

INTELLECTUAL PROPERTY

The Interplay Between Patents and Other Forms of Intellectual Property

Editor's note: This is part two of a six part series on patent law. The next column will address how to obtain patent protection for an invention.



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Intellectual property has been defined as a “category of intangible rights protecting commercially valuable products of the human intellect” (5). In practical terms, intellectual property relates to patent, trademark, copyright, and trade secret rights (Table I), as well as unfair competition, publicity, and moral rights, which are not addressed in this series. Patents and trade secrets protect functionally useful technologies (i.e., the useful arts), but in different ways. Trademarks protect brand reputation and are extremely important to the consumer products industry, including the food industry. Copyrights protect works of authorship, including computer software programs.

Intellectual property laws strive to achieve a balance between promoting and protecting true innovation, denying or extinguishing rights in questionable intellectual property, and providing the public with reasonable access to new and useful technologies and products. Below is an overview of patent, trademark, copyright, and trade secret rights, and the interplay between them in achieving the goals of intellectual property law.



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Patents

Patentable Subject Matter

There are three types of patents: utility patents, design patents, and plant patents. Design patents are granted on ornamental designs of articles of manufacture, i.e., designs that do not have a functional purpose. Plant patents are for asexually reproduced new plant varieties. The discussion below focuses on utility patents. Utility patents cover new and useful processes, machines, articles of manufacture, or compositions of matter. These sub-categories are broad and cover most inventions, including

- new compounds;
- new forms of known compounds (e.g., new polymorphic forms, new salt forms);
- formulations, compositions, and man-made materials;

- genetically altered plants, seeds, and microorganisms;
- isolated genetic material and peptides;
- mechanical devices, tools, vehicles, appliances, and kits;
- synthetic methods;
- analytical methods;
- business methods;
- methods of treating diseases; and
- new processes.

Abstract ideas, principles of nature, and purely mathematical formulas without a practical application are not patentable.

The United States Patent and Trademark Office (USPTO) has issued more than 7 million patents and posts thousands of newly issued patents every Tuesday. One can gain familiarity with a field of interest by searching and reading patents and published patent applications at the USPTO website at www.uspto.gov. One can search as follows:

- 1) Go to www.uspto.gov/patft/index.html;
- 2) On the left side of the page, under issued patents, select “Advanced Search”;
- 3) In the query box, type a search term;
- 4) Click on the “Search” button.

The result will be a list of issued patents. Utility patents are numbered without prefix, design patents have the prefix “D,” and plant patents have the prefix “PP”

The Nature of Patent Rights

Patent Rights are Governed by Federal Law

Each country has its own patent laws. The U.S. patent statute is codified in Title 35 of the United States Code. U.S. patents provide rights only in the United States and its territories. Therefore, a patent application must be filed in each country in which patent rights are sought. Furthermore, one does not have to live in or do business in the United States to obtain or enforce a U.S. patent.

The Goal is Disclosure, Not Secrecy

A patent is granted in exchange for disclosing to the public the details of how to make and use an invention. Disclosing the details of a patented invention is the quid pro quo for receiving a patent and the right to exclude. Disclosure enriches the public knowledge, provides a foundation for future innovation, and gives competitors notice of what a patent covers, so that the competitor can take steps to avoid infringement. The disclosures required by U.S. patent law include detail about how to make and use the claimed invention and disclosure of what the inventor understood

to be the best way of making or using the invention when the patent application was filed. In other words, one cannot obtain a patent while hiding key aspects of the claimed invention.

An Application is Examined Before Patent Rights are Granted

The USPTO grants patents only after a USPTO examiner has reviewed an application and found that it complies with all statutory criteria. To be patentable, an invention must have utility and be novel and nonobvious, as explained in the previous column. Additionally, a patent application must satisfy additional requirements, including providing an adequate disclosure.

A Right to Exclude

A U.S. patent confers upon the patent owner a time-limited right to exclude others from making, using, or selling the invention in the United States. A patent does not, however, grant the patentee any right to make, use, or sell anything. For example, assume company A has patented a sweetener (sweetener A) and company B patented a method of encapsulating sweeteners. Company A can use its patent to preclude company B from using sweetener A in any way, including encapsulating sweetener A using company B’s patented method. Likewise, company B can use its patent to preclude company A from encapsulating sweetener A. Due to the exclusive nature of patent rights, companies in patent-active industries often obtain freedom to operate or noninfringement opinions before investing too much on developing or launching a new product.

Duration

The right to exclude others from practicing a patented invention starts on the date that the patent is issued by the USPTO. Although a patent suit cannot be initiated until the patent issues, under certain circumstances, damages may be recoverable for infringement that occurred before issuance. See 35 U.S.C. §

154(d). The right to exclude others from practicing a patented invention ends on the patent’s expiration date. The expiration date of U.S. patents is now typically calculated as 20 years from the date that the application was filed. However, determining the expiration date of a patent can be complex. Therefore, it is best to consult an attorney when trying to do so.

Enforcing Patents

Obtaining a patent does not guarantee that a competitor will not attempt to practice the patented invention. This is because the competitor 1) may not know about the patent; or 2) may know about the patent but think it is not infringed or that it is invalid or unenforceable (and may have a legal opinion in support of this position to try to avoid potential treble damages available for willful infringement). Therefore, a patent holder should vigilantly identify potential infringers, analyze suspected products, and proceed with enforcement as appropriate. This could involve contacting the potential infringer to discuss licensing or some other arrangement or initiating a lawsuit seeking damages and an injunction.

Trademarks

Subject Matter of Trademarks

Trademarks are words, names, symbols, sounds, or colors used by providers of goods and services to distinguish their goods and services from others in the minds of consumers. A loyal consumer will often associate a trademark with certain characteristics of a brand, such as quality or durability. This phenomenon is often referred to as brand recognition. Trademarks, therefore, encourage companies to invest in the goodwill associated with their trademarks by producing products with desirable qualities. Trademark disputes arise when marks on similar goods lead to consumer confusion or deception.

Table I. Comparison of patent, trademark, copyrights, and trade secret rights

	Utility Patent	Trademark	Copyright	Trade Secret
How created	Invented	Used in commerce	Independent creation once fixed in any tangible medium	Expended efforts
Governing law	Federal (35 U.S.C.)	Federal (15 U.S.C.—Lanham Act) & state	Federal (17 U.S.C.)	State
Federal system for conferring rights	Application examined by USPTO to assess patentability	Application examined by USPTO to ensure criteria are met	Nonsubstantive examination, registration with U.S. Copyright Office is suggested but not required	n/a
Subject matter	Useful arts	Words, symbols, sounds, etc., used to associate a product or service with its source	Forms of expression, not underlying ideas or functional features	Secret information that provides a competitive advantage
Criteria	Utility, novelty, nonobviousness, other	No prior user, appropriate mark, other	Original, but not necessarily novel	Secret
Duration	20 years from earliest filing date	As long as trademark is in use	70 years after the author’s death; 95 years from publication; or 120 years from creation	As long as kept secret
Nature of exclusive rights	Preclude others from making, using, selling, offering for sale in the U.S., or importing into the U.S.	Preclude use of confusingly similar mark with similar goods or services	Control over reproduction, derivative works, distribution, performance, display, and digital transmission	Preclude misappropriation
Relative costs	Most expensive to obtain	Common law, free; registration, less expensive than obtaining patent; cost to promote trademark can be significant	Common law, free; registration, less expensive than obtaining patent	Dependent on measures needed to maintain secrecy

USPTO—United States Patent and Trademark Office

Trademarks Cannot Contribute Functionality to the Product

The purpose of a trademark is to associate a good with its source. A trademark should not provide functionality to the product. For example, a trademark was granted for a unique scent applied to embroidery yarn, because the scent was not a natural or inherent feature of the yarn and provided no utilitarian advantage (2). If the scent had utility, patent protection would have been more appropriate.

Trademarks Should Not Be Descriptive of the Product or Service

One should be allowed to accurately describe its product or services without fear of infringing a trademark. Therefore, trademark law is loathe to remove descriptive words from the public domain. In contrast, distinctive words make strong trademarks. The trademark hierarchy is as follows:

At the low end of the hierarchy are generic words that name the object. Generic words lack any distinctiveness and are ineligible for protection because it would be unfair to deny competitors the right to refer to their products by name. Thus, no one can claim the exclusive right to use the phrase “SHREDDED WHEAT” as a trademark for shredded wheat (6).

Next are descriptive words that describe the product, its attributes, or claims. Descriptive words have little distinctiveness and are protectable only after they have acquired secondary meaning. Secondary meaning arises when, over time, the public has come to associate the mark with the products of a single source. Secondary meaning can be shown by consumer surveys. “BEER NUTS” as applied to salted nuts is a descriptive mark (1).

Suggestive marks do not name or describe the product, but still suggest qualities or claims of that product. Suggestive words are given trademark rights without demonstrating secondary meaning. “CLASSIC COLA” as applied to soft drinks is an example of a suggestive mark (3).

The strongest trademarks are arbitrary or fanciful marks. A mark is arbitrary or fanciful if there is no logical relationship whatsoever between the mark and the product on which it is used. “APPLE” as applied to computers is an example of an arbitrary mark. “EXXON” and “KODAK” are made-up terms and are examples of fanciful marks.

The Nature of Trademark Rights

Trademarks do not exist on their own. Trademarks must be associated with a product or service. Actual use of a mark (or intended use followed by evidence of actual use) is necessary to establish and maintain a trademark. A valid trademark gives the owner the right to prevent others from using a confusingly similar mark with related goods or services.

Trademarks Are Governed By State and Federal Law

Federal and state laws provide for trademark registration, but the systems differ. State registrations are typically administered by the secretary of state. Each state has its own requirements. The federal system involves USPTO examination to ensure that there are no conflicting marks and that the mark is proper. Furthermore, to obtain federal protection, a mark must be used in interstate commerce. The “®” symbol denotes a federally registered trademark and may only be used with registered marks.

Federal registration lasts 10 years and is renewable indefinitely as long as the mark is in use. Trademark registration fees range from about \$100 to \$400. A schedule of such fees can be found at the USPTO website.

Although trademark registration offers enforcement advantages, trademarks do not have to be registered. The “™” symbol is available for marks that have not been registered. It denotes a common law trademark and is not governed by federal statute. Using the appropriate symbol is important because it impacts the defenses alleged infringers can raise in litigation.

Finally, in addition to registration fees, promoting a trademark adds costs that can be significant. Because investing in promoting a trademark can be expensive, it is advisable to have a trademark attorney search and clear a desired new mark.

Duration

Unlike patents, trademarks can last indefinitely. However, a trademark can be lost if its use is discontinued or if the mark becomes generic. A mark becomes generic when the public starts using the mark as a noun rather than an adjective to describe the product’s source of origin. For example, the former trademarks “aspirin” and “cellophane” have become generic and are no longer trademarks. While companies invest heavily in promoting trademarks, they also take pains to prevent the trademarks from becoming generic.

Copyrights

Subject Matter of Copyrights

Copyrights protect original works of authorship, including literary works; musical works (including accompanying words); dramatic works; pantomimes and choreographic works; pictorial, graphic, and sculptural works; motion pictures and other audiovisual works; sound recordings; and architectural works.

These categories are interpreted broadly. For example, a computer program can be considered a literary work and the decorative features of a belt buckle can be considered a sculptural work.

A work does not need to be novel to receive copyright protection—it must only be original to the author. Thus, independent creation can be a defense to copyright infringement. In contrast, lack of knowledge of a patent does not protect against patent infringement.

Copyrights Protect Forms of Expression

Copyrights protect forms of expression, not underlying ideas or information conveyed. For example, an engineer could write a manual on how to build a new reaction vessel and obtain copyright protection for the manual. Copying the manual, word for word, without permission, would infringe the author’s copyright because the manual, as written, embodies the form of expression. However, following the manual’s instructions to build the reaction vessel would not violate the copyright. Protecting the vessel itself would require a patent. Additionally, copyrights do not protect functional features of a device. For example, a copyright might protect ornamental aspects of a belt buckle as a sculptural work, but will not protect the functional features themselves (7). A design patent might also protect such nonfunctional features.

Computer Software

Copyright and patent protection overlap when it comes to computer software. Because a computer program is a written expression of language, one can obtain a copyright for the program code as written expression. Copying the actual program code would

violate the creator's copyright. On the other hand, the functional aspects of the program as executed—what it does—are not protected by copyright. These may be protected by a utility patent.

The Nature of Copyright Protection

The copyright owner has the right to control reproduction of the work, preparation of derivative works, distribution of copies, public performances, public displays, and public digital audio transmissions.

Copyright is Protected by Federal Law

Copyright protection is afforded by federal statute, set forth in Title 17 of the United States Code.

Registration is Available

A work receives copyright protection as soon as it has been “fixed in a tangible form of expression.” This is a relatively easy standard to meet. If a work can be perceived and copied, it is in a tangible medium of expression. For example, notes on a blackboard can have copyright protection. Registration with the U.S. Copyright Office is not required to get copyright protection, but registration provides benefits. A work can be registered at any time during the life of a copyright. Registration fees range from about \$45 to \$200. The fee schedule for registering copyrights in the United States can be found at www.copyright.gov/docs/fees.html.

Duration

Copyright duration depends on when the work was created. Typical lifespan can be 70 years from the author's death, 95 years from publication, or 120 years from creation.

Trade Secrets

Subject Matter of Trade Secrets

A trade secret is virtually any type of confidential information that provides its owner a competitive advantage because the information is not generally known or readily ascertainable. Trade secrets can encompass patentable information, such as product formulations, or nonpatentable information, such as customer lists. The formula for Coca-Cola® is an example of a trade secret.

The Nature of Trade Secret Rights

Trade Secrets Are Governed by State Law

Trade secrets are governed by state law, not federal law. Therefore, the definition of a trade secret can vary from state to state. This can impact whether a given action constitutes trade secret misappropriation—i.e., whether the trade secret has been acquired by improper means or breach of confidence. For example, in a case involving a technical executive moving from a first company to a competitor, the court recognized three theories of trade secret misappropriation: actual, threatened, and inevitable disclosure. The first company's position was that the executive would inevitably communicate its trade secrets to the competitor. The court indicated that under an inevitable disclosure theory, misappropriation would exist. But, the case was decided based on state laws that did not recognize inevitable disclosure, so no misappropriation was found (4). Other relevant facts were that, when leaving the first company, the executive had not signed a noncompete agreement or taken any documents, and the competitor took steps to prevent the executive from revealing the first company's trade secret information. It is advisable for companies to have protocols that address expectations and obligations of newly hired employees as well as employees that leave to find work elsewhere.

The Functions of Patents and Other Forms of Intellectual Property

- U.S. patent law strives to achieve a balance between promoting true innovation and providing public access to useful technologies.
- U.S. patent law strives to deny or extinguish questionable rights.
- Patents, trademarks, copyrights, and trade secrets protect different aspects of intellectual property:
 - Patents protect the useful arts.
 - Trademarks protect investment in branding.
 - Copyrights protect original works of authorship.
 - Trade secrets protect secret information that provides a competitive advantage.

Trade Secrets Do Not Involve a Registration or Review Process

As explained above, the goal of patent law is disclosure, not secrecy. In contrast, the value of a trade secret is its secrecy. One does not have to apply for a trade secret. Instead, trade secrets simply exist if kept secret. Indeed, failure to adequately protect the secrecy of the trade secret can result in loss of protection.

Duration of a Trade Secret

While patent rights expire when a patent expires, trade secret rights last as long as secrecy is maintained. Therefore, maintaining trade secrets requires reasonable measures to prevent careless disclosure by employees or easy access by outside parties. Such measures include establishing and enforcing company policies regarding trade secrets, educating employees about maintaining trade secrets, limiting employee and visitor access to sensitive information and areas, maintaining nondisclosure agreements with employees and third parties, screening information in marketing and sales materials to prevent disclosure of trade secrets, controlling communications with vendors and comanufacturers, and using noncompete agreements where appropriate. One can sue if a trade secret is misappropriated. Reverse engineering a product to learn a trade secret is not misappropriation.

To Patent or Maintain as a Trade Secret

Companies are often faced with deciding whether to seek patent protection or maintain information as a trade secret. In making the decision, one might consider the following factors:

Period of an invention's utility: Is the field of invention fast moving? If so, is it worth spending the time, potentially years, to obtain a patent—or is trade secret protection preferable?

Plans to license or sell the invention: Will the invention be licensed or sold? If so, patent protection may be preferable.

Ability to reverse engineer: Is the invention easy to reverse engineer? If so, patent protection may be preferred. Typically, products are easier to reverse engineer than processes.

Ability to design around: Will the invention obtain broad or narrow patent protection? If the invention is narrow and the same result can easily be achieved without using the invention, does the invention merit patent protection?

Combining patent and trade secret protection: An applicant, after having already filed a patent application for an invention, may develop additional patentable improvements. It may be preferable to maintain the improvements as trade secrets despite patenting the initial innovation.

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- Help with career development
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- Exposure to a new level of professional contacts and possible employment

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- Exposure to a new level of professional contacts and possible employees

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The PDP will match mentors and protégés after July 1. Program participants will then be sent information about the person with whom they have been matched. Mentors and protégés will have a chance to meet in person at a special event during the annual meeting in September, but mentors and protégés are encouraged to introduce themselves over the phone or Internet prior to the annual meeting. You need not attend the annual meeting in order to participate in this program. Mentors and protégés should continue to interact by whatever means is suitable for each pair.

For more information on this program, please contact Bill Atwell, Mentoring Program chair, at +1.952.238.4890 or bill_atwell@cargill.com, or visit www.aaccnet.org/membership/mentor/.

