International Journal of Pharmaceutical Drug Design

IJPDD (April, 2024) ISSN: 2584-2897

Website: https://ijpdd.org/



Review

PATENT PROVISION IN VARIOUS COUNTRIES

Jaitvya Kalmodi, Shiv Hardenia*, Dinesh Kumar Jain

IPS Academy College of Pharmacy, Rajendra Nagar, A.B. Road, Indore, 452012, Madhya Pradesh, India.



Abstract:

Intellectual property rights are the unique privileges given to people by their country to utilize the works of their imagination for a set amount of time. Patents, copyright, intellectual property rights include things like brand name, designs for industries, and geographical indications. A patent is the right that government has granted for entire disclosure of the innovations in exchange with a creation to the innovator. This review examines the laws and rights to intellectual property of several nations, including China, Japan, the United States, India and Europe. Examining both their influence upon the national interests and their effects on other countries. It is a comparison of all the laws surrounding patents in the aforementioned nations

Keywords: Intellectual property rights, TRIP's agreement, WIPO, patent types

*Corresponding Author

Shiv Hardenia

IPS Academy College of Pharmacy, Rajendra Nagar, A.B. Road, Indore, 452012, Madhya Pradesh, India.

Email: shivsharma280484@gmail.com

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0) and the Budapest Open Access Initiative (http://www.budapestopenaccessinitiative.org/read), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

1. INTRODUCTION

In theory, patents can be profitable to their holders by discouraging imitations, serving as legal defenses in court proceedings, and luring in investors and customers. Patents grant inventors and producers a temporary monopoly over their inventions. Scholars and policymakers contend that such benefits more than balance the social costs associated with patent rights. [1]

As defined by the world IP organization as "a patent is an exclusive license issued for a creation that is, an article of goods or method that usually provides an alternative method to do business". Simply a fresh approach to a problem or delivers a new technique to fix the problem. [2]

1.1 Intellectual Property Rights (IPR)

Exclusive rights are awarded to an inventor or creator to use their idea or product for a specific amount of time is known as intellectual property rights (IPR). Novel works of vision (including designs, innovations literary works, creative pieces, symbols, names, designs, names, images, and places are included in intellectual property (IP).[3]

1.3 Copyright and Trademark

The term "copyright" describes a group of exclusive rights granted to an original work's author or creator, notably the right to duplicate, disseminate, and modify the work. Instead of protecting the concept itself, copyright safeguards the way that idea is expressed.

A trademark, sometimes known as a brand name, a visual symbol or is a verbal authorization, designation, equipment, label, number, or collection of colors that is used by one firm on goods, offerings, or other items of commerce to set them apart from similar products or services from another company. [4]

2 INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO TRIPS

2.1 TRIPS Agreement

The members of the World Trade Organization (WTO) have unanimously committed to uphold the TRIPS agreement, which covers economic related elements of intellectual property rights. It lays out the minimum standards that national governments must adhere to when controlling various forms of property rights (IP) in relation to the other member nations of WTO. [5]

By fusing intellectual property with trade, this pact altered the global intellectual property regime.

2.2 Impact of TRIPS on Pharmaceuticals

Many developing nations attempted to prevent the integration of intellectual property (IP) on the Uruguay round negotiation agenda, arguing that IP and trade policies should be kept distinct. After failing to prevent IP from being included on the agenda, they organized their efforts to oppose the inclusion of an amendment that would require governments to allow patents on pharmaceutical products. After all, few emerging nations did do before 1990s. [6]

3 PATENT RELATED LAWS IN INDIA

The World Intellectual Property Organization (WIPO) has drawn numerous independent groups into India due to its provision for protected invention rights and patents. [7]

3.1 Implementation of Patent Laws

The two separate pieces of law that control the enforcement of patents in India are patents act 1970 and patents regulations 2003. Patents (amendment) act, 1999, patents (amendment) act, 2002(amendment) act of 2005 all altered the act in order to bring into compliance with TRIPS requirements. The revised patent act is made up of XXIII chapters with 162 sections, and the revised Patents Rules are made up of XVI chapters with 139 rules. The Patents Rules have four schedules that specify the fees (Schedule I), forms (Schedule II), patent form (Schedule III), and specifics of the expenses that are to be awarded (Schedule IV). [8]

3.2 Patent application types

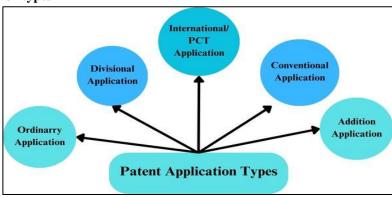


Fig 1 Patent Application Types

3.2.1 Ordinary application

The term "non-provisional" is also used. The whole specification and the claims are included in this application. It is filled without mentioning any additional applications at the patent office. It is filed without mentioning any additional applications at the patent office. The first and authentic investors name and address must be included in the patent application. [9]

3.2.2 International/PCT application

International application is another name for PCT application. It was first made available in 1970. The applicant must provide a comprehensive specification, which includes a title, drawing, abstract description, and claims, with their PCT national phase application. The time span priority date to the start of national phase is defined at 31 months.

3.2.3 Section 135 of the Act, "Conventional Application,"

The statute defines a convention application as one that the applicant submits in a couple of convention countries. Within a year of submitting the application in the convention nation, the applicant submits the identical application once more than the Indian patent office.

3.2.4 Submission of an application under the act, section 54

If the invention is improved upon or otherwise modified, the applicant must file an application with the IPO. The time frame for issuing the patent remains constant and is not increased.

3.2.5 Divisional application of the Act's section (16)

When the applicant seeks to patent more than one invention and the law prohibits multiple patents for the same invention, this application is employed. Before the grant of the patent, the applicant files a petition for submission at the patent office that is divided into two parts.

3.4 Publication

The applicant must publish a journal after submitting the application from that includes their name, address, abstract, and submitting their innovation to patent office process. This needs to be done within 18 months of

application's submission date or upon the date of patent. Then patent public examination of the application is permitted.

3.5 Examination

All the paperwork, application forms, and claims submitted by the applicant who applied for the patent are examined during the examination process. After the reports have been tested, the patent office publishes a first office report and sends it to the candidate or his agent with the objection. The candidate or his agency must respond to the objection within six months. If the candidate does not acknowledge the inspection report and a six-month extension is granted to the applicant.

3.6 Grant of patent

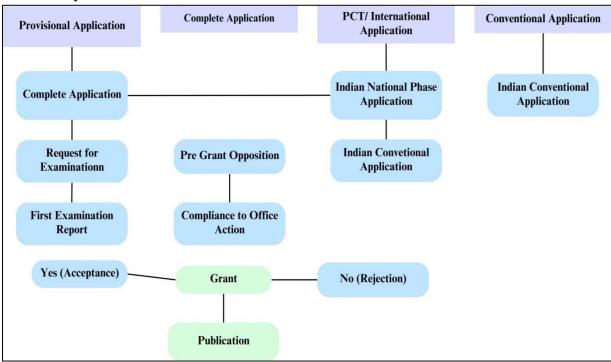


Fig 2 Patent Application Procedure in India

If all the requirements are completed, a 20-year patent is granted to the applicant, and if there is an opposition to the invention, another party may file it within a year of patent's publication.

Table 1 Patent Filing Fee in India

No. of entry	On what payable	Relevant form no.	Natural person, start-up, small business,	Others, either alone or in conjunction with real people, new businesses, small organizations, or educational-institutions
1	On an accompanying or complete application for a patent under Section 7, Section 54, or Section 135 and Rule 20(1) specification. 1.For every sheet of additional specification 30. 2.For each assertion in over and above 10	1	1600 160 320	8800 880 1750
2	Following the provisional filing of a complete specification of up to 30 pages with up to 10 claims, the following requirements must be met: (1) for each additional sheet of specification, excluding those devoted to the sequence listing of nucleotides and/or amino acids under rule (9's sub rule (3); and (2) for each additional claim.	2	No fee 160 320	No fee 880 1750
3	Submission of a statement and undertaking required by Section 8.	3	No fee	No fee
4	Submission of a statement and undertaking required by section 8	5	No fee	No fee

5	When a patent application is requested to be examined, I. under section 11B and rule 24(1), and II. under rule 20(4)(ii).	18	4000 5600	22000 30800
---	---	----	--------------	----------------

4 PATENT RELATED LAWS IN US

4.1 Beginning and implementation of patent law

Since its establishment in 1790, the American patent system has sought to encourage scientific and technological advancement that result in beneficial goods and procedure, raising the standards of living and quality of life for its residents. [10]

The US constitution stipulates that "the congress shall have power in the piece, section 8, clause 8. developing research and critical skills by granting writers and producers exclusive rights to their works for a limited time. As the foundation of the US patent system. This short statement has been broken down over the last 126 years in a way that lays the foundation of modern patent and copyright law.

4.2 Patent requirements for United States

Utility type patents, design type patent, and plant related patents are the three types of patents that may be granted under American patent law. Inventions that are "processes, machines, manufacturers, or compositions of issue, or any novel and helpful enhancement thereof" are the focus of utility patents. Most people are familiar with the inventions covered by utility patents, such as those in fields of computers, electronics, machinery, chemicals, and pharmaceuticals. A new distinctive and beautiful design for an object of manufacturing is the focus of design patents. [11]

These rules are:

- 1. The invention must be focused on "patent-able subject matter," which is a brand-new and beneficial technique, machine, manufacturing, or composition of matter, or a brand-new and beneficial enhancement thereof.
- 2. "The idea must be new. The United States, unlike most other nations (including China), uses a "first-to-invent" rather than "first-to-file" patent system. The following examples of "prior art" might undermine an invention's novelty: (i) an explanation of the innovation in a printed work published anywhere in the world before the applicant's invention or more than a year before the date the US patent application was filed; (ii) public use of the creation in the US before the applicant's invention or more than a year before the date the US patent application was filed; and (iii) an offer to sell or sale of the creation in the US before the applicant's invention or more than a year before the date the more than a year before the filing date of the U.S. patent application; (iv) a description of the invention in another U.S. patent with a filing date earlier than the applicant's invention date.
- 3. The means, procedure, and means of creating and employing the invention must all be adequately described in writing the application for patent describing the invention. The summary has to additionally be adequate to permit a person with common skill, you must create the innovation, put it to use, and reveal the inventor's regard as the "best approach" of implementing the invention.
- 4. The invention must be claimed in the patent application through one or more "claims" that "in particular mark toward and explicitly claim" the invention's subject matter. [12]

4.2 Types of US patent

- a. Design patent: It safeguards an items decorative appeal. Design patents can be a poor proxy for new, valuable ideas but they can also be used to track modifications to the rate at which ornamental designs are being produced. In the year 1842, shortly after the first utility patent, the initial design patent was also granted. [13]
- b. Plant patent: The USPTO also issues plant patents as a different kind of patent. After the introduction of the Plant Protection Regulation Act of 1930 became law, creators of unique asexually reproducing plant types were eligible to submit a plant patent application. Plant patents aren't granted as frequently as other kinds of patents. [14]
- c. X-patents: Any patent before the year 1836 are collectively referred to the "X-patents", or sporadically as "Name-and-date patents", due to the fact that they were initially awarded without a patent number listing only the names of the inventors and the date of issuance. [13]

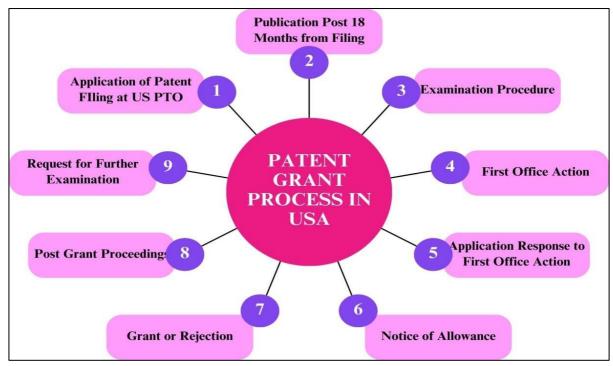


Fig 3 Patent Application Procedure in USA

5 PATENT RELATED LAWS IN EUROPE

5.1 Beginning and implementation of patent law

The European states wherein the applicants desire to file their patent applications are identified in EPO-issued patents. Since national applications from most European nations cost nearly triple as much as EPO patent applications, the EPO patents have considerable economic advantages for inventions that need to be protected in several European markets. [15]

A solitary standardised process is used by EPO to grant patents. When a European patent is awarded, it becomes enforceable in any or all of the 38 EPC member nations. The patents owner verifies it in the relevant member country or countries. The patents office must receive a specification within the time frame established by the patent holder. [8]

5.2 Nature and purpose of European patent

A patent, as the name suggests, is a legal right that gives the holder the authority to forbid other parties from using an innovation for profit in a specific nation and for specific amount of time. Initiated by the EPC, a single patent process for granting patents based solely on one invention and produced a unified body of fundamental patent law developed to offer security for easier, less expensive, and more effective inventions in the signatory nations. [16]

5.3 Patentability

The EPC does not define exactly what "production" is, but provides a definition of the main elements and activities that cannot be considered production (e.g., have patentability).

5.3.1 Invention

The first is computer programs which even if they are referred to as inventions are not. Nevertheless, a computer program that while executing on a computer has a technological effect beyond the "standard" physical connection involving the program itself (software) and the computer (hardware) is not disqualified from patenting under article. The second area consists of techniques for treating the bodies of humans and animals through surgery or therapy as well as techniques for diagnosing the body of a person or animal.

The final category is discoveries that are not patentable because commercialising them would go against public order or morality.

5.3.2 Novelty

An innovation is considered novel if it hasn't already been an element of the current state of the art. The EPC's definition of the "state or the art" includes the idea of "hard novelty", which refers to details that is plainly demonstrated to someone of skill in just one example of prior art that includes a patent application published prior to be priority date.

5.3.3 Inventive step

If an invention is not evident to a skilled person given its state of the art that excludes previous rights it is considered to have an inventive step. Multiple previous art sources may have used to judge innovative advance as opposed to originality. [16]

5.5 Who is entitled for patent

- a. Any person
- b. any professional person
- c. a body that is analogous to a legal entity. [8]

6.6 Where and how to file

The free EPO online filing program can be used to submit European patent applications electronically it is available from the art EPO filing produced with software can be done online or on supported electronic data carriers you can also use the free online filing 2.2 or epos web form filing services which are both offered on the epos website. In annex 3 you will find hyperlinks to filing online services. [8]

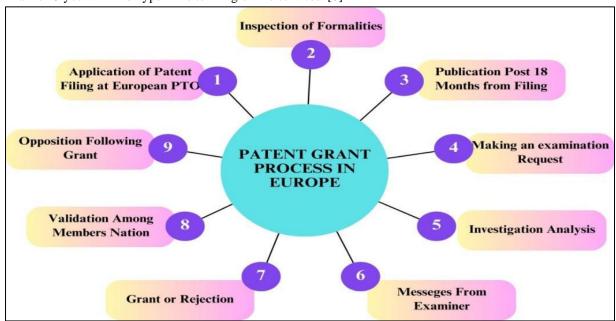


Fig 5 Patent Grant Process in Europe

6 PATENT RELATED LAWS IN JAPAN

The majority of the foundation of patent system in Japan has been confined with law Patent Law No. Law No. 121 of 13 April 1959 is the main source of legislation regarding patents, especially pharmaceutical and software patents. The fundamental resources of law and direction relevant to the bureaucratic aspects of patent disputes in Japan are found in the act no. 109 of 1996's (code of civil procedure). [17]

6.1 Beginning and implementation of Japanese patent law

The patent monopoly Ordinance (Sainbaitokkyo Jorrie), which incorporated some aspects of French and American patent laws, created the Japanese patent system in 1885. The new patent monopoly act took the place of the following an extensive inquiry, at the patent ordinance (Tokkyo Joorei) of 1888 was passed and research on the patent laws in developed nations saw Japan the country that has ratified the convention of Paris for the safety of industrial property and passed the trademark law, the design law, and the patent law. The version that is in use right now is law no. 121, 1959. [18]

6.2 Japanese patent office

The Japanese patent office (JPO) publishes the applications it receives in Japanese, and as a result, inventions are made public by the JPO within 18 months. [19]

As a foreign searching authority (ISA), the Japan patent office conducts international searches for both domestic and foreign applicants who pick JPO as the seeking body for their patent applications. [20]

The JPO properly emphasizes the necessity to establish an equilibrium amongst the concerns of property owners. [21]

6.3 Patent related agreements

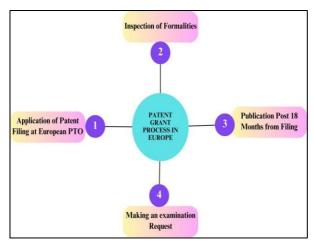


Fig 5 Patent Related Agreements

6.4 Types of patents

6.4.1 Utility model patent

The utility model in Japan was created in the year 1905 to preserve what were then known as "petit inventions" and to address the contradiction that existed between local and international patent regulations. [22]

One of the key matrices for evaluating efficiency of innovation is the number of issued patents such as utility. [23]

6.4.2 Design patent

The form, pattern, colour, or any combination of these is the subject matter covered by the Japanese design law in a piece of content that appeals to the consumers aesthetics sense of sight. The Japanese design act protects an aesthetic impression. [24]

6.4.3 Plant patent

A plant that is patentable maybe natural, bred, or somatic (made from the plant's non-reproductive cells). It can be created or discovered, however only discovered plants that are found in the cultivated areas are eligible for a plant patent. [25]

6.5 Procedure for obtaining patent in Japan

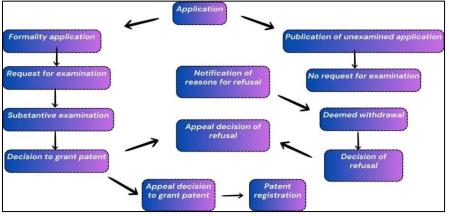


Fig 6 Patent Application Process in Japan

7. CONCLUSION

Patents in certain industries assist the government in luring foreign capital to country and accelerating the country's economic growth. The compilation of patent portfolios, backward and forward citation analysis, and uniform format fields are all used in patent documentation and analysis.

Three components make up a patent, which is a document with a uniform form. It includes the international patent classification, application date, citation number, and patent publication number. The background, innovation substance, and implementation strategies are all described. It is impossible to overstate how crucial patent protection is. There are numerous patents, such as national and international policies like TRIP's and organisations like WTO which have altered the provisions relating to intellectual property in order to promote trade, settle international conflicts, and enable all countries to take part and file patents.

REFERENCES

- 1. Farre-Mensa J, Hegde D, Ljungqvist A. What is a patent worth? Evidence from the US patent "lottery". The Journal of Finance. 2020 Apr;75(2):639-82.
- 2. Raj GM, Priyadarshini R, Mathaiyan J. Drug patents and intellectual property rights. European Journal of Clinical Pharmacology. 2015 Apr;71:403-9.
- 3. Ode S, Mahato TK, Ojha SK, Singh V. Patents & publications: In Indian perspective. World J Biol Pharm Res. 2022;2:13-23.
- 4. Mathur V. Patenting of pharmaceuticals A comparative study of the laws in US Europe China and India.23-89
- 5. Yu PK. TRIPS and Its Futures. Available at SSRN. 2023 Jun 22.
- Athreye S, Piscitello L, Shadlen KC. Twentyfive years since TRIPS: Patent policy and international business. Journal of International Business Policy. 2020 Dec;3:315-28.
- 7. Benny V. An overview on patent status of India. Journal of Emerging Technologies and Innovative Research. 2020;7(3):1463-9.
- 8. Mathur V. Patenting of pharmaceuticals A comparative study of the laws in US Europe China and India.12-43.
- 9. Kumar V. Patent Filing and Drafting Procedure in India for A New Pharmaceutical Product. Innoriginal International Journal of Sciences. 2018 Jun 10;5(4).
- 10. Patent Fees. Retrieved from: http://www.ipindia.nic.in/fees/html./accessed on august 30,2023.
- 11. Elliott G. Basic of US patents and the patent system. The AAPS Journal. 2007 Sep;9:E317-24.
- Sorell LS. A Comparative Analysis of Selected Aspects of Patent Law in China and the United States. Pac. Rim L. & Pol'y J.. 2002;11:319.
- Andrews MJ. Historical patent data: A practitioner's guide. Journal of Economics & Management Strategy. 2021 May;30(2):368-97
- 14. https://www.uspto.gov/web/offices/ac/ido/oe ip/taf/h_counts.htm accessed on September 3, 2023.

- 15. Graham S, Hall BH, Harhoff D, Mowery DC.

 Post-issue patent" quality control": A
 comparative study of US patent Reexaminations and European patent
 oppositions.2002.1-43.
- 16. How to apply for a European patent (epo.org) accessed on September 3, 2023.
- 17. Lipsky AB, Wright JD, Ginsburg DH, Yun JM. The Japan Patent Office (JPO) Guide to Licensing Negotiations Involving Standard Essential Patents, Comment of the Global Antitrust Institute, Antonin Scalia Law School, George Mason University. George Mason Law & Economics Research Paper. 2018 Apr 9(18-05).
- Kotabe M. A comparative study of US and Japanese patent systems. Journal of International Business Studies. 1992 Mar 1:23:147-68.
- 19. Hegde D, Herkenhoff K, Zhu C. Patent publication and innovation. 2022;1845-1899
- 20. Cafiero AJ, Suwa Y, Senior Researcher AJ, Nakagawa J, NAGANO MD. Japan Patent Office Long-term Fellowship Program on the Intellectual Property under the Japan Patent Office FY2019.1-57
- 21. Lipsky AB, Wright JD, Ginsburg DH, Yun JM. The Japan Patent Office (JPO) Guide to Licensing Negotiations Involving Standard Essential Patents, Comment of the Global Antitrust Institute, Antonin Scalia Law School, George Mason University. George Mason Law & Economics Research Paper. 2018 Apr 9(18-05).
- Monya N, Motsembocker M, Mitsumata H. Revision of the Japanese patent and utility model system. Pac. Rim L. & Pol'y J.. 1993;3:227.
- 23. Dechezleprêtre A, Ménière Y, Mohnen M. International patent families: from application strategies to statistical indicators. Scientometrics. 2017 May;111:793-828.
- 24. Yamaguchi Y. Japanese Design Law and Practice. U. Balt. L. Rev.. 1989;19:417.
- 25. Correa CM. Patent protection for plants: legal options for developing countries. Research Paper; 2014.1
