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The Patent System: America's Innovation Engine

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KEY TAKEAWAYS

The U.S. has eviscerated the patent rights that help to power the innovation engine that drove its past technological and economic revolutions.

Economic and historical evidence demonstrates that reliable and effective patents function like all property rights in promoting economic growth and innovation.

The U.S. has shown the world that patents facilitate technological and economic progress. We should do everything we can to keep it that way.

Introduction

For almost two decades, the patent system has been under extensive stress from all branches of the federal government. The patent system has been transformed by new legislation,[1] regulatory actions by agencies,[2] including a new administrative tribunal known as the Patent Trial and Appeal Board (PTAB) that is canceling thousands of patents,[3] and numerous decisions by the Supreme Court of the United States. These systematic changes have affected all aspects of patent rights, such as infringement remedies,[4] licensing,[5] and what types of inventions and discoveries are eligible for patent protection.[6] Inventors, universities, and companies that invent, develop, and commercialize the new innovations that drive economic growth and higher standards of living now face extensive uncertainty. Even worse,

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the changes wrought have mostly eliminated or restricted patent rights, especially in the high technology and biotechnology sectors of the U.S. innovation economy.[7]

The United States patent system was once the "gold standard" among world patent systems.[8] David Kappos, former Director of the U.S. Patent and Trademark Office (USPTO), said 10 years ago that the U.S. patent system was "the greatest innovation engine the world has ever known."[9] Patented innovations drove the Industrial Revolution in the 19th century, the computer and biotech revolutions of the 20th century, and the mobile revolution of the early 21st century.[10] Now the U.S. has eviscerated the reliable and effective patent rights that were a key ingredient in the fuel that powered the innovation engine that drove these past technological and economic revolutions.[11]

The nadir of the U.S. patent system today has prompted a significant bipartisan patent reform movement in Congress to reverse course and restore the patent system to its previous gold-standard status. Several bills have been introduced in recent years to restore the traditional right of patent owners to stop patent infringement with injunctions, to reform the PTAB, and to restore the rights of innovators to have their inventions and discoveries arising from their productive labors secured by property rights (patents).[12] All of these bills are expected to be reintroduced when the 119th Congress convenes in January 2025, and Congress should consider enacting them all into law.[13]

Bipartisan support for patent reform also means that there is bipartisan opposition to this important work to restore the U.S. patent system to its historical function in the innovation economy. Unfortunately, some advocates for property rights, limited government, and the free market misunderstand the nature and function of patents. Instead of *property rights* that spur investments to create innovations and then enable new business models and other commercial innovations to deploy these new technologies in the marketplace, they see innovation-stifling *monopolies*. They fail to recognize the unique innovation of the Founders that patents in the U.S. would not represent royal grants of monopoly privileges, but instead would properly secure property rights in inventions.

This *Legal Memorandum* describes this mistaken opposition to patents by friends of liberty and property—an error committed primarily by libertarians—and how some tech entrepreneurs and tech commentators have embraced it. It then surveys the historical and economic evidence that patents are property rights that are key to a thriving free market and growing innovation economy. In essence, patents secure the same exclusive

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rights as all property rights, and this is why they are a legal launchpad for the commercial innovations and economic growth that have made the U.S. an economic powerhouse and global tech leader.

The (Libertarian) Skepticism of Patents

Patent skeptics who are right of center are typically libertarians. Of course, there are leftists who oppose intellectual property, such as the self-styled "copyleft," but they oppose intellectual property given their opposition to property as such. Pierre-Joseph Proudhon, the early 19th-century anarchist and socialist, infamously declared, "Property is theft!"[14] This proposition applies to property rights in inventions just as much as it applies to property rights in land.

It is more surprising to many people—and understandably confusing—that advocates for individual rights and the free market view patents as unjustified monopolies that violate rights, stifle innovation, and impede economic growth.[15] Of course, there are exceptions, such as Representative Thomas Massie (R–KY), who has been described variously as a disciple of Senator Rand Paul, a libertarian, and libertarian-adjacent.[16] Representative Massie is also an innovator and patent owner, which means that he understands firsthand the vital function of property rights in inventions as a launchpad for a growing U.S. innovation economy.[17] But Representative Massie is the exception that proves the rule.

Among famous libertarian economists and theorists, Murray Rothbard is arguably the most influential when it comes to the anti-patent views prevalent among libertarians today. Rothbard argued in his 1962 treatise *Man, Economy, and State* that a "patent is incompatible with the free market" because it prevents someone from using an invention that one independently created and did not steal from someone else.[18] Because individuals should have a property right in what they create through their own productive labor, Rothbard concluded: "Patents, therefore, are grants of exclusive monopoly privilege by the State and are *invasive* of property rights on the market."[19] Libertarian law professor Tom Bell makes this same point with more rhetorical color: "Because it gags our voices, ties our hands, and demolishes our presses, the law of copyrights and patents violates the very rights Locke defended."[20]

Rothbard, Bell, and other anti-patent libertarians argue that patents lead to undesirable results. As "monopoly privileges" that violate the rights of property and contract, they conclude, patents stifle competition, free markets, innovation, and economic growth. They argue that patents are

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like other government-created monopolies, such as Amtrak or the U.S. Post Office. Another infamous example is the monopoly on phone service that the federal government granted to AT&T before a federal judge broke up this monopoly in 1982.[21] "Patents don't help the little guy," writes libertarian commentator Jeffrey Tucker. "They help the big guy who is already successful beat back the competition."[22]

Silicon Valley Embraces Patent Skepticism

One easily finds strong strains of this libertarian critique that patents are monopoly grants that crush innovators and stifle economic growth among many Silicon Valley tech entrepreneurs and commentators. Silicon Valley entrepreneurs are not wholesale libertarians, but they are often identified as libertarians, at least when it comes to their views about regulations of tech or free speech. It is perhaps more accurate to describe them as "libertarian-adjacent," but for ease of reference, "libertarian" works as shorthand.

Big Tech companies like Google, Intel, Amazon, Apple, and Facebook created a narrative that nefarious "patent trolls" were "stifling innovation" with patents.[23] During the Obama Administration, Google had hundreds of direct one-on-one meetings with the President in the White House, and the critique that patents stifle innovation became ascendent.[24] President Barack Obama even did a Google+ chat in 2013 in which he complained about patent trolls targeting and harming entrepreneurs,[25] and he was the first President in modern memory to devote precious time in a State of the Union address to calling on Congress to enact "patent reform" so companies could "stay focused on innovation" instead of "costly, needless litigation."[26]

The message that patents stifle innovation also became prominent among tech commentators and entrepreneurs. Tech commentator Mike Masnick, for example, has written that "patents are not just a bad proxy for actual innovation, but often *antithetical to innovation*."[27] Masnick also claims that "[t]he idea that patents create jobs is simply not supported by the evidence at all."[28]

Well-known Internet and other Silicon Valley entrepreneurs have voiced similar claims that patents stifle innovation and economic growth. One notable example is Mark Cuban, an early Internet entrepreneur who made millions in the 1990s and many people know today because of his role on *Shark Tank*, in which inventors pitch new products and services to Cuban and other venture capitalists. Despite his role on *Shark Tank*, in which an

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inventor having a patent serves a key role in influencing the decision by the panel of venture capitalists to invest in an invention, Cuban is a well-known patent skeptic. He has repeatedly declared his patent skepticism on his *Blog Maverick*. In one entry posted more than a decade ago, for example, Cuban wrote: "I think 99pct of the time, [patents] are anti-competitive, corruptive, impede creativity and innovation and can kill small businesses."[29]

Another example is Elon Musk, whose first successful Internet company in the 1990s made him millions before he co-founded PayPal with Peter Thei, and later revolutionized electric cars (Tesla), reusable rockets (SpaceX), and social media (X, formerly known as Twitter). Musk has tussled with Cuban on X over Cuban's support for DEI (diversity, equity, and inclusion), but Musk appears to share Cuban's skepticism about patents (although he has moderated this view recently).

In 2014, Musk announced in a now-lost posting on Tesla's blog that Tesla was giving up all its patents. In his characteristic style, his blog posting was titled, "All Our Patent Are Belong to You."[30] (This was a reference to one of the first Internet memes based on a poorly translated English caption in a 1991 Japanese videogame, *Zero Wing*, that stated, "All your base are belong to us.") Although Tesla was not in fact abandoning its patents, it was starting a new patent licensing policy,[31] but the blog generally reflected the libertarian critique of patents: that they are barriers to competition and innovation. Musk wrote that, in the "spirit of the open source movement," he was removing the wall of patents in the lobby of the Tesla headquarters. "Technology leadership is not defined by patents," he wrote. "[T]hey serve merely to stifle progress, entrench the positions of giant corporations and enrich those in the legal profession, rather than the actual inventors."[32]

Musk reiterated these points a few years later in an interview with Jay Leno and posted a brief clip of the interview on X in November 2024.[33] In this brief clip, Leno is marveling at the technological and mechanical brilliance of the Raptor engines Musk is showing him in the SpaceX factory, and Leno asks whether they are protected by patents. Musk says they are not, as he "does not care about patents." Patents are "used like landmines in warfare," he further explains, because "[t]hey don't actually help advance things." He then made his now-famous dictum that has been quoted or repeated often since then: "Patents are for the weak."

More recently, though, Musk has moderated this skepticism. In the November 2024 X post in which he reshared the video of his exchange with Leno about patents, Musk wrote that "[o]nly patents for things that are super expensive to prove work, but are then easy to manufacture (like stage 3 drug trials) have any merit."

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It is revealing that Musk thinks patents may be justified as necessary monopoly grants to incentivize investments in inventions based on massive up-front investments in research and development (R&D) that take place over many years, such as the billions of dollars and decades of R&D to create new drugs.[34] Since Musk is primarily an innovator and successful entrepreneur, not a political theorist, he likely does not have the deeply ideological, anti–intellectual property commitment that many libertarian theorists and economists have. His proven success as an entrepreneur and businessperson best explains Musk's prominence as an informal policy adviser to President Trump, who announced shortly after the election that Musk and Vivek Ramaswamy will co-chair the new DOGE (Department of Government Efficiency).

U.S. Has Secured Property Rights in Inventions

The success of the patent system as a key driver of the U.S. innovation economy for over 200 years has been demonstrated repeatedly by economists, historians, and legal scholars.[35] The patent system was central to the successes of the Industrial Revolution in the 19th century, the pharmaceutical and computer revolutions in the 20th century, and the biotech and mobile telecommunications revolutions in the 21st century. This is the same historical and economic evidence that economists have collected and analyzed between successful free markets, flourishing economies, and the protection of property rights generally in a legal system governed by the rule of law. Similarly, patent systems that secure reliable and effective property rights to inventors consistently and strongly correlate with successful innovation economies.[36]

But this conclusion depends entirely on what a "patent" means. In feudal England, a "patent" was a monopoly granted by the Crown. A patent—more precisely, a *letter patent*—was the official legal instrument by which the Crown exercised its royal prerogative power. In the 16th century, Queen Elizabeth I explicitly embraced a domestic industrial policy of enticing continental tradesmen and other skilled artisans to England by offering them commercial monopolies if they set up shop in the realm and began to practice their tradecraft for the benefit of English subjects. The Crown awarded these royal grants of monopoly privileges with "letters patent."[37]

The provenance of U.S. patents is thus found in these early grants of royal monopoly privileges. This is no different from the provenance of property rights in land. Real estate also was born of grants of royal

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privileges in exchange for fealty, services (such as providing knights for war), and taxes.[38]

Given this historical basis for modern patents, it has become a cliché for judges to remark that the patent system created by the Founders in the U.S. Constitution was "written against the 'backdrop' of English patent practices."[39] This is undeniably true, but if one said in the early American Republic that a "patent" secured under federal law was the same thing as the Crown's grant of monopoly privileges, one might have been tarred and feathered.

The U.S. patent system was as much a part of American exceptionalism as all other aspects of the new American Republic. For example, the patent system was—and is—created through statutes enacted by Congress, the people's representatives, not through the discretionary powers of the Executive. These laws set forth the legal rules for securing patents to inventors, among other significant legal issues. Once patents are issued, like title deeds issued by the federal or state governments, they are interpreted by courts of law either when challenged as invalid or when asserted against someone accused of infringement. (The creation of the PTAB in 2011 to cancel patents by administrative fiat, and the Supreme Court's approval of the PTAB, is controversial precisely because of this challenge to the rule of law. Moreover, patents, like all property rights, are capable of being transferred, sold, or otherwise commercialized in a myriad of ways in the marketplace. In sum, there have always been policy debates and peripheral legal disputes about the scope of patent rights, but U.S. patents were always defined and secured under the law as *property rights* issued to inventors, not as personal grants of monopoly privileges.

In 1813, for example, Chief Justice John Marshall explained that the "constitution and law, taken together, give to the inventor, from the moment of invention, an inchoate property therein," and that "this inchoate and indefeasible property in the thing discovered commences with the discovery itself, and is only perfected by the patent."[40] A unanimous Supreme Court held in 1824 that a patent secures to an "inventor...a property in his inventions; a property which is often of very great value, and of which the law intended to give him the absolute enjoyment and possession."[41]

An anonymous note following an 1871 court opinion in a patent case published in the *Federal Cases Reporter* explicitly distinguished between an English and American patent. An English patent is a "privilege" conferred by a "grant by the crown," and the patent owner's "right has been regarded [as] a personal privilege, inalienable unless power to that effect is given by the crown."[42] In the U.S., the note's anonymous author further explained, a patent is "defined as an incorporeal chattel, which the patent impresses

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with all the characteristics of personal estate...."[43] An "incorporeal chattel" is technical legalese for what we now call simply "intellectual property." In sum, U.S. patents were property rights, not monopoly privileges, and courts secured patents under the law and Constitution as property rights.[44]

Success of the Patent System as a Driver of Economic Growth and Innovation

The innovative and historically unique approach of the U.S. in securing patents as property rights has had significance far beyond this legal classification. As economists are wont to point out, property rights are the launchpad of economic activity, economic growth, and flourishing societies. For example, Hernando de Soto's research has demonstrated how clear legal rules governing title recordation and for transferring these property rights are closely connected with economic activities and growth.[45] In *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Elsewhere*, de Soto recognized that the economic benefits of clear rules governing title recordation and property transfers apply equally to patents as to real estate.[46] Many people miss this point about patents in de Soto's analysis, including many libertarians who value de Soto's economic and empirical work.

Similar to the developing countries in the 20th century that de Soto studied, the U.S. was a developing country in the 19th century compared to England, France, and other older countries. Unlike the countries in the 20th century that were the subjects of de Soto's analyses and that failed these prerequisites of clear title recordation and clear legal rules, the early U.S. patent system implemented these basic legal requirements of reliable and effective property rights. The U.S. did this precisely because it defined patents as property rights, as opposed to monopoly privileges granted at the discretion of the government according to the vicissitudes of economic policy goals.

Dr. Zorina Khan, an award-winning economist, has demonstrated that reliable and effective property rights in innovation—patents—were a key factor in thriving markets for technology in the United States in the early 19th century. Dr. Khan writes in *Democratization of Invention* that:

> [P]atents and...intellectual property rights facilitated market exchange, a process that assigned value, helped to mobilize capital, and improved the allocation of resources.... Extensive markets in patent rights allowed inventors to extract returns from their activities through licensing and assigning or selling their rights.[47]

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Other economists have identified important features of robust innovation markets in 19th-century America. These economic activities were made possible by reliable and effective property rights. They include, among other things, an increase in "venture capital" investment in patent owners, the rise of a secondary market in the sale of patents as commercial assets, and the embrace of economic specialization through the invention of licensing business models.[48]

Given the ubiquity and success of the licensing business model in the global innovation economy, it is perhaps understandable that advocates for property rights, limited government, and the free market may not grasp how this is made possible by property rights in inventions—patents. Far from being impediments to technological and commercial innovation, patents spur and facilitate these achievements. Since patents are property rights in the U.S., inventors have been able to take advantage of specialization and division of labor in the free market; these are the key features of successful markets and economic growth first identified by Adam Smith in his *Wealth of Nations*.[49] Thus, inventors who obtained title to the fruits of their productive labors—patents—could use their property rights to enter into contracts and other commercial deals in dividing their property to maximize value in the production and commercial distribution of their new products and services.

One ubiquitous example today of this value-maximizing economic activity born of the property rights in new innovations is the franchise business model. Today, people associate franchises with fast food restaurants, but it is in fact an intellectual property–based licensing business model in which someone who owns the patents (as well as trademarks, copyrights, and trade secrets) contracts with other people (intellectual property law calls these "licenses") to produce, distribute, and sell to customers their products and services secured by these intellectual property rights. Early American patent owners were the people who invented the franchise business model, as they licensed other people to make and sell their inventions. They embraced the division of labor and specialization that Adam Smith recognized as essential to a successful free market—they invented, other people manufactured, and other people engaged in commercial or retail sales to consumers.

Many famous American inventors developed this innovative licensing business model to distribute their new innovations efficiently in the marketplace. They included, among others, Charles Goodyear, inventor of the process that makes rubber a staple product;[50] Samuel Morse, inventor of the first successful telegraph and its dot-and-dash transmission code (known

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by the eponymous name Morse Code);[51] Alexander Graham Bell, inventor of the telephone;[52] and, of course, Thomas Edison, inventor of the first successful lightbulb, movie cameras, record players (the first ever recording and playback of voices), and many other innovations.[53]

These innovators also created new corporate forms and cross-licensing agreements in 19th-century America, all of which are historical precursors to Tesla's announcement in 2014 of its new cross-licensing policy.[54] One of the most significant innovations was the invention of the *patent pool* in 1856 by several companies and one individual inventor who owned all the patents covering different components of the first commercially successful sewing machine.[55] A patent pool is a cross-licensing agreement among multiple patent owners when their respective patents cover individual components of a single product sold in the marketplace. Patent pools efficiently resolve overlapping legal claims and facilitate commercial activities by authorizing all patent owners in a single agreement to make and sell the consumer product or service. Since 1856, patent owners have created thousands of patent pools. Today, hundreds of patent pools facilitate the commercialization of a myriad of products and services, including Lasik eye surgery; digital songs and videos (MP3 and MPEG); 4G and 5G telecommunications technologies used in automobiles; USB connectors for digital devices; and many others.

Successful companies in the modern innovation economy, such as Qualcomm, IBM, and Microsoft, have flourished as commercial firms through their respective patent licensing business models. These companies exemplify an economic truth: Patents do not stifle innovation, competition, or economic growth. Patents promote innovation and facilitate innumerable commercial activities in the free market, as demonstrated by their role in ultimately creating an unprecedented, flourishing U.S. innovation economy for the past two hundred years from the Industrial Revolution to today's mobile revolution.[56]

Another valuable function of property rights as transferrable assets in the marketplace is that patents can be sold as economic assets themselves, called "secondary markets" in economics, or they can used in other secondary forms of economic activity, such as serving as collateral for loans. This is exactly what happened in the growing American economy in the 19th century as poor inventors lacking capital used their titles (patents) as the basis to secure financing or to fund other activities, including even selling percentages of ownership shares in their patents to fund lawsuits against larger commercial firms that chose to infringe their property rights (called "third-party financing" today).[57] For example, Samuel Morse,

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who was an artist and professor at New York University in the 1830s when he began his experiments to create a telegraph, sold percentages of ownership shares in his patent to fund his research and development of his invention.[58]

Today, this is called venture capital financing, and property rights in inventions (patents) continue to play a key role in helping innovators to secure this essential financing for their start-ups. Economists have now proven that a start-up with a patent *more than doubles* its chances of securing venture capital financing compared to a start-up without a patent, and this patent-based start-up has a statistically significant increased chance of success in the marketplace compared to other start-ups without patents.[59] Beyond the confines of economic and historical studies in academic journals, most people see this function of patents in *Shark Tank*, in which Mark Cuban and the other venture capitalists often base their decision to invest in a new invention on whether there are patents on the products.

In this important sense, "patents are for the weak."[60] For undercapitalized innovators, such as sole inventors, start-ups, small businesses, and universities, patents are essential property rights in securing their exclusive control of their products and services—these property rights are the basis for obtaining financing, creating licenses, and engaging in other commercial activities to develop and commercialize their innovations. Since these innovations often disrupt—and ultimately put out of business and displace—established firms, these property rights secure them from predatory infringement practices by companies that seek to protect their now-obsolete products and services. Libertarians and Internet entrepreneurs claim that patents are only tools of market incumbents that seek to stifle technological or economic progress.[61] To the contrary, patents are for the weak precisely because these are the vital property rights by which technological and innovative progress are facilitated by disruptive innovators.

All of these commercial innovations and activities confirm de Soto's insight that a "good legal property system is a medium that allows us to understand each other, make connections, and synthesize knowledge about our assets to enhance our productivity."[62] Dr. Khan's research confirms de Soto's insight in demonstrating the economic significance of securing patents as property rights in the early American Republic: "The development of trade is predicated on recognized rights of property.... Patent Office assignment records and law reports both reveal that an extensive and deep market in patent assignments and licenses functioned during the antebellum period."[63]

Finally, Dr. Stephen Haber at Stanford University reviews the economic and historical evidence in his article "Patents and the Wealth of Nations"

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and concludes that there is a "causal relationship between strong patents and innovation."[64] Dr. Haber defines a "strong patent" as a property right that is enforceable in courts of law and transferrable to other people, similar to de Soto's and Dr. Khan's definitions. In this way, a strong patent facilitates specialization and the division of labor in new markets for innovations, as described earlier in the inventive and commercial work of Edison, Bell, Goodyear, Morse, and others in their patent licensing business models. In his empirical study of countries with patent systems with these two features of strong patents and the gross domestic product of these countries, Dr. Haber concludes that "there are no wealthy countries with weak patent rights, and there are no poor countries with strong patent rights."[65]

According to Dr. Haber, this establishes the same presumptive burden on behalf of patents that is established by the same overwhelmingly positive correlations between other private property rights and economic growth: Those who claim otherwise bear the burden of proof to show the contrary.[66] This is correct. For example, no empirical study has ever demonstrated that a patent-owner's request for an injunction to stop a defendant's infringement of its property rights has resulted either in consumer harm or in slowing down the pace of technological innovation. Given the well-understood function of property rights, such as patents, in promoting both innovation and economic growth, a heavy burden of proof rests on those who insist to the contrary that patents stifle innovation and economic growth.

Conclusion

President Abraham Lincoln famously said of the U.S. patent system that it "added the fuel of interest to the fire of genius."[67] He knew of which he spoke, as President Lincoln is the only American President to have received a patent for an invention (granted to him in 1849).[68] Lincoln's poeticism about the patent system has been confirmed by the facts, although these rigorous economic and historical studies have been expressed in more technical terms of social scientists. There is a consistent, strong correlation, if not a causal relationship, between property rights in inventions (patents) and growing innovation economies and flourishing societies. This is unsurprising, because it is part and parcel of the same relationship that economists, historians, and social scientists have long identified between reliable and effective property rights and economic growth.

Unfortunately, this key function of patents is widely misunderstood today, just as the key function of all property rights is generally misunderstood. But advocates for property rights and the free market, such as

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libertarians and many people who are influenced by their critiques of patents, are also confused about patents. They mistakenly argue that patents are unjust monopolies that should be abolished, at worst, or monopoly grants made necessary only by the practical realities of prompting people to invent, at best.

The promise of property rights certainly spurs people to invest and create new valuable assets, but property rights do more than this. They are the key means by which individuals transact in the marketplace with their creations and inventions. The farmer is not only incentivized to grow crops by the promise of a property right in the fruits of one's labor; the farmer can then transact with other people in the marketplace. He can contract with a railroad to transport his fruits to a company with which he has contracted to process them efficiently into edible foodstuffs. The processer can contract with a wholesaler to distribute the foodstuff to grocery stores, and ultimately the grocery stores sell inexpensive frozen dinners, bottled or canned fruit, and other necessaries to consumers.

Through licenses and other commercial mechanisms invented over the centuries by patent owners, the patent system facilitates the production, distribution, and retail services in markets for new products and services. If patents are secured as property rights in a political and legal system with stable institutions like the USPTO and courts of law that are governed by the rule of law, then they will continue to serve as essential factors in the successful growth of innovation economies and flourishing societies. The U.S. has demonstrated to the world over the past two centuries that patents facilitate technological and economic progress. We should do everything we can to keep it that way.

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Endnotes

1. *See* Leahy–Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 248 (2011). Many other bills have been introduced in Congress in the past decade that, until three bills introduced during the 118th Congress—the Promoting and Respecting Economically Vital American Innovation Leadership Act (PREVAIL Act); Patent Eligibility Restoration Act of 2023 (PERA Act); and Realizing Engineering, Science, and Technology Opportunities by Restoring Exclusive Patent Rights Act of 2024 (RESTORE Patent Rights Act)—proposed further restrictions on or elimination of the rights of patent owners. *See*, *e.g.*, Venue Equity and Non-Uniformity Elimination Act of 2016, S. 2733, 114th Cong. (2016); Innovation Act, H.R. 9, 114th Cong. (2015); Innovation Act, H.R. 3309, 113th Cong. (2013); and Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013, H.R. 845, 113th Cong. (2013).
2. *See* Press Release, Federal Trade Commission, FTC Finalizes Settlement in Google Motorola Mobility Case (July 24, 2013), https://www.ftc.gov/news-events/press-releases/2013/07/ftc-finalizes-settlement-google-motorola-mobility-case (discussing the FTC's approval of Google/Motorola merger in which Google made concessions on enforcement of its standard essential patents); Federal Trade Commission v. Qualcomm Inc., 969 F.3d 974 (9th Cir. 2020) (reversing district court's decision that Qualcomm violated the antitrust laws with its patent licensing business model).
3. *See* Adam Mossoff, *Big Tech's Abuse of Patent Owners in the PTAB Must End*, Heritage Found., Legal Memorandum No. 336 (2023), https://www.heritage.org/big-tech/report/big-techs-abuse-patent-owners-the-ptab-must-end.
4. *See* eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 392–93 (2006) (determining that an injunction should not be issued automatically based on a finding of infringement).
5. *See* Impression Prods., Inc. v. Lexmark Int'l, Inc., 137 S. Ct. 1523 (2017) (holding that patent owners exhaust all rights in conveyances of patented products in the marketplace); Bd. of Trustees of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc., 563 U.S. 776, 789–90 (2011) (holding that the Bayh–Dole Act does not automatically vest title to federally funded inventions in federal contractors); Quanta Comp. v. LG Elec., Inc., 553 U.S. 617 (2008) (holding that any authorized sale of a patented product exhausts all patent rights in that product); Quanta Comp. v. MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 137 (2007) (holding that a licensee does not forfeit the right to challenge a licensed patent by signing a license agreement).
6. *See* Alice Corp. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014) (holding that a computer program that facilitated financial transactions and mitigated risk is an abstract idea and not patent subject matter); Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013) (holding that isolated DNA is not patentable subject matter); Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012) (holding that a medical treatment method is not patentable subject matter); Bilski v. Kappos, 561 U.S. 593 (2010) (holding that a business method patent on hedging investment risk is not patentable subject matter).
7. *See* Jonathan M. Barnett, The Big Steal: Ideology, Interest, and the Undoing of Intellectual Property (2024); Adam Mossoff, *Weighing the Patent System: It Is Time to Confront the Bias Against Patent Owners in Patent "Reform" Legislation*, Wash. Times (Mar. 24, 2016), https://www.washingtontimes.com/news/2016/mar/24/adam-mossoff-weighing-the-patent-system/ (criticizing the "strikingly one-sided, biased narrative of the past several years about patent 'reform'").
8. *See* Kevin Madigan & Adam Mossoff, *Turning Gold to Lead: How Patent Eligibility Doctrine Is Undermining U.S. Leadership in Innovation*, 24 Geo. Mason L. Rev. 939 (2017).
9. Innovation Act of 2013: Hearing on H.R. 3309 Before the Comm. on the Judiciary, 113th Cong. (Oct. 29, 2013) (statement of David J. Kappos, Partner, Cravath, Swaine & Moore LLP), at 2.
10. *See* Madigan & Mossoff, *supra* note 8 (identifying how the patent system facilitated biotech and computer revolutions); Adam Mossoff, *A Brief History of Software Patents (and Why They're Valid)*, 56 Ariz. L. Rev. Syllabus 62, 79 (2014) ("The American patent system has succeeded because it has secured property rights in the new innovation that has come about with each new era—and it has secured the same property rights for all types of new inventions, whether in the Industrial Revolution or in the Digital Revolution.").
11. *See* Jonathan M. Barnett, *Three Policy Resets to Promote U.S. Innovation Leadership*, Hudson Institute, Policy Memo (2025), https://s3.us-east-1.amazonaws.com/media.hudson.org/Three+Policy+Resets+to+Promote+U.S.+Innovation+Leadership+-+Jonathan+M.+Barnett.pdf (identifying degradation in venture capital financing in U.S. in recent years correlating with degradation of patent system).
12. *See supra* note 1.
13. *See* Adam Mossoff, *Restoring the American Innovation Engine: Congress Should Consider Enacting the RESTORE Patent Rights Act*, Heritage Found., Legal Memorandum No. 364 (2024), https://www.heritage.org/economic-and-property-rights/report/restoring-the-american-innovation-engine-congress-should; Mossoff, *supra* note 3; Adam Mossoff, *Congress Should Reform Patent Eligibility Doctrine to Preserve the U.S. Innovation Economy*, Heritage Found., Legal Memorandum No. 257 (2020), https://www.heritage.org/economic-and-property-rights/report/congress-should-reform-patent-eligibility-doctrine-preserve-the.
14. Pierre-Joseph Proudhon, What Is Property? 1 (Donald R. Kelley & Bonnie G. Smith eds., 1994).
15. *See* Adam Mossoff, *Intellectual Property*, *in* Routledge Companion to Libertarianism (Matt Zwolinksi & Benjamin Ferguson eds., 2022) (describing the range of favorable and opposing views on intellectual property among libertarians).

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16. *See* Eric Boehm, *Will Thomas Massie Get to Pick the Next Speaker of the House?*, Reason (Jan. 2, 2025), https://reason.com/2025/01/02/will-thomas-massie-get-to-pick-the-next-speaker-of-the-house/ (referring to Massie as a "libertarian-adjacent lawmaker"); George F. Will, *Meet the implacable, Off-the-Grid Libertarian Working to Energize Congress*, Wash. Post (June 21, 2023), https://www.washingtonpost.com/opinions/2023/06/21/kentucky-republican-thomas-massie-congressional-plan (stating that "the libertarian does not always play well with others" in Congress); James Pogue, *"I Don't Know Why He's Not More Famous." Meet the Man Republicans Can't Get Enough Of*, N.Y. Times (Mar. 10, 2023), https://www.nytimes.com/2023/03/10/opinion/thomas-massie-republican-party.html?searchResultPosition=1 (reporting that Massie "ran for a county office in 2010 as a disciple of the libertarian-minded Senate candidate Rand Paul" and that "Mr. Paul endorsed Mr. Massie in his first U.S. House race two years later").
17. Representative Massie has received at least 29 patents for his inventive labors and before running for office used his property rights in his inventions in haptic technology (vibration responses to inputs of digital devices) to found SensAble Technologies Inc., which ultimately employed 70 people. *See* Thomas Massie, *Congress Should Protect Patent System, not Weaken It*, The Courier-Journal (Feb. 5, 2015), https://www.courier-journal.com/story/opinion/contributors/2015/02/05/congress-protect-patent-system-weaken/22919533/.
18. Murray N. Rothbard, Man, Economy, and State with Power and Market 747 (Ludwig von Mises Institute, Scholars Edition, 2d ed., 2009).
19. *Id.* at 748 (emphasis in original).
20. Tom W. Bell, *Indelicate Balancing in Copyright and Patent Law*, *in* Copy Fights: The Future of Intellectual Property in the Information Age 4 (Adam D. Thierer & Clyde Wayne Crews, Jr. eds., Cato Institute, 2002).
21. *See* United States v. AT&T, 552 F. Supp. 131 (1982).
22. Jeffrey Tucker, *Patents Are a Government Creation*, Found. for Econ. Ed. (Apr. 14, 2013), https://fee.org/resources/patents-are-a-government-creation/.
23. *See* David Kline, Revisiting Big Tech's Patent Troll Boogeyman, RealClearPolitics (Aug. 9, 2020), https://www.realclearpolitics.com/articles/2020/08/09/revisiting_big_techs_patent_troll_boogeyman_143891.html; Mossoff, *supra* note 3, at 5 (identifying Big Tech companies like Intel and Google as crafting "a narrative that the patent system is 'broken' and stifling innovation").
24. *See* Mario Trujillo, *Report Finds Hundreds of Meetings Between White House and Google*, The Hill (Apr. 22, 2016), https://thehill.com/policy/technology/277251-report-highlights-hundreds-of-meetings-between-white-house-and-google/ (reporting a total of at least 427 meetings between President Obama and Google representatives and Google spending $3.8 million in lobbying in the first quarter of 2016).
25. *See Obama Drinks the Kool-Aid on Weaker Patents, "Trolls,"* IP CloseUp (Feb. 19, 2013), https://ipcloseup.com/2013/02/19/obama-drinks-the-kool-aid-on-weaker-patents-trolls/.
26. Erin Mershon, *Obama Backs Patent Reform Effort in State of the Union*, Politico Now Blog (Jan. 28, 2014), https://www.politico.com/blogs/politico-now/2014/01/obama-backs-patent-reform-effort-in-state-of-the-union-182139.
27. Mike Masnick, *If Patents Are So Important to Innovation, Why Do Innovative Companies Keep Opening Up Their Patents Rather Than Enforcing Them?*, techdirt (Sept. 24, 2020), https://www.techdirt.com/2020/09/24/if-patents-are-so-important-to-innovation-why-do-innovative-companies-keep-opening-up-their-patents-rather-than-enforcing-them/ (emphasis in original).
28. Mike Masnick, *The Economist Disagrees With the Economist: Argues We Need More Patents, Approved Faster*, techdirt (May 12, 2011), https://www.techdirt.com/2011/05/12/economist-disagrees-with-economist-argues-we-need-more-patents-approved-faster/.
29. Mark Cuban, *I Hope Yahoo Crushes Facebook in Its Patent Suit*, Blog Maverick (Mar. 13, 2012), https://blogmaverick.com/2012/03/13/i-hope-yahoo-crushes-facebook-in-its-patent-suit/.
30. Although the original 2014 essay is no longer accessible on Tesla's blog, substantial portions of it are quoted here (and the quotes in this paragraph are taken from it): Eric Wesoff, *Tesla's Elon Musk Declares "All Our Patent Are Belong to You,"* gtm (June 13, 2014), https://www.greentechmedia.com/articles/read/teslas-elon-musk-declares-all-our-patent-are-belong-to-you.
31. In this blog posting, Musk announced a new Tesla patent cross-licensing policy, as I explained in an *Investor's Business Daily* op-ed, "Tesla's New Patent Policy: Long Live the Patent System!" *See* Adam Mossoff, *Teslas's New Patent Policy: Long Live the Patent System!*, International Center for Law & Economics Blog (Aug. 13, 2014), https://laweconcenter.org/resources/teslass-new-patent-policy-long-live-the-patent-system/. The op-ed is no longer available on the *Investor's Business Daily* website, but it was reposted at this blog. As I explained in my op-ed, Musk was exercising his patent rights, not abandoning them, creating a cross-licensing policy in which any company was permitted in "good faith" to use Tesla's patents in exchange for granting Tesla equal access to that company's patents. This remains Tesla's patent policy to this day. *See* Patent Pledge & Tesla's Pledge, https://www.tesla.com/legal/additional-resources#patent-pledge.
32. *Id.*
33. *See* Elon Musk, Only patents for things that are super expensive to prove work, but are then easy to manufacture (like stage 3 drug trials) have any merit, X (Nov. 23, 2024, 6:42 PM), https://x.com/elonmusk/status/1860468899562627163. All quotes in this paragraph are from the video in this X post.
34. For each drug approved by the FDA for use by patients, there are, on average, research and development (R&D) expenditures of $2.6 billion incurred over 10–15 years. *See* Joseph A. DiMasi, Henry G. Grabowski, & Ronald W. Hansen, *Innovation in the Pharmaceutical Industry: New Estimates of R&D Costs*, 47 J. Health Econ. 20 (2016). Total private investment in biopharmaceutical R&D in 2018 was estimated to be $129 billion. *See U.S. Investments in Medical and Health Research and Development 2013–2018*, at 7 (Research America, 2019).

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35. *See*, *e.g.*, Jonathan M. Barnett, Innovators, Firms, and Markets: The Organizational Logic of Intellectual Property (2021); Daniel Spulber, The Case for Patents (2021); B. Zorina Khan, Inventing Ideas: Patents, Prizes, and the Knowledge Economy (2020); B. Zorina Khan, *Trolls and Other Patent Inventions: Economic History and the Patent Controversy in the Twenty-First Century*, 21 Geo. Mason L. Rev. 825, 837–39 (2014); Naomi R. Lamoreaux, Kenneth L. Sokoloff, & Dhanoos Sutthiphisal, *Patent Alchemy: The Market for Technology in US History*, Bus. Hist. Rev. (Spring 2013).
36. *See*, *e.g.*, Stephen Haber, *Patents and the Wealth of Nations*, 23 Geo. Mason L. Rev. 811 (2016); Jonathan M. Barnett, *Patent Tigers: The New Geography of Global Innovation*, 2 Criterion J. Innovation 429 (2017).
37. This term is Law French in feudal England in which the adjective follows the noun and thus is translated in English as an "open letter," as it was literally a letter addressed to the recipient from the Crown and bearing the Crown's seal, conferring and detailing the special privileges granted to the person. The recipient would show this letter—it was *open* to be read by all—to anyone requiring proof of one's legal claim to engage in a particular activity or to formally charge someone for violating this grant of a royal privilege in the Crown's prerogative court, the Privy Council.
38. To this day, all property rights, whether in land or inventions, are found ultimately in an original patent grant by either the federal government or a state government. *See*, *e.g.*, Sherman v. Buick, 93 U.S. 209, 211 (1876) ("The contest in this case [between two claimants to title in a parcel of land] is between a patent of the United States and a patent of the State of California."); *see also* 43 U.S.C. § 945 (2012) (imposing an easement upon "all patents for lands taken up after August 30, 1890, under any of the land laws of the United States"); Home on the Range v. AT&T Corp., 386 F. Supp. 2d 999, 1000 (S.D. Ind. 2005) ("Plaintiffs are private landowners.... The United States issued land patents to plaintiffs' predecessors in interest...."); Schwab v. Timmons, 589 N.W.2d 1, 4 (Wis. 1999) ("In 1854, the United States granted by patent Lot 4 to Ingebret Torgerson....").
39. Bilski v. Kappos, 561 U.S. 593, 626–27 (2010) (Stevens, J., concurring); *see also* Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC, 138 S. Ct. 1365, 1377 (2018) ("The Patent Clause in our Constitution 'was written against the backdrop' of the English system."); Graham v. John Deere Co., 383 U.S. 1, 5 (1966) ("[The Copyright and Patent Clause] was written against the backdrop of the practices—eventually curtailed by the Statute of Monopolies—of the Crown in granting monopolies to court favorites in goods or businesses which had long before been enjoyed by the public.").
40. Evans v. Jordan, 8 F. Cas. 872, 873 (C.C.D. Va. 1813) (No. 4,564) (Marshall, Circuit Justice), *aff'd*, 13 U.S. 199 (1815); *see also* Pennock v. Dialogue, 27 U.S. (2 Pet.) 1, 18 (1829) (stating that a patent is a "title" and that an act of invention before applying for a patent is therefore "like an inchoate right to land, or an inceptive right to land, well known in some of the states, and every where accompanied with the condition, that to be made available, it must be prosecuted with due diligence, to the consummation or completion of the title").
41. *Ex parte* Wood, 22 U.S. (9 Wheat.) 603, 608 (1824).
42. Belding v. Turner, 3 F. Cas. 84, 85 n. (C.C.D. Conn. 1871) (No. 1,243).
43. *Id.*
44. *See* Adam Mossoff, *The Constitutional Protection of Intellectual Property*, Heritage Found., Legal Memorandum No. 282 (2021), https://www.heritage.org/economic-and-property-rights/report/the-constitutional-protection-intellectual-property.
45. *See* Hernando de Soto, The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else 83 (2000).
46. *See id.* at 74.
47. B. Zorina Khan, The Democratization of Invention: Patents and Copyrights in American Economic Development, 1790–1920, at 9–10 (2005).
48. *See*, *e.g.*, Lamoreaux et al., *supra* note 35, at 4–5.
49. *See* 1 Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations 7–15 (Edwin Cannan ed., Univ. Chi. Press, 1976) (1776).
50. *See* Adam Mossoff, *Patent Licensing and Secondary Markets in the Nineteenth Century*, 22 George Mason Law Review 959, 962–63 (2015) (describing Goodyear's use of the patent licensing business model).
51. *See* Kenneth Silverman, Lightning Man: The Accursed Life of Samuel F.B. Morse 261–67 (2003) (discussing Amos Kendall's franchise business model based on licenses of rights in Morse's patent).
52. *See* Christopher Beauchamp, Invented by Law: Alexander Graham Bell and the Patent That Changed America 49–51 (2015) (describing Bell's use of licensing and the franchise business model after failing to sell his patents to Western Union or obtain venture capital to support his own full-service company).
53. *See* Mossoff, *supra* note 50, at 964–65 (describing Edison's licensing business model).
54. *See supra* note 31 (describing the cross-licensing patent policy adopted by Tesla in 2014).
55. *See* Adam Mossoff, *The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s*, 53 Arizona Law Review 165, 194–96 (2011).
56. *See* Jonathan M. Barnett, *From Patent Thickets to Patent Networks: The Legal Infrastructure of the Digital Economy*, 55 Jurimetrics J. 1 (2014), https://papers.ssrn.com/abstract=2438364; Barnett, *supra* note 35.
57. *See* Mossoff, *supra* note 55, at 183 ("Since he was destitute, Howe required an investor to finance his patent infringement lawsuits, and he at last convinced George W. Bliss to invest in his litigation strategy (as well as purchase a one-half interest in Howe's patent from a previous financial backer, George Fisher, who had not realized any return on his investment).").
58. *See* Adam Mossoff, *Morse Telegraph*, *in* A History of Intellectual Property in 50 Objects 69 (Claudy Op Den Kamp & Dan Hunter eds., 2019) ("Morse realized that he could extract the value in the property rights in his patents by selling and licensing his ownership interests to others with the business acumen to convert the invention he created in his New York City apartment into real-world technology used across the United States.").

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59. *See* Joan Farre-Mensa et al., *What Is a Patent Worth? Evidence from the U.S. Patent "Lottery,"* 75 J. Finance 639 (2019), https://doi.org/10.1111/jofi.12867.
60. *See supra* note 27.
61. *See id.*
62. De Soto, *supra* note 45, at 168.
63. Khan, *supra* note 47, at 96.
64. Haber, *supra* note 36, at 834.
65. *Id.* at 815.
66. *See id.* at 834 ("Evidence and reason therefore suggest that the burden of proof falls on those who claim that patents frustrate innovation.").
67. Abraham Lincoln, *Second Lecture on Discoveries and Inventions* (Feb. 11, 1859), *in* 3 The Collected Works of Abraham Lincoln 363 (Roy P. Basler ed., 1953).
68. *See* U.S. Patent No. 6,469 (issued May 22, 1849).

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