

Chapter 1

The First-to-File Rule: Evolution and Application

Senator Patrick Leahy and Representative Lamar Smith, the Congressional sponsors of the America Invents Act (AIA), when considering the volume and intensity of the debate that preceded the signing of the Act into law in 2011, may have found it amusing, if it occurred to them at all, that the first U.S. patent examining body included among its three members the Secretary of War, Henry Knox.¹ While Mr. Knox, who has since come to be recognized as the father of American army artillery, possessed considerable war expertise, it is doubtful that this expertise was a factor in his being appointed to the Patent Board, and it is safe to say that **patents** have never been at the center of a military war. Nevertheless, patents have generated controversies at various times since their introduction into the United States, and possibly the most hotly debated controversy was the one over the proposal made 200 years after Mr. Knox assumed his duties as an examiner, that is, that patents be awarded on a “first-to-file” basis rather than the long-standing policy of “first-to-invent.” Those opposing the proposal argued that, among other perceived evils, it would reverse 200 years of precedent, and vigorous arguments both for and against the proposal were expressed not only by various interest groups within the United States but also between the United States and its allies. The proposal passed however, and it, together with the other provisions of the AIA, produced the greatest overall change in U.S. patent law in 60 years.²

The “**first-to-invent**” and now the “**first-to-file**” rules were devised to resolve priority disputes, that is, competing attempts to obtain patent coverage by different individuals or entities who have separately invented the same invention. Although

¹ The other two members of the Patent Board (or, as it called itself, the “Commissioners for the Promotion of Useful Arts”) were Thomas Jefferson, who was the Secretary of State, and Edmund Randolph, who was the Attorney General.

² The most recent major change occurred with the enactment of the U.S. Patent Act of 1952.

these priority disputes could seemingly arise anywhere in the world and the U.S. patent system was not the world's first, the United States had to develop its own rule with little guidance from preexisting systems.

1.1 HISTORY OF THE FIRST-TO-FILE RULE IN THE UNITED STATES

The patent system existing in England at the time that the empowering clause in the U.S. Constitution³ was written and the first U.S. patent law⁴ was enacted is commonly considered the basis for the U.S. law. The original English patents were privileges granted by the Crown under royal prerogative rather than property rights and were not rewards for ingenuity or discovery. In fact, the first patents were patents of importation, granted to individuals to reward them for introducing products and processes into the country from abroad. This was soon expanded to include patents of invention, that is, for innovations originating within the country itself, but it eventually became apparent that both these types of royal grants were more of a hindrance to domestic industry at large than an incentive for technological advance. As a result, Parliament enacted the Statute of Monopolies in 1621, which voided all patents, including patents of invention and importation as well as business licenses, *except* those for the “sole working or making of any manner of new manufacture within this realm, [granted] to the first and true inventor or inventors ... [that was] not contrary to the law nor mischievous to the state by raising prices of commodities at home, or hurt of trade ...” While the wording of this exception would appear to be an explicit limitation to patents of invention and an institution of a first-to-invent policy, these were both subsequently obscured by the English courts in their interpretation of the expression “the first and true inventor or inventors” to include importers of products and processes that the importers had not themselves invented. Whatever the expression may have implied, however, no priority disputes were adjudicated in England between Parliament's enactment of the Statute of Monopolies and the U.S. Congress' enactment of its first Patent Act almost 170 years later. This left the United States with no precedent on how to resolve priority disputes other than the Statute of Monopolies itself, which was obscured by the legal system's loose interpretation of “the first and true inventor.”

Unlike England, the United States in the late eighteenth century was forced to confront the issue since it faced a situation not present in England. Whereas patents in England were granted by a central authority, that is, the Crown or its law officers, the American colonies lacked a central authority and were granting patents individually well before the Revolutionary War. Even though the colonies claimed to have received the authority to do so from their colonial charters, the colonies were not consistent in how they interpreted their patenting authority. Some colonies granted patents of invention and not importation, some granted patents of

³ Article 1, Section 8, Clause 8, enacted in 1787.

⁴ The Patent Act of 1790.

importation and not invention, some granted both, and some refused to grant any patents. The inconsistencies remained as the colonies became states, but were partially mitigated by the short-lived Articles of Confederation (1781). The Articles continued to recognize the power of individual states to grant patents, however, and defined infringement to include acts occurring within the granting state as well as the importation of infringing products from other states. As for priority among competing inventors, an inventor could clearly be the first to file in one state and the second in another, and yet an early filing in one state by a particular inventor could serve as evidence of that inventor's early invention. It soon became apparent that challenges to patent validity and enforcement among different states were awkward to reconcile and that patents were of no practical use unless they were equally enforceable in all states. Furthermore, the growth in interstate commerce and the need to develop domestic industry in competition with the importation of foreign goods soon took precedence over any interest in individual state patents. For these reasons, the value of rewarding the patent to the first to invent rather than the first to file was apparent.

Countries outside the United States likewise developed their patent systems individually, based on their own interests. Although the twentieth century saw the enactment of patent treaties between groups of countries for various reasons, the initial creation of most worldwide patent systems occurred without efforts of individual countries to band together. Economic competition between countries may in fact have caused individual countries to place a high value on early filing, both to introduce new technology into their countries at an early date by way of the descriptions in patents and to obtain early expiration dates for their patents to hasten the release of the new technologies to the public. This latter goal was achieved by setting the expiration date of a patent at a fixed number of years from the filing date, a policy that the United States did not adopt until 1995.

First-to-file thus became the general rule worldwide, with the United States being the sole exception. Why then did the United States hold out for so long? There is certainly no reason to expect that two (or more) individuals, with or without knowledge of each other's existence, were any more likely to come up with the same invention in the late twentieth century than they were in the eighteenth. Individuals in the late twentieth century were more likely to seek patent coverage, however, due to their recognition of the greatly increased economic power of patents, and the administrative complexities of determining the first to invent in priority disputes became ever more cumbersome and expensive both for the parties involved and for the Patent and Trademark Office (PTO). Most significantly, however, growth in the global economy and international trade placed the United States under pressure to reconsider its adherence to the **first-to-invent rule**, since the adverse effects of this growth included an increasing trade deficit in the United States as well as the piracy of American products by manufacturers in third world countries. The resulting damage to U.S. companies and the U.S. economy in general has prompted the United States to try to enforce its intellectual property more aggressively, as evidenced by an increase in U.S. inventors applying for patents abroad and a desire for U.S. patents to have a more global impact. International treaties are an effective means of promoting

these goals, by harmonizing standards of patentability, coordinating procedures for applying for patent protection in multiple countries, and simplifying the means of enforcing patents across international boundaries. Both Congress and American industry have recognized the potential benefits of these goals, and the United States has entered into such treaties, including the **General Agreement on Tariffs and Trade**,⁵ the **Trade-Related Aspects of Intellectual Property**,⁶ the **World Trade Organization**,⁷ and the **World Intellectual Property Organization**.⁸ Nevertheless, full participation of the United States in seeking global harmonization has been hindered by the U.S. adherence to the first-to-invent rule. The AIA and its institution of the first-to-file rule thus remove this obstacle.

The controversy that preceded enactment of the change by the AIA reflects the profundity of the change relative to other features of U.S. patent law, as evidenced not least by the complex set of official regulations and procedures implementing the first-to-file rule and the fact that the expertise needed to navigate these regulations has created its own subspecialty among patent attorneys. One argument against the first-to-file rule was that it is unconstitutional, based on an interpretation of use of the word “inventors” in the empowering clause⁹ of the Constitution to mean “true inventors” and therefore “first inventors.” Another is that the rule unfairly benefits large, well-funded corporations over individual inventors, startups, and nonprofit entities such as universities and research institutions, the large corporations presumably being better able to fund multiple and early patent filings. The constitutionality argument has been less than fully compelling, however, since the later of two inventors can still be a “true” inventor, and the Constitution does not state otherwise, and the empowering clause expressly states that the purpose for empowering Congress to enact patent laws is “[t]o promote the Progress of Science and useful Arts” and therefore to provide an incentive for inventors to promptly file their patent applications so that the public can obtain the greatest benefit from the information contained in the patents. As for the perceived unfairness to individuals, small businesses, universities, and research institutions, this is partially mitigated by the fee discounts that the PTO offers for “**small entities**” and “**micro entities**,” as well as administrative procedures introduced by the AIA that provide faster, cheaper, and more streamlined means of challenging patents and adjudicating patent disputes, all of which can benefit applicants who are less well funded. Ultimately, the fact that the United States has been the sole holdout among patent-granting countries of the world by adhering to the first-to-invent system, combined with the United States’ global economic considerations, is most responsible for instituting the change.

⁵ GATT, 1948.

⁶ TRIPS, 1994.

⁷ WTO, 1995.

⁸ WIPO, 1967 (United States joined in 1970).

⁹ Article 1, Section 8, Clause 8: “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....”

1.2 “WHO’S ON FIRST?”: THE RULE AND ITS APPLICATION

The first-to-file rule applies to competing *inventors* who file patent applications, not simply to competing *filers* (i.e., applicants). Any individual can file a patent application on another’s invention by substituting the filer’s name for that of the true inventor, whether for unscrupulous reasons or because of a lack of understanding of the law. The law requires that the true inventor be named when submitting the application, and a failure to do so, for whatever reason, is grounds for an examiner to reject an application or for a court to declare a patent invalid. Competing *inventors*, however, do not risk rejection or invalidation simply because of the competition, provided that each is a true inventor. They do however confront each other in a priority dispute that is resolved in favor of the first among them to file.

The act of invention, under either the first-to-invent rule or the first-to-file rule, is generally the **conception** of an idea followed by the reduction of the idea to practice. For certain inventions, the **reduction to practice** is a routine matter involving no creative input or other contribution to the conception once the conception is made, and some inventions lack an actual reduction to practice and instead are sufficiently well thought out to allow the direct filing of a patent application without construction of a prototype or the generation of test data. For these inventions, the act of invention is the conception itself. In either case, many individuals at dispersed locations obtain their education and expertise in the same area of technology, work in the same industry, read the same technical publications, and recognize the same problems in need of solution. Occasions will therefore arise where two or more individuals independently conceive of, and act upon, the same inventive idea. When independent inventors or independent groups of inventors apply separately for patents under the first-to-file rule, the rule applies regardless of whether either one was aware of the other’s existence, or of the fact that the other was working in the same area of technology, or even of the fact that the other intended to apply for a patent. If any such awareness is present however and it can be shown that a particular applicant filed an application on an invention obtained from, or derived from information obtained from, someone else, recourse for the one who originated the idea is available through a “**derivation proceeding**” rather than a simple application of the first-to-file rule. A “derivation proceeding” is an administrative proceeding conducted within the PTO (or **USPTO**) and was introduced by the AIA. The requirements and procedures for derivation proceedings are addressed in Chapter 4 of this book.

The term “file” in its various grammatical forms appears throughout both the patent law and the PTO regulations that implement the law, both before and after the AIA. The inventors will therefore benefit from knowing what constitutes a “filing” under both the first-to-invent and the first-to-file rules. The term “filing” generally refers to a submission of a patent application to an agency created by a government or by an international treaty to receive the application. The agency will

assign the application an application number that is unique to the application and will issue the submitter a receipt indicating the application number and the official date of receipt. The USPTO is one example of such an agency, patent offices (under various names) in individual countries outside the United States are further examples, and patent offices established by treaties among certain groups of countries to serve as centralized patent agencies, prominent among which are the European Patent Office (EPO) and the **Patent Cooperation Treaty (PCT)**, are still further examples. The treaty with the largest number of countries is the PCT, according to which applications can be filed in any of several receiving offices authorized by the treaty (of which the USPTO is one). The term “filing” does not include the submission of documentation to a patent attorney, to a patent administrator (such as a staff person in a corporate patent or legal department), or to any other governmental authority (such as the occasionally but misguidedly cited mailing of a description of the invention to oneself to obtain a receipt stamp from the U.S. Postal Service). Of the agencies which “filing” does include, the functions performed by these agencies differ; some are empowered to grant patents, while others simply receive and record the applications and perform a preliminary processing that is later continued by the same agency or by another agency toward granting a patent. The “applications” that can receive “filing” status include both those that will ultimately become patents and those that serve as predecessors to applications that will become patents. These predecessor applications include **provisional patent applications** (defined and described in Chapter 10) that are filed in the USPTO but not examined, PCT applications, patent applications filed in jurisdictions outside the United States and then followed with U.S. counterparts, and nonprovisional U.S. patent applications that are refiled in the USPTO for purposes such as expansion, updating, changes in emphasis, and the opportunity to present more argument and renew the examination process.

“Filing” thus covers a variety of documents submitted to a variety of authorized receiving offices, and under appropriate conditions (including timing and documentation), two or more such filings on the same or a closely related invention by the same inventor can be made in succession in the USPTO. When such successive filings are made, the later filing(s), typically the refiled applications mentioned earlier, will commonly reference the earlier one(s) with all of the applications claiming the benefit of the filing date of the earliest-filed application of the series. The terms “**continuation**,” “**continuation-in-part (C-I-P)**,” “**divisional**,” and “**reissue**” are applied to many of these refiled applications. These types of refileing are common practice, and the strategies behind their use are all within the expertise of a patent attorney. In each case, however, the earliest claimed filing date is then the “**effective**” **filing date**, while the actual receipt date of any application in the USPTO is that application’s “**actual**” **filing date**. The legally sanctioned use of the benefit of an “effective” filing date that precedes the actual filing date was well established prior to the enactment of the AIA but has been expanded significantly under the AIA and given increased emphasis by the AIA’s explicit use of the expressions “effectively filed” and “effective filing date” in the statute itself. The “first-to-file” thus means the first to *effectively* file.

1.3 ADAPTING BUSINESS ROUTINES TO THE FIRST-TO-FILE RULE

Any technology-based company or organization that seeks financial stability and growth will have an intellectual property policy that includes record keeping, control of outside disclosures and maintenance of confidentiality, and strategies for securing intellectual property rights with an emphasis on patents. Should any of these practices be expanded, eliminated, or changed in view of the first-to-file rule introduced by the AIA?

The date on which the first-to-file rule came into effect was March 16, 2013. The rule is not retroactive and therefore does not apply to applications pending on that date, to applications filed after that date but with effective filing dates before that date, or to patents granted on applications with effective filing dates before that date. All such applications and patents are still governed by the first-to-invent rule, and the rule will therefore continue to have an impact until the last patent subject to the rule expires or is no longer in force. This impact is shown in Chapter 2. For these first-to-invent cases, the value of diligent record keeping is unchanged by the AIA. Record keeping does lose a certain degree of significance in first-to-file cases, but the loss is only in the area of priority disputes. For reasons aside from priority disputes, such as establishing collaboration with others outside the company and either joint or outright ownership (see Chapter 4), as well as derivation (also addressed in Chapter 4), record keeping not only retains its value under the new rule but in some cases has greater value.

For purposes of priority disputes, early filing clearly has greater value under the first-to-file rule. Does this make it more difficult for individuals and small corporations to secure patent protection, as argued prior to the AIA's enactment? The argument stresses that individuals and small corporations are in a weaker position to manage the costs of early filings, particularly for inventions that are at a rudimentary stage and not sufficiently tested to determine technological or economic viability, and that individuals and small corporations have fewer resources to accelerate the development of an invention and to assess its economic value before filing. It has also been argued however that smaller companies have fewer inventors and therefore fewer inventions, with a correspondingly lower frequency of patent application filings. This also means less of a need for the services of patent attorneys and hence fewer legal bills. Likewise for individuals and small groups, different inventions are likely to be related in subject matter, simplifying the process of preparing the applications. This is in addition to the “**small entity**” and “**micro entity**” discounts mentioned earlier.

Nevertheless, the business routine can be adapted to protect against or minimize any loss of opportunities under the first-to-file rule. Company policy can be adapted by raising patent filings to a level of priority comparable to that of record keeping, and this can be done by including a patent attorney, or a staff person assigned to coordinate or administer patent matters with outside patent counsel, in the distribution lists of internal company research reports and in presentations or meetings where

research results are discussed and evaluated. To ensure that ongoing developments are reported, inventors should keep copies of their patent applications and consult them periodically to compare their latest research efforts and developments to those described and covered in the existing applications and to see where updating is needed. Inventors should also be encouraged to think broadly when discussing their inventions with patent counsel. An early filing date is of greatest value when the scope of the application as filed extends beyond the immediate area of the invention's interest to the inventor or the company. This can be done by first identifying the central distinguishing feature of the invention and expanding its scope of possible implementation beyond that which prompted the invention, even to areas that are well removed from the actual laboratory work and even if the chances of viability in those areas are speculative. Chapter 10 expands on this.

Among academic researchers, the publishing of one's research is often an integral part of building one's career and professional reputation, and in many cases, publishing also contributes to one's chances for long-term academic employment. The implementation of the first-to-file rule raises the question of whether the potential for patent protection for academic researchers or the institutions that employ them must suffer if the institutions continue to allow their members to publish. The answer is no; the 1-year grace period allowed to inventors for publishing their inventions that has long been a feature of U.S. patent law remains in effect under the AIA and in fact is expanded to include publications by others who have obtained their subject matter directly or indirectly from the inventor. This is explained more fully in Chapter 4. Disclosures and publications outside the grace period, that is, more than 1 year before the effective filing date of the patent application, are as much of an obstacle to patentability before the enactment of the AIA as after. And as mentioned earlier, derivation proceedings are available to inventors whose inventions have been misappropriated by another who files an application under the filer's own name but based on the inventor's disclosure or publication.

Publication of an invention before filing will nevertheless restrict one's ability to patent the invention outside the United States, that is, in countries that do not provide for grace periods, and this is true under both first-to-invent and first-to-file rules. Those companies or institutions that have instituted policies that control their members' permission to publish or that coordinate their members' publishing activities with patent filing procedures in a manner designed to preserve patent rights will thus continue to benefit from these policies. Indeed, they will benefit more under the first-to-file rule, since early filings will avoid the need for or reduce the chances of having to endure the cost and burden of derivation proceedings or of any other efforts to establish that the author of the publication obtained the published information from the inventor.