Patent Fundamentals

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Introduction

This document will provide the reader with a general overview of patents and the patenting system. We have made every attempt to use terms and definitions that will be encountered during the preparation and prosecution of a patent application. Although intended for the novice, we suggest that you read this document carefully, several times.

If you have any questions regarding our literature or patents in general, please don't hesitate to call us. We offer a no-obligation *free* telephone consultation to discuss your invention and its patentability. Although our federal license and registration requires confidentiality in all client related matters, we have also supplied you with a non-disclosure agreement. This is a written guarantee that we will hold all information related to your invention in the strictest confidence.

Any comments or suggestions regarding this publication will be welcomed and appreciated. Our office is generally staffed in the late afternoons and evenings. Please feel free to give us a call with any questions you may have.

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Commonly Asked Patent Related Questions

What is a Patent?

A patent is used to protect your invention. If your invention is a *patentable invention*, the government will grant you the right to exclude others from making, using, or selling your invention for a fixed length of time. Currently, patent protection is granted for a 20 year period, beginning at the time of filing your application. Since a patent allows you to prevent others from using your invention, it is called an 'offensive' form of protection. Patents are also considered assets, having monetary value and property rights.

A common question asked is - "Why will the government grant such a right?" Well, for one thing, the government's authority to grant patents is rooted into the United States Constitution. Article I, section 8 of the Constitution reads:

> "Congress shall have the power ... to promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

Under this mandate Congress has, over a period of years, enacted the set of laws known as the patent statutes.

Article I, section 8 also reveals the underlying reason the government will grant this type of protection to inventors. It is simply to encourage you to add your ideas to the overall public knowledge of the field to which it applies. Thus, if you let your idea be added to the current state-of-the-art of the field to which it applies, the government will grant you an exclusive right to that idea for a fixed length of time. That right is secured when you are awarded a patent. If an inventor could not secure a patent for his invention, it would be prudent to try to conceal the invention from the general public. This would stifle the flow of new ideas and technology.

As a result of the federal patent laws, the Patent and Trademark Office (PTO) has established a collection of rules and guidelines used to assess if an invention is indeed a *patentable invention.*

Who can apply for a Patent?

The true and original inventor or inventors may apply for a patent. This is the case with independent inventors, or employees who are required to assign (give up the rights to) their inventions to an employer. The application filed with the Patent and Trademark Office (PTO) must always be filed in the names of all actual inventors.

What kind of inventions can be patented?

To be eligible to receive a patent, your invention must be a machine, a process or a business method, an article of manufacture, or a composition of matter. These four categories define what are known as the *statutory classes*. In addition to fitting into one or more of these categories, your invention must have some kind of utility and must not be deemed obvious.

It is also important to note that a patent may be secured if your idea is an improvement of 'something' that already exists, or if you find a *new use* for something already known.

To request a patent the inventor must submit a *patent application* to the United States Patent and Trademark Office in Washington, D.C. - also known as the PTO, the USPTO, or most generically as he Patent Office.

What is a Patent Application?

Some individuals not familiar with the patenting process assume a 'patent application' is a standard form that is completed to describe an invention. This is not the case.

A patent application is a *custom* document that is carefully written to describe your invention in full and complete detail. The description must follow a format that has developed over many years. Often drawings are required, and must conform to established standards.

Recall the actual inventor or inventors must be named when the patent application is filed with the Patent Office (PTO). The application must present the required information in a somewhat standardized format, and must conclude with a set of special/custom statements that define exactly what it is you regard as your invention. These special statements are called the *Claims*. They are a critical part of the patent application. The claims are said to define the boundaries of the protection secured by the patent.

An application is written so as to provide the inventor or his assignee with the 'broadest' coverage possible. The broader the patent wording, the more the inventor can claim as his invention. However, overly broad claims can be difficult to get approval for, and may not be enforceable. So care must be taken in composing a quality set of claims that properly defines the invention for which protection is being sought.

Should I write my own Patent Application?

An inventor is allowed to represent oneself pro se, on his/her own behalf in the PTO. However, to do so is not advisable. Due to the extensive rules and regulations, along with the required content and traditional phraseology, patent applications are usually written by registered professional patent agents and attorneys. These are individuals that specialize in writing and prosecuting patent applications. They have a clear understanding of the patent laws and government regulations that must be followed to have an application accepted for processing and examination within the Patent Office.

In addition, patent agents and patent attorneys are well acquainted with the "language" of patents. They are able to apply it to fully and completely to describe your invention, and thereby attempt to secure a maximum level of protection. The patent laws are specific about the 'descriptive content' that is required in an application to have it approved as a valid United States Patent. Many years of experience are typically required to properly write and secure a valid, complete, and hopefully valuable patent.

Most inventive entities, including individual inventors and corporations, employ the services of U.S. government registered patent agents and attorneys. These are individuals who have earned the privilege to be allowed to practice before the PTO by meeting what some consider to be a strict set of requirements. To be considered for admission to practice before the PTO a person must have a showing of good moral character and good repute, have a substantial technical and scientific background, and demonstrate a sound working knowledge of the patent laws and PTO operating rules and guidelines.

All patent practitioners, agents and attorneys alike, must have at least one 4-year engineering or science degree. In addition, both agents and attorneys must pass an examination given by the federal government called 'The Agents Exam' or 'The Patent Bar'. The exam is arranged in two parts, totaling 6 hours in length. The content of the Exam assesses an applicants grasp of the patent laws, PTO procedure, and the ability to analyze and describe an invention. Agents and attorneys alike, must pass the exam to be admitted to practice before the PTO.

What Should a Patent Application Cost?

The cost of a patent application can vary significantly with the complexity of your invention and the particular patent practitioner you use. The patent process sometimes begins with a search of the field to which the invention relates. In official patent terms, this is referred to as a *preliminary patentability search*. A quality search will typically cost in the range of $500 to $900, or more. However, they can cost as little as

$75 to $150, but this is not a good place to attempt to save money! The cost of a search should include the actual search activities, providing a copy of each prior art reference located, a concise analysis of information found during the search, and a patentability recommendation. The *patentability recommendation,* which is a letter from your patent agent or attorney, provides an assessment and recommendation as to whether patent protection may be available for your invention.

If a decision is made to file an application, an additional expenditure of from $4000 to $9000 can be expected. These figures represent the fees to write and prepare the patent application. A separate fee of approximately $500 is required by the Patent Office to file the application, and for the subsequent examination. An overall discussion of the government costs to be expected when filing a patent application is provided in a separate section, later in this document.

Should I hire an Agent or an Attorney?

This is a decision faced by all inventors. For the purposes of conducting a search and writing an application, both the agents and attorneys are typically well qualified. Each is recognized and registered to practice before the United States Patent and Trademark Office in all matters related to filing, prosecuting and securing a patent. These matters can be associated with domestic applications, interference actions, appeals within the PTO, and the filing of international and PCT applications.

What then is the difference between agents and attorneys? There are essentially two major differences. First, a patent attorney can litigate legal matters related to patent applications in the federal and civil courts. For example, a patent attorney can appeal a finding or conclusion by the Patent Office that you do not agree with. Such litigation's are rare and often very expensive. In addition, the best qualified attorneys available to handle patent related legal matters, generally specialize in appeals and court litigation. They very often do not write and file a substantial number of applications. Agents on the other hand are not attorneys, and therefore are prohibited from giving legal advise and acting in court prosecuted legal matters. As such, Agents generally specialize in

searches, and writing and prosecuting patent applications. They often have strong technical and scientific backgrounds, and have written many applications.

Another item which typically distinguishes a patent agent from a patent attorney are the fees they respectively charge. As a general rule attorneys are more expensive than agents. However, the question of whether to use a patent agent or an attorney to prepare and file your patent application may very well be less important than his or her actual technical background and writing ability - which may vary significantly from one practitioner to another. Each practitioner usually has one or more areas of expertise (e.g., mechanical, electrical, chemical, etc.). Thus, it is advisable to talk with a perspective practitioner to determine how well he or she grasps the basic operation or significance of your invention. It is always prudent to shop around. You should talk to several practitioners before making a decision. One is well advised to always insist a preliminary patentability search be conducted to locate prior art inventions before you commit to the expense of filing a patent application. Among other things, this will allow you an opportunity to assess the practitioners style and professionalism. Remember, a top quality patent application requires a great deal of thought and effort to properly prepare.

The Anatomy of a Patent Application

In this section we will briefly introduce the major sections of a patent application. It is important for an inventor to be familiar with the basic structure of an application. This knowledge will help an inventor review and verify the contents of an application prepared to describe his/her invention. Many individuals assume that their patent agent or attorney has prepared a perfect and accurate document and simply sign it. However, the patent laws require that an inventor thoroughly read and understand their application - before submission to the PTO.

A patent application includes a narrative section that describes the field of the invention, along with any problems or shortcomings in the current art to which your invention relates. This section may be utilized to distinguish your invention from other similar ideas and inventions. Next, a complete and detailed description of your invention must be provided. If the nature of the invention warrants, as it usually does, drawings must be included that show each claimed item or component. The PTO requires drawings when necessary to support and clarify the detailed description. Since a picture can be worth a thousand words, the inclusion of drawings is very beneficial when trying to clearly describe a machine, a product, or a method of doing something.

The narrative section is typically referred to as the specification, or spec. It must provide a full and detailed description of the invention, and must present enough detail to allow a person skilled in the area of the invention to build or reproduce the invention. To this end, the description given in the specification must be what is termed *enabling* to one skilled in the art. If the application does not fully and clearly describe the invention, the examiner is surely going to *reject* the application and require changes be made.

The patent application must also contain a section which provides a set of special statements that define the actual part or parts of the invention for which patent protection is desired. These 'statements' are called the *patent claims*. They must be carefully written and are required to be in a specific form and in a particular (some would say peculiar) style of written language. The claims are considered a most important part of the patent application. Every patent application must contain at least one claim to be filed and examined by the Patent and Trademark Office.

It is important to note that once a patent application is submitted to the patent office, absolutely no new information can be added. The patent rules clearly indicate that only the content of the application as filed will be considered. This means if you leave something out, you cannot add it to the application at a later date. As a result it is important to carefully prepare and review an application before filing it. If additional material must be added, a second application known as a *continuation* can be submitted to replace the original application.

The major components of a patent application, as discussed above, are well defined in several PTO and government documents. One often referenced document, is *Title 37 of the Code of Federal Regulations*, or simply the CFR. Another document commonly used is the *Manual of Patent Examining Procedure*, or the MPEP. The CFR can be used more easily by an inventor or patent novice - but be warned, it is very dry material! The MPEP is often used by the PTO examiners and patent practitioners. Copies of these documents are available from the Government Printing Office in Washington DC, or from the Patent and Trademark Office Web site (www.uspto.gov).

In addition to these documents, the patent statutes (laws) set down a foundation for determining what is required for an invention to be considered a *patentable invention*.

Government Fees To Be Expected . . .

Below is a summary of the fees that one can expect to pay when filing a patent application with the United States Patent and Trademark Office. Please remember that the actual cost for a patent application includes the costs listed below, as well a patent preparation fee that is charged by your agent or attorney.

SME = Small Entity Status

Basic Filing Fee: ~ $500 SME

Required by the USPTO to cover the costs of filing, searching and prosecuting an application for a patent:

Amendments: No Charge

Commonly required during the processing of an application in the PTO.

Publication Fee: ~ $300

Unless a request for non-publication is filed with your patent application, this fee is due when the application is allowed

Issue Fee: ~ $700 SME

A fee due when the PTO has determined that an application has qualified for publication as a United States patent. The fee is used to cover the cost of printing and distributing your patent.

Maintenance Fees:

Rather than charging inventors large issue fees, say of several thousand dollars, the Patent Office charges a more modest (initial) issue fee, and subsequently expects the patent holder to pay additional fees referred to as *maintenance fees*. These additional fees are required to maintain a patent in force beyond 4, 8, and 12 years from the issue date. At the present time these fees are approximately $500 (due no later than the end of 4th year from issue), $1000 (due by the end of the 8th), and $1500 (due by the end of the 12th year).

*A*n Overview of the Patenting Process

The following section provides a brief summary of the patenting process by listing and discussing the stages and steps *recommended* to file and process a patent application in the Patent and Trademark Office.

The Search

A search of the field that relates to an invention is often conducted before the decision to actually file a patent application is made. The prior inventions in a particular field are also known as 'prior art'. *Island Patent* always recommends, at minimum, a thorough domestic preliminary patentability search. We do not consider it wise to forgo a search to apply the search fee to the cost of the application. A quality search can be vital in determining if similar inventions exist in the prior art and if an invention has a possibility of being patented. The only time we make an exception to this general recommendation is if the inventor or inventors are completely familiar with the field that their invention belongs to. In other words, they are experts in the current state-of-the-art regarding their invention. In this case, a search may only provide minimal additional information.

In summary, a search is conducted to assess and evaluate the prior art. That is, to ascertain the current state-of-the-art, along with what is old-in-the-art. If your invention does not show up in the prior art, you may have a good chance of being granted a patent.

The Application

After the search has been conducted, a patent application can be written for submission to the Patent and Trademark Office (PTO). The application must define the field to which your invention belongs. More specifically, the application must define in very clear terms, and with the required language, how your invention works and exactly what you regard

as your invention. A further goal is to provide the 'broadest' description of the invention to which the inventor is entitled.

Filing the Application

After an application for a patent has been carefully prepared by your patent agent or patent attorney, the application is filed with the PTO for examination. The required fees, along with a number of formal documents, are submitted with the application. The PTO conducts an initial examination of the patent application to verify that it contains a specification, one or more claims, drawings (if necessary), fee payment, declaration, and is in an acceptable overall form. For example, the PTO requires that the application's drawing(s) must meet certain well established standards, and be on sheets of paper which are separate from the written description.

If the application is found to be complete and in an appropriate form, it will be assigned to an examining group, and finally to an examiner. The PTO will typically take 9 to 18 months to conduct a search and complete an examination of your application. During this time the invention is said to be *patent pending*. This designation may actually be placed on your invention as a warning to individuals that unauthorized use could result in possible *infringement* violations.

The Examination

While being considered by the PTO, your application is held in the strictest confidence. It undergoes a careful and complete examination to ultimately determine whether your invention is considered patentable. A newly filed application is seldom found to be in condition for *allowance* and without any "problems".

When the initial examination is completed, a PTO examiner sends the results to your patent practitioner of record in a written statement called an *Office Action*. This is no more than a summary of the results of the examination as conducted by the PTO. An office action is also called an *Examiner's Action*, or simply an *Action*.

An office action must list any relevant prior art references, along with the examiner's detailed comments that indicate exactly what problems, if any, have been found with the application. Such problems may be formal, substantive, or both. Upon occasion, an examiner may even make suggestions on how to alter an application or claim to make it patentable.

Reply to an Office Action

The reply to an office action is required to be responsive to each and every issue and point raised by the examiner. These responses are best made in a traditional and well established fashion. All changes to the specification and claims, which are known as *amendments*, must be presented to the examiner in a timely manner using a required procedure and format. In some cases, a well drafted response to an office action is essential if an invention is to have any chance of being found patentable.

It is important to note that these two stages of the patenting process, the *examination* and a subsequent *reply to an office action*, may be repeated several times. That is, the reply to an office action will typically result in a second and likely final office action. The expression "prosecution of the application" is often used to describe these two steps of the patenting process.

Allowance of an Application

If an application is found to contain patentable subject matter, a *notice of allowance* is sent to your patent agent or attorney. The application must then be finalized and put into proper condition to be printed and issued as a patent. Normally, a patent will issue within about three to six months after an issue fee is paid by the inventor.

Summary

Typically the entire process, from the date of filing of the patent application in the PTO, to the date of allowance (thinking optimistically), can take 18 to 30 months. Extremely complicated inventions can take even longer to prosecute. As is often the case when dealing with government agencies, the prosecution of a patent application in the USPTO can be a somewhat long and arduous task. However, once filed, the application does provide the *patent pending* status for the subsequent development and or marketing activities.

Notes: