

**LECTURES ON "IPR" FOR SCIENCE
STUDENTS**
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By

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Dr. B.B.Singh holds a Master's degree in Physics and is a recipient of the Gold Medal for being the best student of the year. He obtained his Ph. D. degree in Radiation Biology from the university of London and is an elected Fellow of the Indian Academy of Sciences and also of the National Academy of Sciences of India. He has been awarded the degree of Doctor of



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He has extensively toured India for over 5 years delivering public lectures on fallacies of the Indian Patent Bill before it was passed into an Act by the Parliament. He is an active member of several NGOs and social welfare bodies including Rotary International, Masonic Fraternities and Swadeshi Jagran movement. He is a very popular public speaker and a teacher for students of academic pursuits and has guided several research scholars for their master and doctoral degrees in various Universities.

LECTURE -3

PATENTS

DICTIONARY MEANING

OPEN

DEFINITION

PATENT IS A MONOPLOY GRANTED TO A PERSON WHO HAS INVENTED A NEW & USEFUL ARTICLE OR AN IMPROVEMENT OF AN EXISTING ARTICLE; OR A NEW PROCESS OF MAKING AN ARTICLE

MONOPOLY CONSISTS OF AN EXCLUSIVE RIGHT TO MANUFACTURE THE NEW ARTICLE INVENTED, OR MANUFACTURE AN ARTICLE ACCORDING TO THE INVENTED PROCESS FOR A LIMITED PERIOD.

DURING THE TERM OF THE GRANT, THE OWNER OF THE PATENT CAN PREVENT ANY PERSON FROM USING, SELLING, MANUFACTURING AND IMPORTING THE PATENTED INVENTION.

AFTER THE GRANT PERIOD THE INVENTION PASSES TO PUBLIC DOMAIN AND ANY BODY CAN MAKE USE OF THE PETENTED INVENTION

OBJECTIVES OF PATENTING

The Object of patent law is to encourage scientific research, new technology and industrial progress. Grant of exclusive privilege to own, use or sell the method or the product patented for a limited period, stimulates new inventions of commercial utility. The price of grant of the monopoly is the disclosure of the invention at the Patent Office, which after the expiry of the fixed period of the monopoly, passes into the public domain.

- If it had not been for the inventor who developed and disclosed the invention, no body would have been able to use it at that or at any other time.
- Giving of monopoly encourages the putting into practice of the invention by the inventor himself or allowing others to use it for royalties.
- Patenting stimulates technical progress in the country and offers;
 - (i) Encouragement for research and invention related activities
 - (ii) Inducement to the inventor to disclose his invention
 - (iii) Rewards for inventions on commercial scale
 - (iv) Incentives to State and Private institutions to invest in research and development.

Simply stated, the objective of granting a patent is to encourage indigenous scientific and technological development. However, looking at it historically, the primary purpose of a grant of patent was not necessarily to encourage the discovery of new inventions but to introduce in the country an existing technology from a foreign State. T. A. Blanco White writes:-

"The basic theory of the patent system is simple and reasonable. It is desirable in the public interest that industrial techniques should be improved. In order to encourage improvement and to encourage also the disclosure of improvements in preference to their use in secret, any person devising an improvement in a manufactured article, or in machinery, or methods of making it, may upon disclosure of his improvement at the Patent Office, demand to be given monopoly in the use of it for a period of sixteen years. After that period, it passes into public domain and the temporary monopoly is not objectionable, for, if it had not been for the inventor who devised and disclosed the improvement, nobody would have been able to use it at that time or any other time since nobody would have known about it. Furthermore, giving of monopoly encourages the putting into practice of the invention, for the only way the inventor can make profit from it is by putting it into practice

either by using it himself and deriving an advantage over his competitors by its use or by allowing others to use it in return for royalties"

SOCIAL BENEFITS OF PATENTS

THE WORKING OF INVENTION WITHIN THE COUNTRY SO AS TO RESULT IN THE ESTABLISHMENT IN THE COUNTRY A NEW INDUSTRY OR AN IMPROVEMENT OF AN EXISTING INDUSTRY WHICH WOULD EMPLOY THE LABOUR AND CAPITAL OF THE COUNTRY AND THUS INCREASE THE NATIONAL WEALTH. DISCLOSURE TO PUBLIC OF THE INVENTION SO THAT ON EXPIRY OF THE LIFE OF THE PATENT, THE PUBLIC ARE ENABLED TO WORK THE INVENTION THEMSELVES AND IN COMPETITION **WITH EACH OTHER.**

(JUSTICE N.R.AYYENGAR'S REPORT 1959)

WORLD HISTORY OF PATENTS

YEAR	COUNTRY	REMARKS
1236	VENICE	WOOVEN FABRICS WITH COLOURED PATTERNS
1421	FLORENCE	
1474	VENICE	VENICE ACT 1474
1500	U.K.	LETTERS PATENT, DECLARATION OF QUEEN ELIZABETH IN THE PARLIAMENT AND "BOOK OF BOUNTY"
1624	U.K.	STATUTE OF MONOPLOY, REVISION-I 1852 VALID IN ALL BRITISH COLONIES INCLUDING USA
1762	FRANCE	ALL FRENCH COLONIES, SPAIN AND PORTUGAL REVISION-I 1844
1790	U.S.A.	14 YEARS AFTER FREEDOM NUMEROUS REVISIONS
1815	PRUSSIA	
1842	GERMANY	VALID IN SCANDENAVIAN COUNTRIES, AUTRIA & COLONIES; ABOLISHED 1850, REINTRODUCED IN 1871, ABOLISHED IN 1945, REINTRODUCED IN 1949, REVISION-1990
1856	INDIA	REVISION 1971, 2002, 2005
1871	JAPAN	ABOLISHED 1872, REINTRODUCED 1885, INVENTION DAY 18 th April
1917	USSR	EASTERN EUROPE & COMMUNIST COUNTRIES

ORIGIN OF PATENTING

It is said that the first patent in the world was granted to a German national John van Speyer in Venice in 1236 for woven fabrics with multicoloured patterns. However, there are no records available for the next 200 years thereafter and there is no way to ascertain whether any patents were ever granted. Nevertheless, it can be surmised on the basis of the existing records that some kinds of patents were indeed granted in and around 1421. However, in those days of monarchical system of governance, such grants or privileges to inventors were not necessarily based on any established system adopted by the kings or by their foresighted politicians. In addition to inventors, many other responsible persons of national administration were also granted similar privileges as a reward or bounty, and, in a way some kind of right to a patent co-existed mixed with other privileges. As a consequence, the grant of such mixed rights gradually increased without being very conspicuously relating to inventions and this caused great confusion. Hence, subsequently a separate process of granting patent rights on inventions was gradually developed to some level of systematisation.

A SHORT WORLD HISTORY OF PATENT SYSTEMS

Venice (Venezia) is the first state that adopted a patent system for an invention in the form of public order. It enacted the Venetian Act of 1474 for granting patents but the first specific patent grant is said to have already taken place in Florence in 1421 as mentioned above. The Venetian Patent Act gave a privilege of 10 years to the inventors (Adelman et al 1998) and a fairly large number of patents were recorded in Europe from the middle of the 15th Century till the beginning of the 16th Century. Thereafter, a Patent system was reintroduced in 1624 by the British, which became applicable in the United Kingdom of Great Britain.

U.K.

Before the Establishment of the First Patents Act in 1624, the British had only heard of the Venice Patent system but prior thereto they had already introduced and adopted its own special patent system closely related to the Venice system. There was actually a pressing reason for introducing a patent type of system because from 1307 to 1377 during the reign of King Edward II and Edward III, foreigners were not permitted to conduct any business within the U.K. territory. Hence, U.K. lagged far behind the European Continent in the field of industrial innovations and it was a pure necessity of promoting its domestic industry that the U.K. decided to adopt the early Venetian patent system as a means to protect and encourage the technicians from the European Continent to come to U.K. The Emperor therefore, exercised his supreme authority to grant some kind of privilege by means of the "Letters Patent" so that the Continental engineers and technicians could safely and freely bring their

knowledge with them and be engaged in businesses necessary for the industrial development within the territories of the United Kingdom. The privilege was granted by issuing the "Open Letters", also called the "Letters Patent"(open), bearing the King's seal. The presently used word "Patent" originates from the said Open Letters with the Seal of the Crown. Such Open Letters were given not only to highly specialised technically qualified individuals but also to other persons of authority and national importance. The "Open Letters" or the "Letters Patent" were made open to public. There were also the "Letters Close" which were given to an individual directly and could not be read and made public unless they were unsealed. Thus all other privileges were granted using the same format as that for patents on inventions and as the number of such cases gradually increased it caused considerable confusion of unimaginable level.

In due course of time and particularly during the reign of Queen Elizabeth - I (1558 -1603), a large number of persons made bad use of the system and the royal household was being deceived with false applications for grant of patents so much so that patents were also being granted even for already-known prior arts as a reward to the court favourites attending on the Queen or as a new source of income to the royal household. This attracted severe criticism by the people and finally culminated into a protest by the members of the House of Commons in 1601 and in order to pacify the protest, the Queen herself appeared and delivered a speech at the House of Commons and declared that unqualified patents would be invalidated and also that the people who had suffered losses could receive compensation against the unjust enforcement of a right by initiating a case for damages/losses at any time. This declaration of the Queen was later also confirmed by King James I (1603 - 1625) who, in 1610 made public the "Book of Bounty" with the intention to put later the concept of patenting in a statutory form as the "Statute of Monopolies" in 1624.

The "Statute of Monopolies" forms the basis of the codified U.K. Patent Act, which have been continuously amended and enforced.

The basic view of the U.K. patent system is as follows;

- (1). A patent shall be granted to a real and first inventor (patentability).
- (2). A patentee may exclusively produce or utilise a product or a process, relating to the patentee's invention, in the domestic market (effects of patent right).
- (3). A patent shall not be against the law or useless to the country by bringing about a rise in prices of commodities and hampering transactions (public interests of patent).
- (4). The term of a patent right shall not exceed 14 years (finiteness of term of patent right).

Thus it can be said that the year of 1624 when the U.K. established its first Patent Act, is one of the most important years in the history of the Patenting System. This is rightly so because many of inventions, which constituted a factor in the Industrial Revolution achieved in U.K. were protected whereby the technical world of the U.K. got built up vertically and rapidly on the foundation of old culture.

The Statute of Monopolies-1624 was revised to a large extent in 1852 to simplify the process for obtaining a patent so that all the procedures were managed by one government office. In addition, a system was also established, in which the content of an invention was officially published before granting a patent right and any person having opposition could file an opposition to the grant of the patent within a fixed period of time. Subsequently following the German Patents Act, the U.K. Patent system was modified in which an examination of the Patent claim was carried out prior to the publication of the patent claim.

The present system of UK Patent Law is modelled essentially on the Patents, Designs and Trade Marks Act 1883, which was amended in 1885, and again in 1888. It was later replaced by the Patent & Design Act 1907 and again by the Patent Act 1949. The 1949 Patents Act remained enforced for a period of nearly 30 years and was revised in August 1977 (enforcement on June 1, 1978). The main objective of this revision is to make adjustment to the European Patent Convention to which the U.K. had acceded. Besides this, the revised U.K. Patents Act has incorporated various provisions necessary for compliance with the Patent Co-operation Treaty, to which the U.K. became a signatory subsequently.

All along the course of time, the U.K. Patent Act became the mother law in the various colonies of Britain which presently form a part of the Commonwealth i.e. Australia, Ireland, India, Sri Lanka and New Zealand.

U.S.A.

During its colonial period, the U.S.A. followed the laws enacted in the U.K. and had no Patent Act of its own. However, in 1776 on becoming an independent sovereign and after achieving national unification, the U.S. constitution (1787) provided for a Patent Law stating; "The Congress shall have power To promote the progress of science and useful acts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." (Chapter 1, Article 8).

On the basis of this Constitutional provision, the first U.S. Patent Act was established in 1790. However, most of the provisions of this Patent Act were generally similar to those already existing in the U.K. Patents Act except that applications for patent were examined by a Committee consisting of three

high-officials including the Secretary of State, and the criterion for patentability of inventions was made more severe. This Patent Act was amended in 1793 and again in 1836 when an independent Government Office (US Patent Office) for carrying out examinations was also established. The elaborate examination system introduced in 1893 in the US Patent Act is today followed by many countries in the world. The present U.S. Patent Act was established in 1952 and amended in 1975, 1980, 1983 and 1984. In its present form U.S. Patent Act has the following two main characteristics:

(i) First Inventor Patent Principle (First-to-invent principle)

The first inventor patent principle states that in the case of applications with conflict on the same invention, a patent is granted to the first inventor. However, since it encompasses some difficulties, there is a need of changing it to a "first applicant patent principle" (called "first-to-file").

(ii) The U.S. Patent Act adopts no System of Publishing Invention prior to the Grant of Patent. Accordingly, only after the patent is granted, the inventions are laid open to public for inspection by publishing the patent specifications.

FRANCE

In France as in U.K., privileges were arbitrarily granted causing many problems during the autocratic periods under the reign of the Kings. Consequently, the necessity arose for making separate provisions for granting a patent and in 1762 the King Louis XV, made a specific declaration regarding patents. After the French Revolution in 1771, the National Parliament established the first Patents Act in 1791 which was revised in 1844 and remained enforced for more than 120 years without having been greatly revised.

The most conspicuous characteristic of the French Patents Act was that examination was carried out only as a formality without properly assessing whether or not an invention was patentable. However, the non-examination system gradually became undesirable and a fully revised new Patents Act was promulgated on January 1, 1969 which contained procedures for an examination system, including a search and opinion notice system. In addition, it also adopted a system for the certificate of utility (certificats d'utilite) in which a right is granted without conducting the examination system in the entirety as it was in the Patents Act. Furthermore, the laying-open system for patent applications was also adopted in the French system as it was then prescribed in the Patent Acts of the Netherlands, West Germany, and the other countries in northern Europe.

France made a partial amendment of the existing Patents Act (July 13, 1978) in 1978 to make adjustment to the European Patent Convention and other international obligations.

The French Patent Act had become a mother law in various countries such as Spain, Portugal, Belgium and Luxembourg. It has also greatly influenced the patent laws in Greece, Turkey, Latin-American countries and other developing countries, which were the colonies of France.

GERMANY

Before the establishment of the German Empire in 1871 there were small states which had their separate Patent Laws so that the number of patents acts was as many as 25 at one time. Accordingly, the export and import of products was very inconvenient and a demand for unification of the Patents Acts became desirable in industrial circles. As a result, a kind of agreement on the Patents in each state was reached in 1842 on the basis of the Customs Union organised in 1833. However, this Agreement was still far from a completely unified Patents Act and the industrial circles were continuing their movement aiming their objectives of unification. At the same time, an anti-patent thinking was also gaining ground on the basis of a "free trade theory" extensively advocated since 1850. Hence, the movement for unification of Patent Acts in various German States was initially not successful.

It was only after the Establishment of the German Empire in 1871 that the importance of a suitable patent system was realised and a provision to the effect that the Empire should reserve legislative power relating to patents for inventions was provided for in the German Constitution. Consequently the German Patents Act was established in 1877 in which the Examination and Publication System was adopted in order to increase the reliance and credibility of a patent.

The German Patents Act had become a mother law in various other European countries such as Norway, Sweden, Finland, Denmark, and Austria. The current Patent Law in Japan is also largely modelled in accordance with the German Patents Act in many respects.

Germany also established the Utility Models Act in 1891 to protect small inventions and as a link in the chain of the patent system and this was later adopted by many countries like Italy, Spain, Portugal and Japan.

After the World War-II, for a period of four years from 1945 through 1949, West Germany was obliged to suspend patent administration. In its place, the so-called Primary Temporary Measures Law was promulgated and enforced in 1949 which, was also subsequently abrogated in 1951. Germany abolished its then existing patent system in 1961 and established instead, the Federal Patent Court System (Bundespatent-gericht) wherein the Judges in a technical line were assigned to Patent Courts who conducted hearings and gave decisions on Patents which were virtually final and conclusive. This proved very noteworthy since the settlement of patent litigation requiring a long period of time in many

cases was expedited and rationalised. In 1967, West Germany adopted the provisional publication system, the system for request for examination of patents and the chemical substance patent system. The German Patent Act was partially revised on January 2, 1978 to make adjustment to the European Patent Convention and to comply with the practice of the Patent Co-operation Treaty. West Germany further revised the Patents Act in July 1979 (enforcement on January 1, 1981), and again in 1990 after unification of West Germany and East Germany on October 3, 1990.

C.I.S./U.S.S.R.

The first Patent Law in the former USSR was established in 1919, and it was very distinctive as it stipulated that all the inventions should belong to the State. However, with the adoption of a policy of admitting private industrial activity according to the New Economic Policy, the USSR revised the Patent Law in 1924 based essentially on the patent laws in other capitalistic countries of Europe particularly modelled on the German Patents Act. However, the revised Patent Law did not actually agree with the economical conditions in the USSR and the New Economic Policy turned out to be ineffective and contrary to the communistic thoughts. Under such circumstances, the Government drastically revised the Patent Law, and enacted the "Statute on Completion of Invention and Technology" on April 9, 1931. It contained a unique system of "Inventor's Certificates" which was formulated and allowed to co-exist with an ordinary patent system. The Statute was revised thereafter in 1941, 1959, 1973 and 1978 and finally renamed as "Statute on Discoveries, Inventions and Rationalisation Proposals". In addition to the "Inventor's Certificates", it also contained the "Discoverer's Certificates" and the "Rationalisation's Certificates" which were issued for the purposes of protecting and encouraging discoveries and proposals in relation to science and technology respectively.

The inventor's certificates system had been adopted in the Patent Law of other east European communist countries such as Czechoslovakia, Poland, Romania, Hungary, former Yugoslavia, Bulgaria, former East Germany and China. However, when the USSR announced (December 1988) a draft revision to clarify the intention of abolishing the Inventor's Certificate system, some of the communist countries like Hungary, former Yugoslavia and China also abolished the "inventor's certificates" system. Consequently in 1991, the USSR adopted a Patent System more in the nature of capitalistic countries and established the Invention Law on May 31, 1991 (enforcement: July 1, 1991). This Invention Law 1991 bears more similarity to those of the patent laws in other European countries and in Japan.

In December 1991, the USSR ceased to exist and the Commonwealth of Independent States (CIS) was founded. The Supreme Council of the Russian Federation approved a Patent Bill on February 12, 1992 wherein the examination principle is adopted; Computer algorithm is patentable; distribution

of products produced on the basis of a process patent is included in the definition of infringement, the Russian Federation Patent Court is established as an appellate court for an appeal in the case of applicant's dissatisfaction with the decision of the Board of Appeals and the decision of the Patent Court being final and conclusive. The Patent Office, (the Committee for Patents and Trademarks of the Ministry of Science and Technology Policy of the Russian Federation) also called briefly "Rospatent") was established and the U.S.S.R. Patent Office (Gospatent) ceased its activity on February 1, 1992, whereupon the Russian Federation took over all rights and duties (including a financial share) which the former USSR had conventionally agreed under the Paris Convention, the International Co-operation Treaty, the Strasbourg Agreement concerning the International Patent Classification, and the Budapest Treaty.

JAPAN

Japan started industrial modernisation based on technologies introduced from the United States and European countries roughly 100 years after the Industrial Revolution in the West. Historically, for almost two and half centuries from 1603 to 1867, the Tokugawa Shogunate government, with a view to prevent the spread of the Christianity, had prohibited direct contact with the outside world adopting a seclusion policy. In addition, the then government prohibited in whole of Japan the manufacturing of new products based on new technologies and as a consequence, the Japanese economy and technologies remained isolated from the outside world and Japan was left without gaining anything from the ever progressing Industrial Revolution in the West. However, in 1858 the powerful United States, Britain and France forced Japan to open its doors for commerce with outside world. At the same time, the Edo Shogunate government collapsed and Japan ushered in a new era called the "Meiji" period in 1868. It then enacted the "Exclusive Right Law 1871" for the first time on the principles of "examination" and "first-to-file". This quick attempt to establish a patent system ended up in failure due to lack of enough preparations to employ the examiners to grant patent rights as there was no government office to accept an application for a patent. In addition, as the invention-promoting system adopted by the Meiji government was a complete departure from the policy of long existing Shogunate government, it was not acceptable by the Japanese people and the law was abolished one year later in 1872. Furthermore, in the Meiji government itself there were people who insisted that an inventor should not be entitled to any special privilege more than a reward.

In the absence of a patent system, inventions were widely imitated and misappropriated in various ways without any sense of guilt. Japan then promulgated on April 18, 1885 a Patent Ordinance which is the first substantial legislation of its kind. This day is now designated and celebrated in Japan as "invention day". The said Patent Ordinance was patterned on the U.S. and French patent laws. The Ordinance adopted the principle of examination and called for a material invention to be novel and useful (an invention contrary to

public order or relating to medicines and drugs was not patentable), granted patent rights upto 15 years and provided for invalidation of a patent right due to non-use. It recognised an additional patent and set forth the principle of one invention in one application. It was revised in 1888 to incorporate the "first-to-invent" principle.

The period from 1885 to 1911 can be said to be a period for the foundation of the Japanese patent system during which period in the year 1894, a commerce and navigation treaty was concluded with Britain paving the way for patent applications by British inventors. Japan became party to the Paris Convention in 1899 allowing the grant of a patent also to other foreigners. The revised 1899 Patent Law recognised rights of non-residents (with an obligation to designate an agent residing in Japan), incorporated a priority claim provision and set forth a provision for the protection of an invention exhibited at an international exposition.

The Patent Law was revised again in 1909 to cope with problems following the Russo-Japanese War. It then incorporated a provision for an employee's invention, expressly defined public knowledge and public use at home and abroad as criteria for the judgement of novelty and corrected the problematic aspect of "the first-to-invent principle" to "the first-to-file patent application principle".

The Japanese Patent Law 1921 was revised and replaced by the Patent Law 1959 on recommendations of the "Council for Study of Industrial Property System Revision" constituted under the Ministry of International Trade and Industry in 1956. It was revised again in 1970, incorporating several new provisions to accommodate needs arisen by the new technological developments in Japan.

With the active development of Japan's political, economic, cultural and other interchanges with overseas, the country's industrial property system had to be internationally harmonised. Thus Patent Act 1970 was revised once again in 1975. As Japan had signed the Patent Co-operation Treaty (PCT), it became necessary to introduce a multi-claim patent application system. The Patent Law was therefore revised in 1978 incorporating a multi-claim application system. In view of needs to comply with a revision of the PCT and necessity for establishing an internal priority system, the Patent Act 1978 was revised again in 1985 and in 1987. The revision of Patent Law in 1990 permitted handling of electronic applications and a comprehensive paperless system in the whole area of patent-related business was established. This paperless system is designed to store all documents handled at the Patent Office in an electronic form and to set up a database on all kinds of business. The development of this paperless system has made possible the electronic filing of an application from an applicant's computer terminal to the Patent Office. By regularly further revising the Patent Law in 1993 and 1994 Japan had been striving to harmonise its

industrial property system with those in other countries through negotiations on the WTO-TRIPS Agreement and with WIPO.

PEOPLES REPUBLIC OF CHINA

The Peoples Republic of China (PRC) established the Patent Office in January 1980 and promulgated the Patent Law on March 12, 1984 to enforce it on April 1, 1985. The Chinese Patent Law has defined detailed provisions for (a) Application and examination procedures; (b) Patentability; (c) Application right; (d) Patent right; (e) obligation of patentee, (f) Utility Models and Designs; and (g) provision for Foreigners. Since accession to the Paris Convention, the principle of equality to natives and foreigners are applied, and utilisation of the priority system has become possible.

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