**WHAT IS REQUIRED FOR THE REGISTRATION OF A PATENT?**

From time to time in an attorney’s career, he/she may have a client with a small business who invents something and, based on this invention, expands his/her business into a substantial concern. Examples of this can be found in the pool cleaner and electronic security industries in South Africa. As the client’s business grows, the attorney can establish a relationship of trust with the client and expand his/her involvement in the business, to the mutual benefit of both parties. In this process, it is vital to recognise the potential for the protection of the client’s invention by means of a patent.

The important question that arises is: what matter is patentable? The answer is that a patent may be granted for any new invention that involves an inventive step and that is capable of being used or applied in trade, industry or agriculture (section 25(1) of the Patents Act 57 of 1978). However, certain things are not considered to be inventions in terms of the Act and are thus not patentable (section 25(2)). This prohibition applies only to the extent that the patent relates to the thing as such (section 25(3)). Most exclusions are based on considerations of public policy. Excluded, first, is a discovery. For example, the discovery of a new substance freely occurring in nature cannot be patented. It has been said that a discovery does add something to human knowledge, but only by “lifting the veil” and disclosing something that before had been unseen or only seen dimly. Similarly, the discovery of a principle that is a law of nature, such as the law of gravity, cannot be patented. On the other hand, an “invention” that is obviously contrary to well-established natural laws cannot be patented (section 36(1)). An example often encountered in practice by patent attorneys is a so-called “perpetual motion machine”. Also excluded are scientific theories or mathematical methods. It is also not possible to obtain a patent if the invention would be generally expected to encourage offensive or immoral behaviour (section 36(2)). This could relate to processes for cloning human beings (European Patent Convention). Precisely what would constitute offensive or immoral behaviour is not clear and the Registrar of Patents is not known to have rejected patent applications on this ground.

Also excluded are literary, dramatic, musical or artistic works or any other aesthetic creation. These works are properly protected by other legislation, such as the Copyright Act 98 of 1978. A further exclusion relates to a scheme, rule or method for performing a mental act, playing a game or doing business. A method for offering alternative wording in documents, to improve parts that read with difficulty, has, on the ground that it relates merely to a mental act, been denied a patent in Europe (*IBM* case). Similarly, a system for the automation of the ordering of food in a cafeteria has been found to comprise a business method (UK *Fujitsu* case). On the other hand, when a method had a “technical aspect”, being the transformation of printer control items in word processing documents from one format to another, its technical nature allowed it to be accepted for patent protection (*IBM* case). Also excluded in the UK, would be a system that, for instance, prevents conflicting bookings for flights, as this can be performed by humans as well and would thus still be a “mental act” (*Fujitsu* case).

The exclusion of matter that involves a method of doing business has been found to apply to a system that related to personnel management (European *Sohei* case). A system that improved mail processing was, however, held to be patentable (European *Pitney* case). Also excluded is the presentation of information. A television signal, merely containing information such as moving pictures, would be excluded. In the absence of the signal, a television screen would still show something, even if it was just snow.

One of the most controversial exclusions relates to computer programs. Such programs are, of course, specifically protected by the Copyright Act (section 2(1)(i)). The idea underlying a particular program, which is typically what patent law relates to, is, however, not adequately protected by way of copyright. In Europe, in the *IBM* case, for example, it has been held that a computer program may be patentable if it resulted in additional technical effects over and above the mere normal interface between a program (software) and the computer (hardware). For the patent attorney, a difficult balancing act must be attempted in advising a client as to whether his/her invention relates merely to a computer program as such or whether it has aspects that may be protected. For example, a computer-controlled machine may be patentable, notwithstanding the fact that it operates under the control of a computer program. However, no case law exists in South Africa and there is a need for clarity in this regard.

Also excluded from protection is a variety of animal or plant or any essentially biological process for the production of the former, if it is not a microbiological process (section 25(4)(b)). An applicant for a patent will have to indicate whether an invention is based on an indigenous biological or genetic resource, or traditional knowledge or use. This is aimed at preventing so-called “bio-piracy”.

The last and interesting exclusion to be dealt with is a method of treatment of the human or animal body by surgery or therapy or of diagnosis practised on those bodies (section 25(11)). This exclusion relates only to treatment and not supporting technical apparatus, such as ECG machines or pacemakers. In Europe, a method for preventing the suffocation of piglets by blowing hot air under the mother pig so as to discourage the piglets from going under her was held to be patentable (*Salimen* case). The exclusion mentioned would also not apply to activities performed on substances removed from a body. For instance, a method for the diagnostic analysis of blood samples would be patentable. Also protectable would be a treatment for sheep that improves the quality of the mutton or the volume of wool produced (Burrell *South African Patent and Design Law* 1999 52). A method for removing plaque from human teeth has been held to be excluded from patent protection (European *ICI* case).

The registration process is commenced with the filing of an application. This application must be accompanied by various documents (section 30). The most important document is the specification, which describes the invention. Two types of specifications are provided for. The filing of a provisional specification, which is optional, establishes the priority date for purposes of the filing of a later complete specification – the filing of which is a requirement for obtaining patent protection. The Paris Convention, of which South Africa is a member, allows for reciprocity in the claiming of priority. In practice, a provisional specification is often filed at an early stage in the development of an invention, while a complete specification is filed later, when the invention has been refined. A provisional specification can be signed by the applicant, but the complete specification must be signed by a patent attorney (or patent agent; see reg 27-28). A complete specification must be filed within specific time periods in order to maintain the priority date of the provisional specification (section 31). A provisional application must fairly describe an invention (section 32(2)). A complete specification, on the other hand, must fully describe the invention and contain claims defining the scope of the invention (section 32(3)).

As mentioned above, in order to be registrable, an invention must be new, involve an inventive step and must be capable of being used or applied in trade, industry or agriculture. An attack on a patent is, in practice, often based on a failure to meet these criteria. Interestingly, the recognition of a new advantage of an “old thing used in a new way” may sometimes be patentable (for example, in Europe, in the *Mobil* case, the use of a compound for the reduction of friction in engines, when the compound had previously been used as a rust inhibitor, was registrable). The most common ground for an attack on a patent is that it lacks novelty and/or is obvious. In this regard, section 25(5) is relevant. It determines that an invention will be deemed to be new, i.e. novel, if it does not form part of “the state of the art” immediately prior to the priority date of any claim to an invention. The priority date is the date on which a provisional or complete specification was lodged, when the subject matter of the invention was first disclosed. The state of the art comprises all matter that has been made available to the public, in South Africa or elsewhere, *inter alia*, through a written or oral description (section 25(6). For example, a holder that has been designed to keep wine cold at polo games may be new to South Africa, but if it has been used to sell beer at German soccer games, it will not be patentable.

The determination of the state of the art is relevant to both novelty and inventiveness. In other words, what material was available to the public as at the priority date of the relevant invention? It has been held in Europe that the state of the art may include a magazine published a day before the priority date (*Research Corporation* case). Generally, the relevant disclosure must qualify as disclosure to the public and must be a so-called “enabling disclosure”, i.e. one that would enable the addressee of the patent to understand the invention disclosed. If information about an invention is disclosed as a result of the invention being worked in South Africa by way of a reasonable technical trial or experiment, such information will not form part of the state of the art (section 26(b)). In terms of the Act, an invention is inventive if it is not obvious to a person skilled in the art to which the invention relates (section 25(10)). One way of looking at this requirement is to ask whether, with regard to the information available at the priority date of the invention, a person skilled in the art faced with the problem solved by the invention could have come up with the invention as a matter of course. The above is a summary of the most basic principles of the law relating to the registration of patents. The most important principle to be remembered, however, is to consult a patent colleague as soon as you detect an inventive sparkle in your client’s eye!

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(adapted version of an article originally published *in De Rebus*)