



Evolving Pace of Patent in India and its Corollary in Past, Present and Future

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ABSTRACT

The law of patents in India is governed by the patent Act 1970 as amended by the patent Act 1990. A bill named patent bill 1999 which had proposed substantial changes in the law was introduced in the parliament in December 1999, and was passed as the patent Act 2002. A patent is monopoly right granted to a person who has invented a new and useful or an improvement of an existing article or a new process of making an article. After the expiry of the duration of patent, anybody can make use of the invention. A patent is a form of industrial property or as it is now called intellectual property. The owner of the patent can sell this property. A patent being a creation of statute is territorial in extent. A patent granted in one state cannot be enforced in another state unless the invention concerned is also patented in that state. A patent is not granted for an idea or principle as such, but for some article or the process of making some article applying the idea.

The object of granting a patent is to encourage and develop new technology and industry. An inventor may disclose the new invention only if he is rewarded; otherwise he may work it secretly. In consideration of the grant of monopoly for a limited period, the inventor discloses the details of the new invention and the method working it so that after the expiry of monopoly period others can use the invention or improve upon it.

Keywords: Patent, Invention, Law, Bill, Intellectual property, Grants.

INTRODUCTION

A patent is granted as an exclusive right by the Government for an invention for a limited period of time in consideration of disclosure of the invention by an applicant.

A patentee enjoys exclusive right to prevent a third party from an unauthorized act of making, using, offering for sale, selling or importing the patented product or process

within the country during the term of the patent. The patent system was first introduced in India in 1856. The act of 1856 provided exclusive rights to the patent holder for a period of 14 years. The Indian Patent and Design Act, 1911 replaced the above act but the main clauses remained the same. Considerable efforts went in formulating the Indian Patent Act in 1970 and finally enacted from 20.04.1972.

The Indian Patent Act in 1970 was modeled to promote the industrial process development and to encourage inventions and also secure that the inventions are worked in India on a commercial scale. The Indian Patent Act, 1970 is a product of mature deliberations by two expert committees. Justice Bakshi tek Chand and Justice N. Rajgopal Ayyangar committee followed by detailed discussion by both houses of parliament and it has brought a revolution in Indian industries especially in Pharmaceutical industry. The prices of the medicines decreased dramatically post 1970 which were the highest before the enactment of this act, and today India became the cheapest manufacturing country of pharmaceutical in the world.^{1,2}

Invention

It 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 person skilled in the art. Capable of industrial application means the invention is capable of bearing made or used in an industry. Main objective of patent system is fostering innovation and technology and bringing new inventions to market for the benefit of society.

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

Inventions include;

- Any new and useful art, process, method of manufacture.
- Product, machine, apparatus, substance or other article produced by manufacture and includes new and useful improvement in any of the alleged invention.³

What is a patent?

A patent is monopoly right granted to a person who has invented a new and useful or an improvement of an existing article or a new process of making an article. It consists of an exclusive right to manufacture the new article invented or manufacture 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.

A patent is a form of industrial property or as it is now called intellectual property. The owner of the patent can sell this property. A patent being a creation of statute is territorial in extent. A patent granted in one state cannot be enforced in another state unless the invention concerned is also patented in that state. A patent is not granted for an idea or principal as such, but for some article or the process of making some article applying the idea.³

Benefits of a patent

1. Patenting your invention also allows you to prevent others from making, using or selling your invention throughout the United States without your consent.
2. A patent is also one of the few assets that can increase in value over time.
3. A patent also increases the value of your business because it is considered a valuable asset by banks and potential purchasers of your business.
4. There are many ways to financially benefit from a patent.

5. Your patent may be sold outright to another for monetary remuneration.
6. You may also license your patent to one or more parties for a percentage of the sale price. You may also be the exclusive manufacturer of your invention.
7. Whether you are a business or an independent inventor, a patent is a valuable asset and is needed to protect you from unscrupulous individuals who could benefit from your hard work.
8. The patent holder has exclusive commercial rights to use and license the invention.
9. Legal action can be taken against anyone who tries to use the invention without the patent holders consent.
10. The existence of the patent may be enough to deter would-be infringers.

How to file a provisional patent – the Specification⁴

The specification is a written description of your invention. It generally has several sections such as;

- Title
- List of Inventors
- Government support statement
- Background
- Brief Summary of the Invention
- Brief Description of the Drawings
- Detailed Description of the Invention
- References
- Claims
- Abstract

Patents are a wonderful source of information

As we saw above, inventors have to provide detailed information about their inventions in their patent applications. Patent applications are public documents, which means that anyone can read and learn from them. Countries have patent libraries where anyone can go to find information about all the patents that the government of that

country has granted. Inventors research patent documents to increase their knowledge about the latest technological developments in their field and to find inspiration for their own inventions. Investors and companies who are looking for new products in which to invest also read patent documents.

A patent is granted as an exclusive right by the Government for an invention for a limited period of time in consideration of disclosure of the invention by an applicant. A patentee enjoys exclusive right to prevent a third party from an unauthorized act of making, using, offering for sale, selling or importing the Patented product or process within the country during the term of the patent. A patented invention becomes free for public use after expiry of the term of the Patent or when the patent ceases to have effect on account of non-payment of renewal fee.^{5,6}

Grant of patents

Where an application for a patent has been found to be in order for grant of the patent and either,

- The application has not been refused by the Controller by virtue of any power vested in him by this Act; or
- The application has not been found to be in contravention of any of the provisions of this Act, the patent shall be granted as expeditiously as possible to the applicant or, in the case of a joint application, to the applicants jointly, with the seal of the patent office and the date on which the patent is granted shall be entered in the register.

On the grant of patent, the Controller shall publish the fact that the patent has been granted and thereupon the application, specification and other documents

Related thereto shall be open for public inspection.⁷

Form of patent

1. A patent shall be in the form as specified in the Third Schedule with such modifications as the circumstances of each case may require and shall bear the number accorded to the application under rule 37.
2. The patent certificate shall ordinarily be issued within seven days from the date of grant of patent under section 43.⁸

Types of patents⁹

Normally a distinction is made between inventions that concern with products and invention that concern with processes. E.g. an invention consists of a new drug is a 'Product Invention', while an invention consist of a new method or process of making unknown or new drug is a 'Process Invention'. The corresponding patents are usually called as product patent and process patent respectively.

Process patent

The basic philosophy of process patent is that the product can be manufactured by a totally new and different method. In this case, the patentee has the exclusive right for himself, his agent or the licensee to use or exercises the process or the method in the country which grants the patent. This means the patentee's exclusive right is confined only to the method or methods of manufacturing product and not to the product.

Product patent

The grant of the patent for the product prevents a person in commercially utilizing the process he has developed for the preparation of the product, without securing a license from the product patent holder. By the grant of patent the patentee has the exclusive right for himself, his agent or the licensee to make, sell, or distribute such a product in the country which grants a patent.

According to the Indian Patents Act, three types of patents can be secured. These are,

- Ordinary Patent
- A patent of addition and
- A patent granted under Convention Agreement.

Ordinary patent

An ordinary patent is a patent granted based on an ordinary application made for patent.

A patent of addition

A patent of addition is a patent secured for an improvement or modification of an invention for which invention; a patent has already been applied for or granted. A patent of addition remains in force only as long as the patent for the main invention remains in force. No renewal fees have to be paid for maintaining a patent of addition. In case the main patent is revoked, the patent addition may be made an independent patent by the authority ordering the revocation of the main patent. Such an independent patent can continue thereafter for the unexpired term of the main patent subject to the payment of the renewal fees.

A patent granted under convention agreement

A patent granted in respect of a convention application filed under Section 135 of the Act, which is based on an application made in a Convention country as notified under Section 133 of the Act in respect of the same invention. According to the modified meaning of the term "Convention Country", it means a country of convention, which is a member of a group of countries or a union of countries or an inter-governmental organization notified as such under sub Section (i) of section 133 of the act.

The convention application has to be made within 12 months from the date of the

first application made in a convention country in respect of that invention.⁹

There are several types of patents recognized under United States law, each of which grants a specific type of benefit or protection. They are:⁹

Utility patents: may be granted on any new or improved, useful and non-obvious machine, manufactured article, process or composition of matter.

Provisional application for patent: an optional first step towards a Utility Patent, Provisional Applications grant an immediate priority filing date and “patent pending” status for a full 12 months before an inventor files a full Utility Patent Application.

Design patents: may be granted on any new, original and ornamental design for a useful article.

Plant patents: may be granted on any new and distinct variety of plant that can be asexually reproduced. Although it’s possible to qualify for more than one type of patent, most inventions qualify only for one. Legal Zoom offers Provisional Applications for Patent, Utility Patents, and Design Patents.

Key features of the provisional application for patent⁹

- **Official Priority Filing Date:** A filing date can be used as evidence in the event of an ownership dispute (the earlier your filing date, the better).
- **Immediate “Patent Pending” Status:** Because the Provisional Application for Patent is a type of patent application, your invention can be marked as “patent pending” for the 12 months the Provisional Application is in effect.
- **Earlier Priority Filing:** If you file a Non-Provisional Patent Application before your Provisional Application expires, your Non-Provisional Application (and any eventual patent) will retain the earlier Provisional Application priority filing date.

- **Less Expensive Filing Fees:** A Provisional Application costs significantly less to file than a Non-Provisional Application.
- **Fewer Application Requirements:** The Provisional Application has fewer required sections than a Non-Provisional Application. Most notably, a Provisional Application does not require a Claims section or a prior art search.

Scope of the provisional application for patent

If you eventually decide to complete the patent process and want to take advantage of your earlier Provisional Application filing date, the subject matter in your corresponding Non-provisional application must be adequately supported by your Provisional Application. In other words, it must be clear to the USPTO that both applications refer to the same invention. Should there be a significant disparity between the two descriptions; the USPTO may decide that your provisional and non-provisional applications describe two different inventions. If this happens, you will lose your claim to the earlier filing date.⁹

The provisional application process

A Provisional Application for Patent requires the following information:

- Invention Title
- Description
- Abstract
- Drawings (if necessary for understanding how to make or use the invention).

Design patents¹⁰

Design patents protect new and non-obvious ornamental design for useful articles. Unlike utility patents, design patents protect only the appearance of an article rather than its structural or functional characteristics. This means they have a much narrower scope of protection than utility patents. Ineligible

design patent subject matter includes unoriginal design (like designs modeled on naturally-occurring or well-known objects or people) or material considered offensive to any race, ethnicity, religion or nationality.

Design patents vs. copyrights

Design patents are used to protect the ornamental design of a useful article, such as the appearance of a music box. In contrast, copyrights are used to protect most types of visual, literary, performing and auditory works. These include things like books, sculptures, photographs, films, sound recordings, paintings and architectural plans. The key difference between a copyright and a design patent is that the artistry protected by a design patent typically accompanies a manufactured item, whereas the expression protected by a copyright typically stands alone as a creative work. In some cases, the ornamental design of a useful article will contain enough originality to qualify for both design patent and copyright protection.¹⁰

Deciding between utility and design patent protection

Utility patents protect an invention's functionality. Design patents protect how an invention appears. A manufactured article that contains both utility and ornamental design could conceivably qualify for both forms of patent protection. Generally, if the design of the article is informed primarily by its function—that is, the invention cannot work the same way if it features a different design—then it will most likely qualify for a utility patent alone, rather than a design patent or both types (assuming of course all utility patent qualifications are met). For example, a design patent application would claim a particular chair's aesthetic appearance, while a utility application would typically claim the technology of the chair itself (e.g. "all devices built with up to four legs, a seat of varying size, with or without a chair back, to be used

for the purpose of support"). A Design Patent protects your design for 14 years from the date of issue. There are no maintenance fees for Design Patents.¹⁰

The design patent application process¹⁰

The design patent's relatively limited scope results in a much simpler application process. It also rules out a Provisional Application as an option—you simply have to apply (non-provisionally) with a Design Patent Application from the start. Your completed application must contain clear drawings with a sufficient number of views to demonstrate the appearance of your claimed design. If relevant, you should also disclose any prior art references used in the design.

Elements of the design patent application

- Preamble: includes the applicant's name, title of the design, and a brief description of the nature and intended use of the design.
- Cross-reference(s) to related applications.
- Statement regarding federally-funded or – sponsored research and/or development, if any.
- A Single Claim, composed in standard sentence format (no more than one claim is allowed).
- Drawings: (without reference numbers) or photographs.

Plant patents¹⁰

Plant patents are far less common than either utility or design patents. They are designed specifically to protect newly discovered or invented varieties of plants that can be asexually reproduced.

Key features of the plant patent

- A two-part definition: (1) discovery or selection step and (2) asexual reproduction step
- Plurality of inventors: An inventor can be any person (including staff members) who

contributed to either step of the two-part definition (see above).

- 20-year patent term: begins on the date of the grant
- Exclusive propagation rights: You have the right to prevent others from asexually reproducing, selling or using your patented plant.
- Single plant, single patent: A plant patent is limited to one plant or genome. A sport or mutant of a claimed plant can be separately patented.

The plant patent application process¹⁰

A Plant Patent Application has the same requirements as a Non-Provisional Utility Patent Application, and one additional requirement: a plant color-coding sheet. The specification for a Plant Patent Application should include:

- Title of the invention
- Latin name of the genus and species of the claimed plant
- Variety denomination
- Background of the invention, including the field and relevant prior art
- Summary of the invention
- Drawing(s) and brief description(s)
- Detailed and reasonably complete botanical description of the plant, including distinguishing characteristics over related known varieties, your plant's antecedents, etc.
- A single claim
- Abstract

Indian patent system¹¹⁻¹⁶

History of Indian patent system

The first legislation in India relating to patents was the Act VI of 1856. The objective of this legislation was to encourage inventions of new and useful manufactures and to induce inventors to disclose secret of their inventions. The Act was subsequently repealed by Act IX of 1857 since it had been

enacted without the approval of the sovereign. Fresh legislation for granting 'exclusive privileges' was introduced in 1859 as Act XV of 1859. This legislation contained certain modifications of the earlier legislation, namely, grant of exclusive privileges to useful inventions only and extension of priority period from 6 to 12 months. The Act excluded importers from the definition of inventor. The 1856 Act was based on the United Kingdom Act of 1852 with certain departures including allowing assignees to make application in India and also taking prior public use or publication in India or United Kingdom for the purpose of ascertaining novelty.

The Act of 1859 provided protection for invention only and not for designs. Whereas United Kingdom had been protecting designs from 1842 onwards. To remove this lacuna, the 'Patterns and Designs Protection Act' (Act XIII) was passed in 1872. This Act amended the 1859 Act to include any new and original pattern or design or the application of such pattern to any substance or article of manufacture within the meaning of 'new manufacture'. The Act XV of 1859 was further amended in 1883 by XVI of 1883 to introduce a provision to protect novelty of the invention, which prior to making application for their protection were disclosed in the Exhibitions of India. A grace period of 6 months was provided for filing such applications after the date of the opening of such Exhibition.

In 1888, new legislation was introduced to consolidate and amend the law relating to invention and designs in conformity with the amendments made in the UK law. The modifications introduced in the Indian law, by Act V of 1888, over the UK legislation, *inter alia*, include:

- Shifting of authority to administer the Act from the Home department to;
- Secretary to Government of India;

- Extension of the jurisdiction of the Act to other courts apart from High Courts of Madras, Calcutta and Bombay;
- Reduction in the fee from Rs. 100 to Rs. 10 only at filing stages;
- Graduation of fee as to amend approximately with the increasing value with the invention acquires as it becomes more commonly known and used.
- Provision for detailed disclosure of the invention, including best mode of working the invention in full clear, concise and exact terms so as to enable any person skilled in the art or science to make use of the invention;

Who can apply?

Application may be made, either alone or jointly with another, by the inventor, assignee, legal representative of deceased inventor or assignee. The inventor is entitled to be mentioned in the patent if he applies to do so. Application may be made jointly by two or more corporations as assignees.

Patentable inventions

An invention means any new and useful art, process, method or manner of manufacture; machine, apparatus or other article; or substance produced by manufacture, and includes any new and useful improvement of any of them, and an alleged invention.

Grant or sealing of patent

If the application is not opposed or the opposition is decided in favor of the applicant or is not refused the patent is granted or sealed on payment of sealing fee within 6 months from the date of advertisement. However, it is extendable by three months.

Register of patents

The Register of Patents will be kept in the Patent Office and its branch offices. Register of Patents can be inspected or extract

from it can be obtained on payment of prescribed fee. Register of Patents contains full details of the Patent which include patent number, the names and addresses of the patentee; notification of assignment etc.; renewals, particulars in respect of proprietorship of patent etc.

Rights of patentee

A patent grant gives the patentee the exclusive right to make or use the patented article or use the patented process. He can prevent all others from making or using the patented process. A patentee has also the right to assign the patent, grant licenses under, or otherwise deal with it for any consideration. These rights created by statute are circumscribed by various conditions and limitations.

Renewal fee

Renewal fees are payable every year. The first renewal fee is payable for third year of the patent's life, and must be paid before the patent's second anniversary. If the patent has not been issued within that period, renewal fees may be accumulated and paid immediately after the patent is sealed, or within three months of its recordable in the Register of the Patents. Date of payment of Renewal fees is measured from the date of the patent. Six months' grace is available with Extension fee. No renewal fees are payable on patents of addition, unless the original patent is revoked and the patent of addition is converted into an independent patent; renewal fees then become payable for the remainder of the term of the main patent.

No renewal fees are payable during the pendency of the application for a patent; renewal fees that become overdue during pendency are payable upon sealing within three months of recordable in the Patent Register.

Working

Annual reports as to the extent of working, by every patentee and licensee, are a statutory requirement and must be submitted by March, 31 each year for the previous year ending December, 31.

Compulsory license and license of right

On failure to work a patent within three years from the date of its sealing, an interested party may file petition for grant of a compulsory license.

Every patent for an invention relating to a method or process for manufacture of substances intended for use, or capable of being used, as food, medicines, or drugs, or relating to substances prepared or produced by chemical process (including alloys, optical glass, semi-conductors and inter-metallic compounds) shall be deemed to be endorsed "Licenses of Right" from the date of expiry of three years from the date of sealing the patent.

Assignment

Applications must be filed on the prescribed form with the Controller for the registration of assignments and any other documents creating an interest in a patent in order for them to be valid. In order to be valid, an assignment must be recorded within six months from the date of the document. A six-month extension may be obtained.

License

Applications must be filed on the prescribed form with the Controller for the registration of licenses and any other documents creating an interest in a patent in order for them to be valid. A license must be recorded within six months from the date of the document.

Duration

A patent lasts for 14 years from the date of filing the complete specification (if an application is filled with provisional

specification on January 1, 1989, and a complete specification is filed on January 1, 1990, the duration is counted from January 1, 1990). However, for food, drug and insecticide patents, the life is seven years from the date of complete specification, or five years from date of sealing, whichever is shorter.

Restoration

Application for restoration of a patent that lapses due to nonpayment of renewal fees must be made within one year of lapse. If an overdue annuity is not paid within the extension period, the one-year period for seeking restoration commences from the date of recordable.

Appeal

Appeal lies in the High Court. Appeal must be lodged within three months from the decision of the Controller.

Patents rules

Section 159 of the Patents Act, 1970 empowers the Central Government to make rules for implementing the Act and regulating patent administration. Accordingly, the Patents Rules, 1972 were notified and brought into force w.e.f. 20th April, 1972. These Rules were amended from time to time till 20th May, 2003 when new Patents Rules, 2003 were brought into force by replacing the 1972 rules. These Rules were further amended by the Patents (Amendment) Rules, 2005 and the Patents (Amendment) Rules, 2006. The last amendments were made effective from 5th May, 2006.¹⁷⁻¹⁹

There are four Schedules to the Patents Rules which provide details of fees and forms pertaining to various types of actions required under patents act and rules:

- The First Schedule prescribes fees to be paid.
- The Second Schedule specifies the list of forms and the texts of various forms

which are to be used wherever required in connection with various activities under the Patents Act.

- The Third Schedule prescribes the Form of the patent to be issued on the grant of patent.
- The Fourth Schedule prescribes costs to be awarded in various proceedings before the Controller under the Act.^{20,21}

Amendments to Indian patents act 1970²

The patent system was first introduced in India in 1856. The act of 1856 provided exclusive right to the patent holder for a period of 14 years. The Indian Patents and Designs Act, 1911 replaced the above act but, the provisions remained the same. Post-Independence, a need was felt to revamp the laws related to patents so as to reduce the stronghold of MNCs (Multi National Corporations) and provide an impetus to local industrial growth. Considerable efforts went into formulating the Indian Patents Act, which was introduced as a Bill in Parliament of India in 1970 and finally enacted from 20.4.1972.

The amendments to the Indian patents act 1970

India along with 137 countries signed the WTO treaty on 15 April 1994 to bring it in effect from 1st of January 1995. TRIPS (Trade Related of Intellectual Property), which is one of the important part of WTO, under which; product patenting was required to be introduced by WTO member countries effective from 1995. Since a patent right is trade related, India, being a member of the World Trade Organization (WTO) is mandated to make its patent-related laws (Patent Act 1970) and other trade-related IPR laws. To conform with the TRIPS norms. Many developing countries, including India, however, were given a 10-years grace period for introduction of product patenting till 1st January 2005. Indian Patent Act 1970 was

amended in 1999, 2002, and 2005 to comply with TRIPS agreement.

The important feature of the recent amendments to the Patent Act was to introduce product patenting in pharmaceuticals, agrochemicals and food sectors for which IPA 1970 was granting only process patents. Till now, the act has been amended thrice-in 1999, 2002, and 2005. In 2001, the provision of exclusive marketing rights (EMRs) was introduced. This was a transitional arrangement till the introduction of the TRIPS- mandated product patents in pharmaceutical, agrochemicals and food sectors.

Indian patent law amendments 1999²

Salient features

1. Introduction of pre-grant representation (opposition) in addition to the existing post-grant opposition mechanism.
2. The provisions for EMR (Exclusive Marketing Rights) were provided which is the main feature of 1999 amendments. Companies can get EMR for maximum period of five years, if they have valid product patent in other countries.
3. The provision for “Mail Box Applications” were introduced in order to protect interests of MNCs. Under these provisions the products patent can be submitted to Indian Patent Office which will be kept in Mail Box and will be examined once the product patent regime is introduced in Indian Patent Law.

Indian patent law amendments 2002

Salient features

1. The term patent became 20 years from the date of a filing which was 7 years previously.
2. A new definition was introduced for “Invention” which means a new product or process involving inventive step and capable of industrial application.

3. A method or process of testing during the process of manufacture became patentable.
4. The provisions for 18 months publication was introduced, which means every patent will be published just after 18 months from the date of filing/priority.
5. The provisions for a request for examination system was introduced and therefore all the patent applications in which First Examination Report has not been issued on or before 19 May, 2003 will now be examined only after filling a request for examination on Form-19 with prescribed fee.
6. The ground of opposition as well as revocation were enlarged by adding following grounds:
 - Non-disclosure or wrongly mentioning the source of geographical origin of biological material used for invention;
 - Anticipation having regard to the knowledge oral or otherwise available within local or indigenous community in India or elsewhere.

4. The term “pharmaceutical substance” introduced and defined as “a new entity” involving one or more inventive steps.
5. What is not patentable: Mathematical methods, business methods, computer program per se and algorithms remain not patentable. Technical application of computer program software in industry and software in combination with hardware which were briefly patentable under the Patents (Amendment) ordinance 2005, have now been omitted in the new Law thereby reinstating the earlier “Prohibition” against patentability of computer program/software per se.

Administrative structure of the patent office²²⁻²⁵

Patent system in India is administered under the superintendence of the Controller General of Patents, Designs and Trademarks (CGPDTM), appointed under sub-section (1) of Section 3 of the Trade Marks Act, 1999. The Office of the Controller General of Patents, Designs and Trade Marks is a subordinate office of the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry and comprises the statutory offices of Patent Office, 13 Trade Marks Registry and Geographical Indication Registry. The Controller General's Headquarters is located at Mumbai. There are four Patent Offices in India. The Head Office is at Kolkata and other Patent Offices are located at Chennai, Delhi and Mumbai. The Controller General of Patents, Designs and Trade Marks delegates his powers regarding various procedures for patent grant to Senior Joint Controller of Patents & Designs, Joint Controllers of Patents & Designs, Deputy Controllers of Patents & Designs and Assistant Controllers of Patents & Designs. Examination of patent applications is done by Examiners of Patents & Designs.

Indian Patent Law Amendments 2005²

Salient features

1. Product patent regime was introduced that means in respect of novel compositions, drugs, chemicals, agrochemicals, food and new microorganisms the product patent can be granted.
2. Novelty: the novelty requirement has been made absolute, both in respect of prior publication and prior use of the invention, anywhere in the world.
3. New definition for Inventive step was introduced which is as follows; “Inventive step” has been redefined as “an invention that involves technical advances 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”.

Patent in different countries²⁶

In a sense patents have assumed an international character. The increasing number of application for patent from foreigners received in almost all countries is recognition of this fact. Attempts are being made from time to time by international associations for the protection of industrial property to introduce more and more uniformity and harmonization among national patent systems. The international convention for the protection of industrial property and GATT and TRIPS agreements are examples of attempts at harmonization of the law of patent and other forms of intellectual property.

Short comparison of patents to other countries

European patent²⁶

Monopolies for inventions have been in existence since the beginning of the 14th century. The first Patent Law was enacted in Venice in 1474. The first patent for an invention was in Italy in 1421 when a three year grant was given to Filippo Brunelleschi for "some machine or kind of ship", for a period of three years. The Senate of Venice granted several monopolies to foster new ventures and invention, and numbered over 100 by 1550. The Venetian system was confirmed by statute in 1474, the first patent law, giving an inventor exclusive rights for ten years and imposed fines for infringement. It stipulated that the Government was free to use the invention. This system spread to other European countries and to England.

European patent application

A European patent application procedure allows you to obtain protection in those European countries which are members of the European Patent Organization. European patent applications may be filed at:

- The national patent offices;

- European Patent Office (EPO), at its Munich, The Hague or Berlin branches.

International patent application by patent cooperation treaty (PCT)

The Patent Cooperation Treaty (PCT) is a worldwide agreement to simplify the filing and processing of patent applications. Approximately 133 countries, including most industrial countries, are party to the treaty. Through a single international application you can apply for a patent in all the countries party to the treaty. You must indicate those PCT contracting states in which your international application is to have effect ("designated States"). The effect of the international application in each designated State is the same as if a national patent application had been filed with the national patent office of that State.

Australian patent law²⁷

The system of granting patents in the Australian colonies is based upon British law, and can be traced back to the English Statute of Monopolies of 1623, and the first "modern" patent law enacted in Britain in 1852. Prior to the colonial states enacting their own legislation in the mid 19th century and forming their own Patent Offices, inventors applied to England for patent registration and protection. When legislatures were established in the Australian colonies, people could apply (petition the parliament) for a patent to be granted by the Governor of the colony, by way of a Private Bill. The first of these was South Australian Private Act No.1 of 1848, granted to Andrew John Murray of Adelaide, S.A. for "An improved windlass", on the 20th June 1848, for a period of 10 years. Several other Private Acts were granted in South Australia prior to the South Australian Patent Act of 1859; and several Private Acts for patents were granted in Western Australia. The first patent act in Australia, other than private acts, was

introduced into New South Wales in 1852 (coming into force on 10th January 1854).

Victoria proclaimed its first Patent Act in 1854, with the length of the grant being for 14 years.

The administration of the States Patents Acts (NSW, Victoria, Queensland, SA, WA and Tasmania) was transferred to the Commonwealth from 1 June 1904

Australian patent law is law governing the granting of a temporary monopoly on the use of an invention, in exchange for the publication and free use of the invention after a certain time. The primary piece of legislation is the Patents Act 1990 (CTH). Patents are administered by the Commonwealth Government agency IP Australia. Australia is a member state of the World Intellectual Property Organization (WIPO), and compliant with Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). This makes Australian patent law broadly comparable with patent law in other major countries.

Canadian patent law²⁸

Canadian patent law is the legal system regulating the granting of patents for inventions within Canada, and the enforcement of these rights in Canada.

Japanese patent law²⁹

Japanese patent law is based on the first-to-file principle and is mainly given force by the Patent Act of Japan. Article 2 defines an invention as "the highly advanced creation of technical ideas utilizing the law of nature".

South African patent system³⁰

The South African patent system is the system by which patents are granted in South Africa. As is the case in many other countries, a patent provides legal protection for a new and industrially applicable invention. This invention, which constitutes

either a product or process, has to be brought about as a result of an inventive step.

United states patent law^{31,32}

In the United States, the first patent was granted by the Massachusetts Bay Colony in 1641 to Samuel Winslow for a method of making salt. Of the original 13 colonies, only North Carolina did not grant any patents. United States patent law is authorized by Article One, section 8, clause 8 of the U.S. Constitution which states:

The Congress shall have power to promote the progress of science and useful arts, by securing for limited time to authors and inventors the exclusive right to their respective writings and discoveries.

Past present and future^{33,34}

Past

For context, the patentability of user an interface has been a topic of discussion for decades, but has only been formalized in recent years and is still evolving. Catron Brooks, Supervisory Patent Examiner at the USPTO, described "how it all started" with Xerox applying for design patents on its user interfaces in the 1980s, which catalyzed discussion and debate over what characteristics of user interfaces could be patentable. Charles Mauro of Mauro New Media contextualized the Xerox patents within a timeline, mapping key events in user interface development with important patent events from the 1960s to the present:

Present

Rob Katz of Banner & Wyckoff provided summary statistics on the current state of user interface design patents, which make-up about 2% of all design patent applications. This translates to roughly 500 UI design patent filings per year with the USPTO, but has been rapidly accelerating. Brooks of the USPTO indicated that "Generated Images" (referring to user

interfaces and icons) are the fastest growing segment of design patents.

It's important to keep in mind that design patents are only one form of intellectual property of protection for user interfaces, which can also be covered by utility patents, trademarks and copyrights. Mauro suggests that all of these forms of IP protection are needed to cover the entire user experience (UX), but that current processes are not integrated, requiring a strategic approach. Apple demonstrated such a strategy in their case against Samsung, which included multiple design patents, utility patents and trade dress IP. Katz mentioned that it is rare for a design patent to include both aspects of the physical product design and the user interface design, as it is typically more effective to patent each separately.

Future

The take aways from Design Day 2013 were clear - user interface design patents are more important now than ever, and there is a need to evolve the processes around protecting them. In the short-term this includes increasing staffing at the USPTO to support the growing number of UI design patent applications, and to continue the dialogue between stakeholders at events like Design Day. It strongly recommends that user interface designers improve their education and processes around patents. Looking further ahead it would expect the USPTO processes to catch-up (or at least narrow the gap) with the design and technology it is intended to protect. This may mean more suitable forms for documenting and describing interactive designs as well as a more cohesive approach to combining related forms of IP such as design and utility patents as appropriate.

Product patent regime posed Indian pharma companies to change their marketing strategies³⁵⁻³⁸

After going through the various articles on patent regime implemented in India from Jan 2005, it compelled Indian pharma companies to relook in to their marketing strategies so as to become competitive & strongly withstand in the competition with MNC's & big giants in domestic markets. Product patent regime posed Indian pharmaceutical companies to change their marketing strategies.

Government Initiatives

Some positives steps taken by Indian government in recent years include.

- Recognition of pharmaceutical industry as knowledge based industry
- Reduction in interest rates for export financing
- Additional tax deductions for R&D expenses
- Reduction in the price control of pharmaceuticals.

Post patent growth rates of sales of drugs³⁹⁻⁴²

The pharma industry has shown a significant growth rate post patent due to following 3 reasons:

- Expansion of global generic sector & increased pressure on big pharma companies to reduce their costs.
- Rapid expansion of local pharmaceutical market & healthcare within Indian market due to privatization of health care industry, increasing disposable income & widening of disease profile.
- The policy stance of the Indian government in favor of public health and the local industry which provides an assurance to the local firms regarding the legitimacy of their generics production activities.

Product patents and access to medicines in India⁴³⁻⁴⁶

Since the introduction of the Indian Patents Act 1970, which prohibited product patent protection to pharmaceutical inventions, the pharmaceutical industry in India succeeded in achieving self-sufficiency. The industry, i.e., the Indian generic industry “holds 4th position in terms of volume and 13th in terms of value of production.” It also enjoys a 22 per cent share of the global generic market. Currently, domestic companies control 80 per cent of the domestic market. Only two MNCs, viz. Glaxo Smithkline (GSK) and Pfizer, figure in the top 10 pharmaceutical companies in India. Only four MNCs find their place among the top 20 pharmaceutical companies in the country. In 1970, Indian companies only had a 20 per cent share. The domestic pharmaceutical markets show a growth of 17 per cent annually. The exports of drugs and pharmaceuticals by the Indian pharmaceutical industry are around USD 5.3 billion. Indian pharmaceutical companies play an important role in providing life-saving drugs at affordable prices. For instance, 70 per cent of the antiretroviral drugs (ARV) procured to treat HIV/AIDS under the Global Fund to Fight HIV/AIDS, TB and Malaria (GFATM) comes from Indian companies. Similarly, 70 per cent of UNICEF, IDA and Clinton Foundation procurement is also from Indian companies. Indian companies export to nearly 225 territories consisting of independent states and non-independent states.

Emerging R & D's strategies⁴⁷⁻⁵⁰

Post product regime, if the Indian companies wanted to withstand in competition & survive, they have to invest more in the R & D's for development of New Chemical Entities (NCE's). Before patent regime, with the help of reverse engineering & process patent companies were enjoying copying MNC's molecules & introducing

their own brands & investing less in NCE's. This is now reversed; companies have adopted the scenario & started investing more in NCE's & discovering Novel Drug Delivery Systems (NDDS).

CONCLUSION

A patent is monopoly right granted to a person who has invented a new and useful or an improvement of an existing article or a new process of making an article. It consists of an exclusive right to manufacture the new article invented or manufacture 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.

A patent is a form of industrial property or as it is now called intellectual property. The owner of the patent can sell this property. A patent being a creation of statute is territorial in extent. A patent granted in one state cannot be enforced in another state unless the invention concerned is also patented in that state. A patent is not granted for an idea or principal as such, but for some article or the process of making some article applying the idea.

Moreover, the attendees and presenters were predominately lawyers and USPTO examiners, along with a handful of design experts. As in previous years, the majority of designers attending were drawn from Industrial Designers Society of America (IDSA), but with the growth of user interface patents. It is expected to see a larger involvement with interface/interaction designers and organizations in the future. It's important to keep in mind that design patents are only one form of intellectual property of protection for user interfaces, which can also be covered by utility patents, trademarks and copyrights and there is a need to evolve the processes around protecting them. However, this may mean more suitable forms for documenting and describing interactive

designs as well as a more cohesive approach to combining related forms of IP such as design and utility patents as appropriate. Marley, review will be helpful to those who are very keen and on the path of filling the patents with their respective methods, approaches, systems, technology and some new formulas which will definitely very fruitful for society to deal with various good quality and attributes of different pharmaceutical dosage form to cure high threshold and high intensities of death causing different diseases in the society.

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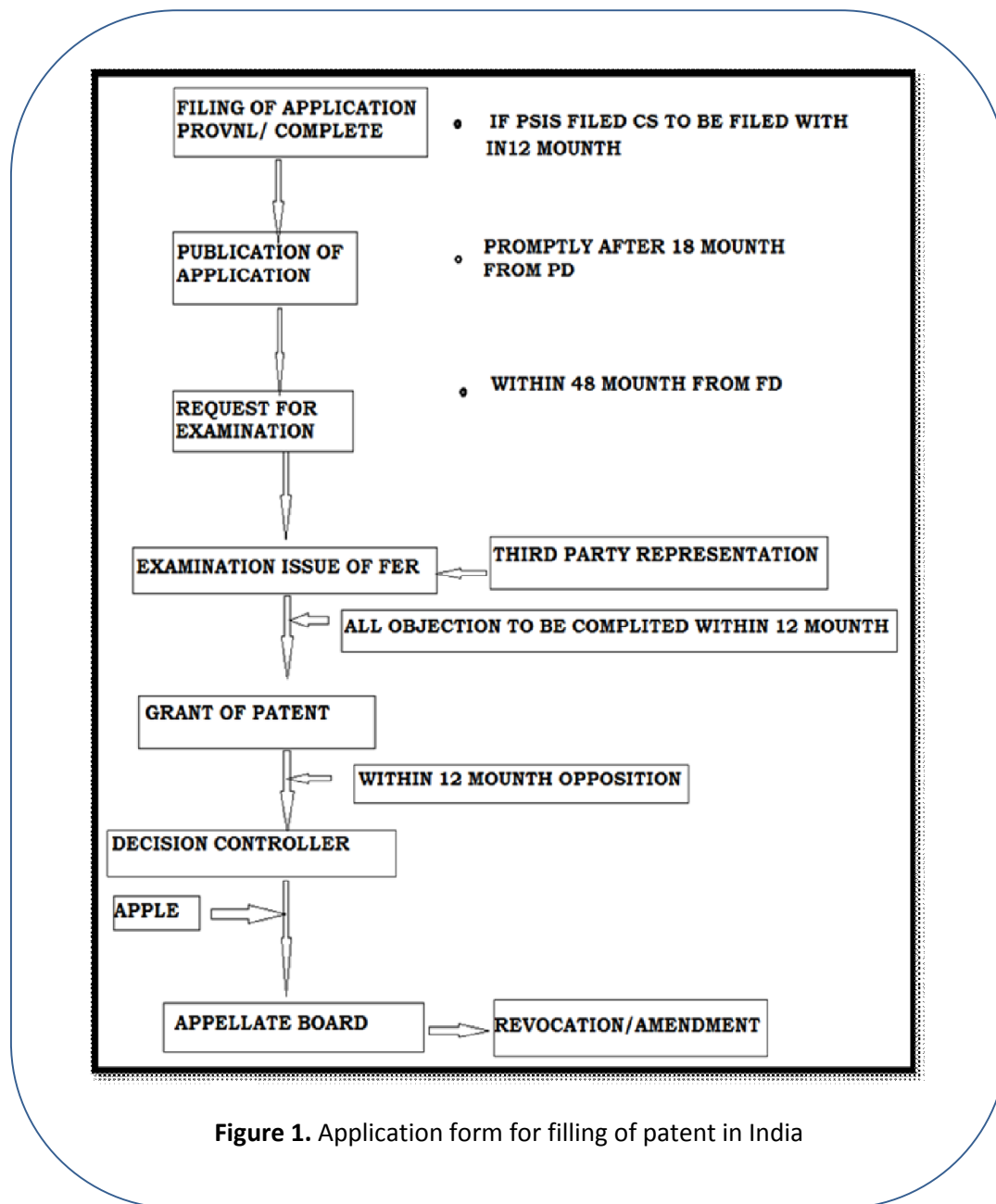


Figure 1. Application form for filling of patent in India