

## INTRODUCTION TO PATENTS

A Patent is an intellectual property right relating to inventions and is the grant of exclusive right, for limited period, provided by the government to the patentee, in exchange of full disclosure of his invention, for excluding others, from making, using, selling, importing the patented product or process producing that product for those purposes. The purpose of this system is to encourage inventions by promoting their protection and utilization so as to contribute to the development of industries, which in turn, contributes to the promotion of technological innovation and to the transfer and dissemination of technology. Under the system, patents ensure property rights (legal title) for the invention for which patent has been granted, which may be extremely valuable to an individual or a company. One should make the fullest possible use of the patent system and the benefits it provides. Patent right is territorial in nature and a patent obtained in one country is not enforceable in other country. The inventors/their assignees are required to file separate patent applications in different countries for obtaining the patent in those countries.

A patent is an exclusive right granted by a country to the owner of an invention to make, use, manufacture and market the invention, provided the invention satisfies certain conditions stipulated in the law. Exclusivity of right implies that no one else can make, use, manufacture or market the invention without the consent of the patent holder. This right is available only for a limited period of time. However, the use or exploitation of a patent may be affected by other laws of the country, which has awarded the patent.

These laws may relate to health, safety, food, security etc. Further, existing patents in similar area may also come in the way. A patent in the law is a property right and hence, can be gifted, inherited, assigned, sold or licensed. As the right is conferred by the state, it can be revoked by the state under very special circumstances even if the patent has been sold or licensed or manufactured or marketed in the meantime. The patent right is territorial in nature and inventors/their assignees will have to file separate patent applications in countries of their interest, along with necessary fees, for obtaining patents in those countries.

A patent is a monopoly right granted by the government to a person who invented or manufactured an article according to the invented process for a limited period. After the expiry of the duration of patent, anybody can make use of the invention. Any person being the inventor of an invention or his assignee can apply alone or jointly with any other person. As per the Indian Patents Act, 1970, invention means any new or useful art, process method, apparatus or machine.

A partnership firm, a private or a public limited company or a corporation can apply for a patent. But they cannot invent and therefore cannot be termed as 'inventor'. Therefore, only individuals could be termed as 'inventor'.

### Patent Information

It relates to information concerning patented inventions disclosed in a patent document. Inventions in the context of patents are successful solutions to technical problems. The

publication of patents and patent document is an essential feature to the patenting process in every country throughout the World. Patent documents set out the full technical details of how an invention works. Well over 42 million patent documents have been published so far and each year, roughly one million new ones appear. This makes patent information available anywhere. Furthermore, the vast bulk of this information cannot be obtained from any source.

Patent also provides useful commercial information, which gives an insight into what new markets your competitors are developing or even, in which countries they are developing. For these reasons, patent documents should form an essential part of any organizations portfolio.

Patent information provides answer to following questions i.e. what is the technological sphere of the invention, which technical problem has been solved and how, what is prior art, who is the owner of the patent, who is the inventor, when was the earliest application for patent field and where, whether the technology is in the public domain.

The commercial and technical knowledge stored in patents has significant role to play in a broad range of business activities from basic research through to product marketing. Before initiating research project, a scan of the published patent documents to establish what is already known can save many hours of fruitless investigation. It is estimated that all over the world industry is wasting a huge sum of money by simply repeating previous the result of which can be found in published patent documents. Unforeseen difficulties can arise when gearing up for production. These difficulties might have been encountered elsewhere and solutions documented in patent documents. The time saved with this knowledge could determine eventually whether or not a vital foothold is gained in a rapidly developing market. An indication of suitable markets for products can be obtained by evaluating the worldwide patent practices of possible competitors.

A thorough review of the relevant patent documentation will also assist in drafting a sound patent application, thereby providing the maximum degree of protection to help exploit successfully the full potential of the idea.

Having successfully launched a product, it is essential to maintain market appeal by a constant program of evaluation and refinement: new processes to reduce production costs, novel materials to enhance performance, and fresh outlets for increased turnover. This information can be obtained from a regular review of patent documents to help innovate and keep ahead of competitors by retaining hard won customer's satisfaction.

Patent is a unique source of technical information due to the fact that a large percentage of technology disclosed in patents is never published in any other publication. Patents are effective only in the country of grant and for a limited period. Patent forms one of the earliest publications of the patented inventions. Patent forms a single storehouse of technological information, covering the widest range of technologies; irrespective of the level of sophistication of the technology. Patents are written in a standard format. Once familiarity is gained, retrieval of relevant information is easy. Patent information is easily accessible through the use of classification systems and the use of electronic database systems.

Patent documents deal with technology. They protect the most recent technology and help the R & D workers to avoid duplication in R & D and assist to go ahead of what has already been done. Patent conveys the most recent information and the speediest form of technology disclosure. Patent documents are uniform and give total description and background of the invention. Patent documents disclose technological information by describing the invention in accordance with the requirement of the law. They indicate the novelty claim and the inventiveness with reference to the existing state-of-the-art.

Patent documents contain information, which is not disclosed to the public in any other form of literature. Patent documents often disclose not only the concepts concerning the general utility of the invention but also provide information on the possibility of its practical application in industry. In many cases, they furnish a history of technological progress in the field to which they relate. The browsing of the patent on a specific subject can encourage the research worker to develop new ideas and reorient their research efforts. Many patent documents contain an abstract, which enables a user to get a general idea of the contents of documents in a few minutes without having to read the full text of the document. The information claimed in a patent obtained by foreign nationals would enable research workers in India to know in what direction the research work is being carried out abroad and this would be helpful in providing basic guidelines for research in India. The text of a patent specification has sufficient details and includes illustrations so that an expert specializing in the field can recreate the invention.

## The Patent Classification

The major patent classifications are International Patent Classification, ECLA Classification, U.S Patent Classification and Indian Patent Classification.

## Need for Patent System

- Patent system encourages an inventor to disclose his invention instead of keeping it secret.
- Patent gives legal protection to the patentee, enabling him to enjoy the right without any fear of copying and raise the capital for working his invention on a commercial scale.
- The industries or R&D centres can make use of the technology disclosed in the patent literature as a stepping-stone, avoiding thereby the redundant research, which means "you do not have to reinvent the wheel".
- It provides an inducement to invest capital in the new lines of production and, thus, provides immense help for development and up gradation of technology.
- One may get a very good return through patent right on the investment made in R & D.
- Patent system provides a reasonable assurance of working and commercialization of the invention.
- Patented invention becomes open to public for free use when it ceases to be in effect.

- It can act as a stimulant for economic growth by encouraging the foreign investment in joint ventures.
- It helps to explore unexplored and uncovered areas.
- Vast patent literature offers an ocean of scientific and technological knowledge and information for the use of public. It encourages R&D activities by becoming a 'tool' for technology transfer.
- It helps in unearthing the traditional knowledge and the information residing in the public domain but having limited access.
- Patent acts as a tradable industrial asset for an enterprise. A strong patent portfolio of the company is an indication of its good economic health.

## Important Features of Patent Right

- Patent is a grant of exclusive right by the government, to the inventor or his assignee, for his disclosed invention, which gives protection against infringement and creates possibility of assigning or licensing of the right.
- It is granted for a limited period and can be enforced only in the country where it is granted.
- A patented invention can normally be exploited only by the patent holder or by someone else with his authorization.
- Grant of patent prevents others from exploiting the patented invention. This is referred to as a right to exclude others from making use or selling his invention. The Patent Right enables the patentee to take legal action against the person who is exploiting the patented invention without the consent or license from the patentee.
- The Patent Right enables the inventor to derive material benefit, to which he is entitled, as a reward for his intellectual efforts and compensation for expenses incurred in research and experimentation relating to his invention.
- Thus, a patentee acquires the right, enforceable by law, to decide who shall and who shall not use his patented invention. He retains this right for the term of the patent provided he pays the necessary renewal fees.
- The grant of patent right by the government does not mean that the government itself would automatically enforce the patent right. It is up to the owner to bring and action, usually under civil law, for any infringement of his patent right. The patentee must, therefore, be his own 'policeman'.

- **Novelty:** The matter disclosed in the specification is not published in India or elsewhere before the date of filing of the patent application in India.
- **Inventive Step:** The invention is not obvious to a person skilled in the art in the light of the prior publication/knowledge/document.
- **Industrially applicable:** Invention should possess utility, so that it can be made or used in an industry.

In most of the countries the invention to be patentable must be:

- Novel
- Non-obvious
- Be capable of industrial application
- Must not be from the categories of inventions specifically declared as non-patentable under the relevant patent law.

### Inventions Not Patentable

- An invention that is frivolous or which claims anything obviously contrary to well established natural laws;
- An invention, the primary or intended use or commercial exploitation of which could be contrary to public order or morality, or which causes serious prejudice to human, animal or plant life or health or to the environment;
- The mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substances occurring in nature;
- The mere discovery of a new form of a known substance that does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the 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;
- A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance;
- The mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;
- A method of agriculture or horticulture;
- Any process for the medicinal, surgical, curative, prophylactic diagnostic therapeutic or other treatment of human being or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products;
- Plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially biological processes for production

## ✓ PATENTABLE AND NON-PATENTABLE INVENTION

### Patentable Invention

A new product or process, involving an inventive step and capable of being made or used in an industry. It means the invention to be patentable should be technical in nature and should meet the following criteria —

or propagation of plants and animals; Example: clones and new variety of plants are not patentable. But process/method of preparing Genetically Modified Organisms are patentable subject-matter;

- A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions;
- A mere scheme or rule or method of performing mental act or method of playing game;
- A presentation of information;
- Topography of integrated circuits;
- An invention which in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components;
- Inventions relating to atomic energy.

## Invention

*Invention* means a *new* product or process involving an *inventive step* and *capable of Industrial application*.

*Inventive step* means a feature that makes the invention not obvious to a person skilled in the art.

*Capable of Industrial application* means that the invention is capable of being made or used in an industry.

However, inventions claiming substance 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, semiconductors and inter-metallic compounds) are not patentable. Only process claims are allowed in such cases. Meaning of chemical process would also include the biochemical, biotechnological and microbiological process.

## Conditions to be satisfied by an invention to be patentable

An invention must satisfy the following three conditions of:

**Novelty:** An invention will be considered novel if it does not form a part of the global state-of-the-art. Information appearing in magazines, technical journals, books, newspapers etc. constitute the state-of-the-art. Oral description of the invention in a seminar/conference can also spoil novelty. Novelty is assessed in a global context. An invention will cease to be novel if it has been disclosed in the public through any type of publications anywhere in the world before filing a patent application in respect of the invention. Prior use of the invention in the country of interest before the filing date can also destroy the novelty. Novelty is determined through extensive literature and patent searches. It should be realized that patent search is essential and critical for ascertaining novelty as most of the information reported in patent documents does not get published anywhere else.

**Inventiveness (Non-obviousness):** A patent application involves an inventive step if the proposed invention is not obvious to a person skilled in the art i.e., skilled in the subject matter of the patent application. The prior art should not point towards the invention implying that the practitioner of the subject matter could not have thought about the invention prior to filing of the patent application. Inventiveness cannot be decided on the material contained in unpublished patents. The complexity or the simplicity of an inventive step does not have any bearing on the grant of a patent. In other words, a very simple invention can qualify for a patent. If there is an inventive step between the proposed patent and the prior art at that point of time, then an invention has taken place. A mere 'scintilla' of invention is sufficient to found a valid patent.

**Usefulness:** An invention must possess utility for the grant of patent. No valid patent can be granted for an invention devoid of utility.

**Distinction between a patented invention and knowhow:** The law does not require that the information disclosed in the patent specification be sufficient for commercial exploitation of the invention. Thus, patent usually will not disclose sufficient information for commercialization. Knowhow on the other hand, covers all information necessary to commercialize the invention e.g. setting up a production plant. Such information would include, for example, details of the production methods, the design drawings etc. It is this knowhow which is traded while transferring technology. Knowhow is always kept as a trade secret and not shared with the public. Knowhow is not protected through patents as most of it is non-patentable matter and one does not take patent on the remaining parts to avoid public disclosure. A knowhow developed around an existing patent and commercialized subsequently may be an infringement of the patent, unless the patentee has agreed to commercialization on mutually agreed terms.

## ✓ TYPES OF PATENT APPLICATIONS IN INDIA

There are six types of patent applications in India:

- Ordinary application
- Convention application
- PCT International application
- PCT National phase application
- Application for Patent of addition
- Divisional application

### Ordinary Application

An application for patent made in the 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

When an applicant comes to the patent office with an application claiming a priority date based on a similar application filed in one of the convention country, it is called a convention application (by virtue of Paris convention). To get a convention status an applicant should file the application in Indian patent office within twelve months from the date of first filing of a similar application in the convention country. The priority document and its English translation (if required) also should be submitted by the applicant. A convention application should be accompanied by a complete specification. When two or more applications for patents constituting one invention have been made in one or more convention countries, one application may be made within twelve months from the date on which the earlier or earliest of those applications was made. Multiple fees has to be remitted for multiple priorities so that the other applications filed earlier in the convention countries will be deemed to have been published in India. The applicant of convention application shall furnish when required by the Controller, copies of specification or documents (priority documents) certified by the official chief of the patent office of the convention country. If any such specification or document is in a foreign language, a translation into English of the specification or document shall be furnished.

## PCT International Application

PCT is an international filing system for patents in which the applicant gains an international filing date in all the designated countries conferring the late entry (up to 31 months) to the national offices without affecting the priority date. This is a simple and economical procedure for those applicants seeking protection for the inventions in many countries. The Indian Patent office is a receiving office for international applications by nationals or residents of India. An international application shall be filed with the appropriate office in triplicate in respect of head office and quadruplicate in respect of branch offices, either in English or in Hindi.

## PCT-National Phase Application

An international application made according to Patent Cooperation Treaty designating India can enter the national phase within 31 months from the international filing date. This application filed before the Controller in the Indian patent office claiming the priority and international filing date is called PCT National Phase application. The applicant can enter the national phase with a request made on white paper. But Form 1A is preferred by the Indian Patent office during National Phase Entry. The title, description, drawings, abstract and claims filed with the application shall be taken as the complete specification for the purposes of filing in India. The filing date of the application...shall be the international filing date accorded under the Patent Cooperation Treaty. It is not mandatory for the applicant to submit the documents while entering the national phase for filing the application in the designated or elected member countries, as it is obligatory on the part of WIPO to send those things to the designated offices. However, for convenience and faster processing the applicant may submit the necessary documents. The office may ask for any other documents, which are necessary in addition to what was submitted along with the application.

## Application for Patent of Addition

When an applicant feels that he has an invention, which is a slight modification on the invention for which he has already applied for/have patent in India the applicant can go for a patent of addition. The only benefit he gets is that there is no need to pay separate renewal fee for the patent of addition during the term of the main patent. Patent of addition expires along with the main patent unless it is made independent. The complete specification of that application shall include specific reference to the number of main patent or the application for the main patent as the case may be, and a definite statement that the invention comprises an improvement in, or a modification of the invention claimed in the specification of the main patent granted or applied for.

## Divisional Application

When the application made by an applicant claims more than one invention, the applicant on his own request or to meet the official objection raised by Controller may divide the application and file two or more applications as applicable for each of the inventions. This type of application divided out of the parent one is called divisional application. The priority date for all the divisional application will be same as that claimed by the parent application (Ante dating). The complete specification of the divisional application should not include any matter not in substance disclosed in the complete specification of the first application. The reference of parent application should be made in the body of the specification.

## **GUIDELINES FOR REGISTRATION OF PATENT**

### **Process patent or patent for 'invention'**

A patent is granted for an 'invention' which means any new and useful 'art, process, method or manner of manufacture'. You are entitled to file patent application for an invented article or process for manufacturing if the process is considered as 'invention'. Only then is your manufacturing process patentable. A patent is a monopoly right from the government conferred on the grantee for a limited period an exclusive right to make, use or sell his invention and also authorize others to do so. It will be operative in the whole of India under the Patent Act, 1970.

### **Term of patent**

The term of patent will be 5 years for food, drug, or medicine cases from its sealing date of 7 years from the date of patent whichever is shorter, in respect of any other inventions the period will be 14 years from the date of patent. After the said years it will become public juris i.e. becomes public.

### **Who can apply for a patent**

- Any person being the inventor of an invention or his assignee can apply alone or jointly with any other person.
- A firm or company or a corporation cannot apply as an inventor because such corporate bodies cannot invent and therefore cannot be termed as inventor. The employees or associates (one or two persons jointly) can be recognized as inventor.
- But you have to name the inventors but your corporation will be the owner of the patent. For example, in many companies there is Research and Development Wing by employing a team of technicians for researching and they invent a process either single or jointly. In such case, the company or corporation may apply for the patent and patent right stands in the name of the company. But the name of the inventors should be brought on the patent documents.

### **Requirements of Filing Patent**

Furnish the following:

- (i) Name of the inventors
- (ii) Name of the applicant—whether it is a corporation or company constituted under which act
- (iii) Address of the applicant
- (iv) Title of the invention
- (v) Provisional or complete specification of patent
- (vi) Drawings, if any.

### **Contents of Provisional or Complete Specification**

This specification should contain objects, statement of claims, drawings if any. The complete specification shall contain the following paragraphs:

1. Introductory paragraph of the invention
2. Statement of prior art or process if known to the applicant and the drawbacks of such present state of art or process
3. Objects of the invention
4. Statement of claim
5. Details of invention (paragraph-wise) with reference to the diagram and drawings, if any.

### **Drawings**

Drawings should be in triplicate and the original shall be on tracing cloth or transport or semitransparent sheet or films made of plastics measuring 33 × 20.5 CM or 41 CM with a clear margin of 1.5 CM width all around. Duplicate and triplicate can be copies. In the top left corner, the title of the invention should be mentioned. Diagrams should be clearly numbered such as Fig-1, Fig-2 etc. In the right bottom, applicant's name should be signed within bracket the name should be mentioned in BLOCK LETTERS.

### **Stages of Patent Application**

- (i) Filing of patent application
- (ii) Examination and acceptance of patent application
- (iii) Advertisement in the Official Patent Gazette and opposition proceedings, if any (within 4 months from the date of advertisement)
- (iv) Sealing of patent (the whole process will complete within the period of 4 to 5 years).

## PATENT FILING

Application is required to be filed according to the territorial limits where the applicant or the first mentioned applicant in case of joint applicants for a patent normally resides, or has domicile 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 appropriate office will be according to the address for service in India given by the applicant or party in a proceeding. The appropriate office once decided in respect of any proceedings under the Act shall not ordinarily be changed. The four patent offices are located at Kolkata, Mumbai, Delhi and Chennai.

### Publication and Examination of Patent Applications

#### Publication

All the applications for patent, except the applications prejudicial to the Defence of India or abandoned due to non-filing of complete specification within 12 months after filing the provisional or withdrawn within 15 months of filing the application, are published in the Patent Office Journal just after 18 months from the date of filing of the application or the date of priority whichever is earlier. The publication includes the particulars of the date of the application, application number, name and address of the applicant along with the abstract. The applications for patent are not open for public inspection before publication. After the date of publication of the application, as stated above, the complete specification along with provisional and drawing, if any, abstract, application on any form or on plain paper and any correspondence between the office and applicant may be inspected at the appropriate office by making a written request to the Controller in the prescribed manner and on the payment of prescribed fee.

#### Early Request for Publication

The applicant may also file a request for early publication in Form-9 with a prescribed fee of Rs. 2,500/- or Rs. 10,000/- for natural person and other than natural person respectively. The above application is published ordinarily within one month from the date of the request on Form-9. The applicant shall have provisional rights from the date of publication.

#### Request for Examination

No application for patent will be examined if no request is made by the applicant or by any other interested person in Form-18 with prescribed fee of Rs. 2,500/- or Rs. 10,000/- for natural person and other than natural person respectively, within a period of 48 months from the date of priority of the application or from the date of filing of the application, whichever is earlier. Where no request for examination of the application for patent has been filed within the prescribed period, the aforesaid application will be treated as withdrawn and, thereafter, application cannot be revived.

#### Examination

Application for patent, where request has been made by the applicant or by any other interested person, will be taken up for examination, according to the serial number of the requests received on Form 18. A First Examination Report (FER) stating the objections/requirements is communicated to the applicant or his agent according to the address for service ordinarily within six (06) months from the date of request for examination or date of publication, whichever is later. Application or complete specification should be amended in order to meet the objections/requirements within a period of 12 months from the date of First Examination Report (FER). No further extension of time is available in this regard. If all the objections are not complied with within the period of 12 months, the application shall be deemed to have been abandoned. When all the requirements are met the patent is granted, after 6 months from the date of publication, the letter patent is issued, entry is made in the register of patents and it is notified in the Patent Office Journal.

#### Withdrawal of Patent Application

The application for patent can be withdrawn at least 3 (three) months before the first publication which will be 18 (eighteen) 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 refiled as it is already laid open for public inspection. However, application withdrawn before the publication can be refiled provided it is not opened to public otherwise.

#### Documents Required for Filing an Application

- Application form in duplicate (Form 1).
- Provisional or complete specification in duplicate. If the provisional specification is filed, it must be followed by the complete specification within 12 months. (Form 2).
- Drawing in duplicate (if necessary).
- Abstract of the invention in duplicate.
- Information and undertaking listing the number, filing date and current status of each foreign patent application in duplicate (Form 3).
- Priority document (if priority date is claimed) in convention application, when directed by the Controller.
- Declaration of inventor-ship where provisional specification is followed by complete specification or in case of convention / PCT national phase application (Form 5).
- Power of attorney (if filed through Patent Agent).
- Fee (to be paid in cash / by cheque / by demand draft) (See Schedule I).  
(Note: The cheque or demand draft should be payable to the "Controller of Patents" drawn on any schedule bank at a place where the appropriate office is situated).

## Contents of Patent Application

A patent application has the following information:

- **Bibliographic:** It is in structure format. It contains the title of the invention, date of filing, country of filing, inventor's name etc.
- **Background of the invention or state-of-the-art:** In this the inventor lists the state of the art available on the date of filing his invention. Here the inventor lists the shortcomings/drawbacks found in the state of the art and define his problem.
- **Description of the invention:** In this the inventor describes his invention duly supported by a series of workable examples along with diagrams/charts, if needed. The invention has to be described in complete details, so that any person, who is skilled in the art can work out the invention.
- **Claims:** In the last, the inventor has to bring out a series of claims establishing his rights over the state of the art. It is this portion, upon which the protection is granted and not on the description of the invention. This has to be carefully drafted.

## Main sources for patent information

National patent offices, international information vendors like Dialog, Orbit, Questel STN, free or charge based patent websites on the internet.

## Date of patent

The date of patent is the date of filing the application for patent (whether provisional or complete). The term of the patent is counted from this date.

## Cost of filing a patent application in India

The government fee for filing a patent application (complete/provisional) in India is Rs. 750/- for individuals and Rs. 3,000/- for legal entities. An applicant is now required to make a request for examining the patent application within 48 months of filing of the application. In case of applications filed before May 20, 2003 examination request has to be made within the 48 months of filing of the application or within 12 months from May 20, 2003, whichever is shorter. An individual has to pay Rs. 1,000/- as examination fee and Rs. 3,000/- for legal entities. A sealing fee of Rs. 1,500/- for individuals and Rs. 5,000/- for legal entities has to be paid at the time of grant (sealing) of patent.

## Criteria for naming inventors in an application for patent

The naming of inventors is normally decided on the basis of the following criteria:

- (i) All persons who contribute towards development of patentable features of an invention should be named inventor(s).
- (ii) All persons, who have made intellectual contribution in achieving the final results of the research work leading to a patent, should be named inventor(s).

- (iii) A person who has not contributed intellectually in the development of an invention is not entitled to be included as an inventor.
- (iv) A person who provides ideas needed to produce the 'germs of the invention' need not himself/herself carry out the experiments, constructs the apparatus with his/her own hands or make the drawings himself/herself. The person may take the help or others. Such persons who have helped in conducting the experiments, constructing apparatus or making the drawings or models without providing any intellectual inputs are not entitled to be named inventors. Quite often difficulties are experienced in deciding the names of inventors. To avoid such a situation, it is very essential that all scientists engaged in research should keep factual, clear and accurate record of daily work done by them in the form of a diary. The pages in the diary should be consecutively numbered and the entries made be signed both by the scientists and the concerned leader.

## Nature of information needed while consulting a patent attorney

As an inventor one should share the complete invention with a patent attorney in the same manner as a patient confides in a doctor. As a doctor may not be able to write a correct prescription without knowing the details of the disease/problem, a patent attorney may not be able to draft a good specification in the absence of details about the invention. The following points should be kept in mind while discussing with the attorney:

- (i) Provide complete details of the invention including failures, if any, on the way to the invention.  
Do not feel bad if attorney asks you questions like where did you get the idea from or did you copy the idea from somewhere, or are you keeping other inventors working with you on the inventorship, or have you published the invention or disclosed it in a seminar/conference, or have you displayed the invention in an exhibition? A patent document is a techno-legal document, hence all precautions are to be taken right from the first step. It provides the right answers and you may even show your laboratory note book/log book to the attorney. This will help the attorney/agent to explain the inventive step in a precise manner and draft a good specification and associated claims.
- (ii) Explain the central theme of the invention and novelty, inventiveness and utility of the invention.
- (iii) Share all the prior art documents in your possession with the attorney.
- (iv) If you have developed an improved version of your competitor's product/process, admit it and be totally honest. This would help the attorney in drafting precise claims and avoid excessive claims, which might be struck down immediately or at a later date.
- (v) A detailed description of the best way of putting the invention into practical use, results of your tests and trials, etc., including all failures and defects should be given to the attorney.

- (vi) Alternative ways of using the invention, and the substitutes or parts of it i.e., will one chemical compound do as well as any other in the process?
- (vii) It may be worth drafting the patent widely enough to cover less satisfactory alternatives as well so as to prevent rivals from marketing a less satisfactory competing product, which because of its defects might bring the whole genre of product into disrepute or which may be cheap.
- (viii) Both after an initial search and during the course of the filing and grant of a patent application, it is important to respond quickly and accurately to queries that the patent attorney may have. Thus, the client should keep the patent attorney informed of any new developments in the field of invention carried by the patentee or someone else.

## Filing of Patent Applications in Respect of Microbiological Inventions and Other Inventions

An inventor is required to deposit the strain of a microorganism in a recognized depository, which assigns a registration number to the deposited microorganism. This number needs to be quoted in the patent application. Obviously a strain of microorganism is required to be deposited before filing a patent application. It may be observed that this mechanism obviates the need of describing a microorganism in the patent application. Further, samples of strains can be obtained from the depository for further working on the patent. There are many international depositories in many countries, which are recognized under the Budapest Treaty.

## Protecting Microbiological Inventions and Microorganisms

The Indian Patent Act has no specific provision for patenting of microorganisms and microbiological processes. However, as a matter of practice microorganisms per se are not patentable in India. (However, a recent decision of the Kolkata High Court has held that microbiological processes are patentable in India). In order to meet the obligation under TRIPS, India is required to introduce a patenting of microorganisms. Draft laws in this regards have been formulated. It may, however, be noted that many countries allow both process and product patents in regard to microbiological inventions and microorganism per se. All such countries allow patenting of genetically modified microorganisms, but a few also allow patenting of naturally occurring microorganisms if isolated from nature for the first time and if other conditions of patentability are satisfied.

## GRANT OF PATENT

When all the requirements of the FER are met or in case of opposition under Section 25(1), if the opposition is decided in favour of the applicant, the patent is granted, after 6 months from the date of publication under Section 11A, the letter patent is issued, entry is made in the register of patents and it is notified in the Patent Office Journal, thereafter opening the application, specification and other related documents for public inspection on payment of prescribed fee.

## Term and Date of Patent

Term of every patent will be 20 years from the date of filing of patent application, irrespective of whether it is filed with provisional or complete specification. Date of patent is the date on which the application for patent is filed.

## Post Grant Opposition

Any interested person can file notice of opposition (along with written statement and evidence, if any) anytime after the grant of Patent but before the expiry of a period of one year from the date of publication of grant of a Patent in the Patent Office Journal. The above notice under Section 25(2) shall be filed on Form-7 along with a fee of Rs. 1,500/- or Rs. 6,000/- for natural person and other than natural person respectively, in duplicate at the appropriate office. The grounds of opposition under Section 25(2) are the same as given before in case of pre-grant opposition. The post grant opposition is decided by an Opposition Board followed by a hearing and the reasoned decision by the Controller.

## Rights of the Patentee

Where a patent covers a product, the grant of patent gives the patentee the exclusive right to prevent others from performing, without authorisation, the act of making, using, offering for sale, selling or importing that product for the above purpose.

Where a patent covers a process, the patentee has the exclusive right to exclude others from performing, without his authorisation, the act of using that process, using and offering for sale, selling or importing for those purposes, the product obtained directly by that process in India. These rights created by statute are circumscribed by various conditions and limitations as provided in the Patents Act, 1970 as amended by The Patents (Amendment) Act, 2002.

## Register of Patent

The Register of Patents are kept in the patent offices and can be inspected or extract from it can be obtained on payment of prescribed fee. Register of Patent contains the name and address of the patentee, notification of assignment etc., particulars in respect of validity or proprietorship of patent and payment of renewal fee.

## Renewal Fee

To keep the patent in force, renewal fee is to be paid every year. The first renewal fee is payable for the third year and must be paid before the expiration of the second year from the date of patent. If the patent has not been granted within two years, the renewal fees may be accumulated and paid immediately after the patent is granted, or within three months of its recordal in Register of Patents or within an extended period of 9 months, by paying extension fees of six months on Form-4, from the date of recordal. If the renewal fee

is not paid within the prescribed time, the patent will cease to have effect. However, a provision to restore the patent is possible provided application is made within eighteen months from the date of cessation.

Renewal fee is counted from the date of filing of the patent application. Six month's grace time is available with extension fee for payment of renewal fee. No renewal fees is payable on Patents of Addition, unless the original patent is revoked and if the Patent of Addition is converted into an independent patent; renewal fee, then, becomes payable for the remainder of the term of the main patent.

## Restoration

Application for restoration of a patent that lapses due to non-payment of renewal fees must be made within 18 months of lapse. The application is to be filed in the appropriate office according to the jurisdiction.

## Opposition Proceedings to Grant of Patents

### Pre-Grant Opposition

Where an application for a patent has been published but a patent has not been granted, any person may, in writing represent by way of opposition to the Controller against the grant of any patent. The representation shall be filed at the appropriate office and shall include a statement and evidence, if any, in support of the representation and a request for hearing, if so desired.

The above representation may be made on the following grounds:

- (a) that the applicant for the patent or the person under or through whom he claims, wrongfully obtained the invention or any part thereof from him or from a person under or through whom he claims;
- (b) that the invention so far as claimed in any claim of the complete specification has been published before the priority date of the claim—
  - (i) in any specification filed in pursuance of an application for a patent made in India on or after the 1st day of January, 1912; or
  - (ii) in India or elsewhere, in any other document: Provided that the ground specified in sub-clause (ii) shall not be available where such publication does not constitute an anticipation of the invention by virtue of sub-section (2) or sub-section (3) of Section 29;
- (c) that the invention so far as claimed in any claim of the complete specification is claimed in a claim of a complete specification published on or after the priority date of the applicant's claim and filed in pursuance of an application for a patent in India, being a claim of which the priority date is earlier than that of the applicant's claim;

- (d) 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 that claim; Explanation — for the purposes of this clause, an invention relating to a process for which a patent is claimed shall be deemed to have been publicly known or publicly used in India before the priority date, of the claim if a product made by that process had already been imported into India before that date except where such importation has been for the purpose of reasonable trial or experiment only;
- (e) 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 as mentioned in clause (b) or having regard to what was used in India before the priority date of the applicant's claim;
- (f) that the subject of any claim of the complete specification is not an invention within the meaning of this Act, or is not patentable under this Act;
- (g) that the complete specification does not sufficiently and clearly describe the invention or the method by which it is to be performed;
- (h) that the applicant has failed to disclose to the Controller the information required by Section 8 or has furnished the information, which in any material particular was false to his knowledge;
- (i) that in the case of convention application, the application was not made within twelve months from the date of the first application for protection for the invention made in a convention country by the applicant or a person from whom he derives the title;
- (j) that the complete specification does not disclose or wrongly mentions the source or geographical origin of biological material used for the invention;
- (k) that the invention so far as claimed in any claim of the complete specification is anticipated having regard to the knowledge, oral or otherwise, available within any local or indigenous community in India or elsewhere, but on no other ground.

The Controller shall, if requested by such person for being heard, hear him and dispose of such representation. If the opposition is decided in favour of the applicant, the patent is granted and the grant of patent is published in the Patent Office Journal, thereby opening the application, specification and other related documents for public inspection on payment of prescribed fee.

### Opposition under the Indian Patents Act 1970

After the Patent Office has examined an application and found it in order for grant of a patent, it publishes the title of the invention, name of the inventor(s) and the applicant(s), abstract of the invention, drawings and claims in the Gazette of India, Part III, Section 2, for interested parties to oppose the grant of the patent. An application for opposition may be filed at the concerned Patent Office branch within four months of the date of the issue

of the concerned gazette. An extension of one month is possible; a request for extension has to be made within the first four months. Typed or photocopies of the specification together with photocopies of the drawings, if any, can be obtained from the Patent Office, Calcutta or the concerned branch office on payment of the prescribed fees. One would like to oppose if the idea of the accepted application infringes upon one's invention/existing patent, if the coverage of the proposed patent is very wide, which may be detrimental to one's research or if the idea is not novel and so on.

## Patent Specification

A patent specification is a technical document describing the invention. A specification may be either provisional or complete. Provisional specification gives the initial description of an invention when the application is filed. A complete specification gives full and sufficient of an invention.

## ✓ TYPES OF PATENT DOCUMENTS

There are two types of patent documents usually known as patent specification, namely:

### Provisional Specification

A provisional specification is usually filed to establish priority of the invention in case the disclosed invention is only at a conceptual stage and a delay is expected in submitting full and specific description of the invention. Although, a patent application accompanied with provisional specification does not confer any legal patent rights to the applicants, it is, however, a very important document to establish the earliest ownership of an invention. The provisional specification is a permanent and independent scientific-cum-legal document and no amendment is allowed in this. No patent is granted on the basis of a provisional specification. It has to be followed by a complete specification for obtaining a patent for the said invention. Complete specification must be submitted within 12 months of filing the provisional specification. This period can be extended by 3 months. It is not necessary to file an application with provisional specification before the complete specification. An application with complete specification can be filed right at the first instance.

### Complete Specification

Submission of complete specification is necessary to obtain a patent. The contents of a complete specification would include the following:

1. Title of the invention.
2. Field to which the invention belongs.

3. Background of the invention including prior art giving drawbacks of the known inventions and practices.
4. Complete description of the invention along with experimental results.
5. Drawings etc. essential for understanding the invention.
6. Claims, which are statements, related to the invention on which legal proprietorship is being sought. Therefore, the claims have to be drafted very carefully.