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Concept of Prior Art in Patent Regime

Ishan Sambhar

Author Affiliation

Advocate, Patent Agent, LL.M (IPR) (Guru Gobind Singh Indraprastha University, Dwarka, New Delhi), LL.B. (Punjab University, Chandigarh), B.Sc. (Delhi University)

Corresponding Author

Ishan Sambhar, Advocate, Patent Agent, LL.M (IPR) (Guru Gobind Singh Indraprastha University, Dwarka, New Delhi), LL.B. (Punjab University, Chandigarh), B.Sc. (Delhi University) E-mail: ishan91sambhar@gmail.com

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Abstract

Patent law is considered to be the most old and important aspect of the intellectual property regime and the concept of novelty is the most cardinal aspect while granting the patent with respect to any invention. Novelty seeks to ensure that patent should not be issued if the same invention already exists. Although gauging the novelty of simple inventions are easy but it can be difficult in case of those complex fields like biotechnology, chemistry, and pharmaceutical. For example, if a drug company seeks to patent a promising molecule that was disclosed but never physically made in the prior art, the key possession question is whether a person having ordinary skill in the art could have made it at the time of the prior disclosure. This research is an attempt to understand the basic meaning of the prior art and further look in into legal system to understand how it have been understood by the statue itself.In particular to understand how statue have defined the role person skilled in art, what is prior art and what are the aspects embodied in it.

Keywords: Prior Art; Person Skilled in Art; Prior Publication, Anticipation.

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Introduction

While talking about the concept of patent we realize that roots of this concept are in existence from the very inception of the human itself. As soon as human started developing, he felt zeal to protect things owned or invented by him. Considering the protection of the new inventions time to time different legal statues or system came into place or modified according to the requirement of the changing need and capacity of the society. A substantial history can be traced back from the ancient days where monopoly existed in the Byzantine Empire. Initially ancient Greece granted monopoly to the cooks for one year to exploit new recipes. But later, Roman emperor, Zeno rejected the

concept of monopoly. By the time 1432, the senate of Venice enacted a statue to providing exclusive privilege to those inventing any machine or process to speed up silk making. This protection was soon extended to other devices. Simultaneously new ides started getting protection. In 1474, the very first ordinance in patent was voted by the Venetian senate. Thus, it is correct to say that present patent system is an evolution of over 500 years.

The basic requirements for being patented are:

1. Novelty 2. Non-obviousness 3. industrial application.

Novelty which is a statutory requirement, that an invention should be new. Determining novelty requires a comparison of the invention



with the "prior art," which refers to knowledge and technology already available to the public. Documents like issued patents and printed publications are common sources of prior art. A document asserted against the invention that the applicant seeks to be patented is called a prior art reference.

According to the patent Act 1970 invention includes new product and new procedure which is having an industrial application [1]. Patent system denies granting patent to the inventions that are disclosed prior the application for the patent.

According to Indian patent (amendment) Act 2005 "new invention" is any invention or technology which has not been published in any document or elsewhere in the world before the filing of the application. In other words it can be stated, for a prior publication to defeat the patent it must exhibit substantial representation of the invention in such a clean and exact extant that one who is skilled in art may make or construct and practice the invention without need to depend on either the patent or his own inventive skills [2].

Patent law does not recognize it as the prior art if it is not accessible to the public. In other words a publication will be considered as the prior art only if available in the public domain rather than hidden in the private pocket. Thus the concepts considered as the common good in the society are not patentable. Otherwise, it will create monopoly in the society with respect every tiny aspect. A man may make experiments in his own closet and does not communicate to anyone in the world and similarly another person can carry the same experiment and the person will make the first application will be entitled to get patent and other one cannot claim ground of prior art because it requires publication or public communication at the first place. Thus, there can be many rival experiments on the same concept at the same time.

Talking about the person skilled in art is the legal fiction to foresee the qualification required to consider something adequate with respect to the particular patent. This fictional person is considered to have the normal skills and knowledge in a particular technical field, without being a genius. He mainly serves as a reference for determining whether an invention is non-obvious or not, or involves an inventive step or not. If it would have been obvious for this fictional person to come up with the invention while starting from the prior art, then the particular invention is considered not patentable. In some patent laws, the person skilled in the art is also used as a reference in the context

of other criteria, for instance in order to determine whether an invention is sufficiently disclosed in the description of the patent or patent application (sufficiency of disclosure is a fundamental requirement in most patent laws).

Meaning and Concept of Prior Art

'Prior art' is generally used to refer to "the entire body of knowledge which is available to the public before the filing date of the application for the patent or if priority is claimed, then before the priority date of an application". Although the definition of 'prior art' seems quite unambiguous, patent offices across countries have adopted widely differing approaches for determining what it constitutes while examining patent claims [3].

According to the EPC, "state of the art ('prior art') shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the filing of the European patent application" [4]. From this definition it is clear that there is no restriction about geographical location or the language or manner in which the relevant information available and no age limit is depicted for the document and the source of information.

Though, the Indian Patent Act do not define the concept of the state of art but Indian Patent (Amendment) Act 2005 does define the meaning of "new invention" which include any invention or technology which has not been anticipated by publication in any document or anywhere in the world prior to the date of application for the patent. Thusconcept of 'state of art' in UK and prior art in India is corresponding [5].

The TRIPS agreement is silent on the definition and explanation of how 'prior art' is to be determined while examining a patent application. Therefore, there is space for national patent offices to use their own standards to determine 'prior art'. On the other hand if we look at the SPLT (Substantive patent law Treaty) 'prior art' have been defined as the information which has been made available to public anywhere in the world in any form. The draft SPLT includes a provision that states that information made available to the public in any form, such as in written form, in electronic form, by oral communication, by display or through use, shall qualify as prior art.

Harmonization of prior art standards is a contentious issue, since this would eliminate the flexibilities that patent office been exercising. For

instance, in the US, an isolated and purified form of a natural product (such as a pre-existing biological resource that was unknown to the public at large) is patentable. The rationale for this is that the concept of 'new' under the novelty criterion for patentability does not mean 'pre-existing', but that there was no 'prior art'. Such a conclusion could well be arrived under the SPLT on a reading of Article 8 on 'prior art' with Article 12 definition of 'novelty' [6]. Under Indian Patent Act 1970 after 2002 amendment, the discovery of any living ting or non-living things or substance occurring in the nature is debarred from the ambit of patentability. So, here basically India is clearly exercising flexibility available because any treaty does not provide for the same, even SPLT does not put emphasis on the Act of 'Discovery', but on whether there is already an existing 'prior art' with respect to the subject matter. We could, however, argue that emphasis in the draft of SPLT is on information made public by whatever means, includes the oral communication also, and it could be proved beneficial for the counties like India, where traditional knowledge associate with our biological resources is very old and available in oral form. If such oral knowledge is considered by every patent office in every country as prior art, it could phenomenally reduce frivolous patent application like given by US on the wound healing properties of the turmeric which India Challenged and won [7].

Talking about the meaning of the invention was well define in case of *Raj Parkash V. Mangat Ram Chaudhary* [8] it was held that invention is to find or discover something not found or discovered by anyone before and it is not necessary that invention should be something complicated. Essential requirement is that the inventor is the first one to adopt it. The principle is that, every simple invention that is claimed, so long as it is something which is novel or new, it would be an invention.

It was laid down by their Lordships of the Privy Council in *pope Appliancecorpn V. Spanish River pulp and papers mills Ltd* [9] that invention is finding out something which has not been found out by other people. There are many instances in branch of science of independent investigator making the same discovery. That does not prevent the one who first applies and gets the patent from having a good patent, for a patent represents quid pro quo. The quid to the patentee is the monopoly; the quo is what he giving to the public that is knowledge. That knowledge which other inventors have kept sealed in his own , and he therefore, cannot complaint that his rival has got the patent.

In other words, to sustain with claim of lack of novelty, it had to be shown that the, prior art contains the clear description of something that would necessarily infringe the claim of the patentee if carried out after the grant of the patent.

Novartis claimed that J&J's Acuvue Oasys products infringed its European patent for extended-wear silicon hydrogel contact lenses that could left in the eye overnight or even several days. J&J counterclaimed for the revocation on the ground of insufficiency, lack of novelty and absence of the inventive step. The decision was appealed in the court of Appeals which found that patent was invalid on the ground of lack of insufficiency [10].

What Are the Subjecct-Matter of Prior Art?

Anticipatoin

Anticipation basically is to compare claims with the prior art. A claim will be considered as anticipated if prior art explains the important elements of the invention and apt enough to enable an ordinary person skilled in the art to create the invention without putting any experimental efforts from his end.

For anticipation it is necessary invention should be found in single prior art source. There would not be anticipation where elements of invention scattered among different prior arts [11].

The claim will be anticipated if someone by following the instructions given by the prior art would inevitably infringe the patent. The principle fully explained by Lord Hoffmann in *Syntham V. Smithkline* could be summarized as follows-

- 1. The prior art must disclose the subject matter which, if permitted, would definitely result into infringement of the patent;
- 2. The patent infringement does not require that on should be aware that one is infringing;
- 3. Whether or not it would be apparent to anyone at the time, whenever the subject matter described in the prior art, such disclosure is capable of being performed and is such that if performed, it must result in the infringement of the patent.
- The infringement must not mere be consequential to performing of the invention disclosed by the prior publication. It must necessarily entail it.

5. The prior disclosure must be construed as it would have been understood by the skilled person in art at the date of disclosure and not in the light of the subsequent patent.

Smith V. Snow [12] in this case the patented process of smith related to staged incubation with the current of air to transfer heat among the eggs during the different stages of incubation. Event before smith, there had been effort to set eggs in staged incubation, but it was not successful due to difficulty in maintaining the heat in the incubator. The prior description was that in the process of incubation the eggs are paced in a closed room and heated by the hot water through pipes, but no description of producing current in the air was there. The court concluded that prior art does not disclose the invention in its entirety. Therefore, smith's invention has not been anticipated. Court further said; by using the material in a particular manner, he secured the performance of the function which had never occurred in the nature, and it has not been anticipated by the prior art.

Bristol-Myers Squibb Co. v. Benn Venue Labs Inc [13]. Bristol-myers involved in two patents relating to administrating the ani-tumour drugs, paclitaxel over a three hour period. Bristol-Myers brought an infringement action. And defendant moved for the summary judgement, it was argued that the patents were invalid because it was anticipated by the prior art, specially by an article by the Mark Kris, a researcher who have treated a cancer patient with three hour infusion of paclitaxel within the claimed dosage range. While Kris had employed the infusion method the study was largely unsuccessful. The court found that the patent with respect to premedication was anticipated in the article by Kris, even though Kris himself never followed the teaching. Thus anticipation does not require that the work should have been performed in the past time, the only cardinal requirement is the prior art should be apt enough to enable the person skilled in the art to perform the invention.

A publication which is a prior art cannot be modified by knowledge of those who are skilled in the art for the purpose of the anticipation. The knowledge emanates from the prior art is in the crystalized form which cannot be further altered. In other words, it can be sated that prior art become crystalized on date it is made public and cannot be further correct and modified by the knowledge of the person skilled in the art [14].

Accidental Anticipation

Any sort of accidental product or process does not constitute the anticipation, because in case of accidental product it is not sure whether same result will be achieved if later performed by other person skilled in the art. On the other hand anticipation cannot be avoided if the priori art achieved through a deliberate or necessary consequence of what was intended, even though the achiever did not fully appreciate the uses, properties and industrial application of the product.

Tilgham v. proctor [15] this is one of the famous US case in which patent claimed with respect to treating fat and oil by separation into fatty acid and glycerin by applying water at high temperature and pressure. Same separation took place in number of the prior cases accidently. Supreme Court did not consider accidental formation of the fatty acid in Perkin's steam cylinder as anticipation of Tilgham's discovery. The reason cited by the court was "accidental and unwanted production of a certain process does not constitute anticipation". It was held that incidental production of fat and oil in the prior process for the purpose of purification of fat and oil does not anticipate the process of preparing the fatty acid, even though claimed process was used in the prior purification process.

Another good example is the decision of the US Supreme Court, where it was held that prior device capable of being adjusted in the same manner as the patented one does not constitute anticipation. In this cases Clough's patent claimed a gasoline burner. The defendant's product was the prior burner which can be adjusted so as to be used in the same manner as of the Clough's patent. The reason given by court was that such adjustment in the prior product is accidental and not part of the structure itself. The product was not designed for the same purpose of the Clough's burner, no person looking at it or using it would understand it is to be used in a way Clough's is used and it is not shown that prior product is really used in that way [16].

Requirement of Cited Publication

Indian Act basically covers two classes of publication one which are the Indian patent specification, second is any other document which may include foreign specifications also. The publication relied upon by the opponent for this ground must satisfy the following requirements:

1. It must be effected before the priority date of the claim which is the subject of attack by the opponent, and

- Such publication may include any specification filled in pursuance of an application for a patent made in India on or after 1stJanuary 1912, or any other document published anywhere, and
- 3. The claim attacked must be contained in any of the said publications [17].

Exception to Anticipation

The Indian Patents Act provides certain exceptions to anticipation in Sections 29 to 34. These exclusions are as under:

1. Anticipation by Previous Publication

If the invention has been published prior to filing of the patent application, if the applicant or the patentee proves that the matter published was obtained from him or any person from whom he derives title without his consent or the consent of any such person, then a complete specification filed shall not be deemed to have been anticipated [18].

2. Anticipation by Previous Communication to Government

Communication to the government or to any person authorized by the government to investigate the invention does not constitute anticipation [19].

3. Anticipation by Public Display

Display of the invention in an exhibition with the consent of the true and first inventor or a person deriving title from him; or the publication of the description of the invention in consequence of display of the invention in such exhibition; or the invention has been used by any person without the consent of the true and first inventor or a person deriving title from him after it has been displayed in such an exhibition; or description of the invention in a paper by the true and first inventor before a learned society and publication in the transactions of such society will not amount to anticipation, provided the application for patent is filed within 12 months from the public display [20].

4. Anticipation by Public Work

There will be no anticipation in case were the working is effected for the purpose of reasonable trial or if it is necessary with respect to the nature of the invention to scrutinize its impact on the public [21].

5. Anticipation by Use and Publication after Provisional Specification

If the invention has been used and published after filing a provisional application, then a complete specification filed shall not be deemed to have been anticipated [22].

Meaning of "Publication"

The term publication has not been defined under the Act, term has been defined for the first time in the U.K. patent Act 1949 in section 101 as follow: "publication' except in relation to the complete specification, means made available to the public; and without prejudice to the generality of forgoing provision a document shall be deemed for the purpose of this Act to be published if it can be inspected as of right of any place in the united kingdom by members of the public, whether upon payment of fee or otherwise." It has been held that inspection "by member of the public" implies in their character as member of the public and if the right of inspection is restricted to person who must meet a particular qualification before enjoysit; there is scope of argument that the document was not made available to the public.

The expression "the public" does not require the inclusion of the entire world. When the matter in question was distributed with the object of spreading the knowledge among the interesting parties, it would constitute the publication.

Where a document relied upon for prior publication was sent by one partner to other in a design project which they have agreed to undertake as a joint project, such correspondence would not amount to make the document available to the public [23].

Accesibility of Prior Publication

Availability of the invention to the public need not to be of wide scale. It was held that limited distribution does not disqualify a publication from contributing to the prior art [24].

Massachusetts Institute of Technology v. AB Fortia [25] A technical paper, the Birmingham paper, was orally presented by Dr. Levive to the first international cell culture congress in Birmingham, Alabama. Conference was attended by in-between 50 to 500 cell culturists. Prior to the conference Dr. Levive gave one copy of the paper to the head of the conference. Afterward, copies were distributed as per the request without any restriction, to almost six persons. It happened more than one year before

to the filing of the patent. It was argued by the MIT that paper could not be treated as the prior art because it is not a printed publication within the meaning of 35 USC section 102 (b). it was held that paper is prior art, 50 and 500 people interested and of ordinary skill in the subject matter were actually told of the existence of the paper and informed of its content by oral presentation, and the document itself was distributed without restriction to at least six persons. The International Trade Commission concluded that it was a printed publication.

Enablling Disclosure

To understand the enabling disclosure, we can recourse to an illustration; underthe 16th century, Galilio Galilei, by theory and practice, indicated that contrary to the Aristotelian theory, two objects of unequal weight would fall from the space almost at the same rate. Though, he admitted that they would not fall at the same moment due to differing air resistance. But he contended that they would fall at the same precise rate if they were dropped in vacuum. Creating vacuum was not practical at that point of time.

That day and time came for the astronaut Neil Armstrong. On 20th July 1969, standing on the surface of the moon, he dropped a hammer and a father. Both hit the surface precisely at the same moment, and Aemsrong said: "You See, Galileo was right".

If what Armstrong did was capable of being patented, he would have been denied the patent because what he did was from an enabling disclosure from the prior art indicated by what was publicly known since the days of the great Galileo.

Dewery & Almy Chemical Co. v. Mimex Co. Inc [26]. If the earlier disclosure only introduces the starting point for the further experiment, if it does not inform completely how to practice new invention, it has not aptly enriched the store of common knowledge and it would not amount to anticipation.

A mere improvement in the nature of incorporating minor change, combination or collection of the components or things what is already known is not an invention. It would be mere workshop improvement and would amount to obvious to the person skilled in art. The inventive should be more than mere a workshop improvement, it has to be new with industrial application.

When making of the product is already known, mere changing of the material does not constitute the new product. A Kalta is a traditional product which has been used since the time immemorial for carrying the products in the hilly area. Traditionally it is made up of bamboo. The only difference between the traditional one and the one produced by the plaintiff was that the material used by the plaintiff was some sort of polymers. That does not mean it is a new invention [27].

Person Skilled in Art

The rules for determining novelty and inventive step in relation to an invention are different. But for determining the novelty and inventive step court must look through the spectacles of the person skilled in art. Determining appropriate level of skill is often difficult. The person skilled in art is basically required to ascertain the meaning of the language used in the patent as well as test the allegation of the novelty, obviousness and insufficiency. He is the person with practical knowledge in the field in which invention is to be applied.

In case where patent calls for range of skills than more than one skilled person may be taken into consideration.

Environment Designs Ltd v. Union oil Co. [28]. court laid down following factors in order to determine the level of ordinary skill in art:

- 1. The education level of the inventor;
- 2. Type of problem encountered in the art;
- 3. Prior art solutions to those problems;
- 4. Rapidity with which inventions are made;
- Sophistication of the technology;
- 6. Education level of the active workers in the field

Dyson Appliances Ltd v. Hoover Ltd [29]. in this case court looked at obviousness in detail. And concluded that the level of skill of a skilled person in art depend upon the proper scope of the subject-matter of patent in question. While considering the common general knowledge, it is customary to consider "positive" aspects of the knowledge with which skilled man would be familiar, but in certain cases it is also necessary to consider the "negative" aspects; that is, what the skilled man would be prejudiced against doing.

Person Skilled in Art is A Real Person or Notinal One?

Schlumberger v. Electromagnatic [30] the patent was concerned with the technology-controlled source

electromagnetic employed in oil exploration. Two articles written by experts in the field were pleaded as prior art in the case. The court first sated that the theoretical skilled person did not mean the oil companies. The skilled person has to be a practical man, who in the real world could constitute the usual team. In order to utilize the invention a CESM specialist has been engaged. The whole technology involved the use of CESM. The documents which explain the patent were addressed to a person who would carry out such activity. He is addressee of the document not any person who is working in the company. In this case court referred Lord DIPLOCK'S guiding rules. In Catnib's case the person with the practical knowledge and experience of the kind of work in which the invention was intended was the relevant person. The claim in the patent in the present case related to the realm of CSEM. Accordingly, a CSEM specialist was needed to work the patent. Therefore, the average person skilled in the CSEM was the person whose view of the prior art should be considered [31].

A person skilled in art is not a person of exceptional skills and knowledge; he is not expected to exercise any sort of invention nor any prolonged search, inquiry or experiment. He is just required to display reasonable degree of skill and common knowledge of the particular art in making trial and correcting obvious error in the specification which can be readily be found [32].

What are the permissible functions to a skilled man for considering whether a claimed invention is obvious to him from the prior art:

- 1. He must bring the task common knowledge on the subject.
- 2. Bear his focus on the enabling and disclosing aspect of the prior art.
- 3. He is not expected to take any inventive step while considering, whether prior art can produce the invention.
- 4. Though he may undertake trial and error process to see whether from the prior art he could produce the claimed invention, he must deal with that within reasonable time.

Obviousness

Postulates for the test of obviousness were described in *Windurfing* [33]:

- 1. Identify the inventive concept embodied in the patent in suit;
- 2. The court then assume the mental of ordinary

- skilled but unimaginative addressee in the art at the priority date, imputing to him what was, at that date, common general knowledge in the art in question;
- 3. Identify what, if any, difference exist between the matter cites as being "known and used" and the alleged invention; and
- 4. The court than ask itself the question whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to all skilled man or whether they require any degree of invention.

Shortcomings in Prior Art

As we have already observed, prior art is one of the most frequently used aspect to invalidate a patent. In the light of this, it can be concluded that in many cases not all relevant prior art being considered during the examination of the patent application. Therefore, it is important to consider potential shortcomings in prior art searching during patent examination process and its effect on patent quality.

Overburdened Patent Examiners

In 2015 Indian patent office received between 30,000-35,000 but during the period of 2017 this figure was in between 40,000-50,000. This is a drastic increase in the patent applications which has resulted in overburdened examiners who have little time to devote to each patent application. The amount of time that an examiner devotes to the entire process of patent examination is uncertain, but estimates range from 8–30 hours [34] and there is widespread agreement that this amount of time is insufficient for adequate examination [35]. As a result of these pressures, examiners do not have time for an adequate search of the prior art [36].

Compartmentalization of Specialized Knowledge

specialized knowledge is often not widely disseminated and thus is likely to be known only to experts in the field. This means that the relevant prior art often may only be known to the patentee (or applicant), her competitors, and perhaps a few others. Thus, it may be difficult, or even impossible, for examiners to access and identify relevant prior art that may be known in a particular area. Similarly, it is widely perceived that in the

software and business method areas, where there is a short history of patenting and there is not a strong tradition of non-patent literature publishing, most of that is known will not be found in prior art searches [37].

Disclosure of Prior Art by the Applicant

There is a moral duty on the part of patent applicant to disclose the prior art which is known by him and relevant with respect to the invention in question. However, applicants may have disincentives to perform a thorough prior art search during prosecution of an application. One reason is the strategic one; it might possible that the applicant may get the broader patent because examiner may not aware of that particular prior art which is relevant to the claim.

Conclusion

Novelty of the indispensable is one requirement for getting your invention patented. And prior art is most frequently assigned argument against claim of novelty under any invention. prior art is the concept which protects the knowledge which is common to all. If we imagine patent regime without the concept of prior art, there will be monopoly with respect to every tiny matter of knowledge in the society. Even though different countries have taken different approach towards granting patent and their legal system differs in many aspects, but concept of the person skilled in art seems universally admitted, even if certain differences remain between the reference to the person skilled in art.

This research has led me to create a formula which may include the entire significance of anticipation through prior art.

Formula

Person skilled in art + Prior art - No further experimental effort or step = Invention in question = Anticipation

In this formula person skilled in art is a person with average knowledge in that field and prior art basically is already existing knowledge before the date of filing application for patent, non-experimental effort contemplates that the person skilled is not required to put any experimental efforts. If this combination results into Invention in

question it would amount to anticipation. In other words, if person skilled in art can make by use of prior art same invention for which application for patent is made, it will amount to anticipation of such invention.

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