

Comparision of Patenting System in India, Us and European Countries

Nikitha K. Heble, N. Vishal Gupta*

Department of Pharmaceutics, JSS College of Pharmacy, SS Nagara, Mysore,
Jagadguru Sri Shivarathreeswara University, JSS Medical Institutions Campus,
Mysore – 570015, Karnataka, India.

Abstract : Patent now a days plays a very essential role in security of drug product and process innovated by the patentee. A patent is a monopoly right granted to an inventor, giving the inventor the right for a limited period of time to prevent others from making, using or selling his invention without due permission from the inventor.

The patent system plays an important role in stimulating the economy and advancing the quality of life. It serves as an incentive for innovation by giving inventors an exclusive right to their inventions for a limited period of time. It also increases and hastens the publication of useful knowledge by requiring inventors to disclose their invention to the public. Patents are particularly important in the pharmaceutical and biotechnology industries because they provide a mechanism by which the extremely high product development costs may be recouped. The legal requirements for obtaining a patent are discussed. The process of examining an application for a patent is also briefly described.

The objective of this work includes comparison of patents between India, US and Europe. As per the data received by an official site, the number of application filled and granted in US is more, compared to India and European countries. Both these laws are very distinct. There are many similarities but differences also exist.

The procedures of obtaining a patent are almost the same in all major patent systems; the difference comes with respect to patentability of inventions. US patent laws allow the grant of patent to anyone who invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof. On the other hand, the Indian patent and EU Patent statute quite elaborately describes what inventions are not patentable under different sections of the Patent Act.

Keywords : Patent, Utility, Description, Patent process, India, United State, European Countries.

Introduction:^[1]

Intellectual property rights (IPR) are statutory rights once granted allows the creator(s) or owner(s) of the intellectual property to exclude others from exploiting the same commercially for a given period of time. It allows the creator(s)/owner(s) to have the benefits from their work when these are exploited commercially. IPR are granted to an inventor or creator, designer in lieu of the discloser of his/her knowledge.

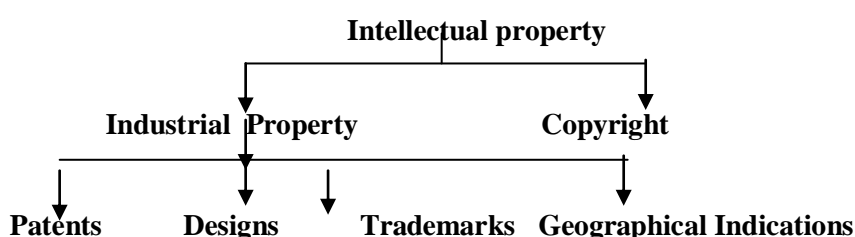


Figure 1: Flow chart of different types of IPR

Patent is a monopoly right granted by the State to an inventor for a limited period, in respect of the invention, to the exclusion of all others. The objective of granting the patent is to ensure that it is worked (utilized) in the country; and it is not meant to block production or further research and development. A patent system encourages technological innovation and dissemination of technology. This in turn stimulates growth and helps the spread of prosperity and better utilization of resources.

Patent cooperation treaty: This treaty offers a simplified patent application procedure for over 140 countries worldwide. It enables inventors to file a single international application designating many countries, instead of having to apply separately for national or regional patents. In this international phase, an international search and – on request – international preliminary examination is performed. In the national or regional phase, the patent granting procedure is then carried out by the relevant national or regional patent offices. India is a member country to PCT.

Basic steps involved in patent process

1. Invention by inventor or applicant
2. Search for same patent
3. Apply for patent by applicant
4. Filing for patent by applicant along with all formalities
5. Examination of patents by patent office
6. Payment of schedule fees
7. Finally grant of patents

The benefits derived from a patent include:

1. Higher profit margins
2. Reduce competition
3. Encourage settlement
4. Expand market share

Need for the study

Patent lets the patentee exclude others from making, using, or selling an invention, or offering it for sale. However, it does not carry the unrestricted right to make, use, sell, or offer an item covered by the patent, because other patents may cover aspects of the same item.

Discussion:

Patent system in India^[2]

Patentable invention

According to the Indian Patent Act, a **patentable invention** is defined as a new product or process involving an inventive step and capable of industrial application.

- **Invention must be ‘new’**
- **Invention must involve an ‘inventive step’**
- **Invention must be having ‘industrial application’**

Invention not patentable

The main categories, which do not qualify for patentability under the act, are:

- ✓ An invention, whose use could be contrary to the public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment. For example, a new type of gambling machine.
- ✓ Inventions relating to atomic energy. This is so because the central government has the sole responsibility for the development of atomic energy and for obvious reasons will not like its programmes to be hampered by patent claims.

- ✓ An invention which is frivolous or which claims anything obviously contrary to well established natural laws. For example, an invention that claims a perpetual motion machine will not be patentable because the claim would be contrary to well-established laws of nature.
- ✓ The mere discovery of a scientific principle or the formulation of an abstract theory. For example, a discovery merely unveils a hidden thing; it does not involve an act that makes it useful; it is therefore not an *invention* and hence not patentable. Similar reasoning applies to the formulation of an abstract theory.
- ✓ Discovery of any living thing or non-living substances or objects occurring in nature.

Procedure for obtaining patent in India

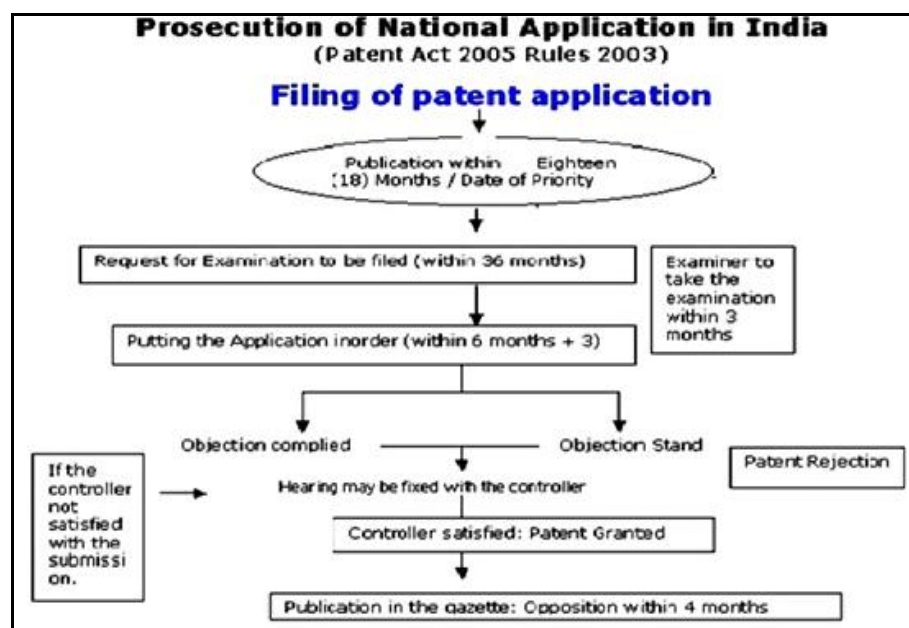


Figure 2: Flow chart of Indian patent process

Patent office procedure

I. Receipt, EDP (Electronic data processing), classification and screening Section (RECS)

RECS 1 - Receipt, sorting & distribution

RECS 2 – EDP- This unit will be manned by required number of data entry operators for electronic data processing of the documents received from **RECS 1**. This unit shall consist of two groups. The group I shall perform digitization activities of new patent applications and group II shall perform the digitization activities of documents of amended patent applications and other documents.

Group I New applications

Group II Amended applications and other documents

RECS 3 Screening and classification

II. Record management and information dissemination (RMID) section

RMID 1 Storage and maintenance of all records including patent register

RMID 2 - Preparation of certified copy, supply of copy of documents, information under section 153 and inspection of documents

RMID 3 – Inspection of register, renewal, restoration, registration and recording of assignments of patent and updating of register or any other amendments in the register.

RMID 4-International Patent applications under PCT

III. General patent matters (GPM) section

GPM 1-Public grievances, requests under RTI

GPM 2-Statistics, periodical reports, working of patents and parliament questions

GPM 3-Legal matters including processing of post grant opposition and any other miscellaneous matter, conversion of complete specification to provisional specification, request to cognate applications, postdating, change of name by claimant.

IV. Examination and grant (E&G) section

V. Indian patent office journal (IPOJ) section: This section shall deal with publication of patent journal and function only in IPO, Kolkata.

Opposition: Notice of opposition must be filed within four months of notification in the Gazette. Extension of one month is available, but must be applied for before expiry of initial four month period.

Register of patents: The register of patents will be kept in the patent office and its branch offices. 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.

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 record 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 recorded in the patent register.

Duration: A patent lasts for 20 years from the date of filing the complete specification.

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 recorded.

Infringement: Infringement can consist of taking away essential features of the patented invention, utilizing claimed features, copying patented substances, mechanical equivalence, taking part of the invention, while the patent is in force. Use by the government or for government purposes is not infringement. Such use must be paid for on terms to be agreed upon before or after use. Accidental or temporary use, use for research, use on foreign vessels, do not constitute infringement.

Appeal: Appeal lies in the high Court. Appeal must be lodged within three months from the decision of the controller.

Right to surrender: The patentee is given the right to surrender the patent at any time by giving notice in the prescribed manner to the controller. The controller, before accepting the offer of surrender will advertise the same so as to give an opportunity to the interested parties to oppose the offer of surrender.

Limitations on Patentee's Rights: There are certain limitations on the rights of the patentee.

- ✓ Any patented product or process or a product made using patented process may be used by or on behalf of the government for its own use only.
- ✓ An invention is said to be used for the purposes of government if it is made, used, exercised or vended for the purposes of the central government, state government or a government undertaking;

- ✓ A patented article or article made by use of patented process may be used by any person for experiment, research or for imparting instructions to pupils and
- ✓ In case of a patent in respect of any medicine or drug, the medicine or drug may be imported by the government for its own use or for distribution in any dispensary, hospital or other medical institution maintained by or on behalf of the government.

Transfer of Patent

1. In case any patentee transfers any patent registered in his name after relinquishing his title thereto, the transferee shall submit an application to the department for removing the name of the transferor from the patent register and then registering his own name therein.
2. In case any person files an application under sub-section (1), the department shall send a notice to the patentee, whose name is mentioned in the register, directing him to file complaints with it within 15 days if he has any objection to the transfer of his patent according to the application submitted by the transferee. In case the patentee files complaints accordingly within this time-limit and it becomes necessary to determine which of the two parties has title to the patent, such transfer shall be stayed pending the judgment of a court on such dispute. In case no complaint is filed within this time-limit, the transfer shall be affected as requested in the application.
3. The person applying for transfer of patent under the provisions of this section shall pay along with the application of this section shall pay along with the application the prescribed amount as transfer fee to the department.

Patent system in US^[3]

A patent is an intellectual property right granted by the government of the United States of America to an inventor “to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States” for a limited time in exchange for public disclosure of the invention when the patent is granted.

A patent may be applied for only in the name(s) of the actual inventor(s).

Patentable invention – Utility patents are provided for a new, nonobvious and useful:

Process, machine, article of manufacture, composition of matter, improvement of any of the above.

Invention not patentable

Laws of nature, Physical phenomena, Abstract ideas, Literary, dramatic, musical, and artistic works, inventions which are: Not useful (such as perpetual motion machines); or offensive to public morality.

Cost for a patent

Filing a provisional application)	\$125
Filing a non-provisional application Non-electric filing fee (applications filed in paper)	Approximately \$625 Additional \$200
Issue fee	Approximately \$870
Maintenance fees: Due at 3.5 years Due at 7.5 years	Approximately \$565 Approximately \$1,425 Approximately \$2,365

There are three types of patents:

- a. Utility patents
- b. Design patents
- c. Plant patents

The United States patent and trademark Office (USPTO or Office) is the government agency responsible for examining patent applications and issuing patents.

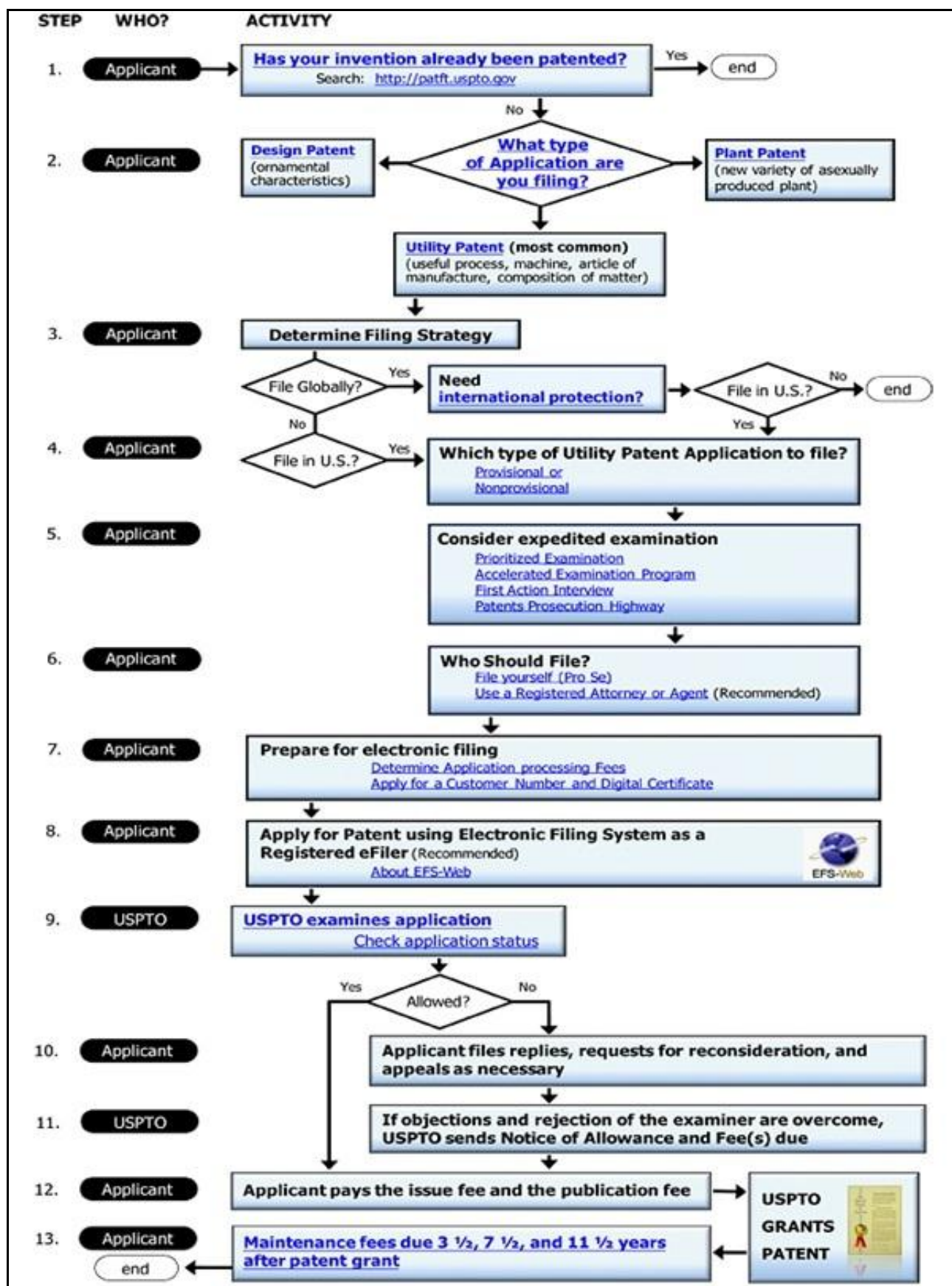


Figure 4: Flow chart for US patenting process

Validity for patent protection

For applications filed on or after June 8, 1995, **utility** and **plant** patents are granted for a term of 20 years from the date you first applied for the patent subject to the payment of appropriate maintenance fees. **Design** patents last 14 years from the date you are granted the patent. No maintenance fees are required for design patents.

Patent system in European countries^[4]

Patentable invention

Under the law of the European patent convention, patents are only granted for inventions that are new, that involve an inventive step and that are industrially applicable. An invention meets these requirements if it was not known to the public in any form prior to the date of filing or to the priority date, was not obvious to a skilled person and can be manufactured or used industrially.

Invention not patentable

Discoveries, mathematical methods, computer programs and business methods as such are not regarded as inventions. Surgical and therapeutic procedures along with diagnostic methods practiced on the human or animal body are excluded from patentability. New plant or animal varieties are completely excluded from patentability. The European patent convention does not, of course, recognize inventions whose commercial exploitation would be contrary to "order public" or ethical principles, such as means of cloning human life or the use of human embryos for commercial and industrial purposes.

European patent cost

The filing and search fees due at the beginning of the procedure amount to about EUR 1300. The amount of the fee due for claims depends on the number of claims in excess of 15. The remaining fees are payable later. This means that applicants can decide at each stage of the procedure whether or not to pursue the application.

The grant procedure

1. **Filing a European patent application:** European patent applications can be filed at the European patent office in Munich, The Hague or Berlin or at the central industrial property office of any contracting state.
2. **The language of a patent application:** A European patent application may be filed in any language, but it will be processed in one of the three official languages, English, French and German. Therefore if it was filed in any other language, a translation in English, French or German needs to be filed within two months.
3. **Components of a European patent application:** European patent applications consist of four or five parts:
 1. **Request for grant:** Requests should be made using the official "Request for grant" form, which is obtainable free of charge, accompanied by explanatory notes, from the European patent office and the patent offices of the contracting states. The form can also be downloaded at: www.epo.org/forms.
 2. **Description of the invention:** The description must describe the invention clearly and completely enough for a person skilled in the art to be able to carry it out.
 3. **Claims:** The claims must define the subject-matter for which patent protection is sought in terms of its technical features. They must be clear and concise and be supported by the description.
 4. **Drawings:** The application may also contain drawings. These form a useful addition to the description when they illustrate the features of the invention.
 5. **Abstract:** The abstract is purely for technical information and is not used to assess the patentability of the invention.
4. **Filing and formalities examination:** The first step in the European patent grant procedure is the examination on filing. This involves checking whether all the necessary information and documentation has been provided so that the application can be accorded a filing date. The following are required: an

indication that a European patent is sought, particulars identifying the applicant and a description or a reference to a previously filed application. If no claims are filed, they need to be filed within two months.

This is followed by a "formalities" examination relating to certain formal aspects of the application, including the form and content of the patent application, the translation, the designation of the inventor, the appointment of a professional representative and the payment of fees due.

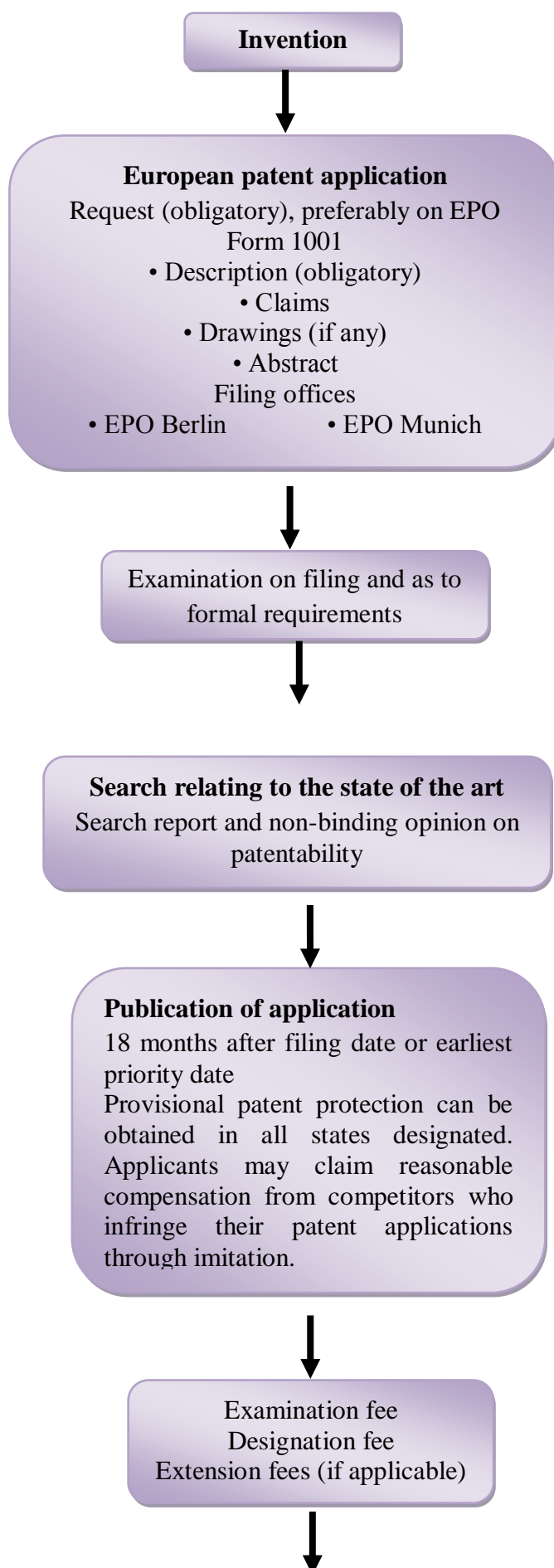
5. **Search:** In parallel with the formalities examination, a European search report is drawn up, listing all the documents available to the office that are considered relevant for assessing novelty and inventive step. The search report is based on the patent claims but also takes into account the description and any drawings. Immediately after it has been drawn up, the search report is sent to the applicant, together with a copy of any cited documents and an initial opinion on whether the claimed invention and the application meet the requirements of the European patent convention.
6. **Publication of the application:** The application is published normally together with the search report 18 months after the date of filing or the Priority date. Applicants then have six months from the date of mention of publication of the search report to decide whether or not to pursue their application by requesting substantive examination. Alternatively, an applicant who has requested examination already will be invited to confirm whether the application should proceed, unless he has waived this invitation.

From the date of publication, a European patent application confers provisional protection of the invention in the states designated in the application as published. However, it may be necessary under national law to file a translation of the claims with the patent office in question, and to have this translation published.

7. **Substantive examination:** After the request for examination has been made, the European patent office examines, in the light of the search report and taking into account the applicant's reply to it, whether the European patent application and the invention to which it relates meet the requirements of the European patent convention, and in particular whether the invention is patentable. The grant will, however, not be issued before translations of the claims into the other two official languages have been filed and certain fees paid.
8. **The grant of a patent:** The granted European patent is a "bundle" of individual national patents. In many contracting states, for the patent to retain its protective effect and be enforceable against infringers, it must be validated. That means that where necessary, the patent owner has to file a translation of the specification or at least of the claims into an official language of that state with the national patent office. Fees may also be payable by a certain date. These matters are governed by national law.
9. **Opposition:** After the European patent has been granted, it may be opposed by third parties – who will usually be the applicant's competitors – if they believe that it should not have been granted (for example, because the invention lacks novelty or does not involve an inventive step).

Notice of opposition must be filed within nine months of grant being mentioned in the European patent bulletin. The examination of oppositions is handled by the European patent office's opposition divisions, which are usually also made up of three examiners. After publication of an application, third parties may present observations on the patentability of the invention to which the application or patent relates, as long as proceedings are pending before the EPO.

10. **Revocation or limitation:** The patent proprietor may request limitation or revocation of the patent at any time after it has been granted.
11. **Appeal:** Decisions of the European patent office concerning issues such as the refusal of an application or opposition matters are open to appeal. Decisions on appeals are taken by the EPO's independent boards of appeal.



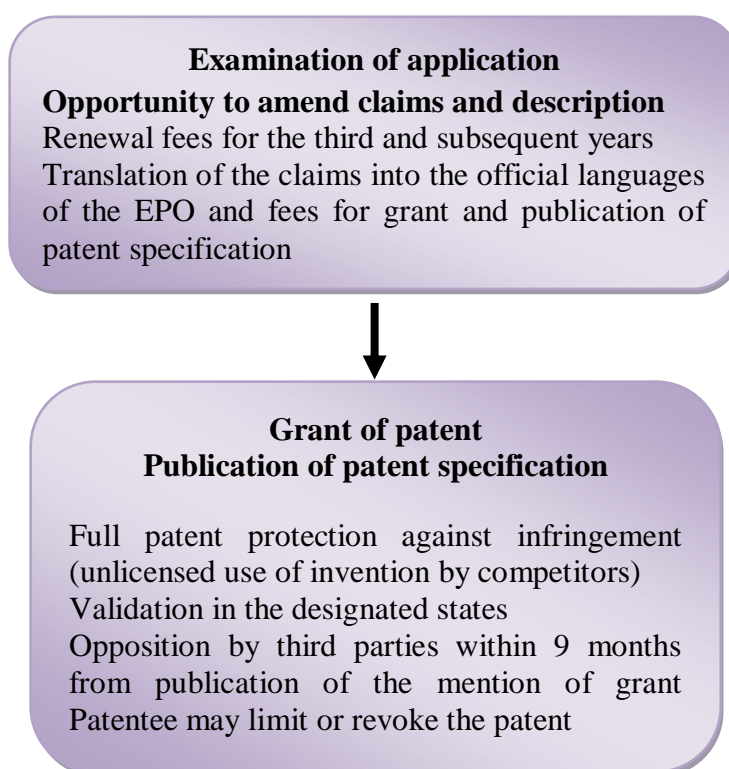


Figure 5: Flow chart for EU patenting process

Differences in patenting system

First to file versus first to invent		
INDIA	US	EU
India first to file systems, thus it does not matter who invents first; it's the first filer who gets the rights over the invention.	In the USA, a slightly different approach is used. In case of two applications for the same invention (called interference), a determination is made who invented it first. This usually involves examining laboratory logbooks, establishing dates for prototypes, and so on. If the person who filed later is found to have invented earlier, he may be awarded the patent.	When two people apply for a patent on the same invention, the first person to have filed his application will get the patent (assuming the invention is patentable, of course). This holds even if the second person did in fact come up with the invention first. The only thing that counts is the filing date.
Grace period		
The application for patent should be filed before the publication of the invention and till then it should not be disclosed or published. However, under certain conditions, there is grace period of 12 months for filing application even after publication.	The USA has a one-year grace period. This means that the inventor can freely publish his invention without losing patent rights. However, this only applies for the USA. If an inventor does so, he automatically loses all potential patent rights in Europe.	The grace period is usually 6 or 12 months
Publication of patent applications		
When the application is found to be suitable for acceptance it is published in the gazette of India.	US patents were only published after grant. This has been changed, and now in the US	All patent applications are published 18 months after their filing date, unless they have been

It is deemed laid open to the public on the date of publication in the gazette of India.	patent applications are published 18 months after their filing date, unless they have been withdrawn or they are filed with a non-publication request, stating that the application is US only.	withdrawn. If the novelty search has been completed by that time, the search report is included with the publication.
Rights conferred by a granted patent		
A patent granted before the commencement of this Act, shall confer on the patentee the exclusive right by himself, his agents or licensees to make, use, exercise, sell or distribute the invention in India.	It allows the patent holder to prevent anyone from making, using or selling in the USA the patented invention.	The European Patent Convention is a treaty signed by twenty-seven European countries, namely Austria, Belgium, Bulgaria, Switzerland, Cyprus, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece, Hungary, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, the Netherlands, Portugal, Romania, Slovenia, Sweden, Turkey and the United Kingdom. Patents under the EPC are granted by the European Patent Office (EPO) in Munich.
Opposition after grant		
At any time within four months from the date of advertisement of the acceptance of a complete specification, any person interested may give notice to the Controller of opposition to the grant of the patent	It has a reexamination procedure; it does not work the same as an opposition. In a reexamination, anyone can present reasons and evidence to the USPTO to challenge the validity of a granted patent. However, it is then the patent holder who engages in a discussion with the USPTO examiner to establish the validity of the reasons. The challenger is not a part of these proceedings.	Within nine months after the grant of a European patent, anyone can file an opposition with the EPO, stating why this patent should not have been granted (of course with arguments and evidence). The patent holder and the opponent can then debate with each other. Finally, the EPO will take a decision based on facts and arguments presented by both sides.
Inventive step		
Invention must be 'new' Invention must involve an 'inventive step' Invention must be having 'industrial application'	The US requirement that the invention must be novel and must not be obvious	The two most important requirements in European patent law are that, to be patentable, an invention must be novel and involve an inventive step.
Patent offices		
Mumbai, Chennai, New Delhi and Kolkata	Alexandria, VA	Munich, The Hague ,Berlin , Vienna and Brussels
Opposition		
pre-grant opposition and post grant	Post grant	Post grant
Plant Patent		
plant are not patentable	plant are patentable	plant are not patentable
Validity		
20 years	20 years	20 years
Filed application		
36812 in 2010	482871 in 2010	235000 in2010
Granted patents		
16061 in 2010	191927in 2010	136700 in 2010

Renewal		
Renewal fees is payable at the expiration of the second year from the date of the patent or of any succeeding year and the same shall be remitted to the patent office before the expiration of the second or succeeding year.	Maintenance fees (paid at 3.5, 7.5, and 11.5 years after your patent is granted.	They are payable for the third and each subsequent year
Restoration		
Within one year from the date on which the patent ceased to have effect, make an application for the restoration of the patent.	A lapsed patent may be restored if an application for restoration is made within one year of the date of lapsing of the patent	NA
Requirements for patents		
<ul style="list-style-type: none"> Title of the Invention. Technical field of invention. Prior art with short comings Problem with the existing art. Proposed technical solution. Brief description of the accompanying drawings, if any. Detailed description of the invention Examples Claims. Appropriate fees 	<ul style="list-style-type: none"> Utility Patent Application Transmittal Form or Transmittal Letter, Appropriate Fees, Application Data Sheet Specification (with at least one claim), Drawings (when necessary), Executed Oath or Declaration, Nucleotide and/or Amino Acid Sequence Listing (when necessary), and 	<ul style="list-style-type: none"> European patent application consists of a request for the grant of a European patent, a description of the invention, one or more claims, Any drawings referred to in the description or claims, and an abstract.

Conclusion:

From the above study, it can be concluded that though Patenting system in India, US and EU includes various steps which are similar for granting of patent. However, some difference was observed. Here, in this study it was found that the patenting process is almost same in all the countries except some aspects, which includes Patent office location, validity of patent, fees opposition, patentable and not patentable invention. Hence, this is very important for an inventor to protect his invention from infringement.

References:

1. <http://ipindia.nic.in/ipr/patent/patents.htm> Accessed on 20th Dec 2016.
2. <http://ipindia.nic.in/>. Accessed on 20th Dec 2016.
3. <http://www.uspto.gov/>. Accessed on 20th Dec 2016.
4. <http://www.epo.org/searching/asian/search.html>. Accessed on 20th Dec 2016.

For your Research References ,

Log onto www.sphinxesai.com

International Journal of ChemTech Research
