

**ANTI-MONOPOLY & PRO-COMMERCE:
THE ORIGINAL FRONTIER SPIRIT OF
AMERICAN PATENT LAW & ITS IMPLICATIONS FOR
TODAY**

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ABSTRACT

This Article describes how the original understanding of properly granted patents, from Renaissance Italy to the Patent Act of 1836, generally required tangible proof of the thing to be patented’s immediate commercializability and its benefits to society at large, along with ready access to courts or other means to challenge improperly-granted patents (under ordinary standards of proof), as such improperly-

granted patents were understood to constitute unjust monopolies that deterred, rather than facilitated, desired innovation. That original understanding is then contrasted throughout to the patent litigation system as it exists in America today in which challengers of improperly-granted patents are effectively denied access to court, while “patent trolls” can come to own vaguely-worded or overly-broad patents that should never have been granted and, without ever producing anything themselves, assert those patents in court under a “presumption of validity” to extort resources from productive enterprises that, unlike the trolls, are making products people want. The situation now—in which the original understanding of the purpose of the patent laws is so diametrically opposed to patent law’s operation today—invites reform by supporters of the patent law’s original design.

INTRODUCTION

Technology has advanced dramatically in the last two centuries. America’s patent laws govern one significant incentive encouraging invention by providing limited but exclusive monopolies on profits resulting from the sale of novel innovations. But while technology only tends to get better and better, the patent laws have wildly fluctuated regarding their purpose and design, and effects on innovation as discussed below, since their roots in Renaissance Venice, their development in England, their adoption in the English colonies in America, the ratification of the Patent Clause in the United States Constitution, and the implementation of that clause through various iterations of patent statutes and patenting systems since 1790.

Former Attorney General Michael Mukasey summarized some significant aspects of the current patent system today this way in the Wall Street Journal:

Flaws in how patents are overseen merit as much attention as outright intellectual-property theft. Patent-infringement litigation is becoming a lucrative business model rather than a way to protect legitimate rights. Hedge funds and litigation-finance companies, among others, bankroll lawsuits by nonpracticing entities, or NPEs, in exchange for a cut of the ultimate settlement or judgment. These NPEs are shell companies. They act as vehicles for the purchase of broad, poor-quality patents and use them to file meritless lawsuits. By targeting U.S. innovators and companies in critical industries, foreign-funded NPEs drain time and resources that could instead be dedicated to

producing the cutting-edge technologies that will keep America safe and prosperous.¹

These “nonpracticing entities” not only own poor-quality patents that may not have met statutory standards for patents in the first place, but they do not even bother to produce a product using the technology that’s the subject of the patent, all the while using such patent to extort money from companies that are actually producing products people want. As I have written elsewhere:

The American legal system allows anyone to impose the costs of settlement on others through lawsuits, under threat of a default judgment. Much worse, in the patent litigation context, third party financers can pay patent trolls who own many vague, valueless, and unproductive patents to threaten to sue productive entities for patent infringement, even when the allegedly infringing innovation was independently discovered and the existence of the pre-existing patent was unknowable in advance and under threat of a finding of willful infringement. Third party financers can then impose vastly disproportionate discovery costs on innocent defendants and claim damages based on the value of the defendant’s entire product rather than the smaller components to which the patent at issue relates, take advantage of standards of proof stacked to their advantage, and incentivize jurors without technical backgrounds to find for the plaintiff following the route of least resistance. All these advantages can then be leveraged by third party litigation financers of patent trolls, who produce no products, into lucrative settlements at virtually no cost to themselves, but to great costs to research and development into future products by others. Such is the scene at the Patent Litigation Casino, where patent trolls can force others to the table and play under hopelessly lopsided rules that encourage innocent rational actors to avoid playing at all by paying trolls in advance.²

How different is this real-world scenario of today from the original understanding of the purpose of the patent laws at the time of their origins in Europe, England, and in the early United States, when America was a frontier nation and it was widely understood that

1. Michael B. Mukasey, *Patent Litigation is a Matter of National Security*, WALL ST. J. (Sept. 11, 2022, 4:35 PM), <https://www.wsj.com/articles/patent-litigation-is-a-matter-of-national-security-chips-and-science-act-intellectual-property-theft-lawsuit-technology-scammers-manufacturing-11662912581>.

2. Paul Taylor, *Disclosing High Roller Bankrolling in the Patent Litigation Casino: The Need to Regulate Third Party Litigation Financing* 103 J. PAT. & TRADEMARK OFF. SOC’Y 21, 67 (2023).

patents were needed to spur the immediate production of useful products that would feed, clothe, house, and facilitate trade among citizens of a fledgling nation, not to draw money away from productive enterprises through litigation? What was the original purpose, intent, and effect of the early patent laws? And what is their purpose and design, and their effects on innovation, today? How have the patent laws progressed or retrogressed, compared to their original designs and effects? That's the subject of the present Article.

I. THE EARLIEST ORIGINS OF PATENT POLICY—PATENT MONOPOLIES DEVELOPED FOR THE PURPOSE OF ENCOURAGING THE CREATION OF NEW WORKING INDUSTRIES FOR SOCIETY'S BENEFIT

Some of the earliest understandings of what marked civilization itself focused on the production and innovation of useful products. The ancient Greeks thanked two gods for the very existence of civilization: the metal-working god Hephaestus, and Athena, the namesake of their capital who was said to have created the most useful of things, namely the olive tree, which provided wood, food, and oil for illumination.³ As Robert Coulter writes, these personifications of industriousness “all relate to controlling the forces and materials of nature and putting

3. See Robert I. Coulter, *The Field of the Statutory Useful Arts — Part II*, 34 J. PAT. OFF. SOC'Y 487, 497-498 (1952) (“Let us revert for a moment to ancient Greece, whose mythology recognized the vital role played by the inventors and the practitioners of the useful arts in elevating mankind from a primitive to a civilized state, and in providing conveniences and comforts which soon came to be regarded as necessities rather than luxuries. The god Hephaestus (Hephaistos) and the goddess Athena (Pallas Athene) were regarded as the joint givers of civilization to the Athenians. (They were later worshipped by the Romans under the names of Vulcan and Minerva.) Their joint festival (the Chalceia) commemorated the invention of bronze-working by Hephaestus. Athena . . . was the originator and patroness of the arts of shipbuilding, navigation, shoemaking, spinning, weaving, fulling, and embroidery, and she was also prominent as a promoter of agriculture. Athens was named after her and she brought to it the useful gift of fire. She earned the right to bestow her name by winning a contest presided over by Zeus, because she created an object of the greatest usefulness to man (the olive tree, which provided wood, food, and oil for illumination). Hephaestus was primarily the patron of the metal-working arts, but also of artisans generally, and his chief characteristic was usefulness . . . It is profoundly appropriate that the same sentence in our Constitution should relate both to promoting ‘Science’ (learning) and to promoting the ‘useful Arts.’ . . . It is said that Athena was the first to tame the horse and to bridle and yoke it to the chariot.”).

them to work in a practical way for utilitarian ends serving mankind's physical welfare."⁴

A thousand years later, western civilization moved from simply worshipping invention to incentivizing it when the first medieval guilds began to offer monopoly rights to encourage craftspeople to specialize. As Bruce Bugbee writes:

From the eleventh century onward . . . such major changes as the revival of towns and commerce, the acceleration of technological development, and increasing political centralization were accompanied by a growing intervention of governments in economic affairs. Corporate commercial entities, such as guilds, were commonly vested with monopolies of certain economic activities by town governments and political authorities at other levels, although some rulers restrained this practice locally. Both sovereigns and local governments, aware of technical advances elsewhere, offered privileges to lure skilled artisans into their respective jurisdictions. Monopolies and importation franchises . . . were extended in an effort to stimulate industry and commerce in various states and localities.

. . . .

[E]xclusive grants were extended in France, "Germany," and Eastern Europe during the later Middle Ages. The French awards concerned the manufacture of glass, while the German privileges, generally local in character, were particularly concerned with mining or metallurgy. . . . In the later Middle Ages the intense rivalry in the wool trade led the competing cloth towns of northern Italy to offer various privileges to attract skilled labor from elsewhere. Grants were also made to foreigners who would import techniques new to the municipality.⁵

And with the Italian Renaissance came the expansion of the granting of patents to protect the right of innovators not only to the use of their current skills, but to the creation of new products and techniques. An award issued in 1416 by the Venetian Republic to Franciscus Petri for the exclusive right to make structures with pestles for fulling fabrics stated "[that] what he [Petri] asks cannot harm our commonwealth or injure our citizens, but rather it will be useful and beneficial, mainly for the wool makers and the entire woolen gild of

4. *Id.* at 498.

5. BRUCE W. BUGBEE, GENESIS OF AMERICAN PATENT AND COPYRIGHT LAW 14-15 (1967).

Venice.”⁶ Under another exclusive grant in Venice in 1444 for a technique for building waterless flour mills for 20 years, it was required of the grantee “that a test . . . shall be made with said mills in one borough.”⁷

Patent policy, from its earliest origins, was based on the understanding that patents should be granted only when the prospects for their generation of concrete benefits for society were palpably real, and when the issuance of the patent would otherwise do no harm. The patent system was developed in Europe by governmental entities that wanted to encourage useful industries in their territories in order to make those territories more successful and competitive in reality, not just in theory. As Bugbee writes:

These grants . . . reflected State and municipal efforts to develop domestic industry by means of importation franchises and monopolies and such “encouragements” as bounties, loans, exemptions, and various forms of protection and assistance. *Utility was the central consideration, and existing monopolies were revoked if they seemed less useful to the State than a prospective industry with which they conflicted.* This policy of industrial stimulation by the State in the later Middle Ages and early Renaissance, while initially unconcerned with true invention, undoubtedly facilitated the protection of intellectual property later.

Among other factors, the decline of the medieval distinction between the liberal arts (even abstract, speculative thought) and the “servile” arts (involving the manipulation of matter) removed a great obstacle to material progress and the development of modern science.⁸

Patent monopolies were granted not to abstract dreamers, or to those who would use patents like casino chips in patent litigation,⁹ but to demonstrated innovators who agreed to actually produce products that would be useful to society at large.

6. Giulio Mandich, *Venetian Origins of Inventors' Rights*, 42 J. PAT. OFF. SOC'Y 378, 379 (1960).

7. Giulio Mandich, *Venetian Patents (1450-1550)*, 30 J. PAT. OFF. SOC'Y 166, 172 (1948).

8. BUGBEE, *supra* note 5, at 16-17 (emphasis added).

9. See generally Taylor, *supra* note 2 (discussing how current law allows third party litigation financiers to convert the unproductive patents of trolls into chips and to turn the patent litigation system into a casino).

The first known patent for true invention, granted by the Republic of Florence on June 19, 1421, to architect Filippo Brunelleschi, includes a preamble that reads:

CONSIDERING that the admirable FILIPPO BRUNELLESCHI, a man of the most perspicacious intellect, industry and invention, a citizen of Florence, has invented some machine or kind of ship, by means of which he thinks he can easily, at any time, bring in any merchandise and load on the river Arno and on any other river or water, for less money than usual, and with several other benefits to merchants and others; and that he refuses to make such machine available to the public, in order that the fruit of his genius and skill may not be reaped by another without his will and consent; and that, if he enjoyed some prerogative concerning this, he would open up what he is hiding, and would disclose it to all; AND DESIRING that this matter, so withheld and hidden without fruit, shall be brought to the light, to *be of profit both to said FILIPPO and to our whole country and others*; and that some privilege be created for said FILIPPO, as hereinafter described, so that he may be animated more fervently to even higher pursuits, and stimulated to more subtle investigations[.]¹⁰

The emphasis was on demonstrated usefulness to the citizenry. So, for example, a Venetian grant of 1460 was awarded to a Master Guilelmo for a method of constructing stoves that used only half the wood normally needed for fuel.¹¹ The grant was conditioned, as was typical, on its successful demonstration. The grant stated “Our General Welfare Board . . . , pursuant to test, *found it exactly so*; also that it will *inure to the benefit of the public* to have the type of stoves aforesaid.”¹² Another Venetian grant of 1460 to one Jacobus provided it was to “have no force and effect” unless the grantee conducted the necessary tests, at his own expense, within six months.¹³ As Bugbee writes, the Venetian authorities “devoted more attention to the possible *usefulness* of each device than to its novelty or origin.”¹⁴

10. Frank D. Prager, *Brunelleschi's Patent*, 28 J. PAT. OFF. SOC'Y 109, 109 (1946) (emphasis added).

11. See Mandich, *supra* note 7, at 173.

12. *Id.* (emphasis added).

13. *Id.* at 174.

14. BUGBEE, *supra* note 5, at 21 (emphasis added).

II. THE FIRST GENERAL PATENT STATUTE

The first known general patent statute was enacted by the Venetian Republic on March 19, 1474. Codifying the use of conditions applied in previous individually-granted patents, it provided that:

[I]f provision were made for the works and devices discovered by [inventors], so that others who may see them could not build them and take the inventor's honor away, more men would then apply their genius, would discover, and *would build devices of great utility and benefit to our commonwealth*. Therefore: BE IT ENACTED that, by the authority of this Council, every person who shall build any new and ingenious device in this City, not previously made in our Commonwealth, shall give notice of it to the office of our General Welfare Board *when it has been reduced to perfection so that it can be used and operated*.¹⁵

As Bugbee writes, “the international patent experience of nearly 500 years has merely brought amendments or improvements upon the solid core established in Renaissance Venice. For centuries to come the Venetian Republic granted numerous patents. . . .”¹⁶ Those patents included one for Galileo Galilei, whose successful application for a patent for a water-raising irrigation device included the promise that “I shall the more attentively apply myself to new inventions for universal benefit,” and also the condition that the patent was to be void if Galileo failed to build a working machine within a year.¹⁷

This approach to encouraging innovation soon spread throughout Europe. Italy “transmitted the patent institution over the Continent to France, Germany, the Netherlands and England, for the idea spread rapidly in the second half of the sixteenth century.”¹⁸

In France, “a French royal decree of 1699 established an examination practice whereby an invention would be inspected by the Royal Academy of Sciences . . . but the leading consideration with the Parliament, before that body gave its approval, was the *commercial value* of the invention and *not its intrinsic merit*.”¹⁹ And “in 1762, a French patent statute was issued [that] contained such restrictions as a

15. Mandich, *supra* note 7, at 176–177 (emphasis added).

16. BUGBEE, *supra* note 5, at 24.

17. Pasquale J. Federico, *Galileo's Patent*, 8 J. PAT. OFF. SOC'Y 576, 577–78 (1926).

18. BUGBEE, *supra* note 5, at 25.

19. *Id.* at 26 (emphasis added).

working clause requiring reduction to practice within one year on pain of forfeiture of the ‘privilege’ concerned.”²⁰

In England, “[a]s early as 1331 Edward III issued letters of protection to John Kempe of Flanders . . . for the purpose of *launching* a new textile industry and instructing Englishmen therein.”²¹ And in 1559, an Italian inventor named Giacompo Acontio:

[J]ourneyed to England, where . . . he presented to Queen Elizabeth a memorable petition . . .

. . . .

This petition . . . conveyed the basic principles of supporting the protection of intellectual property [including] that the products of creative thought are of *advantage to the public* . . . Although earlier English officials had probably been aware of Venetian and other foreign patent efforts, it seems very likely that Acontio’s application directly inspired the English policy of granting patents of invention, which in turn influenced American patent practice.²²

III. THE ABUSE OF PATENT GRANTS IN ENGLAND GAVE RISE TO LATER AMERICAN FEARS OF UNJUST MONOPOLIES (WITH PATENTS BEING ALLOWED ONLY UNDER A NARROWLY-DEFINED EXCEPTION TO A GENERAL POLICY AGAINST MONOPOLIES)

Like many governmental powers, patent grants soon fell into abuse, particularly in England, where their abuse came to make products more expensive instead of more available. As Bugbee writes:

[Queen] Elizabeth had found the practice of issuing exclusive grants a means of showing favor to such courtiers as Sir Walter Rale[i]gh . . . In the last twenty years of the [sixteenth] century the Queen’s habit of dispensing monopolies became notorious . . . Also obnoxious were grants of exclusive privileges for making such commodities as salt, salt-peter, and train-oil . . . Public outcry arose over such monopolies as the exclusive manufacture of starch and vinegar, and there were complaints against the high price of salt . . . A depression of 1597 intensified this resentment, and the growing opposition to this exercise of the Prerogative was given legal support two years later when the Queen’s Bench held in *Davenant v. Hurdis* that

20. *Id.* (emphasis added).

21. *Id.* at 27 (emphasis added).

22. *Id.* at 29–30 (emphasis added).

monopolies were against the common law. Sensing the great strength of the protest, Elizabeth made a skillful show of retreat. Late in November 1601, she informed a restless Parliament that she had never agreed to issue any privileges harmful in themselves, but since the abuse of many grants awarded by her had occasioned grievances to her people, she would repeal or suspend some of them. *Only those, she stated, which were first tested in a court of law would be put into operation henceforth.* This announcement was closely accompanied by a royal proclamation revoking some of the offending monopolies and *permitting injured subjects to challenge others in the courts.*²³

In England, then, patent abuse was remedied by widespread access to the courts, which was understood as the best means of correcting capricious patents awarded by government officials. Indeed, continued royal abuse of the patent system led Parliament to enact what became known as the Statute of Monopolies in 1624, which established a new deference to courts to help ensure granted patents were just, and not oppressive monopolies resulting in more harm than good:

[King] James . . . continued to show his predecessor's penchant for granting monopolies, the opposition to which finally culminated in Parliament's enactment of the famed Statute of Monopolies of 1624.

. . . .

[The Statute of Monopolies] set down in statutory form the principle already enunciated in *Davenant v. Hurd* (1599): that all monopolies and similar grants "for the sole buyinge sellinge makinge workinge or usinge of any thinge within this Realme" were contrary to the laws thereof and therefore void. Consistent with Elizabeth's proclamation of 1601 . . . the Statute further declared that all monopolies, grants, and letters patent, etc., were to be tested for their validity at the common law — that is, in the *courts*.²⁴

Patents to encourage innovation were excluded from the ban on monopolies and set out in the Statute of Monopolies as follows:

"Ires patents and Graunts of Priviledge for the tearme of one and twentie yeares or under, heretofore made of the sole workinge or makinge of any manner of newe Manufacture within the Realme, to the first and true Inventor or Inventors of such Manufactures, which others att the tyme of the makinge of

23. BUGBEE, *supra* note 5, at 36–37 (emphasis added).

24. *Id.* at 38–39 (emphasis added) (citation omitted).

such Letters Patents and Graunts did not use, soe they be not contrary to the Lawe nor mischievous to the State, by raisinge of the prices of Cōmodities at home, or hurt of Trade, or generallie inconvenient . . . “²⁵

Here we see the concern that patents be granted only to “true Inventors,” as the grant of patents to anyone else would inhibit industrial progress and be “mischievous to the State, by raisinge of the prices of Cōmodities at home, or hurt of Trade, or generallie inconvenient.”²⁶ Further, true inventors were subject, under a proclamation issued by Charles I in 1639, to having their patents declared void if they were “not put in Practice within three years next.”²⁷ In other words, if patent monopolies were to be granted at all, they would have to be for innovations that made things cheaper, not more expensive, that facilitated trade, and did not hinder it, or cause inconvenience, and that were actually put into practice by the inventor.

This was the state of English law contemporaneous with England’s American colonies, and it remained essentially the same throughout America’s Founding period. Indeed, as Bugbee writes, “The Statute of Monopolies was followed by no legislation seriously influencing the English law of patents prior to 1852.”²⁸

IV. ENGLAND’S PATENT PRACTICE WAS TRANSPLANTED TO ITS AMERICAN COLONIES, WHERE PATENT POLICY FOCUSED ON THE NEED FOR USEFUL INVENTIONS THAT WOULD HELP STRUGGLING COLONISTS PROSPER ON THE FRONTIER

Life in the North American colonies was hard, and the colonial governments were serious about the need to promote real material progress in America through patents. The first known appearance of patents of invention in America came in the 1640’s. As Bugbee writes:

In an attempt to assure the province and its fishing industry *a larger and cheaper supply of salt*, the [Massachusetts] General Court issued, on June 2, 1641, the following decree: “Whereas Samu: Winslow hath made a proposition to this Court to

25. *Id.* at 39 (quoting Statute of Monopolies, 1624, 21 Jac.1, c. 3 (Eng. And Wales)).

26. *Id.*

27. *Id.* at 40 (quoting PROCLAMATION OF CHARLES I REVOKING CERTAIN PATENTS AND COMMISSIONS (Apr. 9, 1639) in I THE LAW OF PATENTS AS ILLUSTRATED IN LEADING CASES 276 (Walter F. Rogers, ed. 1914).

28. BUGBEE, *supra* note 5, at 40.

furnish the countrey with salt at more easy rates then otherwise can bee had, & to make it by a meanes & way wch hitherto hath not bene discovrd, it is therefore ordered, that if said Samu: shall, within the space of one yeare, *set upon the said worke*, hee shall enjoy the same, to him & his associats, for the space of 10 yeares, so it shall not bee lawfull to any other pson to make salt after the same way during the said yeares; pvided, nevrthelesse, that it shall bee lawfull for any pson to bring in any salt, or to make salt after any othr way, dureing the said tearme.”²⁹

The applicant Winslow

[C]ontended that his process was a new one; he may have originated it himself, although his award did not specifically confirm this. Since the grant stated that during his ten-year term all other salt-making processes were to remain open to public use and that other persons were free to import salt, nothing which the public had already enjoyed was taken from it, and hence Winslow’s award was not a monopoly.³⁰

This would come to be a key element of the early understanding of why patents were justifiably exempted from the general approbation of monopolies: as long as the patented invention furthered, and did not impede, progress for the masses, it would not share the trait of monopolies generally spurring that opprobrium, namely the tendency of monopolies to reduce, not increase, the spread of useful things throughout society. As Bugbee writes of the Winslow patent, “the interest of the public was [further] protected by a working clause requiring that [Winslow] begin operations within one year.”³¹

In America, the need to alleviate the hardships of life as soon as possible was the primary impetus of patent policy. As historian Paschal Larkin reminds us:

In the group of [English] colonies, known as the New England States, the Puritans displayed that love of industry for which they were noted in the Old World, and that rigorism which practically outlawed reasonable recreation.

....

29. *Id.* at 60 (emphasis added) (citing I RECORDS OF THE GOVERNOR AND COMPANY OF THE MASSACHUSETTS BAY IN NEW ENGLAND 331 (Nathaniel B. Shurtleff, ed. 1853).

30. *Id.*

31. *Id.* at 61.

At an early period New England showed signs of a decided preference for industrial and commercial pursuits. This love of commerce was not so much promoted by Puritan prejudice as dictated by climatic and geographical conditions. Land in the Eastern colonies was less productive than land in the Southern and Middle states.³²

And as historian Bernard Bailyn writes, “In June 1641, when the economic future of New England looked most hopeless, the [Massachusetts] General Court started a serious drive to develop the region’s native resources.”³³ Part of that drive was a policy of patents, but only for those related to innovations that would actually be produced to the benefit of the public at large. Just a few years later, as Bugbee writes, “What has generally been regarded as the first apparatus or machinery patent in America was applied for on May 10, 1646, by Joseph Jenks,” an ironworks employee who claimed to know a new method of making metal tools.³⁴ Jenks presented a petition to the Massachusetts General Court that referenced the English Statute of Monopolies and its allowed 14-year patent term, and “[Jenk’s] eloquent petition of 1646 may be compared with those of Galileo (1593) and, of course, Acontio (1559), with the Venetian general patent statute (1474), and with Brunellechi’s Florentine patent (1421) . . . Expressly or by necessary implication, each asserts . . . *that the invention is valuable to the public.*”³⁵ The General Court affirmed the request and announced that among its considerations for affirming it was “ye necessity of raising such manufactures as engins of mils to go by water, for speedy dispatch of muche worke wth few hands” and “*that things may be afforded cheaper then formerly.*”³⁶ Of course, such things would not become cheaper if they were never actually produced, and so, for example, in late May, 1652, the General Court of Massachusetts Bay granted a patent for a method of salt-making, conditioning it on the grantee’s actually following through on the project.³⁷

Other English colonies in America came to adopt patent policies conditioned exclusively on the inventor’s producing things that would benefit the public at large. In Connecticut, a “statute . . . dating from

32. PASCHAL LARKIN, PROPERTY IN THE EIGHTEENTH CENTURY: WITH SPECIAL REFERENCE TO ENGLAND AND LOCKE 139–40 (1969).

33. BERNARD BAILYN, THE NEW ENGLAND MERCHANTS IN THE SEVENTEENTH CENTURY 62 (1964).

34. BUGBEE, *supra* note 5, at 62.

35. *Id.* at 63 (emphasis added).

36. *Id.* at 63–64 (emphasis added).

37. *See id.* at 64, n.18.

1672 . . . [stated] . . . ‘It is ordered; That there shall be no Monopolies granted or allowed amongst us, but of such new Inventions as shall be judged *profitable for the Country*’³⁸ And in 1728 Connecticut issued a ten-year grant to Samuel Higley and Joseph Dewey for a method of making steel, which included the following conditions: “that the said Higley and Dewey . . . *improve the art as above to any good and reasonable perfection within two years . . . and as long as they shall well prosecute the same, and no longer.*”³⁹

In New York, a 1720 patent granted to Colonel Lettis Hooper was revoked for the grantee’s failure to satisfy its working clause requirement.⁴⁰

In South Carolina, Bugbee writes, “With a relatively sophisticated and cosmopolitan society which included English, Scots, Huguenots, and immigrants from the West Indies, and with an economy based chiefly upon trade and the culture of rice, colonial South Carolina rivalled the Bay Colony in the granting of patents of invention.”⁴¹ South Carolina issued a private patent to Peter Jacob Guerard for a rice-husking “Pendulum Engine” so that he “may be encouraged to essay such other machines *as may conduce to the better propagation of any commodityes* of the produce of this Collony.”⁴² A South Carolina law of 1712 issued a patent to the builders of wind- and water-driven sawmills because doing so “will greatly improve the Country it self and its Trade and Navigation.”⁴³ And a South Carolina legislative committee approved a patent for an invention on May 7, 1743, qualified in the following way: “to the end . . . that all due encouragement be given to ingenuity and industry, *when it tends to the public good,*” with a proviso requiring the perfection of the device within two years if the patent were not to be voided.⁴⁴

As Oren Bracha has written:

Many colonial and state patents included working clauses, stipulating grants on the successful implementation of the invention within a prescribed time. Working clauses, similar to the one-year implementation stipulation in Winslow’s Massachusetts grant, appeared in almost all of the colonial patents

38. *Id.* at 69 (citation omitted) (emphasis added).

39. BUGBEE, *supra* note 5, at 70 (citation omitted) (emphasis added).

40. *See id.* at 71.

41. *Id.* at 75.

42. *Id.* at 75 (citation omitted) (emphasis added).

43. *Id.* at 77 (citation omitted).

44. BUGBEE, *supra* note 5, at 79 (citation omitted) (emphasis added).

for invention, including those made toward the end of the period. Grants sometimes stipulated the quality or price of the product to be produced. There were also occasional apprentice clauses mandating the grantee to take a certain number of local apprentices. All of these practices shaped the American patent grant as a variant of its English cousin⁴⁵

The emphasis was on the encouragement of the actual production of things that would result in the feeding, clothing, and sheltering of people most efficiently, so colonists could prosper and multiply, and colonies could grow bigger and stronger.

V. AMERICAN STATES FOLLOWING THE AMERICAN REVOLUTION
USED PATENTS & WORKING CLAUSE REQUIREMENTS TO PROMOTE
USEFUL INVENTIONS THAT WOULD MAKE AMERICAN PROSPERITY A
REALITY

The concept of patent working requirements has its roots in English and Scottish moral philosophy. The concept that one must mix their own labor into their physical surroundings to create something for which they can justify a moral claim to a property right in something reaches far back in English, Scottish, and then American, history.

English philosopher John Locke's theory of the moral justification for the development of property rights was widely influential in America. According to Locke's theory:

Though the Earth, and all inferior creatures, be common to all men, yet every man has a *Property* in his own *Person*: this no body has any right to but himself. The *Labour* of his Body, and the *Work* of his Hands, we may say, are properly his. Whatsoever then he removes out of the state that nature hath provided, and left it in, he hath mixed his *Labour* with, and joined to it something that is his own, and thereby makes it his *Property*. It being by him removed from the common state nature hath placed it in, hath by this *labour* something annexed to it, that excludes the common right of other men: for this *Labour* being the unquestionable property of the labourer, no man but he can

45. Oren Bracha, *The Commodification of Patents 1600–1836: How Patents Became Rights and Why We Should Care*, 38 LOY. L.A. L. REV. 177, 213–14 (2004).

have a right to what that is once joined to, at least where there is enough, and as good, left in common for others.⁴⁶

The Scotsman Adam Smith also associated labor with property, writing that “the property which every man has in his own labour, as it is the original foundation of all other property, so it is the most sacred and inviolable.”⁴⁷

James Madison adhered to the view that actually mixing one’s labor with things was necessary to justify property rights in general. In his Note on His Speech in the Constitutional Convention on the Right of Suffrage, Madison wrote:

In civilized communities, *property* as well as personal rights is an essential object of the laws, which *encourage industry by securing the enjoyment of its fruits: that industry from which property results*, and that enjoyment which consists not merely in its immediate use, but in its posthumous destination to objects of choice and of kindred affection.⁴⁸

As historian Paschal Larkin writes, “whatever was sacred or absolute about property rights appeared to Madison to be due to their labour origin.”⁴⁹ And such a view permeates early American patent law and its various emphases on the need to not only introduce new ideas, but to act on them to improve the world for others in society.

With Locke’s understanding of property rights already widespread, America’s War of Independence from Britain only intensified the new country’s desire for an immediate increase in commercial activity. As Bugbee writes:

The widespread desire to stimulate domestic industry may . . . account considerably for the striking reappearance of provincial patents of invention in the 1780’s . . . War and political independence combined to intensify this American desire for economic independence, and depression after the war lent urgency to the encouragement of inventors.⁵⁰

46. JOHN LOCKE, SECOND TREATISE ON GOVERNMENT 19–20 (4th ed. 1764) (ebook) (emphasis added).

47. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 151 (1776).

48. James Madison, *Note on His Speech to the Constitutional Convention on the Right to Suffrage*, VINDICATING THE FOUNDERS, <https://www.vindicatingthefounders.com/library/madison-right-of-suffrage.html> (last visited Oct. 31, 2023) (emphasis added).

49. LARKIN, *supra* note 32, at 156.

50. BUGBEE, *supra* note 5, at 85.

The first American patent known to be associated with a written description of the invention covered was issued by Pennsylvania on March 17, 1780, to Henry Guest for a method of making blubber oil.⁵¹ The patent stated it was “a reward for his discovery and for the purpose of promoting useful manufactures in this state” and it was conditioned on his construction of a manufacturing plant within the state that would start operations within eight months.⁵² Guest’s New York patent was also conditioned on the first use of the process within the state.⁵³

Pennsylvania’s patent of March 25, 1785, to James Rumsey for a boat propulsion method also included a working clause that allowed him one year in which to complete and operate the boat.⁵⁴ Pennsylvania also awarded Rumsey a patent on September 28, 1789, that declared:

[I]t is highly proper that ingenious men who by their labors and study contrive and invent improvements in arts and sciences should be rewarded by the community in proportion to the advantages *resulting* from the usefulness of their inventions, and . . . the most proper mode of ascertaining the utility of any new invention or improvement must be *experience*⁵⁵

South Carolina issued a patent on February 27, 1788, to Isaac Briggs and William Longstreet for a type of steam engine that was conditioned on the reduction of this invention to practice within a year, and it noted the purpose of the patent laws were to provide “such security [as] may encourage men of learning and genius to publish and *put in practice* such writings and discoveries as may do honor to their country and *service to mankind*.”⁵⁶

Virginia awarded John Fitch a patent on November 7, 1787, which also included a working clause voiding it if a twenty-ton steamboat vessel was not put in operation within three years.⁵⁷

51. *See id.*

52. *Id.* at 86–87 (citing STATUTES AT LARGE OF PENNSYLVANIA FROM 1682 TO 1801 X, 131-132 (James T. Mitchell & Henry Flanders eds., 1896-1911)).

53. *See id.* at 88.

54. *See id.* at 91.

55. BUGBEE, *supra* note 5, at 99 (citation omitted) (emphasis added) (The patent also required that it would be repealed under a writ of *scire facias* if it were shown that someone else had invented the device before Rumsey).

56. *Id.* at 95 (citation omitted) (emphasis added).

57. *See id.* at 97–98 (“The spectacle of the two rivals [Fitch and Rumsey, both actively competing to control steamboat production], whose [patent] applications capped a wave of petitions from other inventors, could hardly have failed to

Maryland awarded a patent to Robert Lemmon on January 20, 1787, for a spinning and carding machine, the preamble of which stated its purpose was to “promote the manufacture of cotton and wool within this state.”⁵⁸

As will be explained later in this Article, the concept of working clauses was subsumed under understandings of the term “useful arts”⁵⁹ by the time the Constitution was drafted, and in the text of the early federal statutes subsequently enacted under its authority, but even so it is worth noting that an explicit working clause made its way into a federal statute in 1832. In that year, Congress adopted its own patent working requirement, as an amendment to a statute enacted in 1800, but the working requirement was restricted to aliens who declared their intention to become United States citizens. As Walterscheid writes:

Congress also addressed in a separate act the question of permitting patents to aliens who had not complied with the two-year residence requirement set forth in the Act of 1800. It authorized aliens resident in the United States to apply for patents without meeting the two-year residency requirement provided that they declared their intention to become citizens. For the first time, it created a working requirement to maintain the validity of patents issued to such aliens. The patent would become automatically void if the invention was not introduced into public use in the United States within one year of the date of issuance of the patent or if the invention should cease to be publicly used and applied for more than six months after its introduction.”⁶⁰

The purpose of that provision was presumably to reward industrious aliens who wanted to become American citizens, but only if they actually produced the things and products they innovated and commercialized their useful product in the United States.

That Patent Act of 1832 provided that the privilege of obtaining patents:

impress those legislators who were soon to become delegates to Philadelphia or members of the First Congress.”).

58. *Id.* at 95 (citation omitted) (The patent also stated that in an infringement suit proof that “Robert Lemmon was not the original inventor of the machine” should result in a jury verdict for the defendant).

59. EDWARD C. WALTERSCHEID, *TO PROMOTE THE PROGRESS OF USEFUL ARTS: AMERICAN PATENT LAW AND ADMINISTRATION* 49 (1998).

60. *Id.* at 344–45.

[B]e extended in like manner to every alien who, at the time of petitioning for a patent, shall be a resident in the United States, and shall have declared his intention, according to law, to become a citizen thereof: Provided, that every patent granted by virtue of this act and the privileges thereto appertaining, *shall cease and determine and become absolutely void without resort to any legal process to annul or cancel the same in case of a failure on the part of any patentee, for the space of one year from the issuing thereof, to introduce into public use in the United States the invention or improvement for which the patent shall be issued*; or in case the same for any period of six months after such introduction shall not continue to be publicly used and applied in the United States, or in the case of failure to become a citizen of the United States, agreeably to notice given to the earliest period within which he shall be entitled to become a citizen of the United States.⁶¹

Today, as in other contexts explored later in this Article, changes in patent policy have flipped this original purpose of patent policy on its head, such that foreign companies can now assert poor-quality patents to extort money from American companies without producing any patented product or service themselves. As former Attorney General Michael Mukasey wrote in the *Wall Street Journal*:

One recent example of NPE [nonpracticing entity] litigation relating to semiconductors is particularly relevant to the Chips Act [a federal bill enacted into law in 2022] insofar as that legislation is supposed to promote domestic semiconductor manufacturing. A federal court ordered the largest U.S. semiconductor manufacturer, Intel, to pay an NPE, VLSI Technology, nearly \$2.2 billion in 2021 as the result of a patent-infringement lawsuit. VLSI, which is funded by a subsidiary of a foreign bank, has never developed or manufactured any product and has never used patents for anything other than filing lawsuits. The infringement claim against Intel was made immediately after VLSI purchased the formerly unused patents in question. What's more, the U.S. Patent and Trademark Office has since said that there is a "reasonable likelihood" the patents are invalid. This case is only one example of foreign investors preying on the industry lawmakers are investing in to ensure America's national security.⁶²

61. Patent Act of 1832, 4 Stat. 577 (1832), *reprinted in* BUGBEE, *supra* note 5, at 495.

62. Mukasey, *supra* note 1. (Indeed, federal subsidies for domestic microchip development, such as those in the CHIPS Act, would not be necessary if so much

VI. THE STATE OF AMERICAN PATENT POLICY LEADING UP TO THE
RATIFICATION OF THE CONSTITUTION'S PATENT CLAUSE

As we shall see, there was essentially no debate on the Patent Clause at the Constitutional Convention, so it is particularly important to look closely at America's experience with patent policy prior to the Convention, as explored above, when assessing the original understanding of its purpose and meaning.

During the course of the Revolutionary War, the American states were governed under the Articles of Confederation.⁶³ The second article of the Articles of Confederation stated, "Each state retains its sovereignty, freedom and independence, and every Power, Jurisdiction and right, which is not by this confederation expressly delegated to the United States"⁶⁴ As Walterscheid writes:

The use of the term "expressly" in Article II was what made it so supremely restrictive of the authority of the national government, i.e., "the United States, in Congress assembled." For by the literal language of Article II, if the Articles did not expressly delegate a power, jurisdiction, or right, that authority could not be exercised by the Congress. It was for this reason that the Continental Congress never attempted to issue patents or grant any form of exclusive rights to inventors in their inventions. The power to do so was simply not delegated to the Congress by the Articles.⁶⁵

Because the Articles of Confederation did not authorize Congress to regulate patents, it was necessary to include such a power in the Constitution. But what, if any, parameters to such a power should be included?

As Walterscheid writes:

Why then should the Constitution make specific reference to promoting the progress of the useful arts by securing exclusive rights in their inventions to inventors for limited times? The answer in no small measure seems to have been predicated on the fact that they desired to follow the English practice of

of the resources of domestic microchip makers did not have to be devoted to fending off lawsuits brought by patent trolls that manufactured nothing themselves).

63. *Articles of Confederation*, NAT'L ARCHIVES, <https://www.archives.gov/milestone-documents/articles-of-confederation> (last visited Dec. 10, 2023).

64. ARTICLES OF CONFEDERATION of 1781, art. II.

65. WALTERSCHEID, *supra* note 59, at 27–28.

granting exclusive rights through the issuance of patents or something similar and were not at all certain that Congress would have the power to do so without an explicit grant of authority.

....

Because of their legal training, a majority of the delegates would have recognized that the [English] Statute [of Monopolies] exempted patents for invention from its prohibition against monopolies. These same delegates would have generally been aware that such patents had been issued in England for more than a century and a half⁶⁶

But as Bugbee concludes, domestic American experience also heavily informed the wording of what ultimately became the Patent Clause:

The national patent and copyright systems created in 1790 under the Constitution were founded not only upon English precedents (themselves preceded by Continental examples) but also—for American patents—upon a century and a half of distinctive provincial tradition. . . . [T]he American law [of] intellectual property can be fully understood only if its roots are known From the long view, the chief contributions made by the colonial and state patent and copyright institutions were, first, to prepare the intellectual ground for the Federal power which rendered them obsolete, and, second, to provide a fund of experience and legal precedent upon which Constitution-makers and Federal legislators could draw selectively. . . . [T]he formative years of the American law of intellectual property were highly significant.⁶⁷

66. *Id.* at 36–37; *see also* BUGBEE, *supra* note 5, at 148 (“Thus the United States patent and copyright systems as established in 1790 represented a considerable fund of experience accumulated on both sides of the Atlantic.”).

67. BUGBEE, *supra* note 5, at 157–58; *see also* BUGBEE, *supra* note 5, at 128 (“By 1787 . . . American lawmakers were well aware of the demand for patent and copyright protection, and were, like Madison, cognizant of the weaknesses of such protection when furnished on a provincial scale. The major contribution of the state patent and copyright policies lay in the precedents which they had accumulated by that year and the ‘education’ which they had provided for men who soon left the states to play a national role. When the Constitutional Convention met, the ground had been well prepared.”); WALTERSCHEID, *supra* note 59, at 39 (stating another “source of precedent would have been the actual experience of the states in issuing patents. . . . [T]here is every reason to believe that at least some of them were cognizant of what their own and neighboring states were doing in this regard.

The Founders who were most influential in drafting of the Constitution's Patent Clause had legislative experience with patent policy prior to their taking part in the Constitutional Convention:

Included among the members of the [Constitutional] Convention . . . were not only Madison and George Washington (whose support for a Virginia copyright law Noah Webster had solicited) but also Charles Pinckney and Charles Cotesworth Pinckney, both of whom were serving in the South Carolina legislature when it enacted the general copyright-patent statute of that state in 1784. Also present in the Convention were Roger Sherman, who had been a member of Connecticut's Council of Assistants when the Connecticut copyright statute was established in 1783, and the North Carolinian Hugh Williamson, who had belonged—along with Madison—to the three-man committee of Congress which had formulated the recommendation that the states enact copyright laws (1783). These men were prominent examples of delegates who had been concerned with the protection of intellectual property before they came to Philadelphia.⁶⁸

Not only did these men have prior experience with patent policy, but at the same time and place the Constitutional Convention was being held, there was a meeting in Philadelphia of the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts, where there was vibrant discussion of the need for the encouragement of patents that would have “excellent effects.”⁶⁹ As Walterscheid writes:

In an address to the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts on August 9, 1787 in Philadelphia, Trench Coxe made express reference to the fact that the constitutional convention was then in session in that city and went on to state: “Premiums for useful invention and improvements, whether foreign or American, for the best experiments in any unknown matter, and for the largest quantity of any valuable raw material, must have *excellent effect*.” . . . While purporting to address these remarks in the context of the concerns of the state of Pennsylvania, Coxe was also in a very real sense directing them toward the delegates working to draft the new form of government for the United States.

Note that a majority of the delegates at the time of the convention were active in some capacity in their state governments.”).

68. BUGBEE, *supra* note 5, at 125–26.

69. WALTERSCHEID, *supra* note 59, at 41.

There is good reason to believe that Madison was apprised of these remarks by Coxe for less than a fortnight later he would propose that the Congress be given authority “to encourage by premiums & provisions, the advancement of useful knowledge and discoveries.”⁷⁰

Whether it was because patent law was a relatively obscure area of the law and therefore many Founders deferred to those who had experience with it, or because American patent policy was generally well understood by the members of the Convention, there was very little debate on the Patent Clause at the Constitutional Convention. According to Madison’s notes on the Convention proceedings:

[T]wo separate sets of proposals concerning intellectual property were introduced almost simultaneously on August 18. Of these propositions, which were included in each case among the powers suggested for the future Congress, one set was presented by Madison himself. Some of his proposals envisioned a national legislature with the authority . . . “To encourage by premiums & provisions, the advancement of useful knowledge and discoveries . . .” The other set of proposals was offered by Charles Pinckney, and included the following contemplated powers . . . “to grant patents for useful inventions”. . . . The weight of the limited evidence available points to Charles Pinckney as the immediate source of the proposed Federal power to issue patents of invention.⁷¹

Both Madison’s and Pinckney’s proposals were premised on the encouragement of “useful”⁷² things. Then, as Walterscheid writes:

On September 1st and 4th, this Committee of Eleven reported partially on the unfinished business presented to it. Again there was no reference to intellectual property matters. On September 5th the Committee reported five unresolved matters pertaining to the powers to be granted to the Congress. The fifth of these was what became the intellectual property clause of the Constitution, to wit: “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.” As Madison reported, this clause was approved nem:con: [meaning “no dissent”]. There is no record to indicate how the intellectual property proposals submitted by Madison and Pinckney were transformed into this clause. Madison,

70. *Id.*

71. BUGBEE, *supra* note 5, at 126–27.

72. WALTERSCHEID, *supra* note 59, at 46.

being a member of the Committee that made the change, obviously knew but never said. Neither did any other member of the Committee. It is quite conceivable, however, that Madison was the author.

....

This is particularly true since he had clearly proposed that the Congress have power to secure copyrights for authors and because he was highly interested in protecting scholarly works. Moreover, his defense of the intellectual property clause in *The Federalist* [as will be discussed later in this Article], while not conclusive on the point, is suggestive that he had more than a passing interest in this particular clause.⁷³

As Bugbee summarizes:

However divided these men [the members of the Convention] may have been over many issues raised in their meeting hall, their unanimous approval of the intellectual property clause for the Constitution is significant. Clearly the legal safeguarding of an originator's rights in his inventions, writings or other discoveries was a fundamental principle upon which the delegates were in complete agreement.⁷⁴

Nor was there any significant debate on the Patent Clause during the ratification debates among the States.⁷⁵

VII. CONCERN WITH UNJUST MONOPOLIES CAUSED THE CONVENTION TO SPECIFICALLY LIMIT CONGRESS' MODE OF GRANTING PATENTS

While the documentary record of the Constitutional Convention on the Founders' understanding of the need for a Patent Clause is sparse, it is clear they were deeply concerned with governmental grants of unjust monopoly powers, and the concept of unjust monopolies would be repeatedly contrasted with the "useful arts," which, properly understood, would not, if patented, constitute unjust monopolies.⁷⁶

73. *Id.* at 49–50, n.94.

74. BUGBEE, *supra* note 5, at 2.

75. See WALTERSCHEID, *supra* note 59, at 59–60 (“[T]he one thing that distinguishes the intellectual property clause during the ratification process is the almost total lack of comment with respect to it within any state. It simply was not an issue, and there is almost no discussion to be found concerning it in any extant documentation regarding the arguments for and against the Constitution.”).

76. See *id.* at 56–61.

Some state constitutions explicitly rejected monopolies. For example, the Maryland constitution of 1776, Section XXXIX, stated “monopolies are odious, contrary to the spirit of free government, and the principles of commerce; and ought not to be suffered.”⁷⁷ Similarly, the North Carolina constitution of 1776, Section XXIII, stated “[t]hat perpetuities and monopolies are contrary to the genius of a free State, and ought not to be allowed.”⁷⁸

Concerns over unjust monopolies granted by the government gave rise to a Patent Clause that allowed monopoly grants of a sort by Congress, but, importantly, only through a limited means. The Patent Clause is unique in the Constitution in that it not only delegates a power to Congress, but it also sets out an exclusive method for Congress’ carrying out that power, namely “by securing for limited [t]imes to [a]uthors and [i]nventors the exclusive [r]ight to their respective [w]ritings and [d]iscoveries,” a method drawn from the experiences of the colonial legislatures and prior patent practice in England.⁷⁹ Interestingly, Thomas Jefferson recorded a conversation that indicated the Convention rejected multiple other potential authorities of Congress to grant monopoly powers in one way or another, ultimately including only one “special” patent power to grant limited monopolies for limited purposes to promote “useful arts.”⁸⁰ As Bugbee writes:

It appears that this was deliberate and that other attempts to grant specific powers to Congress were rejected by the delegates. In this regard, Jefferson recorded the following as the result of a dinner conversation on March 11, 1798: “Baldwin mentions at table the following fact. When the bank bill was under discussion in the House of Representatives, Judge Wilson came in, and was standing by Baldwin. Baldwin reminded him of the following fact which passed at the grand convention. Among the enumerated powers given to Congress, was one to erect corporations. It was, on debate, struck out. Several particular powers were then proposed. Among others, Robert Morris proposed to give Congress a power to establish a

77. MD. CONST. of 1776, art. XXXIX, *reprinted in* FRANCIS NEWTON THORPE, THE FEDERAL AND STATE CONSTITUTIONS: COLONIAL CHARTERS, AND OTHER ORGANIC LAWS OF THE STATES, TERRITORIES, AND COLONIES 1690 (1909).

78. N.C. CONST. of 1776, art. XXIII, *reprinted in* FRANCIS NEWTON THORPE, THE FEDERAL AND STATE CONSTITUTIONS: COLONIAL CHARTERS, AND OTHER ORGANIC LAWS OF THE STATES, TERRITORIES, AND COLONIES 2788 (1909).

79. U.S. CONST. art. I, § 8, cl. 8.

80. *See* WALTERSCHEID, *supra* note 59, at 35 n.41 (quoting MAX FARRAND, THE RECORDS OF THE FEDERAL CONVENTION OF 1787 375-376 (1907)).

national bank. . . . [This] was rejected, as was every other special power, except that of giving copyrights to authors, and patents to inventors; the general power of incorporating being whittled down to this shred. Wilson agreed to the fact.”⁸¹

VIII. THE FOUNDERS’ CONCERNS WITH UNJUST MONOPOLIES

The Founders’ allowance of a limited Patent Clause was the result of grave misgivings regarding monopolies generally. Those well-documented general misgivings about monopolies should inform our understanding of the Founders’ desire that any prospect for unjust patent monopolies should (as will be explored later in this Article) be accompanied by ample means of judicial review to prevent the perpetuation of unjust monopolies in the form of improperly granted patents. Regarding the views on monopolies in early America, Bugbee writes:

It should be noted that the monopoly institution itself, despite its colonial past, had acquired too much of an odium in the wake of the Tea Act and the atmosphere of the Revolution to permit its transfer to the Federal Government. This traditional association of patents and even copyrights with monopolies may account for the infrequent use of the term “property” itself in American patent and copyright legislation, although the “property” concept has been upheld in the courts.⁸²

Indeed, the Boston Tea Party itself was a protest over the exclusive control the British East India Company⁸³ exercised over tea under

81. *Id.* Note that “corporations” at the time of the Founding were not corporations as we understand them today, but rather grants of exclusive monopoly rights to certain favored entities. As Justice Scalia wrote in his concurring Supreme Court opinion in *Citizens United v. FEC*, “Most of the Founders’ resentment towards corporations was directed at the state-granted monopoly privileges that individually chartered corporations enjoyed. Modern corporations do not have such privileges and would probably have been favored by most of our enterprising Founders” *Citizens United v. FEC*, 558 U.S. 310, 387–88 (Scalia, J., concurring); *Id.* at 387 n.3 (citing LAWRENCE FRIEDMAN, *A HISTORY OF AMERICAN LAW* 194 (2d ed. 1985) (“[P]eople in 1800 identified corporations with franchised monopolies.”); WILLIAM FLETCHER, *CYCLOPEDIA OF THE LAW OF CORPORATIONS* 8 (2006) (“The chief cause for the changed popular attitude towards business corporations that marked the opening of the nineteenth century was the elimination of their inherent monopolistic character. This was accomplished primarily by an extension of the principle of free incorporation under general laws.”)).

82. BUGBEE, *supra* note 5, at 131.

83. See WILLIAM DALRYMPLE, *THE ANARCHY: THE EAST INDIA COMPANY, CORPORATE VIOLENCE, AND THE PILLAGE OF AN EMPIRE* 257–58 (2019) (“On 31

its royal grant of monopoly. On December 16, 1773, the protesting colonists boarded East India Company ships and dumped their loads of tea overboard.⁸⁴

Such fears of unjust monopolies helped shape the text of the Patents Clause in the Constitution. As Walterscheid writes:

[I]t is precisely because the delegates were familiar with the Statute of Monopolies either on legal or political terms that they were not about to give the Congress any general power to create monopolies. That was entirely too reminiscent of the power of the royal prerogative which was the last thing that any one (with the possible exception of Alexander Hamilton) wanted to grant to either the executive or the legislative branches contemplated by the proposed Constitution. While they were cognizant that the patent grant constituted an express exception to the general ban on monopolies that had existed in England for more than one hundred and fifty years, they also perceived patents to be monopolies, albeit of a limited and acceptable type. If therefore they were to give power to Congress to secure exclusive rights for limited times to inventors in their discoveries, it was necessary to do so expressly. This would have seemed so obvious to them as to merit almost no discussion.⁸⁵

A. James Madison on Monopolies

In his contributions to the arguments for ratification of the Constitution in the *Federalist Papers*, James Madison defended Congress' proposed patent granting authority, writing that:

The utility of this [patent] power will scarcely be questioned. The copyright of authors has been solemnly adjudged in Great

December 1600, the last day of the first year of the new century, the 'Governor and Company of Merchants of London trading to the East Indies,' a group of 218 men, received their royal charter. This turned out to offer far wider powers than the petitioners had perhaps expected or even hoped for. As well as freedom from all customs duties for their first six voyages, it gave them a British monopoly for fifteen years [subsequently renewed until 1813] over "trade to the East Indies," a vaguely defined area that was soon taken to encompass all trade and traffic between the Cape of Good Hope and the Strait of Magellan.").

84. See *id.* ("[T]he Boston Tea Party, [which opened] the American War of Independence by dumping 90,000 pounds of EIC [East India Company] tea, worth £9,659 (over £1 million today), in Boston harbour, was in part provoked by fears that the Company might now be let loose on the thirteen colonies, much as it had been in Bengal.").

85. WALTERSCHEID, *supra* note 59, at 39.

Britain to be a right of common law. The right to useful inventions seems with equal reason to belong to the inventors. The *public good* fully coincides in both cases with the claims of individuals.⁸⁶

Madison stressed the “utility” of patents in support of “the public good,” traits not shared by unjust monopolies.⁸⁷ And just a few months after Madison wrote those words in the *Federalist Papers*, he wrote to Thomas Jefferson on October 17, 1788, stating his view that, “with regard to Monopolies, they are justly classed among the greatest nuisances in Government,” and going on to recognize the exception in the Constitution for patents, but only under appropriate safeguards, writing “[b]ut is it clear that as encouragements to literary works and ingenious discoveries, they [monopolies] are not too valuable to be wholly renounced? . . . Is there not also infinitely less danger of this abuse in our Governments than in most others?”⁸⁸

Sometime after he left the presidency in 1817, Madison continued to excoriate monopolies and defended the exceptions for patents only when they extended a “benefit actually gained to the community,” and he singled out the temporal limitations of a patent as particularly important “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 same discovery might be expected in a short time from other hands,” that is, independently invented, as so many things are today, especially in the field of information technology.⁸⁹ As Madison wrote:

86. THE FEDERALIST NO. 43, at 271–72 (James Madison) (Clinton Rossiter ed., 1961) (emphasis added).

87. *Id.*

88. JAMES MADISON, THE WRITINGS OF JAMES MADISON, COMPRISING HIS PUBLIC PAPERS AND HIS PRIVATE CORRESPONDENCE, INCLUDING NUMEROUS LETTERS AND DOCUMENTS NOW FOR THE FIRST TIME PRINTED 274–75 (Gaillard Hunt ed., 1900-1910).

89. James Madison, *Detached Memoranda*, ca. 31 January 1820, NATIONAL ARCHIVES FOUNDERS ONLINE, <https://founders.archives.gov/documents/Madison/04-01-02-0549> (last visited Sept. 19, 2023); see also Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2148–49 (2013) (quoting Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law*, 87 N.C. L. REV. 1421, 1451 (2009)) (“IT [information technology] products are complex, multicomponent devices; making one might require integrating thousands of different ideas and parts. . . . As a result, firms commonly invent technologies that are claimed by previously filed patent applications that have not yet resulted in issued patents and often have not yet even been published. Simultaneous invention and inadvertent infringement are thus ubiquitous. One study

Monopolies tho' in certain cases useful, ought to be granted with caution, and guarded with strictness agst. abuse. The Constitution *of the U. S.* has limited them to two cases, the authors of Books, and of useful inventions, in *both* which they are considered as a compensation for a benefit *actually* gained to the community, as a purchase of property which the owner might otherwise withhold from public use. There can be no just objection to a temporary monopoly in these cases: 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 same discovery might be expected in a short time from other hands. . . . [t]he danger being very great that the good resulting from the operation of the monopoly, will be overbalanced by the *evil* effect of the precedent; and it being not impossible that the monopoly itself, in its original operation, may produce more evil than good.⁹⁰

Here, Madison as well stresses the need for patents to reflect things that result in “benefit actually gained to the community,” as otherwise it “may produce more evil than good.”⁹¹ By this reasoning, improperly-granted patents for things that do not meet the criteria for legitimate innovations constitute unjust monopolies, with all the uncompensated-for evils unjust monopolies were understood to entail.

Madison also had views on the rule of law itself that would apply directly to the problems caused by improperly-granted patents that are overly-vague, or extravagantly granted.⁹² A vague patent is an inherent violation of the “rule of law,” a principle that requires clear notice of potential legal violations.⁹³ And if patents are vague and cover

found that, in software and computer technology, roughly 97% of patent suits are filed against independent inventors, not copiers.”).

90. James Madison, *Detached Memoranda*, ca. 31 January 1820, NATIONAL ARCHIVES FOUNDERS ONLINE, <https://founders.archives.gov/documents/Madison/04-01-02-0549> (last visited Sept. 19, 2023).

91. Madison, *supra* note 89.

92. *Id.*

93. See BRIAN T. YEH, CONG. RSCH. SERV., R42668, AN OVERVIEW OF THE “PATENT TROLLS” DEBATE 11 (2013) (citing FEDERAL TRADE COMMISSION, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION 51 (2011)) (noting the “fuzzy boundaries” of patents make any prior patent search “a futile endeavor, and under the doctrine of willful infringement, a risky one. That doctrine has been criticized for creating perverse disincentives by

many overlapping innovations, they deter innovation when they are used in infringement suits to extort money from innocent people who independently and wholly innocently invented something on their own. As James Madison wrote in Federalist No. 62:

It will be of little avail to the people that the laws are made by men of their own choice if the laws [or patents] be so voluminous that they cannot be read, or so incoherent that they cannot be understood . . . Law is defined to be a rule of action; but how can that be a rule, which is little known, and less fixed? . . . What prudent merchant [or inventor] will hazard his fortunes in any new branch of commerce when he knows not but that his plans may be rendered unlawful before they can be executed? What farmer or manufacturer [or inventor] will lay himself out for the encouragement given to any particular cultivation or establishment, when he can have no assurance that his preparatory labors and advances will not render him a victim to an inconstant government?⁹⁴

These words could be applied seamlessly to the dangers to merchants and commerce caused by improperly granted patents, and manufacturers today are put in exactly the sort of impossible situation Madison saw as exemplifying violations of the rule of law when threatened with lawsuits asserting improperly-granted patents, including when alleged infringers are left without the ability to have overly broad or improperly granted patents invalidated by courts.

B. Alexander Hamilton on Monopolies

Alexander Hamilton supported a more robust federal power than some other Founders, but even his assiduous encouragement of government incentives for innovators rested on his understanding that such innovations should be truly useful.⁹⁵

In 1791, Hamilton defended the creation of a form of national bank against charges that it would establish an unjust monopoly by stating “monopoly implies a *legal impediment* to the carrying on of a

exposing defendants who looked at patents they are later found to infringe to enhanced damages, adding to the cost, risk, and duration of litigation.”).

94. THE FEDERALIST NO. 62, at 381–82 (James Madison) (Clinton Rossiter ed., 1961).

95. See Clinton Rossiter, *Introduction* to A. Hamilton, J. Jay & J. Madison, THE FEDERALIST PAPERS at xv (C. Rossiter ed. 1961) (“In recent years a good deal has been made of the fact that Publius was a ‘split personality,’ speaking through Madison as a federalist and an exponent of limited government, through Hamilton as a nationalist and an admirer of energetic government.”).

trade by others than those to whom it is granted.”⁹⁶ Patents of course meet that definition of monopoly, but were countenanced on the grounds that the granting of proper patents produced some amount of utility to society. Hamilton himself showed a great interest in seeing to it that truly useful manufacturing was spurred in the new United States of America such that it could be competitive with other world powers. In his Report on the Subject of Manufacturers, Hamilton requested that Congress use federal funds “to induce the prosecution and introduction of useful discoveries, inventions and improvements, by proportionate rewards, judiciously held out and applied.”⁹⁷

Interestingly, Hamilton in at least one context insisted that a patent holder only be employed by the federal government when the patented thing the inventor was trying to sell the federal government was shown to be useful in some tangible way. Bugbee writes:

[In 1790] the Senate heard Robert Morris report on Francis Bailey’s petition (February 22) [for a patent for an undescribed process for orienting borders or patterns on paper money that could not be counterfeited], which, because of its special character, was then sent to Alexander Hamilton, Secretary of the Treasury. Hamilton replied on February 23, [1790] expressing some doubts about the effectiveness of Bailey’s invention against counterfeiting and adding that the employment of Bailey himself to print government documents should depend upon the success of the device.”⁹⁸

96. ALEXANDER HAMILTON: WRITINGS 623–24 (Joanne B. Freeman ed., 2001) (“Opinion on the Constitutionality of a National Bank”).

97. ALEXANDER HAMILTON: WRITINGS 733 (Joanne B. Freeman ed., 2001) (“Report on the Subject of Manufactures”).

98. BUGBEE, *supra* note 5, at 141–42 (citing ALEXANDER HAMILTON, REPORT ON THE PETITION OF FRANCIS BAIL, NATIONAL ARCHIVES, FOUNDERS ONLINE, <https://founders.archives.gov/documents/Hamilton/01-06-02-0167>) (last visited Sep. 19, 2023) (Hamilton writes “[t]hat it appears to him difficult to decide, to what extent that Invention will afford the Security against Counterfeiting, which is the Object of it. That nevertheless he is of opinion, it will be likely to add to the difficulty of that pernicious practice, in a sufficient degree, to merit the countenance of Government, by securing to the Petitioner an exclusive right to the use of his Invention. That with regard to the employment of the Petitioner to print such papers of a public nature, as may require precautions against Counterfeit; this, in the Judgment of the Secretary, ought to remain a matter of discretion, to be regulated by the success of the experiment and the convenience of the Public.”)

C. Thomas Jefferson on Monopolies

An exchange between Madison and Jefferson regarding the newly proposed Constitution also illustrates the tension between the Founders' fears of unjust monopolies and their support for a patent system to encourage innovation. As Walterscheid writes:

[U]pon receiving a draft of the Constitution from Madison, [Jefferson] wrote back in December expressing his general satisfaction, but also noting his concern that it did not have a bill of rights. In setting forth his views on what should be in a bill of rights, he indicated that it should provide "clearly and without the aid of sophism . . . for the restriction of monopolies."

When he found that the Constitution had been ratified, he expressed his pleasure to Madison in July 1788 and went on to amplify his views concerning monopolies, saying, "It is a good canvas, on which some strokes only want retouching. What these are, I think are sufficiently manifested by the general voice from North to South, which calls for a bill of rights. It seems pretty generally understood that this should go to . . . Monopolies . . . [I]t is better . . . to abolish . . . Monopolies, in all cases, than not to do it in any. . . . The saying there shall be no monopolies lessens the incitements to ingenuity, which is spurred by the hope of a monopoly for a limited time, as of 14. years, but the benefit even of limited monopolies is too doubtful to be opposed to that of their general suppression."⁹⁹

As Walterscheid also notes, aversion to monopolies was widespread:

Jefferson's aversion to monopolies was in no way unique. Among a variety of reasons why his fellow Virginian and delegate to the constitutional convention, James Mason, refused to sign the proposed Constitution was that "[u]nder their own construction of the general clause at the end of the enumerated powers, the congress may grant monopolies in trade and

99. WALTERSCHEID, *supra* note 59, at 56–57 (1998) (quoting Letter from Jefferson to Madison (Dec. 20, 1787), in 1 THE REPUBLIC OF LETTERS 512 (James Morton Smith ed., 1995); Letter from Jefferson to Madison (July 31, 1788), 1 THE REPUBLIC OF LETTERS 545 (James Morton Smith ed., 1995); Letter from Madison to Jefferson (Oct. 17, 1788), 1 THE REPUBLIC OF LETTERS 566 (James Morton Smith ed., 1995)) (noting that "[J]efferson would thereafter accept and play an important role in the early administration of the United States patent law."). As we will see later in this Article, Jefferson would go on to parsimoniously apply the patent laws with a strict eye toward making sure patents were not awarded extravagantly and reserved only for palpably useful inventions.

commerce.” In addition, the New York ratifying convention recommended that certain amendments be sought to it, among which were “[t]hat the congress do not grant monopolies, or erect any company with exclusive advantages of commerce.” Likewise, the ratifying conventions of Massachusetts, New Hampshire, and North Carolina all requested an amendment “that congress erect no company of merchants, with exclusive advantages in commerce.”¹⁰⁰

Although the Bill of Rights ultimately did not contain a flat ban on monopolies, the term “useful [a]rts”¹⁰¹ as it appears in the text of the Constitution was, as will be explained in more detail later in this article, understood to confine granted patents to things that would be useful to others, and not restraints of trade that would be a detriment to the public good.

D. Benjamin Franklin on Monopolies, and How Improperly Granted Patent Monopolies Cause Immediate Harm

Even Benjamin Franklin, who refused to apply for patent monopolies on his own inventions, saw the essence of patents as being a demonstrated *usefulness* to society. In Pennsylvania, even Benjamin Franklin’s famous rejection of patents on his own inventions was based on the essential utility of true patents:

Franklin . . . observed in his Autobiography that after he created the “Franklin stove” . . . the colonial Governor of Pennsylvania offered him a patent “for a [t]erm of [y]ears;” . . . “but I declin’d . . . it from a Principle which has ever weigh’d with me on such occasions, viz. That, as we enjoy great Advantages from the Inventions of others, we should be glad of an Opportunity to *serve others* by any Invention of ours, and this we should do freely and generously.”¹⁰²

Franklin’s and other Founders’ emphasis on how true patents “serve others”¹⁰³ resonate with the economic understanding today that the primary justification of patent law’s exceptions from the anti-monopoly provisions of the antitrust laws is based on the invention’s

100. *Id.* at 57–58 (first quoting THE AMERICAN MUSEUM OR REPOSITORY OF ANCIENT AND MODERN FUGITIVE PIECES, PROSE AND POLITICAL 534–36 (1787); then quoting *id.* at 156; and then quoting *id.* at 303).

101. U.S. CONST. art. I, § 8, cl. 8.

102. BUGBEE, *supra* note 5, at 72 (quoting BENJAMIN FRANKLIN, BENJAMIN FRANKLIN’S AUTOBIOGRAPHICAL WRITINGS 721 (Carl Van Doren ed., 1945) (emphasis modified)).

103. *Id.*

value to consumers, as measured by the profitability of the invention given the patent protection. As Ward S. Bowman, Jr. has written:

The “exclusive right to make, use and vend the invention or discovery,” which Congress has long granted patentees, is thus a legal monopoly exempt from the more general proscription of trade restraints and monopolization under early common law and more recent antitrust statutes.

....

The argument for patents is that without this temporary monopoly there would be insufficient profit incentives to produce the invention, and that because an invention is profitable only if consumers are willing to pay what the patentee charges, the consumers are therefore better off than they would be without the invention, even if they are charged “monopoly” prices. If this is so, a trade-off (some monopoly restraint for greater output in the long run) is in the interest of socially desirable resource allocation.¹⁰⁴

Under this reasoning, a patent that had been improperly granted would constitute an unjust monopoly, and as we will see later in this Article, early Congresses saw to it that improperly granted patents were made subject, by statute, to judicial appeals to help ensure that any unjust monopolies created by improperly granted patents could be invalidated in court. Since such monopoly grants by the government cause immediate economic harm in and of themselves, the availability of prompt appeals of potentially improperly granted patents under typical standards of proof (standards akin to “preponderance of the evidence” rather than heightened standards such as “clear and convincing” evidence¹⁰⁵) is especially important, because when the

104. WARD S. BOWMAN, JR., *PATENT AND ANTITRUST LAW: A LEGAL AND ECONOMIC APPRAISAL* 2–3 (1973) (quoting Patent Act of 1870, ch. 230, § 4884, 16 Stat. 198–217 (1870) (current version 35 U.S.C. § 154)).

105. Currently, the U.S. Patent Act establishes that once a patent has been granted by the United States Patent and Trademark Office (USPTO), “a patent shall be presumed valid,” 35 U.S.C. § 282 (1994), and the Court of Appeals for the Federal Circuit has interpreted this provision to require a party defending against an infringement charge to do so by “clear and convincing evidence” that a patent was improperly granted, *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1359 (Fed. Cir. 2007) (“Since we must presume a valid patent, the patent challenger bears the burden of proving the factual elements of invalidity by clear and convincing evidence.”). See also *Clear and Convincing Evidence*, BLACK’S LAW DICTIONARY (11th ed. 2019) (“Evidence indicating that the thing to be proved is highly probable

government enforces an illegitimate patent, the government itself is denying others the ability to innovate what they would otherwise be able to exercise freely.

IX. THE ORIGINAL UNDERSTANDING OF THE MEANING OF “USEFUL ARTS” IN THE CONSTITUTION

As mentioned previously, there was a prominent meeting of the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts while the Constitution was being debated, in which the subject of the “useful arts”¹⁰⁶ was a focus of discussion. As Walterscheid writes:

The origin of the words “useful arts” can also plausibly be determined. In 1787 “useful arts” meant basically helpful or valuable trades. Thus to promote the progress of useful arts presupposed an intent to advance or forward the course or procession of such trades. Less than a month before the intellectual property clause was first set forth by the Committee of Eleven, Philadelphia was the birthplace of a new group called the Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts. Its name was quite descriptive of its purpose. The inaugural meeting of the Society took place on August 9th [1787] and was well attended. Consequently, there is good reason to believe that Madison and the other members of the Committee of Eleven were not only aware of its existence but conversant with its aims as well.¹⁰⁷

.....

The justification for forming the Society was set forth in the following terms: “In the various stages of her political existence, America has derived great advantages from the establishment of manufactures and the useful arts. Her present situation in the world calls her by new and weighty considerations, to

or reasonably certain. This is a greater burden than preponderance of the evidence.”).

106. WALTERSCHEID, *supra* note 59, at 35.

107. WALTERSCHEID, *supra* note 59, at 51; *Id.* at 41 n.62 (“Quoted from[a]n address to an assembly of the friends of American manufacture, convened for the purpose of establishing a society for the encouragement of manufactures and the useful arts, read in the [U]niversity of Pennsylvania, on Thursday, the 9th of August, 1787 — by Trench Coxe, Esq. and published at their request.” THE AMERICAN MUSEUM OR REPOSITORY OF ANCIENT AND MODERN FUGITIVE PIECES, PROSE AND POLITICAL 249–55 (1787)).

promote and extend them. The United States, having assumed the station of an independent government, requires new resources to support their rank and influence, both abroad and at home. Our distance from the nations of Europe – our possessing within ourselves the materials of the useful arts, and articles of consumption and commerce – the profusion of wood and water (those powerful and necessary agents in all arts and manufactures) – the variety of natural productions with which this extensive country abounds, and the number of people in our towns, and most ancient settlements, whose education has qualified them for employment of this nature – all concur to point out the necessity of promoting and establishing manufactures among ourselves.”¹⁰⁸

In that spirit, as Robert Coulter has written, the original understanding of the meaning of the term “useful arts” connoted inherent practical skills and utility in using them to produce things people would value enough to purchase. In particular, the emphasis was not on abstract ideas of primarily academic value, but on practical things made by handy people who sought to solve problems:

There can be no doubt that the promotion of the “useful Arts” in America was regarded by the founding fathers as a matter of life-and-death importance to the prosperity of the new nation. It is hard for us to realize the primitive state of technology in the latter part of the 18th century as compared to that in England, where household handicrafters were already largely replaced by craftsmen, and in some fields (notably textiles) factories employing power-driven machinery were turning out great quantities of goods both for domestic sale and for export. . . . Yet the Constitution makes it evident that the “useful Arts” thereof are of broad potential scope, else readily available terms of more specific meaning would have been used.

The problem can be easily solved, in principle, by generalizing outward upon the basis of the common ends and the common attributes of the practitioners of the useful arts of the 18th century, while preserving truly fundamental distinctions. The ordinary *practitioners* of the industrial, mechanical and manual arts did not require a high degree of intellectual attainment and cultural education, and rarely possessed them, and they engaged in manual labor, which accounted in part for their more or less lowly social and economic position in the English class

108. WALTERSCHEID, *supra* note 59, at 51 n.99 (quoting THE AMERICAN MUSEUM OR REPOSITORY OF ANCIENT AND MODERN FUGITIVE PIECES, PROSE AND POLITICAL 167 (1787)).

structure. They were not “white collar” workers. They were designated by such words as tradesman, workman, artisan, arts-man, artist, artificer, craftsman and mechanic. They learned their trades by serving as apprentices to master workmen, the usual period being seven years. They had no need of liberal arts colleges, universities, or of schools of fine arts. They learned by imitating and practicing, and by being shown the “tricks of the trade” and the “mysteries.” They used intelligence in following directions; and a certain degree of ingenuity or cunning in applying known principles to various situations and in making modifications and adaptations, especially in the case of those known as “artificers.” This is the “skill of the art” of which we speak even today.

In contradistinction to the cultural arts, the objective was to do practical things in practical ways to satisfy the physical needs of mankind. . . . The worker utilized and manipulated physical forces and corporeal things in accordance with a specific or general plan, to obtain a practical result in a practical manner, the result being beneficial to the welfare of mankind on the physical plane, whether directly or in connection with some further utilitarian activity to which the result could contribute.¹⁰⁹

As Arthur Seidel has written:

If we isolate the words [in the Constitution] relating to inventors we see that Congress has the power “To promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries.” If we are to pick out a Constitutional standard for patentability we must look to the meaning of (i) progress, (ii) promote, (iii) useful arts, (iv) inventors, and (v) discoveries. [Regarding] [t]he first phrase “To promote the Progress of . . . useful Arts, . . .”

. . . .

Dictionaries contemporaneous to the authors of the Constitution teach that the phrase means to advance or forward the course or procession of the helpful trades. This is no more than the providing of something for which someone has a use, and utility has always been a requirement of the statutes since the first Patent Act of 1790.¹¹⁰

109. Robert I. Coulter, *The Field of the Statutory Useful Arts - Part II*, 34 J. PAT. OFF. SOC’Y 487, 489, 496–497 (1952) (emphasis added).

110. Arthur H. Seidel, *The Constitution and a Standard of Patentability*, 48 J. PAT. OFF. SOC’Y 5, 9–10 (1966) (quoting U.S. CONST. art. I, § 8, cl. 8.).

Probably the most authoritative dictionary for the day was A Dictionary of the English Language, by Samuel Johnson, L. L. D. with additions by the Rev. H. J. Todd, London 1818 (Four Volumes). This dictionary carries the word meanings of the late 1700's, and it includes the following definitions: To Promote—1. to forward, to advance 2. to elevate; to exalt; to prefer. Progress—1. Course; procession; passage 2. Advancement; motion forward 3. Intellectual improvement; advancement in knowledge; proficiency 4. Removal from one place to another 5. A journey of state; a circuit. Useful—Convenient; profitable to any end; conducive or helpful to any purpose; *valuable for use*. Art—1. The power of doing something not taught by nature and instinct; as, to walk is natural, to dance is an art 2. A science; as, the liberal arts. 3. A trade 4. Artfulness; skill; dexterity 5. Cunning 6. Speculation.¹¹¹

And so, pulling from these contemporaneous dictionary definitions of the key words in the phrase “To promote the Progress of . . . useful Arts,” the Patent Clause would translate in substance to the following: “To advance the Course of . . . valuable-for-use-Powers of doing something,”¹¹² an energetic, dynamic phrase (however clunky) that fit the tenor of the times of its ratification by the people. Not surprisingly, this understanding of “useful arts” was synonymous with manufacturing, and manufacturing was indeed essential to the original popular understanding of the “useful arts.”¹¹³ As Walterscheid writes:

We begin by looking first at the views of the new federal government toward manufacturing in the United States and the role which it perceived the embryonic patent system should play in fostering manufacturing. . . . As has been indicated, the terms “useful arts” and “manufactures” were used virtually synonymously during this period. Nonetheless, the more common expression was “manufactures,” and “promoting the progress of the useful arts” was contemporaneously understood to mean promoting the development of manufacturing.¹¹⁴

111. *Id.* at n.11 (emphasis added).

112. *Id.*

113. WALTERSCHEID, *supra* note 59, at 145–46.

114. *Id.*

X. THE MEANING OF “USEFUL ARTS” IN THE PATENT ACTS

These understandings also came to be incorporated into the Patent Act of 1790. After the ratification of the Constitution but prior to the enactment of the first federal patent statutes, the earliest patent petitions submitted to the first Congress, not surprisingly, emphasized the need for practical social benefits in accordance with the original understanding of the Patent Clause. As Oren Bracha writes:

[E]arly potential patentees and the first Congress did not show any sign of interpreting the constitutional clause as necessitating a deviation from existing practices. Soon after Congress convened, a trickle of patent petitions arrived, and the trickle gradually grew into a flood. *Petitioners, some of whom referred to the constitutional clause, acted in familiar patterns. Their petitions detailed the specific social benefits that their inventions offered* As far as the petitioners were concerned, the only effect of the constitutional clause was to transfer the familiar grant practice to the federal level. Congress did not seem to think otherwise. It did not reject the individual privilege petitions, but rather transferred them for consideration on the merits by a special committee. In at least one case, a private enactment was almost passed. At some point, for reasons that remain somewhat obscure, the House dealing with the various individual petitions decided to respond by enacting a general patent law.¹¹⁵

As Coulter writes, “It is evident that Congress employed the term ‘useful art’ to designate all techniques and procedures of the Constitutional ‘useful Arts’ field. It is implicit that these must be legitimate or lawful and that *they must be practical.*”¹¹⁶

115. Bracha, *supra* note 45, at 216–17 (emphasis added).

116. Coulter, *supra* note 3, at 500 (emphasis added). This use of the term was retained through many subsequent amendments to the patent laws. The Patent Act of 1790 referred to “any useful art, manufacture, engine, machine, or device, or any improvement therein.” *Id.* The Patent Act of 1793 changed this wording slightly to read: “any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement on any art, machine, manufacture, or composition of matter.” *Id.* That wording was carried over into the Patent Act of 1836, and later simplified in the Patent Act of 1870 to read: “any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” *Id.* It is also worth noting that in 1795, just a few years after the Patent Acts of 1790 and 1793 were enacted, a prominent English judge handed down a decision in *Boulton v. Bull*, (1795) 126 Eng. Rep. 651, 667, which interpreted the English Statute of Monopolies in a way that also emphasized the

XI. THE FIRST PATENT BILL (THAT DID NOT BECOME LAW), H.R. 10

As Walterscheid writes, while it was never enacted into law, the first federal patent bill introduced in the Congress, H.R. 10 “is of considerable interest because it provides an insight into the initial congressional perceptions as to what the first patent law might entail and to what extent, if any, the Congress was contemplating departing from the contemporaneous English practice.”¹¹⁷

First, H.R. 10 maintained the need for the patented thing to be “useful and important”:

[T]he Senate [through amendment to the bill] required the petition for patent to be presented to a three-member board consisting of the Secretary of State, the Secretary for the Department of War, and the Attorney General, any two of which were authorized “if they shall deem the Invention or Discovery sufficiently useful and important, to cause Letters of Patent to be made out in the name of the United States.” What this effectively did was create an examination system as opposed to a registration system, albeit one that placed a considerable degree of discretion in the board through the use of the phrase “sufficiently useful and important.”¹¹⁸

Second, the bill was concerned with promoting social utility. Section 4 of the bill noted the need to specify details of the patent, stating:

[W]hich specifications shall be so particular as not only to distinguish the invention from other things before known, but also enable a workman or other person skilled in the art, science or

practical benefits of inventions to society. *Id.* at 501–02. In that case, Lord Chief Justice Eyre wrote “Undoubtedly, there can be no patent for a mere principle; but for a principle, so far embodied and connected with corporeal substances as to be in a condition to act, and to produce effects in any, art, trade, mystery, or manual occupation, I think there may be a patent.” *Id.* at 502. As Coulter writes, “Chief Justice Eyre clearly recognized the distinction between ‘a mere principle’ and the methods practiced in the useful arts. We can easily see that the former pertains to ‘science,’ but does not in itself constitute a procedure of the ‘useful arts.’ This essential distinction between mere ideas and knowledge as such, and patentable inventions, was clearly stated in a much later English case by Buckley, J.: ‘Invention also adds to human knowledge, but not merely by disclosing something. Invention necessarily involves also the suggestion of an act to be done, and *it must be an act which results in a new product*, or a new result, or a new process, or a new combination for producing an old process or an old result.’” *Id.* (quoting *Reynolds v. Herbert Smith & Co.*, (1902) 20 R.P.C. 123, 126) (emphasis added).

117. WALTERSCHEID, *supra* note 59, at 81.

118. *Id.* at 136.

manufacture whereof it is a branch, or wherewith it may be nearest connected, to make, construct, or use the same to the end that *the public may have the full benefit thereof* after the expiration of the patent term¹¹⁹

Third, the bill provided for robust challenges to improperly-granted patents in court, with so-called “loser pays”¹²⁰ provisions benefiting successful challengers. Section 5 of the bill stated, “the costs thereof [of litigation over inventions] shall be paid by him or them against whom the verdict shall be found”¹²¹ Similarly, Section 6 of the bill included a “loser pays” provision compensating those who brought successful claims against those who obtained patents under “false pretenses.”¹²²

Notably, such appeals of allegedly invalid patents were not subject to any higher “clear and convincing evidence” standard of proof to have a patent invalidated, as is required today.¹²³ Instead, the bill provided that the granting of a patent constituted only “prima facie evidence” of its validity, which could be rebutted by other evidence under ordinary standards of proof.¹²⁴ Section 7 of the bill, regarding the standard of proof for patent challenges, provided that:

[I]n all actions to be brought by such patentee, his, her, or their executors, administrators or assigns, for any penalty incurred by virtue of this act, the said patents or specifications, or certified office copies thereof, shall be *prima facie evidence* that the said patentee or patentees, was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified, and that the same is truly specified; but that nevertheless *the defendant or defendants may plead the general issue*, and give this act or any special matter, whereof notice in

119. *Id.* at 436 (Copyright and Patents Bill, H.R. 10 (1789), reprinted in WALTERSCHEID, *supra* note 59, at 433) (emphasis added).

120. *See id.* at 437–38.

121. *Id.* at 437.

122. *See* WALTERSCHEID, *supra* note 59, at 438 (Section 6 stated “that upon oath or affirmation made before ____ court, that any patent which shall be issued in pursuance of this act, was obtained surreptitiously by, or upon false suggestion, and motion made to the said court, within one year after issuing the said patent . . . and if the party at whose complaint the process issued shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit, to be taxed by the court, and recovered in such manner as costs expended by defendants shall be recovered in due course of law.”).

123. *See supra* note 105.

124. *See* WALTERSCHEID, *supra* note 59, at 438–39 (Copyright and Patents Bill, H.R. 10 (1789), reprinted in WALTERSCHEID, *supra* note 59, at 433).

writing hath been given to the plaintiff or his attorney, thirty days before the trial, in evidence, tending to prove that the specification filed by the plaintiff within thirty days after the delivery of his patent, does not contain the whole of the truth concerning his invention or discovery; or that it contains more than is necessary to produce the effect described¹²⁵

XII. THE PATENT BILL THAT WAS ULTIMATELY ENACTED DURING THE FIRST CONGRESS (H.R. 41)

The patent bill that did become law during the first Congress, H.R. 41, was originally introduced on February 16, 1790.¹²⁶ It also contained provisions for the appeal of invalidly granted patents to federal district courts, including a “loser pays” provision for successful challengers.¹²⁷

125. *Id.* (emphasis added).

126. III DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES OF AMERICA, HOUSE OF REPRESENTATIVES JOURNAL. 1626 (L.G. De Pauw, et al. eds. 1977).

127. See WALTERSCHEID, *supra* note 59, at 447–49 (Section 3 of the bill as introduced provided: “that if upon the notice so as aforesaid given, any other person or persons shall appear before the said Secretary, and shall shew such cause as to him shall appear reasonable, why letters patent, in manner aforesaid, should not issue to the party petitioning for the same; then and in such case, the said Secretary [of State] shall refer the petition aforesaid, and the parties contending, to three indifferent persons, one to be chosen by each of the parties, and the third by the Secretary, who are hereby authorised and required to hear the same; and if upon a hearing of the said parties, it shall appear to them or any two of them, that the thing or things for which a patent is prayed, was or were, before the application to the said Secretary, used or known within the United States, to others than the petitioners, or those who derived their knowledge thereof from or under him or them, they shall certify the same accordingly, and such certificate shall be deemed a sufficient cause to stay the issuing of such letters patent. And the said referees may require each and every of them to deliver to them such specification of their several inventions or discoveries, as are herein before mentioned, signed with their hands, and upon comparing the same, the said referees shall determine and adjudge whether they are the same both in principle and execution, or whether they differ from each other in any material circumstance, and if they be found so to differ, the said referees or any two of them shall certify each of them severally, with their specifications, to the Secretary of State, to the end that such patents as aforesaid may issue, and the said Secretary is hereby required to cause such patents to be made out, proceeded upon and perfected, in the manner herein before mentioned, to each and every of the said parties. And if upon such specification, the inventions or discoveries aforesaid, claimed by two or more parties, shall appear to be substantially the

H.R. 41 as introduced also emphasized the detriment patents granted “surreptitiously” or under “false pretenses” posed to the “community” at large, with “loser pays” provisions benefiting those who successfully challenged patents on those grounds.¹²⁸ It made a granted

same both in principle and execution, the said referees shall enquire and determine the priority of the said inventions and discoveries, and certify the same to the Secretary of State. And if either party is dissatisfied with such determination of said referees, such party may appeal to the district court at the seat of government, to be heard and tried by a jury in due course of law, and shall within twenty-four hours next after such determination, file in the office of the clerk of such district court, a declaration of the facts to be tried and determined by such jury, and shall thereupon apply to the judge of said court, who is hereby authorized and required to appoint the time and place of trial of such facts, and cause the parties to be summoned to appear before such court, to be heard thereon, and also cause a jury of twelve good and lawful men of said district to be summoned and duly enpannelled to hear and try the same, as in other cases of trial by jury, and the verdict of such jury, with the proceedings of such court, shall be entered on the records of such district court; and the costs of suit shall be taxed by the court, and paid by the party against whom judgment shall be awarded . . .”).

128. *See id.* at 450–51 (Section 4 of the bill as introduced provided that: “Notwithstanding the precautions in this act contained, patents or grants of the sole and exclusive right and privilege of making, constructing, using, employing, and vending to others, divers inventions or discoveries, may be obtained surreptitiously, or upon false suggestions, *which may not only be prejudicial to individuals, but to the community*: Be it therefore enacted, that upon oath or affirmation made before the judge of the said district court, that any patent, which shall be issued in pursuance of this act, was obtained surreptitiously by, or upon false suggestion, and motion made to the said court, within one year after issuing the said patent, but not afterwards, it shall and may be lawful to, and for the judge of the said district court, if the matter alleged shall appear to him to be sufficient, to grant a rule that the patentee or patentees, his, her, or their executors, administrators or assigns shew cause, why process should not issue against him, her, or them, to repeal such patents; and if sufficient cause shall not be shewn to the contrary, the rule shall be made absolute; and thereupon shall issue and be awarded and issued against the said patentee or patentees, his, her, or their executors, administrators, or assigns, process in the name of him, her, or them, who shall complain thereof, and upon such writ, the proceedings, and judgment shall be such as to repeal the patents, and if the party at whose complaint the process issued shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit, to be taxed by the court, and recovered in such manner as costs expended by defendants shall be recovered in due course of law.”) (emphasis modified).

patent only “prima facie” evidence of validity¹²⁹ and explicitly authorized patents of importation.¹³⁰

The House of Representatives made various amendments to H.R. 41, as follows:

Section 3 of the bill amended by the House of Representatives contained provisions allowing challenges of patent grants to be referred to a panel of three independent persons (a progenitor of the more recent “Patent and Trial Appeals Board” within the Patent and Trademark Office).¹³¹

129. *See id.* at 451–52 (Section 5 of the bill as introduced provided: “that in all actions to be brought by such patentee or patentees, his, her, or their executors, administrators, or assigns, for any penalty incurred by virtue of this act, the said patents or specifications shall be prima facie evidence, that the said patentee or patentees, was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified, and that the same is truly specified; but that nevertheless the defendant or defendants may plead the general issue, and give this act, and any special matter, whereof notice in writing hath been given to the plaintiff or his attorney, thirty days before the trial, in evidence, tending to prove, that the specification filed by the plaintiff, does not contain the whole of the truth concerning his invention or discovery; or that it contains more than is necessary to produce the effect described; and if the concealment of part, or the addition of more than is necessary, shall appear to have been intended to mislead, or shall actually have mislead the public, so as the effect described cannot be produced by the means specified, then, and in such cases, the verdict and judgment shall be for the defendant, any thing in this act to the contrary notwithstanding.”).

130. *See id.* at 452 (Section 6 of the bill as introduced provided: “that any person, who shall after the passing of this act, first import into the United States from any foreign country, any art, machine, engine, device or invention, or any improvement thereon, not before used or known in the said States, such person, his executors, administrators and assigns, shall have the full benefit of this act, as if he were the original inventor or improver within the said States.”).

131. *See id.* at 457–59 (That Section 3 provided: “that if upon the notice so aforesaid given, any person or persons shall appear before the said Secretary, and shall shew cause as to him shall appear reasonable, why letters patent in manner aforesaid, should not issue to the party petitioning for the same, and the petitioner doth not acquiesce in the opinion of the said Secretary, the petition shall be referred to three judicious, disinterested persons, to be mutually chosen by the parties, or if they do not agree in such choice, to be appointed by the Chief Justice of the Supreme Court of the United States; which referrees shall hear the parties concerned, and the evidence that shall be by them produced, and if upon such hearing, it shall appear to them, or any two of them, that the thing or things for which a patent is prayed, was or were before the application to the said Secretary, used by, or known within the United States, to others than the petitioners, or those who derived their knowledge thereof from or under him or them, they shall certify the same accordingly; and such certificate shall be deemed a sufficient cause to stay

Section 5 of the bill retained the provision of H.R. 41, as originally introduced, that allowed for the appeal of invalidly granted patents to federal district courts, including a “loser pays” provision for successful challengers when such patents were granted “surreptitiously” or under “false pretenses.”¹³²

Section 6 of the bill amended by the House of Representatives also retained the provision in H.R. 41, as introduced, that made a

the issuing of such letters of patent. And the said referees may require each of the said parties to deliver to them such specification of their several inventions or discoveries, as are herein before mentioned, signed by them, and upon comparing the said inventions or discoveries, the said referees shall determine and judge whether they are substantially the same, or whether they differ from each other in any material circumstance, and if they be found so to differ, the said referees, or any two of them, shall certify each of them severally, with the specifications, to the Secretary of State; to the end that such patents as aforesaid may issue: And the said Secretary is hereby required to cause such patents to be made out, proceeded upon, and perfected in the manner herein before mentioned, to each and every of the said parties. And if such specification, the inventions or discoveries aforesaid, claimed by two or more parties, shall appear to be substantially the same, then the said referees shall enquire into, and determine the priority of the said inventions or discoveries, and certify the same to the Secretary of State.”). Today, the “Patent Trial and Appeal Board (PTAB) conducts trials, including inter partes, post-grant, and covered business method patent reviews and derivation proceedings, hears appeals from adverse examiner decisions in patent applications and reexamination proceedings, and renders decisions in interferences.” *Patent Trial and Appeal Board, U.S. PATENT & TRADEMARK OFFICE*, <https://www.uspto.gov/patents/ptab> (last modified Sept. 19, 2023).

132. See WALTERSCHEID, *supra* note 59, at 460 (Section 5 of the bill as passed by the House of Representatives stated: “that upon oath or affirmation made before the Judge of the District Court wherein the defendant resides, that any patent which shall be issued in pursuance to this act, was obtained surreptitiously by, or upon false suggestion, and motion made to the said court, within one year after issuing the said patent, (but not afterwards) it shall and may be lawful to, and for the Judge of the said District Court, if the matter alledged shall appear to him to be sufficient to grant a rule, that the patentee or patentees, his, her, or their executors, administrators, or assigns, shew cause why process should not issue against him, her, or them, to repeal such patents. And if sufficient cause shall not be shewn to the contrary, the rule shall be made absolute; and thereupon the said Judge shall order process to be issued as aforesaid against such patentee or patentees, his, her, or their executors, administrators, or assigns; and in case no sufficient cause shall be shewn to the contrary, judgment shall be rendered by such court for the repeal of such patent or patents, and if the party at whose complaint the process issued, shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit; to be taxed by the court, and recovered in such manner as costs expended by defendants shall be recovered in due course of law.”).

granted patent only “prima facie” evidence of validity.¹³³ The House deleted from Section 6 the provision specifically authorizing patents of importation.¹³⁴

XIII. THE PATENT ACT OF 1790

As Walterscheid points out, the dearth of debate around H.R. 10 paralleled the dearth of debate around the Patent Clause itself: “H.R. 10 was never actually debated at all. There was perhaps a grand total of two days of debate in the House concerning H.R. 41 and perhaps a similar time in the Senate. Only four persons are known to have actually sought to comment on H.R. 41.”¹³⁵ The Patent Act of 1790, as enacted, contained the following provisions: Section 2 of the Act required very particular patent specifications “to the end that the public may have the full benefit thereof after the expiration of the Patent term,” providing that any patent:

[s]pecification shall be so particular, and said Models so exact, as not only to distinguish the invention or discovery from other things before known and used, but also to enable a Workman or other person skilled in the Art of Manufacture whereof it is a branch or wherewith it may be nearest connected, to make, construct, or use the same, to the end that the public may have the full benefit thereof after the expiration of the Patent term”¹³⁶

Section 5 of the Act allowed challenges to the validity of a patent “obtained surreptitiously by, or upon false suggestion” by anyone to a District Court, with the patent enjoying no presumption of validity, but instead providing for challengers to prevail upon showing

133. *See id.* at 460–61 (Section 6 of the bill as amended by the House stated: “that in all actions to be brought by such patentee or patentees, his, her, or their executors, administrators or assigns, for any penalty incurred by virtue of this act, the said patent or specifications shall be *prima facie* evidence that the said patentee or patentees, was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified, and that the same is truly specified; but that nevertheless the defendant or defendants may plead the general issue”).

134. *See id.* at 125. But, as will be explained later in this Article, the language that survived would still be read to allow patents of importation.

135. *Id.* at 142.

136. *Id.* at 465 (Patent Act of 1790, ch.7, 1 Stat. 109-112 (1790), *reprinted in* WALTERSCHEID *supra* note 59, at 463).

“sufficient” evidence, and it provided that successful patent challengers would have their legal costs repaid to them.¹³⁷

Section 6 of the Act provided that patents were only “prima facie” evidence of validity, and that challengers could simply provide evidence “tending to prove that the specification filed by the Plaintiff does not contain the whole of the truth concerning his invention or discovery; or that it contains more than is necessary to produce the effect described; and if the concealment of part, or the addition of more than is necessary,” if such misconduct “actually mis[led] the public.”¹³⁸

As Walterscheid also notes, “the Act [of 1790] provided no judicial remedy whatever in the event two members of the board decided

137. WALTERSCHEID, *supra* note 59, at 467 (Patent Bill, H.R. 121 (1791), *reprinted in* WALTERSCHEID *supra* note 59, at 469) (Section 5 provided that: “[T]hat upon Oath or Affirmation made before the Judge of the District Court where the Defendant resides, that any Patent which shall be issued in pursuance of this Act was obtained surreptitiously by, or upon false suggestion, and motion made to the said Court within one year after issuing the said Patent, but not afterwards, it shall and may be lawful to and for the Judge of the said District Court, if the matter alleged shall appear to him to be sufficient, to grant a rule that the Patentee or Patentees his, her, or their Executors, Administrators or Assigns shew cause why process should not issue against him, her, or them to repeal such Patents; and if sufficient cause shall not be shewn to the contrary, the Rule shall be made absolute, and thereupon the said Judge shall order process to be issued as aforesaid against such Patentee or Patentees, his, her, or their Executors, Administrators or Assigns; And in case no sufficient cause shall be shewn to the contrary, or if it shall appear that the Patentee was not the first and true inventor or discoverer, Judgment shall be rendered by such Court for the repeal of such Patent or Patents; and if the Party, at whose complaint the Process issued, shall have Judgment given against him, he shall pay all such Costs as the Defendant shall be put to in defending the Suit, to be taxed by the Court and recovered in such manner as Costs expended by defendants shall be recovered in due course of law.”).

138. *Id.* at 467–68 (Section 6 provided that: “said patents or Specifications shall be prima facie evidence that the said Patentee or Patentees, was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified, and that the same is truly specified; but that nevertheless the defendant or defendants may plead the General issue, and give this Act, and any special Matter whereof notice in Writing shall have been given to the Plaintiff or his Attorney thirty days before the trial, in Evidence, tending to prove that the specification filed by the Plaintiff does not contain the whole of the truth concerning his invention or discovery; or that it contains more than is necessary to produce the effect described; and if the concealment of part, or the addition of more than is necessary, shall appear to have been intended to mislead, or shall actually mislead the public, so as the effect described cannot be produced by the means specified, then, and in such cases, the Verdict and Judgment shall be for the Defendant.”).

that the invention was not of sufficient usefulness and importance for a patent to issue.”¹³⁹ This lack of a provision for judicial review in the event the patent board *failed to issue a patent*, while judicial review was allowed to challenge allegedly invalidly granted patents, shows the Founders were much more concerned with correcting improperly granted patents than with correcting allegedly improper failures to grant patents. The Founders erred on the side of limiting the number of patent monopolies by placing failures to grant patents beyond appeal yet allowing the appeal of granted patents.

Interestingly, the Senate adopted an amendment to H.R. 41 that would have made it *mandatory* for patentees to license their granted patents (a form of working requirement), but that amendment was only dropped from the bill by the House of Representatives because the Senate amendment required the Supreme Court to set the licensing fees. As Edward Walterscheid writes:

Fully as remarkable . . . was the Senate amendment setting forth a method for obtaining compulsory licensing in the event “the grantee of such patent shall neglect to offer for sale within the United States a sufficient number of such manufacture, engine, machine, art or device, or any improvement therein or shall sell the same at a price beyond what may be judged an adequate compensation.” The idea of compulsory licensing was not new; it had been tried elsewhere with regard to patenting, and was a feature of several of the state copyright laws that had been enacted.

. . . .

On April 3rd, the House considered the Senate amendments and accepted all but the tenth one pertaining to compulsory licensing.¹⁴⁰

As Walterscheid writes in a footnote, “It appears that the House was not enamored of ‘investing the judges of the Supreme Court with a power to determine the compensation which persons shall receive for their inventions,’”¹⁴¹ and that was the sole reason for rejecting the entire provision on compulsory licensing.

In the end, the Patent Act of 1790 allowed for the challenge in federal court of patents obtained surreptitiously or through false suggestion, and endowed patents only with the patina of “*prima facie*” evidence, subject to challenge based on any contrary evidence.

139. *Id.* at 170.

140. *Id.* at 139, 141 (citation omitted).

141. *Id.* at 141 n.107 (citation omitted).

XIV. NOTED INVENTOR THOMAS JEFFERSON'S APPLICATION OF THE PATENT ACT OF 1790

The Patent Act of 1790 was America's first federal patent statute, and the first person to administer it was a noted inventor himself, Thomas Jefferson.

As Walterscheid writes:

The Act [of 1790] provided very little guidance concerning the criteria to be used in the issuance of a patent. Aside from the fact that the patent had to be for an invention or discovery "not before known or used" which was deemed "sufficiently useful and important," no other requirements were set forth.¹⁴²

As Secretary of State, Thomas Jefferson, both a noted Founder and inventor in his own right, took on the role of prime mover on the first patent board created by the Patent Act of 1790 to evaluate patent applications, he applied his unique experience with innovation to his application of the law, and his keen focus on the utility and usefulness of devices proposed for patenting carried on the popular understanding that utility and usefulness were essential for any valid patent. As Walterscheid writes:

Several months after enactment of the Act of 1790, Jefferson wrote: "An Act of Congress authorizing the issue of patents for new discoveries has given a spring to invention beyond my conception. Being an instrument in granting the patents, I am acquainted with their discoveries. Many of them indeed are trifling, but there are some of great consequence, which have been proved of practice, and others which, if they stand the same proof, will produce great effect."¹⁴³

Jefferson emphasized the "great effect" he expected of patented innovations, and as a result he was careful not to grant patent applications willy-nilly:

[T]he patent board moved cautiously and by the end of 1790 only three patents had been "granted." Thirty-three were granted in 1791; eleven in 1792; and ten in 1793 prior to

142. WALTERSCHEID, *supra* note 59, at 170 (emphasis added). It appears none of the twenty patent cases decided by the Supreme Court prior to *Hotchkiss v. Greenwood*, 52 U.S. 248 (1851), dealt with the issue of what degree of originality constitutes patentable subject matter.

143. *Id.* at 172 (quoting Letter from Jefferson to Benjamin Vaughan (June 27, 1790), in 16 THE PAPERS OF THOMAS JEFFERSON 579 (Julian P. Boyd et al. eds., 1964).

February 21 when the Patent Act of 1793 came into being. Thus under the Act of 1790, fifty-seven patents issued. What is not known is the number of petitions for patent received during the time the Act of 1790 was in force.¹⁴⁴

As P.J. Federico writes, “Jefferson . . . did not believe in the granting of patents for small details, obvious improvements, or for frivolous devices; he was a believer in a high standard of invention.”¹⁴⁵ As an inventor himself, he knew how common it was for people to independently come across the same idea, especially when it came to minor improvements that might not warrant the granting of a patent at all. In 1807, Jefferson wrote:

Certainly an inventor ought to be allowed a right to the benefit of his invention for some certain time. It is equally certain it ought not be perpetual; for to embarrass society with monopolies for every utensil existing, & in all the details of life, would be more injurious to them than had the supposed inventors never existed: because the natural understanding of its

144. *Id.* at 173–74. Also stating:

The only extant contemporaneous information derives from a three-page manuscript report dated March 31, 1792 by Henry Remsen, the clerk in the State Department who had charge of the ministerial details involved in the granting of patents. Remsen’s report shows that fifty-six petitions needed to be acted on as of the date of the report. Federico states that: ‘The list of patents and applications on hand as shown by Remsen’s report, and the published lists of patents granted, show that at least 114 applications for patents were filed during the first two years of the three year life of the patent act [of 1790]; 49 of these applications resulted in patents. The actual number filed was probably much greater than 114 since the report is incomplete and lists only the applications under consideration, and does not give nor purport to give the applications disposed of by refusal of a patent prior to the date of the report.’ If this summation is accurate, then the board was indeed cautious in its grants and issued patents on well under half of the petitions presented to it.

Id. at 174 (citation omitted).

145. P. J. Federico, *Operation of the Patent Act of 1790*, 18 J. PAT. OFF. SOC’Y 237, 241 (1936).

members would have suggested the same things or others as good.¹⁴⁶

Jefferson later wrote in 1813, “Considering 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.”¹⁴⁷

Petitioners for patents in the early years of American patent law shared Jefferson’s view on the importance of utility patents and emphasized the practical utility of proposed inventions. As Oren Bracha writes:

Probably the best evidence in existence about the character of the [first] patent board is in the few, full patent petitions that survived. In 1790, William Pollard petitioned for a patent in what he argued to be an improvement on Arkwright’s spinning machine. Pollard’s petition is remarkable because it is overwhelmingly devoted to describing in detail and exalting the substantial social benefits offered by his invention to the United States. Pollard referred the board to “An account of the Cotton Mills in Great Britain & an Estimate of the Cotton Manufactory of that Country,” a list of statistics that demonstrated the dramatic increase in productivity in the years 1781-1787, presumably attributable to Arkwright’s machine.

. . . .

Similarly, John Fitch devoted the bulk of his June 1790 patent petition for his steamboat to demonstrating the “great immediate utility, and the important advantages which would in future result therefrom, not only to America, but to the world at large.”

146. Letter from Thomas Jefferson to Oliver Evans (May 2, 1807), in GREVILLE BATHE AND DOROTHY BATHE, *OLIVER EVANS: A CHRONICLE OF EARLY AMERICAN ENGINEERING* 127 (1935).

147. Letter from Thomas Jefferson to Isaac McPherson (Aug. 3, 1813), in 6 THOMAS JEFFERSON, *THE PAPERS OF THOMAS JEFFERSON, RETIREMENT SERIES* 383 (J. Jefferson Looney et al. eds., 2009) (emphasis added). Contrast that conservative granting policy with more modern, liberal approaches. At certain points in time, 3,000 patent examiners would handle “over 350,000 patent applications annually.” Jeremiah Chan & Matthew Fawcett, *Footsteps of the Patent Troll*, 10 INTELL. PROP. L. BULL., 1, 3 (2005). That led to the granting of “thousands of ambiguous patents” still in effect today. Ashley Chuang, *Fixing the Failures of Software Patent Protection: Deterring Patent Trolling by Applying Industry-Specific Patentability Standards*, 16 S. CAL. INTERDISC. L. J. 215, 228 (2006).

.....
Their petitions reflect the assumption that the board's role was to examine the public benefits of their invention and use its discretionary power in deciding whether it merited protection. . . . [T]he bulk of the available materials from the board's work revolve around the usefulness and public benefits expected to follow from specific inventions.¹⁴⁸

148. Bracha, *supra* note 45, at 223–26 (citation omitted). Also stating

The following prose followed [in Pollard's list of statistics]: 'in the Southern states where young negroes & weakly disabled Men & Women are at present a [Burden?] to their owners they may in these cotton mills be employed to advantage, and the same observations may be extended to the poor white inhabitants in all our large towns. . . . One girl or boy from eight to fourteen years of age will tend from 30 to 50 spindles, & it is necessary to have man or woman to every ten children, to keep order no exertion of strength is required in the spinning apartment . . . Your Petitioner therefore prays that in consideration of the expense & trouble he hath been at . . . so as to perfect a machine which promises such extensive advantages to these United States . . . that your honorable board will be pleased to grant him . . . the sole and exclusive rights and liberty of making constructing & using of & vending to others . . . for fourteen years.' Pollard also added a promise to submit his prices to inspection by the board. In 1792, the relentless Pollard, who received his patent in December 1791, wrote Jefferson and suggested that the board (and possibly also "our worthy President") would visit and see "to what extent it may be carried, and its usefulness in such a Country as ours." . . . Fitch supplied long descriptions of the public benefits that were expected to follow from his invention, including "increased value [that] will be given to the western territory" due to the fact that "[t]he western waters of the United States, which hitherto been navigated with great difficulty and expence, may now be ascended with safety, conveniency, and great velocity." To that he added that these advantages would result in a "great saving in labour of men and horses, as well as expence to the traveller." Fitch's petition was thus in the vein of the traditional Anglo-American grant petitions. It offered specific public benefits and appealed to the sovereign's discretionary power to grant, as Fitch put it, "public countenance and encouragement." In a 1792 petition, Oliver Evans was more succinct, but he too made a point of arguing that "[t]hese engines are of such simple Construction that they may with Convenience be applied to move any kind of machinery that requires either a Circular or Vibrating motion And to the propelling of land

XV. JEFFERSON, HAMILTON, & WASHINGTON ON IMPORTATION
PATENTS

Patents of importation—that is, patents awarded not to the original inventor, but to the first to introduce an existing technology to another country—are testaments to a country’s priority of utility over first invention. And although the bill that became the Patent Act of 1790 was amended to remove its explicit authorization of patents of importation, it was widely understood that the language that was ultimately enacted authorized such patents of importation nevertheless, and such patents were granted with the support of President George Washington, Thomas Jefferson, and Alexander Hamilton, again in the spirit of supporting and maintaining American manufacturing and industry in what continued to be a frontier environment domestically, and a competitive environment internationally.

The American colonies needed a means of feeding, housing, and clothing its citizens, and colonial governments responded by issuing patents of importation. After the United States was established, America needed to compete with Europe and other foreign sovereign powers, many of which were imposing policies to restrain American trade. As Walterscheid writes, after 1789:

[M]anufacturing and the role that government should play with respect to it became a topic of conversation in both official and unofficial circles. Jefferson, who the decade before had staunchly opposed manufacturing in favor of agriculture, would as Secretary of State write in 1791: “Very considerable discouragements are recently established by France Spain & England with respect to our commerce . . . Should these regulations not be permanent, still they add to the proofs that too little reliance is to be had on a steady & certain course of commerce with the countries of Europe to permit us to depend more on that than we cannot avoid. Our best interest would be to employ our principal labour in agriculture, because to the profit of labour, which is dear this adds the profits of our lands which are cheap. But the risk of hanging our prosperity on the fluctuating counsels & caprices of others renders it wise in us to turn seriously to manufactures; and *if Europe will not let us carry our provisions to their manufactures we must endeavor*

Cariages with heavy burdens in an easie [sic] cheap and powerful manner.”

Id. at 224–25 (citations omitted).

to bring their manufactures to our provisions.” Albeit reluctantly, Jefferson now appeared to be joining the chorus of those espousing the development of American manufacturing.¹⁴⁹

George Washington, as President, addressed a joint meeting of Congress describing the state of the Union on January 8, 1790, in which he seemed to imply he hoped importation franchises would be granted in addition to patents of invention. At that joint meeting, Washington said:

The advancement of Agriculture, commerce, and Manufactures, by all proper means, will not, I trust, need recommendation. But I cannot forebear intimating to you the expediency of giving effectual encouragement as well to the introduction of new and useful inventions from abroad, as to the exertions of skill and genius in producing them at home . . .¹⁵⁰

As Walterscheid continues:

In his address to the Congress on January 8, 1790, Washington raised the issue of manufactures in the context of the common defense, saying “A free people ought not only to be armed, but disciplined; to which end, a uniform and well digested plan is requisite: And their safety and interest require that they should promote such manufactories, as tend to render them independent of others for essential, particularly, for military supplies.” In response, the House on January 15, 1790 “Ordered, That it be referred to the Secretary of the Treasury to prepare and report to this House, a proper plan or plans, conformably to the recommendation of the President of the United States, in his speech to both Houses of Congress, for the encouragement and promotion of such manufactories as will tend to render the United States independent of other nations, for essential, particularly for military supplies.” The result would be Alexander Hamilton’s famous Report on the Subject of Manufactures communicated to the House on December 5, 1791.¹⁵¹

In that Report on the Subject of Manufactures:

149. WALTERSCHEID, *supra* note 59, at 147 (quoting Letter from Jefferson to David Humphreys (June 23, 1791), in 6 THE WORKS OF THOMAS JEFFERSON 272–73 (P.L. Ford ed., 1904) (emphasis added).

150. George Washington, President, State of the Union Address (Jan. 8, 1790).

151. WALTERSCHEID, *supra* note 59, at 147–48 (first quoting 3 DOCUMENTARY HISTORY OF THE FIRST FEDERAL CONGRESS OF THE UNITED STATES OF AMERICA, HOUSE OF REPRESENTATIVES JOURNAL 252 (L.G. De Pauw, et al. eds., 1977); and then quoting *id.* at 265).

Hamilton strongly argued for the need of the government to support the development of manufacturing. He adverted to eleven particular means which he stated had been employed with success in other countries. Of particular interest here is his eighth means, set forth as “*The encouragement of new inventions and discoveries at home, and of the introduction into the United States of such as may have been made in other countries; particularly those which relate to machinery.*” Under this heading, he wrote: “*This is among the most useful and unexceptionable of the aids which can be given to manufactures.* The usual means of that encouragement are pecuniary rewards, and, for a time, exclusive privileges. *The first must be employed according to the occasion and the utility of the invention or discovery. For the last, so far as respects “authors and inventors,” provision has been made by law. But it is desirable, in regard to improvements, and secrets of extraordinary value, to be able to extend the same benefit to introducers, as well as authors and inventors; a policy which has been practiced with advantage in other countries.*” . . . Insofar as Hamilton was concerned, “[t]he propriety of stimulating by rewards the invention and *introduction* of useful improvements, is admitted without difficulty,” and the use of premiums “to procure and import foreign improvements, is particularly obvious.”¹⁵²

Jefferson, Hamilton, and Washington were among the Founders who understood that the Patent Act of 1790 authorized patents of importation, which were an important part of the American policy

152 *Id.* at 148–49 (first 10 THE PAPERS OF ALEXANDER HAMILTON 1 (H.C. Syrett et al. eds., 1966); and then quoting *id.* at 338–40) (emphasis added). Also, language likely drawn from Hamilton’s request was inserted into a patent bill, H.R. 166, that was introduced in the House of Representatives in 1792. As Walterscheid writes:

Whereas H.R. 121 [a bill introduced in 1791] had provided that fees not expended in the publication of specifications at the end of the terms of the various patents should be used to form a public library at the seat of government, this bill [H.R. 166] provided that such fees should also be “appropriated to the expense of procuring and importing useful arts or machines, from foreign countries.” This language was undoubtedly added as a result of the recommendation presented by Hamilton in the *Report on the Subject of Manufactures* which Congress had recently received . . .

Id. at 208.

centered on supporting American manufacturing in concrete, practical ways:

In seeking to resolve the issue [as to whether the Patent Act of 1790 authorized patents of importation] it is helpful to once again step back for a moment and review the background against which Hamilton prepared the *Report on the Subject of Manufactures*. In the years immediately preceding 1791, Tench Coxe was perhaps the best known advocate of the need for American manufactures.

. . . .

Quite possibly because Coxe was such a strong advocate for American manufactures, Hamilton appointed him as an Assistant Secretary of the Treasury. Coxe would have a great deal of influence, not only on Hamilton's thinking, but on the ultimate content of the *Report on the Subject of Manufactures*. Indeed, although it is not generally known, Coxe actually prepared the first draft of what eventually became the *Report*.¹⁵³

At least one significant patent of importation came to be granted under the Patent Act of 1790, and the story of how William Pollard came to be granted a patent of importation says a lot about early America's policy of prioritizing utility. As Anthony F.C. Wallace and David Jeremy write:

Angered by the ill treatment he felt he had received from Parliament at trials of his suits for alleged infringement of his 1775 cotton machinery patent, Richard Arkwright told fellow manufacturer Josiah Wedgwood in 1785 that he intended to take revenge on an ungrateful Britain. Parliament had invalidated his patent rights to the extraordinarily productive cotton-spinning machinery which he had introduced ten years earlier; he would now invalidate England's jealously guarded monopoly of the whole technology, including both his 1769 and 1775 patents. He would, he said, "publish descriptions and copper plates of all the parts, that it might be known to foreign nations as well as our own." And six years later, on December 30, 1791, a United States patent was granted to William Pollard of Philadelphia, "ass[ignee] of Richard Arkwright," for a machine for "Spinning and Roving Cotton" that included components of both of Arkwright's patents.¹⁵⁴

153. *Id.* at 151.

154. Anthony F. C. Wallace & David J. Jeremy, *William Pollard and the Arkwright Patents*, 34 WM. & MARY Q. 404, 404-05 (1977) (first quoting R.S. FITTON & A.P. WADSWORTH, *THE STRUTTS AND THE ARKWRIGHTS, 1758-1830: A STUDY*

Patent Commissioner Jefferson, who was also Secretary of State, delayed granting the patent of importation not due to significant concerns regarding the legality of doing so under American law, but rather because there would be significant foreign policy implications if the United States facilitated the exportation of a technology the British were intent on keeping to themselves. As Wallace and Jeremy write:

Information about the remarkable British inventions in cotton machinery, steam engines, and machine tools, news of which had been prevented by the recent war from reaching the ears of American mechanics, was now beginning to filter across the Atlantic. National pride, military self-interest, and a balance-of-payments problem made acquisition of the new industrial techniques a matter of federal concern; and for some federal officials, including Alexander Hamilton and his economic advisor Tench Coxe, the vision of an urban-industrial America competing with Europe economically, as opposed to the conception of an agrarian America dependent for finished products on an industrial Europe, was already a compelling idea.

One reason for the delay may have been a concern on the part of Patent Commissioner Thomas Jefferson, who was also secretary of state, over the delicate condition of American relations with England at the time. It was a serious misdemeanor under British law to export textile machinery. For some of the highest officials of the American government to reward the violation of British law by issuing a patent for a stolen invention – and thus to encourage similar adventures by other industrial spies – would hardly be considered a friendly act. Moreover, the issuance of an American patent for those parts of Arkwright’s invention covered by the voided patent of 1775 might have been regarded as questionable in American patent procedure. And so the patent commissioners may have delayed a decision.¹⁵⁵

Indeed, it was only after an intense, clandestine international battle for technological dominance proved inconclusive that the patent of importation was finally issued to clear the way for Americans to fully embrace the Arkwright spinning machine:

While the patent commissioners marked time, the British government became aware of the applications. Within a few months of Pollard’s submission, British intelligence agent

OF THE EARLY FACTORY SYSTEM 88 (1958); and then quoting William Pollard, Dec. 30, 1791, Patent Records Office, Record Group 241, National Archives).
155. *Id.* at 408–09.

George Beckwith reported to his superior in England that a model of Arkwright's spinning machine stood in Jefferson's office; six months later, he reported that at the organization meeting of the [Society of Useful Manufactures] Alexander Hamilton, a promoter of the ambitious industrial corporation then locating at the falls of the Passaic in New Jersey, displayed several models of spinning machinery, perhaps including both Pollard's and Parkinson's. By this time—mid-1791—there were, in fact, a number of more or less accurate copies of Arkwright's water frame, Hargreaves's spinning jenny, and possibly even Crompton's mule already at work or under construction in America, and the British were mounting, and losing, a clandestine counterintelligence operation to recover them. Several British agents or patriotic merchants were buying the American machines wherever possible and shipping them back to England, and, in some instances, when the machines could not be procured, allegedly burning down the factories that contained them. And American agents—some of them secretly financed by the secretary of the Treasury—kept on bringing in more plans, more models, and more English mechanics.

It was in this context of industrial espionage, theft, sabotage, and arson, with the potentiality for escalation to murder, that Parkinson's and Pollard's petitions for patents were finally granted.¹⁵⁶

The political and international espionage accompanying the fight for the Arkwright spinning machine, and its potential for international scandal, may help explain why patents of importation were not more widely granted during early Congresses. But in the end, a patent of importation was granted to William Pollard, and also George Parkinson, who also imported Arkwright's technology. As Doron Ben-Atar writes:

On March 24, 1791, an announcement appeared in the Philadelphia Federal Gazette. One George Parkinson, of that city, advertised that he had recently obtained a United States patent for spinning flax, hemp, and combed wool by methods that represented "improvements upon the mill or machinery of Kendrew and Porthouse of the town of Darlington in Great Britain." Why had Parkinson, an English weaver who later worked for the Society for Establishing Useful Manufactures (SEUM) in Paterson, New Jersey, been granted a patent monopoly even though his version of Richard Arkwright's flax-

156. *Id.* at 411, 413.

spinning machine only marginally improved on the original? Parkinson's announcement provided the answer. It was because this "*machinery, with the original mechanism . . . [was] of the utmost value to the United States.*"¹⁵⁷

"[Parkinson's] American partner, Tench Coxe . . . explained that he and Parkinson were 'not the inventors, but the introducers, there being no model or drawing of these invaluable movements in the United States,' and that they considered Arkwright 'the inventor and ourselves the introducers.'"¹⁵⁸

This allowance of patents for things already developed elsewhere was in line with the British and colonial patent precedents that preceded the Patent Clause and the Patent Act of 1790. As Walterscheid writes:

The common law had long interpreted the phrase "first and true inventor" as used in the [English] Statute of Monopolies to include not only one who invents in the modern sense but also one who imports into the realm any manufacture which had not been worked there within recent memory. This was the view that had been taken with regard to the issuance of colonial patents as well.

. . . .

In the context of the times, "[i]t was commonly said that inventors make discoveries, and this included both the creation of something new, and the finding out of something that previously existed." There is thus no reason to believe that the Framers intended to use the term "inventors" with any different meaning than it had under the existing common law. Their use of the term "discoveries" in the intellectual property clause

157. Doron Ben-Atar, *Alexander Hamilton's Alternative: Technology Piracy and the Report on Manufactures*, 52 WM. & MARY Q. 389, 389 (1995) (citation omitted). Ben-Atar also notes that "Parkinson was a partner of Tench Coxe, Hamilton's trusted assistant. Coxe had contracted with Parkinson to build a mill based on the latter's claim of detailed knowledge of the secret Arkwright machine. Hamilton thought the experiment merited a forty-eight-dollar Treasury subsidy to cover Parkinson's living expenses in the spring of 1791. This episode was one of many instances in which Hamilton's Treasury Department organized and supported raids on Britain's industrial preeminence . . . [Hamilton] believed that economic independence was inseparable from political independence and was dismayed by the American addiction to manufactured British imports." *Id.* at 390–91, 393; see also Jacob E. Cooke, *Tench Coxe, Alexander Hamilton, and the Encouragement of American Manufactures*, 32 WM. & MARY Q. 369, 381 (1975).

158. *Id.* at n.1 (quoting Letter from Tench Coxe to George Clymer (Jan. 17, 1790) (on file with the Historical Society of Pennsylvania)).

did not change that, because one of the definitions of “to discover” then extant was “to find out; to obtain information.” This clearly permitted patents of importation and, as has been noted, George Washington for one certainly assumed that the intellectual property clause would be so interpreted.”¹⁵⁹

The statutory language of the Act of 1800 bolsters the case that the Patent Acts of 1790 and 1793 were intended to authorize patents of importation as well as patents of invention. Less than a decade after the Patent Act of 1793 was enacted, the Founders explicitly authorized patents of importation for certain aliens. As Walterscheid writes:

[T]he Act of 1800 extended the right to obtain a patent to other than United States citizens, i.e., aliens, provided that the alien (1) had resided in the United States for two years at the time of petitioning; and (2) had sworn or affirmed that to the best of his or her knowledge or belief, the invention had not been known or used in the United States *or any foreign country*. It also declared that every patent obtained pursuant to it “which shall afterwards appear had been known or used previous to such application for a patent, shall be utterly void.” These last two provisions seemed to suggest that “not before known or used” in the Act of 1793 meant “in the United States.”¹⁶⁰

(“Under the Act of 1793 a United States citizen had merely to allege that the invention was ‘not before known or used.’”) ¹⁶¹

“Otherwise, the requirement that the alien applicant swear or affirm that to the best of his or her knowledge or belief the invention had not been ‘known or used either in this or any foreign country’ was redundant to the requirement already existing in the Act of 1793.”¹⁶²

159. WALTERSCHEID, *supra* note 59, at 96–97 (quoting Arthur H. Seidel, *supra* note 111, at 15 (1966)). This view was only rejected by the courts decades later. As Walterscheid writes, “While there would continue to be argument on the point for several decades, the inference that would subsequently be drawn by the courts was that Congress intended that novelty in the United States patent system precludes patents of importation for inventions known and used abroad. *Id.* at 137–38.

160. WALTERSCHEID, *supra* note 59, at 336.

161. *Id.* at 336 n.10.

162. *Id.* at 336. Walterscheid also adds that:

Alternately, it is possible that Congress intended merely to reiterate and emphasize that “not know or used” in the Act of 1793 meant anywhere in the world and not merely in the United States. But if that was the case, why did it expressly limit the required oath or affirmation to alien applicants petitioning “pursuant to this

This shows the Patent Acts of 1790 and 1793 did appear to authorize patents of importation,¹⁶³ although courts, decades later, found the opposite.¹⁶⁴

act”? Since it saw fit to effectively amend the Act of 1793 with certain provisions of the Act of 1800, why did it not expressly amend the Act of 1793 to state “not before known or used in this or any foreign country”? That it did not seemed rather clearly to suggest that it was placing a specific requirement on alien applicants not applicable to American citizens.

Id. at 336.

163. As Walterscheid writes:

[T]he Congress in its deliberations on the Act of 1790 had deliberately removed provisions that would have expressly authorized patents of importation. In doing so, however, it also failed to expressly prohibit them. . . . At least some members of Congress certainly did not perceive it as so doing. . . . [I]n presenting the amendments of February 1, 1793 which limited patentees under the Act of 1793 to U.S. citizens, Rep. Murray clearly seemed to suggest that U.S. citizens could obtain patents for inventions patented by others in Europe, i.e., they could patents as importers as well as actual inventors. That is to say, both importers and inventors could be termed “true inventors” under the statute.

Id. at 378–80.

164. On the point of courts drawing the opposite conclusion decades later, Walterscheid writes:

The courts, however, drew a different conclusion, albeit without taking a careful look at all the language of the Act of 1800. Thus, in 1829 in *Pennock v. Dialogue* the Supreme Court stated that in that Act: “there is not any reason to suppose that the Legislature intended to confer on aliens, privileges essentially different from those belonging to citizens. On the contrary, the enacting clause of the Act of 1800 purports to put both on the same footing; and the proviso [“that every patent which shall be obtained pursuant to the [sic] Act for any invention, art or discovery, which it shall afterwards appear had been known or used previous to such application for a patent, shall be void”] seems added as a gloss or explanation of the original [1793] Act.” In so stating, the Court ignored a second proviso obligating resident aliens to make an oath or affirmation different than that required for citizens. It also introduced a critical typographical error in that both provisos expressly stated “pursuant to this act” rather than “pursuant to the act” as set forth by the Court. Thus the provisos were clearly intended to be applicable to resident aliens only and not to citizens of the United States as

XVI. THE REGISTRY SYSTEM CREATED BY THE PATENT ACT OF 1793

Thomas Jefferson took his job as prime evaluator of patent applications seriously, so seriously that it occupied a significant portion of his time while he was also serving as Secretary of State.¹⁶⁵ Patent application backlogs developed, and as a result Congress acted to relieve the Secretary of State and other cabinet officials of the burden of evaluating patents in an examination system.¹⁶⁶ Congress created instead a registration system that by the terms of the statute provided that federal officials would review patent applications only for their compliance with the procedural requirements of patent submission, not for whether they met the substantive requirements of innovation, leaving those substantive questions to the federal courts.¹⁶⁷ As Walterscheid writes, “When all was said and done, President Washington on

a whole. To state that the proviso[s] were intended merely as a “gloss or explanation” of the Act of 1793 is to effectively read out of the Act of 1800 the phrase “pursuant to this act” which appears in each proviso.

WALTERSCHEID, *supra* note 59, at 376–377.

The Court also seems to have been quite unaware that five years earlier the New York circuit court had interpreted the first proviso in the Act of 1800 in quite a different fashion, saying: “This proviso is a limitation on the enacting clause according to the general rule of construction, and is to be construed as limiting and restraining the grant to which it is applied. It puts the alien on grounds somewhat different from those of a citizen, requiring an oath and something more than is required of a citizen.” *Morris v. Huntington*, 17 F.Cas. 818, 820 (C.C.D.N.Y. 1824) (No. 9,831).

Id. at 377, n.23.

165. WALTERSCHEID, *supra* note 59, at 195 (“[I]t was the dawning recognition by members of the patent board, and particularly by Jefferson, that they simply had insufficient time to properly carry out the tasks assigned to them under the Act, that more than anything else soon produced an understanding in the Congress that the Act of 1790 had to be amended or in some manner changed to avoid having high government officials responsible for the issuance of patents.”).

166. *Id.*

167. *Id.* at 223 (stating that under the Act of 1793 “[t]he Secretary of State still had responsibility for issuing patents, but now that was a pro forma process dependent only on the completion of the required ministerial acts by the petitioner for a patent.”).

February 21, 1793, signed into law the Patent Act of 1793. The United States had entered the era of registration which was to last until 1836.”¹⁶⁸

Jefferson commented on the Act of 1793’s creation of a registration system, lamenting the shift of the pendulum so far in the opposite direction and its shifting of the burden of substantive analysis to judicial actors he saw as ill-fitted to the task. In a letter to Isaac McPherson on August 13, 1813, Jefferson wrote:

Instead of refusing a patent in the first instance, as the board was authorized to do, the patent now issues of course, subject to be declared void on such principles as should be established by courts of law. This business, however, is but little analogous to their [the judges’] course of reading, since we might in vain turn over all the lubberly volumes of the law to find a single ray which would lighten the path of the mechanic or the mathematician. It is more within the information of a board of academic professors, and a previous refusal of patent would better guard our citizens against harassment by lawsuits. But England has given it to her judges, and the usual predominancy of her examples carried it into ours.¹⁶⁹

In Jefferson’s view, it is better to allow government officials to reject invalid patents at the get-go than to leave the invalidation of improperly-granted patents to judges, who generally have no technical backgrounds.

As Bracha writes, not surprisingly, judges ultimately came to see themselves as a new patent board:

After 1793, courts became the main institutions wielding the power to review and shape patents. Initially, at least some of the judges saw themselves as stepping into the shoes of the patent board. Judge Van Ness gave a lucid account in this vein in 1821. Van Ness contrasted the American patent system with the English system, and with the 1790 regime. In England, he

168. *Id.* at 222.

169. 13 THE WRITINGS OF THOMAS JEFFERSON 336 (A.A. Lipscomb et al. eds., 1904); *see also* Bracha, *supra* note 45, at 228 (“[T]he 1793 framework [of the Patent Act of 1793] resembled the de facto situation in Britain, where by that time patents were granted, in practice, with little examination or discretion. All patentability questions were deferred to the courts. Members of Congress, it appears, were aware of the parallel. As Rep. Williamson explained, the proposed Act was “an imitation of the Patent System of Great Britain” and was meant to “circumscribe the duties of the deciding officer within very narrow limits.”) (quoting 3 ANNALS OF CONG. 855 (1793)).

explained, the proceedings for obtaining a patent are “tedious” and involved ample opportunity for challenging the patent and considering its merit, although by this time this was true mainly as a matter of formal law rather than actual practice. Similarly, the 1790 regime created the patent board and “made [it] the duty of these officers to inquire into the utility and importance of the proposed patent before it issued.” Under the new system, he explained,

“[I]t seems to me equally required by considerations of expediency and public safety that, when all preliminary inquiries are abolished, and monopolies and patents freely and gratuitously given to all who present themselves in the character of inventors or discoverers, there should be some easy and summary mode of investigating their merits and deciding on their validity.”

The new power in charge of reviewing patents, Van Ness concluded, was a judge invested with “a plenary supervision over the legality of patents” and with “a discretionary power.” By this account, the courts were now entrusted with the exact role that was carried out in Britain by organs of the crown, and under the 1790 American regime by the patent board.¹⁷⁰

XVII. THE PATENT ACT OF 1793’S BROAD ALLOWANCE OF APPEALS TO REMEDY INVALID PATENTS

The Patent Act of 1793 contained several provisions that shifted the substantive evaluation of patents to the federal courts.

Section 10 of the Act provided:

[T]hat upon oath or affirmation being made before the judge of the District Court where the patentee, his executors, administrators, or assigns, reside, that any patent, which shall be issued in pursuance of this act, was obtained surreptitiously, or upon false suggestion, and motion made to the said Court, within three years, after issuing the said patent, but not afterward, it shall and may be lawful for the judge of the said District Court, if the subject alleged shall appear to him to be

170. Bracha, *supra* note 45, at 229–230 (quoting *McGaw v. Bryan*, 16 F. Cas. 96, 99 (S.D.N.Y. 1821)). Bracha adds, “In 1818, Joseph Ingersoll, arguing before the Supreme Court, repeated the same argument when he stated, “[t]he jury are substituted for the *board*, which, under the first law, was to decide whether the supposed invention was ‘sufficiently useful and important’ for a patent.” *Id.* at 230 (quoting *Evans v. Eaton*, 16 U.S. (3 Wheat.) 454, 488 (1818)).

sufficient, to grant a rule, that the patentee, or his executor, administrator, or assign show cause why process should not be issued against him to repeal such patent. And if sufficient cause shall not be shown to the contrary, the rule shall be made absolute, and thereupon the said judge shall order process to be issued against such patentee, or his executors, administrators, or assigns, with costs of suit. And in case no sufficient cause shall be shown to the contrary, or if it shall appear that the patentee was not the true inventor or discoverer, judgment shall be rendered by such Court for the repeal of such patent; and if the party, at whose complaint the process issued, shall have judgment given against him, he shall pay all such costs as the defendant shall be put to in defending the suit, to be taxed by the Court, and recovered in due course of law.¹⁷¹

As Walterscheid writes,

The Patent Act of 1793 would reject Jefferson's view that only a defendant in an infringement action should have the right to seek to invalidate the patent, and instead would permit such an action to be brought by anyone within three years from the date of issuance of the patent.¹⁷²

The framers of the Patent Act of 1793 allowed anyone to appeal a patent on the grounds it was not validly issued. The Act of 1793 also increased opportunities for appeals of granted patents by extending the time allowed to challenge a patent. As Walterscheid points out,

Similar to the 1790 Act, the Act of 1793 provided that an action could be brought by anyone to invalidate a patent by showing that it had been obtained surreptitiously or on false suggestion, but whereas the 1790 Act had limited such action to within one year after the issuance of the patent, the 1793 Act extended this period to three years.¹⁷³

Section 6 of the Act of 1793 also provided:

[T]hat the defendant in such action shall be permitted to *plead the general issue*, and give this act, and any special matter, of which notice in writing may have been given to the plaintiff or his attorney, thirty days before trial, in evidence, tending to prove that the specification filed by the plaintiff does not contain the whole truth relative to his discovery, or that it contains more than is necessary to produce the described effect, which

171. WALTERSCHEID, *supra* note 59, at 482–83 (Patent Act of 1793, 1 Stat. 318 (1793), *reprinted in* WALTERSCHEID, *supra* note 59, at 479).

172. *Id.* at 206 n.34.

173. *Id.* at 228.

concealment or addition shall appear to have been made for the purpose of deceiving the public, of that the thing thus secured by patent was not originally discovered by the patentee, but had been in use, or had been described in some public work anterior to the supposed discovery of the patentee, or that he had surreptitiously obtained a patent for the discovery of another person; in either of which cases judgment shall be rendered for the defendant, with costs, and the patent shall be declared void.¹⁷⁴

In enacting that provision, Walterscheid writes that the framers of the Patent Act of 1793 retained that portion of the Act of 1790 which provided that within one year after issuance, but not thereafter, an action could be brought to void the patent on grounds that it was obtained surreptitiously or upon false suggestion. “This phraseology was taken from the English judicial practice and presumably required a showing that the patent was fraudulently obtained in that it was for an invention which the inventor knew to be old, i.e., known to others before the patentee ‘invented’ it.”¹⁷⁵

The Patent Act of 1793 also broadened the grounds on which patent grants could be appealed, stating a patent could be declared void if it was shown “that the thing thus secured by patent was not originally discovered by the patentee, but had been in use, or had been described in some public work anterior to the supposed discovery of the patentee.”¹⁷⁶ In addition, the Patent Act of 1793 gave challengers an unlimited amount of time in which to challenge patents on the grounds the invention had been known or used by others prior to the supposed date of invention by the patentee.¹⁷⁷

In sum, the Patent Act of 1793 included provisions that dramatically enlarged the opportunities to challenge improperly granted

174. *Id.* at 481 (Patent Act of 1793, 1 Stat. 318 (1793), reprinted in WALTERSCHEID, *supra* note 59, at 479).

175. *Id.* at 208.

176. WALTERSCHEID, *supra* note 59, at 481 (Patent Act of 1793, 1 Stat. 318 (1793), reprinted in WALTERSCHEID, *supra* note 59, at 479).

177. *See id.* at 229 (“The 1790 Act contained no provision permitting the defendant to plead—other than within the one-year time frame set forth above—that the patentee was not the true inventor, i.e., that the invention had been known or used by others prior to the supposed date of invention by the patentee. The 1793 Act remedied this defect by allowing the defendant to plead at any time ‘that the thing thus secured by patent was not originally discovered by the patentee, but had been in use, or had been described in some public work anterior to the supposed discovery of the patentee, or that [the patentee] had surreptitiously obtained a patent for the discovery of another person.’”).

patents, and Congress subsequently rejected proposed amendments to the Act that would have done away with those provisions. As Walterscheid writes:

In its opening session in 1797 the House took up the issue of whether alterations were deemed necessary to the Act of 1793. Early in 1798 a bill was reported which proposed “to repeal the ninth and tenth sections of the present law, and to add a section inflicting a penalty on any person who shall make, use, devise, or sell anything, the exclusive right of which has been secured by patent.” Repeal of these two sections would have effectively done away with both interferences and the right to challenge the validity of an issued patent other than in an infringement action.

. . . .

Nothing seems to have happened so that this bill died¹⁷⁸

So, the broad judicial review of improperly granted patents was approved by Congress in the Patent Act of 1793, and survived attempts to eliminate such broad review.¹⁷⁹ In addition, as Walterscheid writes, under the Act of 1793, “No mechanism for appeal was provided in the event that he [the Secretary of State] refused to issue a patent upon performance of the requisite ministerial acts by the petitioner.”¹⁸⁰ Just as the Congress that enacted the Patent Act of 1790 erred on the side of limiting the number of patent monopolies by placing failures to grant patents beyond appeal, yet allowing the appeal of granted patents, so, too, did the Congress that enacted the Patent Act of 1793. This policy, which allowed appeals of grants of patents but did not allow appeals of failures to grant patents, was a policy that erred on

178. *Id.* at 334–35.

179. Tweaks were subsequently made to the specific courts to which appeals were directed. As Walterscheid writes:

The Patent Act of 1793 . . . gave exclusive jurisdiction to the district court in actions to repeal patents. When the amount in dispute was more than \$500 and there was diversity of citizenship, original jurisdiction in patent infringement cases was automatically moved from the district court to the circuit court. Any decision of the circuit court involving an amount more than \$2,000 could be appealed to the Supreme Court. The Act of 1800 moved jurisdiction in all infringement actions to the circuit courts.

Id. at 357.

180. *Id.* at 224.

the side of not granting patent monopolies (by disallowing appeals in cases of failures to grant but allowing them in cases where patents were granted).

XVIII. THE PATENT ACT OF 1793 IMPOSED NO PRESUMPTION OF A PATENT'S VALIDITY WHEN PATENTS WERE CHALLENGED

Far from what's imposed under current law,¹⁸¹ the Patent Act of 1793 also granted no "presumption of validity"¹⁸² to patents when they were challenged. As Walterscheid writes:

A substantial change involved what would now be called the burden of proof in litigation. Whereas the Act of 1790 provided that "the said patents or specifications shall be prima facie evidence that the said patentee or patentees, was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified, and that the same is truly specified," no such language appeared in the Act of 1793. As the Supreme Court would note decades later, the result was that a patent would not be received in courts of justice as even prima facie evidence that the invention patented was new or useful. Instead the patentee would be required to prove the relevant facts in order to make out his case. That is to say, the initial burden of proof would be on the patentee under the Act of 1793.¹⁸³

181. Currently, the U.S. Patent Act establishes that once a patent has been granted by the USPTO, "a patent shall be presumed valid," 35 U.S.C. § 282 (1952), and "the burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity." WALTERSCHEID, *supra* note 59, at 224. The Court of Appeals for the Federal Circuit, which hears all patent suit appeals, has interpreted this provision to require a party defending against an infringement charge to do so by "clear and convincing evidence" that a patent was improperly granted. *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1359 (Fed. Cir. 2007). The presumption of validity and need to counter a claim of infringement by clear and convincing evidence can have a dispositive effect on both judges and juries. As one commentator has pointed out, jurors "see the seal on the patent, they hear clear and convincing [evidence], and their likelihood of going for the defendant is much slighter than it is for the patentee." *Competition and Intellectual Property Law and Policy in the Knowledge-Based Economy: Hearing Before the Fed. Trade Comm'n*, 151 (2002) (statement of James Gambrell).

182. 35 U.S.C. § 282 (1952).

183. WALTERSCHEID, *supra* note 59, at 229 (citation omitted). Under the Patent Act of 1793, patent applications themselves were presumed valid, and granted as a matter of course, and so, court appeals would be the only time a patent granted

under the Patent Act of 1793 could be substantively evaluated. *See id.* It is also interesting to note Thomas Jefferson's views on any presumption of validity as applied to patents. As Walterscheid writes:

[I]t was the dawning recognition by the members of the patent board, and particularly by Jefferson, that they simply had insufficient time to properly carry out the tasks assigned to them under the Act, that more than anything else soon produced an understanding in the Congress that the Act of 1790 had to be amended or in some manner changed to avoid having high government officials responsible for the issuance of patents.

Id. at 195.

Jefferson himself drafted a new patent bill at the time. While it did not become law, it is informative of Jefferson's contemporaneous thinking. Jefferson included a provision in his draft bill that provided that

any person making or selling the thing so invented without permission as aforesaid shall be liable to an action at law, and to such damages as a jury shall assess, *unless he can show that the same thing was known to others before the date of the Treasurer's receipt [of the patent application], and can shew such probable grounds as the nature of a negative proof will admit* that that knowledge was not derived from any party from, through or in whom the right is claimed, or unless he can shew on like grounds that he did not know that there existed an exclusive right to the said invention, *or can prove that the same is so unimportant and obvious that it ought not to be the subject of an exclusive right*"

Id. at 470 (citation omitted) (emphasis added).

As Walterscheid writes, Jefferson:

[P]roposed to delete the provision of the Act of 1790 whereby the patent and specification were deemed to "be prima facie evidence that the said Patentee or Patentees, was or were the first and true inventor or inventors, discoverer or discoverers of the thing so specified" and instead replaced it with a provision that permitted an alleged infringer to invalidate the patent by a showing that before the requisite fee was paid the invention "was known to others" who had not derived their knowledge from the inventor or anyone who claimed under the inventor. This was a modified form of the existing English practice.

Since under the Patent Act of 1793 the examination system was removed, the task of reviewing patents for substantive validity fell to the courts, indicating the drafters thought that as the administrative review of patents lessened, so should the burden of proof that a patent was improperly granted, something Congress might consider as a lesson for today.¹⁸⁴

Id. at 203 (citation omitted).

As Walterscheid writes, Jefferson:

[A]lso proposed to permit an infringer to avoid liability by a showing “that he did not know that there existed an exclusive right to the said invention” or by proving – how or on what ground was not stated – that the invention “is so unimportant and obvious that it ought not to be the basis of an exclusive right.” This latter defense was a portent of things to come because unobviousness would become one of the three primary criteria required for modern patentability.

Id. at 204 (citations omitted).

So, in Jefferson’s view, a new patent statute would contain no presumption of a patent’s validity, not even the minimal “prima facie evidence” allowed by the Patent Act of 1790.

184. As I have written previously, today, the USPTO is perennially short of funds and staff, which has resulted in the granting of untold numbers of unworthy patents. Researchers have found that “between 1983 to 2003, the number of patent applications received by the USPTO more than tripled . . . [while] the number of examiners . . . ha[d] decreased by 20% over the last four years.” Chuang, *supra* note 147, at 227 (quoting Chan & Fawcett, *supra* note 147, at 3 n.20). At certain points in time, 3,000 patent examiners would handle “over 350,000 patent applications annually.” Chan & Fawcett, *supra* note 147, at 3. That led to the granting of “thousands of ambiguous patents” still in effect today. Chuang, *supra* note 147, at 228.

Further, researchers have determined that “patents asserted in [patent troll] cases are more likely to be issued at times when the USPTO issues more patents compared to total pending and abandoned applications . . . that is, at times when the USPTO is especially busy,” and may be especially error prone. Lauren Cohen, Umit G. Gurun, & Scott Duke Kominers, *Patent Trolls: Evidence from Targeted Firms*, HARV. BUS. SCH., June 2018, at 22. While efforts have been made to limit the supply of improperly issued patents, those that were issued in the past, of course, remain in circulation. Taylor, *supra* note 2, at 29. And even though the U.S. Patent and Trademark Office of today might be better equipped to stem the

XIX. WILLIAM THORNTON'S EFFORTS TO PRESERVE THE ORIGINAL
SPIRIT OF THE ACT OF 1790, DESPITE THE REGISTRATION SYSTEM
CREATED BY THE PATENT ACT OF 1793

William Thornton, the Superintendent of the Patent Office under the Patent Act of 1793, was aware of the quality control problems created by the registry system, and he thought them so serious that he took actions to ameliorate them even though such actions appeared outside his statutory authority.

As Daniel Preston writes:

The greatest problem Thornton faced in operating the Patent Office was his lack of discretionary power on the question of improper patent applications. Two major goals of the patent law were the protection of the rights of patentees and the protection of the public from fraudulent patents. The wholesale issuance of patents violated both these principles. This system allowed applicants to receive patents that interfered with the patent rights of others or for devices that were not new or did not work. . . . Although he could not deny anyone a patent, Thornton did what he could to discourage applicants when he felt their inventions were unworkable or not original. If he thought a device would not work (particularly perpetual motion machines), he demanded a working model of it before he would issue a patent. If the application were for a machine, tool, or compound already patented, the superintendent would so inform the applicant and warn of the likelihood of a lawsuit.¹⁸⁵

Thornton realized that the granting of patents for things that were already in common use was the most destructive form of patent, as it stultified progress by fomenting litigation around small improvements that were more common sense than novel. As Preston writes:

Thornton considered these patents for commonly used items more dangerous than the ones for devices that did not work. He believed that the controls of the market place would protect the public from machines or compounds of this nature—if an article was ineffective, the public would not buy it. What he feared most were patents for such things as Allison's filter—

tide of improperly granted patents, insofar as improperly granted are still floating around today due to prior inadequacies in such Office, appeals to federal court should remain readily available.

185. Daniel Preston, *The Administration and Reform of the U.S. Patent Office, 1790-1836*, 5 J. EARLY REPUBLIC 331, 342-44 (1985).

devices that were in common use and thus open to exploitation by unscrupulous patentees. When Baltimore inventor Michael Withers applied for a patent in 1813 for winged gudgeons (a common piece of hardware), the superintendent begrudgingly issued it, telling Withers that imposition was the same as theft. Thornton later used the newspapers to publicize the fraudulent nature of Withers's patent. The inventor retaliated by complaining to Adams and Clay and by suing Thornton for libel; his complaint, however, fell on deaf ears, and his lawsuit was unsuccessful.¹⁸⁶

Thornton recruited many others in his appeal for legislative change, but Congress remained inert on the issue. As Preston writes:

It is apparent that Congress was aware of all these problems. Thornton not only petitioned Congress for change but also appealed directly to his acquaintances in the legislature for relief. Furthermore, the superintendent was a prominent figure in Washington, and his activities, such as his newspaper and legal battle with Withers, would not have gone unnoticed. Every secretary of state under whom Thornton served recommended that Congress take some action in relation to the Patent Office. . . . Thornton's calls for change were echoed throughout the nation. Criticism of the law and proposals for reform appeared frequently in newspapers and periodicals, and inventors and patentees, including the renowned Robert Fulton and Oliver Evans, were loud and persistent in their complaints against the law. It appears that practically everyone associated with the system, with the exception of Congress, desired its reform.¹⁸⁷

As Walterscheid adds, "In 1818 Thornton would . . . suggest basically a return to the old patent board of the Secretary of State, the Secretary of War, and the Attorney General to determine whether a petitioner for patent was wrongfully given the right to a patent."¹⁸⁸

In 1830, William Elliot, who had served as chief clerk under Thornton for a number of years, echoed the need for authority "for *refusing* patents . . . to mere speculators (not inventors) who make a business in levying contributions on the public by licenses under the title of 'patents' for neither *new* nor useful inventions . . . and who fill the country with litigation."¹⁸⁹

186. *Id.* at 344–45.

187. *Id.* at 346–47.

188. WALTERSCHEID, *supra* note 59, at 325 n.63.

189. *Id.* at 325 (quoting Letter from Elliot to John D. Craig (Jan. 16, 1830), in H.R. DOC. NO. 38-21, at 4 (1830), as reprinted in C.M. Harris & D. Preston,

In 1830, a report by Thornton worked its way into an official message by President Andrew Jackson, who was a vigorous public opponent of the type of unjust monopoly an improperly-granted patent represented. That presidential message finally generated some attention in Congress. As Walterscheid writes, this debate in Congress occurred following a report from Thornton which was incorporated into a message from President Andrew Jackson dated January 27, 1830. As stated in that report:

When we consider the facility with which, in the United States, patents can be procured, the partiality of men to their own productions, and the sanguine expectations which self-interest thence induces them to indulge, it is not surprising that patents are frequently taken out for the most trifling inventions, or improvements. The Treasury fee is thirty dollars; and many patents, when obtained, are not worth as many cents. Yet the applicant is highly offended, if advised to keep his money. On the other hand, the community at large is frequently deprived of its common right, by a *monopoly* of what ought to be free, unless some individual will step forward and subject himself to the risk of a vexatious law-suit.¹⁹⁰

But that debate failed to lead to reform. As Walterscheid writes:

[T]he debate in the Senate in 1830 on a bill intended to ameliorate [these problems] reveals the rather clear failure of Congress, even as of that date, to really understand the basic problem, which was the need to fundamentally change the way patents were issued to better assure compliance with the patentability requirements and reduce the number of fraudulent and invalid patents. What is interesting about the debate is that it was framed in the context of an intent to reduce the number of “useless” patents that were issued, rather than specifically addressing the real problem of fraudulent and invalid patents.¹⁹¹

Congress’ failure to act to restore quality controls to the front end of the patenting process led Thornton to take matters into his own

Papers Relating to the Administration of the U.S. Patent Office During the Superintendency of William Thornton, 1802-1828, microformed on Roll 1, Ed. No. 1 (Fed. Documentary Microfilm 1987)).

190. *Id.* at 328 (quoting H.R. DOC. NO. 38-21, at 8 (1830), as reprinted in C.M. Harris & D. Preston, *Papers Relating to the Administration of the U.S. Patent Office During the Superintendency of William Thornton, 1802-1828, microformed on Roll 1, Ed. No. 1 (Fed. Documentary Microfilm 1987))* (emphasis added).

191. *Id.* at 328.

hands and take actions not necessarily in accordance with his statutory authority:

On December 19, 1810 Thornton wrote a letter to Secretary of State Robert Smith outlining in considerable detail the duties he performed as Superintendent of Patents. As he phrased it: "... [A patent] requires not only a satisfactory explanation of principles, but the general, specific, & various modes of application. Some of these labours perhaps enter more into the duties of conscience than of office, but much is due to those who if permitted to take out a patent without these cautions (which I know are very unthankfully received) might unknowingly involve themselves and their families in ruin, sometimes by infringing the rights of others, sometimes by selling patents under a guarantee of their originality, sometimes by attempting perpetual motions & other impossibilities. It is only proper to guard against deception, by which many begin by deceiving themselves [that is, thinking something is new when it isn't], & end by deceiving their fellow citizens."¹⁹²

As Daniel Preston writes:

It was this threat of deception that troubled Thornton the most. When Senator John Quincy Adams inquired at the Patent Office in 1804 concerning the patent of a constituent, the superintendent told Adams that "he thought it not a *new* invention, which indeed he says is the case of almost all applications for Patents." Thornton went on to tell Adams of "many egregious impositions on the public," noting particularly the patent of Burgess Allison of New Jersey for a filtration system "which had been known and practiced for many years."¹⁹³

While Thornton lacked the statutory authority Jefferson had to reject poor patent applications, he acted like Jefferson in rebuffing poor patents applications nevertheless, "[a]side from setting forth Thornton's administrative duties and responsibilities, this letter is of interest as showing that at least through 1810, he had taken upon himself the authority to refuse to issue patents in some circumstances, although just what those were is unclear."¹⁹⁴ "In 1809 Thornton informed

192. *Id.* at 259 (quoting Letter from Thornton to Smith (Dec. 19, 1810), reprinted in C.M. Harris & D. Preston, *Papers Relating to the Administration of the U.S. Patent Office During the Superintendency of William Thornton, 1802-1828*, microformed on Roll 1, Ed. No. 1 (Fed. Documentary Microfilm 1987)).

193. Preston, *supra* note 185, at 344 (quoting Diary of John Quincy Adams (Dec. 27, 1804) (on file with Adams Family Papers, reel 30)).

194. Walterscheid, *supra* note 59, at 260.

Robert Fulton that he would not issue a patent for a steamboat to him on the grounds that all he was proposing was a change in proportions and that everything else had either been previously patented or was in public use.”¹⁹⁵

As Walterscheid continues:

[Thornton] clearly was authorized to refuse a patent if the ministerial requirements were not met. But the tenor of the letter is such as to suggest that he was not adverse to conducting a form of examination and seeking to avoid issuing patents that he did not believe were valid.¹⁹⁶

“[A]s early as 1796 Attorney General Charles Lee informed Secretary of State Edmund Randolph that he could—and indeed should—require ‘a more full and detailed specification’ from a particular applicant before a patent should be allowed to issue.”¹⁹⁷ Thornton’s channeling the spirit of Jefferson without express statutory authorization often met with legal scolding within the executive branch:

The Act of 1793 did not expressly obligate the Secretary of State to issue a patent, and for this reason Thornton may have felt that he had the authority to refuse to issue a patent if he perceived that it would be invalid.

If he did indeed have such a view, Secretary of State Smith seems to have rather quickly disabused him of it, for less than four months later in his March 5, 1811 pamphlet Thornton stated that “there is at present no discretionary power to refuse a patent, even where no just claim exists.” But he was not entirely certain on the point for in March 1812 he queried the Attorney General who replied that “the Department of State has no discretion to decline to issue the patent as applied for, in case the allegation and oath prescribed by the Act of Congress have been made, a suitable specification has been filed, and a model (if required) has been deposited.” But the issue would arise again, and even the courts were not certain on the point.¹⁹⁸

195. *Id.* at 260 n.54.

196. *Id.* at 260–61.

197. *Id.* at 260–61 n.55 (quoting R. FARNHAM, I OFFICIAL OPINIONS OF THE ATTORNEYS GENERAL OF THE UNITED STATES 64-65 (1852)).

198. *Id.* at 261–62 (quoting R. FARNHAM, I OFFICIAL OPINIONS OF THE ATTORNEY GENERAL OF THE UNITED STATES 171 (1852)).

Walterscheid notes: “There is also some evidence that on occasion Thornton continued to refuse to issue patents which he deemed to be invalid or improper.”¹⁹⁹

In this regard, William Elliot who had served as his chief clerk for years, gave the very clear impression in 1830 that Thornton had so done, when in commenting on Patent Office practices under Thornton he stated, “It remains to be proved by experience, whether the present system of issuing patents, without limitation or obstruction [by John Craig], is more beneficial to the country, than the judicious exercise of a discretionary power, vested in the superintendent . . . for *refusing* patents (under the control of the Secretary of State and the Attorney General) to mere speculators who make a business in levying contributions on the public by licenses under the title of ‘patents,’ for neither *new* nor useful inventions . . . and who fill the country with litigation.”²⁰⁰

In any event, Thornton “was never overly concerned or constrained by a lack of express statutory authority concerning the issuance of patents. As would be noted several years after his death, ‘he conceived himself to be invested with, and exercised freely, much discretionary power in the issuance of patents.’”²⁰¹

When Thornton’s discretion was challenged in lawsuits, federal courts went both ways on the issue as to whether patents could be denied for lack of utility under the Patent Act of 1793,²⁰² until, as Walterscheid writes “[s]everal decades [later] the Supreme Court would expressly indicate that once the ministerial requirements were met, the applicant was entitled to the patent as a matter of right.”²⁰³ Walterscheid notes that Thornton’s successor as Superintendent of Patents, Thomas P. Jones, “also seems to have followed this practice, but it was

199. Walterscheid, *supra* note 59, at 264.

200. *Id.* at 264 n.65 (quoting H.R. Doc. No. 38-21, at 4 (1830)).

201. *Id.* at 265–66 (quoting Letter from William Elliot to John D. Craig (Jan. 16, 1830), *in* H.R. Doc. No. 38-21, at 3 (1830)).

202. *See* *Whitney v. Emmett*, 29 F.Cas. 1074, 1077 (C.C.E.D. Pa. 1831) (No. 17,585) (“[t]he want of utility may be a good reason for not issuing a patent . . .”). *But see* *McGaw v. Bryan*, 16 F. Cas. 96, 98 (D.C.S.D.N.Y. 1821) (No. 8,793) (“No means whatever are provided or opportunities afforded, to contest the novelty or utility, or general merits, of the patent applied for; and it is known that, practically, patents are granted as a matter of course, if the applicant complies with the forms of the law, which are nothing more than presenting a petition to the Secretary of State, describing the alleged invention or discovery, swearing that he in the inventor or discoverer, and paying \$30 for the fees of the office.”).

203. WALTERSCHEID, *supra* note 59, at 262.

deliberately discontinued by John D. Craig, who served as Superintendent from 1829 through 1834.”²⁰⁴

XX. THE CONTINUED PERCEIVED RELEVANCE OF “UTILITY” TO
VALID PATENT GRANTS UNDER THE PATENT ACT OF 1793

Oddly, the Patent Act of 1793 only referred to the “useful” nature of the patented thing in its very first sentence, which read:

That when any person or persons, being a citizen or citizens of the United States, shall allege that he or they have invented any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement on any art, machine, manufacture or composition of matter, not known or used before the application, and shall present a petition to the Secretary of State²⁰⁵

That language simply prefaced the allegations required of a patent applicant as part of their fulfilling the simple process of registering their patent, which would automatically be granted if the allegation of other procedural requirements were met. Of course, implicit in that prefatory sentence was the need for the federal courts to subsequently evaluate whether a challenged patent had indeed substantively met a “utility”²⁰⁶ requirement. And under the Patent Act of 1793, parties to patent litigation continued to argue the utility of a thing gave it greater claim to a patent.

As Bracha has written:

[Judges] Van Ness and Ingersoll saw the role of courts – whether a judge or jury decided – as equivalent to the discretionary power of the patent board, except for the fact that it was to be invoked in ex-post challenges. At the same time, however, there emerged an opposite view that strove to shape the courts’ power over patents in a thoroughly different way. As observed by George Armstrong, the main battleground for those conflicting views was the interpretation and application of the statutory requirement that the invention be “useful.”

One line of utility cases dovetailed with the courts understanding of themselves as the new locus of the traditional discretionary power over patent grants. The utility requirement was the

204. *Id.* at 263.

205. Patent Act of 1793, ch. 11, 1 Stat. 318-323 (1793) (current version 35 U.S.C. § 101).

206. *Id.*

main valve through which courts applied the power to review patents based on their discretionary assessments of the *net public effects* of specific inventions.²⁰⁷

Bracha provides some examples:

In 1810, in *Whitney v. Carter*, when Eli Whitney's cotton gin patent was challenged, testimonies were produced "to prove the origin and progress of his invention." When arguing the utility question, Whitney's counsel . . . went on to provide the following detailed description of the public benefits of the cotton gin: "The whole interior of the Southern states was languishing, and its inhabitants emigrating, for want of some objects to engage their attention, and employ their industry, when the invention of this machine at once opened views to them which set the whole country in active motion. From childhood to age, it has presented us a lucrative employment. Individuals who were depressed with poverty, and sunk in idleness, have suddenly risen to wealth and respectability. Our debts have been paid off, our capitals increased, and our lands have trebled in value. We cannot express the weight of obligation which the country owes to this invention; the extent of it cannot now be seen. Some faint presentiment may be formed from the reflection that cotton is rapidly supplanting wool, flax, silk, and even furs, in manufactures, and may one day profitably supply the want of specie in our East-India trade. Our sister states also participate in the benefits of this invention; for, besides affording the raw materials for their manufactories, the bulkiness and quality of the article afford a valuable employment for their shipping."²⁰⁸

As Bracha writes: "The reported cases of the time indicate that this was not an exception. When the utility question was discussed, courts were often provided with substantive evidence and arguments regarding the social benefits and effects of the relevant inventions."²⁰⁹

The authors of one of the major patent law treatises at the time, Willard Philips, noted "some of the earlier cases in Pennsylvania and Massachusetts"²¹⁰ in which substantive inquiries into the merits of potentially infringing inventions were undertaken and courts examined

207. Bracha, *supra* note 45, at 230 (emphasis added).

208. *Id.* at 230–31 (emphasis added) (quoting *Whitney v. Emmett*, 29 F. Cas. 1070, 1071–72 (C.C.D.Ga. 1810) (No. 17,583)).

209. *Id.* at 231.

210. WILLARD PHILIPS, *THE LAW OF PATENTS FOR INVENTIONS* 137 (1837).

whether or not the “community . . . receive[d] some benefit from the invention.”²¹¹

Bracha describes one particular decision that makes the point:

The 1822 *Langdon v. DeGroot* decision exemplified the . . . substantive utility mode of thought. The court upheld a trial court instruction to the jury that the plaintiff’s invention was not useful. Judge Livingston relied on the concept of patents as discretionary grants when he explained that each invention must “be beneficial to the community” and offer “benefits [that] are of sufficient consequence to be protected by the arm of government.”²¹²

During this period many decisions were handed down by the courts in which the commercial success of a product subject to a patent dispute was deemed relevant evidence in support of the validity of the patent. As I have written elsewhere,²¹³ when patent law first developed in the early 1800’s, the intent was the creation of “a system that encouraged technological invention that could turn a profit and that increased the usefulness and value of patents for American industry.”²¹⁴ Legal historian Morton Horowitz chronicles how early nineteenth century federal judges often interpreted “usefulness” to mean “above all the right to develop property for business purposes.”²¹⁵ And as Steven Lubar writes, “patent law—the law of intellectual property—partook of this legal dynamism. Inventors and their lawyers made the case that ideas were property and that their development was in the interest of the community’s desire for economic growth.”²¹⁶

The economic good a patent resulted in – that is, its ability to attract purchases by consumers—was seen by judges as redounding to the validity of a given patent. By the 1830’s, this argument was in line with Horowitz’s description of the views judges held regarding property rights more generally, namely “a dynamic, instrumental, and more

211. *Id.*

212. Bracha, *supra* note 45, at 232–33 (citing *Langdon v. De Groot*, 14 F. Cas. 1099, 1100 (C.C.S.D.N.Y. 1822) (No. 8,059)).

213. See generally Taylor, *supra* note 2 (discussing the development of patent law in the early 1800s).

214. Steven Lubar, *The Transformation of Antebellum Patent Law*, 32 TECH. AND CULTURE 932, 932 (1991).

215. MORTON HOROWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1780-1860* 37 (1977).

216. Lubar, *supra* note 214, at 933.

abstract view of property that emphasized the newly paramount virtues of productive use and development.”²¹⁷

In 1832, Chief Justice John Marshall, in *Grant et al. v. Raymond*, describing the federal patent statute, wrote that “the great object and intention of the act is to secure to the public the advantages to be derived from the discoveries of individuals”²¹⁸

Even later, after the Court moved away from commercial success as an explicit indicator of invention, its relevance remained, as evidenced by the Court’s heavy emphasis on the widespread use of a particular barbed wire configuration in upholding a barbed wire patent. In *The Barbed Wire Patent*, the Court wrote:

It is true that the affixing of barbs to a fence-wire does not apparently give a wide scope to the ingenuity of the inventor, but from the crude device of Hunt to the perfected wire of Glidden, each patent has marked a step in the progress in the art. The difference between the Kelly fence and the Glidden fence is not a radical one, but, slight as it may seem to be, it was apparently this which made the barbed-wire fence a *practical and commercial success*. The inventions of Hunt and Smith appear to be scarcely more than tentative, and never to have gone into general use. The sales of the Kelly patent never seem to have exceeded 3000 tons per annum, while plaintiff’s manufacture and sales of the Glidden device (substituting a sharp barb for a blunt one) rose rapidly from 50 tons in 1874 to 44,000 tons in 1886, while those of its licensees in 1887 reached the enormous amount of 173,000 tons. Indeed, one who has traveled upon the western plains of this continent cannot have failed to notice the very large amount of territory enclosed by these fences, which otherwise, owing to the great scarcity of wood, would have to be left unprotected.²¹⁹

As Edmund Kitch writes, “[a]lthough commercial success has often been rejected in particular cases, its general relevance has never again been questioned,”²²⁰ even if used only in that “commercial success may be decisive where invention is in doubt”²²¹

217. HOROWITZ, *supra* note 215, at 31.

218. *Grant v. Raymond*, 31 U.S. 218, 243 (1832).

219. *Barbed Wire Patent*, 143 U.S. 275, 282 (1892) (emphasis added).

220. Edmund W. Kitch, *Graham v. John Deere Co.: New Standards for Patents*, 1966 SUP. CT. REV. 293, 335 (1966).

221. *Textile Mach. Works v. Louis Hirsch Textile Mach., Inc.*, 302 U.S. 490, 498 (1938).

The Supreme Court itself, in recognizing the disadvantage judges might have in assessing usefulness, turned to commercial success as an indicator of patentability. In 1966, in *Graham v. John Deere Co.*, the Supreme Court wrote that inquiries regarding the commercial success of a product:

[M]ay lend a helping hand to the judiciary which . . . is most ill-fitted to discharge the technological duties cast upon it by patent legislation. . . . They may also serve to “guard against slipping into hindsight” . . . and to resist the temptation to read into the prior art the teachings of the invention in issue.²²²

And as explained in a law review article cited by the Supreme Court in the same case:

The possibility of market success attendant upon the solution of an existing problem may induce innovators to attempt a solution. If in fact a product attains a high degree of commercial success, there is a basis for inferring that such attempts have been made and have failed. Thus the rationale is similar to that of longfelt demand and is for the same reasons a legitimate test of invention.²²³

In light of this continued emphasis on the utility of a thing under the Patent Act of 1793, it is not surprising that the patents granted between 1790 and 1846 arose overwhelmingly from centers of commercial activity. As described by Zorina Khan and Kenneth Sokoloff, who studied the relationship between patents and geographical hubs of innovation:

Our sample of “great inventors” consists of 160 individuals credited with at least one important invention between 1790 and 1846 by biographical dictionaries and histories of technology. The data set includes complete patent histories through

222. *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966) (citations omitted).

223. Richard L. Robbins, *Subtests of Nonobviousness: A Nontechnical Approach to Patent Validity*, 112 U. PA. L. REV. 1169, 1175 (1964). The importance of commercial viability to the enforcement of patents was also recognized by Congress when it first granted the International Trade Commission (“ITC”) broader power to protect against patent infringement. See Trade Act of 1974, Pub. L. No. 93-618, § 341, 88 Stat. 2053, 2053–56 (1975) (codified as amended at 19 U.S.C. § 1337). At the time, Congress enacted a requirement that, before the protection of the ITC could be requested, an entity alleging patent infringement show that they were part of a “domestic industry” that was “efficiently and economically operated” and that the infringing goods would “destroy or substantially injure an industry.” *Id.* at § 341(a). The intent was to ensure that those invoking the protection of the ITC were actually viable businesses with commercially productive products.

1865 as well as information on place and date of birth, schooling, occupation before and after major inventions, efforts to extract income from their discoveries, and other variables. The 150 inventors who were also patentees received 1,178 patents, or somewhat less than 2 percent of the total awarded over the period.

One of the salient features of the great inventors is how similar their patterns of patenting were to those of ordinary patentees. *Most significant, perhaps, is the finding that important inventions resembled patents in being strongly and positively associated with the extent of markets.* Like patentees in general, the great inventors were disproportionately concentrated in the Northeast, and especially in Southern New England and New York, where low-cost transportation networks had facilitated a rapid expansion of commerce early in the antebellum period. . . . The procyclicality of both great inventor patents and overall patents during the antebellum period provides further support for the thesis that inventive activity responded to market conditions.²²⁴

Khan and Sokoloff conclude:

The evidence on great inventors conforms well with the view that high regional inventiveness was associated with a wider segment of the population directing its resources toward invention and innovation, in response to the opportunities presented by expanding markets. . . .

. . . .

In contrast to the paradigm of the technically adept outsider revolutionizing an industry, our sample appears to be composed primarily of entrepreneurial inventors who contrived “schemes of practical utility.” Insiders, who perhaps had stronger incentives to invest in inventive activity and better information about the state of the market, were the norm.²²⁵

As Khan and Sokoloff point out, the most prominent inventors at the time tended to promote and produce their products themselves, and to gain profits as a result:

224. B. Zorina Khan and Kenneth L. Sokoloff, “Schemes of Practical Utility”: *Entrepreneurship and Innovation Among “Great Inventors” in the United States, 1790-1865*, 53 J. ECON. HIST. 289, 290–91 (1993) (concluding there was a correlation between patents and innovation contrary to the theory proposed by economic historians that early inventions were haphazard).

225. *Id.* at 294, 296 (citation omitted).

The entrepreneurial inclinations of inventors can also be discerned from their attempts to appropriate returns from their inventions. Their efforts encompassed a variety of methods, including direct use of the invention in production, assignment or sale of rights, licensing, and litigation. *The typical great inventor combined ingenuity in invention and in commercial exploitation, proving to be a shrewd entrepreneur who promoted his inventions for profit. Indeed, few failed to secure rewards from their inventions.*

The assignment or sale of patent rights could prove profitable when the invention was demonstrably useful and when the inventor had reputational capital to draw on. . . .

. . . .

Entrepreneurs are normally credited with transforming the invention into a usable product, and such innovation is often associated with the greatest potential return. For instance, Cyrus McCormick received \$20 to \$35 in royalties per reaper, but he gained an estimated unit profit of \$80 through manufacturing. Before 1825, half of all great inventor patents were filed by individuals who manufactured the product in question and were presumably directly affected by the growth of markets. Subsequent to the rapid industrial expansion of the 1820s and 1830s, it became increasingly common for these inventors to license as well as manufacture. . . .

. . . .

If the propensity to patent typifies economic men motivated by expected profit, then virtually all of the great inventors fall within this category: only 10 of our 160 failed to secure patents for their discoveries.²²⁶

Contrast that with the situation among so-called “patent trolls” today, who are focused “not on developing or commercializing patented inventions but on buying and asserting patents against companies that have already begun using [the claimed technology], often after independently developing them [unaware of the troll’s patent].”²²⁷ As I have written elsewhere:

While the originators of patent law, and property law generally, saw commercial worth as integral to valid patents, [third-party litigation] financiers [of patent troll litigation] are exploiting the current patent litigation system to promote an *opposite*

226. *Id.* at 301–03.

227. YEH, *supra*, note 93, at 1.

goal, namely the facilitation of the use of patents with no demonstrated commercial value to extract settlements *from* those whose products are sold commercially.²²⁸

XXI. JUSTICE JOSEPH STORY'S GUTTING REDEFINITION OF "UTILITY"

Just as the federal courts were settling into their role as arbiters of a substantive "utility" requirement in patents, Justice Joseph Story decided several cases that essentially gutted the utility requirement and reduced the federal courts to largely rubber-stamping patents passed through the registry system created by the Patent Act of 1793, shattering settled expectations grounded in the long history of the patent laws as promoting useful inventions. As Bracha writes:

The conservative interpretation of utility retained some of the traditional character of patents as privileges Parallel to this interpretation, however, a conflicting line of cases appeared that challenged its fundamental premises. Justice Story, in a series of patent decisions, was a leading inspiration for this new line. In 1817, Justice Story first deployed his new conception of utility in *Lowell v. Lewis*. He vigorously rejected the defendant's argument that the invention offered no public benefits because it was inferior to other similar devices already in use. Under the conservative utility framework, this was a rather common argument, but Story launched an all-out assault on this "broad and sweeping doctrine." "All that the law requires," Justice Story explained, "is, that the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society. The word 'useful,' therefore, is incorporated into the act in contradistinction to mischievous or immoral." Story's telling examples of a non-useful invention were "a new invention to poison people, or to promote debauchery, or to facilitate private assassination."²²⁹

This reduction of the definition of "utility" to mean literally anything that did not kill people or "promote debauchery" essentially defined "utility" out of existence:

Despite the role still allocated to the judge as the guardian of society's moral standards, Story's new formula constituted a frontal assault on the two basic premises of the traditional view of utility. Courts under the new interpretation developed by

228. Taylor, *supra* note 2, at 58.

229. Bracha, *supra* note 45, at 233 (quoting *Lowell v. Lewis*, 15 F. Cas. 1018, 1018, 1019 (C.C.D. Mass. 1817) (No. 8568)).

Story were limited to ascertaining whether an invention crossed the line of being “mischievous” or “obnoxious.” They lost their role as the traditional discretionary arbiters of the social benefits of inventions, and the extent to which they deserved governmental privileges. As Story put it, “whether it be more or less useful” was irrelevant to the public. Who then shall judge the value of inventions? Here, Story explicitly appealed to a market-conception of value, very similar to the one that started to appear in late eighteenth century patent thought in England. “If its practical utility be very limited,” Story said, “it will follow, that it will be of little or no profit to the inventor; and if it be trifling, it will sink into utter neglect.” In Story’s new vision the court lost its role as the discretionary allocator of reward in the name of the public interest, and the market rose as the only measure of value.²³⁰

Justice Story’s gutting interpretation of utility was soon widely adopted by the courts.²³¹ The fatal flaw in Story’s reasoning, of course, is that the market was not then, and is not today, the only factor affecting the profitability of a patent. As I have written elsewhere, under the American legal system, abusive lawsuits filed by those who have obtained improperly granted patents for things already in common use and which they do not manufacture or sell themselves can be used to extort large amounts of money from other innocent inventors:

The American legal system allows anyone to impose the costs of settlement on others through lawsuits, under threat of a default judgment. Much worse, in the patent litigation context, third party financiers can pay patent trolls who own many

230. *Id.* at 234 (quoting *Bedford v. Hunt*, 3 F. Cas. 37, 37 (C.C.D. Mass. 1817) (No. 1217)).

231. *See id.* at 234-35 (“The conflict between these two lines of cases continued, but Story’s new framework gradually prevailed in the courts. Treatise writers immediately and uniformly adopted Story’s views. In 1837, Philips declared that ‘the construction of Mr. Justice Story . . . is now universally adopted in the United States.’ He went on to elaborate the new orthodoxy according to which ‘it is not the province of the court to go into the question of the extent of degree of usefulness.’ Earlier he explained that a patent is the ‘most equitable’ reward because invention ‘is graduated according to its utility in the public estimation’ and the inventor ‘is saved from mistakes, favoritism and prejudices of censors.’ By the late nineteenth century, these views were utterly triumphant. . . . As far as ex-post review by the court was concerned, the two premises of Story’s new orthodoxy were uniformly accepted: the role of courts was limited to applying general standard patentability criteria, and the sole arbiter and allocator of value was to be the market.”) (citation omitted).

vague, valueless, and unproductive patents to threaten to sue productive entities for patent infringement, even when the allegedly infringing innovation was independently discovered and the existence of the pre-existing patent was unknowable in advance and under threat of a finding of willful infringement. Third party financers can then impose vastly disproportionate discovery costs on innocent defendants and claim damages based on the value of the defendant's entire product rather than the smaller components to which the patent at issue relates, take advantage of standards of proof stacked to their advantage, and incentivize jurors without technical backgrounds to find for the plaintiff following the route of least resistance. All these advantages can then be leveraged by third party litigation financers of patent trolls, who produce no products, into lucrative settlements at virtually no cost to themselves, but to great costs to research and development into future products by others. Such is the scene at the Patent Litigation Casino, where patent trolls can force others to the table and play under hopelessly lopsided rules that encourage innocent rational actors to avoid playing at all by paying trolls in advance.²³²

And indeed, Justice Story's gutting interpretation of "utility" led to the first iteration of widespread, abusive patent litigation, preceding the sort of patent litigation abuse we see today.

XXII. JUSTICE STORY'S DEFINING DOWN "UTILITY" LED TO THE FIRST ERA OF PATENT LITIGATION ABUSE

The Act of 1793 was enacted at the cusp of a burgeoning American industrial revolution. Its creation of a registration system with supervision left entirely to the courts, combined with Justice Story's evisceration of the definition of "utility," left the patent field open to those who would abuse the patent litigation system for extortionist purposes. As Walterscheid writes:

The era of registration created by the Act of 1793 lasted for 43 years. During this period the United States engaged in a remarkable period of industrial and economic growth. Almost 10,000 patents were issued, which seemed to be clear evidence of the growing technological base of the country, and the patent models collected in the Patent Office were deemed to be a source of great national pride. Yet many of these patents were

232. See Taylor, *supra* note 2, at 67.

considered to be fraudulent and many others—perhaps the majority—were deemed worthless.²³³

Walterscheid continues, in 1813, when the registration system had been ongoing for a decade:

[Joseph] Cooper would make the point even more clearly, saying: “The number and nature of patents granted under the laws of the United States, have hitherto contributed little to the improvement of manufactures, but threaten much to the increase of lawsuits and impositions.” Moreover, “the question is becoming daily more interesting, where patents, frivolous, absurd, and fraudulent, threaten to become taxes on the community, in favour of persons, who may truly be said to raise money under false pretences.” As an example, he provided the following:

“Some north-eastern speculator, I heard of lately, procured or pretended to have procured, a patent right for using stone coal in a blacksmith’s forge: on being taxed with the strangeness and uselessness of such a patent, he replied “no matter: it will be worthwhile for every blacksmith to give me a couple of dollars for a right rather than contest it with me.”

He noted that unfortunately, “[i]t has proved a good speculation” and wished that “it were the only successful case of contributions levied on the public, by the bold speculations of patentees.”²³⁴

Walterscheid adds that “[t]he notoriety of this particular patent was such that even federal judges came to comment on it,”²³⁵ citing *Delano v. Scott*, in which Judge Hopkins instructed the jury that:

A case recorded of a patent for using the common stone coal in a common blacksmith’s forge. The patentee went through the country exhibiting his parchment patent with the great seal of the department of state, and the signatures of the high officers of government appended to it. This would naturally alarm an ignorant smith, and as the patentee would sell him a right for two or three dollars, or for whatever he could get for it, a prudent man would prefer paying so small a sum, rather than go to law with an adversary apparently so well armed.²³⁶

233. WALTERSCHEID, *supra* note 59, at 243.

234. *Id.* at 322–23 (quoting T. COOPER, THE EMPORIUM OF ARTS AND SCIENCES 431, 435, 444 (1813)).

235. *Id.* at 323.

236. *Delano v. Scott*, 7 F. Cas. 378, 382 (D.C.E.D. Pa. 1835) (No. 3,763).

As Walterscheid writes, “As early as 1809 Thornton wrote ‘many of the patents are useless, except to give work to the lawyers, & others so useless in construction as to be . . . merely intended for sale.’”²³⁷ And in 1814, Thomas Jefferson wrote “[t]he abuse of frivolous patents is likely to cause more inconvenience than is countervailed by those really useful.”²³⁸

Abuse was so infamous it caused President Madison to suggest corrective legislation:

By 1816 enough complaints had been received by the State Department that President Madison proposed that the patent law be altered such “that further restraints be imposed on the issue of patents to wrongful claimants, and further guards provided against fraudulent exactions of fees by persons possessed of patents.” Congress did not view the situation in the same manner that the President did, and failed to act on his proposal.²³⁹

Congress was also sent petitions on the issue; the next session saw:

a petition by sundry inhabitants of Pennsylvania, complaining of the many and great impositions to which they are subjected, in consequence of the number of unjust, absurd, and frivolous patents, which have been granted to a set of speculators, and praying that additional restrictions may be imposed on the issuing of patents.²⁴⁰

Justice Story’s defining down the definition of “utility” in 1817 added fuel to the fire. In 1824:

Judge Van Ness had written:

[T]he privileges already obtained and daily acquired under this act will furnish fruitful sources of future litigation. The seeds of controversy are already sown in every quarter of the country. The very great and very alarming facility with which patents are procured is producing evils of great magnitude. It encourages the flagitious peculations of imposters, and the arrogant pretensions of vain and fraudulent projectors.

237. WALTERSCHEID, *supra* note 59, at 323 (citation omitted).

238. Letter from Jefferson to Thomas Cooper (Jan. 16, 1814), in 14 WRITINGS OF THOMAS JEFFERSON 65–66 (A.A. Lipscomb ed., 1903).

239. WALTERSCHEID, *supra* note 59, at 325 (citation omitted). As Walterscheid writes, “Although the Senate appointed a committee to look into the matter, it was discharged within the month with no recommendations. A House committee went somewhat further and actually reported a bill but it was postponed indefinitely which effectively killed it.” *Id.* at 340.

240. *Id.* at 325 (quoting 14 Annals of Congress 843, 870 (1815)).

Interfering patents are constantly presented to our observation, and patentees are everywhere in conflict. Amidst this strife and collision, the community suffers under the most diversified extortions. Exactions and frauds, in all the forms which rapacity can suggest, are daily imposed and practiced under the pretence of some legal sanction. The most frivolous and useless alterations in articles in common use are denominated improvements, and made pretexts for increasing their prices, while all complaint and remonstrance are effectively resisted by an exhibition of the great seal [that is, a government-approved patent].²⁴¹

In 1828:

Throughout the era of registration, a substantial number of useless or invalid patents would issue. In 1828, [I. L.] Skinner suggested that one-third of the patented inventions in this country were useless and another third were “merely exhibitions of ingenuity, useful only, as displays of the inventive faculties of our countrymen.”²⁴²

In 1830, Thomas P. Jones, who had recently served as Superintendent of Patents for a year, wrote “although some few of the specifications are well drawn, and present inventions, or discoveries, which are of great interest, many of them add extreme length to utter worthlessness in all respects.”²⁴³ The same year, William Elliot noted the growing abuse of patent law, stating:

The greatest evil attending the patent law is, that, a number of idle, worthless persons, obtain patents for the most trifling objects, often neither *new* nor *useful*; and impose on the ignorant by a sort of license, signed by the President, Secretary of State, and Attorney General, under the title of “*patent*.” Such men have collected millions of dollars from the honest farmer and mechanic; and filled our courts of law with vexatious suits.²⁴⁴

241. *Id.* at 327 (quoting *Thompson v. Haight*, 23 F. Cas. 1040, 1041 (S.D.N.Y. 1826)).

242. *Id.* at 325 (quoting ICHABOD L. SKINNER, *THE AMERICAN JOURNAL OF IMPROVEMENTS IN THE USEFUL ARTS, AND MIRROR OF THE PATENT OFFICE OF THE UNITED STATES* 6 (1828)).

243. *Id.* at 326 (quoting THOMAS P. JONES, 10 J. FRANKLIN INST. 16 (1830)).

244. W. ELLIOT, *THE PATENTEE'S MANUAL* iv (1830).

XXIII. THE FIRST ERA OF PATENT LITIGATION ABUSE LED TO
CONGRESS' ENACTING THE PATENT ACT OF 1836

The Act of 1793 ended up doing the exact opposite of what the patent laws were originally supposed to do, namely to help the public at large, not facilitate their harassment. As Walterscheid writes, "Finally, there would be a rising chorus of complaint about fraudulent or worthless patents issued under the Act of 1793. It would be this concern that would ultimately result in the major changes brought about by the Patent Act of 1836."²⁴⁵

Much like the current dysfunctions of the patent system that have lingered on for decades uncorrected:

In light of its manifest defects and the continuing chorus of public and judicial complaint with regard to its inadequacies, perhaps the most remarkable aspect of the Act of 1793 is that it remained the law of the land for as long as it did. But it was inevitable that the Congress would at some point have to engage in major reform of the patent law. What was lacking was someone in the Congress to champion such reform. In 1835 that person finally appeared.

He was John Ruggles, newly appointed Senator from Maine. He had long practiced law in that state and had served as a justice of the state supreme court before being appointed to the Senate. What seem[ed] to have caught his interest with regard to the patent law was the fact that he had a strong interest in mechanics and engineering and was desirous of becoming a patentee in his own right. It appears that it was for that reason that he visited the Patent Office shortly after his arrival in Washington. . . . [O]n December 31, 1835 he outlined to the Senate the concerns he had heard from the Patent Office and asked it to appoint a committee to consider the condition of the Patent Office and the existing patent law. He was appointed chairman of a committee to do precisely that.²⁴⁶

Whereas the patents of importation granted under the Act of 1790 authorized a form of piracy by Americans that benefited the American people by facilitating the introduction into the United States of useful things and techniques already used and practiced in other countries, the Act of 1793 did just the opposite, according to the Superintendent

245. WALTERSCHEID, *supra* note 59, at 18.

246. *Id.* at 421–22.

of Patents himself, by authorizing a form of piracy by Americans that redounded to the detriment of other American citizens and businesses:

One of the [first] things the committee did was to make formal inquiry to the Secretary of State on how the Office should be reorganized. This inquiry was passed on to Superintendent of Patents Henry Ellsworth who on January 29, 1836 provided a detailed response to the Secretary of State, who forwarded it to Ruggles. . . .

. . . .

[Ellsworth] quickly got to the heart of the matter by stating that the Office was obligated to issue a patent if the ministerial requirements were met, and that it was up to the courts to sort out what rights if any existed with respect to issued patents. . . . [Ellsworth] indicated that patents were commonly issued to those who pirated inventions, and that the Patent Office itself offered every facility in aid of such piracy. He pointed out, with obvious concern, that just the week before an applicant had been informed that his purported invention was a direct copy of an earlier invention, but that the applicant had nonetheless demanded and obtained a patent. Moreover, the presence of the great seal of the United States, and the signature of the President greatly facilitated fraudulent impositions on the common people who assumed that the presence of these meant that the patent was valid.

Ellsworth argued that the Office should have authority to preclude the issuance of a patent for an invention which was not novel or which interfered with an earlier patent.²⁴⁷

XXIV. THE 1836 SENATE COMMITTEE REPORT

As Walterscheid writes:

On April 28, 1836 the [Senate] committee issued a report which quickly received wide distribution. It began with a simple yet highly important point: “The promotion of the arts and the improvements of manufactures, are the objects aimed at in granting patents for invention.” Rewarding invention was the means by which this end was to be accomplished, but implicit in the report was the view that in actual practice the means had become prostituted through “the unrestrained and promiscuous grant of patent privileges” and had largely subsumed the ends.

247. *Id.* at 422–23.

As a consequence, the public had been ill served and the rights of legitimate inventors had been rendered of little value. . . .

. . . .

Submitted along with the report was a proposed bill containing major revisions of the patent law. The Congress which had remained indisposed for so long to defects in the Act of 1793 now realized that significant changes indeed had to be made in the patent law and in a little over two months enacted the revisions into law.²⁴⁸

The Act of 1836 repealed all the existing patent laws and replaced them with an examination system that remains at the heart of today's patent system.²⁴⁹ Congress thus rejected both the move to a registration system and Justice Story's gutting of a utility requirement, restoring the original frontier spirit of the earliest American patent laws that emphasized utility in proper patenting.

The Senate Committee Report on the bill that became the Patent Act of 1836 reiterated the original policy of the patent laws, which was to allow monopolies over things only when the community benefited. As the 1836 Senate Committee Report stated:

The promotion of the arts and the improvement of manufactures, are the objects aimed at in granting patents for inventions. . . .

. . . .

It is not at this day to be doubted that the evil of the temporary monopoly is greatly overbalanced by the good the *community* ultimately derives from its toleration.²⁵⁰

The Report further stated:

The act of 1793 . . . gives, according to the practical construction it has received, no power to the Secretary to refuse a patent for want of either novelty or usefulness. The only inquiry is whether the terms and forms prescribed are complied with. The granting of patents therefore is but a ministerial duty. Every one who makes application is entitled to receive a patent by

248. *Id.* at 423–24, 426 (citations omitted).

249. *Id.* at 427 (stating the Act of 1836 “repealed all existing patent laws including the Act of 1793” and “replaced it with the examination system that has remained a fundamental part of the patent law to this day.”).

250. *1836 Senate Committee Report*, 18 J. PAT. OFF. SOC'Y 853, 854–55 (1936) (emphasis added).

paying the duty required, and making his application and specification in conformity with the law.²⁵¹

The Senate Report then refers to the unfortunate results of the application of Justice’s Story’s neutered definition of “utility” and states:

The necessary consequence is, that patents have, under the act of 1793, been daily granted without regard to the question of novelty, or even utility in the ordinary sense; for it has been settled that the term useful, as used in this statute, is only in contradistinction to hurtful, injurious, or pernicious.²⁵²

The 1836 Senate Report then stated the proposed bill accompanying it would reimpose an examination system:

A power in the Commissioner of the Patent Office to reject applications for want of novelty in the invention, it is believed, will have a most beneficial and salutary effect in relieving meritorious inventors, and the community generally, from the serious evils growing out of the granting of patents for every thing indiscriminately, creating interfering claims, encouraging fraudulent speculators in patent rights, deluging the country with worthless monopolies, and laying the foundation for endless litigation. . . .

By this means, without danger to actual and honest inventors, the number of patents would be somewhat diminished. But there would be more confidence in those which should be granted The present law waits till infringements and frauds are consummated – nay, it even aids them; and then it offers an inadequate remedy for the jury, by giving an action for damages. It ought, rather, by refusing to grant interfering patents, to render prosecutions unnecessary. Instead of sanctioning the wrong by granting the privilege to commit it, it should arrest injury and injustice at the threshold, and put an end to litigation before it begins.²⁵³

251. *Id.* at 856.

252. *Id.* at 856.

253. *Id.* at 861.

XXV. THE 1836 SENATE COMMITTEE REPORT RECOGNIZED THE
PROBLEMS CREATED BY PRESUMPTIONS OF VALIDITY FOR PATENTS,
EVEN UNDER AN EXAMINATION SYSTEM

The 1836 Senate Report set out the difficulties set upon innocent inventors in the face of patents granted for things that were obvious, or that had already been in public use. As the Senate Report noted:

[Under the Act of 1793,] [t]he country becomes flooded with patent monopolies, embarrassing to bona fide patentees, whose rights are thus invaded on all sides; and not less embarrassing to the community generally, in the use of even the most common machinery and long-known improvements in the arts and common manufactures of the country. . . .

. . . .

In this collision and interference of patents, the original and meritorious inventor sees his invention, to the perfection of which he has devoted much time and expense, pirated from him, and he must forego the reward which the law was intended to secure to him in the exclusive right it grants; or he must become involved in numerous and expensive lawsuits in distant and various sections of the country, to protect and confirm his rights. If he be wise, he will generally avoid the latter, and submit to the former alternative of injustice, to which *the Government, as the law now is, makes itself accessory*. The practice is scarcely less reprehensible, of taking out patents for what has been long in public use, and what every one has therefore a right to use. *The patentee in such cases being armed with the apparent authority of the Government, having the sanction of its highest officers, the seal of state, scours the country, and by threats of prosecution, compels those who are found using the thing patented, to pay the patent price or commutation tribute*. This exaction, unjust and iniquitous as it is, is usually submitted to.²⁵⁴

The 1836 Senate Report went on to recognize that, while the proposed bill would create a new examination system, any such system would be fallible, and inevitably grant improper patents:

To prevent these evils in future is the first and most desirable object of a revision and alteration of the existing laws on this subject. The most obvious, if not the only means of effecting it, appears to be to establish a check upon the granting of

254. *Id.* at 857–58 (emphasis added).

patents, allowing them to issue only for such inventions as are in fact new and entitled, by the merit of originality and utility, to be protected by law. The difficulty encountered in effecting this, is in determining what that check shall be; in whom the power to judge of inventions before granting a patent can safely be reposed, *and how its exercise can be regulated and guarded, to prevent injustice through mistake of judgment or otherwise, by which honest and meritorious inventors might suffer wrong.*²⁵⁵

The 1836 Senate report then noted that even diligent patents examiners would work under circumstances that would inevitably lead to the granting of invalid patents, warranting a robust system of judicial review:

It is obvious that the power must, in the first instance, be exercised by the department charged with this branch of the public service. But as it may not be thought proper to intrust its final exercise to the department, it is deemed advisable to provide for an occasional tribunal to which an appeal may be taken. And as a further security against any possible injustice, it is thought proper to give the applicant in certain cases, where there may be an adverse party to contest his right, an opportunity to have the decision revised in a court of law.²⁵⁶

The 1836 Senate report recognized that any government official charged with judging inventions would be operating under limited technical knowledge and as a result, judicial review should always be available. As William Woodward wrote in 1942, even Queen Elizabeth saw that her own royal patent determinations required judicial review:

[T]here is another factor inherent in the subject matter of patents that would prevent the Patent Office from detecting every unfounded claim *even if every man had perfect judgment and exercised it fearlessly*: in the determination of novelty and inventiveness the Patent Office can judge only in the light of what its personnel knows or can find out in a reasonable time about the state of the art. While a defendant in an infringement suit may spend \$100,000 or more in factual research to attack novelty, inventiveness, and other elements of patentability, the public cannot afford to make so thorough a search of the arts for each patent application presented. Nor can the Patent

255. *1836 Senate Committee Report*, 18 J. PAT. OFF. SOC'Y 853, 858 (1936)(emphasis added).

256. *Id.*

Office concentrate on the more important patents, for there is great difficulty in predicting at the time of patenting which inventions will turn out to be practical or commercially successful. The Patent Office for lack of funds makes no systematic attempt to determine whether any particular subject matter was in public use so as to constitute a bar to patents thereon, unless an interested party brings a petition for the institution of "public use proceedings"; and the public is given no notice of the contents of pending applications. It is therefore necessary that the question of the substantive validity of patents be redetermined if after issuance of the patent it should be found worth questioning. This need is met by the process of judicial review.

The importance of judicial review is recommended by its solid foundation in the history of the United States patent system and its British and colonial predecessors. Even when the granting of monopolies attested by letters patent, for inventions as well as for certain other purposes, was simply a matter of what suited a monarch in his determination of economic and fiscal policies, it was considered that the validity of such letters patent was reviewable in the courts even in the absence of a statute to that effect. This attitude of the courts was indeed expressly recognized by Queen Elizabeth in order to avoid the affront of a statutory limitation of the asserted inherent (or "divine") power to grant monopolies by way of letters patent. When the permissible types of monopolies were at last expressly defined, the statute expressly provided for a determination by the courts of whether the patent was within the permitted class of monopolies. It is to be noted that this provision for judicial review long antedated the establishment of expert tribunals for the examination of patent applications. It was a limitation on royal favoritism and assertions of absolutist divine right rather than upon the acts of an expert bureaucracy failing in thoroughness.²⁵⁷

The Supreme Court in 1853 summarized the evidentiary change made by the Patent Act of 1836 as follows, and read the Act as reinstating the standard that patents would be considered mere "prima facie" evidence of validity:

The patent act of 1790 had made a patent *prima facie* evidence; but this act was repealed by that of 1793, and this provision was not reenacted in it. Hence a patent was not received

257. William Redin Woodward, *A Reconsideration of the Patent System as a Problem of Administrative Law*, 55 HARV. L. REV. 950, 953-54 (1942) (emphasis added).

in courts of justice as even *prima facie* evidence that the invention patented was new or useful, and the plaintiff was bound to prove these facts in order to make out his case. But the act of 4th of July, 1836, introduced a new system, and an entire change in the mode of granting patents. It provided for a new officer, styled a commissioner of patents, to “superintend, execute, and perform all acts and things touching and respecting the granting and issuing of patents, &c.” The commissioner was authorized to appoint a chief clerk, and three examining clerks, machinist, and other officers. . . .

. . . .

It is evident that a patent thus issued after an inquisition or examination, made by skillful and sworn public officers, appointed for the purpose of protecting the public against false claims or useless inventions, is entitled to much more respect, as evidence of novelty and utility, than those formerly issued without any such investigation. *Consequently such a patent may be, and generally is, received as prima facie evidence of the truth of the facts asserted in it.*²⁵⁸

As a result, even under the Patent Act of 1836, which reinstated an examination system, a patent was still only “prima facie” evidence of validity, a much lower standard for invalidating a patent than the “clear and convincing” evidence standard required today.²⁵⁹

XXVI. THE 1836 SENATE COMMITTEE REPORT RECOGNIZED THE NEED FOR A ROBUST PATENT APPEALS PROCESS IN FEDERAL COURT

The low “prima facie” evidence standard was also applied in a robust forum of federal court review, available to anyone seeking to

258. *Corning v. Burden*, 56 U.S. 252, 270–71 (1854) (emphasis added).

259. Black’s Law Dictionary, for example, defines “prima facie evidence” as “[e]vidence that will establish a fact or sustain a judgment *unless contradictory evidence is produced*,” and cites C.J.S. Evidence, §§ 226, 729, 1300–1305, 1320, 1324, 1326–1327, 1342, and 1345 for the proposition that “prima facie evidence . . . merely declares that certain conduct shall suffice as evidence until the opponent produces contrary evidence.” *Prima Facie Evidence*, BLACK’S LAW DICTIONARY (8th ed. 2004) (citation omitted) (emphasis added)). Westlaw’s “Practical Law” Glossary states that “A prima facie standard of proof is relatively low. It is far less demanding than the preponderance of the evidence, clear and convincing evidence and beyond a reasonable doubt standards that are also commonly used.” WESTLAW PRACTICAL LAW GLOSSARY, [https://content.next.westlaw.com/Glossary/PracticalLaw/14cf84635ef2a11e28578f7ccc38dcbee?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://content.next.westlaw.com/Glossary/PracticalLaw/14cf84635ef2a11e28578f7ccc38dcbee?transitionType=Default&contextData=(sc.Default)&firstPage=true) (last visited Sept. 17, 2023).

challenge the validity of a granted patent. Section 12 of the Patent Act of 1836 provided that:

[n]o opinion or decision of any board of examiners, under the provisions of this act, shall preclude any person interested in favor of or against the validity of any patent which has been or may hereafter be granted, from the right to contest the same in any judicial court in any action in which its validity may come in question.²⁶⁰

Section 15 of the Patent Act of 1836 also provided that in an infringement action:

[T]he defendant in any such action shall be permitted to plead the general issue, and to give this act and any special matter in evidence, of which notice in writing may have been given to the plaintiff of his attorney, thirty days before trial, tending to prove that the description and specification filed by the plaintiff does not contain the whole truth relative to his invention or discovery, or that it contains more than is necessary to produce the described effect; which concealment or addition shall fully appear to have been made for the purpose of deceiving the public, *or that the patentee was not the original and first inventor or discoverer of the thing patented, or of a substantial and material part thereof claimed as new.* . . .²⁶¹

Section 16 of the Patent Act of 1836 also gave ready access to federal court for any party to an interference action.²⁶²

260. Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 504.

261. Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 505 (emphasis added).

262. Section 16 provided:

[t]hat whenever there shall be two interfering patents . . . any person interested in any such patent, either by assignment or otherwise, in the one case, and any such applicant in the other case, may have remedy by bill in equity; and the Court having cognizance thereof, on notice to adverse parties, and other due proceedings had, may adjudge and declare either the patents void in whole or in part, or inoperative or invalid in any particular part or portion of the United States, according to the interest which the parties to such suit may possess in the patent or the inventions patented, and may also adjudge that such applicant is entitled, according to the principles and provisions of this act, to have and receive a patent for his invention, as specified in his claim, or for any part thereof, as the fact of priority of right or invention shall in any such case

Regarding the jurisdiction of the federal courts, Section 17 of the Patent Act of 1836 provided:

[t]hat all actions, suits, controversies, and cases arising under any law of the United States, granting or confirming to inventors the exclusive right to their inventions or discoveries, shall be originally cognizable, as well in equity as at law, by the Circuit Courts of the United States, or any District Court having the power and jurisdiction of a Circuit Court; which Courts shall have power, upon a bill in equity filed by any party aggrieved, in any such case, to grant injunctions, according to the course and principles of Courts of equity, to prevent the violation of the rights of any inventor as secured to him by any law of the United States, on such terms and conditions as said Courts may deem reasonable.²⁶³

XXVII. THE PATENT ACT OF 1836 AND THE CONCEPT OF UTILITY

The Patent Act of 1836 restored the Founders' original understanding that patents, to have been validly patented, must have utility, measured by its benefit to the public at large, in order to avoid being an unjust grant of monopoly. This view is encapsulated in a jury instruction from 1851 regarding what was properly patentable. As Arthur Seidel writes:

The Circuit Courts . . . were frequently faced with the issue [of patentability]. . . .

. . . .

be made to appear. And such adjudication, if it be in favor of the right of such applicant, shall authorize the Commissioner to issue such patent, on his filing a copy of the adjudication, and otherwise complying with the requisitions of this act.

Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 506.

263. Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 507 (additionally providing that “. . . from all judgments and decrees from any such Court rendered in the premises, a writ of error or appeal, as the case may require, shall lie to the Supreme Court of the United States, in the same manner and under the same circumstances as is now provided by law in other judgments and decrees of Circuit Courts, and in all other cases in which the Court shall deem it reasonable to allow the same.”)

Probably one of the most interesting cases concerns the charge to the jury in *McCormick v. Seymour et al*, Case No. 8726 (N.Y. 1851). Here the test of what is patentable was rested on the proposition that a thing must be *new*, and that is all that can be said about it:

As to the first point—whether the claim in question constitutes the subject-matter of a patent—the sixth section of the patent act of July 4, 1836 (5 Stat. 119), provides, in substance, that any person, having discovered or invented . . . any new and useful improvement . . . [is entitled to a patent.] . . . [T]he act defines with great particularity and clearness what constitutes a patentable subject, at the same time declaring what persons are entitled to a patent. Such being the definition of a patentable subject, declared by the act of congress itself, you see from it that the improvement upon a machine, which is the kind of invention in question here, must be new, not known or in use before, and must be useful, that is, the person claiming the patent must have found out, created and constructed an improvement which had not before been found out, created or constructed by any other person, *and it must be beneficial to the public, or to those persons who may see fit to use it*. Novelty and utility in the improvement seem to be all that the statute requires as a condition to the granting of a patent. If these are made out to the satisfaction of a jury, then the subject is patentable, and the inventor is entitled to the protection and benefit of the statute. Otherwise, he is not. This is, perhaps, the only general definition that can be given of the subject of a patent, and it is the only one that the law has given for our guide. The two questions, then, on this branch of the case, are—was this contrivance, as constructed by the patentee, new and not before known? —and, if so, is it useful? Both these questions being answered in the affirmative, the case comes directly within the definition of the statute.²⁶⁴

This renewed emphasis on utility did much to prevent the granting of otherwise unjust monopolies. As Walterscheid writes, “As was clearly intended, one immediate result of the Act of 1836 was a pronounced drop in the number of patents issued. This was something that in no small measure the politics of Jacksonian America demanded. As [Steven] Lubar has noted, ‘Monopolies were the bugaboo of the Jacksonians.’”²⁶⁵

264. Seidel, *supra* note 110, at 30–32 (emphasis added).

265. WALTERSCHEID, *supra* note 59, at 430 (quoting Lubar, *supra* note 216, at 942).

XXVIII. THE PATENT ACT OF 1836 EXPLICITLY AUTHORIZED
PATENTS OF IMPORTATION

The Patent Act of 1836 also explicitly allowed the granting of patents even if they had been invented in another country, but not patented elsewhere, or if its specifications had not been described publicly in print. Section 7 of the Act provided that:

[I]f, on any such examination, it shall not appear to the Commissioner that the same had been invented or discovered by any other person *in this country* prior to the alleged invention or discovery thereof by the applicant, or that it had been patented or described in any printed publication in this or any foreign country, or had been in public use or on sale with the applicant's consent or allowance prior to the application, if the Commissioner shall deem it to be *sufficiently useful and important*, it shall be his duty to issue a patent therefor.²⁶⁶

As Walterscheid writes, following enactment of the Patent Act of 1836:

[T]he Patent Office was now required to conduct an examination to determine if certain substantive conditions for patentability were met. Among these were: (1) that the invention had not been made by any other person in this country prior to the alleged invention by the applicant; (2) that it had not been described in a printed publication or in a patent in this or any foreign country; . . .

. . . .

It was now set by statute that prior invention in a foreign country could not be used to preclude patenting by an independent

266 Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 500 (emphasis added). Section 15 of the Patent Act of 1836 makes the point again, stating:

Provided, however, that whenever it shall satisfactorily appear that the patentee, at the time of making his application for the patent, believed himself to be the first inventor or discoveror of the thing patented, the same shall not be held to be void on account of the invention or discovery or any part thereof having been known or used *in any foreign country*, it not appearing that the same or any substantial part thereof had been patented or described in any printed publication.

Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 506.

inventor in the United States, provided only that the prior foreign invention had not been published or described in a patent. Foreign knowledge or use without publication or patenting could not be used as a basis for invalidating an issued patent or for precluding the issuance of a patent.²⁶⁷

Further, “[t]he issuance of a foreign patent would not now preclude the filing of a U.S. application for the same invention provided that the U.S. application was filed within six months of the publication of the foreign patent.”²⁶⁸

XXIX. THE PATENT ACT OF 1836 AND PATENT WORKING REQUIREMENTS

The Patent Act of 1836 also provided that challengers of granted patents could make claims in court that:

[T]he patentee, if an alien at the time the patent was granted, had failed and neglected, for the space of eighteen months from the date of the patent, to put and continue on sale to the public, on reasonable terms, the invention or discovery for which the patent issued; in either of which cases judgment shall be rendered for the defendant with costs.²⁶⁹

Further, Section 18 of the Patent Act of 1836 required, in the “public interest,” that a patent be worked if a patent extension were to be granted, providing that:

[I]f, upon a hearing of the matter, it shall appear to the full and entire satisfaction of said board [of the Secretary of State, the Commissioner of the Patent Office, and the Solicitor of the Treasury], having due regard to the *public interest* therein, that it is just and proper that the term of the patent should be extended, by reason of the patentee, *without neglect or fault on his part*, having failed to obtain, from the use and sale of his invention, a reasonable remuneration for the time, ingenuity, and expense bestowed upon the same, and the introduction thereof into use, it shall be the duty of the Commissioner to renew and extend the patent²⁷⁰

267. WALTERSCHEID, *supra* note 59, at 428–29.

268. *Id.* at 429.

269. Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 505.

270. Patent Act of 1836, § 12, 5 Stat. 117, 122 (1836), *reprinted in* WALTERSCHEID, *supra* note 59, at 508 (emphasis added).

XXX. FEDERAL COURT DECISIONS AFTER 1836 SUPPORTED THE
ACT'S RESTORATION OF THE FOUNDERS' ORIGINAL UNDERSTANDING
THAT THE PATENT LAWS PROTECT ONLY USEFUL INVENTIONS

Supreme Court decisions following the enactment of the Patent Act of 1836 reinforced the Act's restoration of the Founders' original understanding that the patent laws should facilitate only useful inventions.

In 1871, in *Seymour v. Osbourne*, the Supreme Court wrote:

Letters patent are not to be regarded as monopolies, created by the executive authority at the expense and to the prejudice of all the community except persons therein named as patentees, but as public franchises granted to the inventors of new and useful improvements²⁷¹

In 1877, in *Consolidated Fruit Jar Co. v. Wright*, the Court wrote, "Inventors are a meritorious class. They are public benefactors. They add to the wealth and comfort of the community, and promote the progress of civilization."²⁷²

In 1891, in *Clark Thread Co. v. Willimantic Linen Co.*, the Court wrote, "A conception of the mind is not an invention until represented in some physical form, and unsuccessful experiments of projects, abandoned by the inventor, are equally destitute of that character. These propositions have been so often reiterated as to be elementary."²⁷³

In 1892, the Supreme Court wrote in *Pope Manufacturing Co. v. Gormully*, "[i]t is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly"²⁷⁴

271. *Seymour v. Osborne*, 78 U.S. 516, 533 (1871). Patent law treatises at the time also stated the proposition that patents were only sound when benefiting society at large. Curtis on Patents (1873) stated "[A patent] is the grant by the government to the author of a new and useful invention of the exclusive right, for a term of years, of practicing that invention. The consideration, for which this grant is made by the public, is the benefit to society resulting from the invention" GEORGE TICKNOR CURTIS, A TREATISE ON THE LAW OF PATENTS FOR USEFUL INVENTIONS AS ENACTED AND ADMINISTERED IN THE UNITED STATES OF AMERICA xix (4th ed. 1873).

272. *Consol. Fruit-Jar Co. v. Wright*, 94 U.S. 92, 96 (1877).

273. *Clark Thread Co. v. Willimantic Linen Co.*, 140 U.S. 481, 489 (1891).

274. *Pope Mfg. Co. v. Gormully*, 144 U.S. 224, 234 (1892).

In 1933, the Supreme Court differentiated between monopolies and patents of invention, stating that:

Though often so characterized a patent is not, accurately speaking, a monopoly, for it is not created by the executive authority at the expense and to the prejudice of all the community except the grantee of the patent. The term monopoly connotes the giving of an exclusive privilege for buying, selling, working or using a thing which the public freely enjoyed prior to the grant. Thus a monopoly takes something from the people. An inventor deprives the public of nothing which it enjoyed before his discovery, but gives something of value to the community by adding to the sum of human knowledge. . . .

. . . .

It [the invention] is the result of an inventive act, the birth of an idea and its reduction to practice; the product of original thought; a concept demonstrated to be true by practical application or embodiment in tangible form.²⁷⁵

In 1950, in their concurring opinion in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, Justice Douglas, with whom Mr. Justice Black agreed, pointed out again that the inevitable errors of the Patent Office warranted the availability of judicial review, stating:

The patent involved in the present case belongs to this list of incredible patents which the Patent Office has spawned. The fact that a patent as flimsy and as spurious as this one has to be brought all the way to this Court to be declared invalid dramatically illustrates how far our patent system frequently departs from the constitutional standards which are supposed to govern.²⁷⁶

And in 2006, Supreme Court Justice Stephen G. Breyer similarly argued, “sometimes *too much* patent protection can impede rather than

275. *U.S. v. Dubilier Condenser Corp.*, 289 U.S. 178, 186, 188 (1933); *see also* *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1536 (Fed. Cir. 1995) (Newman, Cir. J., concurring) (“The patent law is directed to the public purposes of fostering technological progress, investment in research and development, capital formation, entrepreneurship, innovation, national strength, and international competitiveness.”). Regarding obviousness, “unless the patentee, by his disclosure, adds to the sum of human knowledge, the grant of a patent would, in fact, be a monopoly . . . and the policy of the patent laws would be frustrated.” *In re Tenney*, 254 F.2d 619, 623 (Cust. Ct. 1958).

276. *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 158 (1950) (Douglas and Black, J.J., concurring).

‘promote the Progress of Science and useful Arts,’ the constitutional objective of patent and copyright protection.”²⁷⁷

And in 2018, the Supreme Court reiterated that when the Patent and Trademark Office issues a patent, it “take[s] from the public rights of immense value, and bestow[s] them upon the patentee.”²⁷⁸

Congressional recognition of the unjust nature of improperly-granted patent monopolies most recently appeared in its enactment of the America Invents Act (“AIA”). As the Supreme Court has recognized, Congress enacted the AIA and its procedures for the “inter partes review” of granted patents to “protect the public’s ‘paramount interest in seeing that patent monopolies . . . are kept within their legitimate scope’”²⁷⁹ by allowing anyone to file a petition for such review and authorizing any “party dissatisfied with [a] final written decision” of the Patent and Trademark Office to appeal the decision to the Federal Circuit.²⁸⁰ The committee report on the AIA follows the Founders’ original anti-monopoly understanding of the purpose of the earliest patent laws, and the Patent Act of 1836 that restored that original understanding, stating that Congress enacted the AIA in 2011 in response to a “growing sense that questionable patents are too easily obtained and are too difficult to challenge.”²⁸¹

XXXI. HOW ACCESS TO FEDERAL COURTS TO CHALLENGE IMPROPERLY-GRANTED PATENTS SAVED THE CAR INDUSTRY: HENRY FORD AS THE EMBODIMENT OF THE FRONTIER SPIRIT

In the early 1900’s, a patent litigation drama unfolded that illustrated many of the same dynamics of patent law explored in this Article, with the original frontier spirit of American patent law ultimately

277. *Lab’y Corp. of Am. Holdings v. Metabolite Lab’ys, Inc.*, 548 U.S. 124, 126–27 (2006) (Breyer, J., dissenting).

278. *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1373 (2018) (alterations in original) (citation omitted).

279. *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 279–80 (2016) (alteration in original) (quoting *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 816 (1945)).

280. 35 U.S.C. § 319 (2011).

281. H.R. REP. NO. 112-98, pt. 1, at 39 (2011). The Federal Trade Commission had also previously reported that “[p]oor patent quality and legal standards and procedures that inadvertently may have anticompetitive effects can . . . hamper competition that otherwise would stimulate innovation.” FEDERAL TRADE COMMISSION, *TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY EXECUTIVE SUMMARY 5* (2003).

prevailing yet again, just as it did in the Patent Act of 1836 and in the America Invents Act as it was intended to be implemented.

Some of the most influential inventions of the Twentieth Century included the mass-produced automobile and the radio, and both developed out of the work of many innovators. Regarding the automobile, as Alan Nevins writes, “a wide array of talents had to be fused to form the mere foundation for the invention of the automobile: the talents of the Belgian Lenoir, the Englishman Brayton, the German Otto, the Frenchman De Rochas, and others.”²⁸²

Patent litigation surrounding both these innovations informs the continuing need for robust access to federal courts to challenge the validity of improperly-granted patents.

XXXII. THE SELDEN COMBUSTION ENGINE PATENT & HENRY FORD

In the early 1900s, George Selden got a patent on a device the utility of which had been far surpassed by the time the patent was granted. He never produced the device. Yet he extorted royalties from other productive manufacturers for many years, like modern “patent trolls.”²⁸³ Indeed, Selden may have been the first patent troll of the assembly line era, and Henry Ford the first troll killer.

As David Lewis writes:

The [Selden] suit grew out of an 1879 patent application filed by a visionary Rochester, New York, attorney, George B. Selden, for a road vehicle he had designed but not built. In anticipation of a future auto industry, he cleverly delayed the patent’s issuance for sixteen years by filing additions and changes that took advantage of technological developments in the intervening years. His claims were valueless, of course, until motor vehicles were being built and sold in the United States. Finally, in 1895 he obtained a patent for a “road-carriage” covering all gasoline-powered vehicles designed since

282. WILLIAM GREENLEAF, *MONOPOLY ON WHEELS: HENRY FORD AND THE SELDEN AUTOMOBILE PATENT* ix (2011) (ebook).

283. See Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2170 (2013) (remarking that the term “patent troll” might be defined as “an entity that does nothing but buy and assert patents or that earns more than X percent of its revenues from, or incurs more than Y percent of its costs in, patent assertion activities [such as patent infringement litigation] ...”).

1879 and manufactured, sold, or used in the United States during a seventeen-year period ending in 1912.²⁸⁴

A. Selden's Failure to Produce a Working Device

As William Greenleaf writes in his detailed account of the Selden suit:

Despite the structural changes made by Selden, the operating principles of the [George] Brayton and Selden motors were identical. Both were two-cycle, constant pressure engines using external compression. It might have been expected that Selden would have completed his engine, but he brought this work to a halt. Instead of incorporating a finished motor into an operable road vehicle, Selden deferred actual construction and limited his development of the horseless carriage to paper plans. Time was to prove that Selden was not so much interested in the immediate application of his idea as in securing a comprehensive patent covering every self-propelled road carriage with a gasoline motor. . . . Had Selden at this time built a workable vehicle powered by a gasoline engine, he would have earned a place in history as a leading if unrewarded pioneer in the evolution of the automobile. Instead, his transactions with the Patent Office remained shrouded in secrecy for more than sixteen years while inventors who knew nothing of him or his proposed horseless carriage brought the prototype of the modern motor car into being. Since an invention takes date from the time of application, and amendments may be entered before the grant is made, it is obvious that Selden occupied a unique position. . . . As the first applicant at the patent office of any nation for a franchise covering the gasoline automobile as a unitary combination, Selden could bide his time until his claims, by devious but permissible adjustment to the changing art, were ready for issuance at a time of maximum commercial opportunity. . . .

. . . .

During these fruitful years when inventors came forward with hard-won solutions by trial and error, Selden had not so much as built a horseless carriage. Taking careful note of fundamental progress in the art here and abroad, [Selden] patiently nursed his patent application until 1895, at the dawn of the automobile age in America. His calculated delay in the Patent Office was the dalliance of a shrewd patent attorney. While

284. GREENLEAF, *supra* note 282 at xvi–vii (from the Introduction by David L. Lewis).

other inventors infused their machines with life, Selden spun a paper web to ensnare the gasoline automobile as his original creation and legal monopoly.²⁸⁵

Selden schemed to continually adjust his engine patent application to include the state of the art up to the time he filed it, all the while not producing anything while the rest of the world moved forward with the development of automobiles:

Although issued in 1895, the Selden patent applied to the state of the art as it stood at the time Selden filed. It therefore comprehended the technology of the gasoline automobile from 1879 onward. By sinuous maneuvers the patent rights were stretched to cover a period of almost thirty-four years, until the expiration of the grant in 1912. It is one of the paradoxes of the American patent system that such sweeping claims were awarded to an individual who made no practical contribution to the art of the motor car during its most vital phase of experimental development. . . .

. . . .

One may make out a case for the inventor of modest means who in 1879 set down the first comprehensive description of the motorized road carriage. If the Selden horseless carriage had occupied in 1895 the same relative position it occupied in the art in 1879, there would be no question that the inventor deserved honors, fame, and a fair material reward. But the automotive art had moved forward with great strides. None of its leading inventors was indebted to Selden. On the contrary, he was under heavy obligation to others who had improved the key element of his patent.²⁸⁶

Only a handful of innovators actually produced working automobiles in the early days of its development. “‘The formation of automobile companies has been so frequent lately that the announcement attracts no attention now,’ remarked *Horseless Age* in 1900. It estimated that while more than five hundred firms had been chartered, only about thirty were engaged in production.”²⁸⁷

Meanwhile, as Greenleaf writes:

In Rochester, Selden attended to his law practice, far removed from developments in the industry. In the three years since receiving his patent he had made no attempt to build his vehicle.

285. *Id.* at 23–24, 38.

286. *Id.* at 42, 50–51.

287. *Id.* at 54.

The engine he had constructed in 1878, and operated at infrequent intervals in the following twenty years, rusted in oblivion in his home. For all practical purposes, his patent was hardly worth the parchment on which it had been issued.²⁸⁸

Selden sprung his trap after he joined a trust that sought to use his patent to extort licensing fees from other companies that were actually producing working automobiles. But Henry Ford refused to comply. As Greenleaf writes:

The copy-writers delighted in portraying him [Ford] as an automotive pioneer with a firm dedication to open access to technology in the public interest. . . .

. . . .

[One announcement read:] “The Ford Motor Co. alone carried on this great fight, and because they called a halt to the bluff put up by the Trust, hundreds of non-licensed factories started up all over the U.S., turning out thousands of cars and giving employment to hundreds of thousands of men, and in every way the Automobile industry and the public at large have been benefited and every man of brains has been given an opportunity to develop his own ideas and get the benefit therefrom.”²⁸⁹

This argument was reiterated by lawyers for the defense in Selden’s patent lawsuit when it was ultimately filed:²⁹⁰

In his closing argument for the defendants on June 4, Frederic R. Coudert said that a victory for the Selden interests would be “hopelessly unjust.” His clients, Panhard & Levassor, had built salable automobiles well before the disclosure of the Selden patent. It would be immoral, and contrary to the public interest, if Selden were permitted to monopolize an art and an industry to which his patent had contributed nothing. Selden had no right to exact tribute from pioneers who had dedicated “all their time not to the practice of law and the preparation of

288. GREENLEAF, *supra* note 282, at 54.

289. *Id.* at 192, 193 (citation omitted).

290. *See id.* at 125 (“The fog of rumor and speculation was dispelled on October 22, 1903, when the Electric Vehicle Company and George B. Selden, acting as nominal complainants, carried out the bidding of the A.L.A.M. and lodged suit in the United States Circuit Court for the Southern District of New York against C. A. Duerr & Company and the Ford Motor Company for infringement of the Selden patent. Duerr was the Ford agent in New York City.”).

patent claims, but to the development and perfection of the automobile.”²⁹¹

An auto race held near the courtroom demonstrated the absurdity of the Selden patent. As Greenleaf writes:

On the afternoon of June 1 [during the trial], the New York-to-Seattle long distance automobile race began from City Hall Park, where Mayor George B. McClellan, Jr. fired the starting shot with a gold-plated revolver. As the drivers and mechanics idled the motors, Henry Ford left the courtroom to speed on the crews of the two Ford entries. Judge Hough and the attorneys stood at the windows, observing the event. Frederic R. Coudert, the Panhard lawyer, remarked with mock amazement: “Your Honor, there is something that puzzles me. I don’t see a Selden car. I see a Ford car, two Ford cars, but I see no Selden car!” Hough joined in the general laughter.²⁹²

Although the Selden patent was at first upheld by Judge Charles Merrill Hough, of the U.S. District Court for the Southern District of New York, Greenleaf writes:

Hough admitted that “Selden has contributed little to motor car advancement in the United States and nothing at all abroad.”

...

....

Hough acknowledged the singular character of the proceedings: “No litigation closely resembling these cases has been shown to the court, and no instance is known to me of an idea being buried in the patent office until the world caught up and passed it, and then embodied in a patent only useful for tribute.”²⁹³

B. The Selden Patent and the Abuse of the Presumption of Validity

The Selden patent saga reminds us of the dangers of presumptions of validity in modern patent law. As Greenleaf writes:

There is no doubt that in 1895 the Selden automobile was obsolete. The patent disclosed nothing that pushed forward the frontiers of technology. In its details, the Selden structure was inferior to the horseless carriages made by automotive pioneers after 1885. But, as the creation of a patent lawyer, the Selden car was an almost impeccable legal invention. All United

291. *Id.* at 201 (citation omitted).

292. *Id.* at 200 (citation omitted).

293. GREENLEAF, *supra* note 282, at 208–09 (citation omitted).

States patents are valid on their face; and, according to the claims of his grant, Selden was the original inventor of the gasoline automobile. That he had not constructed an actual motor car did not affect the status of his patent.

At its issue, the Selden patent received the blessing of high authority. In his annual report for 1895, Commissioner of Patents John S. Seymour heralded it as one “which may be considered the pioneer invention in the application of the compression gas engine to road or horseless carriage use.” The patent had immense potential value because it awarded the inventor a legal monopoly when the commercial possibilities of the gasoline motor car loomed on the American industrial horizon.

Seymour’s generous praise found no support from those who were actually building motor vehicles.²⁹⁴

Many early automobile company executives were slow to realize the unearned power of the Selden patent. As Greenleaf writes:

[Albert] Pope . . . made a thorough investigation of automobile patents before establishing his motor carriage department in 1895. . . . In January, 1896, [Hermann] Cuntz warned [Hiram] Maxim [both Pope company employees] that the Pope company was infringing the Selden claims and would have to suspend the development of gasoline automobiles. “I snorted my derision,” wrote Maxim in recalling this episode. “I pointed out that the engine shown in the patent was utterly impractical and a joke. Mr. Cuntz had to explain that the drawings had nothing to do with it. Instead, it was the wording of the claims of the patent which decided what it covered. I maintained that the claims were so broad they were ridiculous. But Cuntz stood his ground valiantly, warning me that a United States patent was a real patent until the courts ruled otherwise, and that anyone infringing it was liable to the owner of the patent for damages.”²⁹⁵

Electric cars were initially a popular means of automobile travel, but that industry soon floundered, and the leading electric car company purchased the Selden patent in the hopes it could be used to extort licensing fees from other automobile companies to help cover its own losses on electric cars:

Selden was paid the balance of \$9,000, and exclusive rights to the patent were vested in the Columbia & Electric Vehicle Company. On June 20, 1900, this manufacturing unit was

294. *Id.* at 49.

295. *Id.* at 64 (citation omitted).

merged in the Electric Vehicle Company, whose capitalization was increased to \$18,000,000. A few days later, on June 26, the Selden patent was formally assigned to the Electric Vehicle Company. Pope was bought out and his automotive plant became the property of the Whitney-Ryan syndicate. . . .

. . . .

In the midst of its financial misfortunes, the Electric Vehicle Company turned for relief to the Selden patent. For the first time, the patent invited serious thought as a valuable property.

Groaning under its financial embarrassments, the Electric Vehicle Company set out in 1900 to compel royalty payments on every gasoline car made, sold or used in the United States. Its main object in taking this step was to funnel an unbroken flow of royalties into its sagging treasury. . . .

The Electric Vehicle Company could enforce its legal monopoly only by filing infringement suits.²⁹⁶

Presaging patent troll strategies of today,²⁹⁷ the owners of the Selden patent hoped quick capitulation by other companies would facilitate further company surrenders:

The warnings served on leading makers of gasoline vehicles in June, 1900, gave proof that the Whitney syndicate was in earnest. The infringement notices announced: “Our clients inform us that you are manufacturing and advertising for sale vehicles which embody the invention of the Selden patent. . . . we notify you of this infringement, and request that you desist from the same and make suitable compensation to the owner of the

296. *Id.* at 68, 74.

297. See Ranganath Sudarshan, *Nuisance-Value Patent Suits: An Economic Model and Proposal*, 25 SANTA CLARA HIGH TECH. L. J. 159, 171–72 (2008) (“Consider one notable plaintiff’s press release after its 40th successful settlement: ‘[Accused infringer’s] purchase of a MMP license is yet another example of the widespread use of MMP Portfolio technology . . . All producers of microprocessor-based products and dependent services should be placing high priority on the purchase of a license for the fundamental MMP Portfolio technologies to reduce related financial exposure. The sweeping scope of applications using MMP Portfolio design techniques continues to encourage the world’s leading manufacturers of end user products from around the globe to become MMP Portfolio licensees.’ By touting the success of their enforcement efforts on their websites and issuing press releases each time a defendant agrees to a settlement, nuisance plaintiffs inform future accused infringers that the patents in question are potent and not worth litigating against.”) (citation omitted).

patent therefor.” The Electric Vehicle attorneys indicated that legal proceedings would be instituted in the near future.

The Whitney syndicate hoped for quick surrenders. The Electric Vehicle lawyers were certain that none would contest the Selden claims in a full-dress infringement action. If a sufficient number of manufacturers acknowledged the validity of the Selden patent, an almost irresistible precedent would be set for whipping recalcitrants into line. Settlement of the test suits would lend the patent the weight of judicial pronouncement and secure the acquiescence of the industry and the public. . . .

. . . .

[B]ut few of the licensees, despite the public pronouncements of the A.L.A.M. [Association of Licensed Automobile Manufacturers], privately believed in the validity of the patent. Their position was summed up in the observation that it was “cheaper to join than to fight.”

. . . .

Buyers of unlicensed cars feared that they might be haled into court. “It is an old truism that no sensible man wants to buy into a lawsuit,” was the advice of a pro-A.L.A.M. publication. “That holds true with automobiles. The sensible automobilist, therefore, will think twice about buying a machine manufactured by a firm outside the association.”²⁹⁸

Lawyers defending the Selden patent argued the decision of the Patent Office should be final:

The A.L.A.M. lawyers, noting that the Selden amendments had the full agreement of the Patent Office, insisted that the patent was a contract. “The large interests which might be adversely affected by a decision sustaining the patent should not be considered in giving to the inventor that to which he is legally entitled,” they observed. “The contract is between the Government and the inventor, and the defendant infringers are not its proper interpreters or entitled to benefits of interpretation.”²⁹⁹

298. GREENLEAF, *supra* note 282, at 74–75, 100, 102.

299. *Id.* at 203–04. As Greenleaf writes, various “companies took out a license under the Selden patent. The original signatories included the following: Electric Vehicle, Olds, Autocar, Pierce, Packard, Apperson Brothers, Searchmont, Knox, Locomobile, Haynes-Apperson, and Peerless.” *Id.* at 97. Greenleaf also writes that “Not one of the makers owing fealty to the A.L.A.M. produced an automobile bearing the slightest resemblance to the awkward vehicle described in the Selden

Judge Hough agreed in his opinion upholding the Selden patent, stating “the very grant of the patent raises a presumption in favor of the complainants.”³⁰⁰ (Judge Hough imposed this presumption, although a patent’s presumption of validity was not codified in statute until 1952.)³⁰¹

C. Familiar Anti-Monopoly Sentiments Were Expressed During the Course of the Selden Patent Litigation

The Selden patent saga is interesting in that it revived in dramatic public fashion the objections to unjust monopolies that were so common in the Founding era and beyond:

More important [to the Selden patent saga] were compelling considerations of public sentiment. A movement of protest against giant trusts and combinations had been sweeping the country for more than a decade. Public opinion had registered its disapproval of financial and industrial monopoly. It was Selden’s fate to be drawn into the struggle on the side of the forces which had excited popular antagonism. Any moral argument which Selden might have been able to marshal was severely weakened by this alignment.³⁰²

Greenleaf quotes Mark Hanna from a contemporary issue of *Motor World* magazine as saying derisively “The only real monopoly . . . is a United States patent.”³⁰³

Recalling Jefferson’s fears that monopolies might be in any way entrenched in the Constitution, including through manipulation of the patent process, Greenleaf writes:

The American patent system is the outgrowth of the only guarantee of private monopoly written into the Constitution. The patentee is endowed with his right as a reward for contributing a novel, original, and useful invention to the industrial arts. The grant of monopoly for a specified period rests on the theory that the public is thereby enriched by an invention to which it previously had no access. Yet the history of the American patent system demonstrates that the constitutional provision for promoting “the progress of science and useful arts” has tended to become a bastion for entrenching privilege to the

patent. By 1903, progress in automotive design and construction had made the patent a veritable antique.” *Id.* at 100.

300. *Id.* at 206 (citation omitted).

301. See Patent Act of 1952, § 282 (1952).

302. GREENLEAF, *supra* note 282 at 75.

303. *Id.* at 86 (citation omitted).

detriment of effective competition. A patent of wide and controlling scope gives the inventor, or more often the corporation which buys up his patent, an instrument for dominating the interlocking provinces of technology, industry and commerce.³⁰⁴

This renewed public sentiment against monopolies began in the Jacksonian era³⁰⁵ and carried through the presidency of Theodore Roosevelt:

The spirit underlying [Ford's] resistance to special privilege based on a patent grant was in a direct line of descent from an earlier American epoch, when the small entrepreneurs of the Jacksonian epoch fought entrenched legal monopoly. . . .

. . . .

In 1903 the national atmosphere was electric with agitation against the abuses of giant industrial combinations. President Theodore Roosevelt had opened fire against the trusts...³⁰⁶

Henry Ford shared the sentiment.³⁰⁷ And while monopolists seek to restrict output to raise prices,³⁰⁸ Henry Ford fought the Selden patent in order to make cheap automobiles widely available to the public:

With few exceptions, the manufacturers who had joined the A.L.A.M. were committed to the policy of building cars for a luxury market.

Other auto producers, most of them outside the licensed association, believed that the future of the industry lay in the lower-priced machine. Their smaller unit profit, they saw, would be

304. *Id.* at 86.

305. Recall the message of President Andrew Jackson in 1830 that incorporated the report stating “the community at large is frequently deprived of its common right, by a [patent] *monopoly* of what ought to be free, unless some individual will step forward and subject himself to the risk of a vexatious law-suit.” WALTERSCHEID, *supra* note 59, at 328.

306. GREENLEAF, *supra* note 282, at 195, 101.

307. As Greenleaf writes, “Another compelling reason for [Ford's] decision to make war upon the patent was his deep-seated distrust of monopoly. Ford drew many of his ideas and notions from a Midwestern rural culture that had a strong flavor of Populist discontent. With many Midwesterners of his generation he shared a hatred of industrial combinations and Eastern financial power. As William J. Cameron remarked, Ford was ‘raised on that terrible fear of monopolistic power holding everything down.’” *Id.* at 113.

308. See Joseph Borkin, *The Patent Infringement Suit – Ordeal by Trial*, 17 UNIV. CHI. L. REV. 634, 642 (1950) (“Litigation and threats of litigation may often be more effective in establishing and perpetuating monopolistic control than any other recourse available to industrial giants bent upon eliminating competition.”).

redressed by a large sales volume. One trade journal spoke for them when it remarked that the industry would reach full flower when the automobile was designed for “utilitarian purposes” and built with “simplicity and cheapness.”

....

The A.L.A.M. was the stronghold of the exponents of the high-priced car. Virtually all of the expensive automobiles made by American manufacturers were licensed under the Selden patent.

....

One observer remarked that the A.L.A.M. was “not interested in producing a poor man’s automobile.” [Detroit Saturday Night, II (January 30, 1909) at 5.]

....

“Early in 1904,” [Ford] said, “I was convinced that the future of the automobile as a staple and permanent industry was dependent upon the production of a car for the ordinary man, and I wanted what ordinary people wanted, and I put my efforts towards developing a car that would meet what I conceived to be the ordinary man’s car.”³⁰⁹

Whereas the owners of the Selden patent were asserting it to recover losses incurred in their own failed electric car business, Henry Ford was resisting it so he could provide reliably working cars to the masses:

Ford’s role in the Selden case drew added meaning from his emergence as the leading manufacturer of a low-cost car produced in quantity for a mass market. This development, wholly unanticipated by the A.L.A.M., did much to detract from the Selden cause. Where the licensed association offered assurances that the patent was valid, and exacted a royalty for which there was no equivalent in the product, Ford stressed the positive contribution of a sturdy car designed for the people.³¹⁰

309. GREENLEAF, *supra* note 282, at 103, 174, 175, 188.

310. *Id.* at 187

D. The Selden Patent Litigation Foreshadowed Modern Suits by Patent Trolls

The lawsuit ultimately filed by owners of the Selden patent exposed some of the same dysfunctions in the patent litigation system we see today.³¹¹ As Greenleaf writes, Ford contrasted himself with the efforts of one person to extort money from an entire industry and halt the progress of the collective efforts of thousands of others to make widely available automobiles a reality:

In advertisements cast as personal interviews with Ford, he charged that the A.L.A.M. had blocked technical progress, an accusation to which he returned more than once. “It is perfectly safe to say that Mr. Selden has never advanced the automobile industry in a single particular,” said Ford, “. . . and that it would perhaps be further advanced than it is now if he had never been born.”

. . . .

Another [Ford Motor Company] announcement spoke of Ford’s determination to resist any combination that “would stifle genius, progress and development” and “keep from the public the benefit of the results of thousands of minds that were centered on this great industry”

. . . .

Although he readily acknowledged the importance of individual genius, Ford regarded invention as fundamentally a social and cumulative process. When he built his first car (he pointed out many years afterward), “I invented nothing new. I simply assembled into a car the discoveries of other men behind whom were centuries of work, and the discoveries of still other men

311. For example, researchers have examined how modern patent troll litigation affected the field of healthcare information technology in light of recent litigation over medical imaging software patents. As the researchers concluded: “No new variations of existing products or new models of imaging software were released by the affected vendors during the period of litigation. An explanation for this lack of innovation is that the vendors did not want to run the risk of being found guilty of ‘wilful infringement’ in the patent suit and being held liable for treble damages. Therefore, one explanation of the slow-down in sales is that the product release and attendant sales cycle was halted as a result of litigation. This emphasizes that even if patent-assertion entities do not prevail in the courtroom, their actions can have significantly negative consequences for incremental innovation while litigation is ongoing.” Catherine E. Tucker, *Patent Trolls and Technology Diffusion: The Case of Medical Imaging 22*, (April 14, 2014), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1976593.

who preceded them. Had I worked fifty or ten or even five years before I would have failed. So it is with every new thing. Progress happens when all the factors that make for it are ready, and then it is inevitable. To teach that a comparatively few men are responsible for the great forward steps of mankind is the worst sort of nonsense.”³¹²

The Selden litigation was just an episode from a much larger chapter of the long history of patent litigation abuse, going back to the era in which Justice Story’s gutting interpretation of “utility” prevailed:

By 1910 the courts were crowded with cases, many of them brought by freebooters who trafficked in disputed inventions. It was commonplace for auto makers, parts-suppliers, and dealers to find warning notices and threats of infringement suits in their daily mail. “Purely from the business man’s standpoint and without regard to the lawyer’s view,” commented a trade journal, “the matter of patents in the automobile and accessory trade is developing some phases and results that challenge thought as to how far patents are to become weapons of warfare in business, instead of simple beneficent protection devices for encouraging inventive creation.” . . . The prevailing view in the industry was summed up in 1912 by a group of auto makers who told a Senate committee: “The exceedingly unsatisfactory and uselessly expensive conditions, including delays surrounding legal disputes, particularly in patent litigation, are items of industrial burden which must be written large in figures of many millions of dollars of industrial waste.”³¹³

The Selden litigation employed the same sort of extortionist strategy used today in America, where even victorious defendants have to pay the full costs of their defense:³¹⁴

312. GREENLEAF, *supra* note 282, at 192, 193, 138 (citations omitted).

313. *Id.* at 243-44 (quoting the automobile trade publication HORSELESS AGE, XXIX 626 (Apr. 3, 1912)).

314. As some have described the situation under current law:

[T]he plaintiff may choose to *file a claim* at some (presumably small) cost. If the defendant does not then *settle* with the plaintiff and does not, at a cost, *defend* himself, the plaintiff will prevail by default judgment. . . . Given the model and the assumption that each party acts in his financial interest and realizes the other will do the same, it is easy to see how nuisance suits can arise. By filing a claim, any plaintiff, and thus the plaintiff with a weak case, places the defendant in a position where he will be held liable for

[Frederic R. Coudert, a lawyer opposing the Selden patent] denounced the Selden patent as a gross abuse of the American patent system, thundering: “A powerful corporation, or aggregation of corporations, owning the flimsiest kind of patent can easily render it far too expensive a luxury to litigate. Few automobile owners could be found to hesitate between the alternative of a \$500 license or a \$50,000 law suit. Knowledge of human nature too easily indicates the answer to this dilemma.”³¹⁵

Ford promised he would demonstrate that “Selden did not and could not invent any part of an automobile . . . ; that this man Selden was not an inventor at all, but merely a patent attorney,

the full judgment demanded unless he defends himself. Hence, the defendant should be willing to pay a positive amount in settlement to the plaintiff with a weak case – despite the defendant’s knowledge that were he to defend himself, such a plaintiff would withdraw.

D. Rosenberg & S. Shavell, *A Model in Which Suits are Brought for their Nuisance Value*, 5 INT’L REV. L. & ECON. 3, 3 (1985). Henry Ford saw the Selden patent litigation as clear extortion to the same effect. As Greenleaf writes: “In a company advertisement which a Detroit newspaper adapted as a press interview, Ford said:

We possess just enough of that instinct of American freedom to cause us to rebel against oppression or unfair competition. It goes against the grain of Americanism to be coerced, or bluffed, or sandbagged; and men who will not fight in such circumstances do not, in my estimation, possess the highest degree of self-respect or even honesty -for I protest it is dishonest to bow to expediency in such a case, and thereby not only become contributors of graft money, but subject the entire automobile industry and buying constituency to a tax that is unjust and uncalled for.”

GREENLEAF, *supra* note 282, at 194 (also noting that “While he was not opposed in principle to the patent system, Ford continued, the laws furnished ‘opportunities for little minds, directed by others more cunning, to usurp the gains of genuine inventors – for pettifoggers to gain a strategic advantage over honest men, and, under a smug protest of righteousness, work up a hold-up game in the most approved fashion.’ The A.L.A.M. was dominated by men who were ‘unwilling to stand on their own ability and compete for business in an open market’ and instead resorted to “smart practice and bluff.”) (citations omitted).

315. GREENLEAF, *supra* note 282, at 226 (citation omitted).

who was willing to prostitute his profession and avail himself of the blind alleys of the law to gain an end.” The patent was nothing more than “a huge joke,” he insisted, and much of the income from it “a soft pension fund” for the A.L.A.M. lawyers.³¹⁶

On appeal to the Second Circuit Court of Appeals, Ford won. The appeals court reaffirmed the patent principles of social value and the public interest. As Greenleaf writes:

[Walter Chadwick] Noyes was the youngest of the three [federal appeals court judges hearing the appeal] and was destined to take the most important role in the case. A native of Connecticut, he attended Cornell University and studied and practiced law in New London, where he became judge of the county court of common pleas. . . .

. . . .

[O]n January 9, 1911, Judge Noyes read the unanimous opinion of the court. The decision was a complete victory for Ford and the French defendants.³¹⁷

Ford’s ultimately victorious stance for American innovation was much more than a legal victory, as it significantly and tangibly benefited American consumers:

Had Ford abandoned the industry in 1903, after the A.L.A.M. denied him a license, the automobile would have remained a luxury article for an indefinite period. The advent of the mass-produced, low-priced car would have been delayed; the production methods of the auto plants, and their radiating influence upon large segments of our industrial economy, would have developed at a slower rate. The total impact would have been felt in every corner of the land, for the transformation of American society by the common use of the motor car would have been checked for at least a decade.³¹⁸

316. *Id.* at 192.

317. *Id.* at 222, 226–27. “After briefly considering an appeal to the Supreme Court, the A.L.A.M. executive committee prudently recognized the decision as final and lost no time in demonstrating a conciliatory attitude.” *Id.* at 234. The New York Tribune newspaper, in describing the decision, focused on Selden’s refusal to produce a working car. As Greenleaf writes: “The New York *Tribune* took Selden to task for his long delay in the Patent Office, observing that ‘practical common sense, as well as intelligent self-interest, strongly suggests that as soon as a useful device is invented *it should be put to use.*’” *Id.* at 235 (emphasis added).

318. *Id.* at 237–38.

XXXIII. THE MARCONI PATENT FOR ASPECTS OF RADIO

Like the automobile, radio also developed out of the work of many innovators. As historians in the field have written:

The modern radio system is not one invention; it is made up of the work of many inventors ... Marconi made the greatest single contribution to its practical realization, though many other scientists and inventors, such as [Oliver] Lodge, [Edouard] Branly, [Nikola] Tesla and [John Stone] Stone, made inventions essential to its development.³¹⁹

And another case from the same era as the Selden patent litigation saga also shows the need for the availability of expeditious appeals challenging a patent's validity in federal court.

As Christopher Harkin has written:

The Marconi patent No. 763,772 serves as an example of a nearly four decade monopoly for an invalid and improvidently issued patent granted June 28, 1904, but not finally struck down until the Supreme Court's 1943 decision. For many of those years, Marconi successfully sued for damages and injunctions against competition, including National Signalling Company, Kilbourne & Clark Manufacturing Company, De Forest Telephone & Telegraph Company, and Atlantic Communication Company.³²⁰

The Supreme Court's 1943 decision in *Marconi Wireless Tel. Co. v. United States*³²¹ did not involve Tesla or other innovators of radio directly, but rather involved a challenge to certain patents related to improvements in radio used by the U.S. government during World War I. One of these improvements was using an adjustable "four-circuit"³²² transformer configuration for radio transmission and

319. JOHN JEWKES, DAVID SAWERS & RICHARD STILLERMAN, *THE SOURCES OF INVENTION: A STUDY OF THE CAUSES AND CONSEQUENCES OF INDUSTRIAL INNOVATION THROUGH THE INVENTIONS OF THE NINETEENTH AND TWENTIETH CENTURIES* 286 (1969).

320. Christopher A. Harkins, *Tesla, Marconi, and the Great Radio Controversy: Awarding Patent Damages without Chilling a Defendant's Incentive to Innovate*, 73 MO. L. REV. 745, 766 n.117 (2008).

321. See *Marconi Wireless Tel. Co. v. U.S.*, 320 U.S. 1, 3 (1943).

322. *Id.* at 6-7 (referring to "The patent, in describing the arrangement of the apparatus so as to secure the desired resonance or tuning, specifies: 'The capacity and self-induction of the four circuits—i.e., the primary and secondary circuits at the transmitting-station and the primary and secondary circuits at any one of the receiving-stations in a communicating system are each and all to be so independently

reception. The Court found that the U.S. counterpart to Marconi's original British "four sevens"³²³ tuning patent was invalid and upheld a 1935 lower court ruling that Oliver Lodge's and John Stone's earlier work and patents had priority. That prior 1935 ruling by the Court of Claims was a compensation case brought by Marconi for compensation for the U.S. government's use of the improvements, and in that case the U.S. government brought up Stone's patent in its defense, and in 1935 the court upheld the proposition that the Stone patent had priority over Marconi's. As the Supreme Court held in 1943:

Marconi's reputation as the man who first achieved successful radio transmission rests on his original patent, which became reissue No. 11,913, and which is not here in question. That reputation, however well deserved, does not entitle him to a patent for every later improvement which he claims in the radio field. Patent cases, like others, must be decided not by weighing the reputations of the litigations, but by careful study of the merits of their respective contentions and proofs. As the result of such a study, we are forced to conclude, without undertaking to determine whether Stone's patent involved invention, that the Court of Claims was right in deciding that Stone anticipated Marconi, and that Marconi's patent did not disclose invention over Stone.³²⁴

Harkin writes:

Can invalid patents deter innovation? The great radio controversy suggests so, and should prompt a change in the way we look at promoting innovation. The message of Tesla makes evident that some form of intellectual property protection for a simultaneous discovery and independent development might better fortify incentives to undertake high risk R&D and could result in more investment across all stages of research. . . .

. . . .

adjusted as to make the product of the self-induction multiplied by the capacity the same in each case or multiples of each other—that is to say, the electrical time periods of the four circuits are to be the same or octaves of each other'.”)

323. 320 U.S. at 66 n.6 (Rutledge, J., dissenting) (noting one of the Marconi patents at issue was U.S. Patent No. 763,772 and British Patent No. 7777 of 1900). That Marconi patent was often referred to as “the four sevens” because its British Patent Number was 7777. *See also* MARC RABOY, MARCONI: THE MAN WHO NETWORKED THE WORLD 222 (2016)(referring to “the so-called four-sevens patent number 7777 of 1900”).

324. *Id.* at 37–38.

A successful patent infringement suit against Marconi may have helped to fund [Nikola] Tesla's research [and that of others referenced in the Supreme Court's *Marconi* case of 1943] in radio during its peak developmental years, 1915 until 1940.

. . . .

[R]adio was not invented by a single person. Instead, it culminated from contributions of many scientists. Imagine what those scientists could have done working together, or without fear of Marconi's lawsuits and the potential for large patent damage awards that can cripple, and even bankrupt, a defendant.³²⁵

Today's innovators should not have to wait for those with invalid patents to have their patented technologies used in a war by the United States, with the hope that the United States will then challenge the patent when sued for compensation, and win such a suit with only ancillary and belated benefits to all the other innocent parties who were denied the ability to innovate while the now-invalidated patents were being enforced.

XXXIV. FEDERAL CIRCUIT PRECEDENTS ARE THE LATEST BARRIERS TO ACCESS TO FEDERAL COURT BY THOSE CHALLENGING IMPROPERLY-GRANTED PATENTS

So far, we have seen how patent law in its earliest days was designed to foster new working industries for society's benefit³²⁶; how the abuse of those patents in England gave rise to concerns that patents for inventions be limited to truly useful things as tested in courts of law in order to avoid perpetuating unjust monopolies; how those concepts carried over to the American colonies and later American states to foster immediately useful inventions needed for survival in a frontier setting; how the Constitution contained a Patent Clause designed to limit unjust monopolies by imposing a specific method of fostering the "useful arts" (understood to mean advancing the production of valuable devices that were ready to use); and how the early patent statutes, with lessons learned from the ill-fated registration system created by the Patent Act of 1793 and the gutting of the definition of "utility" imposed by Justice Story, ultimately carried on that original understanding in the Patent Act of 1836. That Act furthered the goal of

325. Harkins, *supra* note 320, at 768, 769, 794.

326. *See* discussion *supra* Parts I and II.

ensuring recourse to the federal courts by those challenging allegedly improperly-granted patents in order to limit the influence of unjust monopolies, and recognized that the standard for challengers' invalidating improperly-granted patents should be low. We also saw how the epic saga of the Selden engine patent and the triumph of Henry Ford led to both a vindication of the pioneering spirit of American patent law and the widespread availability of the first automobiles to connect the country together.

With that background, how well is the federal appeals court specializing in patent cases, the Federal Circuit, doing in upholding, or hindering, that pioneering spirit of American patent law?

Today, the Federal Circuit Court of Appeals has, unfortunately, handed down precedents regarding the doctrine of "standing"—that is, the doctrine that a party seeking a legal remedy must show they have sufficient connection to and harm from the law or action challenged to support their participation in the case—to raise barriers to prompt patent appeals of allegedly invalid patents.

For example, in 2019, the Federal Circuit issued a precedential opinion dismissing General Electric's appeal challenging a patent as invalidly granted to a competitor for lack of standing, stating it had "addressed the 'competitor standing' doctrine in *AVX Corp. v. Presidio Components, Inc.*, 923 F.3d 1351, 1357 (Fed. Cir. 2019)."³²⁷ In *AVX*, the court held that an appellant who was party to an inter partes review proceeding in the Patent and Trademark Office lacked Article III standing because it had "no present or nonspeculative interest in engaging in conduct" covered by the challenged patent, even though the appellant actively competed against the patent owner in the relevant market.³²⁸ The Federal Circuit, following *AVX*, held that it "[saw] no competitive harm to GE sufficient to establish standing to appeal"³²⁹ because, it reasoned, there would be no adverse impact on "future" competition because "UTC [United Technologies Corporation, the holder of the patent] has not sued or threatened to sue GE for infringement of the '605 patent [the patent at issue]."³³⁰

As explored in this Article, requiring a patent holder to sue or threaten to sue another entity for infringement before anyone else can challenge an improperly-granted patent in court goes against the

327. *GE v. United Techs. Corp.*, 928 F.3d 1349, 1354 (Fed. Cir. 2019)

328. *AVX Corp. v. Presidio Components, Inc.*, 923 F.3d 1357, 1363 (Fed. Cir. 2019).

329. *GE*, 928 F.3d at 1354.

330. *Id.* at 1352.

history of American patent law's allowance for broad access to federal courts for challenges to improperly-granted patents. Prior understanding was that an improperly-granted patent was an unjust monopoly, and as such it inherently causes economic harm by virtue of its characteristics as an unjust monopoly. As Bugbee writes:

There are, of course, various ways in which a patent of invention can be used to effect or assert a true monopoly, which takes from the public something which it previously had the right to enjoy. For example, the inadvertent granting of a patent, without the knowledge that the same invention has already become public property through disclosure in an expired prior patent or a description published long before, or through certain prior public use of the invention, creates a monopoly which continues until the wrongly awarded patent expires or is invalidated.³³¹

The original purpose of the patent laws was to encourage innovators, not to allow non-innovators to use improperly-granted patents to prevent others from pursuing innovations themselves. But that is precisely what is allowed when challengers of improperly-granted patents are denied access to federal court. As Christopher Harkins has further explained:

[L]eading commentators have only addressed the purpose of patent law from the patentee's perspective. Failure to consider innovation from the defendant's perspective, however, serves a negative function and leads inexorably to a patent system that discourages investment in research and development.

. . . .

It is only fair that a plaintiff be rewarded for inventions. It is equally fair, but ignored, that the patent system should encourage all inventors (not just a plaintiff, but also a defendant) to risk investment in research and development (R&D) in pursuit of inventions that benefit society. The policy considerations in favor of promoting the sciences deserve the same respect when achieved by the defendant as when achieved by the plaintiff. . . . When a plaintiff's right to exclude is blindly followed without regard to a defendant's legitimate, independent efforts and successes in developing the same or equivalent invention, society's goal of encouraging research in areas such as public health is jeopardized.³³²

331. BUGBEE, *supra* note 5, at 8.

332. Harkins, *supra* note 320, at 748–49.

In this way, an improperly-granted patent is an unjust monopoly, and as such it creates concrete and immediate economic harm that should be fully recognized understanding law. Indeed, even Judge Hughes explained in his concurring opinion in *AVX Corp.* that “[t]he risk of a future infringement suit is not the only way an IPR [inter partes review] petitioner can show injury-in-fact,”³³³ and there is a much wider range of competitive injuries that should support standing, such that the “costly competitive burden” imposed by UTC’s patent, which “effectively precludes GE from meeting its customer’s design needs without spending additional resources to design around the patent,” should constitute a “‘concrete and particularized’ harm to GE.”³³⁴

The Federal Circuit’s precedents are diametrically opposed to the original understanding of American patent law, under which improperly-granted patents were considered unjust monopolies that inherently caused harm to innovation and the public at large. James Madison, for example, emphasized the “utility” of patents in support of “the public good,”³³⁵ traits not shared by unjust monopolies, and he cautioned that “[m]onopolies tho’ in certain cases useful, ought to be granted with caution, and guarded with strictness agst. abuse. . . . [T]he danger being very great that the good resulting from the operation of the monopoly, will be overbalanced by the *evil* effect of the precedent . . .”³³⁶

In contrast to the Federal Circuit’s standing precedents, and in accordance with the original understanding of first patent laws, the D.C. Circuit has applied “basic economic logic,”³³⁷ when assessing competitive harm, noting that “illegal structuring of a competitive environment” is “sufficient to support Article III standing,”³³⁸ and also finding standing “when the Government takes a step that benefits [a] rival and therefore injures [a competitor] economically.”³³⁹ Other circuits have also relied on the “basic law of economics” to determine

333. *GE*, 928 F.3d at 1357.

334. *Id.* at 1358–59.

335. THE FEDERALIST NO. 43, *supra* note 86, at 271–72.

336. MADISON, *supra* note 88, at 6.

337. *Am. Inst. of Certified Pub. Accts. v. IRS*, 804 F.3d 1193, 1198 (D.C. Cir. 2015).

338. *Shays v. Fed. Election Com’n*, 414 F.3d 76, 85, 87 (D.C. Cir. 2005) (“[W]hen regulations illegally structure a competitive environment— whether an agency proceeding, a market, or a reelection race—parties defending concrete interests . . . in that environment suffer legal harm under Article III.”).

339. *Sherley v. Sebelius*, 610 F.3d 69, 72 (D.C. Cir. 2010).

whether a competitive harm allows standing.³⁴⁰ And the Supreme Court itself has stated that it “routinely recognizes probable economic injury resulting from [governmental actions] that alter competitive conditions as sufficient to satisfy the [Article III ‘injury-in-fact’ requirement]”³⁴¹

CONCLUSION

Thomas Astebro examined a sample of 1,091 inventions and found only between 7-9% of those inventions reached the market, and of the 75 inventions that did, six realized returns above 1400%, while 60% obtained negative returns.³⁴² Those results would be disappointing to the Founders of patent law.

Renaissance Italy’s competitive city states developed a patent system to reward those who developed or imported commercially

340. *See, e.g.*, *Simmons v. ICC*, 900 F.2d 1023, 1026 (7th Cir. 1990) (“An allegation of competitive injury is sufficient to satisfy the first prong of the standing test.”) (*cert. denied*, 499 U.S. 919 (1991)); *Adams v. Watson*, 10 F.3d 915, 922 (1st Cir. 1993) (explaining that “future injury-in-fact is viewed as ‘obvious’” when government action removes competitive burdens on a plaintiff’s rivals, thus “dis-advantag[ing] the plaintiff’s competitive position in the relevant marketplace.”); *Ctr. for Reprod. L. & Pol’y v. Bush*, 304 F.3d 183, 197 (2d Cir. 2002) (recognizing standing where “the government’s allocation of a particular benefit ‘creates an uneven playing field,’” so long as a plaintiff shows “‘that he personally competes in the same arena with the party to whom the government has bestowed the assertedly illegal benefit.’”) (citation omitted); *Adams v. Watson*, 10 F.3d 915, 923 (1st Cir. 1993) (recognizing that because “basic economic theory . . . posit[s] elemental laws of cause and effect,” parties can rely “on such core economic postulates” to show future economic harm from current competitive changes); *Marshall & Ilsley Corp. v. Heimann*, 652 F.2d 685, 692–93 (7th Cir. 1981) (finding competitor standing where a small bank was being acquired by a larger one, due to the “change in the competitive configuration of [a city’s] banking community.”) (*cert. denied*, 455 U.S. 481 (1982)); *TrafficSchool.com, Inc. v. Edriver, Inc.*, 653 F.3d 820, 825–26 (9th Cir. 2011) (finding standing because “[s]ales gained by one [competitor] are thus likely to come at the other’s expense.”).

341. *Clinton v. N.Y.C.*, 524 U.S. 417, 433 (1998). *See also* *Ass’n of Data Processing Serv. Org., Inc. v. Camp*, 397 U.S. 150, 152 (1970) (stating plaintiffs had standing to challenge an administrative decision that increased competition in plaintiffs’ market by allowing new players to enter, because such competition “might entail some future loss of profits . . .”).

342. Thomas Astebro, *The Return to Independent Invention: Evidence of Unrealistic Optimism, Risk Seeking or Skewness Loving?*, 113 *ECON. J.* 226, 226 (2003).

valuable skills, products, or techniques into their own jurisdictions, with that value measured by, and the patents conditioned on, physical demonstrations of the utility of the things to be patented, and commitments to follow through on commercializing them, for the benefit of society as a whole.³⁴³ That system spread throughout Europe. The British monarchy's abuse of the practice by rewarding its friends with what amounted to unjust monopolies rather than patents that incentivized innovation led to the propriety of patents being judged in courts of law, and Parliament's enactment of the Statute of Monopolies, which generally banned monopolies but made an exception for innovators whose protected products and practices would further commerce by making trade cheaper, not needlessly expensive. The focus on the palpable utility of patented things as central to their propriety was seen as especially necessary by English colonial governments in North America, where life was hard and there was a need for immediate, practical solutions to the problems of housing, clothing, and feeding an often desperate population, and the focus was justified by John Locke's moral theory, adopted by Adam Smith and later James Madison and others, which based true property ownership on the mixing of one's labor with the physical environment in ways that made it more valuable to society at large. That "frontier spirit" of American patent law only intensified after the American Revolution created a new nation that needed to innovate quickly in order to survive immediate competition with often hostile and more powerful and industrialized European powers.

At the same time, Americans' hostility toward unjust monopolies, like the East India Company whose monopolization of the tea trade spurred the Boston Tea Party, led to the ratification of a Patents Clause in the Constitution that limited congressional power to "promote the Progress of ... useful arts,"³⁴⁴ which was understood to require advancing products and processes demonstrating immediate utility over political favoritism.

Thomas Jefferson, an ardent opponent of unjust monopolies, an inventor in his own right and strict judge of innovation who knew how common it was for people to independently discover the same innovations, was entrusted with enforcement of the first federal patent statute of 1790, which required patented things to be "sufficiently useful and

343. See discussion *supra* Parts I and II.

344. U.S. CONST. art. I, § 8, cl. 8.

important,”³⁴⁵ while also making granted patents only “prima facie”³⁴⁶ evidence of validity under a robust process of judicial review, in order to avoid perpetuating unjust patent monopolies.

When in 1793 the existing patent examination system was replaced by a ministerial registration system, the courts became the patent evaluators of first resort, and they predominantly continued to impose patentability tests related to the net public benefits and commercializability of specific inventions that is, until Justice Joseph Story’s gutting redefinition of “utility”³⁴⁷ ushered in the first era of patent litigation abuse in which all manner of vague or useless patents were asserted against others for extortionist purposes.

Story’s error and its sanction of patent litigation abuse was explicitly corrected by Congress in the Patent Act of 1836, which restored the patentability focus to whether a thing had utility based on its benefits to the public at large. That Act created a more robust examination system to replace the prior registration system, but even so its congressional supporters took seriously the Founders’ concerns with unjust monopolies, recognizing that even the most diligent examiners had limited technical knowledge, warranting making patents again only “prima facie” evidence of their validity³⁴⁸ and restoring a robust system of judicial review that was available to anyone seeking to challenge an improperly-granted patent, allowing the correcting of the immediate economic harm that was caused by unjust monopolies that prevented true inventors from innovating.

The patent laws were tested again by Henry Ford, who faced extortionist demands for fees from owners of an overbroad and improperly-granted patent who produced no product with the patent themselves. Ford’s successful challenge to that patent was yet another chapter in an ongoing saga featuring litigation abuse by patent trolls, and its happy ending ushered in an era of cheap automobiles for the masses that connected the country together like it had never been connected before. Ford, one of America’s most important innovators, uniquely embodied this original frontier spirit of the patent laws and their foundation in practical utility, and he prevailed over contrary

345. Patent Act of 1790, ch. 7, § 1 (1790).

346. Patent Act of 1790 ch. 7, § 6 (1790).

347. *See supra* Part XXI.

348. Patent Act of 1836, ch. 357, § 7 (1836); *see* Douglas Gary Lichtman & Mark A. Lemley, *Rethinking Patent Law’s Presumption of Validity*, 60 STAN. L. REV. 101, 106–07 (2007).

forces only because he had access to federal court. As Greenleaf writes:

Ford himself never gave an inch in his conviction, which developed and hardened during the Selden case, that patents are worthless unless they contribute to the common store of industrial and social wealth. It was thus that the patent policy of the Ford Motor Company, a policy over which Ford exerted direct control during his active career, became the projection of one man's view that the inventive process is ultimately measured and tested by practical consequences.

His experience in the Selden case taught Ford that a patent right used only for collecting royalties is detrimental to the growth of a free and progressive technology. His inflexible attitude was expressed in a statement he made in 1925: "Patents are silly things when they are used to hinder any industry. No man has a right to profit by a patent only. That produces parasites, men who are willing to lay back on their oars and do nothing. If any reward is due the man whose brain has produced something new and good he should get enough profits from the manufacture and sale of that thing."³⁴⁹

Yet today, the Federal Circuit has created barriers, under the doctrine of standing, to those who might develop new innovations if they could only challenge other improperly-granted patents in court in a timely manner, in accordance with the original frontier spirit of American patent law. A patent improperly granted constitutes an unjust monopoly, and early Congresses saw to it that they were made subject, by statute, to judicial appeals to help ensure that any unjust monopolies the government created could be promptly invalidated in court. Since such monopoly grants by the government cause immediate economic harm in and of themselves, the availability of courts to hear challenges to them under ordinary standards of proof is especially important—because when the government enforces an illegitimate patent, the government itself is denying others the ability to innovate where they would otherwise be able to.

The original patent laws were designed to foster and incentivize the actual production of novel, useful goods and services that would be sold in the market to the benefit of society at large—exactly the opposite of the business model of modern patent trolls, which is based on producing nothing with the vague or obvious patents they own, but rather using them to extort money from productive companies through

349. GREENLEAF, *supra* note 282, at 247–48.

the threat of expensive and wasteful litigation. When improperly-granted patents interfere with commerce in that way, those invalid patents result in the exact opposite of what the entire patent system was originally designed to do, namely increase commerce in the useful arts.

Peter Bernstein, a historian of the history of insurance and its role in incentivizing innovation, has written that “Without the venturesome, the world would turn a lot more slowly. Think of what life would be like if everyone were phobic about lightning, flying in airplanes, or investing in start-up companies. We are indeed fortunate that human beings differ in their appetite for risk.”³⁵⁰ Yet today, our patent system—far from rewarding the sorts of risks that lead to progress—allows those who produce nothing to extort resources from others who are actually providing the things the public wants and needs. That result turns the text of the Patent Clause on its head. As I. Bernard Cohen, a professor of the History of Science at Harvard University, writes in his book *Science and the Founding Fathers*, after surveying the prevailing contemporary understanding of the terms used in the Clause, writes:

The conclusion, therefore, would seem to be that in Paragraph 8 of Section 8 of Article I, the juxtaposition of “Science” and “useful Arts” tells us that what the framers sought to promote was not the progress of science at large . . . but more narrowly and specifically those theoretical or general principles of practice that are associated directly with useful inventions or that lead to economic benefits or financial rewards.³⁵¹

Bernstein also reminds us that the adventuresome, frontier spirit that drove rational, workable insurance systems came to be embodied in our own Founding documents, including the separation of powers that serves as the foundation of our government, writing that, “The Enlightenment’s optimistic philosophy of human capabilities would show up in the Declaration of Independence and would help shape the Constitution of the newly formed United States of America.”³⁵² So, too, a frontier spirit was originally embodied in America’s early patent laws, which focused like Franklin’s bifocals on spurring practical innovations to be provided by bold, enterprising actors who would manufacture things of immediate utility to the benefit of the public at large.

350. PETER L. BERNSTEIN, *AGAINST THE GODS: THE REMARKABLE STORY OF RISK* 105 (1996).

351. I. BERNARD COHEN, *SCIENCE AND THE FOUNDING FATHERS* 308 (1995).

352. Bernstein, *supra* note 350, at 111.

That was the system the Founders saw as the most rational patent system. And when current patent law and practice has strayed so far from its original moorings, reformers in Congress and originalists everywhere should take note, and help navigate America's patent law back to its foundations on the frontier of innovation.³⁵³

353. The recent rise of computer programs that simulate or create intelligence (artificial intelligence, or AI) that can be used by humans to help solve problems has brought to the fore the question of whether new requirements of practical application should be added to legal definitions of the sort of innovation required for patenting. For example, say a person asks an AI device "List for me all the possible improvements to a food processor," and the AI produces a list with a thousand possibilities. Can someone patent any of those possibilities without more? Or should someone be able to patent any of those possibilities only when they themselves contributed to reducing the possibility to practical application in physical form? The United States Patent and Trademark Office, in February, 2024, announced guidance that addresses that question in part in a request for comments regarding evaluating inventorship for AI assisted inventions. Such guidance states the inventorship analysis "should focus on human contributions, as patents function to incentivize and reward human ingenuity." *Inventorship Guidance for AI-assistant Inventions*, 89 Fed. Reg. 10043, 10044 (Feb. 13, 2024), available at <https://www.federalregister.gov/documents/2024/02/13/2024-02623/inventorship-guidance-for-ai-assisted-inventions>. It also includes the following proposed principle: "a natural person who merely recognizes and appreciates the output of an AI system as an invention, particularly when the properties and utility of the output are apparent to those of ordinary skill, is not necessarily an inventor. However, a person who takes the output of an AI system and makes a significant contribution to the output to create an invention may be a proper inventor. Alternatively, in certain situations, a person who conducts a successful experiment using the AI system's output could demonstrate that the person provided a significant contribution to the invention even if that person is unable to establish conception until the invention has been reduced to practice." *Id.* at 10048–49.