

# Patents

## A Handy Guide

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# Chapter I

## Why Patent? What is Patentable?

A patent gives its owner the right to prevent others from using an invention. The right will only be valuable if the invention gives a commercial advantage. If there is no commercial advantage, no one else will want to use the invention and you do not need a patent.

I will take three examples of situations in which a patent would be valuable.

Where development and testing a new product takes many years, companies will not begin the development and testing programme unless they are fairly certain they will be able to obtain a patent. This is particularly true of the chemical and the drugs industries where a new product may take years to be tested for safety.

At the other end of the scale, many businesses are built on non-patented products and, although open to competition, nevertheless make a healthy profit. By the nature of things, ideas which would give the greatest commercial advantage, are often foreseeably the most difficult to patent. Unless you need complete certainty of obtaining a patent in order to justify an extended development and testing programme, you will proceed with the project and make extra efforts to obtain a patent, accepting the risk that your patent application may eventually fail.

Between the two lie the majority of cases where there is a fair certainty of obtaining a patent for an idea which offers a good commercial advantage.

Thought should be given as to how to exploit the advantage. If you are a manufacturer who has an idea for a new product which you intend to make, the answer is pretty obvious. But what if your idea is for an improvement in a machine that you use, but do not manufacture? Or what if you are a private person with a good idea, but no intention of setting up a manufacturing business? In the latter two cases, you can sell or license use of the idea. If you took your idea to, say, a manufacturer and freely disclosed it, there would be nothing to prevent the manufacturer from using the idea without any recompense. One way round that problem is to obtain the manufacturer's prior agreement that the disclosure will be in confidence. The agreement should preferably be in writing. If that goes wrong, however, you are potentially in a worse position than if you had made a patent application before disclosing the idea.

I know of one private person who was unemployed and had little money, disclosed an idea for a new electronic product to a potential manufacturer in confidence. The manufacturer was entirely taken with the idea and promised to send a draft licence agreement within a few days. When it arrived the inventor found the royalties it offered were much lower than he wanted. Where he wanted £1.00 per unit, the draft offered only 50p. In addition he would be liable for a share of the cost of the launch of the product and royalties would not be payable until they had accumulated to cover his share of the costs. He was so disappointed by the draft that he threw it in the bin.

A year later, he found the product on the market. Hearing nothing from the inventor, the manufacturer had placed an order in the Far East for half a million units and filed a patent application in his own name. Now the poor inventor is in a real mess, despite the fact that the manufacturer was not entitled to file the application...and he still has no money to sort it out. Imagine how the inventor felt about the loss of half a million 50ps!

## Chapter II

### How strong is it? Is a weak patent useful?

A patent is a form of intellectual property (it belongs to someone) which protects broad principles in an inventive idea...the idea which we hope will give you the commercial advantage mentioned in Chapter 1.

This is in contrast to other forms of intellectual property. The appearance of an article may be protected by a registered design and may have inherent protection of an unregistered design right. The former is obtained by making an application to the Designs Registry, the latter requires no such application. A name or logo may be protected by a registered trade mark which is obtained by application to the Trade Marks Registry. There is also an unregistered right to prevent another from passing off their goods or services as yours.

To illustrate the difference between appearance, which is protected by registered designs, and broad principles, which are protected by patents, I refer to the decision in the case of *Moody v Tree* (9 R.P.C. 333). The design was for a basket and claimed a pattern in which the osiers were worked in singly, all the butt ends being outwards. The appearance of the pattern was new but could be applied to baskets of any shape. It was held that there had been an attempt to register a conception as to the mode of construction and that the registration was therefore bad. A new mode of construction would more properly be the subject of a patent.

A patent is obtained by making an application at the Patent Office. To obtain a valid patent, the principle must be new. The test for newness is exacting. No example of the principle may have been made available to the public anywhere in the world before the date on which the patent application is made. Any form of disclosure, which was not in confidence, would make the invention available whether by written or oral description or by use or in any other way.

The principle must also involve an inventive step. This means that it must not be obvious in relation to what is already known, again, anywhere in the world.

Exacting requirements, indeed. In reality, no one can know everything which has been disclosed throughout the world and patent applications sometimes come unstuck as a result of disclosures which are found by the Patent Office during Examination of the Application, of which more later.

The Patents Act specifically excludes certain classes of invention from being patentable:

- a discovery, scientific theory or mathematical method;
- a literary, dramatic or artistic work or any other aesthetic creation whatsoever;
- a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;
- The presentation of information
- an invention the publication or exploitation of which would be generally expected to encourage offensive, immoral or anti-social behaviour; and
- any variety of animal or plant or any essentially biological process for the production of animals or plants, not being a microbiological process or the product of such a process.

In general the exclusions are treated narrowly, that is to say, if an invention includes excluded subject matter but solves a technical problem it should be treated as patentable. The exclusions are also an area of significant divergence across the world, for example, in the USA the general principle seems to be that anything under the sun that can be made by man is patentable, in particular, inventions which would be excluded in the UK and Europe as

business methods or computer programs are much more likely to be successfully patented in the USA and Australia.

Applicants often wonder whether or not they should conduct a search before filing the application to see whether or not their idea is new. Unfortunately, no hard and fast rule can be given. The Patent Office will itself conduct a search during the progress of the application. For the applicant, or the patent attorney, searching is a very open ended commitment. Unless the one answer you do not want is found, i.e. that the invention is not new, it is difficult to be sure you have not missed something, or just not looked in the right place. If you want to make as comprehensive a search as is practical, the cost could well be more than the cost of preparing a patent specification to cover a moderately complicated invention, and to pay for the mandatory Patent Office search. On the other hand, if searching quickly led to the discovery of a highly relevant document, it could save the inventor from spending a lot of unnecessary money.

Whether or not to search is thus a decision for the prospective applicant to make, with the assistance of the patent attorney. If the prospective applicant is sure of the novelty of the invention (some are) then, perhaps no search should be made. If the prospective applicant is not so sure, some say "it is so simple I cannot believe no one has thought of it before", then perhaps a search should be conducted. If the prospective applicant wishes to carry out their own preliminary search of published patent applications, <http://gb.espacenet.com/> provides a search engine covering a reasonable range of published patent applications. For a more detailed search please contact one of our patent specialists.

## Chapter III

# Making the Application

From your point of view the important function of a patent is that it gives you the right to stop others from using a principle: it gives you a monopoly. In a gold rush, prospectors staked out their claims to land, so that others would know the land belonged to some one else. Similarly, something in a patent has to tell others what belongs to you. This is done in one or more claims which, by means of words, "stake out a claim" to an area of technology in which the patent grants you a monopoly.

As a generality, the State is opposed to monopolies, preferring competition in order to get the best deal for the consumer. However, the State also wishes science and technology to progress and does not wish to encourage inventors to keep their ideas secret. As a compromise, the state is willing to give a patent monopoly for a limited term (20 years) in exchange for the patentee teaching others one way of carrying out the broad principal.

At one time the patentee literally taught, as in a master teaching an apprentice. Nowadays, the teaching is done by means of a description of an example of the principle. It is not necessary to have made a prototype, but it is necessary to be able to explain in sufficient detail to enable the idea to be carried out without the need to make an invention. The person to whom the explanation is addressed is assumed to have skill in the relevant art or arts (e.g. engineering) so there is no need for the example to include every last nut and bolt. There is a possible difference in the USA.

The document which contains the description and claims is called a "patent specification". Writing it is a highly skilled job, the more so because once the application is on file, it is not possible to add any information. Adding information includes the rather negative concept that deleting detail may broaden the disclosure to cover more and thus, by inference, add information.

The claims must be written in such words as to cover every possible way of carrying the broad principle out but, at the same time, must not cover anything which is already known. In order to provide for the possibility that something is known which the applicant is not her or himself aware of, an application will often contain a set of claims which get successively narrower in scope, similar to the successively smaller areas protected by ring walls of a mediaeval castle. If a broad claim (like an outer castle wall) is attacked, that can be abandoned in favour of a narrower claim (like an inner castle wall), if necessary.

It cannot be stressed too highly, that writing a patent specification is not a job for anyone but an expert. The Chartered Institute of Patent Attorneys will send you a list of registered patent attorneys who have to pass stringent examinations in order to qualify.

Unfortunately, as with most things excellence costs money. Hence, to return to my opening theme: if you have no commercial advantage, you do not need a patent. If you need a patent, you need a patent attorney.

## Chapter IV

# Progress through the Patent Office

It was said in Chapter 2 that in order to obtain a valid patent the invention must be new and not obvious. In common with many other Patent Offices, the British Patent Office examines each application in respect of novelty and obviousness of the claims. Other formal matters are also examined.

On filing the application a fee is paid for preliminary examination, in return for this fee the Patent Office examines whether the application complies with the strict formal requirements regarding such things as the size of the typeface and size of the margins. More important for the applicant are the search and the substantive examination

The search and substantive examination can take place in two stages, each being paid for separately, so that the applicant can withdraw if the situation looks hopeless at the first stage.

The first stage is the search. It is initiated by filing a form at the Patent Office with the appropriate fee. This must be done within one year of the application date.

In return for the search fee, the Patent Office conducts a search through its extensive database.

The search is intended to discover if there is anything already published which discloses any example falling within the scope of the claims or from which an example which does fall within the scope of the claims is obvious. Sometimes two or more documents are combined. The examiner will have in mind that it would be obvious to provide a smoke grinder disclosed in document A, with the wimwam disclosed in document B, but the argument is not explicitly stated. The applicant, or the patent attorney, is expected to see the argument for him or her self, there being only a bare indication of whether the document is particularly relevant alone, particularly relevant if taken with another, or belonging to the technological background.

Although it is really part of the next stage of examination, the Examiner helpfully considers whether the invention belongs to one of the excluded classes mentioned in Chapter 2. If no objection is made in this respect, it can be assumed that, in the opinion of the Examiner, the specification is capable of supporting a claim which would not be excluded. Note that does not mean that all or any of the claims at in the application as examined are free from objection.

On receipt of the search report, the applicant and patent attorney will check that they think there is a reasonable chance of success in view of whatever documents are cited. If it is thought that the existing main claim will not stand up against the citations, an amendment may be filed at this stage, or it may be preferred to wait.

The search request may be filed early and the search report may be an assistance in deciding on whether or not to file foreign patent applications which are discussed in Chapters 7 to 9.

Approximately 18 months after the application date, the application is officially published by the Patent Office. The date of publication is important because from then, given certain conditions, infringers become liable for damages as is discussed in Chapter 7. Although 18 months may seem rather a long time to wait for publication, in many industries, e.g. the pharmaceutical industry, development and testing takes so long that you would prefer your competitors not to know what you are up to a mere 18 months later.

Six months after publication of the application, it is necessary to initiate the next stage of the examination process by filing at the Patent Office a request for substantive examination and by paying the appropriate official fee.

It is also possible to file the substantive examination request with the search request. In that event the Patent Office will conduct the whole examination in one go. This would be an advantage if you want to obtain your patent quickly.

Occasionally, no objections are raised in substantive examination. More commonly, the Examiner will write a letter, which patent attorneys refer to as an "Official Letter", putting into words the kind of argument we may have been able to expect, but might have discounted, from the Search Report. Sometimes, further documents which happen to be known to the Examiner, are cited.

A deadline for responding to the Official Letter will be set, usually 6 months from the date of the letter.

In response we can argue, amend the specification, both argue and amend the specification, or give up!

Drafting patent specifications and then arguing as to why the invention is not obvious in the face of a number of citations is the bread and butter of a patent attorney's work, so do not be disheartened if the Examiner raises objections. Your patent attorney will advise you how serious the objections are and may need your technical expertise in answering them. Amendment of the specification would usually restrict the scope of the claims so that they do not cover something cited by the Examiner but the job takes skill since the amendment must not introduce new subject matter into the application.

Having filed a reply, this will be considered by the Examiner. If the Examiner is satisfied by the reply the application will proceed to grant of a patent. If the Examiner is not satisfied, a further Official Letter will be issued and a time set for reply. You can go round that loop as many times as it takes, but if a patent is to be granted, the application must normally be in order by the end of four and a half years from the application date.

## Chapter V

### Grant and after

Not until a patent had been granted can you use it. Then you can sue infringers for acts of infringement which have taken place after publication of the application provided the published claims covered the infringement. If before the application is published it is thought that infringement will take place, or if infringement is discovered, it is possible to have the application published early.

An action for infringement can be brought in the High Court or in the Patents County Court. It will be costly for both the plaintiff and the defendant, although the Patents County Court will be less costly than the High Court. The costs will have to be discussed before an action is started since the patent is a commercial tool. It should be considered whether the likely cost is justified in view of the size of the infringer's business, for example.

The likely cost of an action is just as daunting for a defendant and a settlement is often reached without the need to go to court. Even if the patentee cannot afford to go to court and does not succeed in stopping an infringer, the threat of an action will cause the infringer considerable worry and expense offsetting, to some extent, any advantage which has been gained by copying the invention. Even a laughably invalid patent has an effect.

Once the patent has been granted renewal fees become payable each year from the end of the fourth year from the application date. The patent expires at the end of the 20th year from the application date.

## Chapter VI

# Developments

In order to secure an early date, patent applications are often filed before development is complete. There may be several reasons for not waiting. The applicant may wish to speak to others about possible co-operation or sale of the invention. It may be felt that others are working in the field and may be near a similar solution.

Development can lead to changes which are fundamental to the principle or to changes which, however radical, do not change the underlying principle. In the first case it may be possible to start completely afresh with a new application. The old application may be needed to prevent a competitor from using the old idea so as to avoid infringement of the patent obtained from the new application.

Alternatively, it may be possible to incorporate both ideas in one application. New matter may not be added to an existing patent application. A new application would therefore be filed containing both the old and the new material and claiming priority from the original. In order to claim priority the new application must be filed within a year of the first. The claim to priority means that the novelty of all the subject matter which appeared in the first application, is judged as of the date of the first application. Thus, for example, the novelty of the broad principle will be judged as of the date of the original application. Later disclosures do not invalidate the application.

If there is to be any value in filing a second application with additional subject matter, that additional subject matter must be new on the date the second application is filed. Developments should thus not be disclosed, except in confidence, until they have been made the subject of a patent application or a decision has been made not to bother.

## Chapter VII

# Foreign Patent Protection

Most countries in the world grant patents. A patent is effective only in the country which granted it. Some countries operate by registering patents granted in another country; thus a British patent is effective only in Britain, but may be registered in certain other ex-colonial territories.

The expenses you will have in preparation of a British patent will be roughly duplicated in any foreign country in which you wish to file an application. Your British patent attorney's fees for preparing the British application are replaced by a foreign patent attorney's fees for translating and customising it.

In order to provide applicants some breathing space, a foreign application can claim priority from the British application in the same way as described in Chapter 6. The foreign application must be filed within one year from the date of the British application. The filing date of the British application is called the priority date of the foreign application. It is the priority date which is effective in respect of novelty and in most countries the test for novelty is the same as that in Britain: if the application is to lead to a valid patent, no example of the principle may have been made available to the public anywhere in the world before the priority date.

Even then, a year is a short time in which to evaluate the potential of the invention and to decide on the likely need and affordability of foreign patents. There are conventions and treaties intended to help the applicant further. The two most likely to be important to British applicants are the European Patent Convention (EPC) and the Patent Cooperation Treaty (PCT).

### The European Patent Convention

The European Patent Convention enables an applicant to file one application (a European patent application) in one patent office (the European Patent Office). However, the single application designates thirty-eight states:

Albania	Hungary	Poland
Austria	Iceland	Portugal
Belgium	Ireland	Romania
Bulgaria	Italy	San Marino
Croatia	Latvia	Serbia
Cyprus	Liechtenstein	Slovakia
Czech Republic	Lithuania	Slovenia
Denmark	Luxembourg	Spain
Estonia	Macedonia (FYR)	Sweden
Finland	Malta	Switzerland
France	Monaco	Turkey
Germany	Netherlands	United Kingdom
Greece	Norway	

The application can be extended to two further Eastern block countries:

Bosnia and Herzegovina  
Montenegro

The fees payable to the European Patent Office seem enormous compared to those payable to, say, the British Patent Office. However, the break-even point at which the overall cost of obtaining national patents equals that of obtaining a European patent is generally thought of as being about three countries.

If the application is successful, the European Patent Office grants a patent which is effective in the countries designated in the application provided certain formalities are carried out in each. You are not obliged to carry out the formalities in all 38 countries, so, if you do not want a patent in all of them, some thought must be given as to where to proceed.

Many countries require a translation of the patent to be filed in their own patent office. Of course if, as is likely, your application is already in English, a translation is not necessary for the British Patent Office. Also there are some countries including France and Germany which will only require a translation of the claims (a significant reduction compared to translating the entire specification). Although translation was one of the major expenses mentioned in relation to national patent applications, for a European application the expense comes much later at a time when you are more likely to know the commercial value of the patent and when all doubt as to whether you will get a patent is removed.

### The Patent Cooperation Treaty

International patent applications filed under the Patent Cooperation Treaty are rather different. Many more countries are designated, but an international patent application will never be granted as an "international patent" in the same way as a European patent application can be granted as a European patent.

One international application is subject to a search and optionally to a preliminary examination, but the application proceeds to the national and/or regional patent offices still as an application. The search and preliminary examination reports are advisory only. A recommendation that the claims in an application define a patentable invention may be ignored by the national or regional patent office.

That is not usually a big problem. For example in the European regional phase, since the international search has normally been carried out by the European Patent Office there should be no surprises. Furthermore, it is not necessary to pay the usual European search fee if the application proceeds to a European regional phase. So the search is valuable. The preliminary examination report is usually comforting, even if you have to argue your case again in, say, the European patent office.

A big advantage of filing an international application is delay. For the payment of fees which although significant are much less than the cost of a comprehensive foreign filing programme, a delay, usually of an additional eighteen months, is introduced before the need to enter the national and/or regional patent offices. The search report will be helpful in making the decision as to the countries in which to proceed.

In all countries, a total of at least thirty months from the filing of the original British application is available to evaluate the commercial worth of the invention before deciding on which foreign patents may be wanted. However, in a very small number of countries it is necessary to make a decision twenty months from filing the first British application. At this stage the national phase can be entered for these countries or, on payment of a second smaller fee for international preliminary examination, a delay until the expiry of the full thirty-month term is obtained.

The international application is not truly international in the sense that it does not cover every country in the world. However, all the major industrial countries are designated and the list which currently stands at almost 150 countries as well as four regional offices is constantly increasing.