CHAPTER-III
GENERAL PRINCIPLES OF PATENT LAW

Patent is a set of exclusive rights granted by a state to an inventor or his assignee for a fixed period of time in exchange for the disclosure of the invention. It refers to a grant of some privilege, property, or authority made by a government or the sovereign of the country to one or more individuals. The instrument by which it made is known as Patent. An invention is the creation of intellect applied to capital and labour to produce something new and useful. Such creation becomes the exclusive property of the inventor on the grant of patent.

The procedure for granting patent, the requirements placed on the patentee and the extent of exclusive rights vary between countries according to the national laws and international agreements. Typically, however a patent application must include one or more claims defining the invention which must be Novel, Inventive and Useful. In many countries certain subject areas are excluded from patents such as business methods and mental acts. A patent is a negative right which grants exclusive rights to a patentee to prevent or exclude others from making, using, selling, offering to sell or importing the invention. The patent law recognises the exclusive right of a patentee to gain commercial advantage out of his invention. This is to encourage the investors to invest their creative faculties, knowing that their invention would be protected by law and no one else would be able to copy their inventions for certain period during which the respective investors would have exclusive rights.

3.1 Patentable subject-matter

Patentable, statutory or patent-eligible subject matter is a subject matter which is susceptible of patent protection. The laws or patent practices of many countries provide that certain subject-matter is excluded from patentability, even if the invention is novel and non-obvious. Together with novelty, inventive step or non-obviousness, utility, and industrial applicability, the question of whether a particular subject matter is patentable is one of the substantive requirements for patentability. The subject-matter which is regarded as patentable as a matter of policy, and correspondingly the subject-matter
which is excluded from patentability as a matter of policy, depends on the national legislation or international treaty.

3.1.1 Inventions

Section 2(1) (j) of India’s patent statute now defines an “invention” as “a new product or process involving an inventive step and capable of industrial application.” This language was implemented via the Patents (Amendment) Act, 2002, so as to expressly incorporate the TRIPS-mandated “inventive step” criteria of patentability\(^1\) into the definition of an invention. The prior version of the statute omitted the inventive step criterion and defined “invention” in a more complicated manner as encompassing: any new and useful—

(i) art, process, method or manner of manufacture;
(ii) machine, apparatus or other article;
(iii) substance produced by manufacture,
and includes any new and useful improvement of any of them, and an alleged invention. India’s new definition of an invention as “a new product or process involving an inventive step and capable of industrial application” also compresses the categories of potentially patentable subject matter to simply “products and processes,” in accordance with TRIPs.

In contrast with U.S. patent law, the new Indian definition of an invention Omits “discoveries.” This is consistent with the European approach, which expressly excludes “discoveries” from patentability.\(^2\)

A ’new invention’ refers to an invention or technology which has not been anticipated by publication in any document or used, in the country or elsewhere in the world before the date of filing of patent application with the complete specification. In other words, the subject matter has not fallen in public domain or that it does not form part of the state of the art.\(^3\)

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\(^1\) TRIPs agreement, Article 27.1 (providing that, subject to certain exceptions, “patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application”)


\(^3\) Section 2(1) (l), Patents Act 1970.
According to Section 2 (1)(ac), which explains, “capable of industrial application, in relation to an invention means that the invention is capable of being made or used in any kind of industry”.

The interpretation of the words “capable of industrial application” is also subject to judicial scrutiny. An invention, in order to be patentable, must be capable of being made or used in some kind of industry. Hence, ‘industry’ should be understood in its broadest sense as including any useful practical activity as distinct from purely intellectual or aesthetic activity, and does not necessarily imply the use of a machine or the manufacture of an article.

An ‘invention’ within the meaning of the Act is an invention for a manner of new manufacture that is in some way associated with trade and commerce, meaning traffic in goods, i.e. exchange of commodities for money or other commodities.  

The entire definition is dependent on or associated with the word ‘manufacture’ which denotes: (i) either a thing made which is useful for its own sake and vendible as such, or (ii) means an engine or instrument to be employed either in the making of some previously known article or in some useful propose or extending to new process to be carried on by known implements or elements acting upon known substances and ultimately producing some other known substance, but producing it in a cheaper or more expeditious manner, or of a better or more useful kind.

‘Invention’ includes both products and processes. In the case of a product patent, the article or apparatus itself, which is the end product, qualifies for a patent protection. In the case of process patent, the patent protection is limited to a particular process through which the end product is attained. Section 5 introduced the process patent and product patent distinction in providing that no patent shall be granted in respect of claims for substances intended for use as food or as medicine or as drug, but claims for the methods or processes of manufacture of these substances shall be patentable. With the omission of section 5, such distinction is of limited relevance.

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4 *Sri Gajalakshmi Ginning Factory Ltd. v. CIT* (1952) 22 ITR 502 (Mad).
5 *Bombay Agarwal Co v. Ramchand* AIR 1953 Nagpur 154.
6 Section 5 was omitted by the Patents (Amendment) Act 2005 with retrospective effect from 1 January 2005.
The term invention means ‘to find out something or discover something not found or discovered by any one before’. An invention is understood based on how the three of its subjective constituents, i.e. novelty, inventive step, and industrial application are understood. The subject matter should involve an invention over what is old. Anything that is in the knowledge of the public or is disclosed to the public cannot be regarded as an invention under the Act. An invention need not be a complicated advancement in technology. Even a simple invention, so long as it is novel or new, would be an invention. An improvement can also be an invention.

It is normally expected that the patentee would specify in the specification the distinguishing features of his application which improve upon the existing level of knowledge and show how such an improvement will constitute an invention. The definition of the term ‘invention’ does not expressly include an improvement or a modification. However, the Patents Act covers improvements that amount to a patentable invention. To qualify as an invention, an improvement must by itself satisfy the test of patentability. An improvement or modification of an earlier patent may qualify for a patent as a patent of addition. ‘Improvement’ is not a term of art, and can have wider or narrower meanings according to context.

A new product or a process could also mean a new improvement over an existing product or a process. Every improvement cannot qualify for a patent, but improvements on the prior art so long as it satisfies the prerequisites of patentability, can qualify as a patentable invention. Mere workshop improvements, devoid of ingenuity, will not qualify for a patent. The application of a known mechanism which had already been used for all practical purposes and the mere collection of more than one integer not involving the exercise of any inventive faculty do not qualify for the grant of a patent. A combination of known integers will qualify for a patent if it can be shown that the improvement was not hitherto known, and that such improvement was new and useful.

A greater degree of control in performance can qualify for an improvement, but such a change in the absence of performance of a new function will not be treated as an invention. Superior utility, comparative excellence, efficient production and qualitative

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9 Section 54, Patents Act 1970.
improvement of the product should be taken into account in determining whether an improvement amounts to a patentable invention.\textsuperscript{10}

3.1.2 Process Patents and Product Patents

Patents for pharmaceutical substances have been a subject matter of special interest in India. Modern pharmaceutical industry, which is popularly identified with the allopathic form of medicine, blossomed and flourished as a result the therapeutic revolution of the twentieth century. With the increase in the production and development of new drugs, the pharmaceutical industry became an industry based on R&D. Eventually dominance in the pharmaceutical industry came to be a direct consequence of the R&D efforts put in by the pharmaceutical companies. As the cost of research and development of new drugs involved exceptional professional expertise and burgeoning R&D expenditure, not all pharmaceutical companies could participate in the development and promotion of new drugs. This eventually demarcated the players in the industry into two broad categories: (1) the brand name companies which are usually multinational in their operation and are involved in extensive R&D for the promotion of new drugs and (2) the generic companies which in comparison are smaller in size and which manufacture bulk drugs not covered by a patent or whose patent rights have expired.

The pharmaceutical industry relies heavily on patent protection as the cost of R&D of a new drug is excessively high compared to the relative low cost of imitating the same drug. The peculiar nature of pharmaceutical industry had put its entire focus on patent protection for the new drugs developed by the brand name companies. The success in the pharmaceutical industry is now associated with not only the ability to frequently come out with new drugs, but also the feasibility of obtaining patent protection for these new drugs.

The fact that pharmaceuticals were inevitably regarded as a part of public health, led many countries to provide for special regulations for them. India granted product patents for ordinary inventions allowed only process patents for pharmaceutical substances till 2005. Section 5 of Patents Act 1970 offered only a process patent for food, medicine or drug substances and specifically excluded product patents for the same.

This enabled Indian manufacturers to make copies of drugs patented elsewhere by finding out the constituents through reverse engineering. It is believed that the distinction between a product patent and a process patent was instrumental to the success of the pharmaceutical industry in India.

The Patents (Amendment) Act of 2005 came into force with retrospective effect from 1 January 2005, introduced product patents for pharmaceutical substances.\footnote{Section 4, Patents (Amendment) Act 2005.}

For the first time since 1972, India’s patents regime once again recognizes the potential patentability of pharmaceutical products. Section 4 of the Patents (Amendment) Act, 2005, the cornerstone provision for bringing India’s patents law into compliance with TRIPS, repealed the pre-existing statutory prohibition on the patenting of claims directed to “substances intended for use, or capable of being used, as food or as medicine or drug, or . . . relating to substances prepared or produced by chemical processes (including alloys, optical glass, semi-conductors and inter-metallic compounds).”\footnote{Supra note 2, p.532.}

### 3.1.3 Patentability of Biotechnological Inventions

In the field of biotechnology, inventions may be made with respect to the following:

- (a) Living entity of natural origin (like animal, plant, human beings including parts thereof);
- (b) Living entity of artificial origin (like micro-organism, vaccines, transgenic animals and plants etc);
- (c) Biological materials (like DNA, plasmids, genes, vector, tissues, cells, replicons etc); and
- (d) Biological processes (like process relating to living entities, process relating to biological materials, methods of treatment of human or animal body, essentially biological process).

As in the case of an invention in any other field of technology, the three prerequisites of patentability, i.e., novelty, inventive step and industrial application, have to be satisfied for the grant of a patent for a biotechnological invention. The application of these standards has lead to differing practices between countries.
According to section 3(j), patents shall not be granted for ‘plants and animals in whole or any part thereof other than micro-organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals’. The above section is modeled on article 27.3(b) of the TRIPS Agreement. Section 3(j) of the Patents Act deals with three broad classes, which are: ‘microorganisms’, ‘essentially biological processes’ and ‘plants and animals’.

**Micro-organisms**

Microbiological inventions generally involve the use of new strain of microorganism to produce a new compound or to produce a known compound more efficiently. The new organism may have been found in nature or may have been produced in the laboratory by artificially induced random mutation or more specific techniques such as genetic engineering.

If the microorganism produces a novel product, such as a new antibiotic of which the structure has been determined or which can be characterized by a ‘fingerprint claim’ then the novel product may be claimed as any other new chemical compound and subject to the requirements of a sufficient description, may be granted patent. If the end product is already known, process protection is available, but this protection is weak and it would be preferable to patent the new organism itself.

Most patent laws do not deal with the question of whether or not a new living strain of microorganism is itself-patentable, but the UK Patent Act 1977 and EPC do not exclude the possibility. Plant and animal varieties are excluded from protection as is any biological process for their production, but not excluded is a microbiological process or the product of such a process, which may of course be a microorganism. Most of the countries including India did not grant patents for microorganisms per se. The TRIPs agreement\(^\text{13}\) makes it obligatory for all WTO members, after the end of applicable transition period, to grant patents for microorganisms. If the microorganism is one, which occurs in nature, it will be necessary to claim it in the form of an isolated strain, in order to avoid possible novelty objections. The term microorganism is interpreted broadly so as to include not only bacteria and fungi but also viruses and animal and plant cells.

\(^{13}\) Article 27.3 (b), TRIPs Agreement.
In USA, in spite of the precedent of the Pasteur patent, it had become the practice of the patent office to refuse claims to living system as not being patentable subject matter. In 1980 however, the Supreme Court decided in the famous Chakrabarthy’s case,\textsuperscript{14} that a new strain of bacteria produced artificially (by bacterial recombination) was patentable invention. Although, Chakrabarthy’s bacteria did not produce a useful product they had the useful property that could feed on and disperse, oil slicks. Since the product, which would be sold, would be the bacterial strain itself, it was particularly important in this case to obtain per se claim to the microorganism.

Section 3(j) of the Indian Patents Act allows for patents for micro-organisms. It is worded in the form of an exception to an exception. The permissibility of patenting micro-organisms was considered in \textit{Dimminaco AG v. Controller of patents and designs},\textsuperscript{15} a case which involved an invention relating to a process for preparation of infectious Bursitis vaccine for protecting poultry. The Assistant Controller of Patents and Designs rejected the application on the ground that it did not constitute an invention under section 2(1) (j) of the Patents Act, holding that the process of preparing the vaccine which contains a living virus cannot be considered as ‘manufacture’ under the old definition of invention. On an appeal preferred under section 116 of the Patents Act to the Calcutta High Court, the court took into account the practice of the Patent Office in granting patents for end products containing living virus and quashed the order of the Controller and directed the reconsideration of the patent application.

The above case was decided under the provisions of the Patents Act before the Patents (Amendment) Act 2002 came into force. The said Amendment introduces section 3(j) which allows patents for micro-organisms.

Indian Patents Act has defined invention\textsuperscript{16} to mean a new product or process involving an inventive step\textsuperscript{17} and capable of industrial application.\textsuperscript{18} The Act gives a list of exclusions, which states that, “Plants and animals in whole or any part thereof other than microorganisms cannot be patented”.\textsuperscript{19} So microorganisms are patentable in India,

\textsuperscript{14} \textit{Diamond v. Chakrabarty}, 206 USPQ 193 (sup. Ct 1980)
\textsuperscript{15} 2002 IPLR 255.
\textsuperscript{16} Section 2 (1) I (j) of Patent (Amendment) Act 2002.
\textsuperscript{17} Section 2 (1) (ja).
\textsuperscript{18} Section 2 (1) (ac).
\textsuperscript{19} Section 3 (j), Patents (Amendment) Act 2002.
provided they satisfy the criteria of patentability. But the Act has not defined what constitutes microorganisms. The judiciary, while dealing with the catena of cases, has made an attempt to define microorganism. In *Green Peace Ltd v. Plant Genetic Systems N.V.*, \(^{20}\) the Technical Board of Appeal of the European Patent Office has attempted definition of microorganisms. It states: “……Microorganisms includes not only bacteria and yeasts, but also fungi, algae, protozoa, human, animal and plant cells, i.e. all generally unicellular organisms with dimensions beneath the limits of vision which can be propagated and manipulated in a laboratory. Plasmids and viruses are also contained to fall under these inventions”.

### 3.2 Exceptions to Patentability

Apart from satisfying the three prerequisites of novelty, inventive step and industrial application, to qualify for a patent, an invention should not be excluded from the categories mentioned in sections 3 and 4. These sections contain a list of inventions that are not patentable. The list includes matters which are incapable of being the subject of legal monopoly, matters excluded by policy and matters which are protected by other forms of intellectual property rights.

#### 3.2.1 Frivolous inventions and inventions contrary to natural laws

Any invention which is frivolous or which claims anything obviously contrary to well established natural laws is not patentable. \(^{21}\) An invention that lacks utility because it serves no purpose or use is called a frivolous invention. It was held in *Indian Vacuum Brake Co. Ltd. v. E.S. Luard*\(^{22}\), that patent for making in one-piece articles which were formerly prepared in two or more pieces could not be called to be a valid patent and was frivolous. Mere usefulness is not sufficient to support the patent.

Recently there has been a flood gate of frivolous patents in the pharmaceutical sector. Section 3(d) of the Indian Patents Act is an attempt to stop such frivolous patents.

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\(^{21}\) Section 3(a), Patents Act 1970.
\(^{22}\) AIR 1926 Cal 152.
3.2.2 Inventions contrary to public order or morality

Inventions whose primary or intended use or commercial exploitation is contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment are not patentable.\textsuperscript{23} The phrase ‘serious prejudice to human, animal or plant life or health or to the environment’ was introduced to accommodate and clarify the expanding meaning of the words ‘public order or morality’.\textsuperscript{24} The jurisprudence of the EPO interpreting the scope and meaning of the words ‘public order or morality’ will be relevant as this provision is similar to art 53(a) of the EPC.

3.2.3 Discovery not an Invention

Generally an idea or a discovery cannot be a subject matter of a patent.\textsuperscript{25} A practical application of an idea or a discovery can, however, qualify for a patent. Such a discovery will be patentable even though the practical application of the discovery is inherent in the discovery itself or becomes obvious once the discovery is made. Such a patent should claim the practical application of the discovery as an invention. A method of identifying diamonds by means of photographic records of their X-ray diffraction patterns (topograms) was held to be a patentable invention. Thus, mere discoveries or ideas cannot be the subject matter of a patent, but discoveries or ideas which have a technical aspect or make a technical contribution will be patentable.\textsuperscript{26}

3.2.4 Inventions Pertaining to Known Substances etc

Section 3(d) includes a category of inventions pertaining to known substances and known processes that are not patentable. The mere discovery of a new form of a known substance which does not enhance the known efficacy of that substance is not patentable. Similarly, the mere discovery of any new property or new use for a known substance or of a mere use of a known process, machine or apparatus, unless such known process results in a new product or employs at least one new reactant, shall not be a subject matter of a patent.

\begin{footnotesize}
\footnote{23} Section 3(b), Patents Act 1970 & Article 27(2), TRIPs Agreement.
\footnote{24} Substituted by the Patents (Amendment) Act 2002 with effect from 20 May 2003.
\footnote{25} Section 3 (c), Patents Act 1970.
\footnote{26} Supra note 10, p. 45.
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3.2.5 Invention Pertaining to Mere Admixture or Arrangement

Section 3 (e) of the Indian Patent Act 1970 provides that “a substance obtained by a mere admixture resulting only in the aggregation the properties of the components thereof or a process for production such substance” is not patentable.

By “mere mixture of known ingredients” is meant a mixture exhibiting only the aggregate of the known properties of the ingredients. Not only must the ingredients be known, but the property that makes the ingredients useful for the purpose of the invention must also be known. If the result achieved by the invention is more than might be expected from a mere mixture, the invention is patentable.

It is possible that a substance is not excluded from being a mere admixture merely on the basis that the physical form of an ingredient has been changed, for example, sweet formed from a mixture of sugar and cellulose which has been turned hard by boiling. In order to overcome the Section 3(e) barrier, a patentee is required to prove that the combination of the known substances has resulted in a synergism wherein the combination displays properties that are not displayed individually by each component.27

A mixture of different kinds of medicines, forming a cocktail of drugs, to cure multiple diseases will not be a patentable invention. For instance, a composition of two drugs, i.e., Paracetamol and Ibuprofen for curing fever and pain or a process of preparation thereof, will not be patentable as the composition is a mere admixture of two drug components resulting in an aggregation of analgesic and anti-inflammatory actions of their respective components.

3.2.6 Method of Testing

Section 3(g) in relation to method of testing now stands omitted in the Patents Act.28 Consequently, a method of testing can now be a subject matter of a patent. A method of testing which could be applied to the improvement or control of manufacture could qualify for a patent in the United Kingdom.29

28 Omitted by the Patents (Amendment) Act 2002.
3.2.7 Method of agriculture or horticulture

A method of agriculture or horticulture cannot be the subject matter of a patent under the Patents Act.\textsuperscript{30} Tracing history, we find that the Indian policy was based on the concept that plant varieties and seeds were the common heritage of mankind. Though there was an increase in the rate of growth in agriculture, the State could not meet the rising demand for the food. The need for attaining self sufficiency in food led to the pursuit of the green revolution. During the colonial period, food production was on the decline. Land reforms had a great impact on the agrarian structure. The rise of the modern technology culminated in agriculture research. This formed the foundation of technological farming. The vision of our forefathers was towards alleviation of poverty. This could be done only by attaining self-sufficiency in food production which could be obtained only by excluding methods of agriculture from protection. Large population of the country derives their livelihood from agriculture. Agriculture is the backbone of India’s economy. Small and marginal farmers predominate agriculture. The main aim of excluding methods of agriculture from protection was to alleviate poverty and also to ensure that there would be self-sufficiency in food sector.\textsuperscript{31}

3.2.8 Methods of Medical Treatment of Human and Animals

Any process for the medicinal, surgical, curative, prophylactic, diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free from disease or to increase their economic value cannot be a subject matter of patent.\textsuperscript{32} A method of medical treatment for an ailment is not a patent eligible subject-matter. A process consisting of the use of a known compound for treating a human being medically has never been held to be patentable because courts have consistently expressed the opinion that a process for medical treatment of human beings is not a proper subject for a patent monopoly.

3.2.9 Plants and Animal Varieties

Plants and animals, in whole or in their parts, are excluded from patent protection. Seeds, varieties and species are also included under the section 3(j). The section also

\textsuperscript{30} Section 3(h), Patents Act 1970.
\textsuperscript{32} Section 3 (i), Patents Act 1970.
excludes ‘essentially biological processes’. However, micro-organisms can be a patentable invention. Plant varieties are protected by a sui generis system under the Protection of Plant Varieties and Farmers’ Right Act 2001.

3.2.10 Business Method, Computer Program etc.

A mathematical or business method or a computer program per se or algorithms is not patentable under the Patents Act. In India, patent protection is not afforded to business methods and computer programs though Article 27 of the TRIPs agreement does not exclude them from patentability. Computer programs are excluded from patent protection as they are protected as a literary work under the Copyright Act 1957.

Though patent for a computer program per se is not patentable, a claim expressed as a computer arranged to produce a particular result, and computer programs which have the effect of controlling computers to operate in a particular way may be the subject matter of a patent. The prevailing view is that where the subject matter as claimed makes a technical contribution to the known art, the patentability should not be denied merely on the ground that a computer program was involved in its implementation.

3.2.11 Literary, dramatic, musical or artistic work etc

The subject-matter of a literary, dramatic, musical or artistic work is protectable under the Copyright Act. The protection is for the original expression of the idea and not for the idea. Moreover, the requirements for obtaining a patent protection cannot be satisfied in the case of the above works.

A copyright infringement action may be clubbed along with a suit for infringement of a patent if both the issues flow from a common set of actions.

3.2.12 Scheme or Rule

A scheme does not amount to a manner of manufacture as it is a mere idea. Here too, an exception is entertained with regard to those ideas which could have a practical effect. Every invention should have begun as an idea. An invention may lie in an idea or

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33 Section 3 (k), Patents Act 1970.
34 Supra note 10, p.50.
35 Section 3(1), Patents Act 1970.
36 Gandhimati Appliances Ltd. v. LG Varadaraju 2003 3 MLJ 85 (DB).
in the way in which the idea is carried out or both. Such an idea must either suggest a new way of making something or it should show a new way of producing a new article.\(^{37}\)

### 3.2.13 Presentation of Information

Section 3(n) of Patents Act excludes a presentation of information from the ambit of patent protection.

An invention in order to obtain patent protection should have a technical result. In Marker/Beattie,\(^{38}\) the invention consisted of an apparatus for and a method of learning how to play a keyboard instrument, with numbers corresponding to notes on a sheet of music appearing on the keys too. The patent application was for a marker to be laid on a musical keyboard to facilitate learning music. The technical feature claimed was the marking of the keys. Patentability was ruled out by Article 52(2) (c) and (d), EPC. Since the key markings were merely known technical features, the contribution made by the claimed invention to the working of the teaching apparatus lay solely in the content of the information displayed, not in the apparatus itself it was held to be not patentable.\(^{39}\)

### 3.2.14 Topography of integrated circuits

Topography of integrated circuits cannot be the subject matter of a patent protection.\(^{40}\) Topographies or lay-out designs of Integrated circuits are protected by the Semiconductor Integrated Circuits Layout- Design Act, 2000.

### 3.2.15 Traditional Knowledge

An invention which is a part of traditional knowledge cannot be the subject matter of a patent.\(^{41}\) Similarly, an aggregation or duplication of known properties of traditionally known component or components is also excluded from patent protection. An invention based on traditional knowledge may be opposed or revoked under the Patents Act on the ground that the invention is anticipated.\(^{42}\) Clause 19 of the Doha Declaration provides that the Council for TRIPs shall review the implementation of the TRIPs agreement and

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\(^{37}\) Section 3(m), Patents Act 1970.

\(^{38}\) T 603/89 1992 OJ EPO 230.

\(^{39}\) Supra note 31, p.233.

\(^{40}\) Section 3 (o), Patents Act 1970.

\(^{41}\) Section 3 (p), Patents Act 1970.

\(^{42}\) Sections 25(1) (k) and 64 (1) (q), Patents Act 1970.
examine, among other things, the relationship between the TRIPs agreement and the Convention on Biological Diversity, the protection of traditional knowledge and folklore, and other relevant new developments.

3.2.16 Inventions Relating to Atomic Energy

Section 4 prohibits the grant of patents for inventions relating to atomic energy. It is widely accepted that countries can provide for security exceptions for the protection of essential security interests relating to fissionable material. Even if a patent is granted for an invention relating to atomic energy, the same may be revoked under section 65 of the Patents Act. The provision relating to atomic energy inventions are contained in section 20 of the Atomic Energy Act 1962.

3.3 Conditions for patentability

Inventions can be as simple as a paperclip or as complicated as a robot but they must meet certain conditions of patentability before they can be patented. An invention must meet several requirements to be eligible for patent protection. These include, in particular, that the claimed invention: (1) consists of patentable subject matter; (2) is new (novelty requirement), it could be a new concept or idea or solution to an existing problem or completely a new method/process/device/utility; (3) involves an inventive step (non-obviousness requirement); (4) is capable of industrial application (utility requirement); and (5) is disclosed in a clear and complete manner in the patent application (disclosure requirement).

3.3.1 Novelty and Anticipation

The concept of novelty in intellectual property jurisprudence lays down that only what is new at the time of the filing of the application for a patent is patentable. Patent eligible subject-matter is granted a patent if the subject-matter is novel, non-obvious and is capable of industrial application. Of these requirements, novelty is of core value.

43 Article 73(b) (i), TRIPs Agreement.
44 Supra note 10, p.55.
Patentability always depends on novelty. The court in AT&T Knowledge Ventures LP, re\textsuperscript{45} observed that patentability cannot be put into a watertight compartment completely separate from novelty.

The Indian Patents (Amendment) Act, 2005 defines a “new invention” as any invention or technology which has not been anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing of the application with the complete specification.\textsuperscript{46} Novelty and anticipation are determined by reference to the language of the claim of the patent application. Under Section 64 of the Indian Patents Act 1970 a patent shall be revoked “where it is not novel”. The Patents (Amendment) Act, 2005, section 23 states that after an application for patent has been published and before the grant of a patent, the grant of patent may be opposed on the ground of novelty.

In Bombay Agarwal Co. v. Ramachand Diwanchand,\textsuperscript{47} a Division Bench of the Nagpur High Court held that in cases of patents, the court must see whether there was novelty in the process, whether the subject-matter of patent is proper and whether there is utility. By the subject-matter of patent, was meant the exact advance upon the existing knowledge which the patentee claims. It was further held that the patent can be defeated if it is not “a new manufacture or improvement, thereby, indicating that manufacture it was being indulged in by others prior to the date of the patent.”

Australian Courts have laid down that the test for determining whether an invention lacks novelty is the “reverse infringement test” as set out in Meyers Taylor Pvt. Ltd. v. Vicarr Industries Ltd.,\textsuperscript{48} where Aickin J. stated: “The basic test for anticipation or want of novelty is the same as that for infringement and generally one can properly ask oneself whether the alleged anticipation would, if the patent were valid, constitute an infringement”.

The Patents Act requires an invention to be new. An invention is regarded as new if it has not fallen in public domain or if it does not form part of the state of the art. The ambit of the term ‘the state of the art’ would include every matter in the public domain

\textsuperscript{45} 2009 EWHC 343 (Pat).
\textsuperscript{46} Section 2 (1), Patents Act 1970, Section 2 (g), Patents (Amendment) Act 2005.
\textsuperscript{47} AIR 1953 Nag 154.
\textsuperscript{48} (1977) 137 CLR 228.
available in any part of the world before the date of filing the patent application. As per the definition in s 2(1) (l), when an invention or technology is anticipated by publication in any document or used in any part of the world, a patent will not be granted as the information disclosed forms a part of the state of the art. It would appear that the standard of absolute novelty introduced by s 2(1) (l) may be employed in determining lack of novelty under s 64(1) (e) of the Patents Act. But s 64(1) (e) prescribes a different standard of novelty.

The difficulty imposed by the introduction of the absolute standard of novelty is that it attempts to replace the existing relative standards of novelty contained in s 64(1) (e), albeit inconclusively. To start with, the definition of ‘new invention’ is not used anywhere in the Patents Act. The standard of novelty under the Patents Act based on which a patent can be revoked for lack of novelty is prescribed in s 64(1) (e), which is a relative standard. It restricts the novelty search to ‘what was publicly known or publicly used in India’. However, the standard of novelty with regard to published documents is an absolute standard as it covers ‘what was published in India or elsewhere’.

It is submitted that in understanding novelty, courts should try to avoid subjective judgments and should adopt the principle of ‘objective novelty’. British courts have followed the principle of ‘absolute novelty’ which requires novelty to be decided against all the information available at the priority date of the invention. This concept of worldwide novelty disregards the place where the information is available and the manner and form in which it is made available. The standard of absolute novelty avoids subjectivity and most questions of degree.49

Novelty refers to a characteristic of the invention of being new, i.e., the invention does not form a part of the state of the art. As one of the prerequisites for the grant of a patent, i.e., a condition that needs to be satisfied before the grant, it casts a duty on the Patent Office to verify whether the invention has been anticipated. The Patents Act provides for an examiner to search for anticipation by previous publication or by prior claim and empowers the Controller to refuse an application where the invention is anticipated.50 An opponent may oppose an application for a patent or a granted patent on

49 Supra note 10, p.473.
50 Sections 13 and 18, Patents Act 1970.
the ground of lack of novelty.\textsuperscript{51} The absence of novelty, as on the priority date of claim, can be a ground for revocation of the patent which may be exercised any time during the life of a patent.\textsuperscript{52} Thus, novelty remains an essential feature of an invention throughout the life of the patent.

In determining novelty, the following three steps may be considered: (i) what is the invention about, (ii) what is the information disclosed by the prior art? and (iii) is the invention new?

The first step is to identify the invention. The manner in which an invention is defined should also be considered. The second step will involve the determination of the information disclosed by prior art. For this to be done, it is necessary to first find out what material forms a part of the state of the art. The state of art will mean a body of information restricted by a point of time. It pertains to the material known before the date of filing of the patent application with the complete specification. Once the material is ascertained, the nature of information disclosed can be found out. The third step will involve a determination as to whether the invention is new, i.e., whether the invention is excluded from the state of the art.\textsuperscript{53}

**The State of the Art**

The recent introduction of the expression ‘the state of the art’ into the Patents Act imports a larger concept than the idea conveyed by anticipation that existed in the Act. The state of art refers to all the information which is in the public domain. To form a part of the state of the art there is no need for the information to be put to actual use. The mere fact that it was available and was capable of being used by the public is sufficient. The possibility of accessing the information by a person will determine whether it formed a part of the state of the art, even if ‘the public has not recognized their potential or taken advantage of them.

**Priority Date**

Section 2(1) (l) states that the date at which the novelty is to be assessed is the date of filing of the patent application with the complete specification, i.e. the priority date.

\textsuperscript{51} Sections 25 (1) (d) and 25 (2) (d), Patents Act 1970.
\textsuperscript{52} Section 64 (1) (e), Patents Act 1970.
\textsuperscript{53} Supra note 10, p.474.
date. Section 11 of the Patents Act enumerates the principles for ascertaining the priority dates of claims of a complete specification. The state of the art includes information that is in the public domain before the priority date. Though the priority date is usually the date of filing the patent application, there are instances where the priority date is calculated from a previous date. Under the Patents Act, a patent may be held to be invalid due to the applicant’s own acts and disclosures which destroy novelty. Thus priority date is relevant not only for assessing novelty but also for exploiting the invention without jeopardizing any potential patent.

Prior Publication

Section 64(1) (e) states that an invention that is published in India or elsewhere in any document will lack novelty. The section implies that such publication will make the invention available to the public. An invention is not made available to the public merely by a published statement of its existence, unless the method of working is so self-evident as to require no further explanation. This would mean that the person of ordinary knowledge of the subject would at once perceive and understand and be able to practically apply the discovery without the necessity of making further experiments. This would also imply that the information given by the prior publication must, for the purpose of practical utility, be equal to that given by the subsequent patent.

Prior publication usually refers to publication in any document made anywhere in the world. It would include documents in foreign language published in a foreign country. Thus, a foreign specification posted in a noticeable part of the Patent Office library where members’ search for information was held to be prior publication. Even a document communicated to a single member will constitute prior publication to the public if there was no bar on that person to further disseminate the information contained in the document.

Publicly known or publicly used

Section 64(1) (e) states that an invention will lack novelty if it is publicly known or publicly used in India. The ambit of the above section is limited to knowledge or use

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54 Section 11 (2), Patents Act 1970.
55 Section 11 (3A), Patents Act 1970.
within India. However, the definition of ‘new invention’ expands the scope of public use beyond India. It covers any invention or technology ‘used in the country or elsewhere in the world’.  

There is a need for clarification with regard to how s 64(1) (e) will be interpreted in the light of the introduction of the expression ‘new invention’ is s 2(1) (l).

Public knowledge need not mean widespread use to the knowledge by the public. To satisfy the requirement of being publicly known as used in clause (e) and (f) of s 64(1), it is not necessary that it should be widely used to the knowledge of the consumer public. All that is required is that ‘it is known to the persons who are engaged in the pursuit of knowledge of the patented product or process either as men of science or men of commerce or consumers.'

A mere publication will not be sufficient to show that an invention is publicly known. A matter may be publicly known even if it is not published in a document, if, for instance, it is publicly used. An invention may be publicly known by oral disclosure, written disclosure by document or by public use. The date of knowledge or use by any person other than the patentee is the date before the invention and not the date before the grant of the patent. To what extent knowledge anticipates an invention is a question of fact which will depend upon the facts and circumstances of each case.

Where the invention claimed was a new product, dealing with that product by way of trade, whether by buying it or selling it with a view to profit or making it for the purposes of sale, will constitute ‘public use’ as stated by the House of Lords in *Bristol-Myers Co (johnson’s) Application*:

The right of a trader to go on dealing by way of trade in any man-made substance in which he had dealt before, without impediment by a monopoly in that substance granted to any other person, was not dependent upon his knowledge of its composition or how it could be made. If he had in fact dealt in that substance he had ‘used’ it; his ignorance of these matters was irrelevant to the question of his use. Nor was his right to go on dealing in it dependent upon his disclosure to the public the composition of the product or the means of making it, or giving to the public the means of finding that out for themselves.

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56 Section 2 (1) (1), Patents Act 1970.
57 *Monsanto Co. v. Coramandal Ltd.*, AIR 1986 SC 712.
58 1974 FSR 43, P 65.
An invention may not be considered as new if it was put to prior public use. Though the Patents Act makes prior secret use in India a separate ground for revocation,\(^5^9\) it excludes secret use for the purpose of determining lack of novelty.\(^6^0\) The purpose of s 64(1) (e) is to protect prior users. A person who is already manufacturing an article or has previously manufactured it, or had put it into use, should not be stopped from doing what he had done before. The grant of a patent should be curtailed where it can result in prohibiting prior users of the article from continuing to use such an article. This would be the case even if the prior user did so in complete ignorance of the scientific technology involved in the invention. The protection will be available to him even if he had manufactured the article by chance and later found out that it had particular advantages or was useful for particular purposes. If another person invents a process for manufacturing the same thing, the latter person will not be entitled to stop the prior user from doing what he was doing before.

**Anticipation**

The Patents Act, 1970, under section 29 to section 34 lays down the provisions governing anticipation in various forms for an invention.

In an application for grant of patent, the specification pertaining to the invention is required to be given. And each claim of the specification is given a priority date. If the invention as claimed in complete specification is noted to have been published before the priority date, then it is a case of anticipation by prior publication. But such an invention is deemed not to have been anticipated by prior publication, if the patentee or the applicant proves that the matter was obtained and published without consent and upon learning of such publication, the application for grant of patent was made as soon as practicable thereafter.

The above does not apply in case the invention has been commercially worked for the purpose of reasonable trial by patentee or applicant himself or through his authorized representative, before the priority date of the claim.

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\(^5^9\) Section 1 (1), Patents Act 1970.

\(^6^0\) Section 64 (2) (a), Patents Act 1970.
If subsequent to the disclosures made by an unauthorized applicant, the invention is used or published, the invention claimed in the specification is deemed not to have been anticipated.

**Anticipation by previous communication to Government**

An invention claimed in complete specification, if communicated to government or its authorized representative in response to any communication for investigating or doing anything relating to the invention is deemed to have not been anticipated.

**Anticipation by public display etc.**

The authorized display or use of invention at any industrial or other exhibition promoted by the Central Government notification through its Official Gazette or the subsequent publication of any description of the invention does not cause the invention to have been anticipated. Also the unauthorized use of invention after such public display will not result in the invention being treated as anticipated, provided that the application for grant of patent must be made not later than twelve months after opening of the exhibition.

The description of the invention in a paper read by the true and first inventor before a learned society or published with his consent in the transactions of such society will not cause the invention to have been anticipated provided the application for the patent is made by the true and first inventor or a authorized representative not later than twelve months after the reading or publication of the paper.

**Anticipation by public working etc.**

An invention claimed in the complete specification is deemed to have not been anticipated, if the invention has been publicly worked in India within one year before the priority date of the relevant claim of the specification, provided such working was effected for the purpose of reasonable trial only and the nature of invention made it necessary that the working for that purpose should be effected in public.

**Anticipation by use and publication after provisional specification**

An invention described by provisional specification is not refused grant of patent or the patent having been granted is not revoked or invalidated solely by the reason of
that the matter described in such specification was used in India, or published in India or elsewhere at any time after the date of filing of that specification.

### 3.3.2 Inventive step/non-obviousness

Non-obviousness/inventive step measures the technical accomplishment reflected in an invention. It attempts to measure an even more abstract quality than novelty and utility. Non-obviousness asks whether an invention is an adequate technical advancement to merit the award of a patent. Even if an invention is new and useful, it does not deserve a patent if it represents merely a trivial step forward in the art. The objective of the patent system is the advancement of science. It aims to protect those, which would not be obvious to anyone skilled in the art if they had put their mind to it. It is regarded as the final gatekeeper of the patent system.

The philosophy underlying the concept of inventive step is similar to that in novelty. By granting monopoly over an obvious thing, the public should not be prevented from doing anything that is merely an obvious extension or workshop variation of what was already known.

The Patents Act defines an invention to mean a new product or process involving an inventive step and capable of industrial application. Section 2(1) (ja) defines inventive step as follows:

‘inventive step’ means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art.

Thus, the section makes two requirements for determining inventive step, ie: (1) the feature should involve technical advance over the existing knowledge or economic significance; and (2) the feature should not be obvious to a person skilled in the art (obviousness).

In 1985, in a classic case, *Windsurfing International v. Taburmarine*, the Court propounded four-step test to determine the inventive step in an invention. They are as follows:

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62 The definition was introduced by the Patents (Amendment) Act, 2005, which replaced the earlier definition on inventive step as amended by the Patents (Amendment) Act, 2002.
(i) the Court must identify the inventive concept embodied in the patent;

(ii) It must assume the mantle of the normally skilled but unimaginative addressee in the art at the priority date and impute to him what was, at that date, common general knowledge in the art in question;

(iii) It must identify what, if any, differences exist between the matters cited as being “known or used” and the alleged invention;

(iv) It must ask itself whether, viewed without any knowledge of the alleged invention, those differences constituted steps which would have been obvious to the skilled man or whether they required any degree of invention.

This test laid down in Windsurfing case, stands as the guidepost in determining whether an invention involves inventive step or not.

The Bombay High Court formulated the rule regarding the inquiry as to the existence of the inventive step. The test was “was it for practical purposes obvious to a skilled worker, in the field concerned in the state of knowledge existing at the date of the patent to be found in the literature then available to him, that he would or should make their invention the subject of the claim concerned.”

It was held that for improvement or a combination of something known before to be patentable, it must involve an inventive step and should be something more than a mere workshop improvement. The ingenuity, independent thought and skill of the inventor must be assessed to judge the degree of inventive step. There must be the exercise of some inventive faculty over the collection of more than one integer for it to qualify the grant of patent. Thus the test is formulated in the following terms, “the material question to be considered is whether the alleged discovery lies so much out of track of what was known before as not naturally to suggest itself to a person thinking on the subject, it must not be obvious or material suggestion of what was previously known”.

Thus the existence of inventive step is a question of fact, while assessing the existence of the inventive step at that particular point of time, it must be enquired whether the invention would be obvious to the notional skilled worker aware of the existing

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63 1985 RPC 159 CA.
64 Hoechst v. Unichem 1969 RPC 55.
knowledge about the subject matter of invention. Any assessment must be done based on
the content of information and the state of technology that the notional worker could have
used.

3.3.3 Industrial Application/Utility

The phrase ‘capable of industrial application’ is defined in s 2(1) (ac) as follows:
‘Capable of industrial application’ in relation to an invention, means that the invention is
capable of being made or used in an industry.

Before the Patents (Amendment) Act, 2002 substituted a new definition for the
term ‘invention’, the term ‘industrial application’ did not figure in the Patents Act.
Though it is quite likely that the term ‘industry’ will be given a very wide connotation so
as to include any commercial undertaking, as was given to the term ‘manufacture’ under
the earlier provisions, a contrary view has also been espoused. The old definition
stipulated the condition that for an invention to be patentable it must relate to a new and
useful manner of manufacture. The interpretations of the terms ‘manufacture’ and
‘useful’ under the old provision may be used to understand the scope of the term
‘industrial application’.

Manufacture may mean the manufacture of a product or a manufacturing process.
It generally denotes either the manufacture of a vendible article or a new process to be
carried on by known implements or elements acting upon known substances, and
ultimately producing some other known substance, but producing it cheaper or in a more
expeditious manner, or of a better or more useful kind. Manufacture includes
improvements in manufacture and changes in the method by which an article is
manufactured.

Methods or processes of manufacture can qualify for a patent if they satisfy the
conditions for patentability. In Thomson Brandt v. Controller of Patents, where the
Controller had rejected an application for the process for opacifying a gaseous medium
on the ground that the cloud created by the process was not tangible or lacked
definiteness and denied the grant of a patent, the Delhi High Court rejected the findings
of the Controller and remanded the application.

66 AIR 1989 Del 249.
The utility of a patent is a vital requirement that should be continuously maintained for a patent to remain active. At any point of time during the term of the patent, an objection can be made with regard to the utility of a patent. Even at an early stage of application for a patent, the law requires that the complete specification shall fully and particularly describe the operation or use and method by which the invention is to be performed. The applicant is also bound to disclose the best method of performing the invention. The emphasis on operation, use and performance accentuate the different aspects of the concept of utility. In fact, a patent is granted for the promise of performance. Where the promise fails, the patent becomes susceptible to revocation on the ground that the invention is not useful.\textsuperscript{67} The non-working of a patent per se is not a ground for its revocation, as a patent can be granted for an invention that is ‘capable of industrial application’.

The definition of invention under section 2(1) (j) of the Act, before the Patents (Amendment) Act, 2002, was that “Invention” means any new and useful art, process, method or manner of manufacture; machine, apparatus or other article; substance produced by manufacture and includes any new and useful improvement of any of them, and an alleged invention.

The above provision required that for an invention to be patentable it must pertain to a ‘new and useful’ manner of manufacture. As per the above definition of invention, one of the requirements was to determine whether the invention involved utility. Though express mention of the terms ‘useful’ and ‘manner of manufacture’ do not figure any more in the new definition of invention, the principles enumerated in the judicial decisions interpreting the phrase ‘manner of new manufacture’ under the earlier definition of invention have now been incorporated into the new definition.\textsuperscript{68}

The concept of manufacture was tied up with the utility of the product or process. Under the old definition of ‘invention’, an invention to be patentable had to be useful in addition to being new. The present definition of invention does not expressly provide for the utility of an invention as a criterion for grant of a patent. But the third requirement of an invention, i.e., that it should be ‘capable of industrial application’ implies usefulness

\textsuperscript{67} Section 64 (1) (g), Patents Act 1970.

\textsuperscript{68} Section 2 (1) (j) of Patents Act 1970 as amended by the Patents (Amendment) Act 2002.
or utility.\(^{69}\) This provision justifies the retention of s 64(1) (g) by which a patent can be revoked for lack of utility.

Utility in patent law does not mean either ‘abstract utility, or comparative or competitive utility or commercial utility. It is a quality of an invention which makes it better than the preceding knowledge of the trade. The question that arises for consideration under this ground often pertains to the quantum of utility required to support a patent. It has been stated that in the absence of any promise in the specification that a definite degree of advantage would result from the use of the invention, the amount of utility required to support a patent is very small. It is not necessary that the invention as described should be commercially useful, unless the specification promises that it would be, and that it is sufficient that the invention be of some use to the public.

Utility or usefulness should be determined by reference to the state of the art at the date of the patent. The question would be: was the invention useful as on the date of the patent? Any development that may happen beyond the date of the patent which would have replaced the said invention or rendered it obsolete should not be taken into account. In *Farbewerke Hoechst AG v. Unichem Laboratories*,\(^{70}\) Vimadalal J, in rejecting the objection on the ground of want of utility, said:

As stated by Halsbury, ‘not useful’ in patent law means that the invention will not work, either in the sense that it will not operate at all or more broadly, that it will not do what the specification promises that it will do. If the invention will give the result promised at all, the objection on the ground of want of utility must fail. It is further stated in the said passage that the practical usefulness or commercial utility of the invention does not matter, nor does it matter whether the invention is of any real benefit to the public, or particularly suitable for the purposes suggested, and that it is only failure to produce the results promised that will invalidate the patent, not misstatements as to the purposes to which such results might be applied.

### 3.4 Procedure for the grant of patents

Every patent system establishes a definite procedure for the grant of patents. The procedure for obtaining patent protection is highly relevant from the perspective of an inventor. The Patent Act provides a full-fledged procedure to ensure that patent is granted to a person who applies for a patent and to make it sure that the patent rights are not

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\(^{69}\) Article 27.1, TRIPs Agreement.  
\(^{70}\) AIR 1969 Bom 255.
misused. The patent procedure comprises four main steps, namely: application for the patent; examination of the application; opposition to the grant of patent and finally grant of patent.\footnote{Supra note 61, p.37.}

### 3.4.1 Application for the patent.

An applicant wishing to file an international patent application has to go through the procedural formalities laid down in the patent co-operation treaty. According to patent law in India, an application for a patent\footnote{Chapter III of the Patents Act, sections 6 to 11 deals with application for patents.} can be made by any person claiming to be the true and first inventor of the invention, any person being the assignee of the person claiming to the true and first inventor or by the legal representative of any deceased person who immediately before his death was entitled to make such an application. Thus it is not mandatory that only an inventor can apply for and get a patent over an invention.\footnote{Section 6, Patents Act 1970.}

An assignee has to furnish evidence of assignment of right to apply for a patent in his favour before making such application. An application must contain the fact that the applicant is in possession of the invention and shall name the owner claiming to be the true and first inventor, and where the person so claiming is not the applicant or one of the applicants, the application must contain a declaration that the applicant believes the person so named to be the true and first inventor.\footnote{Section 7, Patents Act 1970.}

An application for a patent can be made for only one invention and should be in the prescribed form. The application must be accompanied by a provisional or complete specification.\footnote{Ibid.}

The first to file system is employed, in which among persons having filed for the same inventions, first one is granted a patent, therefore, a patent application should be filed properly after conceiving the invention. Therefore it is advisable to apply for a patent as soon as the inventor’s idea of the nature of the invention has taken a definite shape. They need not wait until their inventions are fully developed for commercial

\footnote{\textit{Supra} note 61, p.37.}
\footnote{Chapter III of the Patents Act, sections 6 to 11 deals with application for patents.}
\footnote{Section 6, Patents Act 1970.}
\footnote{Section 7, Patents Act 1970.}
\footnote{\textit{Ibid}.}
working before applying for patents. The Patents Act provides for a mechanism by which the inventor may secure his right to be identified with the invention.\textsuperscript{76}

3.4.2 Specification

The Patents Act states that every application for a patent shall be accompanied by a specification. This requirement did not exist during the formative years of patent law when a patentee could file a specification even after the issue of the patent. The practice of filing a specification after the issue of the patent suggests that the specification did not form a part of the original contract between the state and the patentee. The principles of modern patent system with regard to the requirement of specification were first spelt out during the reign of Queen Elizabeth I. Sections 9 to 11 of the Patents Act deal with specification, its contents and its priority dates.

A patent specification is a unilateral statement by the patentee, in words of his own choosing, addressed to those likely to have a practical interest in the subject matter of his invention, by which he informs them what he claims to be the essential features of the new product or process for which the letters patent grant him a monopoly. The Patent Act requires that every application, other than an international application, shall be accompanied by a provisional or a complete specification.\textsuperscript{77}

Provisional specification helps in the determination of priority of patents. The object of filing a provisional specification is more manifest in cases where there are similar inventions which give rise to competing applications. Where two or more persons develop similar concepts and make competing applications for patents for the same invention, in different parts of the world, the priority of the co-pending applications is determined on a ‘first-to-file’ basis. The application which is filed first in time before the appropriate scrutinising authority will be accorded precedence over the later application. The provisional specification should describe the true nature of the invention, and such description should be the same as that claimed in the complete specification.

\textsuperscript{76} Section 28 of the Patents Act provides that, if the Controller is satisfied, by a request or a claim made before him: (a) that the person in respect of or by whom the request or claim is made is the inventor of an invention in respect of which application for a patent has been made, or of a substantial part of that invention; and (b) that the application for the patent is a direct consequence of his being the inventor, the Controller shall cause such person to be mentioned as inventor in any patent granted in pursuance of the application in the complete specification and in the register of patent.

\textsuperscript{77} Section 7 (4), Patents Act 1970.
Where only a provisional specification is filed at the first instance along with the application, the complete specification shall be filed within 15 months from the date of filing of the application.\textsuperscript{78} The 15 month time period granted for filing the complete specification after the provisional specification has been filed allows the applicant to develop, improve and perfect the invention. The time period between the filing of the provisional and complete specification also helps the applicant to maintain the priority date and file international applications.\textsuperscript{79}

Though both provisional and complete specifications are required to be made in the same form (Form 2), certain distinctions can be seen between the two. A provisional specification needs to satisfy the twin requirements of describing the invention and having a title that sufficiently indicates the subject matter of the invention.\textsuperscript{80} But a provisional specification need not describe the manner in which the invention is to be performed. Similarly it need not disclose the best method, end with a claim or be accompanied by an abstract. It is not intended to contain a complete description of the thing so as to enable any workman of ordinary skill to make it, but only to disclose the invention in its rough state until the inventor is able to perfect its details.

A complete specification should satisfy the requirements stipulated under the Patents Act. It shall begin with a title that sufficiently indicates the subject matter of the invention, fully and particularly describe the invention, disclose the best method of performing the invention, end with the claim defining the scope of the invention, and be accompanied by an abstract. Additionally, a complete specification may further be supplemented by drawings and models or samples. The object and purpose of filing a complete specification is to enable a reasonably well-informed artisan dealing with the subject-matter with which he is familiar to make the thing, so as to make it available for the public at the end of the term of the patent.

The contents of a complete specification are also commonly referred to as contents of a patent. In effect, it is the complete specification which is eventually granted as the patent. A specification is a composite document which comprises various

\textsuperscript{78} Section 9 (1) of the Patents Act 1970 states that the complete specification shall be filed within 12 months, but if the applicant makes a request in the prescribed manner the time may be extended to 15 months.

\textsuperscript{79} Supra note 10, p.112.

\textsuperscript{80} Section 10 (1), Patents Act 1970.
components like title, abstract, description of invention, claims, drawings and models or samples.

3.4.3 Appropriate office for filing an application and for other proceedings.

Application is required to be filed in the appropriate patent office within whose territorial limits where the applicant or the first mentioned applicant in case of joint applicant for a patent normally resides or has domiciled or has a place of business or the place from where the invention actually originated. If the applicant for the patent or party in a proceeding having no business place or domicile in India, the approprable office will be according to the address for service in India given by the applicant or party in a proceeding. An application can also be filed in the office within whose territorial limits the invention originated. An applicant may also furnish his patent agent’s address as the address for service of documents. The appropriate office once decided in respect of any proceedings under the Act shall not ordinarily be changed. The four patent offices are located in India at Kolkata, Mumbai, Delhi and Chennai.

An application for a patent shall be made in duplicate, in Form 1, and by paying the prescribed fee. The application should be accompanied by the following documents:

1. Provisional or complete specification and drawings, if any, in duplicate;
2. Statement and undertaking regarding foreign filing details in respect of the same invention;
3. Declaration as to inventorship;
4. Priority document in the case of a convention application;
5. Power of attorney where the application is made through a patent agent;
6. Proof of right if the application is made by the assignee.

In cases where the applicant for a patent under the Patents Act is prosecuting either alone or jointly with any other person an application for a patent in any country outside India in respect of the same or substantially the same invention, or where to his

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81 Rule 4, Patents Rule 2003.
84 Form 5, Patents Rules 2003.
85 Section 138, Patents Act 1970.
86 Rule 135 (1) and Form 26, Patents Rules 2003.
87 Section 7 (2), Patents Act 1970; Rule 10, Patents Rules 2003.
knowledge such an application is being prosecuted by some person through whom he claims or by some person deriving title from him, he shall file, along with his application, or within six months from the date of filing, a statement and an undertaking as prescribed in Form 3. The statement shall set out the detailed particulars of such application including the name of the country, application number and status of such application.

The different types of patent applications that can be made with regard to an Indian patent are as follows:

**Ordinary application**

The first application for patent made in Patent Office without claiming any priority of application made in a convention country or without any reference to other application under process in the office is called an ordinary application.

**Convention application**

Article 4 of the Paris Convention for the Protection of Industrial Property 1883 allows an applicant who has filed an application for a patent in one of the Convention countries a right to priority based on the basic application first filed in the convention country. An application filed before the Patent Office claiming a priority date based on the basic application is known as a convention application. Application for a patent in India operates on the principle of reciprocity.

**International application under PCT**

The Patent Cooperation Treaty (PCT) is an international filing system which allows applicants to prefer applications in all the designated countries conferring late entry to the national offices without affecting the priority date. An international application is a patent application filed under the provisions of the PCT. An international application under the PCT can be filed only if at least one applicant is a national or a resident of India. It may be filed before the appropriate office in triplicate in English or Hindi.

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88 Section 8 (1), Patents Act, 1970 and Rule 12 (1A), Patents Rules 2003.
89 Section 7, Patents Act 1970.
90 Sections 2 (1) (c) and 135, Patents Act 1970.
91 Section 134, Patents Act 1970.
An international application under the Patents Act refers to an application for patent made in accordance with the Patent Cooperation Treaty.\footnote{Section 2 (1) (ia), Patents Act 1970.} Chapter III of the Patents Rules deals with international applications filed under the PCT. The Patent Office in India is a receiving office for international applications filed by nationals or residents of India.

**PCT national phase application**

An application corresponding to an international application under the PCT under s 7(1A), made in Form 1, claiming the priority of the international filing date is known as the PCT-National Phase Application.\footnote{Rule 20 (1), Patents Rules 2003.} Every international application under the PCT for a patent, as may be filed designating India, shall be deemed to be an application under the Patents Act provided a corresponding application has also been filed before the Controller in India.

**Application for patent of addition**

A patent of addition is granted for an improvement or modification of an invention. As the term implies, a patent of addition is granted as an addition to a pre-existing invention described or disclosed in the complete specification. The invention so described or disclosed is known as the ‘main invention’. As a patent of addition can be granted only on the basis of an earlier application or in a granted patent, the grant of the patent of addition cannot precede the grant of the main invention.\footnote{Section 54 (4), Patents Act 1970.}

The object of providing for patents of addition is to protect improvement and modification of an inventor which may be made in the course of working of his patent, which may, by itself, not be entitled for a separate patent. Such improvements and modifications are tagged along to the main invention and protected along with the main invention so long as the main invention exists. However, the validity of a patent of addition is not affected by a revocation of the main invention.

**Divisional application**

When an application is divided out of the original application, it is termed a divisional application. Divisional applications are filed to overcome objections on
plurality of inventions, as the law allows only one application per invention. The purpose of a divisional application is to protect the rights of an applicant who has disclosed more than one invention in the parent application.\textsuperscript{96}

\textbf{3.4.4 Publication and Examination of Patent Applications}

Ordinarily, an application for patent shall not be open to public before the expiry of 18 months from the date of filing of application or the date of priority of the application whichever is earlier.\textsuperscript{97} Every application shall be published within one month from the date of expiry of the 18 months period or one month from the date of request for publication under rule 24A, except applications in respect of which there are secrecy directions of applications which are abandoned under section 9 or applications which are withdrawn three months before the expiry of 18 months.\textsuperscript{98}

Every application published under section 11A shall include particulars with regard to the date of the application, number of the application, name and address of the applicant identifying the application and an abstract. The Patent Office may make the application together with the complete and provisional specification, drawings and abstract available to the public on payment of the prescribed fees. A request may be made in writing on payment of the prescribed fees and copies of the said documents may be procured from the appropriate office.

An application will be taken up for examination if the applicant or any other interested person makes a request for examination, in Form 18 paying the prescribed fee, after the publication of application within 48 months from the date of priority of the application or from the date of filing of application, whichever is earlier. Ordinarily, PCT National phase applications are processed or examined only after the expiry of 31 months from the priority date, but such application may be taken up for examination before the said period on the express request of the applicant filed in Form 18 along with the prescribed fees.

The applications filed under the Patents Act shall be taken up for examination as per the order in which the requests for examination are made. The application,

\textsuperscript{96} Section 16, Patents Act 1970.
\textsuperscript{97} Section 11A (1), Patents Act, 1970 and Rule 24, Patents Rules 2003.
\textsuperscript{98} Section 11A (3), Patents Act 1970.
specification and other documents shall be referred by the Controller to an examiner for making a report known as the First Examination Report.\textsuperscript{99} The report shall be made to the Controller in respect of the following matters:

(i) Whether the application and specification and other documents relating thereto are in accordance with the requirements of the Patent Act and the Patent Rules;

(ii) Whether there is any lawful ground of objection to the grant of the patent under the Act in pursuance of the application;

(iii) The result of investigations made under s 13 of the Patents Act; and

(iv) Any other matter which may be prescribed.

The examiner shall make the report ordinarily within one month but not exceeding three months from the date of reference of the application to him by the Controller. The Controller shall dispose off the report of the examiner within one month from the date of receipt of the report.

The examination of an application for a patent by the examiner involves certain adjudicatory process. Section 12(1) (b) is broadly worded to include ‘any lawful ground of objection to the grant of the patent under the Act’. Clause (c) of s 12(1) requires the first examination report to contain the results of investigations made under s13 of the Patents Act. In this way, section 12 had a direct nexus with section 13, which details the manner in which an examiner shall make investigations for the purpose of anticipation. The examination and investigation done under sections 12 and 13 of the patents Act shall not be deemed to warrant the validity of any patent and no liability shall be incurred by the Central Government or any offices for such examination, investigation or report. The reports of the examiners made to the Controller shall be treated as confidential and shall not be open to public inspection or be published by the Controller. Such reports shall not be liable to be produced or inspected in any legal proceedings unless the court certifies that the production or inspection is desirable in the interest of justice.\textsuperscript{100}

\textsuperscript{99} Section 12 (1), Patents Act 1970.
\textsuperscript{100} Section 144, Patents Act 1970.
3.4.5 Withdrawal of patent application.

The application for patent can be withdrawn at least 3 months before the first publication which will be 18 months from the date of filing or date of priority whichever is earlier. The application can also be withdrawn at any time before the grant of the patent. The application withdrawn after the date of publication cannot be refilled as it is already laid open for public inspection. However, application withdrawn before the publication can be refilled provided if it not opened to public otherwise.

3.4.6 Opposition Proceedings

The Patents Act provides for opposition at various stages before a right or a claim vests with a person. Opposition proceedings can be instituted to oppose amendments, restoration of lapsed patents, surrender of patents, corrections of clerical errors, grant of compulsory licence and grant of a patent. The purpose and intention of opposition proceedings is to give a competitor the opportunity of opposing unjustified protective rights.

Opposition to the grant of a patent signifies the first instance at which a challenge can be made to the grant of a patent under the Act. The characteristic feature of opposition proceedings available under the patent laws of various countries is the fact that it can be initiated before the authority which grants the patent, ie, the Patent Office. Generally, opposition proceedings are regarded as administrative in nature as they happen within the Patent Office and not before a judicial authority. The opposition proceedings under the Act are unique, as they provide for opposition before the grant of a patent, pre-grant opposition [section 25(1)] as well as for opposition after the grant, post-grant opposition [section 25(2)].

Sections 25 to 28 of the Patent Act deal with opposition. Rules 55 to 70 of the Patents Rules explain the procedural details. The present provisions on opposition proceedings in section 25 were introduced by the Patents (Amendment) Act 2005. The earlier provisions provided for opposition before the grant of a patent but were different from the pre-grant opposition proceedings introduced by the Patents (Amendment) Act.
2005 as they required the opponent to give a notice of opposition to the Controller. The Patents (Amendment) Act 2005 introduced a device for opposition after the grant which did not exist earlier under the Patents Act.

The first instance of challenge to a patent comes in the form of opposition to the patent application under section 25(1) of the Patents Act. As this form of challenge is made at the application stage, the opponent must prefer its challenge before the Patent Office. This is commonly known as the pre-grant opposition. The second instance of challenge can be made soon after the patent is granted by the Patent Office. This form of challenge is made before the Patent Office and is commonly known as the post-grant opposition. The consequences of pre-grant opposition and post-grant opposition are different. A pre-grant opposition if successful will result in the refusal of the patent applications, whereas a successful post-grant opposition will result in the revocation of the patent granted, either in full or in part.

A pre-grant opposition is initiated by filing a written representation for opposition before the appropriate office within the stipulated time. It is an opposition of a preliminary nature. Post-grant opposition is similar to revocation proceedings under section 64 in its outcome as both can have the effect of revoking the patent already granted. The significant difference being that the former is an option available at the Patent Office.

Opposition before the grant or pre-grant opposition proceedings has attained importance in India due to a variety of reasons. First, the large number of mail-box applications filed between 1999 and 2005 has stirred the curiosity of the pharmaceutical industry which has witnessed a comparatively low number of new molecules being developed during that period. Pre-grant opposition has emerged as the first instance to check the validity of these applications. Secondly, the relatively simple and cost effective procedure of pre-grant opposition has attracted many to the Patent Office. Thirdly,

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101 The present provision under the Patents (Amendment) Act 2005, section 25(1) which deals with pre-grant opposition requires the opponent to give a written representation to the Controller. Unlike section 25(2), it does not require the opponent to give a notice of opposition. The notice of opposition should be issued in Form 7 and should be sent to the Controller in duplicate.


103 Section 25 (4), Patents Act 1970.

104 Revocation proceedings under section 64 of the Patents Act 1970 can be instituted before the Appellate Board or the High Court and not before the Patent Office.
challenging patents is a business strategy in itself which is bound to be employed in India, given the presence of a strong home grown generic industry. Fourthly, the unrestricted status of an opponent is likely to attract more persons who have the expertise to question the validity of a patent.\textsuperscript{105}

Opposition after the grant or post-grant opposition may be made at any time after the grant of patent but before the expiry of one year from the date of publication of grant of a patent in the Official Journal.\textsuperscript{106} Post-grant opposition can be initiated by an interested person alone. Any interested person may give notice of opposition in Form 7 to the Controller, paying the prescribed fee, for any of the grounds mentioned in section 25(2). The initial examination shall be conducted by an Opposition Board. The findings made by the Opposition Board are then submitted to the Controller, which are recommendatory and not binding on the Controller. The Controller decides the case based on the submissions made by the parties.

The grounds of oppositions are for pre-grant and post-grant opposition are substantially the same. The only difference is with regard to the stages at which these grounds can be introduced in an opposition. Thus, the 11 grounds on which an application can be opposed are mentioned in section 25(1) as the ones that can be exercised before the grant. The same grounds find mention is section 25(2) as the ones that can be exercised after the grant of the patent. They are as follows:

\textbf{Invention wrongfully obtained:}

An application for a patent or a granted patent may be opposed on the ground that the applicant for the patent or the patentee had wrongfully obtained the invention or any part from the opponent.\textsuperscript{107}

\textbf{Prior publication:}

The fact that the invention claimed in a complete specification has been published before the priority date in any specification or any other document will be a ground for opposing the grant of a patent.\textsuperscript{108}

\textsuperscript{105} Supra note 10, p.346.
\textsuperscript{106} Section 145, Patents Act 1970.
\textsuperscript{107} Sections 25 (1) (a) and 25 (2)(a), Patents Act 1970.
\textsuperscript{108} Sections 25 (1) (b) and 25 (2) (b), Patents Act 1970.
Prior claiming:
An application or a patent may be opposed on the ground that what is claimed was in fact already claimed in a specification published in India with an earlier priority date.\textsuperscript{109}

Publicly known or publicly used:
An application or a patent may be opposed on the ground that the invention so far as claimed in any claim of the complete specification was publicly known or publicly used in India before the priority date of the claim.\textsuperscript{110}

Lack of inventive step:
An application or a patent may be opposed on the ground that the invention so far as claimed in any claim of the complete specification is obvious and clearly does not involve any inventive step, having regard to the matter published or having regard to what was used in India before the priority date of the claim.\textsuperscript{111}

Subject of claim not an invention or not patentable:
An application or a patent may be opposed on the ground that the subject matter of any claim of a complete specification is not an invention within the meaning of the Act or is not patentable under the Patents Act. This is a general ground which is broad enough to include all the provisions of the Patents Act by which an invention and its patentability are determined.\textsuperscript{112}

Insufficiency:
An application or a patent may be opposed on the ground that the complete specification does not sufficiently and clearly describe the invention or the method by which it is to be performed.\textsuperscript{113}

\textsuperscript{109} Sections 25 (1) (c) and 25 (2) (c), Patents Act 1970.
\textsuperscript{110} Sections 25 (1) (d) and 25 (2) (d), Patents Act 1970.
\textsuperscript{111} Sections 25 (1) (e) and 25 (2) (e), Patents Act 1970.
\textsuperscript{112} Sections 25 (1) (f) and 25 (2) (f), Patents Act 1970.
\textsuperscript{113} Sections 25 (1) (g) and 25 (2) (g), Patents Act 1970.
Non-disclosure of information:

An application or a patent may be opposed on the ground that the applicant/patentee has failed to disclose to the Controller the information required under section 8 or has furnished the information which in any material particular was false to his knowledge. This provision takes care of fraudulent practices and false statements made by the applicant to the Controller.

False claim to convention priority:

An application or a patent may be opposed on the ground that in the case of a convention application, the application was not made within 12 months from the date of the first application for protection for the invention made in the convention country by the applicant/patentee or the person from whom he derives title.

Non-disclosure of biological material:

An invention may be opposed on the ground that the complete specification does not disclose or wrongly mentions the source or geographical origin of biological material used for the invention. Where the biological material is not made available to the public, it may be deposited to an international depository authority under the Budapest Treaty as contemplated in section 10(4) of the Patents Act.

Anticipation by traditional knowledge:

An invention claimed in any claim of the complete specification may be opposed on the ground that it was anticipated with regard to the knowledge available within any local or indigenous community in India or elsewhere.

3.4.7 Grant of patents

The grant of a patent confers exclusive rights on the patentee to prevent others from doing certain acts with respect to the patent for 20 years. In the case of a product

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114 As per Section 8, the applicant prosecuting an application for a patent in any country outside India in respect of the same or substantially the same invention shall disclose the same to the Controller and give an undertaking to keep him informed about subsequent filings of such application.
115 Sections 25 (1) (h) and 25 (2) (h), Patents Act 1970.
116 Sections 25 (1) (i) and 25 (2) (i), Patents Act 1970.
117 Sections 25 (1) (j) and 25 (2) (j), Patents Act 1970.
118 Sections 25 (1) (k) and 25 (2) (k), Patents Act 1970.
119 Chapter VIII of the Patents Act, 1970 which comprises sections 43 to 53 deals with the grant of patents and the rights conferred by them. The corresponding rules are contained in rules 74 to 84.
120 Section 48, Patents Act 1970.
patent, the patentee will have exclusive right to prevent third parties from making, using, offering for sale, selling or importing, for those purposes, that product in India. In the case of a process patent, the patentee will have the exclusive right to prevent third parties from using that process and from the act of using, offering for sale, selling or importing for those purposes the product obtained directly by that process in India. If any person does any of the above acts without the consent of the patentee, it would amount to an infringement of the patent. The right to institute infringement action accrues on the patentee only after the grant.\textsuperscript{121}

When a patent application made before the Patent Office is found to be in order for the grant, and it has neither been refused by the Controller, nor found to be in contravention of any of the provisions of the Patents Act, a patent shall be granted as expeditiously as possible to the applicant. Upon the grant of the patent, the Controller shall publish the fact that the patent has been granted and the application, specification and other documents related thereto shall be open for public inspection. Every patent shall be granted in the prescribed form bearing the serial number accorded to the application. As a patent application can be made for one invention only, it follows that a patent shall be granted for one invention only.\textsuperscript{122}

Section 47 states that the grant of a patent under the Patents Act is subject to certain conditions contained therein, the details of which are as follows:

(i) Government Use: Any process or product which is the subject matter of a patent may be imported or made by the government for its own use.

(ii) Experiment and Research: Any person may make or use any patented product or a product made by a patented process or use a patented process for the purpose of experiment or research.

(iii) Import of Medicine or Drug: In the case of a patent in respect of any medicine or drug, the patent is granted subject to the condition that the government may import such medicine or drug for its own use or for distribution in any dispensary, hospital or other medical institution maintained by or on behalf of the government.

\textsuperscript{121} Section 11A (7), Patents Act 1970.
\textsuperscript{122} Section 46 (2), Patents Act 1970.
3.4.8 Term of patent

The time period during which the patent shall have effect is known as the term of the patent. The term of every patent granted shall be for a period of 20 years from the date of filing of the application for patent.\(^{123}\) The term of the patent in case of international applications filed under the PCT designating India shall be 20 years from the international filing date accorded under the PCT. A patent in force would come to a natural end at the expiry of the term of the patent. The 20-year term was introduced by the Patents (Amendment) Act 2002, prior to which patents were granted generally for a period of 14 years from the date of the patent.

Unlike the Indian Patents and Designs Act 1911 which provided for the extension of the term of a patent, the Patents Act 1970 does not contain any express provision for the extension of the term of a patent. But it does provide that the extension of patents to be recorded in the register of patents. The term of the patent is calculated from the priority date.\(^{124}\) For this reason, the expiry date of the patent is fixed at 20 years from the priority date without taking into consideration the time taken by the Patent Office for the grant.

3.5 Rights of patentee

A patent is a statutory grant conferring certain monopoly rights on the grantee for a defined period, subject to certain conditions. In some respect it may be considered as a species of property. A patent grant gives the patentee the exclusive right to make or use the patented article or use the patented process. As a consequence flowing from this he can prevent all others from making or using the patented article or using the patented process. A patent monopoly not only entitles the holder to exploit the invention without competition during the period of patent protection; it also enables him to enter the market, on the expiry of the monopoly in a strong position. A patentee has also the power to assign the patent, grant licences under, or otherwise deal with it for any consideration. These rights created by statute are circumscribed by various conditions and limitations.

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\(^{123}\) Section 53 (1), Patents Act 1970.

\(^{124}\) The priority date is the date of application in most cases, Section 11, Patents Act 1970.
The right of a patentee is considered as a chose in action. In *Edwards v. Picard*, Vaughan Williams, L.J. observed: “Now what is the right of the patentee? It is a chose in action created by the exercise of Royal prerogative, and entirely distinct from the right of property in a chattel created under it.” Again, Buckley, L.J. observed: “The legal qualities of a patent are, not that it confers upon the patentee a right to manufacture, for that he could do without a patent, but that it gives him monopoly in the manufacture. It creates in him a right of action to prevent anyone else manufacturing. It creates in him a right to bring an action for infringement with resultant remedy by way of injunction, or damages or both. This is a legal right.

The right of a patentee to the exclusive use of the patented invention for the period of its protection under the Act is a right to property.

There is no exclusive right similar to that of a patent in a secret formula or process not patented under the Act. When a person has discovered a valuable invention and has not patented it, anyone who had discovered the ingredients may, in the absence of any breach of trust or fraud, sell those ingredients. Any person who has become acquainted with the process of manufacturing an article which is in general secret is entitled to manufacture it.

A person can be prevented from using a secret process only on the basis of breach of contract, breach of confidence or fraud. Thus in *United Indigo Chemical Co Ltd. v. Robinson*, it was held that an employer cannot prevent his employee using, after termination of the employment, knowledge honestly acquired during the course of his former employment.

**Right to use and exercise the patent**

Section 48 confers on the patentee the exclusive right to make, use, exercise, sell or distribute the patented article or substance in India, or to use or exercise the methods or process if the patent is for a process. This right can be exercised either by the patentee himself or by his agents or licensees.

125 (1909) 2 KB 903 at 905 CA.
126 *Id.*, at 909-910.
127 (1932) 49 RPC 178.
The patent is granted in the form prescribed under s 46(1), which reiterates the exclusive right of the patentee to use the patent.

Where a patent has lapsed due to non-payment of renewal fee, the patentee may have the patent restored on following the procedure laid down under ss. 60 and 61.

A patentee has power to assign, grant licences under, or otherwise deal with the patent for any consideration.\(^{128}\) If he is a co-owner of the patent, he can assign any share of the patent or grant licences to others to use the patent only with the consent of the co-proprietors or under the directions of the Controller.\(^{129}\)

The patentee may amend the complete specification of his patent on application made to the Controller for the purpose.

A patentee has the right to surrender his patent. If the patentee or any other person is not interested in working the patent, it may be advisable to surrender the patent to avoid possible revocation proceedings and consequent liability to pay costs.

When a patent is granted to two or more persons, each of the co-owners, in the absence of any agreement to the contrary, is entitled to an equal undivided share in the patent.\(^{130}\) Each of them is entitled, by himself or his agents, to make, use or exercise the patent without accounting to the others. This is of course, subject to any agreement to the contrary.

During the period from the date of advertisement of the acceptance of a complete specification and the date of sealing of the patent, the applicant can exercise all the privileges and rights of a patentee except the filing of a suit for infringement.

Any person may, for the purpose merely of experiment or research, or for the purpose of imparting instructions to pupils, make or use a patented article or use a patented process.\(^{131}\)

A patent has the same effect as against the Government as it has against any other person. Thus the Government is bound to honour the rights of the patentee granted under the Act. Government may use the patented invention or even acquire it, or prohibit a person from using an invention on certain terms and circumstances.

\(^{128}\) Section 70, Patents Act 1970.
\(^{129}\) Section 51, Patents Act 1970.
\(^{130}\) Section 50 (1), Patents Act 1970.
\(^{131}\) Section 47 (3), Patents Act 1970.
The rights of a patentee can be enforced by a suit for infringement of the patent or an action for recovery of royalties or an action for specific performance of contract, depending upon the nature of the right under the patent sought to be enforced.

**Obligation of a patentee**

The possession of a patent confers on the patentee not merely certain valuable monopoly rights and privileges, but also certain obligations and duties. Patents are granted not only to encourage inventions but also to secure that the inventions are worked in India on a commercial scale and to the fullest extent that is reasonably practicable without undue delay. It is also essential that the monopoly created by the patent should not unfairly prejudice the interest of the public. The Act therefore contains provisions for revocation of patents in certain circumstances, and granting of compulsory licences if the patent is not used or the monopoly abused. It is an implied responsibility of the patentee to work the patent in India in such a manner that the reasonable requirements of the public with respect to the patented invention are satisfied and that the patented invention is made available to the public at a reasonable price. Failure to discharge this obligation may amount to abuse of the monopoly granted. Further, provision is also made to restrain the patentee from making unjustifiable threats of an action for infringement of the patent.\(^\text{132}\)

**3.6 Conclusion**

In practice, several issues remain open. Law cannot be static. It has to be modified to meet the requirements of the fast changing environment. Similarly, science is also not static and changes are taking place at a very fast pace. Since patent is related to science & technology, the patent legislations cannot also be static. This is based on the fact that our country possesses the highly capable intellectuals and natural wealth, and that too in plenty. Combining these two valuable strengths/assets, we could have become a country holding valuable IPRs which would have helped economical and industrial development of the country even faster. India should have been proactive instead of reactive. Time is still not lost. India can still initiate appropriate action in this direction in the coming years and achieve benefits from the Intellectual Property System, especially Patent system.

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