

2012

Taking, Tort, or Crown Right? The Confused Early History of Government Patent Policy

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THE JOHN MARSHALL REVIEW OF INTELLECTUAL PROPERTY LAW



TAKING, TORT, OR CROWN RIGHT?: THE CONFUSED EARLY HISTORY OF GOVERNMENT PATENT POLICY

SEAN M. O'CONNOR

ABSTRACT

From the early days of the Republic, Congress and the federal courts grappled with the government's rights to own or use patents it issued. Courts rejected the British "Crown Rights" rule that allowed the sovereign to practice whatever patents it issued. Instead, the federal government was conceptualized as a legal person on par with any other persons with regard to issued patents. But, this simple rule presented challenges as complexities arose in three intertwined patent rights scenarios. The first involved inventions by government employees. The second revolved around government and government contractor use of patents held by private citizens. And the third involved inventions by federal contractors and their employees arising under federal funding. While these three scenarios seem quite distinct today, nineteenth and early twentieth century courts often treated them as overlapping. The confusion was not resolved until the mid-twentieth century when a combination of executive branch and Congressional legislation set the roots of current government patent policy. This Article reviews the history in detail and illuminates current government patent policy debate occurring through such seemingly diverse cases as *Stanford v. Roche* and *Zoltek Corp. v. United States*.

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GOVERNMENT PATENT POLICY

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INTRODUCTION AND FIRST PRINCIPLES	146
I. THE TORT, TAKING, AND CROWN RIGHT DEBATES IN THE EARLY U.S. PATENT SYSTEM	153
II. MOVING TOWARDS RESOLUTION: EARLY TWENTIETH CENTURY STATUTORY AND CASE LAW DEVELOPMENTS	180
III. POST-WAR DEVELOPMENT OF MODERN GOVERNMENT PATENT POLICY	197
CONCLUSION	203

TAKING, TORT, OR CROWN RIGHT?: THE CONFUSED EARLY HISTORY OF GOVERNMENT PATENT POLICY

SEAN M. O'CONNOR*

INTRODUCTION AND FIRST PRINCIPLES

Outside of the federal government's commonly understood role as an *issuer* of patents, it is also a significant *owner* of patents. Further, it must frequently *practice* (or have practiced on its behalf) inventions claimed in private citizens' patents. On one level, it seems trivial that the government itself can own patents. On another level, this is an odd proposition because, as the sovereign that is actually granting the patents in the first place, why does the government need to hold patents itself? After all, it should be able to simply exercise its eminent domain powers to practice any patent it wishes.¹ In the alternative, it should be able to practice patents owned by others with impunity based on principles of sovereign immunity.² However, because the patent grant has traditionally been viewed as not falling cleanly within the framework of either personal or real property,³ the legal implications of unauthorized government use of privately held patents have been likewise murky.

Accordingly, the first consideration must be the nature of the patent grant in the United States to determine exactly what the government may be taking when it engages in unauthorized practice of a private party's patent. In particular, why would some limited, non-authorized government use of a citizen's patented invention rise to the level of a taking when no property seems to have been taken? After all, when one citizen engages in the unauthorized use of another citizen's patented invention, this is deemed infringement, an action historically sounding in tort, not

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¹ See, e.g., *Crozier v. Fried. Krupp Aktiengesellschaft*, 224 U.S. 290, 308 (1912). (noting that, in light of the United States government's eminent domain power, an "injunction could rightfully only have been made to operate until the United States had appropriated the right to use the patented inventions").

² See, e.g., *Zoltek Corp. v. United States*, 672 F.3d 1309, 1318 (Fed. Cir. 2012) (explaining that 28 U.S.C. § 1492(a) (2012) partially abrogates the U.S. government's sovereign immunity for particular acts of patent infringement).

³ DONALD S. CHISUM ET AL., *PRINCIPLES OF PATENT LAW: CASES AND MATERIALS* 5–6 (Robert C. Clark, et al. eds., 3d ed. 2004) (explaining that patent and other intellectual property rights differ from traditional forms of property in the sense that knowledge and ideas are non-excludable and non-exhaustible).

property.⁴ No misappropriation of property has occurred under the law, but rather an infringement of rights.

This puzzle can be resolved by examining the exact nature of the patent grant in the United States. Crucially, the core right granted with the patent is the “negative” right to exclude others from practicing the patentee’s invention as claimed in the patent.⁵ In detail, the patentee obtains:

the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process . . .⁶

This is a negative right because it does not give the patentee any positive right to practice the patented technology herself.⁷ This makes sense for two reasons. First, we may not want the Patent and Trademark Office (“PTO”) to issue positive rights to practice patented technologies because this could conflict with other government interests in regulating technologies, such as the requirement that the Food and Drug Administration (“FDA”) approve new pharmaceuticals before they may be distributed in the market.⁸ Second, the grant of a positive right to practice an invention would be somewhat redundant.⁹

⁴ Schillinger v. United States, 155 U.S. 163, 168–69 (1894) (finding that a wrongful use of a patent action sounded in tort, and thus was not within the jurisdiction of the Court of Claims); Carbice Corp. of Am. v. Am. Patents Dev. Corp., 283 U.S. 27 33 (1931); Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1579 (Fed. Cir. 1986).

⁵ 35 U.S.C. § 154(a)(1) (2012); WiAV Solutions LLC v. Motorola, Inc., 631 F.3d 1257, 1264 (Fed. Cir. 2011) (noting that under the Patent Act of 1952, “a patent grants the patentee the right to exclude others”).

⁶ 35 U.S.C. § 154(a)(1).

⁷ See CHISUM ET AL., *supra* note 3, at 4.

⁸ See, e.g., Apotex, Inc. v. Thompson, 347 F.3d 1335, 1337 (Fed. Cir. 2003).

⁹ See CHISUM ET AL., *supra* note 3, at 5. Consider the explanation of the patent right to exclude given by Giles S. Rich—later Judge Rich—while lecturing at Columbia Law School:

Postulate that there is not now and never was a patent system. A person makes an invention. Assuming there is no law prohibiting it, can he make it? Can he use it? Can he sell it? Yes. *Without* a patent, he *has* all these rights. Now let’s write down (on the blackboard) what the statute says the patent grants the inventor:

A. THE EXCLUSIVE RIGHT TO MAKE, USE, AND SELL

and write under it what rights he had without a patent:

B. THE RIGHT TO MAKE, USE, AND SELL

Now, let’s subtract **B** from **A** and see what the *patent* gave him _____

EXCLUSIVE

Thus, the “property” established by the issued patent is not the invention itself, but rather the exclusivity right.¹⁰ Contrast this with personal or real property rights to use, as well as exclude others from using, the property.¹¹ While a “right to exclude” on its own may seem to be an odd sort of thing to consider property, consider that options on stock or commodities are property as well—they can be bought and sold—even though they are merely rights to take certain actions at a later date. Consequently, the patent *res* should be thought of as a legal right that can be bought and sold like other legal rights such as options or futures contracts.

At the same time, this right to exclude represents the only real commercial value that an inventor can extract from her invention. This is a different proposition from the obvious point that monopolies are almost always valuable to their holders. The standard explanation for why intellectual property is different, and should be treated differently from other forms of property is summed up with the oft-cited Jefferson quote that “[h]e who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me.”¹² This, however, seems to be a peculiar and overly limited view of inventions. Assuming the first person in the Jefferson quote is the inventor, there *is* a loss to the inventor when others use her invention. While it is true that, on one level, many persons can simultaneously use and benefit from an invention, on another level, none has any more of an advantage over the others than he did before the use of the invention by all. Accordingly, an invention’s real value to an inventor is the ability to use it exclusively, and in doing so gain a commercial advantage over her neighbors.¹³ For example, an invention for a more efficient process for spinning wool will allow the

Every business man knows what it means to “have the exclusive” on something. What he gets from the patent—and all he gets—is a right *to exclude*. That’s the patent right.

Id. (emphasis in original) (quoting Judge Rich’s lecture notes from Columbia Law School). Judge Rich was a patent attorney before becoming one of the prime architects of the 1952 Patent Act (still the basis for the current patent law codified in the United States Code). *Id.* at 24. Later, Rich was appointed to the Court of Customs and Patent Appeals, and then to the Court of Appeals for the Federal Circuit when that court was created in 1982. *Id.*

¹⁰ *Id.* at 5; *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599 (Fed. Cir. 1985) (citing *Kaiser Aetna v. United States*, 444 U.S. 164, 176 (1979)).

¹¹ *Chancellor Manor v. United States*, 331 F.3d 891, 902 (Fed. Cir. 2003) (noting that the Fifth Amendment protects interests in real property, including “the right to possess, use and dispose” of property, and that “property owners have the right to exclusive possession”).

¹² Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), *reprinted in* THOMAS JEFFERSON: WRITINGS 1291–92 (Merrill D. Peterson ed. 1984). A more contemporary explanation is that because inventions are nonrivalrous (to use the economists’ term) and can be used by many simultaneously without lessening the value to each user, they differ from tangible forms of property such as cars and land that cannot be fully possessed and used simultaneously by more than one holder. *CHISUM ET AL.*, *supra* note 3, at 5–6.

¹³ See Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 266 (1977) (“The patent is a reward that enables the inventor to capture the returns from his investment in the invention, returns that would otherwise (absent secrecy) be subject to appropriation by others.”).

inventor to produce more wool per cost expenditure than her neighbors, and thus, she may gain a decided market advantage over them.

Of course, this sounds a lot like the rationale for trade secrets, which is implicitly embedded in the definition of a trade secret: “information . . . that . . . derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use . . .”¹⁴ Yet, this measure of value is also appropriate for patentable inventions, even though it does not appear in the definition of patents in a similar manner. In fact, this reconceptualization of the value of inventions, patentable or otherwise, actually gives a clearer and more compelling justification for a patent system than the standard utilitarian or natural rights arguments,¹⁵ while only subtly, but importantly, differing from the utilitarian one.¹⁶ The theory proposed in this Article is most closely related to the dissemination incentive strain of utilitarian justifications: The public’s proper concern is not so much that individuals will not invent absent a formal reward or incentive system such as patents, but rather that they will not distribute products embodying those inventions and may engage in costly measures to maintain the secrecy of the invention.¹⁷ But, if this is all the patent system is about, then why not pre-empt the trade secret system—as Congress has clearly chosen *not* to do¹⁸—and set up a reward/incentive system so that all commercially valuable inventions will be disseminated ultimately to the public?

In contrast, the proposed theory reconciles this problem by arguing that the standard view of patentable inventions as somehow superior or more worthy than those protected as mere trade secrets gets things exactly backwards. The dissemination problem is most acute for those valuable innovations that *cannot* be maintained as trade secrets absent substantial—and wasteful—efforts to disguise them in products or services distributed to the marketplace. Thus, these sorts of innovations are *less* valuable to their inventors, absent a patent system, as a means for gaining economic advantage over one’s neighbors, and are then less likely to be used fully (or without wasteful exercises in subterfuge) than those that are protectable under the sort of trade secret and unfair competition law that significantly precedes formal patent systems. Accordingly, the problem is not really about incentives to create or disclose, but rather simply incentive to *use* one’s inventions in the normal stream of commerce.¹⁹ The patent system, in this view,

¹⁴ UNIFORM TRADE SECRETS ACT § 1(4) (1985).

¹⁵ See CHISUM ET AL., *supra* note 3, at 6, 38–54 (discussing utilitarian and natural rights theories).

¹⁶ See *id.* at 49–51.

¹⁷ See *id.* at 68–70 (variously referring to the dissemination incentive as the “incentive to commercialize,” “incentive to invest,” “incentive to innovate,” and “prospect theory”).

¹⁸ *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 155–56 (1989); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 493 (1974) (“Congress, by its silence over these many years, has seen the wisdom of allowing the States to enforce trade secret protection.”).

¹⁹ See Katherine J. Strandburg, *Users as Innovators: Implications for Patent Doctrine*, 79 U. COLO. L. REV. 467 (2008) (discussing, in part, that innovators derive benefits from development and use of inventions). Importantly, even if the system is best understood as an incentive to use one’s invention, in the United States we have refrained from taking the further step of requiring use or commercialization.

recognizes the value of invention to its inventor as residing in its exclusive use and establishes a legal fiction—the patent grant of exclusivity—to allow the patentee to hold a legal right to that exclusivity even for inventions that would be easily ascertainable when embodied in products placed in the stream of commerce.²⁰

In this way, the patent grant is not the unnatural, lottery-like or disproportionate reward/incentive structure that it is often held to be. Rather, it simply creates a legal environment in which the commercial value to the inventor—exclusivity—is maintained for a period of time by force of law so that the inventor can exploit her resource in a similar manner to other resources that are more “naturally” held in exclusive control, such as land or tangible objects.²¹ Further, this right to exclude does not carry with it a concomitant *obligation* to use or commercialize the invention both because there may be other legal or practical impediments to such use and because important economic values have been tied to the ability to time the distribution of one’s intellectual property products to events in the marketplace.²² Of course, the invention will pass into the public domain at the end of the patent term regardless of the inventor’s use, or lack thereof, during the patent term,²³ so one could simply say that it is the inventor’s own loss if she does not exploit her invention at all during the exclusivity period.

Admittedly, there is a bit of “unnaturalness” to the patent grant under this theory, in that it locks in exclusivity for some inventions, which, even if protectable as trade secrets, might still fall into the public domain—through disclosure or reverse engineering—in a time shorter than the patent term would be.²⁴ But, this challenge

²⁰ *Bauer & Cie v. O’Donnell*, 229 U.S. 1, 9–10 (1913) (discussing exclusivity as one of the patent rights).

²¹ Kitch, *supra* note 13, at 266. Edmund Kitch introduced the famous “prospect theory” of patents by analogizing the patent system to mineral prospecting, *id.* at 267–71, and the patent grant to the claim stake used by miners to mark off their prospecting area. *Id.* at 271–74. Like other valuable resource sources such as fresh water springs and oil deposits, mineral deposit areas are perfectly well understood to be susceptible to private ownership as demarcated by land ownership. *Id.* Patent claims should be even less contentious as they do not remove anything from the commons (as arguably mining claim stakes do) and are restricted to new and nonobvious inventions that are not already part of the common knowledge. 35 U.S.C. §§ 101–03 (2012). Further, like mining stake claims, there is no guarantee that any value or profit will flow from patent grants—patents rarely embody the entire product as sold to the public and, thus, require much development above and beyond the patent claims before revenues can flow. Kitch, *supra* note 13, at 276–77; F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697, 707–12 (2001). Thus, the strain of the dissemination incentive justification for patents that most closely aligns with the views of this Article, although not identically, is the commercialization theory as characterized by the view of patents as a coordinating mechanism to bring together all of the necessary players—not just inventors, but also venture capitalists, manufacturers, etc.—involved in commercializing new technologies. See Kieff, *supra*; CHISUM ET AL., *supra* note 3, at 68–70; Giles S. Rich, *The Relation Between Patent Practices and the Anti-Monopoly Laws*, 24 J. PAT. OFF. SOC’Y 159, 177–80 (1942);

²² See *Herman v. Youngstown Car Mfg. Co.*, 191 F. 579, 584–85 (6th Cir. 1911).

²³ 35 U.S.C. § 154. At the same time, in the current environment where companies are building enormous patent portfolios for both offensive and defensive purposes—in some cases essentially warehousing many of these patents—one could argue that it is time to rethink the lack of a use or working requirement in the U.S. system.

²⁴ See 35 U.S.C. § 154(a)(2) (granting a patent term of twenty years from date on which the patent application was filed). In fact, holding aside the formula for Coca-Cola, many trade secrets

is not fatal for the proposed theory. Instead, it actually helps explain the limitations on patents. First, we want to err on the side of not granting patents to things that are already known or obvious, and so we construct strict bars for novelty and nonobviousness.²⁵ Second, we assume that secret inventions used in commerce will become known sooner or later,²⁶ and thus, we limit the time period for the legal right to exclusivity.²⁷

Having now (re)established exactly what the patent grant is—simply the quasi-contractual right to exclude others from making, using, or selling a certain invention—we can see that any unauthorized use of the invention has effectively destroyed the entirety of that right.²⁸ Coupled with the establishment of this legal right as a *res* of property, similar to other contractual rights that can be traded, such as options of futures, the patent grant stands as a piece of private property that must be considered to have been taken, for Fifth Amendment purposes, whenever the government engages in any unauthorized use of the invention.²⁹ This would include any “making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process . . .”³⁰ Even the narrowest use by the government without authorization should be deemed a taking because it destroys the only right the patentee has—the right to exclude others.

Notwithstanding, many courts, including the Court of Appeals for the Federal Circuit, have ruled that unauthorized use by the government does not constitute a “taking” in the traditional sense because of what is often called the “Government Use Statute,”³¹ which is a statutory provision authorizing such use with the only recourse for the patent owner being a suit for compensation in the Court of Federal Claims.³² This statute is conceptually similar to the old “Crown Right” of the British government.³³ The difference is that the U.S. government has to pay fair compensation for the use, whereas under the old British Crown Right, the British government had no such obligation.³⁴ Throughout the nineteenth century, the

do seem to find their way into the public domain sooner or later. *See* Geraldine Szott Moohr, *The Problematic Role of Criminal Law in Regulating Use of Information: The Case of the Economic Espionage Act*, 80 N.C. L. REV. 853, 868 (2002) (“The ‘leaky’ nature of trade secrets means that secret information often eventually enters the public domain . . .”).

²⁵ 35 U.S.C. §§ 102, 103(a).

²⁶ *See* Moohr, *supra* note 24.

²⁷ 35 U.S.C. § 154(a)(2) (2012).

²⁸ 35 U.S.C. § 271.

²⁹ *See* Pitcairn v. United States, 547 F.2d 1106, 1114 (Ct. Cl. 1976).

³⁰ 35 U.S.C. § 154(a)(1).

³¹ *See, e.g.,* Zoltek Corp. v. United States, 627 F.3d 1309, 1326–27 (Fed. Cir. 2012); Leeson Corp. v. United States, 599 F.2d 958, 979 (Ct. Cl. 1979).

³² 28 U.S.C. § 1498(a).

³³ *See* United States v. Palmer, 128 U.S. 262, 270 (1888).

³⁴ *See* Belknap v. Schild, 161 U.S. 10, 15 (1896). Of note, the current statutory version of the British Crown Right does require fair compensation to the patent owner. Patents Act, 1977, c. 37, § 57A (U.K.).

Supreme Court consistently rejected the notion that the U.S. government had such a power to use a patent without compensation.³⁵

This rejection of the Crown Rights doctrine, originating in cases of government employee inventions, set off a cascade of other legal issues. Did the government have a right to own, or even use, employee or military personnel inventions without an assignment or license? Did the government have any rights to practice patented inventions held by purely private citizens? If it did, could that right be extended to contractors working for the government? Who should own inventions developed by such contractors on projects for the government? And finally, should the determination of ownership rights as between the government and the contractor for federally funded inventions affect the ownership rights of inventors employed by the contractor? These questions were all logical extensions of the thorny central issues of Crown Rights, compulsory licenses, and agency theories.³⁶

To a large extent, the three main issues—government employee invention use/title, government contractor and contractor employee invention use/title, and government use of private patents—were addressed by legislation, case law, and executive policy developments in the mid-twentieth century.³⁷ But, not all the complications were resolved. In fact, fairly fundamental issues were left open, such as how title or use rights of government contractor employee inventions should be secured, and whether fact patterns falling outside of the technical boundaries of the Government Use Statute would enable the patent owner to sue the government for a taking.³⁸ These have come to the fore as of late and are being addressed, to some degree, by recent court decisions in *Stanford v. Roche*³⁹ and *Zoltek Corp. v. United States*⁴⁰ However, the unifying deeper questions of these seemingly disparate cases have not been tied together. This Article, then, sets the missing groundwork to show that the original questions about how the government stood vis-a-vis its employees,

³⁵ See, e.g., *Belknap*, 161 U.S. at 15; *United States v. Jones*, 109 U.S. 513, 518 (1883).

³⁶ See, e.g., *Belknap*, 161 U.S. at 15–22.

³⁷ See, e.g., *Kessenich v. United States*, 135 F. Supp. 528, 531–32 (Ct. Cl. 1955); *Strategical Demolition Torpedo Co., Inc. v. United States*, 110 F. Supp. 264 (Ct. Cl. 1953); *Stub v. United States*, 119 F. Supp. 206 (Ct. Cl. 1954); Bayh-Dole Act of 1980, Pub. L. No. 96-517, 94 Stat. 3015 (codified as amended in scattered sections of 35 U.S.C.); *Crozier v. Fried. Krupp Aktiengesellschaft*, 224 U.S. 290, 305 (1912); Memorandum of October 10, 1963, 28 Fed. Reg. 10,943 (Oct. 12, 1963) [hereinafter *Kennedy Patent Policy*].

³⁸ See, e.g., *Bd. of Trs. of the Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 131 S. Ct. 2188, 2196 (2011). The Court explained that the Bayh-Dole Act of 1980 did not automatically vest title in government contractor inventions to the U.S. government, and that “[n]owhere in the Act is title expressly vested in contractors or anyone else; nowhere in the Act are inventors expressly deprived of their interest in federally funded inventions.” *Id.* Instead, the statute provided that “contractors may ‘elect to retain title to any subject invention.’” *Id.* As for the issue of whether a patent owner may sue the government for a taking for fact patterns outside the Government Use Statute, the court in *Zoltek Corp. v. United States*, 672 F.3d 1309, 1312–14 (Fed. Cir. 2012), recounted the “saga of Zoltek Corporation” and the considerable confusion regarding the proper forum for suit when a private patent holder’s rights have allegedly been infringed in a foreign jurisdiction by a U.S. government contractor who then imports the allegedly infringing product back into the United States for sale and use.

³⁹ *Bd. of Trs. of the Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 131 S. Ct. 2188 (2011).

⁴⁰ *Zoltek Corp. v. United States*, 672 F.3d 1309 (Fed. Cir. 2012).

contractors, and the patent system itself are still at issue in these current cases. Part I establishes the context and details of the early judicial debates over whether government use of patented inventions without an express license or assignment was a taking, tort, quasi or implied contact, or form of Crown Right. Part II traces the statutory and judicial attempts at resolving these issues in the pre-war ,early twentieth century. Part III then outlines, in brief, the post-war, mid-twentieth century statutory and executive branch policies that form the basis for modern government patent policy.

I. THE TORT, TAKING, AND CROWN RIGHT DEBATES IN THE EARLY U.S. PATENT SYSTEM

A look back at the early history of the patent system and the government's use of patented technologies gives concrete examples and support to the foregoing theorizing, even as it adds a new layer of complexity. The Patent Act of 1790, the first federal patent statute, was silent as to whether patents were property, but also seemed to give both negative and positive rights to the patented invention.⁴¹ The penalties for unauthorized infringement under this Act were forfeiture of the infringing goods and damages.⁴² The 1790 Act was quickly repealed and replaced by the Patent Act of 1793,⁴³ which primarily switched the U.S. patent system from one based on intensive examination—by a panel consisting of the Secretary of State, Secretary of the Department of War, and the Attorney General—to one based merely upon registration with the Secretary of State.⁴⁴ This Act retained the positive and negative rights grant of the 1790 Act,⁴⁵ but also established the possibility of blocking improvement patents,⁴⁶ and, arguably, established an early version of the doctrine of equivalents.⁴⁷ Of particular interest for this Article, the 1793 Act also expressly authorized the assignability of patents with a requirement for recordation with the Secretary of State.⁴⁸

⁴¹ Patent Act of 1790, ch. 7, § 1, 1 Stat. 109, 109 (granting to inventors “for any term not exceeding fourteen years, the sole and exclusive right and liberty of making, constructing, using and vending to others to be used, the said invention or discovery”). It is not clear whether the implications of this positive grant—or “liberty”—to practice the invention was understood to then preempt or supersede any other legal limitations on such practice. However, see *infra* for a discussion of whether this and subsequent Acts with similar language were actually interpreted to give a positive right to practice the invention, rather than solely the negative right as is clearly the case under the current law.

⁴² *Id.* § 4, 1 Stat. at 111.

⁴³ Patent Act of 1793, ch. 11, § 1, 1 Stat. 318, 318–21.

⁴⁴ Compare Patent Act of 1790 ch. 7, § 1, 1 Stat 109, 109, with Patent Act of 1793, ch. 11, § 1, 1 Stat 318, 318–21.

⁴⁵ Patent Act of 1793, ch. 11, § 1, 1 Stat. 318, 318–21.

⁴⁶ *Id.* § 2, 1 Stat. at 321 (“That any person, who shall have discovered an improvement in the principle of any machine, or in the process of any composition of matter, which shall have been patented, and shall have obtained a patent for such improvement, he shall not be at liberty to make, use or vend the original discovery, nor shall the first inventor be at liberty to use the improvement . . .”).

⁴⁷ *Id.* (“And it is hereby enacted and declared, that simply changing the form or the proportions of any machine, or composition of matter, in any degree, shall not be deemed a discovery.”).

⁴⁸ *Id.* § 4, 1 Stat. at 322.

At the same time, it seems clear that only natural persons could obtain patents as inventors under both the 1790 and 1793 Acts, based on the requirements that the patent petitioner (today called the applicant) be the original and true inventor and the pronoun references to “he” or “they,” but never “it” for such petitioners.⁴⁹ Thus, there was not then, and is not now, the possibility for “corporate inventors” in the same way that there can be “corporate authors” under the work for hire doctrine of the Copyright Act.⁵⁰ The 1793 Act also restricted remedies for infringement to damages, not including forfeiture of infringing goods, but raised damages to “a sum, that shall be at least equal to three times the price, for which the patentee has usually sold or licensed to other persons, the use of the said invention[.]”⁵¹

Neither the 1790 nor 1793 Acts made any provision regarding government use of privately owned patents.⁵² Further, no cases seem to have arisen where a patentee sued the federal government for unauthorized use of his/her patents. The earliest, accessible reference to any government acquisition of patent rights is an 1812 act of Congress “to purchase of Winslow Lewis, his patent right to the new and improved method of lighting Lighthouses, and for other purposes.”⁵³ This is a fascinating piece of legislation for a few reasons: first, that it would take an act of Congress, albeit a private act, just for the government to avail itself of someone’s patent rights; second, that it includes authorization to contract with Lewis to run the upkeep operation as well;⁵⁴ and third that \$60,000—in 1812—was appropriated by Congress for this plan.⁵⁵ While not conclusive evidence, this act seems to justify an inference that the U.S. government did not believe that it could simply take a license, under an eminent domain theory or otherwise, to a private citizen’s patent. Instead, it seemed to simply approach the situation as if it were any other private party that would need to negotiate with the patentee to obtain any rights to practice the invention.

The next major patent legislation was the Patent Act of 1836,⁵⁶ which repealed and replaced the 1793 Act.⁵⁷ The 1836 Act reinstated the examination system (but through a system of clerks this time),⁵⁸ and allowed a court to impose a range of damages starting at the actual amount and proceeding up to a maximum of treble damages.⁵⁹ But, it seemed to have had no effect on the federal government’s ability, or perception of its ability, to take unauthorized licenses, even for munitions related patents. For example, Congress passed legislation on the same day that it passed the 1836 Act authorizing a purchase of two patents from one Captain William H. Bell: the first for “a machine for elevating heavy cannon,” and the second for “a traverse

⁴⁹ *Id.* § 1, 1 Stat. at 318–21.

⁵⁰ 17 U.S.C. § 201(b) (2012). Copyright law still allows for the separation of owners and authors regarding copyrights, *id.* § 201(d), just as patent law provides for a distinction between inventors and owners under the assignment doctrine. 35 U.S.C. § 261.

⁵¹ Patent Act of 1793, ch. 11, § 5, 1 Stat. 318, 322.

⁵² Patent Act of 1790 ch. 7, 1 Stat. 109, 109–12; Patent Act of 1793, ch. 11, 1 Stat. 318, 318–23.

⁵³ Act of March 2, 1812, ch. 34, 2 Stat. 691, 691.

⁵⁴ *Id.*

⁵⁵ *Id.* § 2.

⁵⁶ Patent Act of 1836, ch. 357, 5 Stat. 117, 117–25.

⁵⁷ *Id.* § 21, 5 Stat. at 125.

⁵⁸ *Id.* § 2, 5 Stat. at 118.

⁵⁹ *Id.* § 14, 5 Stat. at 123.

board for pointing cannon.”⁶⁰ Congress also wisely included a right for the U.S. to use “every improvement that has been made by said Bell on the said inventions, since patenting the same”⁶¹ The grand total for this purchase was to be \$20,000.⁶²

Likewise, ten years later, the federal government seems to have still been relying on this cumbersome method to acquire rights to privately held patents.⁶³ On August 8, 1846 Congress enacted legislation:

That the Secretary of the Navy be, and he is hereby, authorized to purchase of Mrs. Ann Mix, widow of M. P. Mix, late master commandant in the navy, the unlimited power to use a machine called a “manger-stopper,” in all ships of war or other vessels belonging to the United States: *Provided*, An assignment thereof can be obtained at a cost not exceeding three thousand dollars, which sum is hereby appropriated, to be paid out of any money in the treasury not otherwise appropriated.⁶⁴

Another fascinating part of these last two Congressional appropriations is that both seem to be authorizing purchases of patents obtained by military men, and in the last case, the patent was for naval technology likely developed by Mr. Mix while still employed by the U.S. Navy.⁶⁵ If this is true, then it would appear that government agencies such as the Navy, under the then Department of War, were not even requiring the assignment of patentable inventions by employees.⁶⁶ Yet, at the same time, the government was finding that it needed some of these patented technologies—both those developed completely by outsiders, as well as those invented and patented by the government’s own employees.⁶⁷

Nearly a decade later, Congress passed the first act creating the Court of Claims (the predecessor to the Court of Federal Claims) to “hear and determine all claims founded upon any law of Congress, or upon any regulation of an executive department, or upon any contract, express or implied, with the government of the United States”⁶⁸ In 1863, the Court of Claims’ authority was extended to include “all set-offs, counter-claims, claims for damages, whether liquidated or unliquidated, or other demands whatsoever, on the part of the government, against any person making claim against the government in said court.”⁶⁹

⁶⁰ Act of July 4, 1836, ch. 360, 5 Stat. 126, 126.

⁶¹ *Id.*

⁶² *Id.*

⁶³ Act of Aug. 8, 1846, ch. 169, 9 Stat. 82, 82.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.* Of course, it is possible that Mr. Mix had in fact left the service before inventing and patenting the manger-stopper, or that he had not developed it as part of his regular duties.

⁶⁷ See e.g., Act of July 4, 1836, ch. 360, 5 Stat. 126; Act of Aug. 8, 1846, ch. 169, 9 Stat. 82.

⁶⁸ See *Clyde v. United States*, 80 U.S. 38, 39 (1871) (quoting Patent Act of 1855, ch. 122, 10 Stat. 612, 612).

⁶⁹ See *Ex parte Zellner*, 76 U.S. 244, 244 (1869) (quoting Act of March 3, 1863, ch. 92, § 3, 12 Stat. 765, 765).

In that same year, what appears to be the first case brought against the United States for patent infringement was brought before the Court of Claims.⁷⁰ In *Pitcher v. United States* (“*Pitcher’s Case*”),⁷¹ the warden of the U.S. penitentiary for the District of Columbia had inmates using the patented broom making machine of one Spencer Rowe to manufacture brooms, which were then sold with the proceeds going to the maintenance and support of the penitentiary.⁷² While the warden had duly entered into an agreement with Rowe to erect and operate them with inmate labor, Rowe had earlier assigned all his interest in the patent to one John Fox, who in turn had assigned it to C. A. Pitcher, the claimant.⁷³ Pitcher then based his claim against the U.S. on an interesting twist, necessitated by the limited jurisdiction of the Court of Claims: Even though the same fact pattern as between two private individuals would lead only to a tort claim—or “action on the case”⁷⁴—of patent infringement, the United States is a body politic that is incapable of committing tortious acts. Therefore, it must enter into an implied contract with patent holders when it uses their patents without authorization.⁷⁵ Consequently, the patent owner should be allowed to waive the tort and bring an action based on *assumpsit* and the implied contract.⁷⁶ This, of course, then allows the patent owner to bring the claim within the jurisdiction of the Court of Claims. For good measure, Pitcher also added a takings claim and argued that this too gave rise to an implied contract to compensate him for the taking.⁷⁷

The court was unimpressed by these arguments, and denied that it had jurisdiction to hear the case.⁷⁸ First, it rejected the takings claim because of both the nature of the thing alleged to have been taken and the manner in which it occurred.⁷⁹ As to the latter, “[w]e cannot believe that the framers of this clause intended that every subordinate officer or petty agent of the United States might undertake to decide for himself when the exigency has occurred, or the necessity exists, for the seizure and appropriation of the property of the citizen.”⁸⁰ This argument that there

⁷⁰ *Pitcher v. United States*, 1 Ct. Cl. 7 (1863). Of course, the basis for such suits may have existed much earlier, but perhaps owing simply to a lack of a proper forum, on the one hand, and sovereign immunity principles, on the other, any earlier claims against the U.S. may simply have not been able to be heard in any court of law.

⁷¹ *Id.*

⁷² *Id.* at 7–8.

⁷³ *Id.* at 7.

⁷⁴ Act of July. 4, 1836, ch. 357, § 14, 5 Stat. 117, 123 (establishing that “damages may be recovered by action on the case in any court of competent jurisdiction”).

⁷⁵ *Pitcher*, 1 Ct. Cl. at 8–9. While this appears to have been a novel argument in this case, it was formally stated as a point of law, albeit as between a citizen of one country and agents of a government of another, by the Court of Claims two years later in *Straughan v. United States*, 1 Ct. Cl. 324 (1865). The Court plainly stated that “[t]here is no such thing as a tort by a government against an individual.” *Id.* at 328. It went on to state that “[a]s between a citizen and his own government, acts which between private persons would be torts are to be deemed implied contracts founded on the right of eminent domain, or else acts unavoidable, and necessary for the public welfare, but never acts founded upon a wrongful or malicious intent.” *Id.* at 328–29.

⁷⁶ *Pitcher*, 1 Ct. Cl. at 8–9.

⁷⁷ *Id.* at 9.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

needs to be a suitably high or formal level of authorization for a taking to be held to have occurred reappears in later cases of unauthorized patent use by the government throughout the 1800s.⁸¹ Where such authorization does not exist, then the action by the government agent or officer “is a simple trespass, for which he is amenable to the law,”⁸² The court also asserted that there just “was no seizure or taking of any tangible property belonging to the claimant; at most it was a mistaken and unauthorized *use* of a machine which he had an exclusive right to make, use, and vend.”⁸³ “It was the disturbance or infringement of his right, instead of the caption of his property.”⁸⁴

Second, the court pointed out that the patent law itself prescribes both the form of action and proper forums for patent owners seeking remedy for unauthorized use of their patents.⁸⁵ Neither of these had been availed of by the claimant in this case. Finally, the court dispensed of the implied contract argument, at least based on the facts of the case:

We will not affirm that no case can arise where this principle would be sustained; but we think we are safe in saying that the doctrine of implied contract does not arise in any case out of the acts of an agent who has no power or authority to make an express one.⁸⁶

However, there was one additional wrinkle asserted by the claimant:

[I]t is contended that [the implied contract] arises not so much from the wrongful acts of the agents or officers of the United States as from the receipt of the proceeds or profits of the use of the machine; and that having received these profits from the wrongful use of the machine, the claimant may waive the tort, and sue as for money had and received to his use.⁸⁷

The court accepted that there were cases where tortious conversion of property occurred and the owner was then able to waive the tort and bring an action in *indebitatus assumpsit* to recover the money “had and received” by the tortious actions.⁸⁸ But, it stated that in the case of a patented machine, “it is the machine itself and not its product that is protected by the letters patent.”⁸⁹ Thus, the brooms manufactured by the machines “were simply and exclusively the property of the United States” and consequently the injury sustained by the claimant “was not the sale and conversion of his brooms, but the unauthorized use of his invention in making them.”⁹⁰ Again, the court called attention to the type of action and forums

⁸¹ *See infra*.

⁸² *Pitcher v. United States*, 1 Ct. Cl. 7, 9 (1863).

⁸³ *Id.*

⁸⁴ *Id.* at 9.

⁸⁵ *Id.* at 10.

⁸⁶ *Id.* at 11.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.* (emphasis omitted).

⁹⁰ *Id.* at 11–12.

prescribed by the patent statute, and ultimately held that its jurisdiction did not extend to this case.⁹¹

What is not fully explored in *Pitcher's Case* is whether the warden believed that he was acting under proper authorization of the patent owner when he installed and used the broom machines under contract with the original patentee, Rowe. If so, then this would not be the best fact pattern for determining the liability of the government for intentional unauthorized use of patents, but rather only a test of accidental or negligent unauthorized use. *Pitcher's Case* does, however, lay some groundwork for the substantial problem of determining damages when the government infringes a patent because the government is usually perceived as not acting as a commercial entity and, so, measures such as profits are difficult to assess.

A few years after *Pitcher's Case*, *Burns v. United States* ("*Burn's Case*")⁹² affirmed that patent owners' licenses to the government are valid and may not be disregarded by the government.⁹³ In particular, Captain (later Major) Burns received an assignment of one-half interest in a patent for a conical tent from the patentee, one Major Sibley.⁹⁴ Both were then officers in the U.S. Army, but Sibley afterwards defected and joined the Confederate Army as the Civil War ensued.⁹⁵ While still commissioned with the U.S. Army, Sibley negotiated a license with the Army to produce the patented tents upon royalties of \$5 per tent.⁹⁶ After he defected, the Army determined that Major Burns should still be paid one-half of this royalty, even as it ceased paying Sibley.⁹⁷ After paying Burns this partial royalty on a number of tents, the Army began withholding payments based on an interpretation of Army Regulation 1002, which forbade military officers and agents from purchasing or contracting for military goods and services with other military officers and agents.⁹⁸ Clearly, 1002 intended to limit favoritism and cronyism in military procurement, but the court recognized that the military would almost certainly need to contract occasionally with its officers and agents in the context of military procurement.⁹⁹ The court held that the Secretary of War was a civilian officer rather than a military officer, and thus, contracts he approved fell outside of 1002.¹⁰⁰ Because the Secretary of War approved Sibley's original license, it too fell outside of 1002.¹⁰¹

At the same time, the Army continued making and using the patented tents. The court held that the former's withholding of royalty payments to Burns was

⁹¹ *Id.* at 12. The court does state in dicta that the remedies available under the patent statute are "appropriate and ample, and those courts open to the claimant . . ." *Id.* But, the availability of the federal circuit courts for patent infringement actions against government agents and officers who acted within their official duties is in fact challenged in the first case in which it arises. See *infra*.

⁹² *Burns v. United States*, 4 Ct. Cl. 113 (1868).

⁹³ *Id.* at 116.

⁹⁴ *Id.* at 114.

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.* at 115.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

insufficient grounds to find that the Army had terminated the license.¹⁰² This last point was crucial because it kept the matter within the context of an express contract, actionable in the Court of Claims. By contrast, the Army had argued that it had terminated the contract, and so any further making or using of the patented tent was a tortious activity outside of the court's jurisdiction.¹⁰³ However, the court strongly suggested that it should not be presumed that the Secretary "intended to violate the law and disregard the rights secured by the patent, [even while] it is certain that he could not commit the United States to any such wrongful procedure."¹⁰⁴ The Secretary must not have been too pleased with the Army's attempt to paint him as a tortfeasor. Alternatively, based on the court's own comments in *Pitcher's Case*, would not the Secretary have been a high enough authority in the government to direct a taking of the patent? Whether it was intentional or not, the court seemed to duck this explanation for the Secretary's actions.¹⁰⁵

While the case was on appeal to the Supreme Court, Congress had already decided it was time to compile the sundry amendments to the Patent Act of 1836 that had been accumulating.¹⁰⁶ Thus, the Patent Act was once again repealed and replaced by the Patent Act of 1870.¹⁰⁷ For our purposes, the two major changes were to the patent grant itself, and the explicit authorization of injunctive relief in appropriate cases of infringement. The patent grant language in the 1870 Act dropped the confusing reference to "liberties" in earlier Acts that seemed to give a positive right to practice the invention.¹⁰⁸ The new language instead established a "grant to the patentee, . . . for the term of seventeen years, of the exclusive right to make, use, and vend the said invention or discovery . . ."¹⁰⁹ This language was still not as crisp on the nature of the patent grant as the 1952 Act, but it certainly seems closer to, and was interpreted as, simply granting a right to exclude.¹¹⁰ For example,

¹⁰² *Id.* at 116.

¹⁰³ *Id.* at 126.

¹⁰⁴ *Id.* The court continued to offer an alternate explanation: the Secretary had merely ceased the payments in case the courts determined that the contract with Sibley was invalid under the Regulation; payment could always be made later upon proper interpretation of the Regulation by the courts. *Id.*

¹⁰⁵ *Id.* But neither party seemed to raise the issue anyway, likely with good reason as it would not have helped either's case.

¹⁰⁶ Patent Act of 1870, ch. 230, 16 Stat. 198, 198–217.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*; see also *Bloomer v. McQuewan*, 55 U.S. 539, 549 (1852) (suggesting that, even under the Patent Act of 1836, the patentee did not have a liberty to use the patent, but rather only to exclude others). The Supreme Court considered the nature of the patent grant under the 1836 Act, as amended, and gave a description of that grant that is very much in line with Judge Rich's analysis of the contemporary patent right: "The franchise which the patent grants, consists altogether in the right to exclude every one from making, using, or vending the thing patented, without the permission of the patentee. That is all that he obtains by the patent." *Id.* Accordingly, even the earlier patent acts may not have in fact been granting positive rights to practice the invention.

¹⁰⁹ Patent Act of 1870, ch. 230, § 22, 16 Stat. 198, 201.

¹¹⁰ Compare Patent Act of 1870, ch. 230, § 22, 16 Stat. 198, 201 (granting "the exclusive right to make, use, and vend the said invention"), with Patent Act of 1952, Pub. L. No. 82-593, § 154, 66 Stat. 792, 804 (granting "the right to exclude others from making, using, or selling the invention"). Judge (then attorney) Rich in fact seems to have been using the language of the 1870 Act—which

the use of a conjunction makes it sound as if the exclusive right was just directed to the exercise of all three tasks together—making, using, and selling—and not on each task as performed separately.¹¹¹ The 1952 Act fixed this by changing the list to a disjunctive one.¹¹²

Therefore, by 1870 the clear contours of the modern patent grant were firmly established—although there was still no explicit reference to the property status of patents—and remedies for both damages and injunctions were available.¹¹³ At the same time, questions about the status of patents arising from government activities as well as government use of the same, or even of purely private sector derived patents, were increasing.¹¹⁴ This increase may have been based, in part, on the increasing pace of technological innovation generally in the United States, including the particular drive for war related technology associated with the Civil War’s subsequent reputation as the first modern war.¹¹⁵

In December of that same year, the Supreme Court issued decisions in both *United States v. Burns*¹¹⁶ and *Seymour v. Osborne*.¹¹⁷ Affirming the Court of Claims in *Burns*, the Supreme Court added an interesting extra fillip. In explaining its affirmance of the lower court’s ruling that the War Department, under the Secretary’s authorization, can enter into contracts with servicemen notwithstanding Regulation 1002, the Court commented on the ability of such servicemen to obtain patents on military equipment:

If an officer in the military service, *not specially employed to make experiments with a view to suggest improvements*, devises a new and valuable improvement in arms, tents, or any other kind of war material, he is entitled to the benefit of it, and to letters-patent for the improvement from the United States, equally with any other citizen not engaged in such service; and the government cannot, after the patent is issued, make use of the improvement any more than a private individual, without license of the inventor or making compensation to him.¹¹⁸

largely remained in place until the 1952 Act repealed and replaced it—in his Columbia lecture notes. See CHISUM ET AL., *supra* note 3, at 5.

¹¹¹ Patent Act of 1870, ch. 230 § 22, 16 Stat. 198, 201.

¹¹² Patent Act of 1952, Pub. L. No. 82-593, § 154, 66 Stat. 792, 804 (“Every patent shall contain . . . a grant . . . for the term of seventeen years, of the right to exclude others from making, using, or selling the invention . . .”).

¹¹³ *Birdsall v. Coolidge*, 93 U.S. 64, 68–69 (1876) (explaining the remedies that existed in equity and damages prior to the Patent Act of 1870).

¹¹⁴ Most notably, questions of whether use of patents by the government were subject to compensation under the Takings Clause. *Accord* *Cammeyer v. Newton*, 94 U.S. 225, 234–35 (1876) (concluding that patents are property for the purpose of Takings Clause analysis); *McKeever v. United States*, 14 Ct. Cl. 396, 422 (1878) (quoting *Cammeyer*).

¹¹⁵ ANDREW P. MORRISS & CRAIG ALLEN NARD, INSTITUTIONAL CHOICE & INTEREST GROUPS IN THE DEVELOPMENT OF AMERICAN PATENT LAW: 1790-1870, at 65 (2008).

¹¹⁶ *United States v. Burns*, 79 U.S. (12 Wall.) 246, 246 (1870).

¹¹⁷ *Seymour v. Osborne*, 78 U.S. (11 Wall.) 516, 516 (1870).

¹¹⁸ *Burns*, 79 U.S. at 252 (emphasis added).

This comment would later be cited for the proposition that the United States would not follow the English precedent of a Crown Right to practice all patents issued in that country.¹¹⁹ At the same time, it left open the government's right to contract with employees to invent and then assign those inventions to the government, just as was the practice developing in the private sector.¹²⁰ In *Seymour*, Justice Clifford, writing for the majority, established the patent grant as a property right, notwithstanding that the Patent Act of 1870 did not expressly support this: "Inventions secured by letters patent are property in the holder of the patent, and as such are as much entitled to protection as any other property, consisting of a franchise, during the term for which the franchise or the exclusive right is granted."¹²¹

The consequence of this propertization of the patent grant for government use of patented inventions would not become fully clear until six years later. Justice Clifford, sitting as Circuit Justice for the District of Massachusetts in *Brady v. Atlantic Works*, rejected in dicta any right for the government to use patented inventions without authorization or compensation except in the most dire of circumstances.¹²² The issue was again, whether the government had any sort of Crown Right to use a patented invention, but in this case, the question extended to a contractor of the government.¹²³ *Atlantic Works* was building ships for the

¹¹⁹ See, e.g., *United States v. Palmer*, 128 U.S. 262, 270 (1888) ("It was . . . doubted whether the government might not be entitled to the use and benefit of every patented invention, by analogy to the English law, which reserves this right to the crown. But that notion no longer exists. It was ignored in the Case of Burns.").

¹²⁰ *Id.* Oddly though, the related doctrine of "shop rights", or nonexclusive licenses implied to have been granted to employers where employees use their facilities to invent, was not mentioned as an alternate possible justification for a U.S. government right to practice Sibley's patent without compensation (to Burns), even though a case involving a similar circumstance in the private sector had already been upheld in an 1843 Supreme Court decision. In *McClurg v. Kingsland*, 42 U.S. 202 (1843), the defendants had employed James Harley in their foundry where he subsequently invented an improved machine for manufacturing metal rollers. *Id.* at 205. Harley received a raise in pay for these efforts and allowed his employer to use the modified machines – indeed the machines appear to have been made only because of the defendant's contribution of resources for the purpose. *Id.* Harley at one point suggested that he would patent the invention if the defendants would then purchase it from him, but they declined. *Id.* He later patented the improvement anyway, and assigned it to the plaintiffs in this case instead. *Id.* Afterwards, Harley left the defendants' employ because of a disagreement on a different matter, while the defendants continued using his patented improved machines. *Id.* Plaintiffs then brought a patent infringement action in the Circuit Court of the United States for the Western District of Pennsylvania, which found for the defendants on an implied license theory. *Id.* at 205–6. The Supreme Court heard the case on a writ of error and affirmed the lower court's decision. *Id.* at 211. But whereas the Circuit Court only granted a nonexclusive license to the defendants, the Supreme Court strongly suggested that the facts of the case could have supported a finding that enough public use of the improved machines had occurred before the patent application such that the patent should be held invalid. *Id.* at 208. However, the court was of course restrained by the record developed by the lower courts, and the arguments of the parties therein, and could only affirm the finding of an implied license. See *id.* It is interesting that the Court nonetheless appeared to consider the nonexclusive "shop right" type of license to be a variation on the public use grounds for denying or invalidating a patent.

¹²¹ *Seymour*, 78 U.S. at 533.

¹²² *Brady v. Atl. Works*, 3 F. Cas. 1190, 1192 (C.C.D. Ma. 1876) (No. 1794) *rev'd on other grounds*, 107 U.S. 192 (1883).

¹²³ *Id.* at 1193.

government and, in doing so, allegedly infringing the patent of Brady.¹²⁴ One of its defenses was that it was acting as the “mere instrument” of the government as the latter endeavored to build ships for its navy.¹²⁵ This may have been the first time that a contractor expressly sought to clothe itself as an agent of the government for purposes of shielding itself from infringement liability. But, the court did not reach that issue, as it rejected Atlantic Works’ threshold argument that the government had reserved for itself a kind of Crown Right in any event.¹²⁶ Justice Clifford expressly rejected the applicability of continuing British case law on this matter—specifically *Feather v. Queen*.¹²⁷ Implicitly adopting the position that patents are not any species of monopoly in the United States, he stated that “[p]atents in that country are monopolies, granted by the sovereign, and may be granted or refused in the royal discretion.”¹²⁸ By contrast, “[p]ower to legislate upon the subject in *this* country is conferred upon congress by the constitution, by securing for limited periods to inventors the exclusive rights to their discoveries.”¹²⁹ Under the Patent Act of 1870, the use of “[l]anguage so explicit and unambiguous admits of no exception, even if it would be competent for congress to reserve such a right to the government.”¹³⁰ The opinion cited both *Burns* and the Patent Act of 1870 in support of these propositions. It did, however, leave open the possibility for a limited sovereign power to use a privately held patent with neither authority nor compensation “in cases of extreme necessity, in time of war, and of immediate and impending public danger.”¹³¹ But, none of those scenarios were found to apply in the *Brady* facts,¹³² despite Atlantic Works’ arguments that this was essentially a suit against the government of the kind that could stop the operations of the government in times of both war and peace.¹³³

Also in 1876, Justice Clifford wrote the opinion for the Supreme Court in *Cammeyer v. Newton*.¹³⁴ Nominally, like *Brady*, this appeared to be an infringement case between private parties in which one of the defenses was that the work had been done for the government. However, in this case, it was literally true as Newton and the other respondents were engineers directly employed by the government.¹³⁵ While the Court affirmed the lower court’s ruling in favor of the defendants, it was on the grounds of no infringement.¹³⁶ Yet in dicta, Justice Clifford set the tone of cases to come in which government employees would find themselves potentially liable to damages or injunctions for infringing activities done in the course of their employment:

¹²⁴ *Id.* at 1191.

¹²⁵ *Id.*

¹²⁶ *Id.* at 1194.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.* (emphasis added).

¹³⁰ *Id.*

¹³¹ *Id.* at 1192.

¹³² *Id.* at 1194.

¹³³ *Id.* at 1191.

¹³⁴ *Cammeyer v. Newton*, 94 U.S. 225 (1876).

¹³⁵ *Id.* at 234.

¹³⁶ *Id.* at 236–38.

Public employment is no defence to the employé for having converted the private property of another to the public use without his consent and without just compensation. Private property, the Constitution provides, shall not be taken for public use without just compensation; and it is clear that that provision is as applicable to the government as to individuals, except in cases of extreme necessity in time of war and of immediate and impending public danger.

....

Agents of the public have no more right to take such private property than other individuals under that provision, as it contains no exception warranting any such invasion of the private rights of individuals. Conclusive support to that proposition is found in a recent decision of this court, in which it is held that the government cannot, after the patent is issued, make use of the improvement any more than a private individual, without license of the inventor or making him compensation.¹³⁷

Two years later, yet another similar case came in front of the Court of Claims in *McKeever v. United States*.¹³⁸ This time, however, the patentee plaintiff was a government employee, specifically a first lieutenant in the Second U.S. Infantry who had invented a new kind of bullet cartridge box for soldiers to wear.¹³⁹ So, this case once again combined the question of whether the government should own or have rights to inventions of its employees, as the government appears to have believed leading up to this case,¹⁴⁰ with the question of whether the government has any kind of Crown Right, which the government then specifically argued in the case.¹⁴¹ The government relied on the British cases of *Feather v. The Queen*¹⁴² and *Dixon v. The*

¹³⁷ *Id.* at 234–35. (citations omitted). The potential carve out for “cases of extreme necessity in time of war and of immediate and impending public danger” was almost certainly a nod to *United States v. Russell*. 80 U.S. 623 (1871). In that case, the Supreme Court affirmed a Court of Claims holding that fair compensation was warranted where military officers commandeered steamships for emergency purposes on the Mississippi River during the Civil War. *Id.* at 629. The Court found that the crews of the steamships had assented, creating an implied contract which brought the matter properly into the jurisdiction of the Court of Claims, and not some kind of “appropriation” taking as would be outside that jurisdiction. *Id.* at 630. The case would be cited in later decisions finding implied licenses for government use of patented inventions, even in the absence of an express contract. See, e.g., *United States v. Berdan Firearms Mfg. Co.*, 156 U.S. 552, 569 (1895).

¹³⁸ *McKeever v. United States*, 14 Ct. Cl. 396 (1878). The case is reported to have been affirmed by the Supreme Court on appeal in the Supreme Court’s decision in *Russell v. United States*, 182 U.S. 516, 531 (1901) (“*McKeever v. United States*, 14 Ct. Cl. 396, [was] affirmed on appeal by this court . . .”).

¹³⁹ *McKeever*, 14 Ct. Cl. at 397.

¹⁴⁰ *Id.* at 403. The court reporter stated that the facts of the case as found by the court included that “[t]he board on infantry equipments, which recommended [McKeever’s] invention . . . , acted in the belief, derived from their own impressions of the law, that the government would not be put to the additional expense of royalty for the use of an invention made by an officer of the Army.” *Id.*

¹⁴¹ *Id.* at 418.

¹⁴² *Id.* at 417; *Feather v. The Queen*, (1865) 122 Eng. Rep. 1191 (Q.B.).

London Small Arms Company.¹⁴³ The court, acknowledging that such may be the law of England, then went into an extended review (for a case such as this) of the history of the British patent system up through the controversy leading to the Statute of Monopolies.¹⁴⁴ It did so to show the background of the “obnoxious patents” that both triggered that Statute and lead to the antipathy in the United States towards patents as discretionary prerogatives or privileges of the sovereign which can be granted as matters of grace or favor and not of right:

In this country, on the contrary, our organic law recognizes in the clearest terms that mind-work which we term inventions. . . . Instead of placing our patent system upon the English foundation of executive favor and conferring that prerogative of the Crown upon the President, they transferred all authority to the legislative department of the government (the department which regulates rights), by placing it among the specially enumerated powers of Congress.

. . . .

. . . Congress are not empowered to grant to inventors a favor, but to secure to them a right. And the term “to secure a right” by no possible implication carries with it the opposite power of destroying the right in whole or in part by appropriating it to the purposes of government without complying with that other condition of the Constitution, the making of “just compensation.” Neither does the term “*the exclusive right*” admit of an implication that with regard to such patentable articles as the government may need the right shall not be exclusive. The transfer of the power from the executive to the legislature; the abandonment of the terms “grant” and “patent”; the substitution of the words “secure,” “right,” and “exclusive”; the absence of an express reservation which at common law attaches to favors of the Crown or is inferable from the terms “grant” and “patent,” are facts which combine to demonstrate that the framers of the Constitution designed to place the work of the inventor among legal rights, which, when properly “secured” in a manner to be provided by law, should become property in the eye of the law and be respected as such by the government as by the citizen.

Pursuant to the plain intent of the Constitution, Congress have never sought to attach such a condition to the issuing of a patent; private acts have been passed remitting claims for the use of patented inventions to this court for adjudication; statutes have been enacted prohibiting or regulating the use of patented articles in the government service (12 Stat. L., 91, 104, § 3; Rev. Stat., § 1537); appropriations have been made to pay inventors the royalty justly due for their property thus taken for public use; the executive departments have freely resorted to patented articles for the purposes of the government, and have made them the subject of express contracts. The

¹⁴³ *McKeever*, 14 Ct. Cl. at 417; *Dixon v. The London Small Arms Co.*, (1876) Q.B.D. 384 (Eng.).

¹⁴⁴ *McKeever*, 14 Ct. Cl. at 417–20.

course of the legislature and the practice of the executive alike forbid the assumption that this government has ever sought to appropriate the property of the inventor, or that it has ever asserted an inherent right to do so analogous to that reserved in Great Britain by the Crown.¹⁴⁵

The government also argued that the use by government agents of McKeever's patented invention was either a tort or under a gratuitous license from McKeever.¹⁴⁶ The court rejected these as "extreme views":

When a vendible article, such as ordinarily is the subject of bargain and sale, is offered by a producer to a consumer, though with no price specified, and is accepted and used by the latter, it is not to be supposed, on the one hand, that the offer was intended as a gift *inter vivos*, nor implied, on the other, that the taking was with a tortious intent.¹⁴⁷

It then recounted the events leading up to the government's adoption and use of McKeever's cartridge boxes, including the facts that the military board had solicited submissions of such items, that McKeever had complied with that process, that the board had selected his design (albeit as somewhat modified by the government), and that the government repeatedly referred to it as "your patent cartridge-boxes" and similar descriptions.¹⁴⁸ Anticipating later concerns of military defense contractors, the court also addressed the issue of patented inventions that had essentially only one purchaser, the government: "The claimant had gone to the expense of turning his invention into property; it was an article salable almost exclusively to the government; his offer imported a desire to sell to almost the only purchaser of such articles"¹⁴⁹

Finally, the government argued that the Court of Claims had no jurisdiction over patent cases because the Patent Act considered infringement a tort and placed jurisdiction in the regular district courts, and not the Court of Claims.¹⁵⁰ The court rejected this because it considered the facts to show an implied license or contract with the government, which was exclusively the jurisdiction of the Court of Claims.¹⁵¹ The court further bolstered its position by contrasting the instant facts with those of other cases where the aggrieved party had potential remedies in other venues.¹⁵²

¹⁴⁵ *Id.* at 421.

¹⁴⁶ *Id.* at 422.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.* at 422–23. The court gave an analogy to further underscore what it felt to be the extreme nature of the defendant's position:

If the Quarter-master-General had appointed a board to select a wood-lot for the fuel of the army, and a farmer had written to him recommending his wood, and the board had reported in favor of it, and the Quartermaster Department had proceeded to cut and use the wood, can it be supposed that this would be deemed a tortious taking on the part of the Quartermaster-General or a gratuitous license on the part of the farmer?

Id. at 423.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.* at 423–24.

¹⁵² *Id.* at 424.

Establishing what would become the central vexing issue for the question of patent owner remedies against unauthorized government use, the court stated:

In the present case the claimant has confessedly no remedy in the circuit court against the government, and is without a remedy to recover for his property taken for public use, unless the act creating this court gives him one. That act was passed long after the establishment of the patent system; it is comprehensive in terms; it makes no exception either as regards the kind of property which may be the subject of an implied contract or as regards the jurisdiction of other courts over suits between ordinary litigants. Where, as in this case, there is clearly an implied contract between the government and the citizen; and the suit is brought entirely upon that agreement, and the claimant is without judicial redress elsewhere, we perceive no reason why we should engraft an exception upon the statute which Congress have not placed there.¹⁵³

Notwithstanding this forceful statement by Judge Nott in this case, the issue would not be resolved so easily. Difficult fact patterns would arise in which it was less clear whether the government had intended to engage in any kind of contract, express or implied, with the patent owner. In such cases, the subject matter would fall outside the Court of Claims' jurisdiction, and could most plausibly be argued as only the tort of patent infringement, which in turn could not be alleged against the government.¹⁵⁴ This would leave only the claim of a government taking. At the same time, the question of whether the government should have ownership of, or at least a license to, government employees' inventions was likewise unresolved.

These matters returned to the Supreme Court in the 1881 Supreme Court case of *James v. Campbell*,¹⁵⁵ which involved the somewhat banal, although evidently quite useful, patent for a double stamping mechanism that could be used to simultaneously postmark and cancel the postage stamp on a letter.¹⁵⁶ The assignee of the patent brought suit in the Circuit Court of the Southern District of New York directly against the United States Postmaster for the City of New York, Thomas James, for infringing the patent by using a device alleged to embody it in the New York post office.¹⁵⁷ An earlier claim brought before the Court of Claims was "overruled" by that court,¹⁵⁸ possibly in mistaken reliance on *Pitchers' Case*. And, similar to the arguments in that case, the circuit court viewed the facts in *James* as simple patent infringement by a lower level government official which could not be imputed to the federal government as a taking.¹⁵⁹ The court found for the plaintiffs,

¹⁵³ *Id.*

¹⁵⁴ See *James v. Campbell*, 104 U.S. 356, 358–59 (1881).

¹⁵⁵ 104 U.S. 356 (1881).

¹⁵⁶ *Id.* at 359.

¹⁵⁷ *Id.* at 357.

¹⁵⁸ *Id.*

¹⁵⁹ Compare *James v. Campbell*, 104 U.S. 356, 359 (1881) ("We doubt very much whether such an action can be sustained. It is substantially a suit against the United States itself, which cannot be maintained under the guise of a suit against its officers and agents except in the manner provided by law."), with *Adams v. Bradley*, 1 F. Cas. 93, 97 (C.C.D. Nev. 1878) (No. 48) ("Without an

who had brought an action in equity, likely because of the new injunctive relief provisions of the Patent Act of 1870.¹⁶⁰

However, the Supreme Court overturned this result. It first reiterated its position from earlier cases that the United States has no more rights to practice patents duly issued to others than regular citizens do, absent authorization from and/or compensation to the patent owner.¹⁶¹ But, it built upon Judge Nott's concerns in *McKeever* over the special issues of patents with little to no use outside the government: "Many inventions relate to subjects which can only be properly used by the government, such as explosive shells, rams, and submarine batteries to be attached to armed vessels. If it could use such inventions without compensation, the inventors could get no return at all for their discoveries and experiments."¹⁶² Further, it offered some insights into how the government was trying to manage a new world in which inventions were becoming increasingly important to the execution of governmental functions:

It has been the general practice, when inventions have been made which are desirable for government use, either for the government to purchase them from the inventors, and use them as secrets of the proper department; or, if a patent is granted, to pay the patentee a fair compensation for their use.¹⁶³

The Court also strengthened its comments from *Burn's Case* that there would be no equivalent in U.S. patent law to British Crown Rights.¹⁶⁴ Related to this, the Court stated that patent applicants, upon satisfying the statutory criteria, are "entitled to

act of congress no direct proceedings will lie at the suit of an individual against the United States or its property; and no officer of the government can waive its privilege in this respect, nor lawfully consent that such a suit may be prosecuted so as to bind the government.").

¹⁶⁰ *Campbell v. James*, 4 F. Cas. 1168, 1173 (C.C.S.D. N.Y. 1879) (No. 2361) *rev'd*, 104 U.S. 356 (1881); *see* Patent Act of 1870, ch. 230, §§ 52, 55, 58, 60, 16 Stat. 198, 198–217.

¹⁶¹ *Id.* at 357–58.

That the government of the United States when it grants letters-patent for a new invention or discovery in the arts, confers upon the patentee an exclusive property in the patented invention which cannot be appropriated or used by the government itself, without just compensation, any more than it can appropriate or use without compensation land which has been patented to a private purchaser, we have no doubt. The Constitution gives to Congress power 'to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries,' which could not be effected if the government had a reserved right to publish such writings or to use such inventions without the consent of the owner.

Id.

¹⁶² *Id.* at 358.

¹⁶³ *Id.*

¹⁶⁴ *Id.* ("The United States has no such prerogative as that which is claimed by the sovereigns of England, by which it can reserve to itself, either expressly or by implication, a superior dominion and use in that which it grants by letters-patent to those who entitle themselves to such grants.").

[the patent grant] as a matter of right, and does not receive it, as was originally supposed to be the case in England, as a matter of grace and favor.”¹⁶⁵

But, the *James* Court also took pains to suggest, in dicta, that the Court of Claims’ recommendation that infringement actions be brought directly against government officials in the circuit courts was just plain wrong:

The course adopted in the present case, of instituting an action against a public officer, who acts only for and in behalf of the government, is open to serious objections. We doubt very much whether such an action can be sustained. It is substantially a suit against the United States itself, which cannot be maintained under the guise of a suit against its officers and agents except in the manner provided by law.¹⁶⁶

The Court did, however, acknowledge the existing statutory and jurisdictional challenges to plaintiffs seeking compensation, or even injunctive relief, for unauthorized use of their patents by the government.¹⁶⁷ At the same time, given the change of position in the Court of Claims, as evidenced by decisions such as *McKeever*, the *James* Court noted that patent owners could approach the Court of Claims with actions in *assumpsit* based on theories of implied contract with the government.¹⁶⁸ Ultimately, however, the *James* Court conceded that the Court of Claims’ jurisdiction in such matters has not been tested by the Supreme Court, and that if the Court of Claims’ jurisdiction does not reach to these cases, then “the only remedy against the United States, until Congress enlarges the jurisdiction of that

¹⁶⁵ *Id.* This last point is also supported by the affirmative language in both the 1836 and 1870 patent acts that patents must be issued where the invention and application meet all requisite criteria. See Patent Act of 1836, ch. 357, § 7, 5 Stat. 117, 119–20; Patent Act of 1870, ch. 230 § 24, 16 Stat. 198, 201.

¹⁶⁶ *James*, 104 U.S. at 359. Similar arguments would later be considered in *Ex Parte Young* with regard to actions to obtain injunctions against state officials in their individual capacity in ways that were clearly attempts to limit state action. *Ex Parte Young*, 209 U.S. 123 (1908). In that case, Railway stockholders filed suit against the Minnesota State Attorney General complaining that a state statute establishing railway rates was unconstitutional. *Id.* at 129. The district court enjoined the enforcement of the statute, and when the Attorney General violated the injunction by attempting to enforce the statute anyway, the court found him in contempt and issued an injunction against him in his individual capacity. *Id.* at 132. The Attorney General appealed on the basis of state sovereign immunity. *Id.* at 141. Ultimately, the Supreme Court held that state officials did not enjoy the protection of sovereign immunity when they attempt to enforce unconstitutional laws. *Id.* at 167.

¹⁶⁷ *James*, 104 U.S. at 358–59.

[T]he mode of obtaining compensation from the United States for the use of an invention, where such use has not been by the consent of the patentee, has never been specifically provided for by any statute. The most proper forum for such a claim is the Court of Claims, if that court has the requisite jurisdiction. As its jurisdiction does not extend to torts, there might be some difficulty, as the law now stands, in prosecuting in that court a claim for the unauthorized use of a patented invention

Id.

¹⁶⁸ *Id.* at 359 (“[W]here the tort is waived, and the claim is placed upon the footing of an implied contract, we understand that the court has in several recent instances entertained the jurisdiction.”).

court, would be to apply to Congress itself.”¹⁶⁹ Because the *James* Court was able to decide the case on the basis of patent invalidity anyway, it expressly disavowed any resolution of these other issues at that time.¹⁷⁰ Notwithstanding these other issues, the central finding that neither the government nor its employees could practice private patents without authorization and/or compensation was now settled enough to be treated as the law of the land by at least one major patent treatise of the period.¹⁷¹

By the end of the decade, Congress had indeed enlarged the Court of Claims’ jurisdiction. Under a revised and restated enabling statute passed in 1887, the Court of Claims now had the authority to “hear and determine the following matters”:

First. All claims founded upon the Constitution of the United States or any law of Congress, except for pensions, or upon any regulation of an Executive Department, or upon any contract, expressed or implied, with the Government of the United States, or for damages, liquidated or unliquidated, in cases not sounding in tort, in respect of which claims the party would be entitled to redress against the United States either in a court of law, equity, or admiralty if the United States were suable

Second. All set-offs, counter-claims, claims for damages, whether liquidated or unliquidated, or other demands whatsoever on the part of the Government of the United States against any claimant against the Government in said court¹⁷²

Returning yet again to the issue of government rights with respect to employee inventions, in *Solomons v. United States*¹⁷³ and *United States v. Davis*,¹⁷⁴ the Court of Claims decided that even when a government employee is specifically charged with inventing as a general matter, he may patent resulting inventions himself, but the government *does* get a non-exclusive license.¹⁷⁵ Inexplicably, this made the hired-to-invent claim harder for the government to prove than it was for private employers under cases such as *Hapgood v. Hewitt*.¹⁷⁶ To be clear, courts were refusing to equitably convey title to private employers even where an employee was specifically hired to invent *unless* the employee had also expressly agreed to assign the inventions.¹⁷⁷ However, the rationale in *Solomons* and *Davis* was not one of shop rights, but rather that the employee could not be unjustly enriched by work done for

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ See ALBERT H. WALKER, TEXTBOOK OF THE PATENT LAWS OF THE UNITED STATES OF AMERICA 145 (Baker, Voorhis & Co., 4th ed. 1904).

¹⁷² Tucker Act of 1887, ch. 359, 24 Stat. 505 (current version at 28 U.S.C. § 1491 (2012)).

¹⁷³ *Solomons v. United States*, 22 Ct. Cl. 335 (1887).

¹⁷⁴ *United States v. Davis*, 23 Ct. Cl. 329 (1888).

¹⁷⁵ *Solomons*, 22 Ct. Cl. at 342; *Davis*, 23 Ct. Cl. at 334.

¹⁷⁶ *Hapgood v. Hewitt*, 119 U.S. 226 (1886).

¹⁷⁷ *E.g., id.* at 233 (affirming the district court’s decision that the employee-inventor’s contract, as written, did not require him to assign his patent to the employer, and thus, title to the employee-inventor’s patent had not been equitably assigned to the employer).

the government by being effectively paid twice for the invention he was hired to make.¹⁷⁸ At the same time, the *Solomons* and *Davis* decisions allowed the employees to enforce their patents against private third parties, which would mean that they were still profiting in some ways from their government work beyond their regular compensation.¹⁷⁹

In 1888, the Supreme Court affirmed a Court of Claims finding of implied contract as a basis for recovery against the government in *United States v. Palmer*,¹⁸⁰ on a fact pattern quite similar to *McKeever*. In fact, the government use at issue—in this case, patented infantry equipment, including braces—stemmed from the same military board procurement process as that in *McKeever*.¹⁸¹ Likewise, the same record of express adoption of the patented inventions by the government was found by the Court of Claims.¹⁸² Also similarly, the government later argued that its alleged actions were simply patent infringement—a tort—that fell outside the jurisdiction of the Court of Claims.¹⁸³ Affirming the Court of Claims, the *Palmer* Court held that jurisdiction in the Court of Claims was proper where there was an express or implied contract with the government:

[W]hile that objection [that an action on a patent cannot be brought in the Court of Claims] may be available as to actions for infringement of a patent, in which its validity may be put in issue, and in which the peculiar defenses authorized by the patent laws . . . may be set up, it is not valid as against actions founded on contracts for the use of patented inventions.¹⁸⁴

In *Palmer*, the Court had already confirmed that: “This is not a claim for infringement, but a claim of compensation for an unauthorized use,—two things totally distinct in the law; as distinct as trespass on lands is from use and occupation under a lease.”¹⁸⁵

The Supreme Court then affirmed *Solomons* in 1890, but did *not* find a hired-to-invent right in the government, and wrote in dicta what became the seminal formulation of the hired-to-invent rule:

An employe[e], performing all the duties assigned to him in his department of service, may exercise his inventive faculties in any direction he chooses, with the assurance that whatever invention he may thus conceive and perfect is his individual property. There is no difference between the government and any other employer in this respect. But this general rule is

¹⁷⁸ *Davis*, 23 Ct. Cl. at 334.

¹⁷⁹ *E.g., id.* (discussing only the limitations on remedies against the government, not private third parties, against whom the patent would be enforceable).

¹⁸⁰ *United States v. Palmer*, 128 U.S. 262 (1888).

¹⁸¹ *Compare id.* at 262–63, *with McKeever v. United States*, 14 Ct. Cl. at 442 (recounting a military board made up of the same officers to meet July 1, 1874 at Fort Leavenworth, Kansas).

¹⁸² *Palmer*, 128 U.S. at 268–69.

¹⁸³ *Id.* at 269.

¹⁸⁴ *Id.* (citing *United States v. Burns*, 79 U.S. (12 Wall.) 246 (1870) and other cases, and distinguishing *Pitcher v. United States*, 1 Ct. Cl. 7 (1863)).

¹⁸⁵ *Id.*

subject to these limitations: If one is employed to devise or perfect an instrument, or a means for accomplishing a prescribed result, he cannot, after successfully accomplishing the work for which he was employed, plead title thereto as against his employer. That which he has been employed and paid to accomplish becomes, when accomplished, the property of his employer. Whatever rights as an individual he may have had in and to his inventive powers, and that which they are able to accomplish, he has sold in advance to his employer.¹⁸⁶

Meanwhile, the shop rights and hired-to-invent doctrines for private companies continued to evolve as the Supreme Court decided two new cases in 1893. First, in *Dalzell v. Dueber Watch-Case Manufacturing Co.*, the Court held that the express agreement necessary for invocation of the hired-to-invent exception and equitable conveyance of patent rights need not be in writing.¹⁸⁷ And second, in *Lane & Bodley Co. v. Locke*, the Court held that, where the employee conducted experiments at his employer's expense, and then remained employed for a long time with full knowledge that the resultant invention was being used by the employer, the employee had granted an implied license to the employer.¹⁸⁸

That same year, the Supreme Court decided another government employee case in *McAleer v. United States*.¹⁸⁹ The employee argued that he executed a formal assignment of the patent to the government in exchange for consideration that included his continued employment.¹⁹⁰ However, there was nothing in the written agreement to that effect.¹⁹¹ While the Court affirmed the lower court's ruling, and endorsed the lower court's references to *Solomon* and *Davis*, the true basis of the holding was that the written assignment agreement was "a complete legal obligation in itself, with no uncertainty as to the object or extent of the engagement, and could not be defeated, contradicted, or varied by proof of any collateral parol agreement inconsistent with its terms."¹⁹²

Around this same time, the Court of Claims found that a government employee who invented a device before being employed by the government was not receiving unjust enrichment when he required compensation for government use of his patented invention in *Talbert v. United States*.¹⁹³ The Supreme Court affirmed the case in 1894, but only on the limited appeal of the amount of compensation, which the Court found to be an issue of fact, not law.¹⁹⁴ An important theme developing in the government employee cases was the prevention of government employees abusing their offices by requiring the government to use their patents and then profiting from the royalties.

¹⁸⁶ *Solomons v. United States*, 11 S. Ct. 88 (1890).

¹⁸⁷ *Dalzell v. Dueber Watch-Case Mfg. Co.*, 149 U.S. 315, 320 (1893).

¹⁸⁸ *Lane & Bodley Co. v. Locke*, 150 U.S. 193, 201 (1893).

¹⁸⁹ *McAleer v. United States*, 150 U.S. 424 (1893).

¹⁹⁰ *Id.* at 432.

¹⁹¹ *Id.*

¹⁹² *Id.* at 432.

¹⁹³ *Talbert v. United States*, 25 Ct. Cl. 141, 153–55 (1890).

¹⁹⁴ *Talbert v. United States*, 155 U.S. 45, 46 (1894).

That same year, the Supreme Court decided the seminal case of *Schillinger v. United States*,¹⁹⁵ which involved a patent for an improvement in laying concrete pavement issued to John J. Schillinger.¹⁹⁶ The actual infringer was a government contractor working for the architect of the U.S. Capitol to lay concrete pavement on the Capitol grounds.¹⁹⁷ Further, this contractor had indemnified the United States for any patent infringement actions against the latter arising from the execution of this work, even as there was substantial debate as to whether the architect knew that the contractor might employ a pavement arguably infringing the Schillinger patent.¹⁹⁸ Yet, unlike the patent owner in *James v. Campbell*, who chose to bring a personal action against an officer of the United States in circuit court,¹⁹⁹ and perhaps following the Supreme Court's admonishment in that case,²⁰⁰ the owners of the Schillinger patent brought an action in *assumpsit* based on an implied contract theory directly against the United States in the Court of Claims.²⁰¹ However, the wrinkle was that the actions were those of the contractor and not of government employees.²⁰² The Court of Claims held that there was no contract express or implied between the government and the claimants and that accordingly the matter was outside of its jurisdiction (as explained further below).²⁰³

The claimants appealed to the Supreme Court which affirmed the Court of Claims decision.²⁰⁴ The tenor of the majority's opinion towards unauthorized government use of private patents, as expressed by Justice Brewer in his opinion for the majority, is quite different from that in the *James* case.²⁰⁵ Whereas, in *James*, the question of the nature of the patent grant was discussed by the majority and dissent alternately as property or contract, in *Schillinger*, the focus of potential government liability for unauthorized use of a private patent was first and foremost on the sovereign immunity of the United States:

The United States cannot be used in their courts without their consent, and in granting such consent congress has an absolute discretion to specify the cases and contingencies in which the liability of the government is submitted to the courts for judicial determination. Beyond the letter of such consent the courts may not go, no matter how beneficial they may deem, or in fact might be, their possession of a larger jurisdiction over the liabilities of the government.²⁰⁶

¹⁹⁵ *Schillinger v. United States*, 155 U.S. 163 (1894).

¹⁹⁶ *Id.* at 163.

¹⁹⁷ *Id.* at 164.

¹⁹⁸ *Id.*

¹⁹⁹ *James v. Campbell*, 104 U.S. 356, 359 (1881).

²⁰⁰ *Id.* at 358–59.

²⁰¹ *See Schillinger v. United States*, 155 U.S. 163, 165–66 (1894).

²⁰² *Id.* at 171–72.

²⁰³ *Id.* at 165–66.

²⁰⁴ *Id.* at 165–66.

²⁰⁵ *Compare id.*, with *James v. Campbell*, 104 U.S. 356 (1881).

²⁰⁶ *Schillinger*, 155 U.S. at 166.

The Court then reviewed the relevant history of the U.S. Court of Claims and concluded that the latter had no jurisdiction to hear cases against the government arising in tort.²⁰⁷ Applying this to the case at hand, it argued that the patent infringement at issue “was a tort pure and simple.”²⁰⁸ But, the outcome of this analysis was that because the activities at issue were primarily those of the private contractor—amounting to a misappropriation sounding only in tort—and *not* a breach of an express or implied contract by the government, then the case fell outside of the jurisdiction of the Court of Claims.²⁰⁹ At the same time, because the Court holds that the government’s power to choose whether and when it can be sued in its own courts is essentially absolute, the claimants have no remedy or recourse against the government in any other forum either.²¹⁰

The Court also addressed the argument that a government taking of private property creates a claim “founded upon the constitution of the United States” that brings it squarely within the jurisdiction of the Court of Claims under the 1887 Act, regardless of whether the taking was also a misappropriation.²¹¹ This is a powerful argument that the Court rebuffs primarily through a *reductio ad absurdum*:

If that argument be good, it is equally good applied to every other provision of the constitution as well as to every law of congress. This prohibition of the taking of private property for public use without compensation is no more sacred than that other constitutional provision that no person shall be deprived of life, liberty, or property without due process of law. Can it be that congress intended that every wrongful arrest and detention of an individual, or seizure of his property by an officer of the government, should expose it to an action for damages in the court of claims? If any such breadth of jurisdiction was contemplated, language which had already been given a restrictive meaning would have been carefully avoided.²¹²

At the same time the Court appeared willing to grant that an action against the government seeking compensation for use of a privately held patent might properly lie within the jurisdiction of the Court of Claims based on a theory of express or implied contract. The Court cited the facts of *Palmer* for the easy case where the patentee “invited the government to adopt his patented infantry equipments, and the government did so.”²¹³ Under those facts, “an implied contract for compensation fairly arose under the license to use, and the actual use, little or much, that ensued

²⁰⁷ *Id.* at 167–168.

²⁰⁸ *Id.* at 169 (“The petition charges a wrongful appropriation by the government, against the protest of the claimants, and prays to recover the damages done by such wrong.”).

²⁰⁹ *Id.* at 170.

²¹⁰ *Id.* at 166. Except, perhaps, the sort of direct appeal to Congress that the Court states was the sole recourse for any claimant against the government before the Court of Claims was established in the first place. *Id.*

²¹¹ *Id.* at 168.

²¹² *Id.*

²¹³ *Id.* at 170 (quoting *United States v. Palmer*, 128 U.S. 262 (1888)).

thereon.”²¹⁴ This was similar to the decisions in *Burns* and *McKeever*. The Court then cited other property use cases where an implied contract was held to have been entered into by the government.²¹⁵ In each, the key elements for the Court seemed to have been that (i) there was at least some meeting of the minds between the property owner and the government evidencing the assent of the owner to such use, and (ii) the government gave clear acknowledgment that it was appropriating the use of the owner’s property and thus made “no pretense of title.”²¹⁶

But, in *Schillinger*, “the claimants never authorized the use of the patent right by the government; never consented to, but always protested against it; threatening to interfere by injunction or other proceedings to restrain such use.”²¹⁷ Further:

There was no point in the whole transaction from its commencement to its close where the minds of the parties met, or where there was anything in the semblance of an agreement. So, not only does the petition count upon a tort, but also the findings show a tort. That is the essential fact underlying the transaction, and upon which rests every pretense of a right to recover.²¹⁸

Thus, even while the Court conceded that “a party may sometimes waive a tort and sue in assumpsit, as on an implied promise,” it countered that “it is technically a sufficient reply to say that these claimants have not done so. They have not counted on any promise, either express or implied.”²¹⁹

At the same time, the Court made it clear that its opinion was not merely an exercise in formalism, potentially denying relief to a righteous claimant due to a technicality.²²⁰ Rather, the Court appeared to be troubled by what it perceived to be a lack of clear authorization by the government, or even its agent, to infringe Schillinger’s patent:

There was no act of congress in terms directing or even by implication suggesting, the use of the patent. No officer of the government directed its use, and the contract which was executed by [the contractor] did not name or describe it. There was no recognition by the government or any of its officers of the fact that in the construction of the pavement there was any use of the patent, or that any appropriation was being made of claimants’ property. The government proceeded as though it were acting only in the management of its own property and the exercise of its own rights, and without any trespass upon the rights of the claimants.²²¹

²¹⁴ *Schillinger v. United States*, 155 U.S. 163, 170 (1894) (quoting *United States v. Palmer*, 128 U.S. 262 (1888)).

²¹⁵ *See id.* (citing *United States v. Russell*, 80 U.S. 63 (1871)); *id.* at 171 (citing *United States v. Great Falls Mfg. Co.*, 112 U.S. 645 (1884)).

²¹⁶ *See Schillinger*, 155 U.S. at 171.

²¹⁷ *Id.* at 170.

²¹⁸ *Id.*

²¹⁹ *Id.* at 169.

²²⁰ *Id.*

²²¹ *Id.*

These facts would mitigate against a finding of an implied contract under the Court's criteria set out above.

The Court also seemed to suggest an element of bad faith on the part of the claimants for the latter's use of the tort waiver/implied contract argument upon appeal: "There was no suggestion of a waiver of the tort, or a pretense of any implied contract, until after the decision of the court of claims that it had no jurisdiction over an action to recover for the tort."²²² Finally, the Court took a further swipe at the legitimacy of claimants' allegations of infringement by the government in that the latter wound up with none of the claimants' property at the end of the project:

But what property of the claimants has the government appropriated? It has and uses the pavement as completed in the capitol grounds, but there is no pretense of a patent on the pavement as a completed structure. When a contractor, in the execution of his contract, uses any patented tool, machine, or process, and the government accepts the work done under such contract, can it be said to have appropriated and be in possession of any property of the patentee in such a sense that the patentee may waive the tort, and sue as on an implied promise?²²³

However, this eminent domain power seemed to reach only the practice of the patent by or on behalf of the government (i.e., as part of a government function or service) and required compensation for the taking.²²⁴ It did not authorize the conventional compulsory license, where the sovereign grants, or requires the grant of, a license from the patent holder to one or more of the latter's competitors to be used in competition with the patent holder. This conventional compulsory license is a "rarity" in the U.S. patent system.²²⁵

The difference between the eminent domain license and the conventional compulsory license is not merely semantic. Rather, it is decidedly practical because it determines who pays the patent owner for the unauthorized use of her patent. In the eminent domain license, the government must compensate her either when it practices the patent directly or when it authorizes a private contractor to practice the patent on its behalf.²²⁶ But, the sole arbiter of this compensation is the Court of Federal Claims, and the patent owner must bring suit there to receive any compensation—no payments flow "automatically" from the exercise of the eminent domain license.²²⁷ Contrast this with the conventional compulsory license in which

²²² *Id.* at 170.

²²³ *Id.* at 172.

²²⁴ *Schillinger v. United States*, 155 U.S. 163, 177–78 (1894) (Harlan, J., dissenting).

If Schillinger's patent was valid, then the government is bound by an obligation of the highest character to compensate him for the use of his invention, and its use by the government cannot be said to arise out of mere tort, at least where its representative did not himself dispute, nor assume to decide, the validity of the patent.

Id.

²²⁵ *Dawson Chem. Co. v. Rohm & Haas*, 448 U.S. 176, 215 (1980).

²²⁶ *See Leeson Corp. v. United States*, 220 Ct. Cl. 234, 244 (1979).

²²⁷ *See* 28 U.S.C. § 1498 (2012)

either the government sets the compensation rate *ex ante* as part of the license grant, or a court or administrative body establishes what a “reasonable” royalty rate is *ex post*.²²⁸ In either of these cases, the licensed party—who is permitted to bring the patented product to market on its own behalf as a private commercial venture—pays the patent owner for this unauthorized use of the patent owner’s patent.²²⁹

Consequently, the conventional compulsory license is a better financial proposition for the government. But, absent specific language in the compulsory license order to the contrary, the government is left with relatively little control over how the patent will be practiced and has no right to practice the patent itself. Further, the conventional compulsory license is likely viewed with far more distaste by patent owners than the eminent domain license because a compulsory license authorizes a patent owner’s competitors to compete with her in the commercial marketplace based on her own technology.²³⁰ The eminent domain license instead gives the government control over the practice of the patent even while it keeps the patent owner’s commercial competitors at bay.²³¹

Therefore, a fundamental issue in considering either type of involuntary grant is the policy objective the government is trying to achieve. For example, if the objective is simply to level a commercial playing field where a patent owner has acted in an anticompetitive manner based in part on her patents, then a compulsory license to competitors might be warranted. In fact, such compulsory licenses (as well as outright assignments) have been key components of settlements of some antitrust actions brought by the federal government.²³² But, if instead the objective is to make sure that the government has access to technology that it needs to fulfill its core purposes, then clearly an eminent domain license is indicated. Indeed, it was the concern that the federal government would not be able to procure enough munitions in wartime that led to the statutory codification of the government’s eminent domain powers regarding patents.²³³ Private contractors had become reluctant to take on government munitions contracts because they feared patent infringement lawsuits by the private patent owners whose inventions had been incorporated without authorization or license into those munitions.²³⁴

²²⁸ Compare Christopher Gibson, *A Look At the Compulsory License In Investment Arbitration: The Case of Indirect Expropriation*, 25 AM. U. INT’L L. REV. 357, 364 (2010) (stating that compulsory licenses are normally granted on an *ex post* basis in the patent context), with 17 U.S.C. § 111(d) (establishing *ex ante* royalty rates for compulsory licensing of secondary cable transmissions of copyrighted works), and 17 U.S.C. §§ 801, 803 (establishing a panel of Copyright Royalty Judges charged with making rate determinations for various compulsory licenses on both *ex ante* and *ex post* bases).

²²⁹ Christopher Gibson, *A Look At the Compulsory License In Investment Arbitration: the Case of Indirect Expropriation*, 25 AM. U. INT’L L. REV. 357, 364–65 (2010).

²³⁰ *Id.* at 367.

²³¹ See, e.g., *Decca Ltd. v. United States*, 640 F.2d 1156, 1166–67 (Ct. Cl. 1980) (explaining that the eminent domain license provided by 28 U.S.C. § 1498 grants rights only to the U.S. Government and its contractors, and not to the patentee’s competitors).

²³² See, e.g., *United States v. 3D Sys. Corp. & DTM Corp.*, No. Civ. 1:01CV01237(GK), 2001 WL 964343 (D.D.C. Aug. 16, 2001).

²³³ See *infra* Part II.

²³⁴ *Id.*

The value of the government's eminent domain powers with respect to patents is practically limited then in two ways. First, it must still compensate the patent owner for the use, which adds to the cost of procuring the good or service that it needs.²³⁵ Second, private contractors may still be subject to the costs of responding in court to infringement lawsuits, before moving to have them dismissed.²³⁶ Accordingly, where the government can develop its own technologies, it can avoid the complications of takings actions.

There are three further reasons why the government might be interested in developing its own technologies and holding the related patents. First, assuming the validity of the theory that government's main purpose is to provide necessary services that will not be forthcoming from the private sector in a market economy, there will be any number of technologies that the government will need that will simply not be developed in a timely fashion, or at all, without government intervention.²³⁷ Second, it may be in the general interest to have some sensitive technologies controlled by the federal government, rather than by private parties, at least until the technology falls into the public domain and is freely available to all.²³⁸ Third, commencing with the government's direct involvement in scientific and technological research and development ("R&D") through both its own intramural research and its support of extramural research, it has found itself in the position of holding at least equitable rights to patents arising from such R&D, similar to employers and other private funders of R&D initiatives.²³⁹ This leads directly to the question of whether the government should be giving away what is arguably its property, and if so, under what conditions.

A year after *Schillinger*, the Supreme Court decided *United States v. Berdan Firearms Manufacturing Co.* on appeal from the Court of Claims.²⁴⁰ Although

²³⁵ Wesley D. Greenwell, *State Immunity for Patent Infringement Lawsuits: Inverse Condemnation as an Alternative Remedy*, 63 S.C. L. REV. 975, 991 (2012).

²³⁶ See *Madey v. Duke Univ.*, 307 F.3d 1351, 1359–60 (Fed. Cir. 2002).

²³⁷ See Peter Lee, *Toward a Distributive Commons in Patent Law*, 2009 WIS. L. REV. 917, 943–44 (2009) (explaining that through funding upstream research, the government ensures that certain discoveries will be made that would otherwise not exist because "private entities tend to underinvest in research because they cannot appreciate its full social value").

²³⁸ See *id.* at 937–40 (discussing the value of government seizure of health related technology in some circumstances). Of course, extremely sensitive technologies, such as new weaponry, might be best controlled by keeping it confidential within the Department of Defense in the first place. Provisions for control of patents related to national security are located in Chapter 17 of the Patent Act. 35 U.S.C. § 181 (2012). This portion of the Patent Act seems to support my control rationale for some federally owned patents. *Id.* ("Whenever publication or disclosure by the publication of an application or grant of a patent on an invention in which the Government has a property interest might . . . be detrimental to the national security, the Commissioner of Patents upon being so notified shall order that the invention be kept secret . . ."). In a related vein, the relatively recent provision for "statutory invention registrations" ("SIRs") allows federal agencies to effectively force inventions into the public domain without relying on the uncertainty of mere publication to effect the same result. See 35 U.S.C. § 157.

²³⁹ See *McElmurry v. Ark. Power & Light Co.*, 995 F.2d 1576, 1580 (describing "shop right" as "a right that is created at common law, when the circumstances demand it, under principles of equity and fairness, entitling an employer to use without charge an invention patented by one of more of its employees without liability for infringement.").

²⁴⁰ *Berdan Firearms Mfg. Co. v. United States*, 156 U.S. 552 (1895).

seemingly similar to *McKeever* and *Palmer*, this case was more difficult. Berdan, the patent owner, sought compensation on two separate patents for guns.²⁴¹ On the first patent, which was a combination patent, the government appears not to have used all elements of the combination, and thus the Court of Claims rejected, and the Supreme Court affirmed, that the government neither infringed the patent nor had any kind of express or implied contract for use of the patented invention.²⁴² On the second patent, the Court of Claims found, and the Supreme Court affirmed, that the government did indeed use the patented invention in a manner that “were [the government] a private person, [it] would be liable to an action of infringement.”²⁴³ The government tried to argue both that one of its own engineers had later “invented” the particular device and that the employee’s version was materially different from Berdan’s patent, as well as that the government had used it based only on the knowledge of its own employee’s invention.²⁴⁴ But, of course, independent discovery is no defense to patent infringement.²⁴⁵ Notwithstanding, the Court acknowledged that “something more than a mere infringement, which is a tort, and not within the jurisdiction of the court of claims, is necessary to enable the petitioner to maintain this action.”²⁴⁶ In particular, “[s]ome contractual liability must be shown.”²⁴⁷ The Court then found the evidence to fairly show that Berdan intended for the government to use the invention with his consent, in accordance with his wishes, and with the expectation of compensation.²⁴⁸ In this case, however, the Court emphasized the need for evidence of mutuality of assent to find an express or implied contract.²⁴⁹ While this is indeed black letter contract law—as good now as it was in the nineteenth century—the *Palmer* and *McKeever* courts do not seem to have focused on it as carefully.²⁵⁰ Nonetheless, after reviewing the evidence in detail, the *Berdan* Court found both no evidence *negating* assent on the part of the government and some evidence positively showing assent by at least some officers in the military.²⁵¹ This was sufficient to “bring the case clearly within *U.S. v. Palmer*,” and for the Court to affirm the Court of Claims’ finding of a contract sufficient to award some recovery to Berdan.²⁵² The failure of the parties to set a price for the license was found to be no more problematic here than it was in *Palmer* or *United States v. Russell*.²⁵³

²⁴¹ *Id.* at 552–53.

²⁴² *Id.* at 565–66.

²⁴³ *Id.* at 566.

²⁴⁴ *Id.*

²⁴⁵ Karen E. Sandrik, *Warranting Rightful Claims*, 72 LA. L. REV. 873, 903–04 (2012) (“Unlike copyright law, which grants a defense based on independent discovery, patent law provides no good-faith defense to an infringement claim. Thus, defendants have on defense based on unintentional or inadvertent infringement.”).

²⁴⁶ *Berdan Firearms Mfg. Co. v. United States*, 156 U.S. 552, 566 (1895).

²⁴⁷ *Id.*

²⁴⁸ *Id.* at 567–68.

²⁴⁹ *Id.*

²⁵⁰ *United States v. Palmer*, 128 U.S. 262 (1888); *McKeever v. United States*, 14 Ct. Cl. 396 (1878).

²⁵¹ *Berdan Firearms*, 156 U.S. at 568–69.

²⁵² *Id.* at 569.

²⁵³ See *supra* text accompanying note 137.

In 1896, the Supreme Court considered yet a different angle in this ongoing battle. In *Belknap v. Schild*, the patent owner sought an injunction and damages against the government officials who operated a caisson gate at a government facility in California covered by his patents.²⁵⁴ The lower court had granted both the injunctions and a damages award of \$40,000 against the officials.²⁵⁵ The Supreme Court agreed that government officials were not immune from suit simply because of their position, even when acting within their official capacities.²⁵⁶ However, injunctions against individual officials, which would have the effect of precluding the government from using its property, could not be allowed without the United States as a joined party.²⁵⁷ Further, where the profits arising from the unauthorized use by the officials accrued only to the government rather than the officials personally, then damages for those profits could not be awarded against the officials.²⁵⁸ Justice Harlan dissented on the grounds that the majority's ruling would leave patent owners with no effective remedies against the government for unauthorized use of patents where no argument for implied license could bring the case within the jurisdiction of the Court of Claims.²⁵⁹

That same year, the Supreme Court also returned yet again to government employee inventions in *Gill v. United States*.²⁶⁰ The claimed distinction was that Gill, the employee, had been hired neither to invent nor to use his inventive capacities in any regard and had come up with the inventions on his own time, without the use of government resources.²⁶¹ However, he then actually reduced the inventions to practice with government resources, and personally supervised the other government employees who built working versions of his arsenal machines.²⁶² Further, he never mentioned any proprietary position as against the government, nor did he attempt to charge or reserve the right to charge, the government for use of the machines until years later.²⁶³ No government official discussed any license or purchase terms with him for such government use.²⁶⁴ Gill later sold the rights to use his inventions to private parties, while reserving a right of use to the government, but the government remained the primary user of the inventions as they were specially adapted to military uses.²⁶⁵ The Court of Claims had dismissed the claims, and the Supreme Court affirmed.²⁶⁶ Aligning with later government patent policy under the Bayh-Dole Act,²⁶⁷ the Supreme Court considered the notion that the use of government resources to actually reduce the invention to practice could be enough to

²⁵⁴ *Belknap v. Schild*, 161 U.S. 10 (1896).

²⁵⁵ *Id.* at 14.

²⁵⁶ *Id.* at 18.

²⁵⁷ *Id.* at 18.

²⁵⁸ *Id.* at 25–26.

²⁵⁹ *Id.* at 28 (Harlan, J., dissenting).

²⁶⁰ *Gill v. United States*, 160 U.S. 426 (1896).

²⁶¹ *Id.* at 433.

²⁶² *Id.*

²⁶³ *Id.* at 436–37.

²⁶⁴ *Id.*

²⁶⁵ *Id.* at 438 n. 1.

²⁶⁶ *Id.* at 438.

²⁶⁷ Joanna K. Sax, *Financial Conflicts of Interest in Science*, 21 ANNALS HEALTH L. 291 (2012) (discussing the changing role of government in the patent landscape).

grant at least a shop right license to the government, even though the invention had been conceived and constructively reduced to practice outside the scope of employment.²⁶⁸ But, ultimately, it based its affirmance on the grounds that Gill had granted an implied license to the government by his actions.²⁶⁹

Even as the courts were working out the nature and contours of government use of employee and private citizen patents, the beginnings of formal government research funding began with intramural research conducted by the Department of Agriculture and Department of War early in the nineteenth century.²⁷⁰ The beginnings of extramural research arose later under the Morrill Act,²⁷¹ Second Morrill Act,²⁷² and Hatch Act of 1887,²⁷³ which provided support for state Land Grant Universities, Agricultural Colleges, and Agricultural Experiment Stations, respectively. Once inventions started flowing from this research, the government needed to formulate policies for ownership and use of such government-funded inventions. In the absence of federal policy guidance, universities held patents as independent legal entities, while professors occasionally patented inventions resulting from their research and simply took title as individuals.²⁷⁴

II. MOVING TOWARDS RESOLUTION: EARLY TWENTIETH CENTURY STATUTORY AND CASE LAW DEVELOPMENTS

As the twentieth century opened, all three strands of government patent policy were effectively governed by case law. Government use of private patents was limited to suit for compensation in the Court of Claims, provided that the patent owner could show at least an implied license. An open question remained as to the ability of patent owners to sue government officials in narrow ways for either injunctions or damages. Government rights to employee inventions were limited, with the normal result being a shop right license—even where the employee was hired to invent. And finally, government rights to inventions arising under extramural research appeared not to have been tested at all.

In 1900's *Eager v. United States*, the Court of Claims decided yet another case where a government employee sought compensation for the government's use of his patented invention.²⁷⁵ In this case, a mechanic who was not hired to invent, but who, through his primary machinist duties, might design improvements to ordnance, had

²⁶⁸ *Id.* at 433–35.

²⁶⁹ *Id.* at 436–38.

²⁷⁰ U.S. DEP'T OF JUSTICE, INVESTIGATION OF GOVERNMENT PATENT PRACTICES AND POLICIES: REPORT AND RECOMMENDATIONS OF THE ATTORNEY GENERAL TO THE PRESIDENT 13 (1947) [hereinafter "BIDDLE REPORT"].

²⁷¹ Morrill Act of 1862, ch. 130, 12 Stat. 503 (current version at 7 U.S.C. §§ 301–09 (2012)).

²⁷² Second Morrill Act of 1890, ch. 841, 26 Stat. 417 (current version at 7 U.S.C. §§ 321–29).

²⁷³ Hatch Act of 1887, ch. 314, 24 Stat. 440 (current version at 7 U.S.C. §§ 361a–361i).

²⁷⁴ *See, e.g.*, U.S. Patent No. 1,647 to Samuel Morse (of New York University) in 1840; U.S. Patent No. 136,708 to William Dale (of Pennsylvania State College) in 1873; U.S. Patent No. 174,465 to Alexander G. Bell (of Boston University) in 1878; U.S. Patent No. 389,021 to Adolf Sommer (of University of California) in 1888; and U.S. Patent Nos. 638,837 thru 638,840 to Reginald Fessenden (of University of Pittsburgh) in 1899. The Author thanks Gregg Graff for these citations.

²⁷⁵ *Eager v. United States*, 35 Ct. Cl. 556 (1900).

improved upon suggested plans of his supervisor on his own time, and at his own house, for a machine to rifle cannon barrels.²⁷⁶ Streett, the inventor, made a claim to the Secretary of the Navy for compensation for his inventions, which was declined.²⁷⁷ Neither he, nor his assignee, Eager, attempted to enter into a contract with the Navy licensing these inventions until after commencement of the Court of Claims proceeding.²⁷⁸ The court cited *Solomons*²⁷⁹ and *Gill*,²⁸⁰ while making much of the facts that Streett was “surrounded” by other talented individuals and that he was supervised by “knowledgeable” scientific and technical men,²⁸¹ to find that neither Streett nor his assignee was entitled to compensation.²⁸² The court seemed to doubt the validity of the patent, or perhaps even the sole inventor status of Streett, but neither issue was before it in the case.²⁸³

The next year, the Supreme Court affirmed a Court of Claims dismissal of a patent owner’s claim for recovery in *Russell v. United States*.²⁸⁴ The plaintiff, a Captain of Ordnance in the Army, had a lengthy exchange with the Chief of Ordnance about whether the Army would adopt the plaintiff’s patented rifle magazine at a time when the Army was considering adopting a completely new rifle model.²⁸⁵ While this exchange initially seemed quite similar to those recounted in cases favorable to findings for compensation based on an implied contract, such as *Palmer*,²⁸⁶ *McKeever*,²⁸⁷ and *Berdan*,²⁸⁸ it then seemed to veer into more careful statements on the part of the government while also sending Russell on an odd and futile inquiry to the Patent Office to speak with the Commissioner of Patents regarding the Patent Office’s jurisdiction.²⁸⁹ Overall, it seemed like the Chief of Ordnance, on behalf of the Army, was giving Russell the run around and taking advantage of the latter’s clear lack of understanding of the exact process of seeking either a license or compensation.²⁹⁰ In other words, representatives of the Chief seemed to lead Russell to think that an arrangement might be worked out, even as they also suggested that the Norwegian company, who had won the overall bid to deliver the new army rifles, would compensate Russell either directly or through some sort of indemnification agreement with the government.²⁹¹ It is true that, as the exchange went on, representatives of the Chief used increasingly careful language to basically push off Russell and let him know that he had to take up

²⁷⁶ *Id.* at 566.

²⁷⁷ *Id.* at 560.

²⁷⁸ *Id.*

²⁷⁹ *Solomons v. United States*, 11 S. Ct. 88 (1890).

²⁸⁰ *Gill v. United States*, 160 U.S. 426 (1896).

²⁸¹ *Eager*, 35 Ct. Cl. at 566–68.

²⁸² *Id.* at 567.

²⁸³ *Id.* at 568.

²⁸⁴ *Russell v. United States*, 182 U.S. 516 (1901).

²⁸⁵ *Id.* at 519–30.

²⁸⁶ *United States v. Palmer*, 128 U.S. 262, 270 (1888).

²⁸⁷ *McKeever v. United States*, 14 Ct. Cl. 396 (1878).

²⁸⁸ *United States v. Berdan Firearms Mfg. Co.*, 156 U.S. 552 (1895).

²⁸⁹ *Russell*, 182 U.S. at 522–23.

²⁹⁰ *Id.* at 519–30.

²⁹¹ *Id.*

matters directly with the Norwegian firm or through the Court of Claims.²⁹² In the end, Russell was forced to bring an action in the Court of Claims. He sought to position just as Palmer, McKeever, and Berdan had, but the Court of Claims sustained the government's demurrer that no government official had in fact implied a contract to Russell.²⁹³ Writing for the Supreme Court on the appeal, Justice McKenna made much of the fact that the Army had adopted the Norwegian firm's overall rifle design and not Russell's.²⁹⁴ But, Russell had never argued that his patents covered the overall design of the gun. Rather, he simply claimed that his patented magazine design was included in the Norwegian firm's overall design.²⁹⁵ As if not understanding that a patent on an overall unit such as a rifle, or on some constituent parts, need not be in conflict with a patent on a specific separate component of that overall unit, both the Chief of Ordnance and the courts kept referring to the Patent Office's grant of a patent to the Norwegian firm for either a patent on the entire gun (perhaps as a combination of other elements) or some parts of it, as if that were conclusive evidence that Russell's patent could not have been infringed by the manufacture and use of the Norwegian design.²⁹⁶ Notwithstanding the misleading way that the Chief's representatives seemed to deal with Russell, the Court may have been correct that by the end of the exchange of letters it was hard to make out an argument that the Army had assented to even an implied license.²⁹⁷ Thus, both the Court of Claims and the Supreme Court concluded that there was no license.

But, this of course then meant that Russell was out of luck, as he could not sue the government for the tort of patent infringement. Thus, the question is whether the government had wised up after its failed attempts to escape compensation to patent owners (who in some cases were also military employees), such as Palmer, McKeever, and Berdan, by seeking to make sure that its officers in charge of procurement never made any clear statements to patent owners that might look like assent to a license. If so, then this set the government on an abusive infringement policy that would give it *de facto* Crown Rights, as it could use patented inventions adversely with no hint of compensation and then hide behind the shield of sovereign immunity. While this might have indirectly affected the goals of the government attorneys, in earlier cases, who cited British cases to argue that the U.S. government *did* possess something like a Crown Right, it surely went directly against the manifold Supreme Court opinions stating clearly that the United States did *not* have such rights.

A few years later, in 1905, Justice McKenna once again wrote an opinion that essentially rejected rights for a government employee to receive compensation from the government for use of a patented invention.²⁹⁸ In *Harley v. United States*, an employee of the Bureau of Engraving and Printing had responded to the need for a register that could be placed on presses to control the printing of valuable securities

²⁹² *Id.* at 520, 532.

²⁹³ *Id.* at 516.

²⁹⁴ *Id.* at 531.

²⁹⁵ *Id.*

²⁹⁶ *Id.* at 521–23, 531–32, 535.

²⁹⁷ *Id.* at 535.

²⁹⁸ *Harley v. United States*, 198 U.S. 229 (1905).

by submitting his design to the Chief of the Bureau.²⁹⁹ The Chief knew this was Harley's own design and, upon concerns of Harley about seeking a patent to protect his interests, the Chief assured him, "[c]ertainly; I will see that you are protected."³⁰⁰ The Chief even went so far as to secure the services of a patent attorney for Harley.³⁰¹ The device was shown to the Secretary of the Treasury, who quickly endorsed it.³⁰² However, while Harley claimed to have expected compensation and that he believed that the Chief and the Secretary understood and agreed to this, the Chief and the Secretary claimed that they believed that, because Harley was a Treasury Department employee, he would neither expect nor demand remuneration.³⁰³ There was no argument that Harley was hired to invent the register or that he had done it on Treasury time or with Treasury resources.³⁰⁴ Six years went by with the Bureau using, on average, 200 of the registers per day over a period of 1082 working days.³⁰⁵ While the Court made much of the fact that Harley did not bring an express claim for remuneration either directly within the Bureau or Treasury or in the Court of Claims during this time, Harley argued that he was coerced by his subordinate position into not making more demands for compensation until finally bringing this suit.³⁰⁶ Justice McKenna brushed this off in what seemed a quite harsh position: He seemed to think it was silly and unacceptable that Harley felt intimidated,³⁰⁷ but this may reveal more about McKenna and his great good fortune in being a Supreme Court Justice than about the true merits and equities of the situation. In the end, similar to the outcome of *Russell*, the Court found the government's efforts effective and persuasive in showing that, at least from its end, no assent had been forthcoming and thus there could have been no "meeting of the minds" to form a valid contract.³⁰⁸ It specifically cited *Russell* in support, and distinguished the instant facts from *McKeever*.³⁰⁹ It also cited *Schillinger* and *Berdan* for the proposition that contracts or obligations arising from tort (e.g., where the tort was waived by the patent owner and a suit was brought on the grounds of the quasi-contract *assumpsit*) would not satisfy the requirement for a true meeting of the minds and contract.³¹⁰ This arguably raised the bar from earlier cases, which made out an implied contract exactly on the waived-tort *assumpsit* theory.

In response to these developments, the question of redress for government use of private patents came to a head in Congress, and legislation was enacted. The first version of the Government Use Statute was passed as the Act of June 25, 1910, entitled "An Act to Provide Additional Protection for Owners of Patents of the United States, and for Other Purposes."³¹¹ The title was telling because it positioned the Act

²⁹⁹ *Id.* at 229–30.

³⁰⁰ *Id.* at 230.

³⁰¹ *Id.*

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *See generally id.*

³⁰⁵ *Id.* at 230.

³⁰⁶ *Id.* at 235.

³⁰⁷ *See id.* at 234–35.

³⁰⁸ *Id.* at 230.

³⁰⁹ *Id.*

³¹⁰ *Id.*

³¹¹ Act of June 25, 1910, ch. 423, 36 Stat. 851, 851.

as something to benefit patent owners and not the government. The original text is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That whenever an invention described in and covered by a patent of the United States shall hereafter be used by the United States without license of the owner thereof or lawful right to use the same, such owner may recover reasonable compensation for such use by suit in the Court of Claims: Provided, however, That said Court of Claims shall not entertain a suit or reward compensation under the provisions of this Act where the claim for compensation is based on the use by the United States of any article heretofore owned, leased, used by, or in the possession of, the United States: Provided further, That in any such suit the United States may avail itself of any and all defenses, general or special, which might be pleaded by a defendant in an action for infringement, as set forth in [the Patent Act]: And provided further, That the benefits of this Act, shall not inure to any patentee, who, when he makes such claim is in the employment or service of the Government of the United States; or the assignee of any such patentee; nor shall this Act apply to any device discovered or invented by such employee during the time of his employment or service.³¹²

Thus, while the Government Use Statute might seem like a compulsory license provision at first blush to the modern reader, it was in fact carefully crafted to address the absence of remedies for patent owners whose patents were practiced adversely by the government, while not disturbing the growing sense in the courts that the government should have rights to practice inventions of employees. The first part of the statute addressed only those situations where no license could be made out for the government use, express or implied. Further, it did not positively authorize such use by the government, as a compulsory license or Crown Right would. Instead, it merely established that, to the extent such use might occur, the patent owner would no longer be left without a remedy: Such patent owners could bring claims for compensation in the Court of Claims. In other words, this was really an act to enlarge the jurisdiction of the Court of Claims. At the same time, this would have no effect on patent owner claims based on true express or implied contracts with the government. The first proviso addressed the fact patterns in *Pitcher's Case*³¹³ and *Belknap*³¹⁴ by making clear that no such suit in the Court of Claims could provide compensation for the use by the government of physical property it possessed. The second proviso empowered the government to use any defenses that a private defendant could use under the Patent Act of 1870.³¹⁵ Interestingly, the Act does not necessarily say that the action in the Court of Claims

³¹² *Id.*; *Crozier v. Fried. Krupp Aktiengesellschaft*, 224 U.S. 290, 302–03 (1912)

³¹³ *Pitcher v. United States*, 1 Ct. Cl. 7 (1863).

³¹⁴ *Belknap v. Schild*, 161 U.S. 10 (1896).

³¹⁵ Compare Patent Act of 1870, ch. 230, § 61, 16 Stat. 198, 208, with Act of June 25, 1910, ch. 423, 36 Stat. 851.

is an infringement action under the Patent Act—that would be tantamount to saying that the government *could* engage in tortious activities, which the Supreme Court had expressly rejected on many occasions.³¹⁶ Thus, the action may be *like* one for infringement, with similar claims and defenses, but it may not technically *be* an action for infringement sounding in tort. The last proviso then established that government employees could not use the Act either while they were employees or for inventions created while in the government’s employ or service, if they were not employed by the government at the time of the intent to bring suit.³¹⁷ Nor could they use assignees to essentially bring the action for them.³¹⁸

Before the Act was passed, however, the German corporation Krupp had brought suit in the Supreme Court of the District of Columbia for compensation from William Crozier, personally, for his actions as Chief of Ordnance of the U.S. Army for the manufacture of Krupp’s patented field guns and carriages in U.S. arsenals.³¹⁹ The claims also sought an injunction preventing Crozier from directing such manufacture going forward.³²⁰ The latter claim likely was informed by the same legal arguments that impelled various aggrieved railroad owners to seek injunctions against state government officials in what became the landmark case of *Ex Parte Young*,³²¹ as well as the earlier cases of *James v. Campbell* and *Pitcher’s Case*. The original action in *Young* was filed in federal circuit court one week before Krupp filed its action in the D.C. court and sought an injunction preventing the state attorney general and others from enforcing a new set of tariffs under a law that railroad owners believed was unconstitutional for lack of due process.³²² After the injunction issued, the attorney general sought to enforce the law anyway and was found in contempt of court and jailed.³²³ On a petition of *habeas corpus* based on state sovereign immunity under the Constitution, the Supreme Court upheld the lower court’s actions and dismissed the petition, holding that state officials could indeed be enjoined from enforcing illegal or unconstitutional laws.³²⁴ While this proceeding of *Ex Parte Young* in the Supreme Court was decided in March 1908, less than a year after the original filing in the circuit court,³²⁵ Krupp’s action against Crozier was not appealed to the

³¹⁶ *E.g.*, *United States v. Bethlehem Steel Co.*, 258 U.S. 321, 326 (1922) (“We have in other cases expressed our aversion [to tortious use of patents] . . . [A contract] to pay for a mechanism used will be implied rather than a tortious appropriation of it . . .”).

³¹⁷ Act of June 25, 1910, ch. 423, 36 Stat. 851, 852; *see also* *Crozier v. Fried. Krupp Antiangewandtschaft*, 224 U.S. 290, 303 (1912).

³¹⁸ Act of June 25, 1910, ch. 423, 36 Stat. 851, 852; *see also* *Crozier*, 224 U.S. at 303.

³¹⁹ *Crozier*, 224 U.S. at 297.

³²⁰ *Id.* at 298.

³²¹ *Ex Parte Young*, 209 U.S. 123, 129 (1908).

³²² *Id.* at 129–30.

³²³ *Id.* at 133–34.

³²⁴ *Id.* at 167–68. This case has had a major impact on the question of reliance by states on their 11th Amendment sovereign immunity as a shield against patent and copyright suits. *See* *Pennington Seed, Inc. v. Univ. of Ark.*, 457 F.3d 1334 (Fed. Cir. 2006); *Vas-Cath, Inc. v. Curators of the Univ. of Missouri*, 473 F.3d 1376 (Fed. Cir. 2007); *see also* SEAN M. O’CONNOR ET AL., NAT’L ACAD. OF SCI., LEGAL CONTEXT OF UNIVERSITY INTELLECTUAL PROPERTY AND TECHNOLOGY TRANSFER (2010), *available* *at* http://sites.nationalacademies.org/xpeditio/groups/pgasite/documents/webpage/pga_058897.pdf.

³²⁵ *Ex Parte Young*, 209 U.S. at 109.

Supreme Court until 1911, *after* the Government Use Statute was enacted.³²⁶ In the D.C. court, the government had demurred on the grounds of insufficient jurisdiction on the theory that the case was really against the United States.³²⁷ Krupp had also given up, by stipulation, its claims for damages directly from Crozier.³²⁸ The court of appeals reversed and remanded on a holding later characterized by the Supreme Court as:

[having] a broad distinction between interfering by injunction with the use by the United States of its property and the granting of a writ of injunction for the purpose of preventing the wrongful taking of private property, even although the individual who was enjoined from such taking was an officer of the government, and although the purpose of the proposed taking was to appropriate the private property when taken to a governmental purpose.³²⁹

In the appeals court's own words, as quoted by the Supreme Court:

It will thus be seen that in the Belknap and Bruce Cases the subject-matter involved was property of the United States, and that therefore the United States was necessarily a party. In the present case it is not sought to disturb the United States in the possession and use of the guns already manufactured. The court is not asked to deal with property of the United States. The plaintiff simply asks that an officer of the United States be restrained from invading rights granted by the government itself. The acts complained of are not only not sanctioned by any law, but are inconsistent with the patent laws of the United States.³³⁰

On appeal to the Supreme Court, in *Crozier v. Krupp*, the Supreme Court used the intervening enactment of the Government Use Statute to sidestep resolving two thorny and conflicting issues.³³¹ On the one hand, the ability for patent owners to secure injunctions against government officials for essentially performing their tasks could effectively be injunctions against the government itself. This was untenable, especially when important matters of the military were at stake.

But, on the other hand, earlier cases such as *James* had declared the principle that ordinary government officials should not be able to commit the government to wrongful conversions of property, and so, could be enjoined as individuals from converting such property.³³² The Court in *Crozier* quoted the 1910 version of the Government Use Statute and asserted that it was passed expressly to deal with these

³²⁶ *Crozier v. Fried. Krupp Antiengesellschaft*, 224 U.S. 290 (1912).

³²⁷ *Id.* at 300.

³²⁸ *Id.* at 298–99.

³²⁹ *Id.* at 300–01.

³³⁰ *Id.* at 301.

³³¹ *Id.* at 302. The court avoided consideration of both the “correctness of the theory upon which the court of appeals placed its decision and the arguments in favor and against that theory.” *Id.*

³³² *James v. Campbell*, 104 U.S. 356, 357–58 (1881).

kinds of situations (i.e., where there was neither an implied nor express license).³³³ Thus, while acknowledging that the Government Use Statute primarily intended to benefit patent owners, the Court stated that the Statute also implicitly authorized the government to take or appropriate a license.³³⁴ The nature of the Statute then removed the possibility of the government engaging in tortious infringement of a patent because, at the moment of the “unauthorized” use, the government was considered to have constructively taken a license.³³⁵ This turned the action from a potential wrongful tort of conversion into a rightful appropriation under eminent domain theories.³³⁶ Accordingly, the Court reversed the appeals court, with an order to reinstate the trial court’s dismissal of the bill without prejudice, so that Krupp could bring a claim for compensation under the Government Use Statute directly against the United States in the Court of Claims.³³⁷

The combination of the *Crozier* decision and the enactment of the Government Use Statute seemed finally to resolve, at least, the issue of which rights the government had as to unauthorized use of privately owned patents. Nonetheless, *Crozier* was not entirely convincing that the Government Use Statute gave the government positive powers or simply an express statutory mechanism for taking licenses without permission of the owners. Thus, the uneasy issue of whether the government was still relying on a general eminent domain power lingered, along with the question of whether it needed to engage in a formal process before exercising this power with regard to any particular patent.

After *Crozier*, it was generally assumed that federal government contractors enjoyed the same protection under the Government Use Statute as government officials, based in part on the exception to injunctive relief for patent owners originating in *Brady v. Atlantic Works*.³³⁸ However, at the height of World War I, the Supreme Court rejected this interpretation in *Cramp & Sons Ship & Engine Building Co. v. International Curtis Marine Turbine Co.*³³⁹ In particular, the Court sought to cut back a bit on the *Crozier* Court’s broad statements regarding the government’s eminent domain rights under the Government Use Statutes as converting, automatically, any otherwise infringing action of a government official into a constructive license.³⁴⁰ More directly, the *Cramp* Court sought to distinguish the likely proper scenario, where the government specifically authorizes a contractor to manufacture an item that is covered by a third party’s patent, from the scenario

³³³ *Crozier v. Fried. Krupp Antiengesellschaft*, 224 U.S. 290, 302–03 (1912).

³³⁴ *Id.* at 305.

³³⁵ *Id.*

³³⁶ *Id.*

³³⁷ *Id.* at 308–09.

³³⁸ *E.g.*, *Brady v. Atl. Works*, 3 F. Cas. 1190, 1192 (1876) *rev’d on other grounds*, 107 U.S. 192 (1883). Cases following this principle in the pre-World War I period were *Firth-Sterling Steel Co. v. Bethlehem Steel Co.*, 216 F. 755 (E.D. Pa. 1914), and *Marconi Wireless Tel. Co. of Am. v. Simon*, 227 F. 906 (1915). *Marconi* was affirmed by the Circuit Court of Appeals for the Second Circuit, 231 F. 1021 (1916), but then reversed by the Supreme Court in *Marconi Wireless Tel. Co. of Am. v. Simon*, 246 U.S. 46 (1918), a companion case to *Cramp & Sons Ship & Engine Bldg. Co. v. Int’l Curtis Marine Turbine Co.*, 246 U.S. 28 (1918). *See also* Karl Fenning, *Patent Infringement by the Government*, 37 YALE L.J. 773, 776 (1928).

³³⁹ *Cramp*, 246 U.S. 28, 37–39 (1918).

³⁴⁰ *Id.* at 43–44.

where the contractor simply chooses to infringe a third party's patent in order to perform a contract for the government without the infringement being a necessary part of the contracted work.³⁴¹ This former scenario was in line with the injunction exception established in *Brady*,³⁴² whereas the latter was a bit more in line with the controversy in *Schillinger*.³⁴³ Whatever the merits of this distinction, the net result appeared to be a sudden reluctance on the part of key defense contractors to continue entering into government contracts for vital wartime machinery and munitions. Accordingly, partly as a result of a strident letter written by then Secretary of the Navy, Franklin Delano Roosevelt, Congress voted to amend the Government Use Statute through the Naval Appropriations Act of 1918.³⁴⁴ The amendment extended the reach of the Statute to things manufactured *on behalf* of the government, thus bringing the action of contractors within its scope.³⁴⁵ Similar wartime concerns over patents led to the creation of the Army and Navy Patent Board.³⁴⁶

In 1924, the Supreme Court turned back to the question of hired-to-invent scenarios in *Standard Parts Co. v. Peck*.³⁴⁷ The Court finally acted on the dicta in

³⁴¹ *Id.* at 345.

³⁴² *Brady v. Atl. Works*, 3 F. Cas. 1190, 1192–94 (C.C.D. Ma. 1876) (No. 1794) *rev'd on other grounds*, 107 U.S. 192 (1883).

³⁴³ *Schillinger v. United States*, 155 U.S. 163, 170 (1894).

³⁴⁴ The changes are highlighted by use of italics:

That whenever an invention described in and covered by a patent of the United States shall hereinafter be used *or manufactured by or for* the United States without license of the owner thereof or lawful right to use *or manufacture* the same, such owner's *remedy shall be by suit against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture*; Provided, however, That said Court of Claims shall not entertain a suit or award compensation under the provisions of this Act where the claim for compensation is based on the use *or manufacture by or for* the United States of any article heretofore owned, leased, used by, or in the possession of the United States

Act of July 1, 1918, ch. 114, 40 Stat. 704, 705 (1918) (current version at 28 U.S.C. § 1498 (2012)) (emphasis added).

³⁴⁵ *Id.* This interpretation of the amendment was followed by cases such as *Foundation Co. v. Underpinning & Foundation Co.*, 256 F. 374 (1919), and *Floyd Smith Aerial Equipment Co. v. Irving Air Chute Co.*, 276 F. 834 (1921). Notably, the *Floyd* court seemed to read in the *Cramp* Court's distinction between necessary and discretionary use of a patented invention under a government contract as it expressly found and relied on the fact that Irving's use of Floyd's patented invention was based on the express specifications of the government contract. *Id.* at 839. This then could be the origins of the later "authorization and consent" requirement built into later versions of the Government Use Statute. At any rate, the notion was first expressly articulated in *Wood v. Atlantic Gulf & Pacific Co.*, 296 F. 718, 719 (S.D. Ala. 1924) (holding that in order for the amended Government Use Statute to apply, the federal government must authorize or consent to its contractor's infringement of a patent). A lingering question about whether cases against contractors must be brought directly in the Court of Claims, or whether district courts retained jurisdiction was answered by the Supreme Court decision in *Sperry Gyroscope Co. v. Arma Engineering Co.*, 271 U.S. 232 (1926). In that case, the Court held that the amended Act did not deprive district courts of jurisdiction in cases against government contractors, but rather went to the merits of whether the contractor was liable for the infringement. *Id.* at 235–36.

³⁴⁶ *Joint Army and Navy Munitions Patent Board: Hearing on Sundry Civil Appropriation Bill for 1920 Before the Subcomm. of the H. Comm. on Appropriations*, 65th Cong. 3 (1919) (statement of G.H. Dorr, Assistant Dir. of Munitions, War Department).

³⁴⁷ *Standard Parts Co. v. Peck*, 264 U.S. 52, 55 (1924).

Solomons and *Gill* that inventors, under a clear agreement to invent a particular thing as the primary or exclusive scope of their employ with compensation given for the resultant invention, could be equitably ordered to transfer title to the hiring party under the hired-to-invent rule.³⁴⁸ Peck entered into the following agreement:

This agreement witnesseth that second party is to devote his time to the development of a process and machinery for the production of the front spring now used on the product of the Ford Motor Company. First party is to pay second party for such services the sum of \$300 per month. That should said process and machinery be finished at or before the expiration of four months from August 11, 1915, second party is to receive a bonus of \$100 a month. That when finished second party is to receive a bonus of \$10 for each per cent. of reduction from present direct labor, as disclosed by the books of the first party.³⁴⁹

The district court had ruled that Peck had to assign the resultant patent developed under this arrangement.³⁵⁰ However, the Circuit Court of Appeals for the Sixth Circuit reversed, granting the hiring party a shop right license only.³⁵¹ In reversing the court of appeals, the Supreme Court made it clear that, while the pronouncements in *Solomons* and related cases about the hired-to-invent rule were dicta, they were dicta that the prior courts had relied on to reach their actual holdings.³⁵² As such, the *Standard Parts* Court considered these statements controlling precedent and found Peck's agreement to be a clear case of hired-to-invent where title should equitably be transferred to the hiring party.³⁵³

Also in 1924, the District Court for the Southern District of New York decided *Squier v. American Telephone & Telegraph Company*, in which an army officer, who had invented on behalf of the army and then publicly dedicated his patent to the public,³⁵⁴ sought to reclaim exclusivity against the American Telephone & Telegraph Company ("AT&T").³⁵⁵ Squier had invented in the field of wireless communication and sought to protect his inventions for the government.³⁵⁶ As such, he took advantage of the 1883 Act providing that the Patent Office waive fees for government employees who patented inventions with use rights granted to the government.³⁵⁷ While he and the Signal Corps of the Army made much of the public dedication of the patent, it was done during a period when the 1883 Act was interpreted to mean that "any other person in the United States" meant literally any person, whether or not connected with the government, and not simply a catch-all to authorize use by

³⁴⁸ *Id.* at 59.

³⁴⁹ *Id.* at 59.

³⁵⁰ *Id.* at 56.

³⁵¹ *Id.* at 57–58.

³⁵² *Id.* at 59.

³⁵³ *Id.*

³⁵⁴ *Squier v. Am. Tel. & Tel. Co.* 784 F.2d 747, 748 (1924).

³⁵⁵ *Id.*

³⁵⁶ *Id.* at 748.

³⁵⁷ *Id.* at 750.

sundry individuals and organizations working with or on behalf of the government.³⁵⁸ This point, in fact, was made by the Judge Advocate General of the Army (the “Army JAG”) in a 1910 opinion issued in response to Squier’s inquiry about seeking a patent on his invention.³⁵⁹ As part of Squier’s public proclamations about the dedication of his patent to the public he even said:

I will say that I do not want one penny from any one for the discovery. There will be no royalties attached to the use of the plans and specifications, and the American Telephone & Telegraph Company, the War Department, you, or I are as welcome as can be to take copies of these specifications and build multiplex telephone. I have arranged it so that these patents are in the name of the government and the people of the United States.³⁶⁰

However, when a later Army JAG issued an opinion in 1918 stating that the 1883 Act proviso covered only persons working for or on behalf of the government,³⁶¹ Squier suddenly changed his position and contacted AT&T to demand compensation of its ongoing use of his patented invention.³⁶² Then, in 1920, the Acting Attorney General issued an opinion similar to the new position of the Army JAG.³⁶³ Squier thereafter sued AT&T for infringement.³⁶⁴ Writing for the court, Judge Knox expressed skepticism about the 1883 Act interpretations of the Army JAG and Acting Attorney General.³⁶⁵ In doing so, he stated his belief that the Act should be interpreted on the plain reading of its language, especially in light of the Patent Office’s longstanding—and apparently heretofore unchallenged—practice of stamping “Dedicated to the Public” legends on every patent issued under the 1883 Act.³⁶⁶ Ultimately, however, Judge Knox did not decide the case based on this, but rather on Squier’s repeated and painfully clear public statements that he had dedicated use of the invention to the entire public, including AT&T.³⁶⁷ This effectively acted as an abandonment of his rights.³⁶⁸ Notwithstanding the outcome, the case signaled a growing concern among

³⁵⁸ *Id.* at 748.

³⁵⁹ *Id.* at 748. The Army JAG opinion upon which Major Squier relied read:

The patent, if issued, will vest the property rights in Maj. Squier; but the final clause of the above-cited act is to defeat any property rights in the patent within the territorial limits and jurisdiction of the United States, as such rights are prevented from accruing in Maj. Squier’s behalf, in the operation of the last clause of the statute. It is therefore recommended that Maj. Squier be authorized to apply for a patent in the operation of the Act of March 3, 1883, as it is the operation of that act to throw it open to public and private use in the United States

Id.

³⁶⁰ *Id.* at 749.

³⁶¹ *Id.* at 750.

³⁶² *Id.*

³⁶³ *Id.*

³⁶⁴ *Id.*

³⁶⁵ *Id.* at 752.

³⁶⁶ *Id.*

³⁶⁷ *Id.* at 752–53.

³⁶⁸ *Id.* at 753.

government inventors that their magnanimous and public-spirited gestures of “dedicating to the public” their inventions should not then accrue to the profit of private businesses. In other words, this demonstrated the emergence of a desire to separate commercial and noncommercial uses of federally funded inventions.

In 1928, the Court of Appeals for the Fourth Circuit affirmed a lower court holding that a government employee had been specifically hired to invent and assigning title to the government in *Houghton v. United States*.³⁶⁹ In so doing, the court seemed to broaden the hired-to-invent rule from earlier cases by stating that:

[t]he right of the employer to the invention or discovery of the employee depends, not upon the terms of the original contract of hiring, but upon the nature of the service in which the employee is engaged at the time he makes the discovery or invention, and arises, not out of the terms of the contract of hiring, but out of the duty which the employee owes to his employer with respect to the service in which he is engaged.³⁷⁰

At the same time, the court made it clear these were special facts because the employee initially had an ordinary position, but was later asked to work on a special project to invent and was expressly paid solely to produce the invention.³⁷¹ But, the case also signaled a shifting sentiment in the courts that inventions paid for by the government and its taxpayers should be freely available to all:

It is unthinkable that, where a valuable instrument in the war against disease is developed by a public agency through the use of public funds, the public servants employed in its production should be allowed to monopolize it for private gain and levy a tribute upon the public which has paid for its production, upon merely granting a nonexclusive license [to the government].³⁷²

That same year, the 1883 Act was amended to change the troubled proviso.³⁷³ The new language read: “Provided, That the applicant in his application shall state that the invention described therein, if patented, may be manufactured and used by or for the Government for governmental purposes without the payment to him of any royalty thereon, which stipulation shall be included in the patent.”³⁷⁴ This evinced Congress’s clear intent that the Act was to provide a license to the government and its contractors only and not a public dedication, which would undercut the whole premise of a patent. At the same time, the shop rights rule was already granting equitable licenses to the government for employee inventions, and in some cases, the hired-to-invent exception was being applied to transfer title entirely to the government.³⁷⁵ So, the only real benefit of the statute, as amended, would be for inventions developed by government employees on their own time. But, the language

³⁶⁹ *Houghton v. United States*, 23 F.2d 386, 391 (1928).

³⁷⁰ *Id.* at 390.

³⁷¹ *Id.*

³⁷² *Id.* at 391.

³⁷³ Act of April 30, 1928, ch. 460, 45 Stat. 467.

³⁷⁴ *Id.*, 45 Stat. at 468.

³⁷⁵ *E.g.*, *Squier v. Am. Tel. & Tel. Co.* 784 F.2d 747, 750–51 (1924).

was not retroactive, and a subsequent case found that patents issued under the original 1883 Act were still subject to the interpretation that they were dedicated to the public.³⁷⁶

Also in 1928, the Supreme Court upheld the amended Government Use Statute in *Richmond Screw Anchor Co. v. United States*.³⁷⁷ In that case, the Court reaffirmed that the sole remedy for patent owners in matters of infringement by the federal government or its contractors was to seek compensation under the Government Use Statute in the Court of Claims.³⁷⁸ Two caveats from earlier cases still seemed to apply, however. First, the government must specifically authorize contractors to practice the patented invention in question and consent to such use (and its subsequent liability for compensation).³⁷⁹ Second, the statute would not apply where a contractor still had a negotiated licensing agreement with the patent owner.³⁸⁰ Accordingly, this meant that the government and its contractors would be bound to any licenses to which the contractor was a party before or during the federal contract work.

Meanwhile, the government had already begun studying the nature of patents arising under government service. As early as 1919 and 1920, a bill was sponsored by the Interior Department to provide for voluntary assignment or license of patents by any government employee to the Federal Trade Commission (“FTC”).³⁸¹ The FTC could then license the patents to manufacturers, with any resultant license fees paid into the Treasury, and whatever portion might be deemed equitable paid to the inventor.³⁸² The bill failed to pass Congress.³⁸³

In 1923, an *ad hoc* interdepartmental patents board, created by executive order, recommended regulations establishing that, in the absence of a contract to the contrary, government employees retain ownership of their inventions.³⁸⁴ The rationale was that a dedication to the public would defeat the purpose and incentive of a patent.³⁸⁵ It also strongly rejected proposals that government employees be required to assign their inventions to the government, on the basis that it would be very difficult to attract and retain talented individuals to the already low-paying government positions.³⁸⁶ Finally, the board recommended legislation to establish a permanent board with the power to demand assignment of government employee patents where the inventions were related to national defense or were otherwise in the public interest.³⁸⁷ Its power to demand such assignments would be founded on a different part of the legislation that would make it an express term of government

³⁷⁶ See, e.g., *Selden Co. v. Nat'l Aniline & Chem. Co.*, 48 F.2d 270, 271 (W.D.N.Y. 1930).

³⁷⁷ 275 U.S. 331, 346 (1928).

³⁷⁸ *Id.* at 306–08.

³⁷⁹ Act of July 1, 1918, ch. 114, 40 Stat. 705 (current version at 28 U.S.C. § 1498 (2012)); *supra* text accompanying note 344; *Wood v. Atlantic Gulf & Pacific Co.*, 296 F. 718, 722 (1924).

³⁸⁰ *Newport News Shipbuilding & Dry Dock Co. v. Isherwood*, 5 F.2d 924, 933–34 (4th Cir. 1925).

³⁸¹ *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 205–06 (1933).

³⁸² *Id.* at 205.

³⁸³ *Id.* at 206.

³⁸⁴ *Id.*

³⁸⁵ *Id.*

³⁸⁶ See *id.* at 206–07.

³⁸⁷ *Id.* at 207.

employment that any inventions would be subject to the board's power in this regard.³⁸⁸ None of the recommendations were adopted.³⁸⁹

Coincidentally, in some universities, faculty had begun assigning their inventions to the university as early as World War I.³⁹⁰ By the 1930s, a number of universities had adopted institutional patenting policies.³⁹¹ Notwithstanding, the government had no uniform patent policy for intramural or extramural research, and most of its funded research was devoted to "agriculture and the development of land resources."³⁹²

In the absence of government-wide policies or regulations, some government departments had begun issuing regulations governing employee inventions.³⁹³ Thus, in the 1930 case of *Selden Co. v. National Aniline & Chemical Co.*, the District Court for the Western District of New York upheld employee invention regulations of the Department of Agriculture as consistent with the 1883 Act and having the force of law.³⁹⁴ The pertinent regulation required employee inventions to be "patented in the name of the inventor without expense to him, in such a way as to allow any citizen of the United States to use the patented article or process without payment of royalties."³⁹⁵ Because the case was decided after amendment of the 1883 Act, but the patents were filed before, the question was raised as to which interpretation of the Act would govern.³⁹⁶ The court held that the amendment was not retroactive.³⁹⁷ And while it inclined towards the dicta in *Squier*, that the Act granted free rights to the entire public,³⁹⁸ it focused its decision on the Department's regulations and the practice of the Patent Office to mark patents issued under the 1883 Act as either

³⁸⁸ *Id.*

³⁸⁹ *Id.*

³⁹⁰ *See, e.g.*, U.S. Patent No. 1,212,945 to Thomas P. Haslam in 1917 (assigned to Kansas Agricultural College); U.S. Patent No. 1,218,472 to T. Brailsford Robertson in 1917 (assigned to University of California, by agreement); U.S. Patent No. 1,392,767 to Edward C. Kendall in 1921 (assigned to University of Minnesota); and U.S. Patent No. 1,491,900 to Daniel G. Chilson in 1924 (assigned to University of Arizona). The Author thanks Gregg Graff for these citations.

³⁹¹ Archie MacInnes Palmer, *University Patent Policies*, 16 J. PAT. OFF. SOC'Y 96 (1934) (noting that, among others, Columbia University, St. Louis University, and the University of Illinois had patent policies in place by the early 1930's).

³⁹² BIDDLE REPORT, *supra* note 270, at 13 (noting that, prior to World War II, the major focus of government R&D was devoted to "agriculture and the development of land resources").

³⁹³ BIDDLE REPORT, *supra* note 270, at 22. The Tennessee Valley Authority ("TVA") had a patent policy prescribed by Congress, in which the TVA retained sole and exclusive ownership of employee inventions. *Id.* The TVA obtained "ownership of all inventions which bear some relation to its functions, or involve the use of its time or facilities." *Id.* Departments, including the Bureau of Standards, the Aeronautics Branch of the Department of Commerce, the Food and Drug Administration, and Department of Agriculture, among others, required assignment to the government of inventions made in the course of employee's official duties. *Id.* at 22-23.

³⁹⁴ *Selden Co. v. Nat'l Aniline Chem. Co.*, 48 F.2d 270, 273 (1930).

³⁹⁵ *Id.* at 272.

³⁹⁶ *Id.*

³⁹⁷ *Id.* at 273.

³⁹⁸ *Squier v. Am. Tel. & Tel. Co.*, 21 F.2d 747 (S.D.N.Y. 1924) *aff'd* 7 F.2d 831 (2d Cir 1925). The court in *Squier* noted that the plaintiff deliberately resorted to the 1883 Act because, under the Act, "it was intended that the free use of the invention, instead of being limited to the government and to persons engaged in work upon its behalf, should be open to any person in the United States who desired to take advantage of its disclosures." *Id.* at 753.

“Dedicated to the Public” or “Filed under the Act of Mar. 3, 1883.”³⁹⁹ It also considered the inventors’ own statements in a printed publication that the patents had been dedicated to the public under the 1883 Act and Department regulations.⁴⁰⁰ Thus, the court held that the patents were abandoned by the inventors and dedicated to the public.⁴⁰¹

Then in 1933, the Supreme Court issued its landmark ruling, *United States v. Dubilier Condenser Corp.*⁴⁰² Two employees in the radio division of the Bureau of Standards selected problems related to airplane radios that had been suggested by the Navy.⁴⁰³ They did not seek patents under the 1883 Act as amended, but rather filed as any ordinary citizen.⁴⁰⁴ They granted exclusive commercial licenses to Dubilier Condenser Corporation⁴⁰⁵ and a license to the government for governmental purposes.⁴⁰⁶ The government then sued Dubilier for a declaration that it was a trustee for the government and thus required to assign all its rights, title, and interest to the patents, as well as to make an accounting, to the government.⁴⁰⁷ The government may have thought it could tap into the apparent trend of courts broadening the hired-to-invent rule to allow a more general sense of hiring employees in an inventive capacity because it did not otherwise have a particularly compelling case. No real evidence was proffered showing that the inventors were specifically hired or tasked to invent the devices they perfected and patented.⁴⁰⁸ It is also unclear why suit was brought against the exclusive licensee of the patents. Even though, in some cases, exclusive licensees who have all rights of the patent can have standing to sue to enforce the patents, legal title is still held by the licensors.⁴⁰⁹

Both lower courts and the Supreme Court ruled against the government.⁴¹⁰ The Supreme Court may have taken the case in order to crop back the expanding scope of the hired-to-invent rule and/or to limit the growing sense in some courts and corners of the government that all inventions by government employees using government resources should be dedicated to the public. This speculation may be supported by the exhaustive manner in which the majority reviewed every major angle and development in this area of law since *Burn’s Case*.⁴¹¹ Further, even the Court was divided, with three justices supporting the government’s position that the patents should be dedicated to the public, either through assignment to the government or by cancellation.⁴¹² Notwithstanding, the majority re-established the basic contours of

³⁹⁹ *Selden*, 28 F.2d at 271–72.

⁴⁰⁰ *Id.* at 274.

⁴⁰¹ *Id.*

⁴⁰² *United States v. Dubilier Condenser Corp.*, 289 U.S. 178 (1933).

⁴⁰³ *Id.* at 184–85.

⁴⁰⁴ *Id.* at 203.

⁴⁰⁵ *Id.* at 182.

⁴⁰⁶ *Id.* at 203.

⁴⁰⁷ *Id.* at 182.

⁴⁰⁸ 289 U.S. at 193.

⁴⁰⁹ *See e.g.*, *Waterman v. Mackenzie*, 138 U.S. 252, 255 (1891) (explaining that suit may never be brought solely in the name of a licensee, unless it “is necessary to prevent an absolute failure of justice, as where the patentee is the infringer, and cannot sue himself.”)

⁴¹⁰ *Dubilier*, 289 U.S. at 182.

⁴¹¹ *Id.* at 186–208.

⁴¹² *Id.* at 209–24.

the shop rights doctrine and its hired-to-invent exception, both for the private and public sectors.

This remained the state of affairs into World War II. But, the dramatic upswing in military manufactures needed during wartime meant that the federal government needed to be able to procure such manufactures through its contractors at much lower prices than it could have afforded during peacetime.⁴¹³ Accordingly, Congress amended the Government Use Statute again to clarify these issues in the Royalty Adjustment Act in 1942.⁴¹⁴ The amendment added language codifying the judicial requirement for clear “authorization and consent” by a federal agency for the contractor to use the specified patents or copyrights without authorization of the owner and still be covered by the statute.⁴¹⁵ It also sought to clarify that contractors were not bound to existing licenses with patent owners while doing work for the federal government if the hiring agency incorporated clear authorization and consent language to use the patents in question independent of any license.⁴¹⁶ This essentially overturned the result in *Newport News Shipbuilding & Dry Dock Co. v Isherwood*.⁴¹⁷ Finally, the amendment served to settle any confusion in the courts as

⁴¹³ See, e.g., *Adjusting Royalties for the Use of Inventions for the Benefit of the United States: Hearing on H.R. 7620 Before Comm. on Patents*, 77th Cong. 3–4 (1942) (letter of Henry Stimson, Secretary of War) (presenting draft bill to adjust government patent royalties).

⁴¹⁴ Act of October 31, 1942, ch. 634 § 6, 56 Stat. 1013, 1014. The text of the amendment reads:

For the purposes of this Act, the manufacture, use, sale, or other disposition of an invention, whether patented or unpatented, by a contractor, a subcontractor, or any person, firm, or corporation for the Government and with the authorization or consent of the Government shall be construed as manufacture, use, sale, or other disposition for the United States and for the purposes of the Act of June 25, 1910, as amended (40 Stat. 705; 35 U.S.C. § 68), the use or manufacture of an invention described in and covered by a patent of the United States by a contractor, a subcontractor, or any person, firm, or corporation for the Government and with the authorization or consent of the Government, shall be construed as use or manufacture for the United States.

Id.

⁴¹⁵ *Id.*

⁴¹⁶ *Adjusting Royalties for the Use of Inventions for the Benefit of the United States: Hearing on H.R. 7620 Before Comm. on Patents*, 77th Cong. 3–4 (1942) (letter of Henry Stimson, Secretary of War). Mr. Stimson wrote:

In a number of instances, manufacturers with whom contracts for the production of articles and materials for the War Department have been placed were found to be manufacturing under licensing agreements entered into during peacetime with the owners of patents covering the desired articles or materials, binding such manufacturers to pay specified royalties.

....

The proposed legislation is designed to meet the existing situation and to aid in expediting production for the prosecution of war.

Id.

⁴¹⁷ *Newport News Shipbuilding & Dry Dock Co. v Isherwood*, 5 F.2d 924 (4th Cir. 1925) (holding that Government Use statute did not confine plaintiff to a claim against the U.S. government for government contractors use of plaintiffs patent to build ships pursuant to a government contract, and that plaintiff could pursue claim against contractor for patent infringement royalties).

to whether the Government Use Statute applied to federal *subcontractors*, as well as prime contractors, by explicitly adding them.⁴¹⁸ The statute then remained unchanged until after World War II, when it was reworded and transferred out of Title 35 into Title 28, which covers the judiciary and judicial procedure.⁴¹⁹

Accordingly, by the end of World War II, the major contours of the first two categories of government patent policy were established. First, inventions by government employees would be owned by the employee, except where there was a clear agreement that the employee was hired to invent that specific thing. The government did not have an express license or shop right to use employee-owned inventions, even if they were developed with government resources. But, it had a *de facto* right to use them because government employees were barred by the Government Use Statute from asserting claims against the government for such use, even if it was for patents the individual obtained before employment with the government.⁴²⁰ Second, the use of privately held patents, either directly by the government or on its behalf by contractors and subcontractors, was deemed a lawful appropriation or taking of a license as soon as the activity commenced. The only recourse of the patent owner was to seek compensation from the Court of Claims. Notwithstanding this conceptual clarity, many cases continue to come through both the Court of Claims and district courts on various questions of jurisdiction, damages, etc.⁴²¹ The third category—ownership and/or use rights to patented inventions of contractors (and their employees) developed under government contract—remained quite undeveloped, despite its rapid rise in the wartime and post-war research ecosystem.

⁴¹⁸ Act of October 31, 1942, ch. 634, § 6, 56 Stat. 1013, 1014.

⁴¹⁹ Act of June 25, 1948, ch. 646, § 1498, 62 Stat. 869, 941 (codified as amended at 28 U.S.C § 1498 (2012)).

⁴²⁰ *But see* Van Meter v. United States, 47 F.2d 192 (2d Cir. 1931) (hearing an appeal from a district court decision in an infringement action against the U.S. government permitted by a private act of Congress for an invention developed prior to government employment). Interestingly, Congress was in some cases responsive to government employee inventor petitions for special private acts granting the employee a right to bring suit for compensation in district court (oddly, not in the Court of Claims).

⁴²¹ *See, e.g.*, Broome v. Hardie-Tynes Mfg. Co., 92 F.2d 886 (1937) (rejecting plaintiff patentee's argument that use was actually by or for State of Ohio, and not federal government); Olsson v. United States, 25 F. Supp. 495 (1938) (guns purchased from France, assembled in United States, but then stored and unused, still constituted a "use" for purposes of Government Use Statute and compensation to patentee); Pollen v. Ford Instrument Co., 108 F.2d 762 (1940) (infringing items made by private party for sale to government came within scope of Government Use Statute and so compensation could not be awarded by district court); Identification Devices v. United States, 121 F.2d 895 (1941) (jurisdiction in district court is proper where claim is against private party for use on behalf of government, but a rejection of a claim in Court of Claims directly against the government does not give grounds for bringing the case in district court later; not all alleged harm is compensable); Yassin v. United States, 76 F. Supp. 509 (1948) (neither the Lend-Lease Act nor the Royalty Adjustment Act enlarged the scope of the Court of Claims jurisdiction under the Government Use Statute); Irving Air Chute Co. v. United States, 93 F. Supp. 633 (1950) (six year statute of limitation not an issue where infringement is ongoing; each new act accrues a new cause of action).

III. POST-WAR DEVELOPMENT OF MODERN GOVERNMENT PATENT POLICY

President Franklin Roosevelt had desired to establish a uniform government-wide patent policy for both government employees and contractors.⁴²² In 1943, at the height of World War II, he requested that the Attorney General undertake a comprehensive investigation of the nature and extent of government patent policies.⁴²³ The request anticipated the significant boom in post-war research funded by the government and sought to answer a single question: “What disposition of patent rights as between the Government, its employee or contractor, and what use of patent rights owned by the Government, will best serve the public welfare and stimulate the progress of science and the useful arts?”⁴²⁴ A year later, President Roosevelt issued an executive order to create a separate register in the Patent Office to record all government rights in patents.⁴²⁵

In 1947, the Department of Justice issued the Biddle Report in three volumes under the title “Investigation of Government Patent Practices and Policies, Report and Recommendations of the Attorney General to the President.”⁴²⁶ This report set the stage for nearly all of the current debates and policies regarding both intramural and extramural research patent policies. The Biddle Report was heavily biased towards the position that federally funded inventions should be freely available to the public.⁴²⁷ It also frequently incorporated what were essentially opinions or recommendations into its “findings.” For example, a central finding of the Biddle Report was that, with regard to inventions made by federal employees, “[i]nventions financed with public funds should inure to the benefit of the public, and should not become a purely private monopoly under which the public may be charged for, or even denied, the use of technology which it has financed.”⁴²⁸

A further finding was that the government should obtain all rights to inventions made by government employees: “(i) during working hours; or (ii) with a substantial contribution by the government (in the form of facilities, equipment, materials, funds or information, time paid for by the Government, or services of other government personnel), or (iii) bearing a direct relation to the employee’s official functions.”⁴²⁹ In cases where there was a less significant contribution by the government or a minor relationship between the invention and the employee’s official functions, the Biddle

⁴²² BIDDLE REPORT, *supra* note 270, at 9.

⁴²³ *Id.*

⁴²⁴ *Id.* at 2

⁴²⁵ Exec. Order No. 9424, 9 Fed. Reg. 51 (Feb. 18, 1944).

⁴²⁶ BIDDLE REPORT, *supra* note 270, at 1.

⁴²⁷ *Id.* at 2. Importantly:

Federal participation in postwar research will be large and of major significance. The fruits of this great national resource are advances in science and technology, usually susceptible of civilian as well as governmental uses; and since many of these advances consist of patentable inventions, their use and enjoyment by the Government and by the people of the United States may depend upon the control of patent rights.

Id.

⁴²⁸ BIDDLE REPORT, *supra* note 270, at 2.

⁴²⁹ *Id.*

Report found that ownership should be left with the employee,⁴³⁰ subject to some important caveats. First, the government should retain a perpetual, nonexclusive, irrevocable, royalty-free license to make, have made, use, and dispose of the invention.⁴³¹ Second, the employee should have an obligation to exploit the invention diligently him or herself or grant nonexclusive licenses at a reasonable royalty to all applicants.⁴³² In all other cases, the Biddle Report recommended that all rights should be left to the employee.⁴³³ In essence, the Biddle Report was recommending the adoption of an aggressive form of the shop rights doctrine. President Truman implemented these recommendations in Executive Order 10096 in 1950, which is still in force, as amended.⁴³⁴

The Biddle Report also found that the “public interest” required that patents arising from federally funded research and development (“R&D”) be assigned to the government:

Public control will assure free and equal availability of the inventions to American industry and science; will eliminate any competitive advantage to the contractor chosen to perform the research work; will avoid undue concentration of economic power in the hands of a few large corporations; will tend to increase and diversify available research facilities within the United States to the advantage of the Government and of the national economy; and will thus strengthen our American system of free, competitive enterprise.⁴³⁵

Further, leaving patent rights with the contractor might permit suppression of an invention paid for by the public or the imposition of charges for use by the public to private advantage. This could “unbalance” federal research by making those programs, which were likely to lead to patents more desirable to contractors.⁴³⁶ “Expert opinion and experience within and without the Government” was cited to support the contention that enough competent private and institutional labs would accept contracts specifying federal ownership of patentable invention arising from them.⁴³⁷ Nonetheless, the Biddle Report concluded that, in “emergency situations,” exceptions could be made to this basic policy for situations in which the contractor already had made a substantial independent contribution to the field of research.⁴³⁸

⁴³⁰ *Id.* at 3.

⁴³¹ *Id.*

⁴³² *Id.*

⁴³³ *Id.*

⁴³⁴ “Providing for a Uniform Patent Policy for the Government With Respect to Inventions Made by Government Employees and for the Administration of Such Policy”, Exec. Order No. 10,096, 15 Fed. Reg. 389–91 (Jan. 25, 1950) *currently codified at* 37 C.F.R. 501 (1996). The policy was challenged as unconstitutional in the 1970s and 1980s but survived. *Heinemann v. United States*, 796 F.2d 451 (Fed. Cir. 1986) (finding the Truman Order constitutional based on Executive powers and Congressional acquiescence for many years); *Kaplan v. Corcoran*, 545 F.2d 1073 (7th Cir. 1976) (same).

⁴³⁵ BIDDLE REPORT, *supra* note 270, at 3.

⁴³⁶ *Id.* at 2.

⁴³⁷ *Id.* at 4.

⁴³⁸ *Id.*

The Biddle Report then recommended a uniform patent policy in which all federal contracts for extramural R&D stipulate that the government would own any resultant patents.⁴³⁹ The head of each federal agency, however, could certify that an emergency existed and, with the approval of a central “Government Patents Administrator,” award a contract allowing the contractor to retain title to any patent inventions arising under it. This could be done on terms and conditions that the Administrator would prescribe or approve and only so long as the contractor had already made a substantial independent contribution to the field.⁴⁴⁰ However, any such exceptional contract would be subject to the following conditions: (i) The head of the agency and the Administrator would certify that reasonable efforts were made to find a contractor that would accept federal ownership of patents, but these efforts were unsuccessful; (ii) the contract would stipulate that the contractor would retain patent rights only to those inventions in which its independent contribution antedated the work called for in the contract; (iii) the contractor would grant the United States a nonexclusive, irrevocable, royalty-free license to make, have made, use and dispose of any inventions awarded to it under the contract; and (iv) the contractor (or its assignee) would agree to place the invention in adequate commercial use within a designated period, and if at the end of such time the government determined that such use was not being made, then the contractor (or its assignee) would be required to offer nonexclusive licenses at a reasonable royalty to all applicants.⁴⁴¹

The recommended requirements presaged the “Government License” and “March-in Rights” developed in President Kennedy’s Patent Policy,⁴⁴² and later codified in the Bayh-Dole Act.⁴⁴³ It also established the terminology and basic two types of “title” and “license” patent policy models.⁴⁴⁴ In a “title” model, the government would take title to the inventions.⁴⁴⁵ In a “license” model, the contractor would retain title, but grant the government a nonexclusive license.⁴⁴⁶ At the same time, the Biddle Report also clearly distinguished among the three types of federal funding agreements still used today—procurement contracts, grants, and cooperative research agreements—and recommended that all three be treated under the same basic policy and exceptions framework.⁴⁴⁷

Another central finding of the Biddle Report was that a uniform, government-wide patent policy was indeed warranted and that it would “extend to all Federal agencies the benefits of sound patent principles, will avoid competition among the agencies, and will strengthen the Government’s bargaining position.”⁴⁴⁸ Exceptions to the basic policy, if any, should also be governed by uniform principles and

⁴³⁹ *Id.* at 5.

⁴⁴⁰ *Id.* at 103–04.

⁴⁴¹ *Id.* at 103–04.

⁴⁴² Kennedy Patent Policy, *supra* note 37.

⁴⁴³ Bayh-Dole Act of 1980, Pub. L. No. 96-517, 94 Stat. 3015 (codified as amended in scattered sections of 35 U.S.C.).

⁴⁴⁴ BIDDLE REPORT, *supra* note 270, at 22.

⁴⁴⁵ *Id.*

⁴⁴⁶ *Id.*

⁴⁴⁷ *Id.* at 5.

⁴⁴⁸ *Id.* at 8.

governed by the proposed Government Patents Administrator, to avoid conflict and breakdown of the basic policy.⁴⁴⁹ The Biddle Report also concluded that, because the policy governed only employment and contracting within the Executive Branch, it could be effected through an executive order and then implemented by departmental regulations.⁴⁵⁰ It would not alter or conflict with the existing patent laws or system.⁴⁵¹ The Biddle Report recommended that the proposed Government Patents Administration should include both the Government Patents Administrator and an oversight body named the “Advisory Patents Board.”⁴⁵²

The Biddle Report contained other findings and recommendations that are less relevant to the legal focus of this Article, but still notable for current patent policy debates. First, it found that systems of special financial rewards, promotions, or salary increases based on development of patentable inventions could be “undesirable” because they “might induce secrecy and lack of cooperativeness.”⁴⁵³ They could also pose administrative challenges in selecting the persons to be rewarded, especially where the invention was the result of a group effort, and create dissatisfaction among those not rewarded (even though they had done equally worthwhile, but unpatentable work), possibly resulting in the slighting of work not leading to patentable inventions.⁴⁵⁴ The Biddle Report recommended that any rewards systems treat patentable and unpatentable research results equally.⁴⁵⁵

Second, it found that federally-owned inventions would best serve the public interest by being made available to all on a “royalty-free, nonexclusive” basis.⁴⁵⁶ If further risky development were needed so that private firms could market the invention, then the government should finance such development.⁴⁵⁷ Notwithstanding, it still found that patenting of such inventions was superior to simply dedicating the inventions to the public because patenting would afford greater protection and control of the invention for the public interest.⁴⁵⁸

Accordingly, the Biddle Report recommended that: (i) All federally-owned inventions “should be made fully, freely, and unconditionally available to the public without charge, by public dedication or by royalty-free, nonexclusive licensing[.]” (ii) as soon as any such inventions were completed they should be patented or published (with full disclosure to the Patent Office to count as prior art to prevent others from patenting the invention); (iii) all federally-owned inventions should be listed and promoted in the register created under the Roosevelt Administration, with copies distributed widely; (iv) to the extent funds were available, projects should be initiated to demonstrate and publicize promising federally-owned inventions, especially to small businesses; (v) the Government Patents Administrator or other federal agency could recommend preliminary experimental, developmental, or pilot-plant operations

⁴⁴⁹ *Id.*

⁴⁵⁰ *Id.*

⁴⁵¹ *Id.*

⁴⁵² *Id.*

⁴⁵³ *Id.* at 3.

⁴⁵⁴ *Id.*

⁴⁵⁵ *Id.*

⁴⁵⁶ BIDDLE REPORT, *supra* note 270, at 6

⁴⁵⁷ *Id.*

⁴⁵⁸ *Id.*

to establish the practicality or effectiveness of a particular federally-owned invention; and (vi) “[t]he Government Patents Administrator should prepare and submit to the President for approval a program to encourage and sponsor the use and practice of Government-owned inventions by small and new business concerns, and should report periodically on the extent of use of Government-owned inventions.”⁴⁵⁹

Third, it recommended that the government should obtain foreign rights similar to whatever rights it had in the United States to any federally-funded invention.⁴⁶⁰ If the government later determined that it did not need such foreign rights, then it could release them back to the employee or contractor.⁴⁶¹ President Truman issued an Executive Order implementing this recommendation that same year.⁴⁶² It appears to be the first uniform directive to apply to all departments and agencies regarding patent rights arising from both intramural and extramural research funding.

Fourth and finally, the Biddle Report recommended that:

[Government] [e]mployees and contractors . . . be required to agree, in respect of any inventions made by them which the Government determines should be kept secret, that they will not disclose the invention to any unauthorized person, or assign any rights therein, or file any domestic or foreign patent applications, unless and until authorized to do so by the Government.⁴⁶³

Despite the quick implementation of some of the Biddle Report’s recommendations by the Truman Administration, none of the others were acted on throughout the 1950s. During that time, however, a number of statutes were passed that specifically allocated patents arising from federally-funded extramural research to either the government or contractors.⁴⁶⁴ A number of these were true “vesting statutes” in which the normal default rule of inventor ownership was trumped in favor of title allocation to a government entity.⁴⁶⁵ In the absence of a uniform government-wide patent policy, the various agencies went their separate ways with

⁴⁵⁹ *Id.* at 6–7.

⁴⁶⁰ *Id.* at 7.

⁴⁶¹ *Id.*

⁴⁶² Providing For The Protection Abroad of Inventions Resulting From Research Financed by the Government, Exec. Order No. 9865, 12 Fed. Reg. 3907 (June 14, 1947).

⁴⁶³ BIDDLE REPORT, *supra* note 270, at 7.

⁴⁶⁴ *E.g.*, National Science Foundation Act of 1950, ch. 171, § 12(a), 64 Stat. 149, 154 (current version at 42 U.S.C. § 1871(a) (2012)); Atomic Energy Act of 1954, Pub L. No. 83-703, §§ 151–60, 68 Stat. 943, 943–48 (current version at 42 U.S.C. §§ 2181–90); National Aeronautics and Space Act of 1958, Pub. L. 85-568, § 305, 72 Stat. 426, 435–37 (current version at 51 U.S.C. § 20135); Helium Act Amendments of 1960, § 4, Pub. L. 86-777, 74 Stat 918, 920 (current version at 50 U.S.C. § 167b); Arms Control and Disarmament Act, Pub. L 87-297, § 32, 75 Stat. 631, 634 (1961) (current version at 22 U.S.C. § 2572).

⁴⁶⁵ *E.g.*, Atomic Energy Act of 1954 § 152 (as amended by Pub. L. 87-206, sec. 10, § 152, 75 Stat 475, 477 (1961)) (providing that title to inventions in the field of atomic energy “shall be vested in, and be the property of, the [Atomic Energy] Commission . . .”).

different title or license policies for patents arising from extramural federally funded research.⁴⁶⁶

It was not until the Kennedy Administration that a uniform, government-wide policy governing extramural research inventions was established (the “Kennedy Patent Policy”).⁴⁶⁷ The Kennedy Patent Policy established nearly all the key concepts and terminology of the modern government R&D procurement and technology transfer system established under the Bayh-Dole Act (albeit with many of them adapted from the Biddle Report).⁴⁶⁸ In particular, the core elements of the Government License and March-In Rights were in place.⁴⁶⁹ The Kennedy Patent Policy also included detailed requirements for contractors who acquired exclusive patent rights.⁴⁷⁰ For example, the contractor would have to submit periodic written reports to the funding agency regarding progress on commercialization of the invention.⁴⁷¹ In cases where the federal agency retained the patent rights, the Kennedy Patent Policy imposed some conditions on the agency itself. First, if the funding agency chose not to file for foreign patents, the contractor would be able to file for that patent subject only to a non-exclusive license to the government for governmental purposes and on behalf of any foreign government that would get such rights under a treaty or agreement with the United States.⁴⁷²

The key divergence of the Kennedy Patent Policy from the Biddle Report was that the former sought to establish a balance between government and contractor ownership of patents arising from federally funded research: “[T]he public interest might also be served by according exclusive commercial rights to the contractor in situations where the contractor has an established non-governmental commercial position”⁴⁷³ By contrast, the Biddle Report strongly urged government ownership and/or public dedication of federally funded inventions. Under the Kennedy Patent Policy, funding agencies should consider whether inventions arising under federal funding agreements could productively be practiced directly by the public (e.g., a farming technique), or whether intervening R&D and private initiative was needed to turn the invention into a product that could be made available to the public (e.g., a complex manufactured device).⁴⁷⁴ The Kennedy Patent Policy seemed primarily focused on private sector contractors, rather than university and nonprofit research organization contractors: Contractors who retained title or exclusive rights must bring those inventions to “the point of practical application,” defined as “to manufacture in the case of a composition or product, to practice in the case of a process, or to operate in the case of a machine and under such conditions as to establish that the invention is being worked and that its benefits are reasonably accessible to the public.”⁴⁷⁵

⁴⁶⁶ See Kennedy Patent Policy, *supra* note 37, at 10,943.

⁴⁶⁷ *Id.*

⁴⁶⁸ *Id.* at 10,943–46.

⁴⁶⁹ *Id.* § 1(a)–(c),(f)–(g).

⁴⁷⁰ *Id.* § 1(a)(4)(i)–(ii).

⁴⁷¹ *Id.* § 1(e).

⁴⁷² Kennedy Patent Policy, *supra* note 37, § 1(h).

⁴⁷³ *Id.* at 10,943.

⁴⁷⁴ *Id.* at 10,944.

⁴⁷⁵ *Id.* § 3(g).

Notwithstanding the soundness of the Kennedy Patent Policy, it was never adopted as a government-wide regulation. This was likely because of the myriad special title allocation statutes that Congress had passed. It was not until the passage of the Bayh-Dole Act in 1980 that anything approaching a binding government-wide contractor patent policy was put into effect.

CONCLUSION

From the early days of the Republic, Congress and the federal courts grappled with the government's rights to own or use patents it issued. Courts rejected the British Crown Rights rule that allowed the sovereign to practice whatever patents it issued. Instead, the federal government was conceptualized as a legal person on par with any other persons with regard to issued patents. But, this simple rule presented challenges as complexities arose in three intertwined patent rights scenarios. The first involved inventions by government employees. The second revolved around government and government contractor use of patents held by private citizens. And the third involved inventions by federal contractors, and their employees, arising under federal funding. While these three scenarios seem quite distinct today, this Article revealed the convoluted nineteenth and early-twentieth century case law that often treated them as overlapping. The confusion was not fully resolved until the mid-twentieth century. At that time, a combination of executive branch policy, Congressional legislation, and judicial developments set the roots of current government patent policy.

Notwithstanding the clarity that has come from disentangling these three different scenarios, fundamental issues remain. First, the indirect endorsement of eminent domain takings of licenses to privately held patents under the Government Use Statute still does not eliminate the questions of how this squares with the early Supreme Court cases rejecting any kind of Crown Right in the United States, and whether the government's eminent domain powers with regard to patents are limited to those covered by the Statute. This has been underscored by the multiple cases and appeals in *Zoltek Corp. v. United States*.⁴⁷⁶ At the heart of those cases has been confusion over whether the Government Use Statute applies to the infringement of a patented process by or on behalf of the government where the alleged infringement occurred, in part or in total, offshore. If it does not, then another area to explore might be whether the patentee has any takings claim under the Tucker Act.⁴⁷⁷ Or is the patentee out of luck just like the pre-Government Use Statute patentees who could not show any kind of express or implied contract with the government? The latest opinion from Court of Appeals for the Federal Circuit seems to resolve these questions by invoking the direct infringement liability of a party who imports a

⁴⁷⁶ *Zoltek Corp. v. United States*, 51 Fed. Cl. 829, 831–32 (2002); *Zoltek Corp. v. United States*, 58 Fed. Cl. 688, 689 (2003); *Zoltek Corp. v. United States*, 442 F.3d 1345, 1347 (Fed. Cir. 2006); *Zoltek Corp. v. United States*, 85 Fed. Cl. 409, 414–17 (2009); *Zoltek Corp. v. United States*, 672 F.3d 1309, 1322–24 (Fed. Cir. 2012).

⁴⁷⁷ See Richard T. Ruzich, *Government Patent and Copyright Infringement Overseas Under 28 U.S.C. § 1498 (in the Shadow of the RIM Decisions)*, 15 FED. CIR. B.J. 401, 410 (2005).

manufacture produced overseas by a process patented in the United States.⁴⁷⁸ This may then bring the complaint back within the scope of the Government Use Statute and head off any attempts to rely on the Tucker Act for a general takings claim.

Second, the question of whether Bayh-Dole had allocated title to federally funded inventions as between contractors and their employees was never directly addressed before *Stanford v. Roche*.⁴⁷⁹ While regulations before and after the passage of Bayh-Dole seemed to make clear that contractors had the obligation to secure adequate rights from their inventive employees to protect the government's interests under funding agreements, this seems to have been lost in the mix somewhere.⁴⁸⁰ In its place was a vague sense, among university administration in particular, that Bayh-Dole had automatically transferred title from employee inventors to the contractor by operation of law. In fact, Bayh-Dole simply regulated the relationship between the contractor and the government.⁴⁸¹ Some had tried to treat contractors and their employees as if they were directly employed by the government. But, the history belies this as a serious consideration. In the end, as the Court in *Stanford v. Roche* had to concede, the question of title as between contractors and their employees was simply not addressed as a legislative matter, but rather left to the negotiation and private ordering of the parties.⁴⁸²

In sum then, the three categories of government patent policy are still works-in-progress. We have not resolved all the nuances and issues. Nonetheless, significant progress has been made. In some cases, the progress is simply greater clarity about the differences among the three categories and their subcategories. In other cases, statutory, regulatory, or case law has established a working rule that advances equity among the government, its employees and contractors, and unaffiliated patent owners. More work needs to be done as the United States continues to break new ground on a system that, at its core, treats the government itself as just another private citizen who must engage with other citizens regarding what it is doing and which rights it has.

⁴⁷⁸ *Zoltek Corp. v. United States*, 672 F.3d 1309, 1326–27 (Fed. Cir. 2012).

⁴⁷⁹ *Bd. of Trs. of the Leland Stanford Junior Univ. v. Roche Molecular Sys. Inc.*, 131 S. Ct. 2188, 2194 (2011).

⁴⁸⁰ See Sean M. O'Connor, *The Real Issue Behind Stanford v. Roche: University Patent Assignment Policies and the Flawed Legacy of the 1947 Biddle Report* (working paper on file with author).

⁴⁸¹ Edward C. Walterscheid, *The Need for a Uniform Government Patent Policy: The D.O.E. Example*, 3 HARV. J.L. & TECH. 103, 130 (1990).

⁴⁸² *Bd. of Trs. of the Leland Stanford Junior Univ.*, 131 S. Ct. at 2204.