Introduction to the United States Patent System

Companies invest significant time, money, and effort developing and marketing innovative technologies to compete in today’s global markets, and they rely on intellectual property laws to protect such investments. This series provides an overview of U.S. intellectual property laws with an emphasis on patent law. Below, we provide an introduction to basic patent law concepts and terminology. Future articles will address the interplay between patent law and other forms of intellectual property, such as trademark, copyright, and trade secret rights.

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Why Should Nonattorneys Learn About Patents?

Patents have economic and business implications. For example, the “soft-cookie wars” in the late 1980s involved patented technologies and resulted in a $125 million settlement between Procter & Gamble, Nabisco, Keebler, and Frito-Lay (3). While such multi-million dollar disputes do not occur every day, patents are regularly used to generate licensing revenues, to prevent competitors from entering a market, and as negotiating tools.

Having recognized the value of patents, food companies are actively building patent portfolios in areas such as biotechnology, nutraceuticals, formulations, chemical compounds, analytical methods, processes, and the like. Universities often seek to generate licensing revenues through patenting and technology transfer programs. Failure to appreciate the relevance of patents in a company’s field can be costly. For example, learning about a competitor’s patent too late could scuttle a product launch even though a plant and equipment have been built and purchased and employees have been hired and trained.

To function most effectively in a world where patents play an ever larger role, scientists and engineers should have at least a basic understanding of patents and what they can and cannot do. Some universities have also recognized this need and are considering patent law courses as part of the scientific and engineering curricula (e.g., Soetendorp, 2007 [8]). We provide the basis for such an understanding in this article and those that follow.

The Foundations of U.S. Patent Laws

The U.S. Constitution

The U.S. Constitution explicitly authorizes Congress to provide a system to encourage innovation by providing inventors with exclusive rights to their discoveries for a limited amount of time. This is the foundation of U.S. patent laws, which grant inventors the right to exclude others, for a limited time, from making or using a patented invention. George Washington signed the first patent statute in 1790. Since then, U.S. patent laws have undergone various revisions. Indeed, Congress is currently considering revisions to harmonize U.S. patent law with that of the rest of the world.1

The United States Patent and Trademark Office

The United States Patent and Trademark Office (USPTO) interprets and applies U.S. patent laws in determining whether to issue U.S. patents. To obtain patent protection, an invention must be patentable. This means the invention must have a utility and it must be novel and nonobvious. Each of these requirements is briefly described below.

Utility: Utility means that the invention has a practical use. This is a relatively easy standard to meet. There are, however, some restrictions. For example, one cannot patent an invention that only has harmful uses, and one cannot patent an invention that is impossible, such as a perpetual motion device.

Novelty: Novelty is also referred to as the “newness” requirement. It means that the invention cannot already exist in the public domain, also known as the prior art. For example, an inventor cannot patent what someone else has already done or published. You also cannot patent what you yourself have made public, unless you file a patent application within time periods set forth in the U.S. patent laws. In both cases, the invention is already in the prior art. Therefore, to avoid inadvertently losing the right to obtain a patent, one should speak with a patent attorney before disclosing an invention to the public, whether through publication, commercial use, or any other means. For example, scientists who made a poster presentation regarding a soy fiber technology two years before applying for a patent on the technology could not obtain a patent because the invention was no longer “novel” (5).

Obviousness: Even novel inventions cannot be patented if they are obvious. An invention is obvious if it is a straightforward combination or application of prior art information and does not

1 The patent statute is codified in Title 35 of the United States Code. The associated rules and regulations are in Title 37 of the Code of Federal Regulations.

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require doing something inventive. For example, when a company publicly distributed samples of a novelty ice cream product made by a process similar (but not identical) to a process later patented by the company, the patent was ultimately found to be invalid as obvious in view of publicly distributed samples made by the similar process (2).

**The Federal Courts**

Disputes between patentees and potential infringers are handled in the federal court system. In handling such disputes, the federal courts must interpret the patent laws, and therefore have a major impact on how patents are obtained and enforced. Patent disputes begin in one of the United States district courts. All patent appeals from district courts are heard by a single court, the Court of Appeals for the Federal Circuit. The district courts must abide by the rulings of the Federal Circuit. Having a single court handle all patent appeals promotes uniformity in interpretation and application of patent laws, thereby strengthening the patent system. Appeals from the Federal Circuit go to the U.S. Supreme Court. The Federal Circuit (and all U.S. courts) must abide by the rulings of the Supreme Court.

**The Terminology of Patent Enforcement: Infringement, Validity, and Enforceability**

Patent disputes typically concern the infringement, validity, and/or enforceability of a patent. These terms are explained below.

**Infringement:** As already noted, a patent gives the patent holder the right to prevent others from practicing the patented invention—i.e., making, using, or selling the patented invention. One is said to have infringed a patent when one violates such rights by practicing an invention without authorization (for example, without a license) from the patent holder. The relief for infringement can be damages and/or an injunction. Damages are payments of money. An injunction involves a court ordering the infringer to stop all infringing activity, even if it means closing plants, recalling products, and eliminating jobs.

**Validity:** An issued patent is presumed to be valid. This means that it can be used to exclude others from infringing unless someone proves that the patent is invalid or unenforceable. Invalidity is a defense an alleged infringer can raise in a patent suit, and it requires proof that a patent does not satisfy the requirements of patentability, such as utility, novelty, or nonobviousness. If an accused infringer can prove invalidity, the patentee cannot recover damages or obtain an injunction even if there is infringement.

**Enforceability:** Patent applicants have a duty to disclose to the USPTO all information that the applicant believes could be material to determining whether a patent should issue. The USPTO examiner must rely on the applicant for such disclosure. In contrast, an accused infringer, through the litigation process, can review the patent holder’s internal documents, including notebooks, e-mails, reports, memoranda, and the like. If these documents show that the patentee violated the duty of disclosure (by intentionally failing to disclose information to the USPTO or misleading the USPTO) a court can find the patent unenforceable. An unenforceable patent cannot be enforced, even if it meets the requirements of patentability and is infringed. For example, in a case concerning a patent to nonhydrogenated canola oil having superior oxidative and fry stability, the inventor obtained the patent by telling the examiner that the new oil had superior stability compared to similar oils. The alleged infringer, however, proved that the applicant withheld data from the patent examiner showing this to be false. As a result, the court found the patent unenforceable (1).

**The Essentials of Patent Law**

- Patents are technical documents and business tools.
- Patents confer the right to prevent others from making, using, or selling an invention.
- The business ramifications of patents extend far beyond the filing of patent applications and include patent strategy, licensing, and enforcement.
- Federal court decisions interpret the patent law and thereby impact its application.
- To maximize the value of patents, both legal and nonlegal professionals must have at least a basic understanding of patent law.

**The Players**

The following is a brief description of the entities involved in obtaining and enforcing patents:

**The USPTO:** The administrative agency empowered to issue patents in accordance with the patent statute and rules. Patent examiners at the USPTO work with applicants to determine whether inventions meet the requirements for patentability.

**The Federal Courts:** The arbiters of patent disputes. Litigation in the federal courts is an adversarial process in which patent holders attempt to enforce their patent rights and alleged infringers defend themselves. The written decisions of the federal courts set precedent as to how to interpret and apply patent laws.

**Inventors:** The creators of intellectual property.

**Society:** The ultimate beneficiaries of intellectual property. Intellectual property laws strive to balance the goals of spurring innovation and the products resulting therefrom, while preventing removal of common technology, ideas, and business tools from the public domain.

**Those Skilled in the Art:** The contemporaries to whom patent teachings are addressed, and through whose eyes patents are interpreted.

**Business:** Businesses frequently invest in and own intellectual property. Therefore, business strategy often dictates what intellectual property to pursue and how to protect and leverage it.

**Patent Counsel:** Professionals working in companies and law firms involved in planning and implementing patent-related activities, including developing and implementing patent strategies, including budgets and priorities; drafting and filing patent applications and working with the USPTO to obtain patents; managing and maintaining patent portfolios; licensing patents; monitoring the patent activity of competitors; providing legal opinions regarding infringement, validity, and enforceability of patents; evaluating the relative value and strength of a company’s patent portfolio prior to a merger or acquisition; and litigating patent disputes.

**A Changing World for Innovation and Its Laws**

The value of a patent depends on its scope and strength. Evaluating the scope and strength of a patent requires staying abreast of changes in U.S. patent law and how the federal courts interpret those laws. For example, the U.S. Congress is currently considering legislative reforms to the U.S. patent system and the U.S. Supreme Court has shown a renewed interest in taking patent cases and interpreting patent laws. Indeed, in the past year, the Supreme Court decided cases relating to the standard of ob-
viousness (6), the standard for awarding a permanent injunction in patent cases (4), and the propriety of a licensee (i.e., the party taking a license from the patent holder) suing a licensor (i.e., the patent holder) to invalidate a licensed patent (7). Thus, although U.S. patent laws have existed for more than 200 years, they are constantly evolving.

References and Authorities
2. Dippin’ Dots Inc. v. Mosey, 476 F.3d 1337 (Fed. Cir. 2007).

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