



THE ANATOMY OF A PATENT

Over the years, we have talked with a number of people who think applying for a patent is a simple matter of filing out an application. Nothing could be further from the truth. In fact, a patent application is an extremely complicated legal document that is best prepared by an experienced patent attorney. A typical patent application takes 20-35 hours to complete and is generally 15-30 pages long and includes several sheets of figures.

To give you a better understanding of the contents of a typical patent application, the following provides a description of each section of a typical patent application.

1. **Title of the Invention:** The title of the invention is generally placed on top of the first page of the application and describes the invention in preferably two to seven words, although the length of the title may not exceed 500 characters.
2. **Cross-Reference to Related Applications:** If the patent application is claiming priority to one or more previously filed United States, Foreign or PCT related-applications for filing date purposes, the applications to which priority is claimed must be listed in this section. In order to claim priority to another application several conditions must be satisfied: (1) the subject matter of the invention that is claimed in the new patent application must have been disclosed in the related application(s); (2) the new patent application must be co-pending with the related application(s) (i.e. the related application(s) must not be abandoned or have issued into a patent); (3) there must be a specific reference to the related application(s) in the specification or data sheet of the new patent application, hence this section; and (4) the new patent application must have the same inventor or inventors.

If priority is established, all subject matter that was first disclosed in the related application(s) will have the benefit of the filing date(s) of the related application(s). This can become important in overcoming prior art references during examination of the new patent application by the Patent Office. For Example, if a new patent



application is filed on 1.01.03 but it claims priority to a related application that was filed on 6.30.01, any prior art with a date after 6.30.01 cannot be used to challenge the claimed subject matter in the new patent application that was first disclosed in the related application.

Perhaps the most common use of this section in patent applications filed by solo inventors and small companies is to claim priority to a Provisional Patent Application. For more information on Provisional applications [see FAQ](#).

- 3. Background of the Invention:** This section is generally divided into two parts: (1) The Field of the Invention; and (2) Description of Related Art. The Field of the Invention typically comprises a one or two sentence description of the general and specific technical areas to which the invention described in the patent application is related.

The Description of the Related Art typically contains a description of prior art related to the invention. Typically, the problems or disadvantages related to using the prior art are described. Some patent attorneys like to describe prior art patents that were identified during the patent search and describe how they differ from the claimed invention. Others like to describe the prior art generally without reference to any specific patents. We have done both but prefer the later for various reasons, which would take much too long to explain here.

- 4. Brief Summary of the Invention:** This is a section that has been the source of much discussion and disagreement in terms of what it should contain. At most, however, this section should only summarize the specific invention being claimed. Recently, some courts have used the summary of the invention to narrow or limit the breadth of the claims during legal proceedings. This is quite disturbing considering that many patent attorneys used to and continue to write long summaries that are significantly narrower than the broadest patent claim. In most cases, we leave the summary out of the application. If it is not there, it cannot be used against the patent holder.

Also patent attorneys used to and some still provide “objects of the invention” that describe what the invention is supposed to do in the context of problems presented by the prior art. There has been concern that someone might be able to avoid infringement if he/she uses the invention to solve a problem not



anticipated by the inventor and not provided as an object of the invention. This is a complicated legal area that is beyond further discussion here, suffice it to say “objects of the invention” should not be described in the summary section of the application if at all.

The conventional wisdom is to dispense with this section altogether. At most the summary section should just parrot the broadest claim or each of the independent claims listing each as one embodiment of the invention. Accordingly, the courts will not be able to use the summary section to further narrow the scope of the claims if a resulting patent is ever litigated. Anymore could end up hurting the inventor.

5. **Brief Description of the Drawings:** A brief description is provided of each of the figures provided in the patent application. The brief description typically identifies (1) what is depicted in each figure, (2) the number of the figure, and (3) the type of drawing in the figure, such as an isometric, a cross section, a block diagram and a front view.

6. **Detailed Description of Invention:** This section is typically the heart of a patent application. It generally describes one or more preferred embodiments of the invention in enough detail to enable someone of ordinary skill in the art to make or use the invention without having to resort to undue experimentation. Of course, if a patent issues, a person of ordinary skill is legally prohibited from making and using your invention for the term of the patent. The detailed description, however, need not be a production specification. The description usually references the various figures and numbered elements provided in the figures. The description in conjunction with the other parts of the application must describe or provide the best mode of the invention (or in other words the preferred configuration of the invention as it is known to the inventor at the time of filing).

Generally, we prefer to draft applications that have a significant amount of detail so that a wide a variety of potential claims are supported by the application, as it may be necessary to amend the claims during prosecution to gain allowance of the claims and obtain a patent. Inventors should beware that there are some patent attorneys and agents that skimp on the detailed description. We have reviewed many issued patents with very skimpy detailed descriptions that in my opinion fail to adequately enable the invention. The enablement requirement is not something that is typically determined by a United States Patent and



Trademark Office patent examiner during prosecution so a patent may issue for an invention that is not enabled. If the owner of such a patent tries to enforce the patent, the patent will be declared invalid in court and the accused infringer will be free to continue to make and use the invention without any compensation flowing to the inventor.

The embodiment (or embodiments) of the invention described in the detailed description is merely exemplary. In other words, the invention is not limited to the specific embodiments provided in this section. The actual scope of protection provided by a patent is defined by the claims alone. However, the detailed description is used to help interpret the claims. For instance, if a term in the claims is ambiguous, it is often necessary to review the detailed specification to determine how the term was defined. Additionally, recent case law has moved in the direction of using the content of the detailed description to narrow the scope of the claims by adopting relatively narrow definitions of the claim terms consistent with their usage in the detailed description. Accordingly, a good detailed description not only discloses the preferred embodiments of an invention but also discusses any alternative embodiments that have been contemplated by the inventor. Further, concerning key elements of the invention and key terms used in the claims, language should be provided to broaden the definition of the elements and terms.

- 7. Claims:** The claims are by far the most important part of the patent application. Simply, the claims in an application define the breadth of protection afforded the owner of a patent. A patent owner can only exclude others from making, selling or using an invention to the extent that the invention is defined in the claims. The broader the claim, the greater likelihood an accused device may infringe it and the patent; whereas, the more narrow the claim the less likely the claim and the patent are infringed. A key skill in drafting a patent application is the ability to draft claims that are as broad as possible without reading on the teachings of prior art.

Any patent attorney or agent with even a modicum of skill can draft a narrow claims that will be allowed by the patent office, but a much greater skill level is necessary to draft broad claims. Incidentally, it is broad claims that result in legally defensible patents that can get licensed and win infringement law suits. Inventions with only narrow claims are rarely licensed or litigated, since potential infringers can easily avoid infringement by making a change to their products or processes to avoid certain elements in a patent's claims. Because



narrow claims often include superfluous elements and limitations, would-be infringers can often make these changes without negatively impacting the desirability of their product relative to an embodiment of your claimed invention. Of course, understand that what is narrow or broad in terms of a claim is relative to the area of art to which a particular invention pertains. A claim that appears narrow on its face may be very broad in the sense that it claims as much as possible considering applicable prior art. Conversely, in a field with little prior art, a claim that may be broad in another field of art may be more narrow than necessary.

When choosing a patent attorney, an inventor must beware of patent attorneys that draft narrow claim sets to gain quick and easy allowance of a patent. Remember that most patent attorneys can get a patent for their clients but a far fewer number can obtain, or are willing to fight for, as broad of coverage as the applicant deserves. We always discuss the breath of allowed patent claims with my clients before paying the patent issue fee to help them determine whether the allowed claims are as broad as they should be and whether they are of value to the clients in exercising their patent monopoly.

There are two types of claims that will be found in a patent: independent claims; and dependent claims. Independent claims are claims that stand by themselves and comprise a set of limitations (or elements) that define the scope of an invention. Dependent claims are those claims that include all the limitations of a particular independent claim but also add one or more additional limitations. They do not stand alone and always reference another claim. A typical issued patent usually has 1-5 independent claims and 0-30 claims that depend from one or more of the independent claims. There is, however, no limit to the number of claims that may be included in a patent application or a patent, although only 20 claims, of which three can be independent, are provided for with standard filing fee. Additional fees are assessed for a total number of claims in excess of 20 or independent claims in excess of three. Practically, a patent examiner will limit an inventor to claims related to a single invention, so patents rarely issue with more than 30 claims. Since 20 claims are included with the basic filing fee, only in very rare circumstances should an application be filed without 20 claims. Further, if a fraction of the twenty claims are allowed by the patent examiner during prosecution, your patent attorney should request that he be allowed to add dependent claims to the allowed independent claims until the maximum number of 20 is reached. This will not always be possible but it is almost always better to have a patent with more claims rather than less.



8. **Abstract:** A brief abstract of the technical disclosure of the invention is required to permit the Patent Office and the public (once the patent issues) to quickly determine the nature and gist of the invention. The abstract may not exceed 150 words. Further, the abstract will not be utilized by the patent examiner for interpreting the scope of the claims.

9. **Drawings:** When it is possible to illustrate an invention by drawings, one or more drawings are required. The drawings can also be used to support the enablement, best mode and written description requirements. Yes, although it may seem strange, the written description may be satisfied by the content depicted in drawings and figures. Accordingly, a good patent attorney will utilize as detailed a set of drawings as is reasonably and cost effectively possible. It is not uncommon to have to rely on the content of a drawing to support additional claim limitations that have to be added to a patent application to overcome prior art references presented by the patent examiner.