

GENERAL INFORMATION
ON
OBTAINING PATENT PROTECTION
FROM
NORTH AMERICA

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1.0 WHAT IS A PATENT?

A patent is a statutory monopoly granted to an inventor (or his assignee) that allows the inventor (or the assignee) to prohibit others from making, using, selling or (in most cases) importing an invention into the country in which a patent has been granted.

Patents are not automatically granted upon making an invention, but must be applied for by filing a patent application. Although not mandatory, it is highly recommended to employ the services of a registered patent agent to prepare such an application. This is so, as a properly drafted patent application not only contains a detailed description of the invention phrased in concise legal and technical language, but, perhaps most importantly, contains a series of numbered paragraphs, known as “claims”, which contain a legal and technical definition in as few words as possible of the scope of the invention. These “claims” are used by the courts, in conjunction with the detailed description, in any subsequent legal disputes to determine the extent of protection to be afforded to the invention disclosed in the patent. As such, a patent application is not merely a technical description of the invention, but is also a complicated legal document whose drafting is best left to those with the skill, training and experience of a registered patent agent. Failure to do so often results in the issuance of a patent that may have much more limited scope than intended by the applicant.

Once issued, a patent, in perhaps overly simplistic language, becomes a part of the law of the land where it issued. Accordingly, anyone who makes, uses or sells the invention protected by the patent without the permission of the owner of the patent is breaking the civil law of that land. However, like all laws, a patent must be enforced. A patent is enforced by the owner launching a court action (termed an infringement action) against those persons who have ignored the prohibition contained in the patent, whether innocently or otherwise. Such an action cannot be launched until after the patent has issued, although compensation from an earlier publication date of the patent application may be available in some circumstances.

2.0 ARE ALL INVENTIONS PATENTABLE?

The short answer is "No." To be patentable in Canada (and most other countries) the invention must possess the following four basic characteristics:

- 1) Proper subject matter;
- 2) Novelty;
- 3) Utility; and,
- 4) Unobviousness.

2.1 Proper Subject Matter

The subject matter of a patentable invention must be:

- i) a process;
- ii) a machine;
- iii) a manufacture;
- iv) a composition of matter; or,

v) an improvement of i) - iv)

Item i) can include a process for making an otherwise unpatentable product. Item ii) requires no explanation. A "manufacture" is differentiated from a "machine" by the fact that it, has no moving parts. An example would be a new type of hammer. A "composition of matter" is a product where the chemical nature of the substance is its distinguishing characteristic, e.g., a pharmaceutical or a fertilizer.

It follows from the above, from other prohibitions contained in the Canadian Patent Act, and from principles that have emerged from various court cases that:

Traditionally, a patent cannot be obtained for a mere scientific principle, abstract theorem, mathematical formula, or principle of nature, but only for a practical embodiment which makes use of same or causes some physical effect or outcome based thereon. For example, the principle of the expansive action of steam on solid bodies could not have been patented when first discovered, but its practical application in the form of a steam engine was patentable by James Watt.

Extrapolating from this basic principle, both Canadian and US courts initially took the position that a patent cannot be obtained for a mere business scheme, for example, a new type of franchised business. However, so-called "business system patents" began to be allowed in great numbers in the United States after a landmark US Supreme Court decision known as *State Street Bank* in 1998. Following this ruling, thousands of business systems patents were issued in the late 1990's and early 2000's, fuelling the so-called "dot-com bubble". The proliferation of issued business system patents, many of dubious quality and/or scope, and the corresponding increase in questionable patent litigation that followed, resulted in significant public backlash and judicial criticism of business system patents, many of which involved software run on conventional computer equipment for carrying out business procedures and processes that had already, or could have readily been, carried out without the use of computers by workers of average skill in the field. Following on this, three subsequent US Supreme Court case rulings (*Bilski* in 2008, *Mayo* in 2010, and *Alice* in 2014), have virtually eliminated the availability of patent protection for business systems in the USA, at least where they do not result in the production of a tangible product, or other unexpected physical outcome ("machine or transformation"), or where, they are merely directed to a software-related implementation of an existing business procedures or processes that had previously been carried out manually without the aid of computers or software. Another way of viewing this is that business system inventions cannot be made patent eligible simply by saying, "Do it with a computer." Instead, it is necessary to improve the business procedure or process through the use of improved hardware, improved firmware (or a combination of both), or by adding new process steps which provide for unexpected utility over what was previously attainable without the use of computers or software.

This narrowing of subject matter eligibility requirements for business system inventions has been extended in the USA to software inventions in general, whether or not they relate to procedures or systems of doing business. The result is that it is currently very difficult in the USA to obtain patent protection for computer systems (i.e., computer hardware and software elements combined) and for software *per se*, unless the patent applicant can demonstrate some physical outcome is achieved by the invention (i.e., the invention relates to something more than the manipulation of data by conventional computer hardware and/or firmware programmed in a certain way by a patent applicant). This is often referred to under European law as requiring the invention to have a "technical effect".

In Canada, the law relating to patenting of computer implemented inventions, including business systems, is substantially similar in result to that applicable in the USA, although the semantics and terminology used is different. Very generally speaking, computer implemented inventions are patentable in Canada, whether they relate to software or software and hardware systems, or computer implemented processes, when they provide “a technological solution to a technological problem”. Accordingly, presuming novelty and ingenuity exist, any of the following provide “technological solutions to technological problems” and would be viewed as patentable: a computer programmed to allow its speakers to simulate “surround sound” (known hardware controlled by new software), a computer adapted to operate using two central processing units (new arrangement of known hardware, controlled by new software), a computer programmed to allocate memory to video processing in a manner that increases the efficiency of the device when running several applications (known hardware controlled by new software), and a computer whose motherboard has an inventive new video card slot with a faster data transfer rate (new hardware). As in the US, merely programming a conventional computer to do nothing more than carry out calculations (i.e., data in and different data out) is not patentable in Canada.

Notwithstanding the difficulties in obtaining patent protection for software related inventions, more limited legal protection may be available for the software itself under the copyright laws of Canada and the USA. Moreover, graphical user interfaces may be protectable by way of industrial design registrations in Canada, and design patents in the USA.

In Canada and some other countries, methods of medical treatment and surgery are not patentable on public policy grounds, or on the basis of non-reproducibility of results due to differences in the skill of the person performing the method. It is often easier to say what is not patentable than what is. If your invention is clearly directed to unpatentable subject matter, we will most likely be able to tell you this after receiving and reviewing a disclosure of your invention at an initial office consultation. If there doubt remains whether it constitutes patentable subject matter, we can only suggest that you undertake a patentability search and/or file a patent application if the search results are positive.

2.2 Novelty

In Canada

To be patentable, an invention must possess "novelty", i.e., it must be new. There are two criteria for establishing such novelty set out in the Canadian Patent Act, as summarized below.

- i) **The invention must not have been described in another patent application filed in Canada having an earlier “claim date.”**

The “claim date” is the earlier of either the actual filing date of the Canadian application or the “Convention priority date”.

There is an international treaty called the Paris Convention that allows citizens of the member countries of the Convention to file subsequent patent applications for the same invention in any of the member countries **within one year of the first patent application filed for the invention in a member country**, and thereby obtain a so-called “Convention priority date” for each later filed applications. The “Convention priority date”

is the actual filing date of the first patent application filed for the invention in a member country. In other words, if the subsequent patent applications are filed in Paris Convention countries within one year of the first filed Paris Convention country application, they will each be afforded a "Convention priority date" backdated to the actual filing date of the first filed application. Accordingly, for applications entitled to the benefit of the Paris Convention, the effective filing date of the application would be the Convention priority date.

For example, an application filed first in Canada by Inventor A will be overcome by an application later filed in Canada by Inventor B, where Inventor B's later filed Canadian application has been backdated to an earlier "Convention priority date." In this instance, Inventor B's application will move on toward a patent, while Inventor A's application will be refused as lacking the requisite "novelty." By contrast, when the Canadian patent application is the first application to be filed anywhere, where prior applications were filed in countries which are not members of the Convention, or when for other reasons the application is not entitled to a Convention priority date under the Paris Convention, the "claim date" in Canada will be the actual filing date of the Canadian patent application.

Most of the major countries of the world, including Canada, the United States, the United Kingdom, Germany, France, Italy, Australia, China, India, South Korea, Russia and Japan are members of the Paris Convention.

From the above, it should be appreciated that Canada is, a "first to file" country. That is, assuming two parties independently develop the same invention, the first of such parties to file a patent application for the invention in a Paris Convention country will be entitled to obtain the Canadian patent for the invention.

Further, the Canadian Patent Office assumes that inventors named in a patent application filed in Canada are the true inventors. Filing a patent application for something developed by someone else, even if it was developed many years previously and apparently forgotten about, amounts to an act of fraud on the Patent Office that is sufficient to invalidate any patent that might ultimately issue from the application. Notwithstanding this, there is no effective way under the present Canadian Patent Act to challenge a fraudulent assertion of inventorship within the Patent Office. Thus, an applicant who fraudulently files an application claiming to be the true inventor will routinely obtain the Canadian patent over the actual true inventor who files a Canadian application having a later effective filing date. It would then be up to the true inventor to either have the fraudulently obtained patent invalidated by the Federal Court of Canada after its issuance, or to have ownership of the prior patent conveyed to him/her, provided legal grounds justifying the conveyance of such ownership can be demonstrated to the court. Either relief may be sufficiently untimely and expensive to obtain, such that it deprives the true inventor of the fruits of his invention. Moreover, a declaration of invalidity of the subject patent may have the effect of preventing the true inventor from obtaining his own patent, if a statutory novelty bar has arisen in the interim by reason of the prior publication of the invention. Accordingly, it is best to file for patent protection at the earliest opportunity, and preferably before any publication of the invention.

All important countries of the world, including the United States (since March 16, 2013), are also "first to file" countries.

Accordingly, from the above, it will be seen that there is a critical urgency for the inventor wishing to protect his invention by means of a patent to file a first patent application for the invention in a Paris Convention country as soon as is practically possible.

- ii) **The invention must not have been, before the “claim date” of the Canadian application (as defined above), disclosed in Canada or elsewhere in such a manner that it became available to the public.**

This requirement of "absolute novelty" was introduced into the Canadian Patent Act in October of 1989. With this change in Canadian law, any sales, enabling public disclosures or public uses of the invention (in any country) will be considered a public disclosure of the invention sufficient to destroy its novelty. Even an offer to sell the invention may be construed as a public disclosure, at least where terms of confidentiality are not imposed on the offeree.

Experimental use will not likely destroy the novelty of the invention, but to be so classified, such use must be concealed from the public.

Any non-confidential description of the invention may also destroy the novelty of the invention, at least where the description contains sufficient details to allow the reader to practise the invention without the need for other than routine experiment. Such a publication could be in the form of a new product announcement or brochure, an article in a scientific or trade journal, an internet or website description, or an article in a publication such as "Popular Mechanics." As issued patents of all countries are considered to be available to the public, a patent of any country published prior to the effective filing date of a Canadian application for the same invention will destroy the novelty of any invention described in a subsequently filed Canadian patent application. Moreover, many countries, including Canada and the USA, publish their patent applications prior to issuance, such that the date of such publication will destroy the novelty of the invention, at least with respect to applications filed after such publication that are not entitled to a Convention priority date pre-dating such publication.

Some of the apparent harshness of the absolute novelty standard as it applies to Canadian applications is mitigated by a one year “grace period” with respect to public disclosures of the invention made by the inventor or by those who derived their knowledge of the invention through the inventor. That is, with respect to disclosures made by the inventor, or others who derived their knowledge of the invention, either directly or indirectly, from the inventor, the Canadian Patent Act allows the inventor to delay filing of a Canadian patent application for the invention up to one year after the date of such publication without destroying its novelty. Note firstly, that this does not change the first to file rule. That is, in delaying this one year, the inventor runs the risk that someone else (either legitimately or otherwise) will file an application in Canada for the same invention. Secondly, the Paris Convention priority filing date does not apply here. That is, the actual filing date of the Canadian application must be within one year of the first public disclosure made by the inventor (anywhere). Accordingly, the one year grace period for filing Canadian applications should be properly viewed as a potential trap for the unwary, as it appears to offer the inventor security for his invention for an initial one year period, without emphasizing that the clock of the first to file system is in fact ticking away during that year without any regard to the grace period. This danger becomes all the more pronounced when it is remembered that the remainder of the world, (with the notable exception of the USA, as discussed more fully below), do not recognize a “grace period” for prior art published before the effective filing date of an

application for patent filed in their country. That is, such countries view **any** non-confidential disclosure of an invention made public prior to the effective filing date of a patent application for the invention in their country as destroying the novelty of that invention under their law, irrespective of who made the public disclosure, or who filed the subsequent patent application

All of this should impress on the inventor the critical need to keep his invention confidential (i.e., no public sales, uses or publications whatsoever) until at least one Paris Convention country application is filed for the invention. In this manner, and assuming all further foreign applications for the invention are duly filed within one year from such first filing (so as to have a Convention priority date pre-dating any publications of the invention), the inventor will have done all that he can to ensure that he is the first to file for the invention and that he has not destroyed the novelty of his invention through his own acts or through those who derived knowledge of the invention through him.

In the United States

The America Invents Act switched the U.S. patent system from a "first-to-invent" system to a "first-to-file" system for patent applications filed on or after **March 16, 2013**. The law also expanded the definition of prior art used in determining patentability. Under this Act, actions and prior art that can bar patentability in the USA include public use, sales, publications, and other disclosures available to the public anywhere in the world as of the filing date of the application, other than publications by the inventor within one year of the effective filing date of the US application (inventor's "publication-conditioned grace period"), whether or not a third party also files a patent application. The America Invents Act also notably expanded prior art to include foreign offers for sale and public uses anywhere in the world. Applicants that do not publish their inventions prior to the effective filing date of the US patent application receive no grace period.

Accordingly the US law regarding novelty of inventions is substantially the same as to Canadian law, at least for applications filed in the US after March 16, 2013. Thus, the best practice for the prudent inventor to preserve his patent rights in all countries is to keep his/her invention confidential until after at least a first patent application for the invention is filed in a Paris Convention country, and to ensure that patent applications are filed in all other countries where patent protection is desired within a year from the first application date, thereby allowing the subsequent patent application(s) to receive an effective filing date (under the provisions of the Paris Convention) that is deemed under national laws to be the same as the first filed application date. This will prevent statutory novelty bars from arising based upon publications made between the two filing dates, whether such publications arose through the actions of the patent applicant, or the actions of others.

2.3 Utility

To be patentable, an invention must have a useful purpose recognized by the Patent Act. Accordingly, frivolous or illegal inventions are not patentable. Traditionally, patent applications for games have been rejected (particularly under Canadian and British law) as lacking the requisite utility for patentability. However, more recently, many games have been patented, particularly in the United States, sometimes as patented processes.

Utility means some usefulness that is beneficial to the public in some recognizable way. The true test of utility is whether the invention disclosed in the patent application, when practised by a person skilled in the relevant field, will do generally what it is supposed to do. The invention need not have defined commercial value, nor be superior to other means for achieving the same or similar purposes to be patentable. Superiority, however, may help show that an invention has utility and is unobvious (see below).

To possess utility, an invention must be reproducible in a consistent manner, and its outcome must not be dependant to any significant degree upon the individual skill of the person practising the invention. Thus, for example, (and quite apart from the specific statutory provisions prohibiting such patenting on policy grounds) medical or surgical procedures are not patentable in Canada, as lacking utility.

2.4 Unobviousness

A patentable invention must not be "obvious". Stated in the positive, a patentable invention must be "inventive." Not every small change or improvement to a known device, process, etc. is patentable. Such changes or improvements may produce important results, but they may be the result of obvious improvements resulting from experience or the application of routine skill. As such, they lack inventive ingenuity and are viewed by the patent law as mere "workshop improvements," not worthy of patent protection.

It is generally not a patentable invention to alter the proportions of ingredients that were previously used in combination, to alter the size or shape of articles, or to substitute equivalent materials. However, if some long-standing technological hurdle is overcome by such activity, for example, the miniaturization of transistorized circuitry into integrated circuits, such miniaturization may be unobvious, and hence, patentable.

Obviousness should not be confused with simplicity. Many inventions are obvious in retrospect. The determination of whether an innovation is unobvious is to be made from the perspective of a worker having ordinary skill in the technical field of the invention at the relevant date. In Canada and the USA, the relevant date, as regards publications of persons, excluding the inventor and those who derive their knowledge of the invention through the inventor, is the effective filing date of the patent application. For the inventor and those who derive their knowledge of the invention through the inventor, the relevant date in Canada is one year prior to the actual Canadian filing date. In the United States, the relevant date for determining obviousness in this latter situation is the effective filing date of the US application.

The notional worker referred to above is deemed to possess the basic knowledge and skill of an average worker in the technical field of the invention, such as can be demonstrated by standard textbooks, etc., and is deemed to have specific knowledge of all relevant prior printed publications and patents that were published (anywhere) prior to the relevant date. If the invention would have been obvious to such a worker possessed of this knowledge, then it is unpatentable.

The solution of a long-standing technical problem, and the fact that other workers in the relevant field have previously failed to solve the problem, affords evidence of inventive ingenuity in reaching a solution. Similarly, commercial success may also indicate inventiveness.

It should be appreciated that, in rejecting a patent application on the grounds of obviousness, the Patent Office is entitled to combine the teachings of one or more prior art patents or other printed publications, on the basis that it would have been obvious for an average worker in the art to do so. In contrast, with objections based upon lack of novelty, the Patent Office can only rely upon a single prior patent or other printed publication, to support such an anticipatory rejection. However, it will be readily apparent that the success or failure of a patent application is largely dependent upon the state of the prior art at the relevant date.

3.0 THE PATENT SEARCH

Before filing a first patent application for an invention, it is highly advisable, although not mandatory, to have at least one patentability search carried out in order to determine the state of the art, and thus the likelihood of obtaining a worthwhile patent. Moreover, the search allows the patent agent to draft a better application, having the benefit of knowing at least some of the prior art patents that will have to be overcome during the prosecution of the application. Not doing a preliminary patentability search before filing a patent application is like flying a plane in fog in the mountains without instruments; the odds are very high you just might crash into something. This is particularly likely if you are not familiar with the local geography.

Most preliminary patentability searches conducted by North American inventors are carried out as computer searches in the patent database collections maintained and published by the United States, Canadian or European Patent Offices. Other countries such as Japan, South Korea and China also make their patent records available for computer searching, but the ability to fully search these records in the English language is restricted. While you can have your patent extended to cover the patent databases of multiple countries, the associated cost will obviously be higher than if only one country's patent database is searched.

Multi-country or regional patent databases are available from various commercial entities for searching; however, these databases typically have a significant access fee associated therewith and may not be updated as regularly as the official government databases. Accordingly, most searches we undertake on behalf of our clients are carried out in one or more of the patent databases of the United States, Canadian and European Patent Offices. Unless specific reasons exist to search a particular country's patent records (e.g., Canada for hockey or South Korea for flat-screen TV panels), the single country we most often search is the United States, as it maintains the largest searchable patent database, and as a large proportion of inventors, regardless of their country of residence, file for patent protection in the USA. Accordingly, for those with limited searching budgets, the biggest bang for your buck is usually obtained by conducting a preliminary patentability search in the records of the US Patent Office.

Patent searching is very time consuming, particularly if multiple databases are to be searched. While key word searching strategies are almost always used in conducting computer patent searches, it is advisable

to also employ classification based searching strategies. Due to the complexities and potentially open-ended nature of patent searching, in order to contain our client's searching costs and maintain uniform searching standards, our firm typically retains the services of highly trained searchers to conduct patent searches for our clients. Such searchers are involved on a day-to-day basis with patent searching, such that they are efficient in formulating, implementing and documenting their search strategies and the search results.

The normal turn-around time for us to have a preliminary patentability search conducted, to analyse the results provided by our searcher, and to provide you with our written report and opinion on patentability is 4-8 weeks (from the time we have all necessary invention disclosure information and materials from you), but this can be expedited in urgent cases at additional cost.

To carry out a patentability search, your patent agent should be provided with clear sketches or drawings of the product or the process, if it can be illustrated. Preferably the drawings should be accompanied by a written description that refers to the drawings by means of reference numerals shown on the drawings. If you book an initial consultation with our office, we can provide you with a disclosure form to be completed before your attending at the initial consultation. The disclosure form sets out in more detail the types of materials to bring to the initial consultation. Good formal drawings are not required for searching purposes (in some cases, photographs may be sufficient), but such drawings must eventually be prepared for the filing of a non-provisional patent application. We are able to take digital photographs of your prototype for searching purposes, if no drawings are available.

A proper search report and opinion should not only provide you with copies of the patents identified by the search, but should also contain: i) an indication of the features of your invention that were searched; ii) a summary of the teachings of the closest prior art references located (as they relate to the features of your invention searched); and, iii) a discussion of the scope of patent protection that should be available for the features of your invention over the teaching of closest prior art references summarized under ii). The discussion under iii) should make specific reference to the issues of novelty and unobviousness. Also, there should be general agreement with you and your patent agent on what features of your invention are included in point i), above, **before** the patent search is actually conducted. **Any patentability opinion that does not cover all of points i) through iii) and include full copies of the patent references discussed in the opinion is substandard, and of questionable value.** In other words, not all patentability searches and opinions are equal. As with most things, the axiom "You get what you pay for!" applies.

I am often asked: "Can I perform my own patentability search?" The short answer is "Yes, you can." The smarter question is: "Should I rely on the results of my own patentability search?" The proper answer to these questions is: "No", unless you are a professional patent searcher, or you have extensive past experience conducting patent searches. It should be apparent from the above that the task of patent searching is complex and potentially open-ended from a time perspective, with no guarantee that you have found the most relevant prior art references, or even that you have looked in the right places where such probability is highest. While it is certainly better to conduct your own prior art patent search prior to filing a patent application than to do no search at all, the benefit to be derived therefrom is directly proportional to the experience and skill of the searcher and the time spent on the task. Moreover, if you do not keep a record of your search strategies, queries

and any prior art references identified by your search, we have no way of evaluating its efficacy, or of making any use of your search results as an aid to drafting your patent application. From our professional standpoint, it is as if such undocumented searches were never conducted.

Sometimes an invention represents an improvement over an existing product of which the inventor is aware. In such cases, it is imperative to inform your patent agent of the previously known product, at least in a general way, and to indicate the differences and the attendant advantages that your product or invention has over the known item. Your provision of any trade literature, technical manuals and the like that are known by you as indicating the state of the relevant industrial art are also useful for review by a patent agent when he is assessing your chances of obtaining patent protection.

4.0 PREPARATION OF THE FIRST PATENT APPLICATION

It is highly recommended that you employ the services of a registered patent agent to prepare a patent application for your invention. After all, a patent application is undoubtedly one of the most complex legal documents known. Some inventors prepare and file their own applications to save money. Such an approach is "penny wise and pound foolish," as the services of a patent agent are inevitably required to fix the application so as to have it issue, if, indeed, it is capable of so fixing. Frequently, the application must be completely rewritten and re-filed by the agent, often at significantly more cost to the inventor than if the original application had been properly prepared and filed by a registered patent agent in the first instance. Moreover, if new subject matter must be added to the re-written application to give it validity, priority for at least the new material added will likely have been lost which, in "first to file" countries such as Canada and the United States, may jeopardize the patent protection sought if an application to a similar invention is filed by a third party in the intervening time before the re-written application is actually filed.

Assuming the preliminary patentability search and opinion are favourable (and only about 50% of such first-time searches are), your patent agent can then proceed with the preparation of the first patent application, which, depending on the scope of your commercial interests, might normally be filed in either Canada or the United States. In any case, for the patent application to be prepared, your invention must be sufficiently complete to enable the agent to describe a working embodiment. You must provide your agent with a description of the best mode then known to you of making your invention and it is also recommended that you indicate any significant alternate constructions or embodiments that come to mind. It will be necessary for the agent not only to describe your invention in detail in the application, but also to prepare claims that set out the scope and extent of the monopoly of the invention to which you and your agent feel you are entitled. The claims normally appear at the end of the application and are set out as numbered paragraphs. The results of the patent search are particularly useful to the agent in the preparation of the patent claims.

It is normal practice for the agent to send an initial draft of the application to the inventor after it has been prepared for review and approval. This will give the inventor an opportunity to confirm the technical content of the initial draft, including the drawings, and to add any additional information to the application that the inventor feels is necessary or appropriate. Upon receipt of the inventor's suggestions for revision (and there are almost always some revisions to be made) the patent agent can finalize the first draft of the application for filing. At this time, a petition (so called in Canada, or referred to as a declaration in the United States) is also prepared for filing with the application. A petition can be executed by the agent on your behalf, while a declaration must be executed by the inventor(s).

4.1 Provisional Patent Applications

Since June of 1995, the United States Patent Office has accepted the filing of “provisional” patent applications. Canada also has what amounts to a provisional patent system, although the Canadian patent legislation does not use the term “provisional” to describe incomplete or informal applications filed thereunder. Rather, it has been possible, since 1996, to file applications in the Canadian Patent Office without claims and still receive an official filing date for such an application. The Canadian system is more akin to the system available in the United Kingdom for many years. A provisional patent application has often been referred to as “a poor man’s patent”, on the basis that it may be cheaper to file. In terms of a dollar analysis, this may initially be true. However, as it is necessary to regularize the provisional application (within a year of the provisional filing date) by bringing it up to full formal specification, including the addition of claims, the full costs of filing a regular application cannot be avoided; rather they can only be deferred. Moreover, it may actually cost more to have a registered patent agent draft the provisional application and thereafter regularize it, as s/he must again pick up the case some months later, and spend a not-insignificant amount of time getting back up to speed on the invention in order to draft claims properly supported by the specification on file. The issue of such support leads to the primary risk in filing a provisional application. That is, will the provisional specification (typically) drafted in haste and with undue emphasis on low cost, be sufficient to fully support a properly considered set of claims that may not be drafted until some months after the provisional specification is filed? Consider that most patent agents draft the claims of a patent application first, as it is only during this long and mentally vigorous process that the patent agent comes to fully appreciate the essential integers of the invention and their exact relationship to one another. When the claims are completed, the patent agent typically turns to drafting the remainder of the application, paying particular attention to using language in such description that is fully consistent with the well-honed language of the claims. Often more than half of the time spent by the patent agent in preparing a full-application is allotted to claim drafting, although such claims may occupy far less page volume in the finished application. With a provisional application, this normal order of operations is reversed: i.e., the detailed description of the invention is drafted before the claim language. What often results is a provisional specification that is couched in language that is insufficient to later support claim language that fully defines the level of protection to which the invention is entitled. Any new subject matter that must later be added to the application to fully support such claims will not receive the original filing date of the provisional application; rather, such new subject matter will only receive a filing date from the date it was first added.

It should also be noted that neither a US nor Canadian provisional patent application will be examined until after it is regularized. Rather, such an application will be assigned a filing date and a serial number, but little else will happen. The US provisional application will go abandoned (without further notice from the US Patent Office) if not formalized within a year of filing, and remains confidential after such abandonment, as if it was never filed. The Canadian Patent Office will send the applicant written notice of formal deficiencies in the provisional application as filed; however it will also go abandoned if these deficiencies are not corrected within the time frame set out in the notice. Moreover, no substantive examination will occur in Canada until such time as the deficiencies are corrected and the examination fees have been paid. Thus, while filing a provisional application will get you a filing date, it will not get you a patent, or even an examined patent application. This leads to the second major disadvantage of filing a provisional application in place of a full-fledged regular application. That is, unless the provisional application is quickly formalized after its filing, there is almost no chance of receiving feedback from even the US Patent Office in the form of a first office action within the Paris Convention priority year. The benefits of such timely feedback have been discussed

above. Accordingly, the applicant will be faced with the prospect of not only regularizing his provisional application within the Convention priority year, but also with the cost of filing corresponding applications (i.e., full applications) in other countries in which protection is required, all without having had any feedback from a Patent Office on the patentability of the invention.

This is not to say that provisional application do not have their use. Certainly, where an unavoidable first non-confidential disclosure is imminent, such that there is insufficient time for a regular first application to be prepared and filed in advance of the publication, a provisional application may have the effect of getting the inventor a filing date in advance of the disclosure, so as to avoid novelty bars that might otherwise arise, as discussed previously. If, for example, an inventor was scheduled to give a speech at a professional conference in several days or weeks, and was worried that such speech might destroy (in at least some jurisdictions) the novelty of those aspects of the invention described in the speech, he would be wise to file the content of the speech (and anything else that could be conveniently added by way of enabling subject matter) as a provisional application, and follow up as soon as possible with a full-blown regular application. In this manner, he would receive a filing date for the provisional application ahead of the disclosure which would, likely be sufficient to get behind the public disclosure he made at the convention. The inventor must be cautioned, however, that a provisional application is only as good as its contents. That is, neither the Patent Office nor the courts will add content to an application that was not present on provisional filing. Notwithstanding this, there may be circumstances (such as the example just given) where a provisional filing is better than no filing at all. This being the case, the inventor is well-advised to rely on provisional applications as a last ditch effort, only where absolutely necessary, and to follow-up with a regular patent application meeting all formal requirements as soon as reasonably practical, claiming internal priority on the regular application from the previously filed provisional application.

5.0 PROTECTION IN FOREIGN COUNTRIES

Patents, as a general rule, are obtained on a country by country basis. There are in place, however, several international treaties that are intended to simplify the procedure of obtaining patents in the countries which are parties to these treaties. After the first patent application has been prepared and filed, it is necessary to decide whether further corresponding applications are to be filed in other countries. Fortunately, as a result of the Paris Convention (see above), to which most significant countries are signatories, an applicant normally has up to one year to file these subsequent applications. If these applications are filed within this time period, the foreign applications will be entitled to claim Convention priority based on the application that was filed first. In other words, the foreign applications will obtain the same effective filing date as the first application. As discussed above under heading 2.1 dealing with novelty, this can be very important, as most countries require absolute novelty for the invention before valid patents can be obtained in those countries. A delay beyond the one year period in filing foreign applications may, therefore, forever bar patent protection in some countries.

There are additionally two main international treaties which Canadian residents can currently take advantage of for obtaining multi-national patent protection are the European Patent Office (EPO) Treaty and the Patent Cooperation Treaty (PCT). Protection under granted EPO patents can, upon completion of certain formalities after grant, be extended to all major European countries. PCT applications, also known as “international applications”, can, with appropriate steps and their associated costs, be extended to cover over 152 countries around the world, including those of the EPO. Thus, the use of international treaties may not

necessarily result in an overall cost-saving to the patent owner, but is best seen as a useful way of deferring the large costs associated with obtaining multi-national patent protection until a later date when the commercial value of the invention and the likelihood of obtaining commercially meaningful patent protection will likely have been ascertained with greater certainty.

A full discussion of the filing of PCT and/or EPO patent applications is beyond the scope of this brochure. We would, however, be pleased to discuss filing a PCT patent application in more detail at an initial office consultation. The PCT became available to Canadian resident inventors on January 2, 1990 and has become an increasingly popular route for inventors to obtain patent protection beyond their home countries.. The EPO is typically accessed by Canadians through the PCT, although direct access thereto by Canadian inventors is also possible.

Your patent agent should be able to provide you with a rough estimate of the cost of filing foreign applications, but you should appreciate the cost of filing in one foreign country can differ considerably from the cost of filing in another, and that such estimates are based upon fluctuating currency exchange rates and changing tariffs charged by patent agents and attorneys in foreign countries. Accordingly, you should advise your agent as soon as practical of those countries where you are seriously interested in filing patent applications when you are requesting an estimate from him or her. Generally speaking, those countries where English is an official language tend to be less expensive than those countries where the application must be translated into another official language.

6.0 PROSECUTION OF APPLICATIONS

In most countries, the patent application is examined after filing by experienced Examiners in the respective Patent Offices to determine if it is in the proper form and is directed to patentable subject matter. In both Canada and the United States an Examiner will conduct their own search and examination of the relevant prior art publications available to him or her, so as to assess the patentability of the subject matter being claimed in the patent application. If the Examiner has any objections to the application either as to form or substance, he will issue a written report that is referred to as an "Office Action" and will set a deadline for responding to the Office Action. In some countries such as the United States, extensions of the deadline may be obtained by payment of an extension fee. Failure to respond within the deadline, or such extensions of it as may be available, will result in abandonment of the patent application. It will therefore be necessary for your patent agent to prepare a response to the Office Action that overcomes the objections of the Examiner. You will appreciate that the nature and extent of objections can vary considerably from one application to the next.

Examination of U.S. patent applications follows automatically upon filing of the application, as the fee for examination is included in the fees due on filing. In many countries, including Canada, filing does not ensure examination of the application. This is called "deferred examination". Under deferred examination, the applicant (or his agent) must specifically request that the application be examined and pay the additional extra government fee for such examination. Thus, filing of the application in deferred examination countries only results in applicant obtaining a filing date and serial number, thereby to secure his relative position in the line-up for a patent. If examination is not requested within a period set by national law, the application will go abandoned. The time limit set for requesting examination and paying the examination fee in Canada is five years from the Canadian filing date, although the request can be filed concurrently with the filing of the application to expedite examination.

With respect to some applications, the Examiner has no objections, and the application is allowed by issuance of a "Notice of Allowance." Such cases are the exception rather than the rule. More commonly a Notice of Allowance will issue only after one or more Office Actions and responses filed by the appointed agent. It is therefore, difficult, if not impossible, for a patent agent to estimate beforehand how much work will be involved in the prosecution of an application to its allowance. Each invention and application are unique, and therefore prosecutions are "tailored" to the specific application rather than "off the rack".

The charges quoted for preparing and filing a patent application do not normally cover the prosecution charges that may arise because of objections made by the Examiner. Rather, charges are made for docketing and reporting each Office Action to the inventor, and for preparing and filing a written response thereto. In some cases, more than one Office Action may be issued, it being necessary to respond to each of these actions substantially as described above. If it is not possible to overcome an Examiner's objections, an appeal is also possible. If the objections are not ultimately overcome and the application is abandoned, there is no refund of the costs incurred to date in connection with that application.

7.0 ALLOWANCE, PAYMENT OF THE FINAL FEE, AND ISSUANCE OF THE PATENT

When an application is considered by an Examiner to be acceptable, s/he will issue a Notice of Allowance. In Canada and the United States, this notice provides for the payment of a final or issue fee to issue the patent and bring the patent rights into force. In both Canada and the United States, the amount of this fee depends upon whether the applicant is entitled to claim "small entity status". If the applicant is not a small entity, then the government fee is double that payable by a small entity. An independent inventor who has not assigned or licensed his invention to a large company will be entitled to small entity status. Because of the length of time that is normally involved in the prosecution of a patent application, either in Canada or the United States, a final fee may not be payable on an application for two or more years after the application has been filed. The initial estimate provided by an agent as to the cost of preparing and filing a patent application does not normally include subsequent charges for prosecution of the application through to allowance, nor the cost of paying the final or issue fee. When comparing estimates from different agents, be sure of whether a particular agent's estimate includes these subsequent charges, as they can be significant.

Mechanical patent applications in the United States are typically in the prosecution phase from about 24 months to 36 months, absent appeals from Examiner's decisions. The period is typically longer for applications in certain fields, including software, life sciences, business systems and electronics. Steps are available to expedite prosecution (at extra cost), but a discussion of same is beyond the scope of this brochure. Once a patent issues in the United States, the owner of the patent is granted exclusivity in the subject invention for a period of twenty (20) years from the date of the filing of the application.

In Canada, the average pendency period is about three to five years from filing the request for examination, unless a request for expedited prosecution is requested, and the fee for requesting same is paid. Once a Notice of Allowance is received from the Canadian Intellectual Property Office and the issuance fee is paid, a patent will issue for a period of (20) twenty years from the date on which the application was filed in Canada.

8.0 MAINTENANCE FEES

In addition to the costs of preparing and filing patent applications and of prosecuting same to grant, most countries, including the United States, require the periodic payment of fees to the respective Patent Offices to maintain issued patents in force. Some countries, including Canada, require the payment of such "maintenance fees" to keep pending applications in force irrespective of whether the application has been examined or the patent issued. For example, Canada requires the payment of the first annuity before the second anniversary of the Canadian filing date and before each subsequent filing anniversary thereafter, up to and including the nineteenth annuity. Other countries, such as the U.S.A. require payment of maintenance fees on dates measured from the issuance date of the patent.

While many countries provide a grace period for late payments of the maintenance fees (typically, with a significant penalty), failure to pay any single annuity will, if not remedied within the grace period, result in abandonment of the application or issued patent. The theory behind this approach is to facilitate technology becoming available for use by any interested party sooner if the patent owner is no longer interested enough in the technology to keep his patent in force. Generally, the maintenance fees are lower in amount in the earlier years of protection, and gradually increase throughout the life of the patent (or application). The theory here is that a patent owner has (hopefully) started to earn a profit from his patent rights after the first few years, so that he can then afford the higher maintenance fees. Your agent can discuss the amounts and further particulars with you during your initial or subsequent interviews.

The tracking of annuity dates for various patents around the world can become a rather onerous task, particularly where several patents for different inventions are involved. To this end, most patent agents maintain computerized record keeping systems to ensure that valuable protection is not inadvertently lost through missed maintenance fee payments. A service charge is levied (beyond the actual government fees involved) for setting up and maintaining these computer databases, reminding the owner periodically of the need to pay maintenance fees, and paying the fee for the owner. This is another important ongoing benefit of employing the services of a registered patent agent in Canada.

9.0 EXPLOITATION OF PATENTS

You have your issued patent. What next? Actually, most inventors do not wait until they have secured issued patents for their inventions before attempting commercialization. Only the largest of corporations have the financial resources to do this. Rather, most smaller corporations and individual inventors begin seeking out commercial opportunities for their invention once they have filed the critical first application (keeping in mind the one year Paris Convention period for following up with additional applications in other countries). That is, assuming a working prototype has been developed, or the invention has at least been proven viable in all essential respects, the invention owner may then either start the manufacturing process himself, if he is inclined and capable of so doing, or may enlist the help of investors or joint-venture partners to assist him in bringing the invention to the marketplace. Good market research, including a sound business plan, is essential if the inventor wishes to attract significant financial investment by others in his project. Legal counsel will most likely be required to set up appropriate corporate or other entities to facilitate investment by other parties in the project and to ensure strict compliance with all applicable laws, including, but not limited to, the applicable securities legislation. New and better prototypes may also be necessary so as to refine the invention for commercial production. The precise steps to be followed can vary considerably depending upon the nature of the invention and the parties involved. In nearly all instances, the commitment, in terms of both time and

expense to take a product from the prototype stage to the stage of a vendible product or process is too great for a single person of average means. On the time side, such commercial exploitation of an invention can easily become a full-time occupation for at least one or two years. Most individual inventors who are not already involved in running a business to which the invention relates do not wish to commit such large amounts of their time and energy to an invention. Moreover, such inventors do not typically have the financial resources to do so. As a result, the vast majority of independent inventors will seek to form a partnership, joint-venture, or corporation with others to share the development work development costs and the proceeds, if any, later realized. Again, legal counsel is desirable in respect of such formation. More commonly, however, independent inventors will seek to sell or licence their inventions to companies that are already profitably engaged in a related business in exchange for a lump sum payment (in the outright sale scenario) or ongoing royalties (in the licensing scenario).

In order to effectively bargain for fair remuneration for the invention, whether in licensing or outright sale negotiations, it is essential that the initial patent application referred to above be already filed by the inventor and the Paris Convention priority period (one year from first filing) not have elapsed without further applications having been filed in other market countries in which potential purchasers or licensee might be interested in exploiting the invention. Absent such filings, the invention will have considerably less value to a potential purchaser/licensee. This is so for many reasons. For example, if the invention has been made public prior to the initial patent application being filed, the right to obtain valid patent protection may have been compromised or forfeited in at least some countries. This being the case, the inventor has no monopoly (or at best a doubtful one) with respect to such countries. Absent such monopoly, all the inventor is really offering to the purchaser/licensee is an opportunity to be the first commercial supplier of the invention in one or more markets. This is of limited value, as competitors will be in a position to copy the invention if it is successful in the marketplace. Moreover, such copiers may be able to make the invention available at a more competitive price, as they have not incurred the additional costs associated with paying the inventor, or any additional research and development or marketing costs that may have been necessary to perfect the invention for commercial production and to establish an initial market for it. Thus, for effective licensing of inventions that are not protectable other than under the patent laws, patent protection is essential if the inventor is to realize a full financial return.

The filing of foreign patent applications and their prosecution (especially outside of North America) is expensive. While it is critical for the inventor wishing to exploit his invention by licensing to file the initial patent application on his own initiative and at his own cost at the earliest date possible, and preferably prior to disclosing the invention to any other persons (particularly those who might have a commercial interest in the invention), it is not unusual for patent licence agreements to provide for the funding of subsequent filings in other countries. This may be expressly accommodated by the payment of earmarked amounts under the licence agreement at specific dates to cover such filings or may simply be accommodated by having the licensee agree to pay an up-front fee for obtaining the licence. The latter approach is more common with "exclusive" licence agreements, although the general trend today is to resist the payment of large up-front fees in favour of more generous royalty provisions over the life of the licence. Licensees favour this approach as it shares the risk of the invention being commercially successful with the inventor and frees up the licensee's capital for application against the high start-up costs associated with commercializing most inventions.

Licensing of inventions is, like patent drafting, a highly specialized subject best left to specialists in the area. While some registered patent agents have experience in the drafting of licences for patentable inventions, the legal training received by lawyers ideally suits them for this task, particularly lawyers who are

experienced with patent matters, such as those who are also registered patent agents. A further discussion of the licensing of inventions is beyond the scope of this brochure.

10.0 CONFIDENTIALITY PRIOR TO ISSUANCE

Until a patent issues in either of Canada or the United States the owner cannot commence a patent infringement lawsuit against infringers, even against putative licensees who have broken-off licensing negotiations with the patent owner. Canada, the USA, and most other countries publish (“lay-open to public inspection”) their patents not less than 18 months from their priority date (unless earlier laying-open has been requested by the applicant). Such publication gives the patent owner so-called “intervening rights”, such that those who infringe a published patent application will typically be held liable to the patent owner for some form of compensations for any such infringements occurring after the laying-open of the application, provided the patent subsequently issues with claims that cover the infringing activity. Nonetheless, the actual infringement suit cannot typically be launched until after the patent actually issues. Accordingly, the patent application owner is very vulnerable to infringers during the pendency of his application, as there is a window of opportunity for infringers to practice the invention prior to issuance of the original inventor's patents, with little or no risk of ultimately paying damages for what would be seen as actionable infringement after the respective patent issues. Accordingly, it is wise for details of the invention to be kept as confidential as possible until all the patents for the invention have issued (or have at least been allowed) in the patent owner’s major market countries. Ideally, details of a patentable invention should only be made available to those who have a definite need to know in order to further the commercialization of the invention. Moreover, wherever possible, a valid Confidentiality Agreement should be signed by the recipients of such details in all instances prior to their receiving same.

A Confidentiality Agreement is a simple contract between the party imparting the confidential information (the "discloser") and the party receiving the confidential information (the "disclosee"), wherein, in consideration for the disclosure of the confidential information which is the subject of the Agreement, the disclosee agrees to retain in confidence the information disclosed. The consideration flowing to the disclosee for his promise of confidentiality is the opportunity to receive information which is not otherwise available, typically for the purpose of assessing the merits of same, with a view towards entering into a further agreement (such as, for example, a licence agreement) relating to the commercial exploitation of the confidential information for the mutual benefit of both parties. Thus, the purpose of the Confidentiality Agreement is to give the discloser (typically the inventor or patent owner) a remedy for breach of contract against those with whom he is most vulnerable until such time as his patents issue or another more detailed contract (e.g., a licence agreement) is substituted for the Confidentiality Agreement. Remember, however, that the Confidentiality Agreement binds only those who are party to the Agreement.

A suitable form of Confidentiality Agreement should be available from your patent agent or patent lawyer for a modest charge. There is no "standard form" for such Agreements which can be as short as one page, or as long as 8-10 pages. Frequently one finds that, the longer the Confidentiality Agreement, the less willing recipients will be to sign it, particularly without first receiving independent legal advice. If an intended recipient is a larger company, its representatives will typically refuse to sign all but the company's standard Confidentiality Agreement. Most of such standard corporate sourced agreements typically deny that confidence exists in relation to the material being disclosed to the company, and have the discloser expressly acknowledge that his legal rights will be determined by the patent, trademark or copyright laws of the company's country of

residence, and that he should first file for any patent or other legal protection that might be otherwise available to protect his rights in the information he is about to disclose. As such, standard company agreements of this nature are more accurately referred to as "Non-Confidentiality Agreements" and should only be signed in instances where the disclosing party has already filed his initial patent application (as previously discussed) and has filed applications for any other types of legal protection that might be available to protect his "invention", such as trademarks, copyright, or industrial design (design patent) applications and the discloser feels confident that the company he is dealing with is reputable and will treat him fairly. There is always a leap of faith in making this latter assessment.

The critical path in deciding whether or not to make a disclosure to a corporation or other entity having a policy that does not guarantee confidentiality is: 1) File at least the first patent application and/or other application(s) for legal protection as advised by your patent agent or lawyer **prior** to making **any** disclosures (including sales or public uses) of the invention to **anyone**; 2) Get a tightly drafted Confidentiality Agreement (preferably drafted by your own patent agent or lawyer) signed prior to each and every disclosure of the invention to other parties (including potential investors, partners, prototype makers, and to potential licensees), particularly in the earlier stages of the commercialization of the invention, where the window of opportunistic infringement discussed above is the largest; 3) Deal only with reputable parties whom you trust and with whom you feel comfortable; 4) Limit the number of disclosures of details of the invention to only those who need to know; 5) Ensure that all follow-up patent applications for the invention are filed within the Paris Convention Priority Period (i.e. within one year from the initial filing date) claiming priority from the first filed application; and, 6) Pursue the prosecution of your patent applications, so as to have them ideally allowed or issued contemporaneously with commercialization of the patentable invention.

If you closely follow the steps outlined above, you will greatly reduce the risk of having your invention misappropriated by unscrupulous individuals or companies.

11.0 YOUR NEXT STEP

If, after having read this brochure, you are interested in pursuing legal protection for your invention, please contact our office to set up an initial office conference with one of our patent professionals to review your situation. Such appointment will, in most cases, be set one or two weeks after the date you call. We do charge for initial interviews, albeit at a reduced first interview rate. In the interim, we will send to you, on request, an Invention Disclosure Form which is designed for the inventor to fill out and bring to the initial interview. This Form asks you to complete a series of questions which cause you to set out details of your invention and the circumstances surrounding its creation in an organized fashion that will not only form a permanent record of your invention for your own records, but will allow the patent professional conducting your initial interview to have before him/her all of the pertinent details of your invention so as to allow him to focus upon the issues with which you are concerned during the initial conference without overlooking any of the details. Thus, it is important that the Invention Disclosure Form be fully completed to the best of your ability **prior** to your attending your initial office interview if you wish to derive maximum benefit from the time allotted for your interview, which is normally about one hour.

As to confidentiality, all disclosures made to our firm are treated with the strictest confidentiality. As a firm of lawyers and as patent & trademark Agents, we are subject to the disciplinary proceedings by both the Law Society of Upper Canada (which licences lawyers to practice in Ontario) and the Canadian Patent Office (which licences patent agents to practise in Canada). Moreover, we are also members of the Intellectual

Property Institute of Canada, which professional organization sets and administers a Code of Ethics for all member patent agents practising in Canada. If requested, we will date and sign a copy of the Disclosure Form at the initial interview so as to provide you with a detailed record of your disclosure to us.

12.0 COST ESTIMATES FOR PATENT SERVICES

The following estimates for patent related services are estimates, only, and are based upon routine cases of average complexity which entail an average expenditure of time on the part of the professional(s) involved. They do not include H.S.T. or other standard disbursements (e.g., long distance telephone, facsimile, photocopies, print charges, postage, couriers etc.), except as otherwise explicitly stated. These estimates are based upon performing the services as routine cases and not on an expedited basis. Premiums may be applied if expedited service is requested. As to the time frames normally required to complete the services, these vary from time to time depending upon current workloads, and should be discussed with the patent professional handling your affairs at the time of your initial interview. Thus, the charges which follow should only be seen as only as a budgeting guide to the charges which you will ultimately incur.

	<u>OUR FEE</u>	<u>GOV'T. FEE</u>	<u>TOTAL</u>
1. Reduced Hourly Rate - Initial Office Conference (including provision to you of Disclosure Form and preliminary review of same)	\$400/hr.		
2. Preliminary Patentability Search and Written Opinion (conducted in U.S. Patent Office records)	\$3,500. - \$5,500. (average)		
3. Preparation and Filing of first non-provisional patent application, (not including drawing charges)			
Canada (small entity)	\$15,000. - 25,000.	\$ 200.	\$15,200. - 25,200.
Canada (large entity)	\$15,000. - 25,000.	\$ 400.	\$15,400. - 25,400.
U.S.A. (small entity with ≤ 20 claims)	\$15,000. - 25,000.	\$1,100.	\$15,950. - 25,950.
U.S.A. (large entity) with ≤ 20 claims)	\$15,000. - 25,000.	\$2,200.	\$17,200. - 22,200.
If requesting examination at time of filing, <u>add</u>			
Canada (small entity)	\$ 200.	\$ 400.	\$ 600.
Canada (large entity)	\$ 300.	\$ 800.	\$1,100.
If requesting examination at any other time, <u>add</u>			
Canada (small entity)	\$ 300.	\$ 400.	\$ 700.
Canada (large entity)	\$ 400.	\$ 800.	\$1,200.

	<u>OUR FEE</u>	<u>GOV'T. FEE</u>	<u>TOTAL</u>
4. Preparation and Filing of Subsequent Patent applications			
Canada (small entity)	\$3,550.	\$ 200.	\$3,750.
Canada (large entity)	\$3,600.	\$ 400.	\$4,000.
U.S.A. (small entity)	\$4,000.	\$1,100.	\$4,600.
U.S.A. (large entity)	\$4,500.	\$1,700.	\$5,200.
If requesting examination at time of filing, <u>add</u>			
Canada (small entity)	\$ 100.	\$ 400.	\$ 500.
Canada (large entity)	\$ 200.	\$ 800.	\$1,000.
If requesting examination at any other time, <u>add</u>			
Canada (small entity)	\$ 300.	\$ 400.	\$ 700.
Canada (large entity)	\$ 400.	\$ 800.	\$1,200.
5. Formal Drawings	(Highly Variable - Average Cost)		\$1,000 - \$2,000
6. Prosecution costs (extremely variable)			
Canada	\$5,000. - 7,500.		
U.S.A.	\$7,500. - 10,000.		
7. Patent Issue fees (including government fees)			
Canada (small entity)			\$1,000.
Canada (large entity)			\$1,200.
U.S.A. (small entity)			\$2,175.
U.S.A. (large entity)			\$3,375.

NOTE: The estimates given above are approximate only and do not include applicable taxes. Where the charges include government fees paid in U.S. dollars, the estimates given are based upon currency exchange rates in force at the date of preparing this schedule, given below, which can vary greatly. Additional costs and government fees will be incurred where assignments from the inventor(s) to others are necessary. Our charges for handling the filing and prosecution of foreign patent applications (i.e., other than Canada or the U.S.) also vary greatly due to fluctuating currency rates charged by our foreign associates. We can provide you with a ball-park estimate of the charges for such foreign applications at or after your initial office consultation with us, which estimate can be further particularized at the relevant time base upon then-current exchange rates. In budgeting for patent protection you should also keep in mind the payment of ongoing maintenance fees which are charged in nearly all countries for issued patents and in many countries also for pending patent applications. Details of these charges are also available upon request. It is the policy of our firm to request of new clients retainers of not less than 100% of the estimated fees and disbursements prior to undertaking a preliminary patentability search and not less than 50% of the estimated fees for the preparation of an initial patent application. The balance of actual fees, disbursements and taxes incurred on your behalf will be billed upon completion of the requested service. Interest is charged on unpaid accounts after 30 days, pursuant to The Solicitors' Act.

E. & O. E.

1/6/20

ABOUT THE AUTHOR

Patrick Hofbauer is a lawyer with over 35 years of experience in patent and trademark matters. He is also a patent and trademark agent registered to practise before both the Canadian and U.S. Patent and Trademarks Offices and is a member of numerous legal and professional organizations, including the Intellectual Property Institute of Canada and The International Federation of Intellectual Property Attorneys (FICPI). Mr. Hofbauer is a Toronto native who has lived in Burlington, Ontario since 1986.