

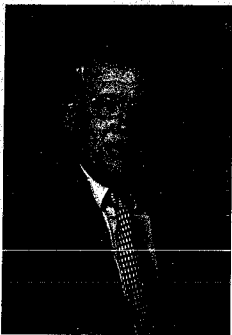
What You Need to Know about Patents

by Ken C. Decker

Ken C. Decker is an U.S. Registered Patent Attorney

Mr. Decker is with the law firm of Botkin & Hall where his responsibilities include the preparation and prosecution of domestic and foreign patent applications for multiple clients.

His work experience includes the preparation of patent applications in a wide range of technical fields including electronic amplifiers, refrigeration control systems, transportation equipment, medical devices, building materials, and manufacturing equipment. He was the Automotive Patent Counsel for AlliedSignal Inc. (now Honeywell International) for 26 years.



Contact

Information:

Cell: 574-315-2071

Email:

ken.decker@prodigy.net

Patents, once a legal backwater, have become increasingly important to business. The number of new patent applications filed in the United States Patent and Trademark Office sets new records every year (over 350,000 last year, compared with just over 100,000 twenty years ago), and awards in patent lawsuits are sometimes enormous. Dr. Gary Michelson, a practicing orthopedic surgeon who also invented several extremely valuable devices used in spinal surgery, recently won \$550 million from Medtronic, a large manufacturer of medical devices. Yet patents remain somewhat of a mystery to many business people.

What is a patent? Why do I need to get a patent on my invention?

A patent is a right granted by the Federal Government to *exclude others* from making, using and selling the invention covered by the patent. Note that the right is negative – a patent does *not* grant the right to manufacture the invention. A perfectly valid patent may be granted on an invention that may not be manufactured because it infringes an earlier valid patent. Patents are granted to encourage business to develop and manufacture new products, which few would do if there is no protection against knock-offs. Nobody is forced to obtain a patent – an invention may be marketed without being patented as long as it doesn't infringe another patent.

What are the requirements for obtaining a patent?

According to the patent statute, an invention must be “new, useful and nonobvious” to be patentable. “Nonobvious” is a legal concept that lawyers argue over, and is difficult, if not impossible to define. In the real world, most inventions are a result of an attempt to solve a problem, and such solutions, if unique, are probably patentable. Sometimes, the solution to a problem is exceedingly simple, but recognizing and defining the problem is the invention. This too is potentially patentable. An invention may be very simple and still be patentable. Most of Dr. Michelson's inventions are not structurally complicated, but they make a big difference to patients suffering from back pain.

What must be included in a patent application?

A patent application includes a drawing (except in patents relating to chemical compositions), a detailed description, and claims. The detailed description must be thorough and include the best way the inventor knows of to implement the invention (commonly called the best mode requirement). Since the patent will be invalid if the written description withholds anything that is required to make and use the invention, the written description must be carefully prepared, and an inventor should tell the patent attorney if anything “special” is required to make or use the invention. However, the written description should be written so that it is reasonably understandable to the inventor (and anyone else). Claims are a bit different – they define the invention and are the most important part of the patent. It is difficult, but an inventor should try to understand the claims as much as possible, and be willing to suggest changes if necessary. Recent court decisions make it unlikely that the scope of the patent will be expanded beyond the literal meaning of the claims.

Is a search required before filing the application?

A search is not required, but may be useful. Traditionally, searches have been made manually (in a patent office or an independent search facility) through a firm that specializes in searching. Manual searches are expensive and generally take several weeks. With the internet, a far cheaper and faster alternative is available free through the US Patent Office web site (www.uspto.gov). The site makes it relatively easy for an inventor to search, and copies of patents

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may be downloaded inexpensively. A special browser plug-in is required and is available at the website. Internet searches are not as reliable as manual searches, mainly because internet searches rely on key words, and the same mechanical elements are called different names by different people. The patent offices of other countries also often maintain web sites through which patents may be searched.

Would I be better off keeping my invention as a trade secret?

You may be. Many inventions in the metal treatment industry involve processes performed in the shop, and therefore may be kept as trade secrets. But caution is advised. For example, can the product be examined to reveal how it was treated? Can the secret be restricted to the shop owner or to a few key employees, or do all employees need to know? Is the secret revealed to visitors touring the shop? Must the secret be revealed to vendors, who must be placed under a signed agreement of confidentiality? Maintaining a trade secret takes effort, but trade secrets can be maintained indefinitely (the formula for Coke has been maintained as a trade secret for over one hundred years!). Trade secrets may be licensed. The licensee must be obligated to maintain secrecy and to take precautions against disclosure. If the trade secret is discovered independently, the trade secret is lost. It is very unusual to maintain a trade secret for more than a few years. The choice between a trade secret and a patent is often difficult. Remember also that a patent must include a complete disclosure, and any infringement may be difficult to detect if capable of being performed behind closed shop doors.

Any common pitfalls?

Current United States law requires that a patent application be filed within one year after an invention is first disclosed publicly, described in a printed publication or *offered* for sale (not necessarily sold). Foreign countries bar a patent for *any* sale or disclosure before the filing date. Accordingly, if patents in countries outside of the United States are needed,

no disclosure of any kind should be made before filing a patent application.

Do I need patents in other countries?

Since a patent protects against infringement by making *or* using *or* selling the invention, a patent in any country can be enforced against imported products produced in countries where the inventor does not have a patent. Of course, a truly global business must be concerned with obtaining patents in countries where the invention might be manufactured and sold other than in the country where the business is based. In the metalworking and metal treatment industry, these countries probably include countries of Europe, Japan and possibly others, such as China. Obviously, it is not practical to obtain patents everywhere.

How do I obtain patents in other countries?

The attorney who filed the domestic application will correspond with attorneys or agents in foreign countries to file applications there. By international treaty, almost all countries agree to grant a "right of priority" which grants a filing date in each country the same as the date (commonly referred to as the "priority date") that the domestic application was filed in the inventor's home country, so disclosure and sale of the invention may be made after the initial case is filed without putting foreign coverage in jeopardy. However, the laws in every country differ. Accordingly, it may not be possible to obtain a patent in every country and the claims awarded will almost certainly be different. Furthermore, the laws as to what is patentable also differ. For example, some countries limit inventions relating to drugs and medical devices; in the United States software is generally patentable, but the European Patent Office is far more restrictive. (Patent applications in Europe may be filed and examined in your choice of English, French or German through the European Patent Office which, if allowed, may be used to obtain automatic patent grants, provided translations into the local language are filed, in European countries selected shortly after the application was filed.)

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I must disclose my invention next week. What do I do?

United States law permits filing an informal "Provisional Patent Application", which does not require claims and may accordingly be filed relatively quickly, provided that a complete, formal application is filed within one year. (Any foreign applications must also be filed at the end of the year). Since the provisional application will only be as effective as the completeness of the disclosure, the provisional application should be professionally prepared if at all possible. In a real emergency, a copy of the disclosure material itself may be filed, but if this is done, another application (either another provisional application or the formal application) should be filed as soon as possible thereafter (without waiting until the end of the year).

When will my patent application be available to the public?

Most countries publish patent applications 18 months after the filing or priority date. The United States allows an inventor to postpone publication of the invention until the patent is issued if the inventor agrees that no corresponding applications will be filed outside of the United States.

When do patents expire?

Most patents now being issued expire 20 years from the earliest filing date of the formal patent application (some patents involve more than one application). In the United States, some patents are extended beyond 20 years to compensate for unusual delays in the Patent Office or, for example, for

delays in obtaining regulatory approval (these extensions normally will be printed on the first page of the patent). If a provisional application was filed, the 20 year period is counted from the filing of the formal application, not the filing date of the provisional application. Older United States patents, some of which are still valid, expire 17 years from the date that the patent was issued (instead of the filing date). There was a phase-in period when both systems were in effect. Accordingly, if a critical decision must be made as to when practice of an invention covered by an expiring patent is permitted, professional advice should be obtained. If a filing is based on a provisional or a priority application, expiration of the resulting patent is 20 years from the filing date of the formal application.

What happens after I file a patent application?

Within a year or so, depending upon the backlog in the area of the patent office to which the application is assigned, a communication (commonly referred to as an "office action" or "official action") will be received from the patent office examiner. Some cases are allowed without requiring a response, but this is rare. Normally, claims must be amended and/or arguments must be filed. Many, but not all, patent applications are allowed after this initial response. Some applications will receive additional office actions and will require additional responses. At some point, the examiner will issue a final decision (commonly referred to as a "final rejection"). The inventor then either must accept what the examiner is willing to allow, give up, or appeal the rejection (the US Patent Office includes a Board of Appeals, which hears these appeals).

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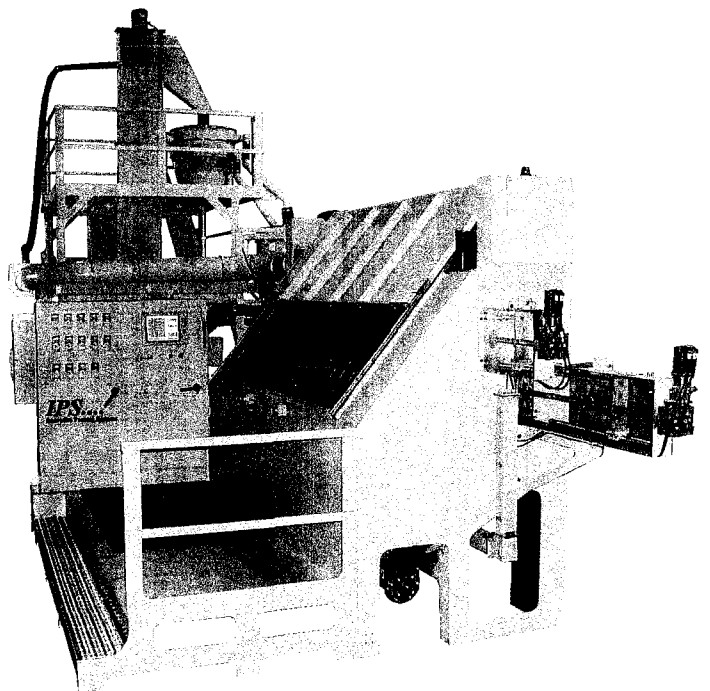
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How much does it cost?

Attorney fees vary greatly. Large firms in large cities charge much more than smaller firms in smaller cities for the same work. Traditionally, law firms charge a rate per hour, multiplied by the number of hours required to do the work. In my experience, smaller firms are more responsive to smaller clients and there is little difference in work quality. Many, but not all, firms are willing to quote a fixed fee for preparing a particular application, which takes much of the guessing out of trying to budget a final cost. Of course, the time required varies with the complexity of the case, but most patent applications will require 15-20 hours of attorney time to prepare for filing. In addition, one or more responses/arguments to the Examiner will probably be required, which will incur an additional charge. Various fees must be paid to the Patent Office, which are increased every year. Costs of obtaining patents in other countries will be as high or higher than the cost of obtaining a United States patent, because a translation is usually involved and because fees in many countries are more than in the United States.

Does a small corporation have a chance?

I believe that patents are more valuable to smaller corporations than to giants. A large entity can compete on size alone. Does anyone really think that Dr. Mickelson would have had a chance against Medtronic if he didn't have patents? More likely, Dr. Mickelson, were there no patent system, would never have

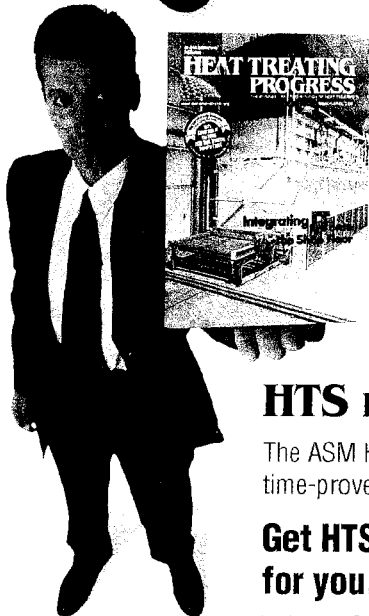
made his inventions in the first place, or would have kept them secret and used them only in surgeries he performed himself. That would have been a real tragedy, especially for anyone suffering from back pain. I am sure that Dr. Mickelson's legal fees went well into seven figures, and he was unusual in that he was already wealthy. However, most patents are never litigated. When a company suddenly has a competitor after a patent covering one of its products expires, the value of the patent becomes apparent, even though it was never litigated.

There are other reasons for obtaining patents other than the obvious competitive reason to protect a product against competition. Even if a patent does not cover a product sold by its owner, patents establish a reputation in a technical area, are useful as "trading material" to trade for technology owned by others, and for many other reasons. Patents may be licensed, which is a way to exploit an invention that an inventor is unable to exploit. Dr. Mickelson's initial relationship with Medtronic was through a license of an earlier invention. Medtronic refused to recognize his later patents.

All companies, both large and small, simply must take patents seriously. If a court finds that a patent has been willfully infringed, the court can award the patentee attorneys' fees and award punitive damages of as much as triple the actual damages. (A portion of Dr. Mickelson's award was punitive damages). I have heard otherwise savvy businessmen say that patents don't mean much because 80% of patents are invalid when litigated. This may have been true thirty years ago, but is most certainly not true today. In fact the situation is reversed – about 80% of patents are held valid today! ☺

Q. Where can you find answers to your heat treating problems?

A. HTS membership.



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