A QUICK GUIDE TO PATENT LAW AND RECENT DEVELOPMENTS IN THE FIELD

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Executive Summary: The framers of the U.S. Constitution believed that codifying intellectual property rights at the federal level was important to economic independence, innovation, and domestic growth. Article I, Section 8 declares that Congress has the 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." Intellectual property in the United States encompasses four broad categories: patents, trademarks, copyrights, and trade secrets. A patent is a property right granted to an inventor that allows the inventor (or assignee) to exclude others from "making, using, offering for sale, or selling" the invention for a limited time. Patents play an essential role in the economy by creating limited legal monopolies for inventors and developers, which incentivize investment in creativity, innovation, and production. In exchange for these legal monopolies, patent owners disclose their inventions to the world, contributing to continued advancements in science, engineering, medicine, and more. A well-functioning and efficient patent system is critical to invention and innovation.

I. BACKGROUND: WHAT IS A PATENT?

A patent is intended to protect new processes, machines, and/or products as codified in the 1952 Patent Act.[1] A patent is an exclusive right granted by the federal government to a person to "exclude others from making, using, offering for sale, or selling" an invention throughout the United States and to exclude others from importing the invention into the United States.[2] To obtain a patent, technical information about the invention must be disclosed to the public in a patent application. As a reward for disclosing their invention to the public in a patent application, patent owners can obtain exclusive rights to their inventions for a certain time; however, a patent does not give the inventor an affirmative right to make, use, or sell the invention.[3] After a patent term expires, the patent owner loses the legal monopoly, and the patented subject matter becomes part of the public domain, permitting others to make, use, and sell the relevant products or processes in the free market.[4]

The foundation of patent law is in the United States Constitution, which grants Congress the power "[t]o 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."[5] This clause, known as the Patent and Copyright Clause, is viewed both as a designation of an enumerated power to Congress and as a limitation on that power—specifically, the Constitution gave Congress the power to "grant[] exclusive rights for limited times."[6] This means patents only

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[1] 35 U.S.C. §§ 1–390.
[2] *Id.* § 154.
[3] CRAID ALLEN NARD, THE LAW OF PATENTS 1 (4th ed. 2017) ("A patent gives its owner the right to exclude; a patent does not provide a positive right to make, use, or sell, the invention.").
[4] *See U.S. Patent Overview*, FINDLAW (June 12, 2017), https:/corporate.findlaw.com/intellectual-property/u-s-patent-overview.html (explaining that, once a patent expires, anyone may make, use, offer for sale, or import the invention).
[5] U.S. CONST. art. I, § 8, cl. 8.
[6] NARD, *supra* note 3, at 18.

grant the right to exclude—thus giving its holder a legal monopoly—without other rights, and those rights must expire after some period of time. Congress has exercised its power to promote the sciences with many different patent laws, from the Patent Act of 1790,[7] it's first patent statute, to the 2013 Leahy-Smith America Invents Act (AIA),[8] the first significant overhaul to the patent system in over fifty years.

Patents fall into one of three categories: utility patents, design patents, and plant patents.[9] Utility patents are the concern of most patent law proceedings. Utility patents protect functional ideas ("the way an article is used and works") and issue for a period of twenty years from the filing date of the patent application.[10] Design patents "protect[] the way an article looks" and issue for a period of fifteen years.[11] Plant patents generally protect "distinct and new variet[ies] of plant[s]" such as plants invented or discovered and asexually reproduced.[12]

Modern patent documents consist of two main parts: the specification and the claims.[13] As the Federal Circuit succinctly stated, "[s]pecifications teach. Claims claim."[14] The specification contains the disclosure of the invention, which is used to teach the reader about the particulars of the invention.[15] However, the specification is not a "how-to" guide instructing the average person how to make or perform the invention, but rather contains only enough detail for a person skilled in the art to carry out the invention.[16] In contrast, claims, which are "considered to be the most important part of the patent document," set the legal boundaries of the invention and precisely define the patentee's property rights.[17]

II. BACKGROUND: HOW DO I GET A PATENT?

The patent application process, otherwise known as patent prosecution, starts when an inventor files a patent application with the United States Patent and Trademark Office

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[7] Act of Apr. 10, 1790, ch. 7, 1 Stat. 109.
[8] Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).
[9] U.S. Patent and Trademark Office, Manual of Patent Examining Procedure § 1502.01 (9th ed. Rev. 01.2024) [hereinafter MPEP] (providing provisions and definitions that cover each of the three types of patents).
[10] *Id.*
[11] *Id.*
[12] *Id.* § 1601; G*eneral Information About 35 U.S.C. 161 Plant Patents*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/patents/basics/apply/plant-patent (last visited Sep. 27, 2025). Without plant patents, some kinds of agricultural development would not be cost effective, since anyone could simply get seeds of the plant and grow for free what the patent owner had spent time and effort designing.
[13] *See* NARD, *supra* note 3, at 47 (noting that claims are technically part of the specification under 35 U.S.C. § 112, but that patent professionals and courts treat claims and specifications as distinct).
[14] SRI Int'l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1121 n.14 (Fed. Cir. 1984).
[15] *Id.* at 1122.
[16] Phillips v. AWH Corp., 415 F.3d 1303, 1323 (Fed. Cir. 2005).
[17] *Id.* at 1118, 1121.

(USPTO).[18] After the application is received, it is sent to a particular art unit and Examiner who reviews the patent application for compliance with patent laws, namely, subject matter eligibility,[19] novelty,[20] non-obviousness,[21] and sufficient disclosure.[22] Patent prosecution generates a prosecution history, which refers to the record of all communications between the USPTO and the applicant regarding a particular filing.[23] The USPTO awards patents for *new* inventions; that is, patents cannot be issued for concepts and objects already in the public domain.[24] "Prior art" is the term used to refer to all inventions, writings, and patents that came before and are related to a particular application.[25] For the patent to be issued, it must be distinguishable from the prior art and meet all other statutory requirements.[26]

Three primary statutory requirements of patent eligibility include novelty, non-obviousness, and subject matter.[27] For an invention to be novel, it cannot have been disclosed in a patent, described in a printed publication, in public use, on sale, or otherwise available to the public prior to its effective filing date.[28] Similarly, a patentable invention must be non-obvious—that is, readily apparent or easily conceivable to a person of ordinary skill in the relevant field.[29] Finally, a patentable invention must refer to patentable subject matter, which is defined by statute as a "process, machine, manufacture, or composition of matter, or any new and useful

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[18] *See* Joshua Scheufler, Patent, 27 TEX. INTELL. PROP. L.J. 139, 140–41 (2019) (detailing the PTO process); *Trademark, Patent, or Copyright?*, U.S. PAT. & TRADEMARK OFF., https://www.uspto.gov/trademarks/basics/trademark-patent-copyright (last visited Sep. 27, 2025) (explaining the difference between a patent and a copyright).

[19] Four categories of invention—process, machine, manufacture, or composition of matter—are deemed by Congress to be the appropriate subject matter of a patent. 35 U.S.C. § 101.

[20] The requirement for Novelty means that nothing exactly like the claimed invention can be found in the prior art. *Id.* § 102.

[21] Non-obviousness requires the applicant to demonstrate that they have given society something it didn't have before. The claimed invention must be a nonobvious solution to the person having ordinary skill in the art (PHOSITA). *Id.* § 103.

[22] Sufficient disclosure requires that a patent application disclose a claimed invention in sufficient detail so that the PHOSITA could carry out that claimed invention. 35 U.S.C. § 112.

[23] Karen Millane Whitney, *Sources of Patent Prosecution History Must Not Violate Public Notice Requirement*, 32 SETON HALL L. REV. 266, 266–68, 268 n.6 (2001).

[24] See Eileen M. Kane, Patent Ineligibility: Maintaining a Scientific Public Domain, 80 ST. JOHN'S L. REV. 519, 540 (2006) (explaining the public domain must be protected by not awarding patents to material already within the public domain).

[25] Whitney, *supra* note 23, at 269–70.

[26] *Id.*

[27] 35 U.S.C. §§ 101, 102, 103.

[28] *Id.* § 102(a).

[29] *Id.* § 103.

improvement thereof."[30] Typically, subject matters that are not patentable include laws of nature,[31] natural phenomena,[32] and abstract ideas.[33]

III. BACKGROUND: PATENT LAW JUDICIAL BODIES AND PROCEEDINGS

The Federal Circuit has exclusive subject matter jurisdiction over patent appeals and hears patent appeals from federal district courts, the International Trade Commission (ITC), and the Patent Trial and Appeals Board (PTAB).[34] In 2021, the USPTO filed the highest number of appeals in the Federal Circuit[35]

Under the AIA, the USPTO has substantially expanded its role in adjudicating the validity of patent claims. The Act created two new types of post-grant proceedings: Post-Grant Review[36] (PGR) and Inter Partes Review[37] (IPR). PGRs review the validity of a patent that has recently issued, allowing anyone to challenge a patent's validity within nine months of issuance on any ground.[38] The PTAB will grant review if it believes it is "more likely than not" that at least one of the challenged claims is unpatentable on grounds such as subject matter, novelty, public use, or sale.[39] IPRs, on the other hand, permit challenges of a patent's validity after nine months from issuance or, if a party initiated a PGR proceeding, after the PGR terminates.[40] The scope of the challenge in an IPR is narrower than a PGR: grounds for invoking IPR are limited novelty and obviousness and with patents and printed publications.[41] Further, the Board will not

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[30] *Id.* § 101.
[31] *See, e.g.*, O'Reilly v. Morse, 56 U.S. 62, 113–14 (1853) (holding as ineligible a general claim for using electric current to transmit intelligible signals (telegraphy) because of its broad focus on a law of nature (electromagnetism)).
[32] *See, e.g.*, Diamond v. Chakrabarty, 447 U.S. 303, 310 (1980) (holding that a genetically engineered micro-organism was patentable because it did not otherwise exist in nature).
[33] *See, e.g.*, Alice Corp. v. CLS Bank Int'l, 573 U.S. 208, 226–27 (2014) (rejecting a patent claim as drawn to the abstract idea of intermediated settlement because the claim merely used a generic computer implementation).
[34] 28 U.S.C. § 1295(a); *see* NARD, *supra* note 3, at 42–43 (explaining that appeals to the Federal Circuit from PTAB may arise from the patent prosecution process, or from patent review proceedings such as Inter Partes and Post Grant Reviews).
[35] APPEALS FILED, TERMINATED, AND PENDING, UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT (2021), https://www.uscourts.gov/sites/default/files/data_tables/jb_b8_0930.2021.pdf.
[36] 35 U.S.C. § 321.
[37] *Id.* § 311. On October 17, 2025, John Squires, the director of the USPTO, stated that he will be "reclaiming the director's statutory role" in deciding whether to institute AIA reviews of patents. *See* Ryan Davis, *USPTO Head to Take Over Patent Review Institution Decisions*, LAW 360 (Oct. 17, 2025, at 16:26 ET), https://www-law360-com.us1.proxy.openathens.net/articles/2401076/uspto-head-to-take-over-patent-review-institution-decisions (noting that while the law states that "such decisions are to be made by the USPTO director . . . that authority has been delegated to the [PTAB] in most cases since the inter partes reviews and post-grant reviews became available in 2012.").
[38] 35 U.S.C. § 321(c).
[39] *Id.* § 324(a).
[40] *Id.* § 311(c).
[41] *Id.* § 311(b).

authorize an IPR unless there is a reasonable likelihood that the petitioner will prevail.[42] The decisions to institute both PGRs and IPRs are "final and not appealable;"[43] however, once instituted, a party may appeal an adverse result to the Federal Circuit. These two new methods of review, particularly IPRs, have been very popular due to their economy and efficiency for challenging patents.[44]

IV. CURRENT PATENT NEWS & FURTHER READING

A. PROPOSED CONGRESSIONAL CHANGES

Congress, backed by the current Administration, is pushing a pro-patent agenda in favor of the patent owner through pending legislation.[45] Three bipartisan pieces of legislation, the PREVAIL Act, the Patent Eligibility Reform Act (PERA), and the RESOTRE Act, represent a pro-patent agenda that would "(1) limit abusive post-grant patent challenges, (2) clarify what is patentable, and (3) restore the presumption that a patent holder can enjoin (block) infringers from wrongfully using its patented technology."[46] Proponents of these Acts state that they would raise incentives for beneficial patenting that drives innovation.[47]

Specifically, the PREVAIL Act would reform and limit defendant-friendly proceedings concerning patents' ineligibility by raising the standard of proof in IPR proceedings to "clear and convincing."[48] It also tackles procedural issues at the PTAB to reform the process of patent challenges.[49] Opponents of the bill contend that there's a risk that these changes could increase litigation, arguing that strengthening patent protections could extend pharmaceutical monopolies and delay generic competition.[50]

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[42] *Id.* § 314(a).
[43] *Id.* §§ 324(e), 314(d).
[44] NARD, *supra* note 3, at 45.
[45] *See* Meaghan Kent, Manyn Caixeiro & Michael Sandonato, *Deregulation Nation: USPTO and the U.S. Copyright Office*, VENABLE LLP (June 10, 2025), https://www.venable.com/insights/publications/2025/06/uspto-and-the-us-copyright-office (explaining that administrative agencies "are shifting discretionary authority away from … bureaucratic administrative judges and administrators" and "toward political appointees." These changes incentivize patent enforcement, especially for non-practicing entities (NPEs), which own patents and receive revenue from licensing or enforcing them, as opposed to gaining revenue from operations).
[46] Alden Abbott, *Strong Trump Support For Patent Rights Could Promote U.S. Innovation*, FORBES (June 27, 2025), https://www.forbes.com/sites/aldenabbott/2025/06/27/strong-trump-support-for-patent-rights-could-promote-us-innovation.
[47] *Id.*
[48] Kent et al., *supra* note 45.
[49] *See* Keegan Caldwell, *Trump's First 100 Days: How a Pro-Patent Agenda Could Reshape US Innovation*, CALDWELL (Apr. 25, 2025), https://caldwelllaw.com/news/trump-ip-reform-patent-policy-innovation-impact (explaining that the bill would require anyone challenging a patent to have already been sued or threatened with a patent lawsuit and "prevent multiple challenges against the same patent, apply evidentiary standards favorable to patent owners, and ensure different judges handle the institution and final decision phases").
[50] *Id.* (elaborating that the bill could limit the public's ability to challenge questionable patents through the more accessible PTAB process and possibly force disputes into lengthy and costly federal court proceedings).

Meanwhile, PERA targets the confusion created by the Supreme Court's 2012 *Mayo* and 2014 *Alice* rulings.[51] Such decisions greatly restricted patent eligibility for innovations, especially in software and medical diagnostics.[52] The desired result of PERA would restore a straightforward threshold test for patentability by limiting judicial exceptions and clarifying that "useful processes, machines, manufactures, or compositions of matter are presumptively eligible for protection."[53] However, PERA critics are concerned that expanding patent eligibility to include subject matter that was previously considered natural phenomena or abstract ideas could allow companies to claim broader ownership over biological information or fundamental concepts.[54]

While PERA would likely redefine the law of patent eligibility by eliminating judicial exceptions, the RESTORE Act would create a presumption in favor of injunctions.[55] Before 2005, if patent owners proved patent infringement, they were given an injunction as a matter of course.[56] However, starting in 2006, the post-*eBay* framework made it nearly impossible for non-practicing entities (NPEs) to obtain injunctions.[57] Therefore, RESTORE could recalibrate the power dynamic in favor of NPEs.[58]

B. USPTO Hiring and Employment Status

On January 20, 2025, President Trump signed an executive order that froze all federal hiring and required federal employees to return to in-person work.[59] Although the USPTO is largely self-funded through user fees, executive actions aimed at reducing federal spending nevertheless apply.[60] The hiring freeze prevented the USPTO from bringing on about 800 new hires, many of whom were patent examiners.[61] Furthermore, for over twenty years, the USPTO operated on a remote work model, and to comply with the executive order, it had to force 90% of its workforce to return to physical offices that did not exist.[62] In response to these drastic changes and low demand for the service, the USPTO has discontinued its Accelerated Examination program for utility and design applications.[63] This workforce reduction was compounded by

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[51] *Id.*
[52] *Id.*
[53] *Id.*
[54] *Id.*
[55] Kent et al., *supra* note 45.
[56] *Id.*
[57] *Id.*
[58] *Id.*
[59] Grant M. Ehrlich & Youngmin Lee, *Patent Strategies in Response to Recent U.S. Developments: Expected Changes and Filing Strategies*, Stites & Harbison PLLC (June 10, 2025), https://www.stites.com/resources/client-alerts/patent-strategies-in-response-to-recent-u-s-developments-expected-changes-and-filing-strategies.
[60] Dennis Crouch, *USPTO Facing Additional Cuts: What's Core vs. Expendable*, Patently-O (Feb. 26, 2025), https://patentlyo.com/patent/2025/02/facing-additional-expendable.html.
[61] Ehrlich & Lee, *supra* note 59.
[62] *Id.*
[63] *USPTO Discontinuing Accelerated Examination Program for Utility Applications*, USPTO (June 9, 2025), https://www.uspto.gov/about-us/news-updates/uspto-discontinuing-accelerated-examination-program-utility-applications; *USPTO to Suspend Expedited Examination of Design Applications*, USPTO (Apr. 14, 2025), https://www.uspto.gov/about-us/news-updates/uspto-suspend-expedited-examination-design-applications.

October 2025's government shutdown; within twenty-four hours of the shutdown, the USPTO announced that one of its regional offices would be closed and employees laid off.[64] The expected consequence of the USPTO's dwindling workforce is increased patent pendency.[65]

C. AI AND PATENT LAW

Between 2000 and 2022, it is approximated that 190,000 Artificial Intelligence (AI) patents were granted worldwide,[66] and as AI has developed, courts have been challenged with setting precedent on the framework of AI patentability. In the 2022 decision in *Thaler v. Vidal*,[67] the Federal Circuit affirmed that AI inventions can be patented, but the inventor listed on the patent application must be a natural person—not the AI itself.[68] But the holding in *Thaler* did not go so far as to conclude whether inventions made possible by the assistance of AI or inventions generated entirely by AI are patentable.[69] In 2024, the USPTO released guidance on AI and patent inventorship and concluded that both the inventor and coinventor of an invention must be a natural person.[70] The guidance also addressed the issue of whether an invention can be patented if AI was used to assist in its invention. The USPTO concluded that so long as only natural persons are named as the inventors, and each named natural persons significantly contributed to creating the invention in accordance with the factors listed in *Pannu v. Iolab Corp.*,[71] patentability of an invention is not precluded by AI assistance.[72] The guidance provided by the USPTO is in alignment with the purpose of the patent system: "to encourage *human* ingenuity."[73]

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[64] Jory Heckman, *USPTO, Sends Layoff Notices After Trump Administration Threatened Shutdown RIFs*, FED. NEWS NETWORK (Oct. 1, 2025), https://federalnewsnetwork.com/government-shutdown/2025/10/uspto-sends-layoff-notices-after-trump-administration-threatened-shutdown-rifs.

[65] Ehrlich & Lee, *supra* note 59.

[66] *Global Competitors Outpace U.S. in Patents*, U.S. NAT'L SCI. FOUND. (Feb. 29, 2024), https://www.nsf.gov/nsb/updates/global-competitors-outpace-us-patents.

[67] 43 F. 4th 1207, 1209 (Fed. Cir. 2022).

[68] *See id.* at 1209, 1211–12 (analyzing inventorship using the plain meaning and legal precedent of the word "individual" used in the Patent Act). Technologies like generative AI can create original works, like images, music, and writings, but these original works are hallucinations based on machine-learning models developed by humans. *See* Adam Zewe, *Explained: Generative AI*, MIT NEWS (Nov. 9, 2023), https://news.mit.edu/2023/explained-generative-ai-1109.

[69] 43 F. 4th at 1213.

[70] Inventor Guidance for AI-Assisted Inventions, 89 Fed. Reg. 10,043, 10,045–46 (Feb. 13, 2024).

[71] *See* 155 F.3d 1344 (Fed. Cir. 1998). The court in *Pannu* requires that a named inventor or coinventor must:

> (1) contribute in some significant manner to the conception or reduction to practice of the invention, (2) make a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and (3) do more than merely explain to the real inventors well-known concepts and/or the current state of the art.

Id. at 1351.

[72] Inventor Guidance for AI-Assisted Inventions, 89 Fed. Reg. 10,043, 10,046 (Feb. 13, 2024).

[73] *Id.*