

A Practical Guide to Patents for Business and Commerce

by Thomas T. Chan

WHAT IS A PATENT?

A patent is an exclusive privilege granted to an inventor to make, use or sell an invention for a set number of years. It is a federally granted "deed" acknowledging that you have the right to exclude others from a particular type of device, process or ornamental shape, or "importing" the invention into the United States, because you were the first one to invent or disclose it to the public. A useful analogy is to consider a patent similar to the deed for a piece of property. Because you hold the deed to your property, you can use it yourself, rent it out, sell it, and even keep others from entering and using your property. A patent grant acts in a similar manner in outlining what is your exclusive property and giving you the legal right to bar others from making, selling, offering for sell or even using the invention disclosed in the patent without your permission.

WHAT CAN BE PATENTED?

Machines, tools, manufacturing processes, chemical compositions, sequence listings or business methods that produce a useful, concrete and a tangible result can be patented. Even plants! Examples are: computers (hardware); computer programs (software); methods of making a product; methods of doing business; chemical compositions; nucleotide and/or amino acid sequence; and in fact, almost any useful article or process can be patented.

Ornamental designs or shapes can also receive patent protection.

WHAT CANNOT BE PATENTED?

Laws of nature, natural phenomena, and abstract ideas cannot receive patent protection. However, if you design a device that implements one of these categories in its operation, the device can be patented.

HOW CAN A PATENT HELP A BUSINESS?

A patent is a government approved 20 year monopoly giving the patent owner the sole right to exclude others from making, selling, offering for sale, or using his patented invention. In effect, the patent owner has at least a 20-year period to eliminate competition and establish both his name and market share in the industry for the product or process protected by the patent by allowing the patent owner to be the sole source of that invention.

ARE THE PATENTS OF ONE COUNTRY VALID IN ANOTHER COUNTRY?

No. Each country issues its own patents. However, there

are a number of treaties and Conventions that give an inventor certain priorities and rights in foreign countries making it easier for the inventor to obtain foreign patent protection, if he complies with certain requirements.

One such requirement is that there be no public disclosure of the invention anywhere before the inventor files a patent application in a member country.

After that he may be given a grace period of from six months to one year to

act in other foreign countries and still retain his rights. This is a complicated area, but generally speaking, no public use or disclosure should be made of your invention before you speak with legal counsel familiar with foreign patent laws and procedures.

DO I NEED PATENT PROTECTION?

This is really a business decision and should be handled as such. You must weigh the cost of getting a patent against the potential return in profit your business will receive by being the sole source for the product or process for a 20-year period. Consider also the value of having a patent protecting your product both as a company asset and a potential for cross licensing with other companies to obtain technologies that you may want.

WHAT ARE THE REQUIREMENTS FOR A PATENTABLE INVENTION?

Generally, the law requires that your invention have both "novelty" and be "unobvious" over the "prior art" before you will be awarded a patent. Prior art, novelty and obviousness are terms of art in patent law.

A term of art has a conceptual meaning beyond a strict dictionary definition. "Novelty" means that your invention is not known or used by others in this country or patented or described in a publication anywhere, before you invented it, nor was the invention patented or described in a printed publication anywhere or in use or sale in the US more than a year before applying for the patent.

The unobviousness of an invention is an objective determination of whether someone versed in the field of the invention would think that the inventor originated an inventive step or leap that separates the invention from the prior existing state-of-the-art in that field. The prior existing state-of-the-art in the field is all subject matter (patents, publications, etc.) bearing on the novelty or unobviousness of a claimed invention and is commonly referred to as prior art. This does not mean that the invention must be made from uniquely new, never before seen unique components or steps, but only that no one versed in the field of the invention ever thought of combining them as you did in arriving at your invention.

HOW DO YOU GET A PATENT?

An application for patent describing the invention and

specifically claiming it is prepared and filed with the U.S. Patent and Trademark Office in Washington, D.C.

WHAT TYPES OF PATENTS ARE THERE?

There are various types of patents: utility, design, and plant. There are also two types of utility patent applications: provisional and nonprovisional. Most of the patent applications received by the U.S. Patent and Trademark Office each year are for nonprovisional utility patents.

WHAT IS A NONPROVISIONAL UTILITY PATENT?

A nonprovisional utility patent defines an invention having industrial utility. It can cover a method, an apparatus, an article of manufacture, or a composition of matter or any new useful improvement thereof. A nonprovisional utility patent application (nonprovisional application) must include a specification, with a claim or claims; drawings, when necessary; an oath or declaration; and the prescribed filing fee.

WHEN CAN A NONPROVISIONAL PATENT BE FILED?

A nonprovisional application can be filed up to one year following the date of first sale, offer for sale, public use, or publication of the invention. (These pre-filing disclosures, although protected in the United States, may preclude patenting in some foreign countries.)

WHAT MUST BE INCLUDED IN A NONPROVISIONAL PATENT APPLICATION?

A nonprovisional utility patent application (nonprovisional application) must include a specification, including a claim or claims; drawings, when necessary; an oath or declaration; and the prescribed filing fee.

The specification is a written description of the invention and of the manner and process of making and using the same. The specification must be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention pertains to make and use the same.

The claim or claims must particularly point out and distinctly claim the subject matter that the inventor regards as the invention. The claims define the scope of the protection of the patent. Whether a patent will be granted is determined, in large measure, by the choice of wording of the claims.

If drawings are necessary for the understanding of the nonprovisional application subject matter, then it is required to contain drawings particularly showing every feature of the invention as specified in the claims.

WHAT IS A PROVISIONAL PATENT?

A provisional patent application is a simplified patent application allowing the inventor one year to assess the invention's commercial potential before committing to the higher cost of filing and prosecuting a non-provisional

patent application. A provisional patent filing allows a lower initial investment and no formal patent claim, oath or declaration, or statement regarding prior art is required.

Other advantages of a provisional application are as follows:

- 1) A provisional application establishes a filing date for an invention;
- 2) It authorizes the use of "Patent Pending" for one year on the invention;
- 3) It allows immediate commercial promotion of the invention with greater protection against having the invention stolen;
- 4) The application is not published and therefore preserved in confidence;
- 5) It permits the applicant to obtain certified copies from the U.S. Patent Office;
- 6) It allows the filing of multiple provisional applications for a patent and for consolidating them in a single non-provisional application for patent pursuant to U.S. law 35 U.S.C. §111(a); and,
- 7) It allows the submission of additional inventor names or deletion of inventor names by petition, providing the omission occurred without deceptive intent.

An additional advantage is that by filing a provisional application first, then filing a corresponding non-provisional application referencing the provisional application within the 12-month provisional application term, the term of the patent may be extended by as much as 12 months. Therefore, the patent term will be 21 years from the provisional application filing date.

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WHAT MUST BE INCLUDED IN A PROVISIONAL PATENT APPLICATION?

The provisional application must include a written description of the invention, any drawings necessary to accurately depict the invention, and the name(s) of all of the inventor(s). If any of these items are missing or incomplete, no filing date will be assigned. A provisional application must also include a filing fee and cover sheet.

SOME PROVISIONAL PATENT APPLICATION PRECAUTIONS

In order to obtain the benefit of the filing date of a provisional application for the filing of a subsequent non-provisional application, the claimed subject matter in the non-provisional application must be supported in the provisional application. Therefore, it is important that the disclosure of the invention in the provisional application be as complete as possible.

WHAT IS A DESIGN PATENT?

A design patent may be granted to anyone who invents a new, original, and ornamental design for an article of manufacture. A design consists of the visual ornamental characteristics embodied in, or applied to, an article of manufacture. Since a design is manifested in appearance, the subject matter of a design patent application may relate to the configuration or shape of an article, to the surface ornamentation applied to an article, or to the combination of configuration and surface ornamentation. A design for surface ornamentation is inseparable from the article to which it is applied and cannot exist alone. A design patent protects only the appearance of the article and not its structural or utilitarian features.

WHAT IS THE DIFFERENCE BETWEEN A DESIGN PATENT AND A UTILITY PATENT?

A utility patent protects the way an article is used and functions, while a design patent protects the articles appearance. A design patent and a utility patent may be obtained on an article if invention resides both in its utility and its ornamental appearance. The utility and ornamentality of an article are not easily separable. Utility and design patents afford legally separate protection. Articles of manufacture may possess both functional and ornamental characteristics.

WHAT MUST BE INCLUDED IN A DESIGN PATENT APPLICATION?

A design patent application must include a preamble stating name of the applicant, title of the design, and a brief description of the nature and intended use of the article in which the design is embodied; a description of the figure(s) of the drawing(s); a single claim; drawings or photographs (only after the granting of a special petition and payment of a fee); an oath or declaration; and the prescribed filing fee.

WHO CAN APPLY FOR PATENT PROTECTION?

Only the inventor, or an agent or attorney registered with the United States Patent and Trademark Office representing the inventor may apply for a patent. If the inventor is an employee a company that will eventually own the patent the employee must initially sign the patent application. However, once the application is filed the employee may assign the patent application to the company, an assignment can even be submitted along with the application. Once the assignment is filed the company can then prosecute the patent application and own the rights to the patent when it issues.

WHAT DO I NEED TO GET STARTED AT CHAN LAW GROUP?

The inventor must complete an invention disclosure specifically detailing what the invention is and how it works.

It is also useful to reveal how it differs from existing devices and what problem the invention solves, or how the invention is an improvement over existing devices. The greater the detail explaining the invention put into the disclosure, the more beneficial it will be to the patent drafter.

WHAT HAPPENS AFTER YOU HAVE PREPARED A DISCLOSURE?

A patent application is then prepared and after the inventor approves it, filed with the U.S. Patent and Trademark Office in Washington, D.C. Each patent application has a very uniquely stylized format that does not lend itself to a "fill in the blanks" type general format. While following a prescribed format, a patent application is unique for each invention and requires a great deal of art and skill and specific technical knowledge to draft. The issued patent must not only be technically correct, but must meet and pass legal scrutiny if it is to be upheld by a court of law during litigation.

WHO CAN PREPARE A PATENT APPLICATION

Only the inventor, or an agent or attorney registered with the United States Patent and Trademark Office representing the inventor. The best advice is to seek a competent firm specializing in patent law. The inventor may be an expert on the invention and how it works, but not the nuances and intricacies of the patenting process or the legal requirements necessary to produce a strong and valuable patent. A patent attorney or agent is a scientist or engineer.

The patent attorney or agent has also passed a nationally administered certifying examination to become registered to practice before the United States Patent and Trademark Office. An agent not being an attorney, may not be familiar with the nuances required for enforcement of a patent through the court system. For maximum protection and value, a patent should always be written to withstand the scrutiny of potential litigation. As well as being an engineer or scientist, a patent attorney has graduated from law school and has been admitted to practice as an attorney before a state bar association. Since a patent should be written not only for examination by the USPTO, but also with an objective of overcoming any future legal attack upon it when the owner tries to enforce it in court, a patent attorney ideally gives the greatest scope of legal and technical knowledge in preparing a valid and enforceable patent.

WHAT HAPPENS AFTER FILING?

Generally, after several months, a Patent Examiner is assigned to review the application. Typically after this

review, an office action is issued rejecting all or part of the claims in the application. In the office action, the Examiner will state legally and technically based arguments supporting the rejection of the cited claims along with supporting prior art technical references. Most patent applications have some or all of the claims initially rejected. The claims are often rejected as lacking "novelty" or as being "obvious" or the cited prior art references. Nonetheless, most patent applications eventually issue as patents after successfully overcoming these rejections by replying to all office actions with counter-arguments and sometimes amending the patent application to correct it or distinguish it from the prior art references.

HOW LONG DOES ENTIRE PROCEDURE TAKE?

Patents are normally allowed and passed to issue, depending on the subject matter, within 12 to 24 months of the initial filing date. "Allowed" and "issue" are additional terms of art in patent law. Allowed means that the Examiner has reviewed the claims in the application and has determined that the claims are non-obvious and novel, and that the period of patent examination, called patent prosecution, is over. A patent issues when a fee, referred to as an issue fee, is paid on an allowed patent.

WHAT DOES IT COST?

The initial governmental filing fee for a nonprovisional utility patent begins at \$370 for a small company and \$740 for a large company. The initial governmental filing fee for a provisional utility patent begins at \$80 for a small company and \$160 for a large company. The initial governmental filing fee for a design patent begins at \$165 for a small company and \$330 for a large company. The issue fee for a nonprovisional utility patent ranging from \$640 to \$1280, depending on the type of patent and size of the company.

There is no issue fee for a provisional utility patent since it expires after 12 months. The issue fee for a design patent is \$230 or \$460, depending on the size of the company.

Legal fees for preparing a nonprovisional utility patent application range from \$4000 to \$20,000, or more, depending on the technology involved. Responding to Examiner office actions require a special amount of expertise at an additional cost..

WHEN SHOULD I START SEEKING PROTECTION FOR MY INVENTION?

As early in the product development cycle as possible! Your company should institute a training program to make all employees aware of the value of protecting their work. A patent attorney, being an engineering and legal specialist, should be contacted early in the research and development phase of a product. A patent attorney not only prepares patents, but assists in analyzing and helping the development team avoid or design around the existing patents of others. Such preventative measures

not only provide peace of mind, and are cost effective, but result in a stronger patent and stronger marketing position for your company.

SPECIAL WARNING ABOUT PUBLIC DISCLOSURE BEFORE FILING A PATENT APPLICATION

While there are certain provisions of U.S. law that may permit you to file a patent application after you have publicly disclosed your invention or offered it for sale, any such public disclosure or offer may cost you your international patent rights, as many foreign countries have a requirement of absolute novelty in filing a patent application. That is, if you attend a trade show and demonstrate a prototype of your invention, you may still be able to file for patent protection in the U.S., but such public show of your invention may prevent you from seeking foreign patent protection for your invention.

WHAT IS AN INVENTION DEVELOPMENT ORGANIZATION?

The United States Patent and Trademark Office has the following statement regarding Invention Development Organizations on their Internet site. "Invention Development Organizations (IDO) are private and public consulting and marketing businesses that exist to help inventors bring their inventions to market, or to otherwise profit from their ideas. While many of these organizations are legitimate, some are not. Be wary of any IDO that is willing to promote your invention or product without making a detailed inquiry into the merits of your idea and giving you a full range of options which may or may not include the pursuit of patent protection. Some IDOs will automatically recommend that you pursue patent protection for your idea with little regard for the value of any patent that may ultimately issue. For example, an IDO may recommend that you add ornamentation to your product in order to render it eligible for a design patent, but not really explain to you the purpose or effect of such a change. As design patents protect only the appearance of an article of manufacture, it is possible that minimal differences between similar designs can render each patentable. Therefore, even though you may ultimately receive a design patent for your product, the protection afforded by such a patent may be somewhat limited. Finally, you should also be aware of the broad distinction between utility and design patents, and realize that a design patent may not give you the protection desired."

SO NOW I HAVE A PATENT, WHAT DO I DO WITH IT?

A patent is a valuable business asset that not only adds to your accounting sheet of company assets, but permits you to stop knock-offs and copies of your product. A patent gives you the right to seize imported copies of your invention at the dock, thereby preventing it from ever reaching the marketplace. A patent also gives you an opportunity to establish your name and market share in the industry so as to recoup the costs invested in research and development of the invention. Finally, the patentee does not have to produce and sell the patented item to profit from patent protection. The patentee can license another to use or sell the patented item in

exchange for a royalty fee or cross-license the patent to another company in exchange for access to their patented technology.

ARE PATENTS REALLY WORTH THE EFFORT?

Definitely! The courts take patents very seriously. There have been many judgments holding a patent valid against infringers, awarding substantial penalties against competitors who copy another's products, and prohibiting such future acts by the infringers.

Domestic and foreign industrial leaders quickly move to patent their research and development efforts which represent their competitive edge and market share advantage over competitors.

In fact, many industry analysts believe a company's patent portfolio is essential to its survival and profitability in an increasingly competitive marketplace. An excellent example of the value of a strong patent portfolio is Texas Instruments, which at one point made more money licensing its patents than it did selling its products!

ARE THERE OTHER PROTECTIONS I SHOULD BE AWARE OF?

Yes. A sophisticated protection program will also extend to copyrights and trademarks, which afford legally separate protection offered by the government to businesses to further protect their intellectual property from unfair competition and/or unauthorized copying. For example, in the electronics and computer industry copyrights are used in conjunction with patents to protect software, giving the owner two independent and strong shields against the copier. Trademarks are used to protect your company's reputation with the public by protecting the association of the name of your product with your company. This prevents an infringer from using a product name similar to your product name and causing consumer confusion between your trademarked product and the infringer's product and diverting your sales to them. Both copyrights and trademarks are discussed further in separate publications available upon request.

DO I REALLY NEED CONCERN MYSELF WITH COPYRIGHTS AND TRADEMARKS IF I HAVE A PATENT?

Yes. Since the government offers you two additional non-overlapping legal "clubs" to beat your competitors with, it would be foolish not to take advantage of these methods to protect your products and, consequently bottom line profitability.

OTHER PEOPLE'S PATENTS; THE VALUE OF A PATENT SEARCH

Another important issue in patenting is to protect you from becoming an infringer. That is, just because your engineering department independently developed your product does not guarantee you freedom from infringing another's patent. If the device is already claimed in an

issued patent, you will be liable for patent infringement with potential monetary damages and an injunction prohibiting your use of the product you developed with your own research funds. To limit your exposure to patent litigation (a very costly and frustrating activity), a patent search should be made as early in the development phase of a project as possible. A patent search during the development phase of a project indicates a good faith effort to avoid patent infringement and therefore may provide some "insurance" against claim of willful infringement.

The patent attorney working with the product development team may also supply some useful ideas on how to proceed with the development cycle and concentrate your product development dollars into avenues most likely to produce profitable and favorable results.

IN YOUR OPINION...?

In a complete intellectual protection property program, companies seek the opinion of a patent attorney before proceeding with the commercialization or even finalization of their new product. The opinion of competent patent counsel not only provides a company with good engineering and legal analysis of the proposed product in light of existing patented devices, but it may also prevent a claim of willful infringement of an existing patent and the associated trebling of any damage awards. In this highly competitive marketplace where companies consider litigation just another business tool, an opinion letter from a patent attorney is a valuable asset even if you do not seek a patent on your invention.

POSTSCRIPT

Technology and information (collectively known as "Intellectual Property") have become the foundations of our society and commerce. Patents, copyrights and trademarks are protections offered by the government to foster this commerce, and reward innovation by giving the company owner an opportunity to protect his profitability in light of an ever increasingly competitive marketplace. No one can afford to ignore these protections and stay in business, for if you do, you can be sure that your competitor will not.