C. Alternative Views Regarding the New Grace Period

Detractors may argue that the new statute's grace period offers weak protections to inventors. For example, certain section 102(a) prior art events cannot qualify for the grace period because the event is not a "disclosure" within the meaning of the new section 102(b). That view is not supported by the statute's text. It indicates that the word "disclosure" in the new section 102(b)(1)(A) should be interpreted broadly to encompass any activity that would generate prior art under 102(a)(1).

This view is based on the text, structure and legislative history of the statute. First, the statute's structure under section 102(b)(1) specifically distinguishes between the inventor's activities that constitute merely a "disclosure" in (b)(1)(A) and activities that "publicly disclose" in (b)(1)(B). If the concept of disclosing were to be defined as "publicly disclosing," then the word "publicly" in (b)(1)(B) would be rendered superfluous. Section 102(b)(2) also refers to "disclosures" appearing in patent applications.⁵⁷ However, filed patent applications do not publicly disclose material until publication 18 months after filing. Second, some definitions of "disclose" do not rise to the level of widespread dissemination. For example, the dictionary provides one definition as "open to one's own knowledge." While the legislative history contains some loose language, there are unequivocal assurances that, within the one-year grace period, an inventor's own activities should never create a barrier for them obtaining a patent: "[grace periods] will apply to all

57. 35 U.S.C. § 102(b)(2).

actions by the patent owner during the year prior to filing that would otherwise create section 102(a) prior art.”⁵⁸

The grace period in 102(b) is best interpreted as providing two levels of protection. Stronger protection is provided under the “A” subparagraphs in 102(b)(1) and 102(b)(2) so that, during the one-year grace period, none of the inventor’s own work can be the source of prior art relative to the inventor.⁵⁹ The key concept of “disclosure” should be interpreted to mean *disclosure into the prior art*. Protection is also provided against others’ disclosures under the “B” subparagraphs of 102(b)(1) and (2), but only if the inventor has “publicly disclosed.”⁶⁰

D. Applications Under the New Novelty Requirement

Like section 102(b), the essence of the new 102(a) novelty provision protects the interest of the first inventor. At its most basic level, a publication by one inventor prior to a second inventor’s filing will stop the second inventor from obtaining the patent. For example, Albert Einstein’s public disclosure in January 2015 will block John Smith’s patent filing in March 2015. John’s work will not satisfy the novelty requirement as a result of Albert’s publication. This would hold true even if John had not derived his invention from Albert because the statute does not provide an independent discovery defense.

However, the protections offered to bona fide first inventors are limited. If, for example, Thomas Edison enters into a confidential sales agreement in January 2015, he then has until January 2016 to file for patent protection. If he fails to do so, his January 2015 agreement will be rendered prior art against him under 102(b)(1).

This hypothetical gets trickier when a third party is introduced into the equation. Assume that Edison files for patent protection in March 2015. If Nikola Tesla publishes an article in February 2015 that covers the secret invention sold by Edison in January 2015, then Tesla will have priority. If Tesla then applies for a patent in April 2015, Edison will not be able to cite his secret sale in January as a bar. In other words, Edison’s application will be rejected because it will not be novel relative to Tesla’s disclosure and filing in February and April, respectively.

58. H.R. REP. NO. 112-98, pt. 1, at 43 (2011), <http://judiciary.house.gov/issues/Patent%20Reform%20PDFS/CRPT-112hrpt98-pt1.pdf>.

59. 35 U.S.C. § 102(b).

60. *Id.*

Building on this example, assume that Tesla files a patent application in January 2016. That would mean that Tesla is a second filer whose application was submitted a year after Edison's sales agreement. Here, Edison's secret sale will not be considered prior art relative to Tesla because they were not public disclosures. Tesla also has the upper hand against Edison's filing because Tesla's public disclosure precedes it under 102(b)(2)(B). So, Tesla will likely secure the patent despite being the second filer.

III. The Leahy-Smith Act is More in Line with the Spirit of the Constitution and the Additional Patentability Requirements

In *Fiers v. Revel*, the court found an exception for simultaneous conception and reduction to practice.⁶¹ In *In re Application of Hardee*, the Patent Commissioner found that "one must contribute to the conception to be an inventor."⁶² Likewise, in *Board of Trustees of Florida State University v. American Bioscience Inc.*, the court added the following caveat: "invention requires conception."⁶³ In the case of chemical compounds, the status of inventorship may only be granted if the claimed inventor has a conception of the specific compounds being asserted.⁶⁴ In *American Bioscience Inc.*, the Federal Circuit held that simply having general knowledge of the anticipated biological properties of groups of compounds is insufficient to grant inventorship status.⁶⁵ Similarly, in *Ex parte Smernoff*, the Patent Board stated that, "one who suggests an idea of a result to be accomplished, rather the means of accomplishing it, is not a coinventor."⁶⁶

These cases are often cited by the USPTO in determining patentability. They indicate that the definition of inventor is not static, but dynamic, as the agency looks to board and case law for its guidelines. The fluidity of the definition is significant because it sets the stage for the context in which the Leahy-Smith Act was signed into law; it was enacted in the shadow of case law indicating that patent rights are based on a fluid definition of inventor. At the most basic level, this indicates that the definition of inventorship is not set

61. 984 F.2d 1164, 1168 (Fed. Cir. 1993).

62. 223 USPQ 1122, 1123 (Comm'r Pat. 1984).

63. 333 F.3d 1330, 1340 (Fed. Cir. 2003).

64. *Id.*

65. *Id.*

66. 215 USPQ 545, 547 (Bd. App. 1982).

in stone as some scholars may argue. More importantly, there is more to the intellectual property clause than the word “inventor.” The text of the clause indicates that the purpose is societal improvement by promoting the progress of science. How can this purpose be achieved if the old system allows an individual to stop others from obtaining a patent without requiring him to get that information to the public? In other words, the old system allows individuals to stop others from moving the world forward because it puts a premium on activities that can be done privately. Of course, invention does require diligent work performed away from the eyes of the public. However, placing the critical dates for patentability on private activity is less in line with the spirit of the intellectual property clause because public disclosure and filing necessarily bring information to the world.

In *Fritsh v. Lin*, even though the inventor was not involved in developing the procedures for expressing the gene in question in host cells, he was granted the patent.⁶⁷ In that case, the Patent Board determined that “it is not essential for the inventor to be personally involved in carrying out process steps where implementation of those steps require the exercise of inventive skill.”⁶⁸ Furthermore, it was deemed that there is no requirement an inventor be the party who reduces the invention to practice. What matters is whether the reduction was done on his behalf.⁶⁹ This notion is further elaborated in *Mattor v. Coolegem*, in which the Board stated, “one following oral instructions is viewed as merely a technician.”⁷⁰

These cases further indicate that the law is sensitive to the notion of defining an inventor within the reality that inventions often come to fruition with the input of several individuals. Additionally, the distinction between technicians and inventors illustrates the premium placed on originality and inventive skill. The Leahy-Smith Act is consistent with this notion. While public disclosure and filing under the new regime takes precedent over the subjective mindset of the inventor, the Act leaves the door open for the original inventor to demonstrate that the patent holder derived the invention from him. If such a showing is made, the original inventor may invalidate the patent even though the holder was the first to file. As a result, the Act continues this nation’s tradition of placing a premium on inventive skill.

67. 21 USPQ2d 1737, 1739 (Bd. Pat. App. & Interf. 1991).

68. *Id.*

69. *In re DeBaun*, 687 F.2d 459, 463 (CCPA 1982).

70. 530 F.2d 1391, 1395 (CCPA 1976).

Under the 1952 Act, the stages of invention include conception and reduction to practice, followed by filing in order to obtain formal protection. The new Leahy-Smith Act instead focuses on public disclosure while still requiring filing. The latter thus shifts the weight of focus on activities that bring information to the public. Under the old act, an inventor could simply conceive of an invention, obtain a patent, but then put it in his drawer. The whole point of the intellectual property clause is to move the world forward, and yet that inventor is allowed to just sit on his patent. This is why the new focus on filing and public disclosure is not only constitutional, but preferable. Public disclosure and filing actually moves the world forward in a way that is true to the spirit of the intellectual property clause and the Constitution because they bring information out to the public.

Patent eligibility, however, goes beyond the section 102 requirements. For example, the purpose of the written description requirement is “to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him.”⁷¹ Furthermore, the written description must be sufficient, when the entire specification is considered, such that the “necessary and only reasonable construction” that would be given it by a person skilled in the art is one that clearly supports each positive limitation in the count.⁷² An example of this is seen again in *Hyatt v. Boone*.⁷³ There, the claim could be read as describing subject matter other than that of the count and thus did not establish that the applicant was in possession of the invention of the count.⁷⁴ In *Bigham v. Godtfredsen*, there is a similar understanding: “[t]he generic term halogen comprehends a limited number of species, and ordinarily constitutes a sufficient written description of the common halogen species.”⁷⁵

The enablement requirement again highlights the premium that has historically been placed on informing the public. In order for a patent application to provide a sufficient written description, it must inform third parties to the extent necessary for duplication of the invention. So, it looks beyond the inventor himself and asks if his work is moving the world forward. The first-inventor-to-file regime

71. *In re Edwards*, 568 F.2d 1349, 1352 (CCPA 1978).

72. *Id.*

73. 146 F.3d 1348, 1354-55 (Fed. Cir. 1998).

74. *Id.*

75. 857 F.2d 1415, 1417 (Fed. Cir. 1988).

speaks to the same essence. Under a first-to-invent system, the moment of invention is more subjective because conception and reduction to practice can be done privately. However, under a first-inventor-to-file system, this analysis becomes clearer. The patent is granted to the first inventor that files or is first to publicly disclose. Third parties are introduced into the equation and can validate or discredit the relevant key dates that the patent system is looking to.

This public record, in turn, brings additional benefits to the patent system. In the first instance, it puts any potential independent inventors on notice that a particular invention has been covered. Once they are put on notice, one of two outcomes is likely. First, the second-in-time inventor is informed that a patent already exists in the area he is pursuing invention. So, he is likely to stop developing that particular invention. Society is no worse off because identical inventions, even those developed independently, provide no benefit. The individual inventor is better off because he is clearly informed that his efforts should be redirected. Alternatively, if the second-in-time filer knows that the patent holder derived his invention from his work, the second-in-time filer may bring proceedings against the patent owner to invalidate the patent. In either scenario, the outcome is more stable because of the clarity provided by a first-inventor-to-file system.

Support for a first-inventor-to-file system can be found beyond the enablement and written description requirements as well. The *Eaton v. Evans* court stated that “in an interference proceeding, a party seeking to establish an actual reduction to practice must satisfy a two-prong test: (1) the party [must construct] an embodiment or perform[] a process that met every element of the interference count, and (2) the embodiment or process [must operate] for its intended purpose.”⁷⁶ In *Wetmore v. Quick*, the Federal Circuit reiterated that constructive reduction to practice and actual reduction to practice are not identical.⁷⁷ The court noted that, “the same evidence sufficient for a constructive reduction to practice may be insufficient to establish an actual reduction to practice, which requires a showing of the invention in a physical or tangible form that shows every element of the count.”⁷⁸ For an actual reduction to practice, the invention must have been sufficiently tested to demonstrate that it will work for

76. 204 F.3d 1094, 1097 (Fed. Cir. 2000).

77. 536 F.2d 937, 942 (CCPA 1976).

78. *Id.*

its intended purpose, but it does not need to be in a commercially satisfactory stage of development.⁷⁹

Each of the cases reflects the reality that it is unclear to determine whether an invention is ready for real-world use. A first-to-invent system further adds to this confusion. In order to verify whether the invention was indeed completed at the time claimed, the inventor must reconstruct the steps he took. This adds another layer of uncertainty because an ex post evidentiary analysis is often needed. Under a first-inventor-to-file system, an ex post evidentiary analysis will occur less often because the dates are clearer. This, in turn, speeds up the entire process because it favors these types of evidentiary hearings only when an original inventor attempts to invalidate a patent.

IV. Constitutional Case Law Supports a First-Inventor-to-File Regime

Supreme Court decisions are particularly relevant because patent law is federal. Their line of cases support the assertion that Congress was within its authority to grant patent rights in the method proscribed by the Leahy-Smith Act. For our purposes, the focus is on “inventor” because the shift from a first-to-invent regime to a first inventor to file turns largely on this word. As discussed, the former relies on conception and reduction to practice whereas the latter depends on public disclosure and filing.

79. U.S. DEPT. OF COMMERCE, U.S. PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE (8th ed. 2001) (Rev. July 2010). Several cases exemplify this idea: *Scott v. Finney*, 34 F.3d 1058, 1062, 32 USPQ2d 1115, 1118–19 (Fed. Cir. 1994) (citing numerous cases wherein the character of the testing necessary to support an actual reduction to practice varied with the complexity of the invention and the problem it solved). If a device is so simple, and its purpose and efficacy so obvious, construction alone is sufficient to demonstrate workability. *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860, 226 USPQ 402, 407 (Fed. Cir. 1985). Additional cases pertaining to the requirements necessary to establish actual reduction: *DSL Dynamic Sciences, Ltd. v. Union Switch & Signal, Inc.*, 928 F.2d 1122, 1126, 18 USPQ2d 1152, 1155 (Fed. Cir. 1991) (events occurring after an alleged actual reduction to practice can call into question whether reduction to practice has in fact occurred); *Fitzgerald v. Arbib*, 268 F.2d 763, 765–66, 122 USPQ 530, 531–32 (CCPA 1959) (“the reduction to practice of a three-dimensional design invention requires the production of an article embodying that design” in “other than a mere drawing”); *Birmingham v. Randall*, 171 F.2d 957, 80 USPQ 371, 372 (CCPA 1948) (To establish an actual reduction to practice of an invention directed to a method of making a product, it is not enough to show that the method was performed. [S]uch an invention is not reduced to practice until it is established that the product made by the process is satisfactory, and this may require successful testing of the product.)

A survey of Supreme Court decisions regarding the intellectual property clause and the definition of inventor supports the stated proposition. In 1850, the Court stated in *Gayler v. Wilder* that “the inventor of a new and useful improvement certainly has no exclusive right to it, until he obtains a patent. The right is created by the patent, and no suit can be maintained by the inventor against any one for using it before the patent is issued.”⁸⁰ Expanding on this notion, the Court stated that, “the discoverer of a new and useful improvement is vested by law with an inchoate right to its exclusive use, which he may perfect and make absolute by proceeding in the manner which the law requires.”⁸¹

These cases exemplify the issue of the Leahy-Smith Act’s constitutional viability. The Court recognized that the inventor’s right vests at the point in time at which the patent is granted. More importantly, it recognized that the patent right perfects the rights created by inventorship. Thus, it treats the two as distinct. The opposing view argues that inventorship itself vests the right. However, as seen in this early decision, the Supreme Court’s precedent does not treat the two as one in the same. In other words, the two key dates taken into consideration by the Leahy-Smith Act, public disclosure and filing, is analogous to the approach seen since 1850. Equally important here is the basic recognition that the legislative branch determines how the right is granted. Congress’ enactment of the Leahy-Smith Act fits in perfectly with this rationale. As the legislature, Congress has prescribed by law the method by which the patent right is granted.

During this same time period, the Court stated in *Evans v. Eaton* that, “no valid patent can be granted [when the second inventor] cannot be considered as the original inventor”⁸² The plaintiff in that case argued that he should be granted patent rights for his improvements to an earlier invention.⁸³ The device in question “spreads and turns the meal, cools it some, dries it, and gathers it to the bolting chest.”⁸⁴ The Court elaborated: “a patent . . . can only be for an original invention. It is of no importance that a man really believes himself to be the inventor, or is the true inventor . . . without knowledge that the thing he supposes himself to have invented was

80. 51 U.S. 477, 493 (1850).

81. *Id.*

82. 20 U.S. 356, 361 (1822).

83. *Id.* at 357.

84. *Id.*

known or used before.”⁸⁵ Furthermore, the Court stated, “as a patent for the whole machine, including the alleged improvements, it is void because the plaintiff was not the original inventor of the machine.”⁸⁶

Again, during this early period, the analysis turns on whether the inventor was in fact the first person to move the world forward with his work. This analysis can translate seamlessly to the current system introduced by the Leahy-Smith Act. Under a first-inventor-to-file system, a secondary inventor’s application can be rejected because the law has recognized those rights in the original inventor. The only difference would be the point in time when the original inventor’s rights vested in a patent. Under the new regime, the first to file or publicly disclose would have his rights secured. Thus, he would be the original inventor. The second-in-time inventor would still be blocked from a patent because those rights would have already vested. Therefore, the change from a first-to-invent to a first-inventor-to-file regime would not significantly conflict with the constitutional rationale dating back to the 1820s.

This argument is bolstered by the Court’s deference to the Patent Act of 1793.⁸⁷ The Court recognizes that the validity of patents and their assignment to the inventor derives from congressional legislation.⁸⁸ The Court has sidestepped lower court interpretations of the Patent Act of 1793 and deferred to the congressional text.⁸⁹ This reinforces the notion that the Court favors deference to the legislative branch in deciding these matters. In addition, this decision carries considerable weight in interpreting the intellectual property clause given the early time period in which it was made. Because this case was decided within the Founding Generation, its implications are further cemented as precedent. Accordingly, the Leahy-Smith Act is in line with this reasoning. Neither constitutional text nor early constitutional case law disfavors Congress from making these kinds of decisions. Rather, the language and deference seen here indicate that Congress is well within their realm of authority to define the word “inventor” and set the framework for granting patent rights.

In 1824, the Supreme Court examined the extent of congressional authority in the landmark decision of *Gibbons v.*

85. *Id.* at 379.

86. *Id.*

87. *Id.* at 429.

88. *Id.*

89. *Id.* at 435.

Ogden.⁹⁰ While this case is taught nationwide for its implications on interstate commerce, it is also an early examination of the intellectual property clause that yielded a nuanced approach to Congress' capacity to legislate in that area. The Court stated that, while Congress may grant patent rights to inventors through Article I, this source for granting patent rights was not necessarily exclusive.⁹¹ The Court stated that other forms and levels of government may grant patent rights so long as they do not conflict with the intellectual property clause.⁹² Conversely, "[the intellectual property clause] excludes all rights to legislate for the benefit of any person who is not himself the inventor."

Most importantly, the Court accepts the legislative definition of "inventor" even though the case in effect limits congressional authority. By establishing these extensions and limitations, the Court demonstrated that it was taking more than a perfunctory look at Congress' power under the intellectual property clause. Within this framing, the Court elected to accept Congress' definition of inventorship. Thus, the Court, at least implicitly, acknowledges that Congress may statutorily define that term, which is exactly what Congress has done with the Leahy-Smith Act. They defined a term that is within their realm of authority.

Within the context of the Court defining and shaping Congress' authority under the intellectual property clause, some boundaries have been set. As one of the most cited decisions in this field, *Graham v. John Deere Co. of Kansas City* states these boundaries most clearly.⁹³ There, the Court stated that, "Congress may not authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available."⁹⁴ This conclusion was based on the rationale that "innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in a patent system which by constitutional command must 'promote the Progress of useful Arts.'"⁹⁵ In unequivocal terms, the Court stated that, "this is the standard expressed in the Constitution and it may not be ignored.

90. 22 U.S. 1, 9 (1824).

91. *Id.* at 45.

92. *Id.*

93. 383 U.S. 1, 6 (1966).

94. *Id.*

95. *Id.*

And it is in this light that patent validity ‘requires reference to a standard written into the Constitution.’”⁹⁶

The importance of this precedent is relevant for a variety of reasons. First, it again highlights that Congress is not unbound in granting patent rights. Second, it reaffirms the notion that all authority in granting these rights must stem from the Constitution. In the first instance, the Leahy-Smith Act does not encounter any insurmountable constitutional challenges. The text of the Act does not remove knowledge from the public domain. Once the original patent is granted to the first inventor to file, that information is no longer in the public domain. Therefore, a second applicant who claims to have developed the invention prior to the first inventor to file is put on notice. The burden is placed on inventors to remain vigilant in monitoring similar patent applications that may cover their invention. In the second instance, the Leahy-Smith Act derives its authority from the Constitution. As stated previously, Congress has the power to grant patents to inventors. And, as demonstrated by the relevant case law, this power includes statutorily defining terms, which is exactly what Congress has done in the Leahy-Smith Act. Since the Act does not remove information from the public domain and it derives its authority from the Constitution, it does not encounter insurmountable constitutional challenges based on the landmark case law.

This interpretation is also consistent with congressional legislation from that period. According to the Bayh-Dole Act, “whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore.”⁹⁷ This statute supports the constitutionality of the Leahy-Smith Act in two ways. First, it demonstrates that the Leahy-Smith Act is consistent with the preceding patent legislation. Like the Bayh-Dole Act, the Leahy-Smith Act allows patent rights to be granted to an inventor for his inventions. Again, the only distinction is the point in time in which those rights are granted. Second, the Bayh-Dole Act indicates that Congress has a history of legislating in this field, which lends credibility to the notion that Congress is within their authority to legislate in the manner detailed by the Leahy-Smith Act.

The new regime set forth in the Leahy-Smith Act does not authorize patent rights to be vested in individuals who are not the

96. *Id.*

97. 35 U.S.C. § 101 (1952).

inventor. It does not allow granting of more than one patent covering the same area. It also does not allow granting of patent rights on naturally occurring substances. Therefore, the only meaningful change it ushers in is the point in time in which the rights are granted. Since this is consistent with Congress' legislative history in the field, the change to a first-inventor-to-file regime is constitutional.

Conclusion

The text of the Constitution does not limit Congress' ability to shape the method by which patents are issued. Various Supreme Court decisions have set boundaries on Congress' power in this area. A first-inventor-to-file system is not outside of these boundaries. Because of these considerations, the Leahy-Smith Act is constitutional. Equally important are the policy considerations in favor of the regime set forth in the Leahy-Smith Act. The Act establishes clear guidelines for when patent rights are created. It also facilitates the patent process by establishing a framework designed to eliminate unnecessary evidentiary claims. On an international level, it places the United States' system in harmony with the majority of the nations with whom we trade. From a practical standpoint, this system is also in line with the cases used by the USPTO in establishing its guidelines for determining patentability. As a result, not only is the first-inventor-to-file regime in the Leahy-Smith Act constitutional, but in many respects it is also a better alternative to a first-to-invent system.