

LAWSON & PERSSON, P.C.

PATENTS

Patent Basics

Patents protect new and useful inventions. A patent is the grant of the right to exclude others from making, using or selling a new and useful process, machine, manufacture or composition for a limited period of time (now 20 years from the date of filing). In the United States, there are three types of patents:

- Utility patents cover machines, articles of manufacture, compositions of matter, and processes.
- Design patents cover the ornamental appearance of articles of manufacture and machines
- Plant patents cover asexually reproducing varieties of plants.

Patents are not effective until granted by the government and the invention must first pass a rigorous examination prior to grant. As noted above, the patent right is a right of exclusion and therefore no patent is necessary to practice an invention.

To be patentable, an invention must be both novel and unobvious in light of other "prior art" inventions. An invention is novel if it is not made from elements found in another single invention that was patented or otherwise known to the public before the date of invention or more than one year prior to filing a patent application. Thus, the novelty determination is a direct comparison between a single prior art disclosure and the new invention. If a prior art disclosure is found to include all of the elements of the new invention, the new invention is said to be "anticipated" by the prior art disclosure. An invention is unobvious if a person of ordinary skill in the art of the new invention would not have known to develop the new invention given the state of the art at the time the new invention was invented. Obviousness, like novelty, requires a comparison of prior art inventions to the new invention, but has the additional requirement that there was some suggestion in the prior art that the elements could be combined or that someone of ordinary skill would know to combine the elements to achieve the new invention. If all elements of the new invention are not found in the prior art, or no such suggestion to combine references is found, or if the references "teach away" from the result of the new invention, then the invention is unobvious.

Prior art disclosures and inventions, as the novelty and obviousness standards indicate, are inventions that have either been known or used by others, or patented or described in a printed publication either before the date of invention or more than one year prior to the filing of a US patent application. Thus, prior art consists of all public information ever disclosed, including those disclosed by the inventor. This means that expired patents from the 1800's, articles for obscure foreign journal, or even the combined works of Leonardo DaVinci, may form the basis for a rejection by the Patent Office. Non-public information, however, is never prior art and, thus,

inventions disclosed under non-disclosure agreements or internally within a business are not prior art disclosure that would foreclose an inventor from obtaining patent rights.

The scope of a patent is determined by the patent claims, which serve as the legal description of the patent right conferred upon the inventor. Patent claims are similar to the description of property in a deed of land as they determine the "metes and bounds" of the invention. In addition to the novelty and unobviousness requirements, U.S. law also requires that the claims distinctly claim and particularly point out that which the inventor believes to be the invention. Claims that do not meet this requirement are found to be indefinite and rejected upon this basis.

Pre-Patent Considerations - Record Keeping

As noted above, the U.S. grants patents to the first person to invent a new invention and not to the first person to file a patent application. Thus, an important part of the inventive process should be the keeping of records to prove the date of conception and reduction to practice of the invention. In general, a disclosure is sufficient to prove conception if it includes the name of the inventor or inventors, the first recorded date of conception of the invention, the date that the record is being made, a general description of the invention, and signatures and dates of signing by one or more witnesses. However, the many legal rules that have developed regarding evidence of conception overshadow this general rule and necessitate the use of certain record keeping conventions to insure that dates of conception and reduction to practice are properly documented.

First and foremost, **DO NOT MAIL A COPY OF THE DISCLOSURE TO YOURSELF**, as this is not sufficient to prove conception or reduction practice of the invention. Rather, a thread-bound laboratory notebook should be used for recording all original data and ideas. The individual inventor should keep and maintain this notebook. Notebook entries should generally include a statement of the problem to be solved and the essential features of the proposed solution as it will be reduced to practice.

To be admitted into evidence in a legal proceeding, each page of the notebook should be signed, dated and witnessed by someone who reads, understands, signs and dates his signature on the page. In general, the witnesses should not be related to the inventor (i.e., wife, child, parent, uncle, etc.) or a co-inventor of the invention in question.

The first page of the notebook should contain a "Table of Contents", set out in a logical manner, to provide ready and quick reference. After the Table of Contents, the remainder of the book should include a chronological series of entries describing inventive activity and should follow the following conventions.

- Laboratory notebook pages should be consecutively numbered.
- All entries into the notebook should be made in ink to rebut any argument of undetectable alteration of the record.
- Never erase an entry. If mistakes are made, incorrect entries should be crossed out with a single line so as not to destroy legibility and the correct entry should be written in above,

followed by the writer's initials and the date. Errors not discovered at the time of signing should be corrected on a subsequent page.

- Chronological entries should be maintained. Each design or experiment should be started on a new page, and blank spaces on pages should never be left as such spaces can be construed as an indication of the intention to make later entries, which is not permissible. If the record of the experiment requires more than one page, refer to the page where the record will be continued prior to signing and closing out the page.
- Entries should refer to any separate analytical or test data not included in the notebook and separate test data should be separately signed and witnessed.
- Notebook pages must be closed by signing and dating the pages shortly after the entries have been made. After the page is closed, no further entries should be made. As used here, entries means any marks such as corrections and question marks made by those who review the record. Before signing, any blank space on the page between the entry and the signature lines should be crossed out.
- Each page must be witnessed. As noted above, a proper witness is a person who understands the content of the entry but is not a relation or a co-inventor. Witnesses should read the subject matter and sign and date his or her signature on each page immediately beneath the last entry on the page followed by the words "read and understood".
- Notebooks need not be specifically designed as laboratory or inventor's notebooks and a simple thread bound composition book is adequate for this purpose.

Pre-Patent Considerations - Disclosures to Third Parties

In our earlier discussion of prior art, it was noted that disclosures made by the inventor could be prior art barring the grant of a patent on the invention. This means that disclosures of patentable ideas to customers and vendors, either without any requirement of confidentiality, or as an offer for sale, will invalidate any claim to patent protection in foreign countries and will begin the one year statutory bar period in which to file a US patent. As the value of an invention is rarely known in the earliest stages of development, there is a risk that valuable intellectual property will be lost if precautions are not taken at a very early stage to avoid public disclosures.

A disclosure is considered to be public if it is made to a person who is under no obligation to keep it secret from the public. Thus, disclosures to customers, vendors, financing sources, or even family members, could trigger the bar, absent some obligation not to disclose. Private disclosures, on the other hand, are disclosures to people who are obligated to keep it secret. The principal means of obtaining this obligation is the execution of a non-disclosure agreement.

In general, non-disclosure agreements (NDA's) are binding legal contracts under which information is disclosed in exchange for a promise not to make the information public. This promise, as noted above, creates a legal obligation not to disclose and makes any disclosures made by the parties under the agreement private disclosures.

Non-disclosure agreements are used for many different purposes and vary widely in their scope, complexity and the reciprocity of obligations. Therefore, an NDA should be carefully drafted to protect the specific interests of the inventor and NDA's offered by third parties should be scrutinized to insure that these interests are protected. Upon your request, a sample NDA will be provided for your convenience. However, as noted above, NDA's are serious documents and it should not be assumed that the sample document would provide the specific protections appropriate for each inventor.

Regardless of the form of NDA that is used, any information disclosed under the NDA should be clearly marked, preferably in red, as "PROPRIETARY AND CONFIDENTIAL". This serves to inform the other party that you consider the disclosed information to be confidential and thus subject to the agreement.

Unlike disclosures involving a pure exchange of information, disclosures that are part of an offer for sale can never be considered private disclosures, regardless of confidentiality obligations, and will always trigger the statutory bar. Because of this strict rule, a patent application should be filed prior to offering any product for sale.

Pre-Patent Considerations - Patent Filing Decisions

Before investing in patent protection, an inventor should critically evaluate the invention to determine whether the benefits of patent protection will outweigh the costs of obtaining and maintaining the patent. This evaluation should include answers to the following questions:

- Does the invention have technical merit? Does it solve a problem that has not previously been solved? Is it reasonably feasible from a technical and commercial viewpoint? Will the invention require additional development by the inventor or licensee? What are the technical advantages and disadvantages of the invention?
- Does the invention have business merit? Is there a reasonably profitable commercial use in the foreseeable future? Does the product have a large or small potential market? Will a patent seriously hinder current or future competitors and, if so, how?
- What is the state of evolution in the art?
Will the product be obsolete by the time that a patent is granted? To what extent will the patent be enforceable given the prior art; i.e., will competitors be able to easily design around the patent?
- What is the cost of obtaining and maintaining patent protection? What will it cost to perform a search, draft an application, prepare an amendment, prepare and file formal drawings, maintain your patent? You should expect that your patent attorney would offer you a fixed fee quotation for the drafting of your application and provide you with a detailed list of future charges, including maintenance fees.

Pre-Patent Considerations - Written Invention Disclosures

If a careful evaluation of the above factors reveals that a patent should be obtained, the next step is to draft a comprehensive invention disclosure for use by your attorney. Such a disclosure should include the following:

- A statement and discussion of the problem solved by the invention. This should include examples of prior art devices that either create, or don't solve, the problem and a discussion of the importance of solving the problem. If possible, you should include an explanation of how and when the problem was identified and how long the problem has existed without a solution.
- A complete description of the inventive device, system or method including sketches and/or drawings, and an explanation of how the invention works to solve the stated problem. This should include any embodiments of the invention, whether or not commercially practical, that will solve the problem using the same basic design. This may include designs that were discarded during the design process, or concepts that the designer knows to be an alternate method for achieving the same result.
- A list of related prior art patents, applications, technical papers, products, etc. These may be found by performing a patent search, which is recommended, or taken from the general knowledge of the inventor.
- A brief statement of why you believe the invention to be new, with specific reference being made to features that you believe to be novel. This should include a statement of what differentiates the invention from current practices and why this approach was chosen.
- A statement of how you plan to commercialize the invention. This is important, as it will help to determine the way in which the invention will be claimed and will insure that a full disclosure is made to support these claims.

Patent Prosecution

The filing of a patent application and correspondence with the U.S. Patent and Trademark Office (PTO) to obtain a patent is commonly referred to as "patent prosecution". Patent prosecution begins with the drafting and filing of a patent application. Under current U.S. law, patent applications may be provisional or non-provisional.

The provisional patent application was created as part of the latest General Agreement on Tariffs and Trade (GATT) and is intended to allow U.S. applicants to obtain the same priority benefits accorded to those filing first in foreign countries. A provisional patent application is essentially a patent application without claims. A provisional patent application is not examined by the PTO but may be referenced in a non-provisional application, filed within one year of the provisional application, to establish the earlier filing date. In this manner, a provisional application affords the inventor a

patent term equal to 21 years from the date of filing rather than the standard 20 years. Conversely, a non-provisional patent application is a complete application, including claims, which is filed with, and examined by, the USPTO.

A provisional application may be appropriate where additional time is desired to determine the market for the invention, as the filing fees typically are \$400.00 or less for a small entity, and legal fees are typically \$1000.00 less for the provisional. However, if a non-provisional application is subsequently filed, the overall cost is generally \$300.00 - \$600.00 higher than if a non-provisional patent application were initially filed. Therefore, provisional applications should only be filed when the inventor believes that they will be able to accurately determine the value of the invention within the one-year grace period and are willing to abandon the invention if it is found to have inadequate value.

The preparation of any patent application involves significantly more than the completion of standard forms. Rather, it involves the preparation of drawings and the drafting of a discussion of the background surrounding the invention, a summary, a detailed description of the drawings, claims and an abstract. Accordingly, a typical non-provisional patent application will be between 15 and 25 pages in length, excluding the drawings, and will cost between \$3,500 and \$6,000 to prepare.

The patent application process begins with the completion of a Record of Invention form and drafting of an invention disclosure. Once this form and disclosure are completed, we review them, determine a fixed fee, or cost estimate, for preparing a patent application, and forward a Representation Agreement to the inventor outlining the services to be provided and the fees for performing those services. The inventor will then return the signed Agreement, a retainer, and answers to any questions posed by the attorney, and the application will be docketed.

In most cases, the patent drafting process begins with a patentability search. This search acts both as a screening process for unpatentable inventions as well as a means for writing a patent application that clearly demonstrates which portions of the invention are old and which are new. In the interest of keeping fees low, we generally recommend that the inventor perform the search, as patent searching is typically more time consuming than technically demanding. Accordingly, we will often spend a portion of our initial consultation teaching the inventor how to perform a patent search.

Before filing an application, a completed draft is sent to the client for review and comment, we edit the draft application based upon the client's comments, and a final draft, including all necessary forms, is forwarded to the client for review and signature. Upon receipt of the final draft, filing forms, and any unpaid fees from the client, we file the application with the USPTO.

Once filed with the USPTO, the examination process begins. The examination process may differ substantially from application to application, but will generally follow the following timeline:

- Within two months of filing a non-provisional application, a postcard will be received from the PTO acknowledging receipt of the application.

- Within six months of filing, a filing date acknowledgment and foreign filing license will be forwarded. Once this is received, the inventor may identify the invention as "patent pending" and may export the technology and file applications in foreign countries.
- Between 9 months and 18 months of filing, an Official Action will be received from the PTO. Official actions include the results of the examiner's search, any objections to the drawings and specification, and the allowance or rejection of the claims. Generally, all or most claims will be rejected based upon the prior art. There are a number of reasons why most claims are rejected in the first official action, but the vast majority of these rejected claims are ultimately allowed through argument and/or amendment by the patent attorney.
- Once an Official Action has been mailed, the applicant has a set period of time to respond in order to avoid abandonment of the application. Generally, this period for response is set for three months from the date of mailing of the Action, though the response period may be extended for an additional three months by paying increasing extension fees. During this time, the attorney will discuss the options with the client and, if the client decides to continue given the prior art cited by examiner, the attorney will prepare a response to the action. The cost to respond to an Official Action is typically between \$500 and \$1500, depending upon the rejections made and the complexity of any amendments to the claims that are necessary to obtain allowance of the application.
- Within 3 - 6 months of the filing of a response, the PTO will forward a second Official Action, either rejecting or allowing all or some of the claims. If the claims are allowed, this action will include a notice of allowance. If any claims are rejected, the examiner may make the action a "final action" and again give three months to respond. If no claims are allowed, or if claims that we believe should have been allowed were rejected, it will be necessary to either appeal the rejections to the USPTO Board of Patent Appeals and Interferences, or to file a Request for Continued Examination (RCE) to obtain another round of examination. In cases where we feel that the Examiner is not entrenched in his/her position, we will generally file an RCE, as the cost to do so is typically between \$900 and \$1600 compared to the \$3,000 to \$4,000 cost of appeal, and the time to obtain a patent is typically between 6 and 12 months compared to 12 - 24 months were an appeal filed.
- Once a notice of allowance is mailed, the inventor has three months from the date of mailing to pay the issue fee and submit any additional papers, such as formal drawings, corrections, etc. This three-month period is absolute with respect to payment and may not be extended. However, submission of additional papers may be made after the three-month period with the payment of extension fees. The current cost for paying an issue fee for an independent inventor or small business is \$1300, of which \$1000 is paid the USPTO.
- Within six months of the payment of the issue fee, the patent will issue and patent copies will be sent to the inventor or assignee of the invention.

Our Approach to Patents

Inventors and patent attorneys face the challenge of filing patent applications as precisely and rapidly as possible while minimizing legal costs. Lawson & Persson tailors its services to meet this challenge. We strive to respond promptly to client phone calls and time schedules to insure that applications are processed in the most expeditious manner that is consistent with the client's goals. We seek to foster a team approach, where the inventor and patent attorney contribute jointly to obtaining the broadest possible patent coverage at the lowest possible cost. Using this approach, the client may reduce the overall cost of obtaining patent protection by performing many of the necessary tasks themselves, rather than relying entirely on the attorney. Finally, we encourage the use of electronic mail to allow us to rapidly collaborate, even over long distances.

At Lawson & Persson, the patent process begins with the completion and submission of a Record of Invention form and written disclosure, and/or the scheduling of a free consultation session to discuss the invention. Once we obtain an adequate understanding of the invention, we recommend a course of action, prepare a cost estimate for moving forward with the course of action, and forward an Authorization to the inventor outlining the services to be provided and the costs of performing those services. The inventor will then return the Authorization, a retainer in the amount of at least one-half of the estimated cost of the services, and answers to any questions posed by the attorney, and the services will be docketed.

When a patent application is to be filed, we prepare an initial draft, often including a number of additional questions for the client. We then send this initial draft to the client for review and comment and edit the draft application based upon these comments. Once completed, a final draft, including all necessary forms, is forwarded to the client for review and signature. Upon receipt of the final draft and filing forms from the client, the application will generally be filed within two business days (unless circumstances mandate same day filing).

Once a patent application is filed, any correspondence from the USPTO is reviewed, any deadlines for response to the correspondence are scheduled on our docketing system, and a letter is sent explaining the nature of the correspondence, any necessary actions to be taken, and the costs for taking these actions. Other than the review of correspondence, it is our general policy to not take any action on a client's behalf without providing a cost estimate and receiving the client's approval to perform the necessary services.

We hope that this information is helpful to you and invite you to contact us with any questions or comments.

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