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The Emergence of the Professional Patent Practitioner

KARA W. SWANSON

Thomas Edison is a household name, the subject of countless press articles and biographies, and the object of adulation as a great American inventor, holder of 1,093 patents. Lemuel Serrell, the patent practitioner who prosecuted some of Edison's key telegraph, telephone, phonograph, and electric light patents during a ten-year period and "one of the most expert patent lawyers in the country," has little name recognition, even within the history of technology.¹ Neither do the Dyers, George and Richard, father and son patent lawyers who worked for decades managing patent applications for Edison and who became involved in many aspects of Edison's business.²

Kara W. Swanson, a registered patent attorney and assistant professor of law at Drexel University Earle Mack School of Law, is completing her Ph.D. in the history of science at Harvard University. She earned her B.S. in molecular biophysics and biochemistry from Yale University, and an M.A. in biochemistry and a J.D. from the University of California, Berkeley. In addition to her research into the history of the U.S. patent system, she is writing a history of human body fluid banks in the United States, concentrating on milk, blood, and sperm. For their comments and assistance, the author thanks the participants in *Con/Texts of Invention*, The Society for Critical Exchange, Case Western Reserve University, Cleveland, April 2006; Christopher Beauchamp; Mario Biagioli; Bill Rankin; John Staudenmeier; and the anonymous reviewers. This work has been supported in part by a Graduate Research Fellowship from the National Science Foundation.

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1. "Lemuel Wright Serrell" (death notice), *New York Times*, 2 August 1899; Francis Jehl, *Menlo Park Reminiscences* (Dearborn, Mich., 1936-41), 3:948-49; Reese V. Jenkins et al., eds., *The Papers of Thomas A. Edison* (Baltimore, 1989-), 1:196n2. Serrell's work from 1870 to the early 1880s is evidenced in numerous documents within the Edison papers; see, for example, Jenkins et al., 1:173, 1:497-98, and 3:284n5. A JSTOR search in the history of science and technology yielded over 250 articles and reviews referencing "Thomas Edison" and none at all discussing "Lemuel Serrell," although Serrell is occasionally mentioned in books about Edison. See, for example, Paul Israel, *Edison: A Life of Invention* (New York, 1998), 56, 80, 97, 148, 178; and Charles Bazerman, *The Languages of Edison's Light* (Cambridge, 1999), 53.

2. Jenkins et al., 4:206n16, 6:312; Israel, *Edison*, 232, 237-38, 427-28. Richard's brothers, Phillip and Frank, were also Edison employees (Jenkins et al., 6:11n7, 6:11n3).

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But these men and others like them were virtually indispensable to American invention by the late nineteenth century. From tentative beginnings early in the century, the role of patent practitioner—by which I mean persons who were paid to participate in the patent application process as agents of the inventor—became a routine part of the patent system and a key node in the networks that inventors like Edison built to develop and sustain their inventions.³

Historians of technology in recent decades have investigated the social networks that surround and support any invention and have shown the correlation between successful network-building and membership in that informal though well-known pantheon of great inventors.⁴ Patent practitioners, like Serrell and the Dyers, became crucial but often anonymous links in such networks, similar to the unsung assistants in Edison's workshops and the investors who, in an oft-repeated part of the great inventor biography, provided financing at crucial moments.⁵ In this way, the history of the patent practitioner is likewise part of the history of invention, a part thus far underexplored.⁶ The history of the patent practitioner is also inter-

3. During most of the time period discussed in this article, roughly 1836 to 1938, qualifications for what today we call "patent attorneys" and "patent agents" were unspecified, or very loose. I use "patent practitioner" as a trans-historical catchall term to refer to what were variously called "patent solicitors," "patent agents," "patent counsel," "patent attorneys," and "patent lawyers" during this first century of the modern patent system. These terms reflected a persistent nomenclatural muddle among all legal actors in the United States—a muddle created by borrowing terminology from Great Britain without also borrowing the associated distinctions in role; see Lawrence M. Friedman, *A History of American Law*, 3rd ed. (New York, 2005), 235. Thus "solicitor," "counsel," "attorney," "lawyer," and "attorney-at-law" all had popular associations with legal training and expertise, although the terms had shifting meanings over the decades. When chosen by patent practitioners themselves, these terms also bore some relation to practitioners' self-perceptions of their roles: to solicit patents (solicitor), to act as the inventor's agent in legal dealings with the patent office (agent or attorney), to provide counsel (counsel), to engage in legal proceedings and advocacy, and to assert or defend a patent (attorney, attorney-at-law, or lawyer). Although this article discusses self-described "patent attorneys," including those who were admitted to the bar and represented clients in court, it does not address patent litigation in the courts, an activity that was generally limited to attorneys-at-law but has always been accessible to all bar admittees, whether or not they called themselves "patent attorneys." My focus is on the process of obtaining patents.

4. Two examples of such scholarship that explore the role of patents in social networks are Israel, *Edison*, and Carolyn C. Cooper, *Shaping Invention: Thomas Blanchard's Machinery and Patent Management in Nineteenth-Century America* (New York, 1991).

5. One especially poignant example of this trope is the story of Gail Borden (failed developer of a dried-meat biscuit and obsessive experimenter with shelf-stable milk products) meeting a wealthy banker on a train and convincing him to provide the funds necessary to build the first condensed-milk plant, the foundation of what became a massive international business—the Borden Company. See George J. Kiehle, *The Story of Gail Borden: The Birth of an Industry* (New York, 1947), 3. For Edison's reliance on assistants, see Israel, *Edison*, 119–242, 270–76.

6. Some histories of invention note, but do not discuss, the history of the patent practitioner; see, for example, Carolyn Cooper, "The Social Construction of Technology

twined with the broader history of professionalization, particularly that of two other professions struggling for social space in the nineteenth century, engineers and lawyers. The role of patent practitioner was another occupational niche that those trained as engineers or lawyers could occupy, provided that they could convince, first the inventive public and, later, government regulators, that their training was the most appropriate qualification for this work. As patent practitioners became more numerous and indispensable, and as they jockeyed for clients amid a slowly developing regulatory regime, the contours of this occupation became more controlled and formalized. The constant issue under negotiation was the type of expertise to be privileged in this new occupational space.

Serrell and the Dyers were men with a particular set of specialized skills and training. Edison was introduced to Serrell in 1870 by one of his early investors and mentors, Marshall Lefferts of the Gold & Stock Telegraph Company, who wanted Edison to understand the strategic uses of patents and the patent system and to get the best available advice. Serrell had learned patent prosecution from his father, who had been in the business since the first years of the modern patent system. By the time he was hired to support Edison's telegraphy inventions, Serrell was already experienced with the technology of the new industry. Richard Dyer also learned patent practice from his father, George Dyer, and succeeded him as Edison's patent lawyer.⁷ These men combined bar admission with a specialized apprenticeship in patents. Without any formal requirements for work as a patent practitioner, men like these were joined by countless others of varying backgrounds, all seeking business as mediators between inventors and the patent office. Between the passage of the Patent Act of 1836 and the mid-twentieth century, there was continuous debate about the relative merits of legal, technical, and/or bureaucratic training as the best source of expertise to fill this new role.⁸ As the meaning of legal expertise and technical expertise shifted with increasing professionalization, aspirants to paid work as patent practitioners shifted the epistemological basis of their claims to this professional space.

through Patent Management: Thomas Blanchard's Woodworking Machinery," *Technology and Culture* 32 (1991): 962. More often, the patent system is explained without any reference to such persons, as in Paul Israel, *From Machine Shop to Industrial Laboratory: Telegraphy and the Changing Context of American Invention, 1830–1920* (Baltimore, 1992), 1–23. Notable exceptions to this trend are the works of Robert C. Post, which focus on antebellum patent examiners but also include some discussion of patent practitioners: *Physics, Patents, and Politics: A Biography of Charles Grafton Page* (New York, 1976), and "'Liberalizers' versus 'Scientific Men' in the Antebellum Patent Office," *Technology and Culture* 17 (1976): 24–54.

7. "Lemuel Wright Serrell" (n. 1 above); Israel, *Edison* (n. 1 above), 56; Jenkins et al. (n. 1 above), 6:312, 6:328n25.

8. "Patent Act of 1836 (July 4, 1836)," in *Statutes at Large of United States of America, 1789–1873* (Washington, D.C., 1856), 5:117. This act implemented the patent examination system by a designated patent office. The system, though modified by subsequent legislation, remains in place today.

Patents themselves are hybrids, boundary objects that move back and forth between technical and legal realms of knowledge production, serving a mediating function. The nature of a patent as a legal-technical hybrid is built into the very concept of patents for invention.⁹ A patent presupposes a technical realm,¹⁰ in which ideas are, in the phraseology of patent law, conceived and reduced to practice, and a legal realm, in which the specially processed paper provided by the government to the inventor has power—power that can be expressed through the judicial system in the form of orders to cease and desist (infringing uses) or to pay (damages). Within this two-realm concept of the patent system, it was not clear during the nineteenth century which claimants to expertise in patent applications should prevail: those basing their claims on legal knowledge, or those relying on technical training. There was also a third, overlapping category of claimants: those who had experience with the boundary itself through working in the patent office as bureaucrats.

A general decline of professional standards during the first half of the nineteenth century, supported by the Jacksonian rhetoric of anti-elitism, was followed by a resurgence of professionalization efforts during the latter half of the nineteenth century.¹¹ Particularly from about 1870 to 1920, multiple groups of white-collar workers sought to professionalize in order to maintain or raise their status and earnings in a society increasingly organized around industrial capitalism. During this period, engineers formed professional associations, established specialized educational institutions and degree programs, and attempted to create licensing programs—imitating to some extent the legal profession, which engaged in these same activities with more success.¹² The occupation of patent practitioner reflected, and was shaped by, these professional trends.

9. In considering twentieth-century inventions, Gary Edmond has used the phrase “law-science hybrid” to discuss patents; see Edmond, “The Law-Set: The Legal-Scientific Production of Medical Propriety,” *Science, Technology & Human Values* 26 (2001): 192.

10. I recognize that “technical” in this sense is a contemporary term, and a more appropriate term for the late eighteenth and early nineteenth centuries might be “mechanical” or even “useful arts”—the phrase used in the U.S. Constitution, art. 1, sec. 8, cl. 8.

11. Robert H. Wiebe, *The Search for Order, 1877–1920* (New York, 1967), 113–22. The antebellum decline in the strength of professions does not particularly apply to engineering, which scarcely existed as an occupation in the United States before 1815 and was only emerging as numerically significant during the 1850s; see Edwin T. Layton Jr., *The Revolt of the Engineers: Social Responsibility and the American Engineering Profession* (Cleveland, 1971), 2.

12. Monte A. Calvert, *The Mechanical Engineer in America, 1830–1910: Professional Cultures in Conflict* (Baltimore, 1967), 40, 57; Peter Meiksins, “Engineers in the United States: A House Divided,” in *Engineering Labour: Technical Workers in Comparative Perspective*, ed. P. Meiksins and C. Smith (London, 1996), 75, 77; Layton, 4; Wayne Karl Hobson, “The Legal Profession and the Organizational Society, 1890–1930” (Ph.D. diss., Stanford University, 1977); William R. Johnson, *Schooled Lawyers: A Study in the Clash of*

Using the history of the legal and engineering professions as a backdrop, I discuss the emergence of this new occupation—the patent practitioner—from the passage of the Patent Act of 1836 until the defeat of the legal profession’s campaign to limit the occupation to lawyers in 1963. I begin with the emergence of self-described “patent agents” or “patent solicitors” as an unintended consequence of the Patent Act of 1836. In creating the first formal patent office staffed by full-time examiners, the act provided a niche for a new kind of expertise in drafting patents and negotiating their acceptance with the patent office bureaucrats. I then turn to the legal profession, which, at first slow to recognize work within the patent office as part of legal practice, began to seek patent solicitation work during the second half of the nineteenth century, leading to a clash between claimants to patent practice based on technical knowledge and those boasting of formal legal training. I conclude by tracing the formalization of the role of patent practitioner through the increasingly sharp conflict between engineers and lawyers, leading to the contemporary resolution of patent practitioner into two defined categories: “patent agent” and “patent lawyer.” These categories, formalized by federal regulations, replaced the clamor of claimants to the occupational space with clear rules for entry, standardizing the patent professional. The definition of these categories signified a truce between the two professions claiming the space. The regulatory scheme acknowledged the usefulness of legal knowledge through a required examination of the laws and regulations related to the patent application process. The legal profession, however, failed to make a law degree and admission to a bar prerequisites for patent practice; instead, a college degree in a field of science or engineering is today the only required academic credential.¹³ The patent practitioner, like the engineer, became a hybrid occupation that combined technical training with an embedded role in a larger institution dominated by those without technical training—for engineers, the corporation and the business world,¹⁴ and for patent practitioners, the legal system.

Professional Cultures (New York, 1978), 68–73; and Robert Stevens, *Law School: Legal Education in America from the 1850s to the 1980s* (1983; rept., Union, N.J., 2001).

13. The current requirements for admission to the patent bar examination are set forth in the *Code of Federal Regulations*, sec. 11.7, and further elaborated in the “General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases before the United States Patent and Trademark Office” (January 2008). The categories of degrees that are considered acceptable have expanded with technological advance; for example, certain degrees in bioscience and computer science are now accepted (“General Requirements,” 4). It is possible to satisfy the scientific and technical qualifications requirement without a college degree by providing a wealth of detail to the patent office regarding one’s coursework, technical training, or relevant experience (“General Requirements,” 5–7).

14. The hybrid nature of engineers as technical professionals working within corporations is noted in Layton, viii, and more generally in Meiksins, 61, and Calvert, xiv.

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During the forty-two years of the patent registration system that preceded the Patent Act of 1836, both the assumption and the reality of the patent application process had been that inventors usually prepared and presented their applications in person, often traveling to Washington, D.C., to do so. Under the Patent Act of 1793, any applicant who presented the required paperwork in good order, accompanied by the necessary drawings, model, and fee, was virtually assured a patent.¹⁵ Travel was slow, arduous, and expensive, so some inventors used people such as legislators who were traveling to the capital on other business to carry their application materials to Washington and, while there, to interact with the patent office as necessary to obtain the patent.¹⁶

After 1802, inventors and their friends would have been dealing with the first full-time patent clerk, William Thornton, who served until his death in 1828.¹⁷ Thornton sought to make the process of remote application easier, thus relieving “friends [of a] tedious correspondence” and dispensing with “long journies [*sic*] [by inventors] to the seat of government.” Thornton implemented his plan of easing the application process by issuing written guidelines for inventors. In his 1811 pamphlet, reprinted in periodicals, Thornton guided inventors to the relevant laws and detailed the precise steps needed for an application to be processed successfully, such as the recommended paper size and the need to place one’s name and

15. “Patent Act of 1793 (February 21, 1793),” in *Statutes at Large of United States of America, 1789–1873* (Washington, D.C., 1845), 1:318. The registration system had replaced a three-year experiment with examination by high-level government officials, pursuant to the Patent Act of 1790 (April 10, 1790), *Statutes at Large of United States of America, 1789–1873* (Washington, D.C., 1845): 109. While the near-automatic quality of the registration system was contested, it was reaffirmed by the attorney general, the secretary of state, and the courts. See William I. Wyman, “Dr. William Thornton and the Patent Office to 1836,” in *Outline of the History of the United States Patent Office*, ed. P. J. Federico (Washington, D.C., 1936), 83–90, and Daniel Preston, “The Administration and Reform of the U.S. Patent Office, 1790–1836,” *Journal of the Early Republic* 5 (1985): 334–51. Preparation of the non-textual parts of the application, the models and drawings, was another occupational space within the patent system. For the history of patent drawings and models in the nineteenth century, see William J. Rankin, “The Ends of Naturalism and the End of Models: What Does It Mean to Draw an Invention,” paper presented at “Tangibles of Intangibles: Patent Models and the Making of Intellectual Property Law,” Collection of Historical Scientific Instruments, Department of the History of Science, Harvard University, 1 May 2009.

16. For examples of this early practice, see Kenneth W. Dobyns, *The Patent Office Pony: A History of the Early Patent Office* (Fredericksburg, Va., 1997), 42–43, 60, 73; Post, *Physics, Patents, and Politics* (n. 6 above), 52; and Post, “‘Liberalizers’ versus ‘Scientific Men’” (n. 6 above), 29n14.

17. Thornton’s life and work in patenting are discussed in Wyman, “Dr. William Thornton and the Patent Office to 1836”; Preston; Dobyns, 35, 39–57, 60–70; Beatrice Starr Jenkins, *William Thornton: Small Star of the American Enlightenment* (San Luis

the name of the claimed invention on the submitted model. By these practical rules of patent petitioning, Thornton strove to make the process accessible to any literate inventor. He also assisted the early inventors by developing the practice of reissue, allowing inventors to return patents for new ones to correct mistakes—a practice later ratified by statute.¹⁸

But the relationship of the patent office with inventors became immediately more complicated in 1836 when a new type of federal bureaucrat was created, the patent examiner. The Patent Act of 1836, in requiring “an examination of the alleged new invention or discovery” for originality, utility, and importance, placed a new burden on the patent applicant.¹⁹ Some men moved quickly to assume that burden—for a price. Within three months of the act taking effect, Thomas Jones, a well-known man of science and technology, had opened an office as a patent practitioner in Washington and was advertising his services to inventors in the *Journal of the Franklin Institute*, a prominent journal aimed at educated mechanics and men of science.²⁰ Jones was medically trained, but he had worked for a number of years as a professor and lecturer in experimental science and was employed by the Franklin Institute to edit its journal. He had also briefly served as the patent clerk under the registration system after Thornton’s death. During that time, Jones had written out patent applications for inventors, sometimes free of charge and sometimes perhaps for a fee.²¹ In the new act, Jones saw a way of using his experience and reputation to augment his income. Jones was hired by the office as the second patent examiner in 1837, but he then returned to his private-agency work by 1838, presumably because it was more lucrative.²² Almost as quickly as Jones, others moved to fill the new professional niche created by the act.

Obispo, Calif., 1982); and Elinor Stearns and David N. Yerkes, *William Thornton: A Renaissance Man in the Federal City* (Washington, D.C., 1976).

18. William Thornton, *Patents* (Washington, D.C., 1811). The contents of the eight-page pamphlet were also published in the capital newspaper, the *National Intelligencer*, on 12 March 1811 (Dobyns, 62), and in William Thornton, “Account of the Method of Obtaining Patents,” *Emporium of the Arts and Sciences* 2 (1814): 274–82. In the twentieth century, his pamphlet was reprinted as “Patents,” *Journal of the Patent Office Society* 6 (1923): 97–103. The quoted text appears in the *Journal of the Patent Office Society* reprint on 98, and the referenced sections on 102–3. Reissuance practice, which persisted until greatly curtailed by the Patent Act of 1870, is discussed in Kendall J. Dood, “Pursuing the Essence of Inventions: Reissuing Patents in the 19th Century,” *Technology and Culture* 32 (1991): 999–1017.

19. “Patent Act of 1836” (n. 8 above), sec. 7.

20. Dobyns, 110; Bruce Sinclair, *Philadelphia’s Philosopher Mechanics: A History of the Franklin Institute, 1824–1865* (Baltimore, 1974), 200n18. The intended readership of the journal is described in Sinclair, 195–216, 287.

21. Jones’s involvement with the Franklin Institute and its journal is discussed in Sinclair, 53–58, 195–216, and his career on 54–55, 197–208; Jones’s time in the patent office is discussed in Dobyns, 80–82.

22. Post, *Physics, Patents, and Politics* (n. 6 above), 52; Sinclair, 200.

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The patent office itself became staffed by men with the practical expertise to aid inventors. Jones was only the first of many to move through the revolving door between federal employment in the patent office and private work as a patent practitioner. Many of the antebellum examiners, as well as men who had worked in the office as drafters and copyists, became private patent practitioners, alone or in partnership with others. For example, Charles Keller, the first patent examiner, was acting as a private patent agent by 1845 in partnership with John Greenough, who had been employed by the patent office to re-create patent drawings lost in the patent office fire of 1836. The fourth patent examiner to be hired, Charles Grafton Page, worked in the office from 1842 to 1852 and then went into business as a patent agent. W. P. N. Fitzgerald, who took over Keller's examinership, also became a patent agent by the 1850s. Samuel Cooper, a patent examiner, went on to head the largest patent agency in Boston.²³ These men were remarkably successful at convincing the public of the need for their services. This rapid and pervasive shift to reliance on patent agents can be seen in the suggestive statistic that in 1839 and 1840, over 20 percent of all patent applications filed were prepared by just two of the growing numbers of patent practitioners.²⁴

The meteoric rise of the new profession of patent practitioner was due to the patent examiner. The one patent examiner authorized by the Patent Act of 1836 had become a corps of two dozen men within twenty years.²⁵ The examiners, who had been added to the system in order to stem the flood of procedurally correct but legally invalid patents claiming old or unoriginal ideas, made obtaining patents more difficult. In the first year that the Patent Act of 1836 was in place, Keller rejected about 75 percent of all the applications he received. The rejection rate would continue to fluctuate between 25 and 67 percent throughout the antebellum period.²⁶ Clearly, getting a patent had become a trickier business, and there was a much greater incentive to hire someone who could anticipate and prepare for the type of examination given to applications.²⁷ As repeat players, experienced

23. Post, *Physics, Patents, and Politics*, 46, 52, 58.

24. William P. Elliot, who had worked for Thornton, became a patent agent by 1839 (Dobyns [n. 16 above], 68). In that year, he negotiated fifty applications (out of 425 filed), and thirty-four in 1840. These constituted about 10 percent of all applications filed in these years—a feat equaled by Jones, who was responsible for another 10 percent (Post, *Physics, Patents, and Politics*, 52; Post, “‘Liberalizers’ versus ‘Scientific Men’” [n. 6 above], 30).

25. United States Patent Office, *Annual Report of the Commissioner of Patents for the Year 1844*, 28th Cong., 2d sess., House of Representatives Document 78 (Washington, D.C., 1845), 4 (referring to the “corps”); United States Department of Commerce, *The Story of the American Patent System, 1790–1940* (Washington, D.C., 1940), 10 (by 1856, there were twelve examiners and twelve assistant examiners).

26. Post, *Physics, Patents, and Politics*, 52; Post, “‘Liberalizers’ versus ‘Scientific Men,’” 25, 29.

27. Historian Nathan Reingold has described meetings between examiners and the inventor or his agent as akin “to an editorial conference, in which the editor (the patent examiner) and the author (the inventor or his attorney) have a dialogue about the revision of a text (the specification)”;

practitioners had mundane knowledge of the functioning of the patent system unavailable to the first-time inventor, whose knowledge was limited to the words of the act.

By the 1850s, nearly every issue of the *Journal of the Franklin Institute* carried at least one advertisement for a firm of patent agents, mostly located in New York but also in Washington, D.C., and Philadelphia. Boston also had growing numbers of patent practitioners, with the number of individuals describing themselves as patent agents climbing from three in 1855 to seven in 1865.²⁸ By 1859, a single issue of the journal carried advertisements from nine different agencies, including Lemuel Serrell's office.²⁹ Dwarfing all these agencies was Munn & Co., a New York-based agency that claimed to be processing about one-third of all patent applications through the 1860s, and that was advertising its services to would-be inventors all over the country in every issue of its affiliated weekly, *Scientific American*.³⁰

The official attitude of patent office bureaucrats toward these practitioners was ambivalent. The two groups of patent professionals had multiple reasons to look upon each other with favor. The revolving door of the patent office ensured that many patent practitioners had close connections with the examiners and commissioners as former co-workers. Indeed,

for the History of Technology," *Technology and Culture* 1 (1960): 160. The patent attorney was often the author of the text, as described in Paul Israel and Robert Rosenberg, "Patent Office Records as a Historical Source: The Case of Thomas Edison," *Technology and Culture* 32 (1991): 1097. For a discussion of this aspect of the patent practitioner's role, see Kara W. Swanson, "Authoring an Invention: Nineteenth-Century American Law and Patent Authorship," in *Making and Unmaking Intellectual Property: Creative Production in Legal and Cultural Perspective*, ed. Mario Biagioli, Peter Jaszi, and Martha Woodmansee (Chicago, forthcoming), and Kara W. Swanson, "Biotech in Court: A Legal Lesson on the Unity of Science," *Social Studies of Science* 37 (2007): 357–84.

28. Advertisements typically ran on the unpaginated front and back covers of the issues. The earliest I have found appeared in volume 56 (July 1853) and were for the Page, Greenough & Fleischmann agency in Washington, D.C., and for Charles Keller in New York. The data on Boston-area practitioners is from George Adams, *The Boston Directory* (Boston, 1855) and Adams, Sampson & Co., *The Boston Directory* (Boston, 1865).

29. *Journal of the Franklin Institute*, March 1859. The advertisements were for Low, Haskell & Co.; Lemuel Serrell; Thomas D. Stetson, Mechanical Engineer and Solicitor of Patents; J. Blunt & Thomas Ewbank; Edward Renwick; and Fowler & Wells, all of New York; Henry Howson of Philadelphia; and James C. Lane (of unknown location). According to Post (*Physics, Patents, and Politics* [n. 6 above], 160), "[b]y 1860 there were nearly three-dozen [patent] agencies in Washington alone, and at least twice that many throughout the rest of the country."

30. Munn & Co., *Hints to Inventors, Concerning the Procuring of Patents, Either American or Foreign, with Suggestions and Valuable Information to Patentees* (New York, 1861), 7. Note that this estimate is probably somewhat inflated. An examination of Orson Munn's private diaries has documented exaggerations in *Scientific American's* claimed circulation figures, as well as major omissions in its self-published histories. See Michael Borut, "The *Scientific American* in Nineteenth-Century America" (Ph.D. diss., New York University, 1977), 48–52, 67–69.

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sometimes commissioners endorsed practitioners, and commissioners themselves could increasingly look to a job with a patent agency upon leaving their government post.³¹ The former patent office employees among the patent practitioners understood the details of office practice and procedure and could sympathize with the annoyances and pressures felt by the examiners. When dealing with former office employees, the examiners could address a score of cases in one meeting with a savvy practitioner, instead of painstakingly explaining the patent law to first-time inventor after first-time inventor. Further, the financial success of patent practitioners was reassuring to government employees, who might be fired after a change of administration or experience freezes in wage increases and promotions along with the rest of the civil service.³² Both while they were working in the patent office and as they looked toward their future, the bureaucrats appreciated this new profession.

Yet this coziness occasionally became uncomfortable. When the former examiner Keller, now an agent, succeeded in obtaining a reissue of his client's patent with a claimed worth in the millions with his former patent office assistant Fitzgerald acting as examiner for the reissuance, the close dealing was denounced as a "fraud upon the public."³³ Episodes such as this one caused patent commissioners to attempt to distance themselves from private patent practitioners. For example, the official patent office pamphlet of information for inventors published in 1849 attempted to disabuse the public that "individuals hav[ing] undertaken the business of preparing applications, drawings, & c., for procuring patents, under the professional title of 'Patent Agents,' or 'Patent Attorneys,' [had any] connexion with the Patent Office, official or confidential." No matter what such practitioners might claim, the commissioner stressed, the patent office "does not concede to them any favors or privileges which are not granted to all other persons;

31. For example, Henry Howson's advertisement in the May 1858 issue of the *Journal of the Franklin Institute* included an endorsement from the patent office's former commissioner, Charles Mason, who himself left for private practice with Munn & Co.

32. The so-called spoils system in the federal civil service was firmly entrenched by 1836 and held sway until the passage of the Pendleton Act in 1883, which implemented the first broad merit-based reform (although some merit-based procedures were implemented in the patent office beginning in 1869). During this time, the employment of all federal employees was uncertain with each change of administration. Additionally, during the Civil War, there were wage cuts and freezes. See Martha Barris Taylor, *History of the Federal Civil Service, 1789 to the Present* (Washington, D.C., 1941), 16–52; Robert Maranto and David Schultz, *A Short History of the United States Civil Service* (Lanham, Md., 1991), 18, 27–59; and Paul P. Van Riper, *History of the United States Civil Service* (Evanston, Ill., 1958), 41–56, 60–95.

33. Post, *Physics, Patents, and Politics*, 135, citing "Abuses in the Patent Office, illustrated by Ex-Commissioner Burke," *American Telegraph Magazine* 1 (1851): 12. Such close dealing continued; in 1875, the *Scientific American* complained that the firm of Fisher and Duncan, a partnership of a former commissioner and a former assistant commissioner, had undue influence with the current commissioner ("The Woodbury Patent," *Scientific American*, 9 January 1875, 16).

and any pretensions to the contrary, (if any such are made,) are, of course, without foundation.”³⁴

Further, the patent commissioners were loathe to give up on the do-it-yourself ethos of patenting. The U.S. patent system was frequently lauded as cheaper, simpler, and more effective at issuing valid and valuable patents than the British system; to accept the patent practitioner as a necessary part of the system was to cede some of this claim to superiority. Therefore, in the annual report of the patent office for 1849, when a substantial portion of applications were already being filed by practitioners, the commissioner nevertheless praised the country’s patent system for its “rejection of intricate legal forms, so that every inventor of ordinary capacity may make out and pass through the office his own papers, without the intervention of attorney or agent.” He also congratulated his office for its support of inventors through “the information and advice, verbally and by circulars, gratuitously given,” and through “access to the office library”—again, as services to aid direct inventor applications.³⁵ By 1851, the commissioner went further still and announced that in order “[t]o relieve applicants from the expense of employing agents, the examiners will decide questions of novelty and patentability upon papers imperfectly prepared. . . . *when such papers are prepared by the inventor himself.*”³⁶

The patriotic objection to the reliance on practitioners was strengthened by a practical consideration: the patent office was unable to produce enough former examiners to meet the growing desire of the public to file patents. Despite the outflow of patent office employees—which the patent commissioners were continually trying to stem by calling for higher salaries—there remained room in the marketplace for practitioners who lacked patent office experience. It was one thing to be negotiating patents with a former bureaucrat, who, though perhaps not personally known to the examiner, would have shared a common experience and probably a circle of acquaintance, but quite another to face practitioners who lacked any detailed knowledge of the patent office and who also lacked respect for the stated ideal of issuing legally robust, commercially valuable patents.

By 1859, the commissioner felt the need to warn the public that “the

34. Edmund Burke, “Information to Persons Having Business to Transact with the Patent Office,” reprinted in *Journal of the Franklin Institute* 17 (1849): 179.

35. United States Patent Office, *Annual Report of the Commissioner of Patents for the Year 1849*, 31st Cong., 1st sess., Senate Executive Document 15 (Washington, D.C., 1850), 514–15.

36. “Information to Persons Having Business to Transact with the Patent Office,” reprinted in United States Patent Office, *Annual Report of the Commissioner of Patents for the Year 1851*, 32nd Cong., 1st sess., House of Representatives Executive Document 102 (Washington, D.C., 1853), 491–516, emphasis in original. This policy, first circulated in 1850, drew immediate fire from patent agents; see “Patent Office Report for 1850—No. 3,” *Scientific American*, 4 October 1851, 21, and Charles Grafton Page, “Some of the Written Rules of the Patent Office,” *American Polytechnic Journal* 1 (1853): 20. These issues are also discussed in Post, *Physics, Patents, and Politics* (n. 6 above), 136, 147.

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present law affords . . . many facilities for the dishonest practices of such men, by whom innocent inventors are continually plundered.” By “such men,” the commissioner referred to “a certain class of patent agents, who seek to make profit by aiding dishonest men in annoying and robbing honest inventors of their just rights rather than by an honorable practice of their profession.”³⁷ With no barriers to entry nor any regulation of patent practitioners, there certainly was ample opportunity for shady practices, particularly because many agents charged only upon the successful issuance of a patent. This contingent fee structure created an incentive for an agent to draft the application in the form that would be most easily granted, rather than in that which would best protect the invention. The general public perception that “such men” were too common led Congress in 1861 to grant the patent commissioner his first authority to impose any kind of quality control on private patent practitioners. He could ban patent agents from appearing in a particular case or generally for “gross misconduct.”³⁸ While useful to quell the worst abuses, this statutory change did not provide any legislative guidance regarding the nature of expertise necessary or useful for the patent practitioner. The inventive public continued to have an array of choices.

The Legal Profession and Patent Practice

Patent office experience, of course, was not the only type of relevant experience for a patent practitioner. There were certainly competent, reputable, skilled antebellum practitioners who gained their experience through association with a former examiner and/or through simple experience as a practitioner. Such men, however, also frequently called upon their training as engineers; such training could indicate a shared background with patent office examiners, who were generally hired for their scientific and/or technological competence.³⁹ Cooper and another antebellum examiner, Henry

37. United States Patent Office, *Annual Report of the Commissioner of Patents for the Year 1859*, 35th Cong., 1st sess., Senate Executive Document 12 (Washington, D.C., 1860), 1:6.

38. “Act of March 2, 1861,” in *The Statutes at Large, Treaties and Proclamations of the United States of America* (Boston, 1863–69), 12:247, c. 88, 8; see also “Act of July 8, 1870,” in *The Statutes at Large and Proclamations of the United States of America* (Boston, 1871–73), 16:200, c. 230, 19.

39. What it meant to be an “engineer” was also under negotiation during the nineteenth century, as those who self-identified with the occupation sought to professionalize; see Calvert (n. 12 above). For a detailed discussion of the debates over the required expertise of examiners, and the qualifications of various antebellum examiners, see Post, “‘Liberalizers’ versus ‘Scientific Men’” (n. 6 above). Beginning in 1869, examiners were subject to examination in technical subjects; see William Wyman, “Samuel Sparks Fisher, Commissioner of Patents, 1868–1870,” *Journal of the Patent Office Society* 10 (1920): 492–93. See also United States Patent Office, *Annual Report of the Commissioner of*

Renwick, both had practical experience as engineers,⁴⁰ which was more common at the time than formal training. While the mere handful of self-identified U.S. engineers in the early nineteenth century had grown to several thousand by the 1850 census, during the antebellum era, engineers were most often defined by their field experience rather than by formal training or credentials.⁴¹ The ability to self-identify as an engineer was as unrestricted as the assumption of the role of patent practitioner.

What was conspicuously lacking during the antebellum period was any reference to legal training as part of the ideal skills of a patent practitioner, or much attempt by members of the bar to occupy that space.⁴² The mutual dependence—both hostile and friendly—of patent office examiners and patent practitioners was carried out largely independent of the legal profession during this period.

Although it claimed a larger membership than engineering, the legal profession was only slightly more organized in the first half of the nineteenth century than the unregulated field of patent practitioners.⁴³ In 1836, when the role of patent practitioner first began to develop, it was still rare for a lawyer to have attended a law school. Admission to the bar was generally based on law-office training and was made by oral examination, a procedure that lacked uniformity and rigor during the period. In fact, under the onslaught of Jacksonianism, earlier barriers to entry into the legal profession crumbled and the number of law schools declined.⁴⁴ Further, individual lawyers were slow to view patent solicitation as part of the practice of law.

Thomas Fessenden wrote the first American patent law treatise in 1810.⁴⁵ Although he was a lawyer, Fessenden directed his volume, *An Essay*

Patents for the Year 1869, 41st Cong., 2d sess., House of Representatives Executive Document 102 (Washington, D.C., 1870), 1:6–7.

40. Post, *Physics, Patents, and Politics*, 116, 118.

41. Ruth Oldenziel, *Making Technology Masculine: Men, Women, and Modern Machines in America, 1870–1945* (Amsterdam, 1999), 55; Calvert, 2.

42. W. P. N. Fitzgerald was apparently the only antebellum examiner with any legal training; see Post, *Physics, Patents, and Politics* (n. 6 above), 58. Note that Post has compiled a list of all antebellum examiners in “‘Liberalizers’ versus ‘Scientific Men.’”

43. Over 20,000 lawyers were counted in the 1850 census, versus 2,000 civil engineers; see Terence C. Halliday, “Six Score Years and Ten: Demographic Transition in the American Legal Profession, 1850–1980,” *Law & Society Review* 20 (1986): 53–78. What constitutes a “lawyer” has shifted over American history, although generally there has always been some standard for (and concept of) admission to the bar. See James Willard Hurst, *The Growth of American Law: The Law Makers* (Boston, 1950), 249, 253, 256; Friedman (n. 3 above), 226–41; Hobson (n. 12 above); and Johnson (n. 12 above).

44. On bar examinations, see Hurst, 256. For a discussion of the decline of legal professionalism from 1830–1840 in comparison to colonial and early republic legal practice, see Stevens (n. 12 above), 7–10.

45. The first patent law treatises were part of a broader trend in legal publication. Until the early nineteenth century, there were no collections of American law, and they accumulated only slowly. See Charles Warren, *A History of the American Bar* (Boston, 1911), 338, 460.

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on the *Law of Patents for New Inventions*, not to lawyers, but to “those men of inventive powers, who are unacquainted with the niceties of legal distinctions.”⁴⁶ Fessenden himself devoted little of his professional life to legal practice; his interest in and knowledge of patents stemmed from his participation in the patent system, first as co-owner of two patents that he struggled to commercialize, then as an inventor himself who received two patents.⁴⁷ Rather than suggesting that the inventor seek legal advice about patenting, Fessenden offered his readers a form of a patent petition, specification, and affidavit, and he also provided a generic example of a patent.⁴⁸ Like Thornton and other participants in the patent system before 1836, Fessenden assumed that the inventor himself would seek the patent, and he offered his forms to “save inventors, and others interested, from much unnecessary delay and fruitless expense, which occur in consequence of forwarding incorrect forms of attestation, specification, etc. to the Secretary’s office for the purpose of procuring patents.”⁴⁹

Lawyers had participated in the patent system as courtroom advocates on behalf of patentees, licensees, and alleged infringers from its earliest days, as described in the cases in Fessenden’s treatise, which was revised and expanded in 1822. But during the antebellum period, lawyers did so as trained advocates, not as patent specialists. With relatively few patent disputes in court, no lawyer could make a career out of specializing in these cases.⁵⁰ The 1809 case of *Perkins v. Odiorne* discussed in Fessenden’s first edition exemplified the state of patent practice.⁵¹ A manufacturer sought to invalidate a patent for cutting and heading nails, based on a claim of fraud in the procurement of the patent. The plaintiff brought his case to the federal court in Massachusetts, and each party was represented by two prominent, well-qualified lawyers.⁵² Yet, as Fessenden notes, all four lawyers were

46. Thomas G. Fessenden, *An Essay on the Law of Patents for New Inventions* (1810; repr., Clark, N.J., 2003), xxxviii. Fessenden revised his treatise in 1822 (*An Essay on the Law of Patents for New Inventions*, 2nd ed. [Boston, 1822]).

47. Porter Gale Perrin, *The Life and Works of Thomas Green Fessenden, 1771–1837* (Orono, Maine, 1925), 32, 48–49, 166.

48. Fessenden, 193–205 (1st ed.); 393–405 (2nd ed.).

49. *Ibid.*, xxxix (1st ed.).

50. There were only six reported U.S. patent decisions between 1800 and 1809, and a further thirty-seven cases between 1810 and 1819; see B. Zorina Khan, “Property Rights and Patent Litigation in Early Nineteenth-Century America,” *Journal of Economic History* 55 (1995): 63, 94–95. The situation did not change significantly in the following decades: Khan finds thirty-six patent cases between 1820 and 1829, and thirty-seven between 1830 and 1839. Note that Fessenden, in his 1810 edition, included four U.S. cases in his “Table of Cases Cited” (229), and fourteen cases in the 1822 edition (426–27), indicating that only a percentage of reported cases was readily available to litigators.

51. *Perkins v. Odiorne* (D. Mass., 1809), briefed in Fessenden, 175–76 (1st ed.).

52. Fessenden (n. 46 above), 176 (1st ed.). The plaintiff was represented by Charles Jackson and Harrison Gray Otis, both prominent Harvard-educated lawyers of early nineteenth-century Boston who were involved in all types of legal practice. (They attended Harvard College; Harvard Law School was not founded until 1817.) Jackson later

uncertain about what procedure the plaintiff should follow to plead his case,⁵³ there being neither written precedent nor past practice to follow. Like these lawyers, the lawyers who later used Fessenden's treatise would have considered themselves skilled advocates, applying their skills in a wide range of practice areas.

The courts, feeling their way through English precedents and the first two U.S. patent statutes, were sympathetic to the inventor-drafted patent. Indeed, Justice Joseph Story, the most influential judge in the early formation of patent law,⁵⁴ interpreted the Patent Act of 1793 to lend every advantage to the unskilled, perhaps even semi-literate, patent-drafter. Story held that the act had modified the English common-law doctrine which dictated that any misstep in the specification—describing too much or too little—was fatal to a patent. Instead, he interpreted the act to require a jury to find, first, that such a misstep had occurred, and second, that the misstep had been made “with intent to deceive the public”—a very high bar indeed.⁵⁵ Further, while the applicant had an obligation to distinguish what was new from things previously known in the patent specification, Story set the standard for making this distinction at a “reasonable certainty,” such that what was new could be understood “expressly or by necessary implication.”⁵⁶ Again, the faltering U.S. inventor, unlike his English counterpart, was given every chance. The practice of patent reissuance as developed by Thornton also aided inexperienced drafters, serving as a means of correcting mistakes.⁵⁷

became a justice of the Supreme Judicial Court of Massachusetts, authored a treatise on pleading, and was a member of many commissions to codify various areas of law, and Otis served as U.S. district attorney and later as U.S. senator (Warren [n. 45 above], 314, 465, 529, 531). These lawyers were opposed by Samuel Dexter, “the leader of the Massachusetts bar” of the day, who, as a member of the U.S. Supreme Court bar, had argued significant constitutional issues (Warren, 262, 272). Note that Fessenden identifies Jackson and Otis only by their surnames. I am making an educated guess of their identities based on Warren's description of the bar in the early nineteenth century. Fessenden states that Dexter was working with one Fairbanks, whom I have not been able to further identify.

53. “There existed considerable doubt and hesitancy relative to the most eligible mode of proceeding, as there are no American precedents, applicable to this case” (Fessenden, 176n [1st ed.]).

54. Story's influence was obvious to contemporaries, and Fessenden dedicated his second edition to him (Fessenden, front matter [2nd ed.]). Legal historians for the last century have agreed; see Warren, 458; Frank D. Prager, “The Influence of Mr. Justice Story to Patent Law,” *American Journal of Legal History* 17 (1973): 262–70; Oren Bracha, “Owning Ideas: A History of Anglo-American Intellectual Property” (S.J.D. diss., Harvard Law School, 2005), 421–22, 440, 442n159; and Khan, 73.

55. *Whittemore v. Cutter*, 29 F. Cas. 1120, 1122 (C.C.D. Mass., 1813) (note that this version uses the phrase “arose from an intention to deceive the public”). Case discussed (pp. 174–81) and quoted (p. 174) in Fessenden, 2nd ed. See also *Lowell v. Lewis*, 15 F. Cas. 1018 (C.C.D. Mass., 1817).

56. *Lowell v. Lewis*, 1020, quoted in Fessenden, 146 (2nd ed.).

57. Dood (n. 18 above).

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As the volume of patent cases increased, it became possible for a lawyer to develop a reputation in patent law through courtroom work, even if it was not the mainstay of his practice.⁵⁸ One such was Willard Phillips, a lawyer appearing “often” in patent cases before the United States Circuit Court in Boston in the first decade of the examination system, when a good proportion of patent cases were being heard by that court.⁵⁹ A graduate of Harvard College, Phillips had been admitted to the bar in 1818 and had served in the Massachusetts House of Representatives. Later, he served as a probate judge, and he ended his career as president of the New England Mutual Life Insurance Company.⁶⁰ Clearly, although Phillips had some expertise and experience with the law of patents, his legal career had a broad scope.

Phillips embarked upon the project of updating Fessenden and creating the second American patent law treatise. Finishing just as the Patent Act of 1836 was being finalized, Phillips stopped the presses on his volume, *The Law of Patents for Inventions*, in order to include the text of the new act.⁶¹ Unlike Fessenden’s earlier treatise for “men of inventive powers,” *The Law of Patents* was directed toward men like Phillips himself, members of the bar who represented clients in patent litigation, an indication of the growing numbers contemplating such legal practice. But Phillips also published a shortened version of the same text as *The Inventor’s Guide*, describing this volume as “embrac[ing] the laws and decisions, and principles and forms, that were considered to be of practical importance to Inventors and Patentees; omitting the legal proceedings and such other matters as were thought to be peculiarly useful to members of the profession of the law.”⁶² Like Fessenden’s treatises, *The Inventor’s Guide* included a discussion of the patent acts and of the case law, as well as sample forms. Phillips warned both the inventor and the legal community that “[i]t requires no little skill and knowledge of the subject of the invention, to draw up an adequate and apt specification. And skill and knowledge of the subject will not suffice for this purpose, without also knowledge of the law of patents generally.”⁶³

58. Khan (n. 50 above), 73. Hurst argues that specialized lawyers did not emerge until after 1870, and that the beginnings of the patent bar can be traced to about the same time, with major patent cases handled by general advocates before then; see Hurst (n. 43 above), 297–98. The examples of Phillips and Gifford (discussed below), as well as the unpublished work of Christopher Beauchamp, suggest that a specialized patent bar may have emerged earlier than Hurst suggested, perhaps as one of the first legal specialties.

59. Warren (n. 45 above), 457–58. Patent cases continued to be concentrated in the Northeast throughout the nineteenth century; see Christopher Beauchamp, “The Telephone Patents: Intellectual Property, Business, and the Law in the United States and Britain, 1876–1900” (Ph.D. diss., University of Cambridge, 2007), 72–73.

60. William T. Davis, *Bench and Bar of the Commonwealth of Massachusetts* (n.p., 1895), 1:281.

61. Willard Phillips, *The Law of Patents for Inventions; including the Remedies and Legal Proceedings in Relation to Patent Rights* (Boston, 1837), iv.

62. Willard Phillips, *The Inventor’s Guide, Comprising the Rules, Forms, and Proceedings, for Securing Patent Rights* (Boston, 1837), preface (n.p.).

63. Phillips, *The Law of Patents*, 232, and Phillips, *The Inventor’s Guide*, 238.

While acknowledging the relevance of both technical and legal expertise, Phillips found the necessary legal expertise well within the grasp of the inventor—presumably Phillips’s guide could supply precisely the requisite knowledge, which in combination with the inventor’s own knowledge of his technical subject, would allow the inventor to obtain a patent without further professional aid. Phillips, as a prominent lawyer, was not seeking business representing inventors before the patent office; he was simply making extra money from his efforts to assemble current patent law for his fellow courtroom lawyers by repackaging the information for inventors.

One of those fellow lawyers who might have used Phillips’s treatise as the “leading American law book on the subject of patents”⁶⁴ was New York attorney George Gifford, who started out practicing in general commercial law, admiralty, and wills and trusts. He had no interest in patent solicitation, but after trying a patent case in 1844, he switched his focus to patent litigation. In 1856, he became chief counsel for Elias Howe, inventor of a successful sewing machine.⁶⁵ The infringement suits in the sewing-machine industry were eventually resolved by one of the first patent pools, an arrangement of cross-licensing that allowed multiple firms to manufacture machines and distributed royalties on each sale among the patentees. Gifford orchestrated and refereed this pool.⁶⁶

Gifford’s transition from commercial litigator to patent litigator and then to chief counsel for a major manufacturing concern founded on patents neatly illustrates the increasing familiarity of the legal bar with patents, and its growing awareness that patent solicitation mattered. In the second half of the nineteenth century, legal practice began to shift in focus from advocacy to counseling, and also from general to specialized practices such as patents, personal injury, and criminal law.⁶⁷ Pioneered by elite urban lawyers, law firms became increasingly common, beginning as two- to six-member partnerships and growing larger by the early twentieth century. In addition to development of the law firm, legal practice also changed with the increasing prominence of in-house counsel—lawyers salaried by the corporations they advised.⁶⁸ The corporate lawyer—the counselor—was a creature of the late nineteenth century and replaced the old-fashioned courtroom advocate as the new model of the legal profession.⁶⁹ In certain businesses such as sewing-machine manufacture, telegraphy, and teleph-

64. Warren, 460.

65. Elias Howe, obituary, *New York Times*, 3 July 1883. For a brief history of Howe and his invention, see James Parton, *History of the Sewing Machine* (Boston, 1870).

66. Steven W. Usselman, “Patents Purloined: Railroads, Inventors, and the Diffusion of Innovation in 19th-Century America,” *Technology and Culture* 32 (1991): 1048; Floyd L. Vaughan, *The United States Patent Office: Legal and Economic Conflicts in American Patent History* (Norman, Okla., 1956), 39–41; and Howe, obituary.

67. Hurst (n. 43 above), 298–99, 302–3; Beauchamp (n. 59 above), 79–81.

68. On the rise of the law firm, see Hurst, 306–7; and Stevens (n. 12 above), 22. On the emergence of in-house counsel, see Friedman (n. 3 above), 490.

69. Hurst, 305.

ony, the legal advisor to a corporation needed a strong knowledge of patent law and came to perceive the drafting of patents as crucial to his client's business. By the turn of the century, corporations that developed the first industrial research laboratories also created patent departments, incorporating invention and patenting into their basic business strategy.⁷⁰ Like the sewing-machine manufacturers, other industries faced with a thicket of patents owned by a handful of firms created patent pools. All these new departments and arrangements called for lawyers. The accelerating pace of publication of legal literature related to patents attested to the increasing interest of the legal profession in patent matters. After 1836, instead of a new patent treatise every decade or so as had sufficed from 1790 until 1836, a new one was published every two to five years.⁷¹

These transformations in the nature and focus of legal practice were accompanied by a rising sense of professionalism among members of the bar and by a self-conscious effort to raise standards for bar admission. After the Civil War, the number of law schools increased. The bar attempted to strengthen itself through a national organization, the American Bar Association, which was formed in 1878. While it was initially a small organization, it pushed successfully for increased qualifications for entry to the bar, such that between 1870 and 1890, admission qualifications were strengthened.⁷² Before 1890, only four states required a written bar exam, and oral bar examinations, generally conducted by judges rather than by specialized bar examiners, were widely considered perfunctory. Legal education became more rigorous; for example, the proportion of law schools requiring three years of study rather than two gradually increased, and more began to require some college training for entrance.⁷³ In 1891, only one out of five

70. See, for example, Leonard S. Reich, *The Making of American Industrial Research: Science and Business at GE and Bell, 1876–1926* (Cambridge, 1985), 191–93. Carolyn Cooper cites one study that found that by 1885, 12 percent of all patents were issued to corporations; see Cooper, "Making Inventions Patent," *Technology and Culture* 32 (1991): 841n5. Edison similarly moved his patent attorney into an office at his Menlo Park laboratory in 1882; see Israel, *Edison* (n. 1 above), 232. By 1925, the Boston city directory included a category of individuals describing themselves as working in patent departments; see Sampson & Murdoch Co., *The Boston Directory for the Year Commencing July 1, 1925* (Boston, 1925).

71. These books included George Ticknor Curtis, *A Treatise on the Law of Patents for Useful Inventions in the United States of America* (Boston, 1849; subsequent editions published in 1854, 1867, and 1873); J. G. Moore, *Patent Office and Patent Laws: A Guide to Inventors and a Book of Reference for Judges, Lawyers, Magistrates and Others* (1855; rept., Philadelphia, 1860); William Edgar Simonds, *A Manual of Patent Law* (Hartford, 1874); William Edgar Simonds, *A Summary of the Law of Patents for Useful Inventions with Forms* (1883; rept., Littleton, Colo., 1995); Albert H. Walker, *Text-Book of the Patent Laws of the United States of America* (New York, 1883; subsequent editions published in 1886, 1889, and 1895); and William C. Robinson, *The Law of Patents for Useful Inventions*, 3 vols. (Boston, 1890).

72. Hurst, 287; and Stevens, 25–27. See also Johnson (n. 12 above), xiii, who emphasizes the shift to increased training after 1870.

73. In 1921, the American Bar Association was still trying to establish that two years of

newly admitted lawyers had been to law school.⁷⁴ Eventually, the law school replaced the office apprenticeship as the basis for legal training.⁷⁵ After 1900, states increasingly required not only successful performance on an examination for bar admission, but also proof of formal education such as a college degree and/or a law school degree.

Within this increasingly formalized profession, those who specialized in patent law began to create a self-conscious identity. The first patent law association was formed in Chicago in 1884. Such associations were soon formed in other cities, and eventually, the American Patent Law Association as a national entity was formed in 1897.⁷⁶ These new organizations used the terminology of the patent office, which referred to all practitioners as “patent attorneys,” and included both bar-admittees and lay practitioners in their membership. The inclusive membership reflected the late-nineteenth-century landscape of patent practitioners, which had been occupied by a heterogeneous mix, while the legal profession had concentrated its attention elsewhere. In the twentieth century, lawyers would become much less willing to classify themselves with lay patent practitioners.

Defining the Patent Practitioner

With the increasing institutionalization of the legal profession, lawyers became increasingly interested in defining the patent practitioner as a professional with legal training and membership in the bar. These newly self-aware patent lawyers might divide their practice between patent solicitation and patent litigation, or concentrate on one or the other; they might work as sole practitioners within a law firm or as in-house counsel, perhaps in a patent department within a corporation.⁷⁷ They all shared, however, a professional pride in their bar admittance as a credential that increasingly represented formal training and demonstration of knowledge. To the antebellum categories of “good” agents (i.e., patent office-trained) and “bad” agents (i.e., contingent-fee-seeking rascals), the lawyers now added the categories of lawyer and nonlawyer.⁷⁸ From the late nineteenth century through the

college should be a condition of admission to law school (Hurst [n. 43 above], 268). The shift from an apprenticeship model to a law school model is discussed in detail in Johnson.

74. Discussed in Friedman (n. 3 above), 463, 498–99.

75. Stevens (n. 12 above), 95; see also Hurst, 281–84.

76. John A. Diener, “Patent Law Associations: The American Patent Law Association and the National Council of Patent Law Associations,” *Journal of the Patent Law Society* 32 (1950): 828, 840.

77. Note that “patent department” as a way of designating employment in the area of patents first appeared in the Boston city directory in about 1925 (based on surveys of directories from every fifth year beginning in 1855), and in that year, nineteen individuals clustered at two addresses so described themselves (*The Boston Directory for 1925* [n. 70 above]).

78. The term “lawyer” is used here, and henceforth, in the present-day sense of an admittee to a state bar based on a demonstration of defined qualifications.

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first half of the twentieth century, the lawyers strove with increasing vigor to map these new categories onto the old, so that lawyers would be considered “good”—that is, reputable, well-trained agents—and nonlawyers would be considered “bad”—disreputable, poorly trained agents.

The nonlawyer patent practitioners were limited to proceedings within the patent office. Such proceedings included preparing an application for submission, negotiating with the patent examiners for its grant, and appearing before the administrative tribunals within the office. Nonlawyer practitioners might also draft licenses and prepare opinions on patentability and infringement, all of which fell into the gray area between legal practice and patent office practice. They might work as sole practitioners, or within firms comprised solely of lay practitioners, or as nonlawyer employees of a law firm. These nonlawyer practitioners were defined more negatively than positively, for they lacked both specific credentials for practice and a professional organization. Without a strong self-definition, they largely failed to respond to the late-nineteenth-century attacks on lay patent practitioners; instead, the lawyers defined the terms of the debate, using a broad brush to characterize all lay practitioners negatively.

The growing conflict between lawyers and nonlawyers with respect to patent practice was waged by pamphleteering. An early salvo on behalf of the bar was produced by the Connecticut attorney William Simonds, who was a model of the new patent lawyer. He attended Yale Law School, graduating in 1865, and then entered into practice in Hartford. Almost immediately, according to his own testimony, he began to specialize in patent law—both patent procurement and patent litigation. Six years after entering private practice, Simonds published his first piece of patent literature, which differed considerably from Fessenden’s and Phillips’s treatises. It was a slim volume, titled *Practical Suggestions on the Sale of Patents* (1871),⁷⁹ more self-advertisement than treatise.

As suggested by its title, this pamphlet set forth advice and forms related to assigning, selling, and licensing patents, all designed to aid the patentee in the commercialization of his invention. But Simonds also included a second section, titled “Hints Upon Invention,” in which he discussed how to invent and gave “[a] few words about professional solicitors of patents.” He wanted readers to understand that “it is advisable for almost all persons to avail themselves of the services of a faithful solicitor, in . . . securing patents.” He ended with a three-page discussion of his own qualifications, describing his attainment of scientific and legal training, six years of experience, rate of success, and personal completion of all papers by his own hand.⁸⁰ Gone was any suggestion of self-help in patent procurement, or any assumption that patent procurement was not the practice of law.

79. William Edgar Simonds, *Practical Suggestions on the Sale of Patents* (Hartford, 1871).

80. *Ibid.*, 74 (quote), 102–4.

When Simonds went on to publish two versions of a traditional patent treatise, one for inventors and the other for legal professionals, he took care in the former volume to alert inventors to variations in the emerging profession of patent solicitors, some of whom he characterized as unqualified.⁸¹ He quoted the annual report of the patent commissioner to Congress for 1869, which warned of “establishments . . . organized for the purpose of procuring patents, [which] are apt to become more solicitous about the number than the quality of those which they obtain.” According to Commissioner Samuel Fisher, problematic agencies included “those who solicit patents . . . without special training or qualifications, [and] adopt this business as an incident to a claim agency, and press for patents as they press for back pay and pensions.” Simonds made certain his readers knew that the commissioner urged inventors to seek out and use “[h]onest and skillful solicitors, with a thorough knowledge of the practice of the office, and of patent law . . . who are able and willing to advise their clients as to the exact value of patents they can obtain for them.”⁸² These skillful solicitors, according to the commissioner, had knowledge of office practice and of law.

Simonds and Commissioner Fisher were responding to the outpouring of patent advice pamphlets by patent agencies. Fisher was himself a member of the bar of Ohio, having studied law in an office before the Civil War and practiced in the area of patent law both before and after his service as commissioner.⁸³ The employees of the agencies that concerned Simonds and Fisher were pejoratively called “advertising attorneys” by later members of the bar who linked the tendency to advertise (a generally prohibited activity for attorneys-at-law throughout most of the twentieth century) to the origins of such practitioners in pension-claim agencies.⁸⁴ The post-Civil War explosion of the population entitled to veteran pensions created a boom in Washington-based agents, who advertised that they would obtain pensions for applicants on a contingency-fee basis.⁸⁵ It was alleged by

81. Simonds, *Manual of Patent Law* (n. 71 above), 74. Simonds followed the publication of his *Manual of Patent Law*, which was written for inventors (v–vi), with his *Summary of the Law of Patents* (n. 71 above), an expanded version designed for lawyers (preface [n.p.]).

82. Simonds, *Manual of Patent Law*, 74–75 (quoting *Annual Report* [n. 39 above], 9). Note that Simonds went on to become Commissioner of Patents from 1891 to 1893; see Lee R. Schermerhorn, comp., “Biographical Sketches of the Commissioners of Patents,” in *Outline of the History of the United States Patent Office* (n. 15 above), 194–95.

83. *In Memoriam: Samuel S. Fisher* (Cincinnati, 1874), 16–17, 21–24.

84. Dienner (n. 76 above), 834–38. The American Bar Association prohibited advertising in its *Canons of Professional Ethics* (Chicago, 1908). This ban was in essence lifted by the Supreme Court in 1977, when it held that state bans on attorney advertising violated the First Amendment; see *Bates v. State Bar of Arizona*, 433 U.S. 350 (1977).

85. For a discussion of Civil War–related pensions and the practices of postwar pension attorneys, see Theda Skocpol, *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States* (Cambridge, 1992), 106–11, 116–17. Such pension “attorneys,” like nineteenth-century patent “attorneys,” were not necessarily members of the bar.

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the patent office and by legally credentialed patent practitioners that some of these agents felt free also to advertise their services as patent agents, based solely on their ability to wheedle a government grant out of a federal agency. These practitioners had no technical training, no experience with the patent office, and no legal training. The purported infusion of such men into patent practice was alleged to cause a flood of meritless patent applications that clogged the patent office and fleeced naïve inventors, who, if they obtained a patent at all by such help, received only a narrow, weak, or otherwise commercially dubious grant. The most notorious example of the self-promoting agent taking money from naïve inventors for worthless inventions was John Wedderburn, whose disbarment from the patent office was finally decided in 1898.⁸⁶

This separation of the skilled, knowledgeable, credentialed lawyer from the unskilled “advertising attorney” did not acknowledge the tradition of technically trained and experienced patent practitioners. The legal profession clung to this characterization of lay patent practitioners, developing a narrative that alleged that lay patent agents had grown out of such pension agents, and using this narrative well into the twentieth century to argue for the inappropriateness of lay practitioners.⁸⁷ The coherence and dominance of this narrative through the late nineteenth and early twentieth centuries were maintained in part because lay patent practitioners did not emulate the legal profession in organizing themselves and creating their own narratives. This lack of organization can be explained in part by the absence of any universal credential linking this heterogeneous group.

As discussed previously, almost immediately after the passage of the Patent Act of 1836, patent office experience became a route to private patent practice, with direct participation in the patent office an obvious source of expertise to attract clients. But this source of expertise was soon joined by others. While experience with other federal bureaucracies came to be portrayed as insufficient credentialing for a reputable practitioner, as late as 1854, one patent practitioner advertised himself as “late of the census office” when offering his services to obtain European and Canadian patents for inventors.⁸⁸ More significant and lasting were claims of technical expertise, which were particularly obvious in electrical technologies. Thus ad-

86. *United States of America ex rel. Wedderburn v. Bliss*, 12 App. D.C. 485 (1898). Diener, 836–37, reviews the Wedderburn case as the nadir of the advertising attorney problem. See also Deborah J. Merritt, “Hypatia in the Patent Office: Women Inventors and the Law, 1865–1900,” *American Journal of Legal History* 35 (1991): 299. For examples of this discourse persisting into the twentieth century, see “Report of the Committee on Patent Law Revision of the American Bar Association,” presented at the Annual Meeting, Milwaukee, August 1934, and reprinted in *Journal of the Patent Office Society* 16 (1934): 732–33; and “Proceedings of the Annual Meeting of the State Bar Association of North Dakota,” 23 June 1960, printed in *North Dakota Law Review* 36 (1960): 285–86.

87. See, for example, Diener.

88. Advertisement by Jas. C. G. Kenney, *Journal of the Franklin Institute* (1854), back matter (n.p.).

vertisements for patent practitioners from the 1850s onward contained references to practitioners' credentials as engineers.⁸⁹ Thomas Edison, as we have seen, came to rely upon patent practitioners who had experience in the technical areas in which he was inventing.⁹⁰

These technically experienced practitioners did have one increasing source of professional strength. In the post-Civil War decades, at the same time that legal education was being more formalized, engineering education was also becoming a more significant consideration for the engineering community. "Schooled engineers" began to replace the field-trained, nonacademic engineers of the first half of the nineteenth century, particularly after about 1880.⁹¹ An academic degree became a shared credential demonstrating expertise in a particular branch of engineering. Like lawyers, engineers established professional associations and sought to form their historically diffuse profession with a more coherent set of practices, looking to medicine and law as they considered credentialing boards and specific academic requirements.⁹² While engineers looked to law as an example, they did not succeed in professionalizing their field to the same extent. This failure, often noted in the history of engineering, limited the ability of engineers concerned with patents to counter the legal campaign to occupy the space of patent practitioner.⁹³

The organizations that perhaps did the most to present the case for the patent practitioner as having specialized (although not necessarily legal) credentials were not any of the new engineering associations, but rather the linked entities of Munn & Co. and the *Scientific American*. Together, these two organizations were responsible not only for a large proportion of issued patents, but also for a large percentage of the late-nineteenth-century popular patent literature. This literature included the weekly itself, which incessantly flogged inventions and inventors, as well as how-to pamphlets about invention and patenting.⁹⁴ Its output included *Hints to Inventors* and

89. Examples are found in the *Journal of the Franklin Institute* (advertisements for Stetson [1856] and Lane [1859]) and in the Boston city directory (for Batchelder [1855] and Goody [1905, 1925]).

90. For some telegraph patents, Edison used Lemuel Serrell, who had substantial expertise in telegraphy (Israel, *Edison* [n. 1 above], 56, 80). Attempts to use Munn & Co., whose agents lacked such expertise, were not successful (Israel, *Edison*, 80).

91. Layton (n. 11 above), 4; Peter Lundgreen, "Engineering Education in Europe and the U.S.A., 1750–1930: The Rise of Dominance of School Culture and the Engineering Profession," *Annals of Science* 47 (1990): 59–62. As noted by Layton, the rise of the college-educated engineer was a slow process, and as late as 1945, almost half of all engineers lacked college degrees. See also Oldenziel (n. 41 above), 62.

92. Lundgreen, 35–37. Engineers revived the moribund American Society of Civil Engineers in 1867 and formed the American Institute of Mining Engineers in 1871 and the American Society of Mechanical Engineers in 1880; see Calvert (n. 12 above), 40, and Layton, 29.

93. Oldenziel, 70; Layton, viii; Meiksins (n. 12 above), 61–62.

94. For the role of *Scientific American* in public discussions of patenting, see Post, *Physics, Patents, and Politics* (n. 6 above), 110–32.

United States Patent Law, issued in multiple editions from at least 1861 onward. These publications were short and small—the 1861 *Hints to Inventors* was sixteen pages long and measured about two by four inches—and they were cheap, or even free.⁹⁵ The 1861 version explained the process of obtaining a patent in simple, chatty language, all in terms of the services and value provided by the Munn patent agency. This pamphlet argued that “[n]o inventor can possibly have facilities or influence superior to our own; for more than one-third of the entire business of the Patent Office passes through our hands.”⁹⁶ Munn & Co. also had a warning to inventors that differed slightly from that given by Simonds and the patent commissioner: “Applicants for extensions should always place the management of their cases, from first to last, in the hands of faithful and experienced patent attorneys. *Ordinary lawyers or agents*, who have had no experience in extension cases, should never undertake them.”⁹⁷ While Munn & Co. agreed with Simonds and Commissioner Fisher that claims agents were not suitably expert, mere legal expertise, as represented by bar admittance, was also no assurance of patent expertise.

During the second half of the nineteenth century, despite Munn’s efforts, the emphasis on the legal aspects of the patent system grew ever stronger. While antebellum patent commissioners continually stressed the need for patent examiners to possess specialized scientific and technological expertise, later commissioners also included legal expertise among the desirable attributes of their employees.⁹⁸ These commissioners themselves—political appointees who did not necessarily have any experience in patents or engineering—usually were members of a state bar.⁹⁹ If examin-

95. Munn & Co., *Hints to Inventors, Concerning the Procuring of Patents, Either American or Foreign, with Suggestions and Valuable Information to Patentees* (New York, 1861). This pamphlet was followed by *United States Patent Law: Instructions How to Obtain Letters Patent for New Inventions* (New York, 1863, 1867).

96. Munn & Co., *Hints to Inventors*, 7.

97. *Ibid.*, 16, emphasis added. At this time, “patent attorney” continued to refer both to those admitted to the bar and to those without such a legal credential.

98. See, for example, *Annual Report of the Commissioner of Patents for the Year 1845*, 29th Cong., 1st sess., House of Representatives Document 140 (Washington, D.C., 1846), 4 (“The office of examiner of patents . . . requires the highest attainments in the sciences, and a soundly discriminating mind. . . . An examiner should be a living encyclopedia of science, if the expression may be used”). The emphasis on scientific qualifications among the antebellum examiners is discussed in Post, “‘Liberalizers’ versus ‘Scientific Men’” (n. 6 above), 24–54. For post–Civil War examples, see *Annual Report of the Commissioner of Patents for the Year 1868*, 40th Cong., 3rd sess., House of Representatives Executive Document 52 (Washington, D.C., 1869), 5 (“Questions of law, of science, and of mechanics”); *Annual Report* (1869) (n. 39 above), 6 (“Good knowledge of patent law”); and *Annual Report of the Commissioner of Patents for the Year 1921* (Washington, D.C., 1922), iii (bemoaning the loss of experienced examiners who were “not only scientifically trained, but . . . members of the bar”).

99. The biographies of more than one dozen commissioners and acting commissioners who served between 1865 and the 1880s are described in Dobyns (n. 16 above), 171–96. Some were former examiners, others former judges and congressmen.

ers needed legal expertise to participate in the patent system, then patent practitioners, as the interfaces between inventors and examiners, probably needed such expertise as well.

Part of the legal profession's campaign to raise its standards and solidify its social role was the clarification of what activities constituted legal practice. While virtually no one in the antebellum period—including lawyers such as Fessenden and Phillips—thought of patent solicitation as legal practice even though it might be performed by members of the bar, the legally certified patent lawyers of the late nineteenth century were ready to challenge that assumption and to expand the notion of legal practice in the patent system from activities centering around the courtroom to interactions with the patent office. Further, lawyers also began to lay claim to that gray area between the courtroom and the patent office where licenses, assignments, and patent opinions were drafted. State bar associations, in charge of admitting legal practitioners and disciplining miscreants, were more than happy to support this expansion, which by the early twentieth century harmonized with other campaigns to encompass the preparation of legally binding documents—including real estate contracts, for example—within the practice of law.¹⁰⁰

The organized bar also worked to secure the passage of regulations and legislation that would regulate and restrict patent practitioners. If lay practitioners could not be eliminated, the goal was to at least stigmatize and marginalize them as much as possible. This campaign was most successful at tightening access to patent office practice through regulatory change. Fisher, the same commissioner who tightened standards for patent office employees through examinations, announced that he would limit agents to those of “intelligence and good moral character.”¹⁰¹ This power to exclude from entry, as well as to expel, was made more formal by the addition of a registration requirement in 1897 by Commissioner Benjamin Butterworth.¹⁰² The new roster included all those admitted to practice before the

100. The first bar association committee on the unauthorized practice of law was established in 1914, and by 1938, there were 430 such committees; see Quintin Johnstone, “The Unauthorized Practice Controversy: A Struggle among Power Groups,” *University of Kansas Law Review* 4 (1955–56): 2n8. See also Johnstone's discussion of early-twentieth-century cases brought by bar associations regarding the unauthorized practice of law, in *ibid.*, 4n7, and Hurst (n. 43 above), 319–22.

101. *Rules and Directions for Practice Before the Patent Office* (1869), cited in *Sperry v. Florida*, 373 U.S. 379, 388–89 (1963).

102. *Rules of Practice Before the Patent Office*, sec. 17 (December 1, 1897). There is some indication that registration itself was used to weed out the wrong sort of “advertising attorneys”; see “Lawyers in Trouble,” *American Lawyer* 7 (1899): 164. Butterworth, a congressman from Ohio and a member of the Ohio bar, was first made commissioner in 1883 after he lost a reelection bid. In 1885, he returned to Congress and served until 1891, eventually chairing the House Committee on Patents. He then returned to the patent office as commissioner. See Dobyns, 195, and U.S. Congress, *Biographical Directory of the United States Congress, 1774–Present* (Washington, D.C., ongoing), available online at <http://bioguide.congress.gov/biosearch/biosearch.asp> (accessed 8 April 2009).

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patent office as of that date. The patent office persisted in calling this heterogeneous group “patent attorneys,” which was an ongoing annoyance to attorneys-at-law. Beginning in 1918, those registered had to seek prior approval of all advertising from the commissioner, a regulation mimicking the restrictions on advertising that the organized bar had imposed on its members in 1908 in order to elevate their professional status.¹⁰³ Congress ratified these administrative changes in 1922 in a revision to the patent law that for the first time recognized the distinction between patent agents and patent attorneys and made explicit the commissioner’s powers to regulate those admitted to practice in the office, including the requirement that they show “necessary qualifications.”¹⁰⁴ Finally, in 1938, patent attorneys were registered separately from patent agents for the first time, and except for those already registered, only attorneys-at-law registered with the patent office were allowed to call themselves “patent attorneys”;¹⁰⁵ all other registered patent practitioners were “patent agents.” Both in 1922 and 1938, the patent commissioner resisted legislative change that would have eliminated lay patent practitioners, relying instead on the tightened regulation to address the concerns Commissioner Fisher had expressed.¹⁰⁶

Still, patent practitioners of all types wondered if the lay practitioner, as an increasingly marginalized remnant of “the older line of attorneys,” was moving toward extinction.¹⁰⁷ Beginning in 1944, the American Patent Law Association closed ranks with the patent section of the American Bar Association (which had always excluded nonlawyers) and, in a change of policy, began to exclude nonlawyers from membership.¹⁰⁸ Nevertheless, Congress ratified the existence of lay practitioners in 1946 with the Administrative Procedure Act, and again in 1952 when the patent law was revised and reenacted.¹⁰⁹ Despite these setbacks, the bar did not give up its efforts to elim-

103. *Official Gazette of the United States Patent Office* 252 (1918): 967.

104. Act of February 18, 1922, *The Statutes at Large of the United States of America* (Washington, D.C., 1923), 42:390.

105. *Official Gazette of the United States Patent Office* 495 (1938): 715; 37 *Code of Federal Regulations*, sec. 1.34(c).

106. Commissioner Robertson defended lay practitioners to Congress before passage of the 1922 act as “[s]ome of our best practitioners” (House Committee on Patents, *Hearings on H.R. 210*, 67th Cong., 1st Sess., 1921, 15–16). His successor also defended lay practitioners when discussing proposals to limit the term “patent attorney” to bar admittees (House Committee on Patents, *Hearings on H.R. 5527*, 70th Cong., 1st Sess., 1927–28, 15).

107. *Hearings on H.R. 210*, 15–16.

108. Dienner (n. 76 above), 833n2.

109. Rather than banning nonlawyer practitioners, the Administrative Procedure Act stated: “Nothing herein shall be construed either to grant or to deny to any person who is not a lawyer the right to appear for or represent others before any agency or in any agency proceeding.” “Administrative Procedure Act” (June 22, 1946), *United States Statutes at Large* (Washington, D.C., 1947), 60:240. “The Patent Act of July 19, 1952,” *The Statutes at Large of the United States of America* (Washington, D.C., 1953), 66:792 and 795,

inate lay patent practitioners. In a new series of attacks on patent agents, state bar associations brought suits in state courts, charging patent agents with the unauthorized practice of law in violation of state regulations requiring bar admission for practice within a state's territory.¹¹⁰ The organized bar achieved its greatest triumph in Florida in 1961.

The Florida state bar association had sued to prevent a patent agent, Alexander Sperry, from performing patent solicitation work within the state of Florida, claiming that he was simply a businessman engaged in the unauthorized practice of law. Sperry maintained an office in Tampa, which identified him as a "patent attorney" on the door, and he advertised himself as such in the telephone directory. Sperry had been admitted to practice before the patent office in 1928 and so was grandfathered under the 1938 rule, which prospectively limited the designation "patent attorney" to bar admittees. Still, the Florida supreme court agreed with the state bar association that everything Sperry did to advise clients, prepare documents, and respond to the patent office in the preparation and prosecution of patent applications amounted to the practice of law. Since his office was in Florida, Sperry was therefore required to be admitted to the Florida bar. The logical result of this decision would be to confine all patent agents to practice within the District of Columbia, which specifically allowed the practice before federal agencies by those not admitted to its bar, and to preclude even bar members from engaging in patent prosecution outside of the state(s) in which they were admitted.¹¹¹

This test case was then appealed to the United States Supreme Court,

sec. 31, retained the ability of the commissioner to regulate "agents, attorneys, or other persons." In between these two acts, in 1948, there was a proposal to amend the patent office regulation that stated that registration only entitles registrants to practice before the patent office (37 *Code of Federal Regulations*, sec. 1.341), to state that "registration . . . shall not be construed as authorizing persons not members of the bar to practice law or to perform any acts regarded as practicing law in the jurisdiction where performed," and this proposal was rejected because it would have given states the power to do exactly what Florida later attempted to do (as discussed below). See "Proposed Revision of Patent Rules," 611 *Official Gazette of the Patent Office*, supp. 8, and testimony from hearing on proposed change quoted in *Sperry v. Florida*, 373 U.S. 379, 387n8 (1963). This battle had also been fought over the amendments to the patent law eventually passed in the Act of 18 February 1922, with the patent commissioner defending the registration of lay practitioners. See *Sperry v. Florida*, 390–95 (discussing repeated failed attempts to use statutory changes to eliminate lay practitioners).

110. This campaign also involved lay practitioners in other federal agencies, such as the Interstate Commerce Commission and the Tax Court. The cases are cited in *Sperry v. Florida*, 383n2, and in Johnstone (n. 100 above), 4n7. The Association of Interstate Commerce Commission Practitioners filed an *amicus* brief in support of *Sperry* and listed fourteen cases between 1931 and 1962 in which state bars had attempted to exclude lay practitioners before federal agencies. See "Brief of *Amicus Curiae*, Association of Interstate Commerce Commission Practitioners," 4n7–8.

111. *State of Florida ex. rel. The Florida Bar v. Sperry*, 140 So. 2d 587 (Fla., 1962).

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where the American Bar Association and the American Patent Law Association filed *amicus curiae* briefs in support of the Florida bar, urging the court to allow states to prohibit nonlawyers from practicing before federal administrative agencies from within their boundaries.¹¹² Lay patent practitioners, however, organized to push back. Although they had been excluded from the American Patent Law Association, they were still allowed to be members of the Florida Patent Law Association, which also included numerous practitioners admitted to state bars outside of Florida. These practitioners told the Supreme Court that

[t]he task of understanding an invention and properly describing it in an application for Letters Patent, and the prosecution through the Patent Office comprises at least 80% technical engineering and scientific skill and knowledge, and knowledge of the Rules of Practice of the United States Patent Office, and perhaps 20% of general legal knowledge.¹¹³

This claim for the superior need for technical skill over legal knowledge became most persuasive when coupled with an argument based on geography and scarcity. The Florida Patent Law Association emphasized the need to communicate with the client in face-to-face meetings to prepare the application, and the association cited the lack of sufficient members of the Florida bar who were registered patent attorneys to meet the needs of Florida inventors. The United States, in another *amicus* brief supporting Sperry, took this argument about inventors' access to practitioners to a national level: "The crucial fact is that Patent Office practice is largely conducted outside of the District of Columbia."¹¹⁴ The attorney general provided evidence from the patent office register that only 55 percent of registered patent attorneys and agents were members of the bar practicing in their state of admission. If the Florida holding were to stand, almost half of all patent practitioners in the United States would not be able to practice. Many inventors would be unable to hire a local practitioner and would therefore be forced to prepare their applications by mail.¹¹⁵

In holding unanimously for Sperry, the Supreme Court reviewed the history of patent agency, as well as the various unsuccessful attempts to limit patent practice to attorneys-at-law. It concluded that lay persons had always practiced before the patent office, and it rejected the arguments of the bar associations that the public was damaged by the persistence of this class of patent practitioners. While nonlawyer practitioners may have been responsible "for the deceptive advertising and victimization of inventors

112. *Sperry v. Florida*, 373 U.S. 379 (1963).

113. *Amicus* brief of Florida Patent Law Association, 5.

114. Brief for the United States as *Amicus Curiae*, 12.

115. *Ibid.*, 3 (cited in *Sperry v. Florida*, 401).

which long plagued the Patent Office,” the court found that this situation had been remedied by tightened regulations since 1899.¹¹⁶ It was instead the threatened decimation in the ranks of practitioners—since patent practitioners were admittedly so crucial to obtaining patents—that would be a blow to inventors. The Supreme Court thus gave the country a new narrative of the patent agent, replacing the negative one the bar had attempted to create. The patent practitioner was vital and rare, a creature of specialized expertise—expertise that did not come from law school training and bar admittance, but, as the Florida Patent Law Association claimed, from “technical engineering and scientific skill and knowledge.” The Supreme Court’s decision ratified the dual nature of patent solicitation as an occupation appropriate for both lawyers and laymen.

The Patent System and the Patent Practitioner as Legal-Technical Hybrid

In its opinion, the United States Supreme Court turned attention from the professional strategizing of lawyers, and the defensive maneuvering of lay practitioners, back to the inventor. The focus on inventor access to qualified patent practitioners was both practical and an echo of the broad democratic values espoused by the nineteenth-century patent commissioners who had sought to keep patents accessible without the need for any reliance on practitioners. The opinion implicitly recognized the Florida Patent Law Association’s 80/20 formulation, which in turn reflected the regulatory scheme in place in 1961. The regulations required academic credentials to demonstrate “technical engineering and scientific skill and knowledge,” along with a written examination to show the necessary knowledge of the rules of practice. The expertise question had been settled, first by the regulations set by patent commissioners, then by congressional ratification, and finally by the Supreme Court’s approval. The emphasis is on technology rather than law.

What matters is not a split between legal professionals and lay practitioners, therefore, but between those with technical expertise and those without it. Both in 1961 and today, the most common sort of patent practitioner is one who has both academic technical training and legal training, but the only nonnegotiable credential is a bachelor’s degree or the equivalent in a recognized field of science or engineering.¹¹⁷ Evidence of technical expertise enables applicants to clear the first hurdle before being tested on

116. *Sperry v. Florida*, 388, 390.

117. Reflecting the lack of formal definition of “scientist” or “engineer” (particularly when compared to “lawyer”), the door of the patent office does remain open to proving the equivalent. See the discussion in footnote 13.

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patent law and procedure. Through this examination, the earliest type of expertise for patent practice—direct familiarity with patent law and procedure—is also now a formal requirement. In the late twentieth and early twenty-first centuries, applicants typically have gained this familiarity through preparatory courses and/or office apprenticeships and then demonstrate their competency through examinations rather than patent office work. The revolving door continues to spin for examiners, however, and those with sufficient years of experience within the patent office may waive the written examination for patent office registration.¹¹⁸ Today, no one can drift into patent law from general legal practice, as George Gifford did during the 1840s and 1850s. The modern patent practitioner, like the system in which she/he is embedded, is a legal-technical hybrid. No longer free to pick and choose what expertise to proclaim to the inventing public, the practitioner is certified by the patent office itself to have particular types of both technical and legal expertise. This hybrid practitioner is thus a node in the network that embeds inventions in law, a professional who facilitates the passage of a patent from the technical to the legal realm.

118. 37 *Code of Federal Regulations*, sec. 11.7(d); and “General Requirements” (n. 13 above), 3.