

**How to Protect Your
Intellectual Property
effectively and affordably**

Chapter 1

What is a patent?

A patent protects any invention that is new, inventive and capable of being used in trade, industry or agriculture. Whereas: a design protects the shape of an article; a trademark protects a trading name; and copyright protects work reduced to material form from being copied, patents protect the technical principle of an invention.

A patent prevents others from making, using, exercising, disposing of (selling, leasing, etc) or importing the invention for a period of 20 years. Patents are territorial. To secure patent protection in a country you must file a patent in that country. There is no such thing as a “world wide patent”.

In South Africa, the process for obtaining patent protection generally comprises the steps of conducting a novelty search, filing a provisional patent application and, 12 months later, filing a complete patent application. If the inventor wishes to file patents in more than three other countries, he should file a PCT (international) application followed by national phase patent applications in each of the countries - the PCT patent does not itself develop into a patent. It merely extends the period in which an inventor may file patents in other countries from 12 months after filing a provisional patent application to 30 months.

Although patent attorneys are the only persons authorized by law to file complete patent applications, anyone is able to conduct their own patent searches and file their own provisional patent applications. The cost to a patentee for taking the first two steps himself, that is conducting his own search and filing his own provisional patent application directly at the South African Patent Office, is R60.

Various tools to assist inventors to file their own provisional patent applications and reduce their patenting costs are available at www.mypatent.co.za.

Obviously, there are pitfalls that must be navigated around where patentees conduct their own searches and file their own provisional patent applications. However, with the correct guidance these pitfalls can be avoided.

Rights secured by a patent

Patent rights are defined by the claims. Any product that includes the features described in a patent claim infringes that patent. The existence of additional features is irrelevant to the question of infringement. However, it is possible that the inventor of these additional features may obtain patent protection for such features, if new.

For example, the first person (inventor X) to invent a pencil, could have obtained a 20 year monopoly for the following principle:

Claim 1

A writing instrument including:

an elongate body defining a central bore; and

a writing element sized to fit within the central bore.



Assuming that another person (inventor Y) invented the standard pen, he would have to pay a royalty to inventor X to make the pen, but would also be entitled to patent protection for the following principle:

Claim 1

A writing instrument including:

a reservoir for holding a fluid;

an elongate body for housing the reservoir; and

a nib on at least one end of the reservoir for controlling flow of fluid from the reservoir.



Now assuming that inventor Z creates a click-type pen, he would have to pay royalties to both inventor X and inventor Y, but would be able to secure patent protection for the following principle:

Claim 1

A writing instrument including:

a reservoir for holding a fluid;

an elongate body for housing the reservoir;

a nib on at least one end of the reservoir for controlling flow of fluid from the reservoir, the reservoir being movable between an operable position, wherein the nib protrudes from the body, and an inoperable position, wherein the nib is housed within the body; and

a means for actuating the reservoir between the operable and inoperable positions.



Chapter 2

Reason for filing a patent

After a major storm hit the East London harbour in 1963, Eric Mowbray Merrifield, a East London harbour engineer, began considering methods to dissipate rather than block the energy of waves. Merrifield wanted a block designed in such a way that it could be "*sprinkled like children's jacks*", presenting very little surface area to the wave action, making them difficult to dislodge.

Kruger went home for lunch, cut three sections off the end of his wife's broomstick, knocked them together with nails into an H-shape with one leg turned through 90 degrees, and the dolos was born.



Being easy and cheap to manufacture, simple to distribute along shorelines, the dolos proved an immediate success world wide. Each kilometer of shoreline requires ten thousand 20 ton dolosse, with millions having been scattered along beaches.

Pitfall 1 – do not pass the opportunity of protecting your intellectual property by without good reason.

Unfortunate for Merrifield and Kruger, no patent or design protection for the dolos was secured, and no commercial benefit was received by either inventor for this incredibly successful invention.

Chapter 3

The importance of conducting a novelty search

After coming up with an invention, and before patenting, you should always conduct a novelty search. Failure to do so may cause you to incur unnecessary expenses, time and effort in developing and commercializing an invention that is not even protectable.

Never assume that your invention is new. Conduct internet patent searches through the freely accessible databases, e.g. US, UK, European and Canadian Patent Office databases.

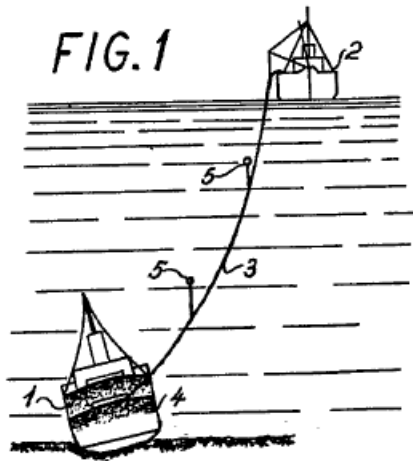
Pitfall 2 – do not assume that your invention is new. Conduct a search.

On September 14, 1964, the Al Kuwait freighter carrying 5000 sheep capsized and sank in the Kuwait harbour. As time went by, the freighter's decomposing cargo threatened to contaminate the city's drinking water supply, which at the time was sourced from the harbour. An effective method of salvaging the Al Kuwait freighter was desperately required.

Bringing cranes in would have taken too long and the real risk of the freighter breaking apart during salvage was unacceptable. It was apparently during this ordeal that Karl Kroyer dreamt up an alternative method of raising sunken vessels. His method involved pumping a number of buoyant bodies into the vessel through a tube until the buoyant bodies provided sufficient upward lift to bring the vessel back to the surface.

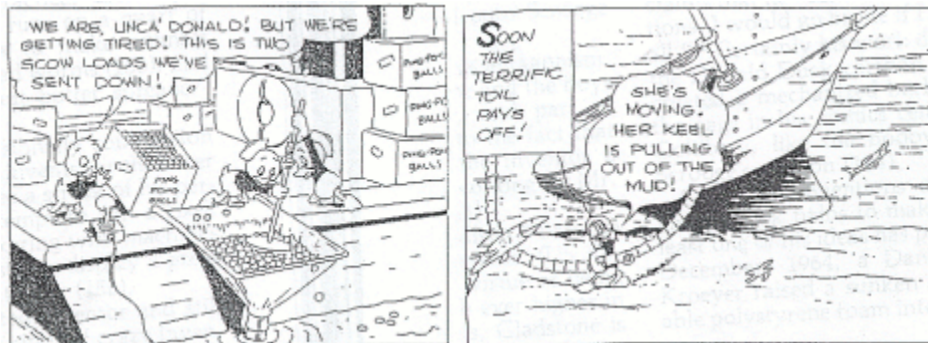
On 31 December 1964 and using 27 million plastic balls made of expandable polystyrene foam, Kroyer raised the Al Kuwait freighter to the surface, saving the insurance company that had insured the freighter in excess of \$1,500,000.

Between the time of the sinking and the salvaging of the Al Kuwait freighter, Kroyer filed a patent application at the Danish Patent Office. This application was later extended into the territories of Germany, the Netherlands and the United Kingdom. In his application, Kroyer claimed a "*method of raising sunken or stranded vessels by introducing into the interior of said vessel buoyant bodies by means of a stream of water, characterised in that said stream of water is passed through an ejector and that the buoyant bodies are introduced into said stream of water through the suction tube of said ejector*". The figure below shows a representation which accompanied Kroyer's application.



Although his invention had proven successful with the salvaging of the Al Kuwait freighter and had resulted in the grant of patents in both Germany and the United Kingdom, Kroyer could never have guessed that the novelty of his invention was about to be brought into question by a Donald Duck comic book.

Patent “legend” has it that although Kroyer’s invention was considered novel by the German and UK Patent Offices, the Dutch Patent Office had discovered a piece of prior art which was detrimental to the novelty of Kroyer’s invention. The prior art discovered was not found by a search normally conducted through the available patent records of that time, but rather a 1949 Donald Duck comic book entitled “The Sunken Yacht” (by Carl Barks - Walt Disney)



The comic book shows Donald Duck and his nephews raising a yacht by filling it with ping pong balls fed through a tube. The Dutch Patent Office refused to grant a patent for the invention on the ground that the comic book disclosed the same technique as that claimed in Kroyer’s patent, consequently destroying the novelty of his invention. Whether the patents in Germany and the United Kingdom were ever challenged on the findings of the Dutch Patent Office are to this day unclear. However, on the basis of the comic book disclosure, all patents filed by Kroyer appeared to lack novelty and were invalid.

An invention must be new to be patentable in South Africa. If an invention has been disclosed to the public in any way, anywhere in the world prior to filing a patent

application, the invention is no longer patentable. Even the disclosure of the invention by the patentee on a non-confidential basis to his best friend is novelty destroying. A series of nine confidentiality agreements is available at www.mypatent.co.za).

Pitfall 3 – do not rely on novelty searches conducted through the records of the South African Patent Office.

Many inventors conduct patent searches at our Patent Office. This is not encouraged; our Patent Office records are incomplete and not up to date; some searchers remove relevant patent abstracts instead of making a photocopy thereof; and a very small percentage of patents world wide are filed in South Africa. Only conduct South African searches for technology where South Africa is recognized as a world leader, e.g. mining equipment, techniques and processes and automatic pool cleaners.

Pitfall 4 – just because your invention has not previously been commercialized does not mean that it is new.

There are two chestnuts that a patent attorney is guaranteed to see every year – aeroplane tyres with fins and a front brake light for a car.

Standing at O.R. Tambo International and watching the aeroplanes land, the benefits of pre-rotating the aeroplane tyres prior to landing are obvious. Tyres making contact with the runway have to accelerate from zero to over 350 kilometres per hour within a fraction of a second. The friction wears the tyres and generates a cloud of smoke.

Using the wind speed to pre-rotate the tyres while in flight, should improve tyre life. And, a simple way of converting wind speed into wheel rotation is to add fins or cups to the outer walls of the tyres.

Despite the obvious commercial benefits, a quick search through the US Patent Office database reveals that this technology is more than 40 years old and has never been put into practice.

Search String Example

The keywords, and all variations thereof are:

- airplane or aeroplane or aircraft;
- tyre or tire or wheel;
- rotate or rotating or rotation or spin or spinning or turn or turning;
- wind; and
- land or landing;

Chapter 4

An invention must not be obvious to a skilled person to be patentable.

Fuses or shock tubes were introduced to the mining, quarrying and construction industries in the early 1970's as a method of initiating explosions. These tubes had a fine layer of explosive dust on their inner walls. The detonator at one end of the tubes initiated an explosive wave along the tube to detonate a charge at the other end. However, this explosive coating would dislodge from the inner wall during transportation and installation, resulting in misfires.

To make the tube more resistant to impact Ensign Bickford added an abrasive resistant outer tube over the inner tube. During handling, this outer tube absorbed most of the impact that would have otherwise dislodged the explosive dust.

Ensign Bickford obtained a patent for this invention, which was subsequently challenged on the ground of obviousness. The court found that merely adding a resistant coating to an impact sensitive article would have been obvious to an expert in the field, and revoked the patent due to the absence of an inventive step.

To the best of our knowledge, this is the first of only three patents that has ever been revoked on the ground of lack of inventiveness in South Africa.

Suggestion: provided your invention is novel, despite misgivings as to inventiveness, file a patent.

Chapter 5

Do you own the fruits of your creativity?

In terms of our common law, ownership in intellectual property created by an **employee** within the course and scope of his employment automatically vests in the employer.

“*Course and scope*” means “*relating to the work of the employee*”. For example: intellectual property relating to a new method of gold mining developed by a secretary employed by a mining house would generally fall outside the “course and scope” of her employment. However, the same invention created by a mining engineer would most probably satisfy this requirement.

An employer may not in a contract of employment:

- secure ownership of inventions made outside of the employee’s course and scope of employment; or
- limit the employee’s rights in inventions developed by him for more than one year following termination of employment. (This does not mean that the employer may secure a licence over or ownership in such invention).

On the other hand, ownership in intellectual property developed by a **contractor**, is generally regulated by the terms of the agreement between the parties. In the absence of an agreement to the contrary, the contractor typically retains ownership of any intellectual property developed by him. However, in such instances, the contractee is generally entitled to an implied royalty-free licence to use the intellectual property for the purposes reasonably foreseen and understood by the parties.

Students developing intellectual property while enrolled at a university are subject to the IP policy of the university.

Pitfall 5 – do not jointly own a patent without a joint ownership agreement that regulates the owners’ rights in respect of the patent.

Where there are joint owners of a patent application, in default of a joint ownership agreement to the contrary, each owner will hold equal undivided shares in the application and none of the owners may without the consent of the other joint owners exercise any patent rights.

In many instances, family members consider joint ownership agreements unnecessary. But this view quickly changes once a dispute arises.

Chapter 6

Drafting and filing a South African provisional patent application

Assuming that you have conducted a search which yields positive results and established that you have the right to file a provisional patent application, the next step is to draft the provisional patent specification.

Although patent specifications are technical documents, the legal requirements for a valid provisional patent are few. Basically, the specification need only describe comprehensively the features ultimately claimed in the subsequently filed complete specification. More than 2000 inventors file their own provisional patent applications each year.

Since the goal is ultimately to file a complete application, it makes sense to adopt a similar format when drafting the provisional, such that large sections can be copied into the complete specification, thereby reducing the time, effort and cost to draft and file that application.

Accordingly, in practice, a provisional specification includes the following sections: Title; Background of the Invention; Summary of the Invention; Brief Description of the Drawings; Detailed Description of the Drawings; and a set of drawings. The Patent Toolkit available at www.mypatent.co.za aims to assist in preparing the specification, providing a skeleton to which you merely add the flesh.

It may be comforting to note that when drafting the corresponding complete specification, you may substitute drawings and revise the wording of the Claims and/or Summary. As long as the invention has been described comprehensively in the Detailed Description of the Drawings, most defects in the provisional specification can be remedied in the complete specification.

Although a provisional specification does not require a set of claims, preparing this section assists in focusing the mind on the new, essential features of the invention, which must be described in detail instead of solely describing the problem that your invention sets out to solve.

As a preliminary step, we suggest that you list the novel features of the invention and rank them according to essentiality. Thereafter, you can draft a set of claims that introduce these features one at a time. When introducing features, start by referring to the broadest possible category (e.g. fastener means), then reduce the scope of the categories (e.g. screws, nails, rivets, etc) until you finally arrive at the preferred feature (e.g. a flat-top screw).

By drafting a set of claims, you will gain a good feel for the scope of protection you can expect to obtain from a subsequently granted complete patent application. In fact, you may find that the scope of protection afforded by the claims is so small that the cost of filing a patent application makes little commercial sense due to the patent being vulnerable to easy design around.

If the claims offer little protection, other options should be considered, for instance, filing a number of provisional applications, each covering a different embodiment of the invention. If this is too expensive, or if there are too many possible embodiments, then you may wish to consider protecting the invention with a series of design applications. Design applications are cheaper and enforceable at least one year before the patent. A Toolkit for drafting and filing design applications for R240 is also available at www.mypatent.co.za.

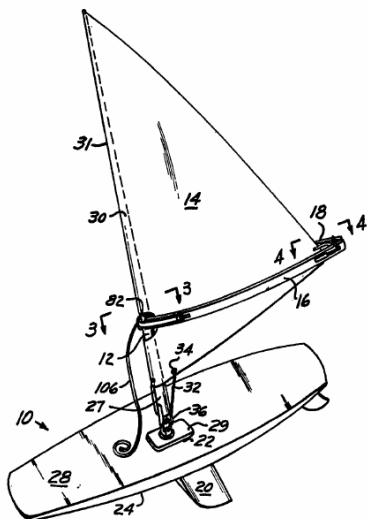
Once you have completed drafting the provisional specification, you need simply: to sign the specification at the end of the Description; complete (in black ink and block letters) and attach forms P1 (in duplicate), P2 (in duplicate), P3 and P6 (copies available at www.mypatent.co.za); go to the South African Patent Office (DTI campus, Block F, 77 Meintjies Street, Sunnyside, Pretoria), pay the cashier R60 in cash to stamp the document and submit the application.

Pitfall 6 – do not leave out important information or fail to describe alternative embodiments of your invention in your provisional patent application.

The consequences of not describing your invention fully are illustrated in the example below.

After becoming one of the most popular water sports in the world, windsurfing was awarded Olympic status at the 1984 Los Angeles Games. Unbeknown to the inventors, the validity of their patents was about to be challenged, resulting in the revocation of their United Kingdom patent no more than a year later.

The inventors of the windsurfer were James Drake - an aeronautical engineer who enjoyed sailing – and Hoyle Schweitzer - a computer analyst and a surfer. Together, they came up with the concept of attaching a sail to a surfboard, providing the exhilaration of surfing without the need for a wave.



The first patent application was filed in the US in 1968 and later extended to Australia, Canada, Germany and the United Kingdom. The UK patent, which was granted in the early 1970's under patent number GB 1,258,317, claimed:

A wind-propelled vehicle comprising body means, an unstayed spar connected to said body means through a joint which will provide universal-type movement of the spar in the absence of support thereof by a user of the vehicle, a sail attached along one edge thereof to the spar, and a pair of arcuate booms, first ends of the booms being connected together and laterally connected on said spar, second ends of the booms being connected together and having means thereon connected to the sail such that said sail is held taut between the booms.

During subsequent revocation proceedings, previous windsurfers with generally similar configurations (including straight booms that became curved to some degree when sailed) came to light. James Drake argued that the patented windsurfer represented a significant advancement in that the sail adopted the shape of an aerofoil, which significantly improved its sailing characteristics, and that this shape was induced by the arcuate booms. However, the patent merely stated that the arcuate booms provided a grip for the user and to hold the sail taut – a purpose that straight booms would achieve just as effectively – and failed to explain the ancillary, novel function of these booms.

Based on this omission, the Court upheld the application for revocation and revoked the patent on the grounds of insufficient disclosure and lack of novelty. South African patent law closely mirrors the law in the United Kingdom with regard to grounds of revocation. Therefore, if registered, any corresponding South African patent would likely have suffered a similar fate.

Chapter 7

The patent race has only just begun

Many inventors are under the impression that once their provisional applications are filed, the money will simply start rolling in. This is unfortunately not the case.

Pitfall 7 – do not sit back and expect the money to simply start rolling in after filing your provisional patent application.

The patent race has only just begun. You have 12 months from filing the provisional application to raise between R5,000 and R15,000 to file a complete application in South Africa only, or between R15,000 and R75,000 to file a PCT application if you intend to obtain patents in foreign territories. The success of your patenting strategy depends largely on the actions you take during this period.

This time must be used to assess the commercial value of your invention and, if you intend to file a PCT application, to focus on raising the required funding. The costs of an international patenting program are detailed below:

- day 1 – file a provisional: R60
- 12 months – file a PCT application: between R15,000 and R75,000
- 16-25 months – amend PCT specification: R5,000 to R10,000
- 30 months – file patent applications in select territories: R20,000 to R30,000 per country
- 30-66 months – prosecute foreign patent applications to grant: R20,000 to R60,000 per country
- annual renewal fees – R1,500 to R8,000 per country

Instead of focusing time on “perfecting” the product (the product does not need to be perfect to attract investors), rather focus on obtaining government grants or venture capitalist (VC) funding. The probability of securing finance from these sources seldom exceeds 20%. A list of funding agencies is available at www.mypatent.co.za.

Too often, licensing as a source of funding is overlooked by inventors. A licensee that assumes the costs of patenting in his licensed territory in consideration for a discounted royalty rate is a “gift-horse”. Second and third prizes are licences that provide for either an upfront licence fee with discounted running royalties or a royalty pre-payment. As a last resort, provide for guaranteed minimum royalty payments, which can be discounted to a financier.

Only after overcoming the funding obstacle, should your focus revert to perfecting and marketing the product ... and, of course, remember to consult your patent attorney at least 4 weeks before expiry of the 12 month period to commence with the drafting and filing of your complete or PCT application.

Chapter 8

Patenting new applications for existing invention?

To reduce wear on shoes, various patents were filed prior to the 1960's for heels having metal plates. Drummond-Hay worked in the mines and noticed that miners' boots tendered to slip in the wet environment of stopes. To remedy this, Drummond-Hay created a boot with an integrally moulded metal plate that semi-protruded from the heel and filed South African patent No. 22967 entitled "Improvements in heels for miners' boots".

Drummon-Hay's boot was subsequently copied by DI Fram Company Limited resulting in infringement being instituted. DI Fram countered this action by claiming that Drummond-Hay's boots were not novel. In his defence, Drummond-Hay argued that: (i) his configuration, although not necessarily new, prevented slippage in addition to reducing wear; and (ii) related specifically to a miner's boot. The prior patents, which related to footwear in general, did not describe this additional benefit in their descriptions.

The court held that it was obvious that the heels described in the prior patents would have prevented slippage, and the fact that the descriptions did not mention this benefit was immaterial.

A new use for an existing product is therefore not patentable. But this principle does not necessarily apply to pharmaceuticals.

Chapter 9

Patent do's, don'ts and maybes.

Do:

- ensure that intellectual property developed by contractors is assigned to you in writing;
- conduct an internet-based patent search before filing a patent application. To be patentable, the invention cannot have been disclosed anywhere in the world whether orally, in writing, by use or otherwise;
- ensure that the patent application cites all inventors that contributed features mentioned in the claims / features to be claimed in the complete application;
- file a provisional patent application first if you foresee making improvements / modifications to the invention during the coming year or if you intend to file patents in more than three foreign territories;
- ensure that your provisional patent specification includes proper drawings (without dimensions);
- set out your patent filing strategy at an early stage to ensure sufficient cash flow, when required;
- when considering your patent filing strategy, consider the acts that you wish to prevent people from performing – making, using, disposing (including offering to dispose), exercising (a method) and importing – focus on territories where the patented product can be made or imported or used;
- mark your product with your patent number, once registered. This will enable you to claim damages for infringement;
- file corresponding patent applications in foreign countries or a PCT patent application within 12 months of filing your first patent application (typically your provisional patent application from which you claim priority);
- file a PCT application if you intend to file patents in more than three foreign territories, but ensure that you simultaneously file applications in non-PCT member countries;
- consider tax and exchange control issues when assigning patents; and
- claim related research and development (R&D) tax incentives (calculated at 150% of R&D salary and consumables costs).

Don't:

- disclose your invention to anyone before filing a patent application, unless such disclosures are subject to confidentiality undertakings;
- use puffery in your patent specification or claim that your invention solves various problems. A patent is not a marketing document;
- make a profitable sale using your invention before filing a patent application;
- post-date your provisional patent application if you intend to file corresponding patents in foreign countries;
- re-file your provisional patent application if the invention has been disclosed to the public in the interim;

- institute infringement proceedings in respect of your South African patent until 9 months following grant;
- threaten anyone with your granted patent without first sending a polite, non-threatening letter informing the person of your patent, citing your patent number and attaching a copy of your patent;
- file a patent in the name of two or more applicants unless the applicants have concluded a joint ownership agreement;
- file your patent in the name of a foreign entity without first obtaining exchange control approval;
- file patent applications for business methods, methods of playing a game, methods of performing a mental step, scientific theories; or mathematical methods. Obtain professional advice if you wish to patent a computer program; and
- grant an exclusive licence without appropriate escape clauses or minimum royalty provisions.

Maybe:

- keep your invention secret (or ensure disclosures are subject to Confidentiality Undertakings) until filing a complete/PCT application, despite having filed a provisional patent application. Although this is not necessary to maintain the validity of your patent, it will give you more options should you wish to extend the period for filing PCT or foreign patent applications;
- consider filing design applications together with your patent application; and
- consider protecting not only the product but also the method of making the product, the method of using the product and the machinery to manufacture the product.

Chapter 10

Other forms of intellectual property protection

Registered designs

Design applications protect the appearance of an article. To be registerable, a design must be new, and original or not common place. Two types of designs exist, namely aesthetic designs and functional designs. Aesthetic designs protect those features of the article which appeal to and are judged solely by the eye (e.g. jewellery), whereas functional designs protect those features that are necessitated by the function the article is to perform (e.g. a flat-top screw).

Functional designs may however not be filed for spare parts, being articles that are expected to be replaced during the life of the machine, vehicle or equipment as a result of ordinary wear and tear. A set of articles can be protected in a single application, provided that each article in the set has the same general character and are ordinarily on sale together or intended to be used together (e.g. cutlery, set of tools, tea set, etc).

Aesthetic or functional design registrations, prevent others from making, importing, using or disposing of articles that embody the registered design or a design not substantially different, for periods of 15 and 10 years respectively.

Various tools to assist you in filing your own design applications and thereby reducing your costs are available at www.mypatent.co.za.

Trade marks

A trade mark protects marks that are capable of distinguishing the goods or services of one person from those of another. Words, logos, shapes, slogans and colours are protectable by trade mark.

A registered trade mark prevents others from using a similar or identical mark that is likely to cause confusion. A registered trade mark is renewable every 10 years in perpetuity.

As with patents and designs, certain marks are excluded from registrability under the Trade Marks Act namely, marks not capable of distinguishing, descriptive marks and generic marks. The first category is self explanatory. The second refers to marks that describe the goods or services of a trader, for example, juicy apples or orange oranges. The third category refers to marks that through use have become generic in the market place, for example escalator, thermoflask and nylon.

“Vaseline” was at risk of becoming generic – referring to petroleum jelly products in general. To protect its trade mark right, Unilever extended its range of Vaseline products to include non-petroleum jelly based products such as body lotions, hand and nail treatments and heel balm sticks.

Copyright

Copyright protects an original qualifying work reduced to material form against copying. Categories of works include: literary, musical and artistic works; cinematograph films; sound recordings; broadcasts; programme-carrying signals; published editions; and computer programs.

To qualify for copyright protection, the work must be original (i.e. derived from the author) and reduced to material form (i.e. by writing, recording, electronic storage or any other means). Copyright subsists automatically from the date on which the work is reduced to material form.

The effect of copyright protection is to prevent others from making reproductions or adaptations of a substantial part of the work for the term of the copyright, which is generally the life of the author plus 50 years. However, copyright does not protect the content of the work.

For example, author X who compiles a telephone directory by gathering names and corresponding telephone numbers from various databases benefits from copyright protection in the telephone directory. However, if author Y uses the same databases to compile the same directory without copying X's work, Y does not infringe X's copyright.

Since the copyright holder must prove that his work has been copied, we suggest that you insert "fingerprints" in your work, such as fictitious entries in telephone directories, spelling errors and portions of redundant code in software that are never triggered.

Know-how

Know-how includes secret information that cannot be gained from mere examination of a product or that constitutes knowledge that is not generally possessed by experts in a recognised profession.

The term of know-how is for as long as the information remains secret, as is the case with the Coca-Cola formula, which to this day is a closely guarded trade secret known only to a few employees. Know-how is protected by the law of unlawful competition.

As with copyright, know-how is not a registrable right and can generally only be protected by: internal systems to maintain the information secret, confidentiality agreements and restraints of trade.

A series of free confidentiality agreements is available at www.mypatent.co.za.

Chapter 11

R&D tax provisions

An R&D tax incentive provision was introduced into our Income Tax Act in November 2006. The incentive provides a taxpayer with a 150% deduction in respect expenditure relating to R&D activities within South Africa. Presuming that you are a sole proprietor, for every R100 spent on R&D, you could potentially claim R60 back from SARS.

To qualify for the incentive, the taxpayer must fulfill the following requirements:

1. Carry on a trade. In other words, the R&D activities should relate to a business from which you intend to generate a profit.
2. Incur expenditure. Generally, the only expenditure qualifying for deduction under this section is expenditure relating to the payment of salaries and to the purchasing of consumables and materials.
3. The expenditure must be directed at qualifying activities, which include:
 - a. *the discovery of novel, practical and non obvious information; and*
 - b. *the devising, developing or creation of any—*
 - i. *patentable invention*
 - ii. *registrable design*
 - iii. *copyrightable software*
 - iv. *knowledge essential to the use of such invention, design or computer program*

Category 3a is extremely narrow and is limited to the “discovery” of pre-existing information not previously within the public domain. For example, the discovery by Alexander Fleming that penicillium mould kills bacteria and that the active compound was penicillin.

4. The qualifying activities must be scientific or technological in nature.
5. The qualifying activities must be performed in South Africa. No tax allowance is available for expenditure relating to R&D activities conducted outside of South Africa.
6. He must intend to use the resultant IP in the production of his income. Accordingly, if you intend to sell the resultant IP for a capital gain, your intention is not to produce income. The IP must be used in your business or be licensed out to other persons in consideration for taxable income.

We suggest that, before commencing your R&D, reduce your goals to writing and (with the exception of software) conduct internet searches to confirm that these goals are either patentable or design registrable. Finally, to access this section, you must complete

the questionnaire available at <http://www.dst.gov.za/r-d> and return it to the Department of Science and Technology and include your R&D claims in the corresponding sections in your tax return.

A comprehensive guide on the R&D incentive is available at www.mypatent.co.za.

Chapter 12

Table of royalty rates

Category	Average Royalty	Category	Average Royalty
Accessories	8.9%	Novelties / Gifts	8.3%
Aerospace	4.0%	Personnel Services	12.5%
Apparel	6.8%	Pharmaceuticals / Drugs	7.5%
Automotive	3.3%	Pre-Clinical	3.0%
Baby Goods	6.0%	Phase I	7.5%
Baked Goods	5.2%	Phase II	11.5%
Books - Softcover	7.5%	Phase II	15.0%
Books - Hardcover	10.0%	Launched	20.0%
Building & Construction	5.6%	Research Reagents (e.g. expression vector, cell culture, media supplements)	3.0%
Business Services	11.9%	Diagnostic Products (e.g. monoclonal antibodies, DNA probes)	3.0%
Chemicals	4.3%	Therapeutic Products (e.g. monoclonal antibodies, cloned factors)	7.5%
Child related	6.3%	Vaccines	7.5%
Computers	4.6%	Animal Health Products	4.5%
Consumer Goods	4.8%	Plant/Agriculture Products	4.0%
Domestics	7.3%	Printing	5.4%
Education Related	8.3%	Publishing	10.6%
Electronics	5.1%	Biotechnology	7.0%
Energy & Environment	8.0%	Pharma & Biotech	5.0%
Entertainment	15.5%	Real Estate	7.4%
Diagnostics	3.5%	Restaurants	4.6%
Distribution	5.2%	Retail	6.1%
Fast Food	5.1%	Semiconductors	3.7%
Food	4.4%	Services	5.9%

Footwear	10.0%	Software	9.6%
Franchises	5.0%	Sporting Goods	7.7%
Furniture / Home Furnishes	7.0%	Stationery / Paper	10.0%
Government / University	7.1%	Telecom / Communications	5.8%
Healthcare Products / Equipment	6.4%	Toys & Games	9.7%
Hospitality / Leisure	4.5%	Travel	5.6%
Housewares	7.0%	Trademarks and Copyright	10.6%
Industrial Products	6.4%	Greeting Cards & Giftwrap	3.5%
Internet	8.2%	Household Items (cups, sheets, towels)	5.5%
General Manufacturing	6.4%	Fabrics & Apparel	6.0%
Machine/Tools	4.8%	Posters & Prints	10.0%
Maintenance Services	6.9%	Toys & Dolls	5.5%
Media & Entertainment	6.5%		
Music / Video	7.0%		
Medical Equipment	4.0%		

For articles on determining reasonable royalty rates using first principle, see www.zaiplaw.co.za (Articles, valuations).

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