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Law protecting inventions in India

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1. Introduction

1.1 Introduction to emergence of laws for protecting inventions in India

The first Indian statute on patents was passed in 1856 granting some exclusive rights to inventors for 14 years. It had to be re-enacted with some modifications as the Act of 1859. It granted to inventors of 'new manufacture' exclusive rights to make, sell and use the invention in India, or to authorize some one to do so. Its scope was expanded to include designs, under 'the new manufacture' in the *Patents and Designs Protection Act, 1872*. Then came the *Inventions and Designs Act of 1888*, and later the *Indian Patents and Designs Act, 1911*, (which was modeled largely on the British Patents and Designs Act, 1907). It was a comprehensive piece of legislation and it provided for an elaborate administrative regime under the management of the controller of patents and various time and procedural requirements for processing of applications, filing of objections etc. [1].

After independence in 1947, the independent government decided that the above Act, which was closely modeled on the laws applicable in England, had to be comprehensively reworked because it was deemed inappropriate to realize the economic development goals of the country. This was due to the facts that the colonial cat had failed to stimulate invention by Indian citizens and to encourage the development and exploitation of new inventions for industrial purposes in the country so as to secure benefits to the largest section of the people [2]. This was, for instance, reflected in the fact that the 1911 Act had led to a situation where 90 per cent of Indian patents were held by foreigners and about 90 per cent were not worked in India [3]. Two expert committees reviewed the then existing situation with regard to patents: one, headed by Justice Rajagopal Iyengar, and another headed by Bakshi Tek Chand. The reports of these committees were as follows: -

(a) Justice Bakshi Tek Chand Report, 1950: Considered the failure of the Indian Patent System to stimulate invention and encourage exploitation of new inventions for industrial purposes and suggested the following measures-

1. Compulsory licenses should be issued;
2. Efficient machinery should be evolved to tackle the issue of abuses [4].
3. **Justice Rajagopala Ayyangar's Report' 1959:** identified the essential pre-requisites for a nation to assimilate the benefits of a patent system. These features include the technological advancement of the country, need for encouragement of the inventors and for rewarding them and the increasing emphasis on technical education in India and the growing number of quality research institutes together with the rapidly increasing industrialization. The committee believed that the system of patent protection should be modified to suit the Indian environs. After careful deliberation, it suggested a three pronged strategy: -

1. Identification of inventions, which are to be protected;
2. Determination either to prevent foreigners from taking patents in India or to make them work the patent in India;
3. Determination to withstand any pressure to sign any international conventions.

This was suggested so that India could develop its economy independently without any arm-twisting from developed nations [5].

The bill proposed by this committee was placed before the Lok Sabha in 1966 but the House was dissolved shortly thereafter and the Bill lapsed. The Joint Committee of the Pa presented the New Lok Sabha with another bill in August 1967 and it was revealed that MNCS, who owned 90% of all patents in India, had misused patents largely to ensure a protected market in India for their products, denying availability of many essential goods to people at competitive prices.

1.2 The Indian Patents Act, 1970

The Patents Bill following the reports of these Committees was debated for a decade when finally The Indian Patents Act 1970 was enacted after deliberation by the Joint Committee of the Parliament, The Patents Act, 1970 was passed. The main amendments to the Indian Patents and Designs Act were as follows: -

In the long title and the Preamble the words "Inventions and" were omitted [6].

The words "Indian Patents and" were omitted from Section 1 (1).

In Section 2 clause no 1 was omitted. In clause 2 the words "(as respect designs)" were omitted. For clause 3 the following substitution was made "controller means the Controller General of Patents, Designs and Trade Marks appointed under sub section 1 of Section 4 of the Trade and Merchandise Marks Act, 1958". In clause 5 the words " Trademark as defined in Section 78 were substituted by "trade mark as defined in clause (v) of sub-section (1) of Section 2 of the Trade and Merchandise Marks Act, 1958. Clause 6 was fully omitted. The following words were inserted in clause 7 after sub clause (ee) i.e. "(f) in relation to the Union Territories of Dadra and Nagar Haveli and Goa and Daman and Diu, the High Court of Bombay, (g) in relation to the Union Territory of Pondicherry, the High Court at Madras." Clauses 8, 10 and 11 were omitted. For clause 12 following substitution was made "patent office means the patent office referred to in Sec 74 of the Patents Act, 1970."

Part I was omitted [7].

Following substitution were made for Section 51-B, " Designs to bind Government- A registered design shall have to all intents the like effects as against government as it has against any person and the provisions of Chapter XVII of the Patents Act, 1970, shall apply to the registered designs as they apply to patents."

The following substitutions were made in Section 54 for the words "The provisions of this Act" the words "the provisions of the Patents Act, 1970."

Sections 55 and 56 were omitted.

Following substitution was made in Section 57 (1) " there shall be paid in respect of the registration of designs and applications therefore and in respect of other matters relating to designs under this Act such fees as may be prescribed by the Central Government."

Section 59-A was omitted [8].

Sub section 1 of Section 61 was omitted.

The following substitution was made for Section 62 "Power of Controller to correct clerical errors- The Controller may on request in writing accompanied by the prescribed fee, correct any clerical errors in the representation of a design or in the name of address of the proprietor of any design or in any other matter which is entered upon the register of designs."

In section 63 (1) the words "to a patent or" and "patent or" were omitted. In sub section (2) the words "patent or" were omitted and the words "patents or designs, as the case may be" were substituted by 'designs." In sub section (3) the words "patents or' were omitted. In sub section (4) the words "to a patent or" were omitted.

In Section 64 (1) the words "patent or" and "either" were omitted wherever they occur. In sub section (5) clause (a) was omitted [9].

Section 66 was omitted.

In Section 67 the words "for a patent, or for amendment of an application or of a specification, or" were omitted.

In Section 69 (1) the words "to grant a patent for an invention or."

In Section 71-A the words "or from patents, specifications and other." were omitted.

Sections 72, 74-A and 75 were omitted [10].

In Section 76 (1) the word 'other' was omitted and in sub section (2), clause (c) the word "opponent' was omitted.

In Section 77 (1), in clauses (c) and (d) the word "specifications" was omitted. In clause (e) following substitution was made "providing for the inspection of documents in the patent office and for the manner in which they may be published." Clause (eee) was omitted.

Section 78 was omitted.

Following substitutions were made for Section 78-A "Reciprocal arrangement with United Kingdom and other Commonwealth Countries- (1) any person who has applied for any design in the United Kingdom or his legal representative or assignee shall, either alone or jointly with any other person, be entitled to claim that the registration of the said design under this act shall be in priority to other applicants and shall have the same date as the date of application in the United Kingdom:

Provided that-

(a) the application is made within 6 months from the application of protection in the United Kingdom; and
(b) nothing in this section shall entitle the proprietor of the design to recover damages for infringements happening prior to the actual date on which the design is registered in India.

(2) The registration of a design shall not be invalidated by reason only of the exhibition or use of, or the publication of a description or this section as that within which the application may be made.

(3) The application for the registration of a design under this section must be made in the same manner as an ordinary application under this Act.

(4) Where it is made to appear to the Central Government that the Legislature of any such Commonwealth country as may be notified by the Central Government in this behalf has made satisfactory provision for protection of designs registered in India, the Central Government provisions for the protection of designs registered in India, the Central Government may, by notification in the Official Gazette, direct that the provisions of this section, with such variations or additions, if any, as may be set out in such notification, shall apply for the protection of designs registered in that Commonwealth country."

Sections 78-B, 78-C, 78-D and 78-E were omitted [11].

The resulting Patent Act, which was adopted in 1970, retained the basic western patent model but with its own twist in a number of areas. On the one hand, the Act was adopted on the basis of a conscious decision to maintain the existing system and was influenced by the changes that took place in the UK, which also amended its patent regime in 1949 [12]. On the other hand, the Act was noteworthy for its attempt to mitigate some of the perceived negative impacts of the monopoly inherent in the patent system [13].

Since the Patents Act, 1970 introduced a system which was largely modeled after existing laws And treaties, this section does not introduce the basic patent regime proposed and limits itself to pointing out the main specifications of the patent regime adopted in the Act. At the level of the scope of protection, the 1970 Act introduced a number of significant exceptions. Firstly, it generally excluded the patentability of life forms and specifically precluded the patentability of methods of agriculture or horticulture [14]. Secondly, the act rejected the possibility of granting patents in respect of substances intended for use as food, medicine or drug [15]. Interestingly drugs were deemed to include insecticides, germicides, fungicides, weedicides and herbicides and all other substances intended to be used for protection or preservation of plants [16]. Thirdly, the act introduced a distinction between product and process patents in the fields of nutrition and health. While product patents were excluded, process patents were allowed.

The Act also discriminated between different types of inventions with regards to rights conferred. While the normal duration of patent rights was 14 years it was of reduced duration of 7 years with respect to processes of manufacture for substances intended for use as food, medicine or drug [17].

Further, the Act included a series of measures restricting the rights of patent holders, particularly to encourage the use of invention in India [18]. Thus the Act specifically indicated that the general principals governing the sue of patents were that:

(a) patents were granted to encourage inventions and to secure that the inventions are worked in India on a commercial scale ; and
(b) they are not granted merely to enable patentees to enjoy a monopoly for the importation of patented articles [19].

This constitutes the basis for the compulsory license regime. Under the Patents Act 1970 a compulsory license could be granted upon application if after three years it was shown that the reasonable requirements of the public with respect to the patented invention were not satisfied or that the patented invention was not available to the public at a reasonable price [20].

In this context, one specificity of the Act was the introduction of 'licenses of right'. This constituted a stronger form of compulsory licensing where the government could directly request after three years from the Controller General of Patents that he/ she should endorse the patent with the mention 'license of right' if the reasonable requirement of the public were not met or if the patented invention was not available to the public at a reasonable price [21]. This endorsement then gave anyone interested in working the patent the right to ask the patent holder for a license on the terms that had to be mutually agreed [22]. An even stricter regime was put in place for patents relating to food, medicine or drugs. In this case, all patents were automatically deemed to be endorsed with the mention 'license of right' at the expiration of a period of three years [23].

Further the Act also provided the ultimate penalty of patent revocation where compulsory licenses and licenses of rights failed to achieve the goal of meeting the reasonable requirement of the public. An application for revocation could be made after the expiration of a period of two years from the date of grant of a compulsory license or license of rights [24].

Overall the Patents Act 1970 was quite different from the western patent model of the time and is now in retrospect a model of what a TRIPS Agreement that took effective notice of developing countries' interests and needs could have looked like. It is even more interesting because most of the exclusions that were provided specifically related to the need to balance the monopoly rights with the expectations of society at large. The focus on exclusions in the field of health and food were significant because these are two of the fields that are directly related to the need to balance the monopoly rights with the expectations of society at large. The focus on exclusions in the field of health and food were significant because these are two of the fields that are directly connected to the fulfillment of basic needs. The system put in place specifically sought to discipline the prices of essential items such as food and medicine to ensure their availability to the greatest number [25]. The rationale of the Patents Act 1970 was to promote the growth of domestic industry at the expense of foreign companies but, especially in the fields related to basic needs, it specifically sought to control the monopoly rights conferred on domestic producers.

There is a large consensus that this strategy was, for instance, largely successful in the pharmaceutical sector and the Patents Act 1970 and associated measures such as price control have had a number of positive impacts on access to drugs. Firstly, relative drug prices have decreased significantly since the 1960s compared to other countries. While drug prices in India were among the highest in the world after independence, they are now among the lowest [26]. Secondly, the Patents Act also constituted the bedrock of the growth of the domestic pharmaceutical industry which had remained relatively small in decades following independence and by 1970 only accounted for about 25 per cent of the domestic market. The restriction on product patents, prices and foreign investment contributed to the rapid development of the industry, which now accounts for 70 per cent of bulk drugs and meets nearly all the demand for formulations [27]. Thirdly, some of the local companies have developed sufficient expertise to produce their own medicines. This does not mean that the patent system introduced in the 1970s managed to solve any of the underlying socio-economic problems such as fostering access to drugs for all as some recent estimates indicate that only 20 per cent of the population has access to all the essential drugs they need [28]. In isolation, any patent system is unlikely to ever provide an answer to social policy issues. However, it can have rather positive or rather negative impacts on sustainable development and the Patents Act 1970 is among the acts that will have had some positive impacts during its lifespan.

It was highly acclaimed by, amongst others, United Nations Conference on Trade and Development, hereinafter referred to as (UNCTAD), a most progressive patent law and inspired similar legislation in many developing countries [29].

1.3 Pre-requisites for grant of a patent to an invention

There are certain prerequisites for grant of a patent to an invention. The prerequisites to be present in an invention before it can be granted a patent in India are: -

1. It must be new
2. It must be non obvious
3. It must be useful

Section 2 (1) (j) of Patents Act, 1970 defines an invention as follows: -

"Invention" means a new product or process involving an inventive step and capable of industrial application and section 2(1) (ja) defines an 'inventive step' as a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art. The Patent Rules, 2003, rule 2 (c) defines "article" as it includes any substance or material, and any plant, machinery or apparatus whether affixed to land or not.

Sections 3 and 4 of the Indian Patents act, 1970 lists the following not being inventions within the meaning of the Act and therefore, being unpatentable:-

1. An invention which is frivolous or which claims anything obviously contrary to the well established natural laws.
2. An invention the primary or intended use or commercial exploitation of which could be contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to environment.
3. The mere discovery of a new form of a known substance which does not result in the enhancement of the efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process results in a new product or employs atleast one new reactant.
4. A substance obtained by a mere admixture resulting only in the aggregation of the property of the components thereof or a process for producing such substance.
5. The mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way.
6. A member of agriculture or horticulture.
7. Any process for the medicinal, surgical, curative, prophylactic diagnostic therapeutic or other treatment of human beings or any process for a similar treatment of

animals to render them free of diseases or to increase their economic value or that of their products.
8. Plants and animals in whole or any part thereof other than micro-organisms but including seeds, varieties and species and essentially bio-logical process for production or propagation of plants and animals.
9. A mathematical or business method or a computer programme pre se or algorithms.
10. A mathematical or business method or a computer programme per se or algorithms.
11. Literary, dramatic, musical or artistic work or nay other aesthetic creation including cinematographic works and television productions.
12. A mere scheme or rule or method of performing mental act or method of playing game.
13. A presentation of information.
14. Topography of integrated circuits.
15. An invention which in effect is a traditional knowledge or which is an aggregation or duplication of known properties of traditionally known components.
16. An invention relating to atomic energy.
17. In respect of food, medicine or drug, patents are granted only for the method of process of manufacture of the substances but not the substances themselves intended for use, or capable of being used as medicine or drug except chemical substances, which are ordinarily used as intermediate, patent can be granted in the manner provided in the Act.
18. In respect of substances prepared or produced, by chemical processes which includes bio-chemical, bio-technological and micro-biological process or including alloys, optical glass, semi-conductors and inter-metallic compounds, patents are granted only for the process of manufacture but not for the substances themselves.

The Bombay High Court laid down the constituents of an invention in the case of *Farbwork Hoechst Attengesellschaft Vosmals Meister Leucius & Bruning Corporation etc vs Unicham Laboratories and Other* [30]. Invention consists of following essential elements: -

1. An invention consists of the production of new substance from known materials by known methods cannot be held to possess subject-matter of an invention merely on the ground that the substances produced are new. Substances produced may serve no useful purpose, in which case the inventor will have contributed nothing to the common stock of useful knowledge (the methods and materials employed being already known) or of useful materials.
2. Such an invention may, however, be held to possess subject matter provided the substances produced are not only new but useful, though this is subject to qualification that the substances produced must be truly new, as opposed to merely additional members of a known service (such as homologous) and that their useful qualities must be the inventories won discovery as opposed to mere verifications by him of previous predictions.
3. Even where an invention consists of the production of further members of a known service whose useful attributes have already been described or predicted, it may possess sufficient subject matter to support a valid patent provided the somewhat stringent conditions was essential to the validity of a selection patent are satisfied, the patent must be based on some substantial advantage to be gained from the use of the selected members of the known series of family of substances the whole (or substantially the whole) of the selected members must possess this advantage, and this advantage mention peculiar (or substantially peculiar) to the selected group. The mere fact that the methods adopted are known methods cannot lead to the conclusion that there is no inventive step.

1.4 Steps in procedure for grant of a Patent

The procedure for obtaining a patent in India consists of following steps:

1. Submission of application
2. Publication And Examination of application
3. Opposition to grant of patent to the applicant
4. Grant and sealing of the patents [31].

1.5 Submission of application

Sections 6 to 11 of The Patents Act, 1970 deal with the requirements regarding application for patents. Section 6 of The Act stipulates the person entitled to apply for patent. Section 7 provides the form of the patent application to be filed in patent Office for only one intervention and also provides for international application under patent cooperation treaty. Section 8 lays down information and undertaking regarding foreign application, which are required to be furnished under the act.

Section 9 and 10 list the content of provisional and complete specification to be filed wit the application describing the invention, method of performing, claim of invention and the provision for technical information along with the provision for the international application for invention respectively [32].

1.6 Persons entitled to apply for patents

Section 6 of the Act provides the persons who are entitled to apply for patents.

An application for obtaining a patent may be made by any of the following persons wither alone or jointly with any other person: -

1. By any person claiming to be the true and first inventor of the invention;
2. By any person being the assignee of the person claiming to be the true and first inventor in respect of the right to make such an application;
3. By the legal representative of any deceased person who immediately before his death was entitled to make such an application.

The Patent Rules, 2003 specifies the procedure for application for patents. Rule 10 provides the period of proof and Rule 11 specifies the order of recording applications.

Section 6 of The Patents Act, 1970 is subject to Section 134 which provides that: -

Where any country which has been declared a convention country by the Central Government does not accord to citizens of India the same rights in respect of the grant of patents and the protection of patent rights as it accords to its own nationals, no national of such country shall be entitled, either solely or jointly with any other person: -

1. To apply for the grant of a patent or be registered as the proprietor of a patent;
2. Be registered as the assignee of the proprietor of a patent;
3. To apply for a license or hold any license under a patent granted under the Act.

1.7 The applicant to file provisional and complete specification

Section 9 provides that where an application for patent is accompanied by a provisional specification, a complete specification shall be filed within 12 months from the date of filing of an application, and if it is not so filed then the application shall be deemed to be abandoned. Every specification whether provisional or complete shall be made in Form 2 as specified in Patents Rules, 2003.

Specification means to specify the invention or tell about the intricacies of an invention. It is provisional when only an initial description is given in the document and it is complete when the full working details are specified. The main purposes of specification are to check the validity of claim of invention and to make the invention available to the public on expiry of the term of the patent.

Section 10 of the Act lists the contents of complete specification as follows: -

1. The invention shall be titled sufficiently indicating the subject matter to which the invention relates.
2. The full and particular description of invention and its operation or use and the method by which it is to be performed.
3. The disclosure of the best method of performing the invention, which is known to the applicant and for which he is entitled to claim protection.
4. The claims defining the scope of the invention for which the protection is claimed.
5. The specification should be accompanied by an abstract to provide technical information on the invention.
6. The specification, in case of international application, designating India, the title, description, drawings, abstract and the claims filed with the application shall be taken as a complete specification.
7. The claim of a complete specification shall relate to a single invention, or to a group of inventions linked so as to form a single inventive concept, shall be clear and succinct and shall be fairly based on the matter disclosed in the specification.
8. The declaration as to the inventor ship of the invention, shall be furnished within period prescribed after filing of the specification.
9. The complete specification filed after a provisional specification may include claims in respect of developments of, or addition to the invention which was described in the provisional specification being developments or additions in respect of which the applicant would be entitled under the provisions of section 6 to make a separate application for a patent.

Section 10(2) provides that a Controller may require drawings to be supplied, which shall form part of the specification.

In the case of *Ram Narain Kher vs Ambassador Industries, New Delhi and another* [33], The Delhi High Court has laid down that having regard to the previous date of knowledge at the time of the patent is granted to a party, it is essential that the party claiming patent should specify what particular feature of the device distinguish it form those which had gone before and show the nature of the improvement which is aid to constitute the invention. A person claiming a patent has not only to allege the improvement in the art in the form but also that the improvement affected a new and very useful addition to the existing state of knowledge. The novelty or the invention has to be succinctly stated in the claim. Where the claim made is addressed to the skilled persons in art or trade and not to a common man, the Court observed that it is no doubt true there can be no escape form the fact that the novelty of the claim or the advantage derived by the invention has to be succinctly stated in the claim and must not be left to an inference raised on a general review of specification.

Publication and Examination of the Application

The Patents Act, 1970 as amended by the Patents (Amendment) Act 2005, provides that the application for patent shall ordinarily be open to the public for such period as may be prescribed. However, the applicant may request the Controller to publish his application before the expiry of the period prescribed and subject to certain exceptions, the controller shall publish such application as soon as possible [34].

Every application for a patent, shall on expiry of the period prescribed be published except in few cases:

1. Where the application in which secrecy direction is imposed under section 35,
2. Where the application has been abandoned under Section 9,
3. Where the application has been withdrawn three months prior to the period specified [35].

The publication of every application shall include:

1. Particulars of the date of application,
2. Number of application,
3. Name and address of the applicant,
4. An abstract

The Patents (Amendment) Act 2005 provides that on and form the date of application of paten and until the date of grant of patent, the applicant shall have the like privileges and rights as if a patent for invention had been granted on the date of publication of the application.

When the complete specification has been filed in respect of an application for a patent and request for examination has been mad in respect of the application in the prescribed manner under section 11B(1) or (2) or (3), the application and the specification relating thereto shall be referred by the Controller to an examiner for making a report to him in respect of the following matters: -

1. Whether an application and specification and other documents relating thereto are in accordance with the requirements of the Act and of rules made thereunder;
2. Whether there is any lawful ground of objection to the ground of patent under the Act in pursuance of application;
3. The result of investigations made under section 13;
4. Any other matter which may be prescribed

The examination shall be made in accordance with Form 18 of Patent Rules, 2003 and the report has to be made by the examiner within 18 months.

On examination, if there are any deviations or mistakes made by the applicant and are detected by the examiner then the objections will be raised. These objections are mainly with respect to drafting of claims and specification, similarity with any prior claim recorded by the patent office.

The Patent Office may conduct the search not only in respect of documents in the search file. It may additionally carry out an online computer search of one or more commercial

databases, as well as on the Internet. The search does not extend to disclosures other than publications and, in particular, does not seek to determine whether disclosure has taken place by public use. This type of disclosure, if any, will only be taken into account during the examination as to substance if that use has been brought to the attention of the Patents Office by some third party's action [36].

The applicant is then to make any amendment, which is sought within 15 months from the date on which first statement of objections is sent by the controller. Such period of making amendments can be extended to a maximum of 18 months on a request of extension being made by the applicant. If the objections are not satisfactorily rectified, the Controller after giving an opportunity of hearing to the applicant may refuse the acceptance of the application.

1.8 Opposition to the grant of patent

Section 25 of the Act provides that any person in writing on following grounds can file an opposition:

1. The applicant had wrongfully obtained the complete invention or a part thereof from a person under or through whom he claims.
2. Prior publication in any Indian specification or prior publication in any other document in India or elsewhere.
3. The invention has been the subject matter of a prior claim in an application, which is prior in time than the applicant's claim.
4. The invention as claimed in the complete specification was publicly known or publicly used in India before the applicant's claim.
5. The invention as claimed by the applicant in his complete specification is obvious and does not involve any inventive step
6. The invention is not patentable or tits patenting is prohibited under the Act.
7. The complete specification of the applicant does not sufficiently and clearly describe the invention or the method by which it is to be performed.
8. In case of foreign application, the failure to disclose information relating to such application filed in a foreign country.
9. In case of convention application the application was not made within 12 months from the date of first application for protection of invention made in a convention country by the applicant or a person from whom he derives title.
10. In case the complete specification does not disclose or wrongly mentions the source or geographical origin or biological material used for invention.
11. In case the invention so far as claimed in any claim of the complete specification is anticipated having regard to the knowledge, oral or otherwise, available within any local or indigenous committee in India or elsewhere.

The Controller shall, if requested by such person for being heard, hear him and dispose of such representation in such manner and within such time as prescribed [37].

However, at any time after the grant of patent but before expiry of one year from the date of publication of patent, any person interested may give notice of opposition to the Controller, on nay of the similar grounds mentioned above [38].

Where any such notice of opposition is duly granted, the controller shall notify the patentee and shall constitute a Board, refer such notice of opposition along with the documents for examination and submission of its recommendations to the Controller. The opposition board, after giving the patentee and opponent an opportunity of being heard, shall submit recommendations to the Controller, and the Controller shall either to maintain, or to amend, or to revoke the patent, though while passing an order, the Controller shall not take into account any personal document or secret trial or secret use [39].

Chapter VI of the Patents (Amendment) Rules, 2005 deals with the opposition proceedings. Rule 55 states that opposition by representation against the grant of patent be duly filed in Form 7 and sent to Controller in duplicate. Rule 57 lays down rule regarding the filing of written application of opposition and evidence.

1.9 Grant of patent

When the application for a patent has been found in order for grant of the patent and:

1. The application has not been refused by the Controller by virtue of any power vested in him,
2. The application has not been found to be in contravention of any provisions of the Act,

Then the patent shall be granted as expeditiously as possible 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 the patent, the Controller shall publish the fact that the patent has been granted and it shall be open for public inspection.

1.10 Term of the patent

Section 53 lays down the term of every patent granted shall be in respect of all inventions 20 years from the date.

1.11International protection for inventions

In order to protect one's invention in other countries, one is required to file an independent patent application in each country of interest; in some cases, within a stipulated time to obtain prioirty in these countries. This entails large investment within a short time towards various costs.

In this regard, India is a member of Patent Co-operation Treaty (hereinafter refered to as PCT), which is a multilateral treaty administered by the International Burreau of the World Intellectual Property Organisation (hereinafter referred to as WIPO). It facilitates the obtaining of protection for inventions where such protection is sought in any or or all of PCT contracting states including India. It provides for the filing of one patent apllication, 'the international application' with effect in several states instead of filing several separate national or regional patents. Although the PCT does not eliminate the necessity of prosecuting the international application in the national phase of processing before the national regional offices, but it does facilitate such prosecution in several important respects by virtue of the procedures carried out on all international applications during the international phase of processing under the PCT (e.g., the international search and international preliminary examination.). The applicant gets more time and a better basis for deciding in what countries to further pursue the application. Secondly, the PCT saves time and money as only one application is to be filed, and one initial set of fees to be paid, in any one currency. Other benefits are simplification of procedures, and saving on translation costs, etc. [40].

There are two main phases in the PCT procedure. It begins with the filing of an international application and ends in the case of a favorable outcome for the applicant with the grant of a number of national or regional patents. The international phase has four main steps. The first three steps consist of the filing of the application and its processing by the 'receiving office' (designated), and the publication of the international search report by one of the ' international searching authority, (designated), and the publication of the international application together with the international search report as well as their communication by the International Bureau of WIPO to the national or regional offices (the so-called 'designated offices') which the applicant wishes to grant him a patent on the basis of his international application. There is also an optional fourth step, i.e., the establishment of an international preliminary examination report (which, however, is not published) by one of the IPE authorities (designated).

On completion of the international phase, further action is required in each designated office (it is up to applicant to decide when to enter the national phase). The required national fees are to be paid, any translations if required are to be furnished, if need be a representative of the applicant in the particular country has to be appointed, all within the prescribed time limit. Offices then examine the patent and grant or refuse it on the basis of their national laws. It is to be noted that any action taken in the international phase has no effect on the national office [41].

For a given international patent application, there will be one or more competent international searching authorities. The results are set out in the 'international search report', which is made available by the fourth, or fifth month after the international patent application is filed. It lists citations of prior art relevant to the claims of the application and gives an indication of the possible relevance of the citation to the questions of novelty and inventive step (non-obviousness). There is also the option of an international preliminary examination, to be made on the basis of the international search report, according to internationally accepted criteria of patentability (novelty, inventive step and utility).

The patent or any other office designated by each contracting State becomes the receiving office for receiving the applications. These are passed on to WIPO for administrative action after which they are referred to the International Searching Authorities (ISA), which are usually the patent offices, appointed to carry out the patent search on global basis. In case the receiving office is also an ISA, a separate referral is not required [42].

The application under PCT has the effect of a national patent application in the PCT contracting states, which have been declared as the designated States in the original application. It also has the effect of a regional application in the PCT countries, which are also parties to the regional patent treaty like Harare Treaty. The main advantage is that because the application is prepared in accordance with the international standards, there will be no need for amendments to suit the regional or national requirements.

The granting of patent remains the responsibility of the national or regional offices. But the start of processing of applications by these offices (the national phase or regional phase), including the examination, is delayed until after the end of 20th or 30th month from the date of filing of PCT application in the receiving office [43].

Table

Stage One The PCT application is filed	The Receiving Office (RO) checks the application for mistakes. The RO then assigns the application a filing number. This part of the process usually takes 6 to 8 weeks
Stage Two An International Search is carried out	An International search is carried out by the International Search authority (ISA) to look for any relevant documents describing similar inventions related to the one described in PCT application. The findings of search are compiled in search report called an International Search report (ISR). An examination report called a Written Opinion of the International Searching Authority (ISA) is also produced. These reports are sent to an agent and the IB One can amend the application based on findings of ISR and ISO- amendments must be made within 2 months of receiving the ISR and ISO or within 16 months of the earliest priority date. As a PCT requirement, the ISR and ISO must be issued within 3 months of the application's lodgment date, or 9 months of the earliest priority date, whichever is later.
Stage Three The application is published by the IB	18 months from the earliest priority date, the IB publishes the application and the ISR. There is no provision for delay in publishing the application- it can be published without the complete ISR if necessary. At this point, the only way to stop the publication is to withdraw the application- this must be done no later than 15 working days before it is due to be published. 30 months from the earliest priority date the IB publishes the ISO
Stage Four-Optional An International Preliminary Examination is requested	One can request an optional International Preliminary Examination (IPE) of the application- this request is called a demand. The IPE is based on ISO and any amendments one files and helps one to refine their application before one decide to proceed with the national phase. If you have requested an IPE, and the International preliminary examiner considers that there are still deficiencies in your application, you will be given a written opinion (IPEO) otherwise the examiner will establish an International Preliminary Report on Patentability (Chapter 10 or (IPRPII) The examiner must in any event establish the IPRPII by 28 months after the earliest priority date. This will be an adverse report if you have not overcome all deficiencies. The EPEO, like the ISO, explains why documents have been cited and alerts you to any problems your application may have in relation to novelty, inventiveness, and industrial applicability, as well as to any problems of clarity in your specification. You can then file amendments to your application (under Article 34 – seen in more depth) at the time of filling

	and demand or in response to a IPEO any time up to the establishment of the IPRPII Please note – the decision on granting a patent remains the task of the national or region offices where you enter the national phase – the IPRPII is authoritative but it is not binding in these offices.

Source: IGNOU study material book no 2 page no 80

In India, Indian Patent Office acts as a receiving office (RO), International Searching Authority (ISA) and the International preliminary Examining Authority (IPEA) under the PCT.

1.12 A brief look into major countries' patent grant procedure

Patent systems features	United States	Japan	Europe
Patents granted on the basis of first to file?	No	Yes	Yes
Filing permitted in any language?	Yes	Not	No, but accepts English, French, German, or any official language of member sate of European Patent Convention
Are patent applications published?	No, kept secret until patent is granted	Yes, 18 months after filing priority date	Yes, 18 months after filing priority date
Can patent examination be deferred?	No	Yes, for 7 years after filing	Yes, 6 months after 18-month publication
Patent term	20 years from filing for application filed after June8, 1995	15 years from date of publication for purposes of opposition, but not more than 20 years from filing I	20 years from filing
Grace period	1 year with no restrictions on disclosure by inventor	6 months with restricted disclosure permitted	6 months with restricted disclosure permitted
re-grant opposition?	No	Yes	No
Compulsory licensing?	Only for national security	Yes	Laws of member states control
Legal systems	Common law	Civil	Civil/UK common law
Patent commissioners	Political appointee	Professional bureaucrat	Professional bureaucrat
Patent documents	Public good	Copyright	Varies
Formality	Less stringent Reviewed by clerks and examiners	Extremely stringent Reviewed by clerks (not examiners)	Reviewed by clerks and examiners

Source: IGNOU stud

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