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INTELLECTUAL PROPERTY AND TECHNOLOGY LAW UPDATES

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Special Procedures under PCT for Inventions in the Field of Biotechnology

- **Manish Kumar**

Introduction

Nucleotide and amino acid sequence listings and the use of biological material relate to inventions in the field of biotechnology. Sequence listings present particular challenges for both the PCT system and national offices because of their technical complexities, and the fact that the sequence listings themselves, if reproduced on paper, may be in excess of hundreds and sometimes thousands of pages; similar problems are confronted with regard to the biological material. Hence, PCT provides a special procedure with regard to sequence listing and disclosure of biological material if used in an invention.

Disclosure of sequence listing¹

PCT applications containing nucleotide and/or amino acid sequence listings have to be presented in accordance with the standard contained in Annex C of the PCT Administrative Instructions “STANDARD FOR THE PRESENTATION OF NUCLEOTIDE AND AMINO ACID SEQUENCE LISTINGS IN INTERNATIONAL PATENT APPLICATIONS UNDER THE PCT” [https://www.wipo.int/pct/en/texts/ai/annex_c.html].

Further, in order to facilitate the processing, searching and examination of PCT

applications containing sequence listings, most International Searching Authorities and national offices require that nucleotide and/or amino acid sequence listings be submitted in electronic form, in compliance with the prescribed standards (*see Section 208 and Annex C of Administrative Instructions*).

Therefore, if your PCT application contains nucleotide and/or amino acid sequence listings, then the application should be filed in electronic form and the sequence listing forming part of the international application should comply with the sequence listing standard. In this case, no page fees arise for the sequence listings. The receiving office of the International Bureau accepts international applications filed in electronic form. If you file the international application in electronic form, but the sequence listing is filed in image format, or the international application containing the sequence listing is filed on paper, full page fees are payable for the sequence listings.

Biological Material Deposits²

Full disclosure of the invention is a prerequisite for the grant of patent. Normally, the disclosure is contained in the written description. However, where an invention involves biological material, such as a microorganism or the use of a microorganism, disclosure is not always possible in writing but can only be effected by the deposit, with a specialized institution, of a sample of the microorganism.

¹ https://www.wipo.int/pct/en/texts/ai/annex_c.html

² <https://www.wipo.int/pct/en/texts/rules/r13bis.html>

If your application makes reference to biological material, you may be required in some PCT countries to make a deposit with a recognized depository institution, such as a laboratory, for the purposes of patent disclosure. The Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, eliminates the need to make a deposit in each country in which protection is sought. All Contracting Parties of the Budapest Treaty, whether or not they are PCT Contracting States, will recognize a deposit made with any of the recognized depository institutions (see - <https://www.wipo.int/treaties/en/registration/Budapest>).

References to biological material and/or to its deposit with a depository institution are made in the description of a PCT application. If not contained in the description, they may be given on a separate sheet. Form **PCT/RO/134** should preferably be used for that purpose. The Form can also be used to provide further details and information in connection with the deposit of the biological material.

**Treading the easy path for filing process
and reduced costs – The Patent
(Amendment) Rules 2019**

- **Saipriya Balasubramanian**

The Department of Promotion of Industry and Internal Trade issued ‘The Patents (Amendment) Rules, 2019’¹ on September 18, 2019, introducing easier filing process with an array of benefits and few other amendments in the Patents Rules 2003 which are dealt in detail in the following:

Highlights of The Patents (Amendment) Rules, 2019

- ⇒ Original documents to be submitted only upon request
- ⇒ Government undertakings, small entities and female applicants can also apply for expedited examination. (Form 18A is amended to include all categories of applicants who can apply for expedited examination)
- ⇒ Start-ups/Small-entities to file Form-28 along with every document for which a fee is specified
- ⇒ Transmittal fee waived for international applications (for ePCT filing) and no fees for preparation of certified copy of priority document and e-transmission through WIPO DAS.

1. **Original documents to be submitted only upon request:** As per 2016 Patents (Amendment) Rules, electronic submission is the only way through which a patent agent can file the required documents such as Power of Attorney

¹

https://dipp.gov.in/sites/default/files/Patents_Amendment_Rules2019_23September2019.pdf

(PoA), Assignment deed, Form-1(signed), verified translated copies of priority documents and other documents relating to PCT applications before the Controller, thereby providing an electronic catalogue of the authenticated documents. The proviso as inserted under sub rule 1A of rule 6, requires the applicant to submit the documents in original within 15 days from the date of online submission of the said forms, failing the deadline of 15 days shall deem the forms to be not submitted at all. However, such short timeline of 15 days requires utmost care, attention and additional costs in filing the said duly authenticated documents on time.

As per the amended Rules 2019, (September’19) a patent agent can file the said duly authenticated documents electronically alone, and the requirement to mandatorily submit duly authenticated physical forms within 15 days no longer exists. However, the duly authenticated original documents have to be submitted before the Controller upon request, within 15 days of such request failing which the documents shall be deemed not to be filed at all.

2. **Government undertakings, small entities and female applicants can also apply for expedited examination:** In 2016 Patent Rules amendment, Form-18 A was first introduced which established a mechanism for applicants to file a request for an expedited examination. Rule 24(c) was introduced so that an applicant can file for expedited examination under certain conditions which are as follows:

- If the Applicant has indicated India as the competent International search authority (ISA) or as an International Preliminary Examining Authority;
- If the Applicant is a start-up

Also, a request for examination under 24B may be converted to a request for expedited examination under 24(C).

As per the amended Rules 2019, (September'19), the option for filing expedited examination has been expanded to cover various categories of applicants under certain conditions. The categories of applicants and their eligibility criteria for applying for expedited examination has been included in Form 18A. The amended form 18A also specifies the documents that each of these categories of applicants need to submit at the time of making a request for expedited examination.

The list of new categories of applicants who can apply for expedited examination, along with the relevant documents to be submitted for the respective category as mentioned in amended Form 18A, is reproduced below:

S. No	Categories	Mandatory Documents to be Submitted
1	India indicated as -ISA -IPEA	Relevant ISA number issued by ISA, India Relevant IPEA number issued by IPEAS, India
2	A start-up	a) For an Indian Applicant: The certificate of recognition as a start-up from

		Department for Promotion of Industry and Internal Trade. b) In case of a foreign entity: Any document as evidence of eligibility
3	A small entity	a) For an Indian Applicant: Evidence of registration under Micro, Small and Medium Enterprises Act, 2006 (27 of 2006) b) In case of Foreign Entity: Any document as evidence of eligibility
4	Women applicants, applying either alone, or jointly with other applicants, where all the other applicants are individuals i.e. a natural person	a) In case of an Indian Applicant: Photo Identity card of female applicant issued by competent authority as evidence of eligibility. b) In case of a foreign Applicant: Photo identity card of female applicant issued by the competent authority as evidence of eligibility.
5	Department of Government	a) In case of Indian Applicant: Any document as evidence of

		eligibility. b) In case of foreign Applicant: Any document as evidence of eligibility
6	An institution established by a Central, Provincial or State Act, which is owned or controlled by the Government;	a) In case of Indian Applicant: Any document as evidence of eligibility. b) In case of foreign Applicant: Any document as evidence of eligibility
7	A government company as defined in Section 2(45) of the Companies Act, 2013	a) In case of Indian Applicant: Any document as evidence of eligibility. b) In case of foreign Applicant: Any document as evidence of eligibility
8	An institution wholly or substantially financed by the Government;	a) In case of Indian Applicant: Any document as evidence of eligibility. b) In case of foreign Applicant: Any document as evidence of eligibility
9	Applications pertaining to a sector that has been notified by the Central Government	Notification from the Central Government and documents as may be required by the Controller.
10	Applicants who are eligible under an arrangement	Declarations and documents as maybe required by the Controller.

	for processing a patent application pursuant to an agreement between IPO and a foreign Patent Office.	
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3. Start-ups/Small-entities to file Form-28 along with every document for which a fee is specified:

As per the amended Rules 2019, (September'19), Start-ups/Small-entities are required to submit documents in lieu with their Start-up/Small-entity status along with all the forms for which a fee has been prescribed. This arrangement is mainly to ensure that the subsidized/reduced fee provided for Start-ups/Small-entities are rightly utilized by the most eligible companies that claim a Start-up/Small-entity status.

4. Transmittal fee waived for international applications and no fees for preparation of certified copy of priority document and e-transmission through WIPO DAS:

The following fees are the existing transmittal fees for international application and fees for preparing certified copy of priority document and e-transmission through WIPO DAS.

On what payable	Relevant Form	Natural person(s) and/or start-up	Small entity alone or with natural person(s) and/or start-up	Others alone or with natural person(s) and/or start-up and/or small entity
Transmittal fee for PCT application	-	3200	8000	16000
For preparation of certified copy of priority document and or transmission of the same to the International Bureau of World Intellectual Property Organization (WIPO)	-	1000 (upto 30 pages and thereafter, 30 for each extra page)	2500 (upto 30 pages and thereafter, 75 for each extra page)	5000 (upto 30 pages and thereafter, 150 for each extra page)

As per the amended Rules 2019, (September'19), **no transmittal fee is required for international applications and no fee is charged for preparation of certified copy of priority documents and e-transmission through WIPO DAS.**

The Patents (Amendment) Rules, 2019, as discussed above, is a tremendous boost not only for start-ups and small-entities but also for women innovators and research and development department to prove their expertise. The transmittal fee waiver for

international applications as well as the waiver for priority documents preparation and e-transmission through WIPO DAS will substantially reduce the burden on applicants filing international applications. It is also pertinent to note that the IPO is taking cognizance of applications filed through an arrangement between the IPO and a foreign Patent Office by offering a category for expedited examination.

How to make sure your inventive idea already exists or not? Conduct a Patent Search

- **Deepika Dang**

You have a brilliant idea, you think of patenting it, but are you sure your inventive idea is patentable? Does your idea already exist? These are the important questions you should seek answer to. In a world of rapidly developing technology and fast paced new inventions, it is difficult to ensure that your idea is new and unique. The first step toward patenting your idea is – to conduct a patent search. A patent search is essential to determine how difficult it will be for you to get your patent for the invention. A patent is a powerful tool that gives an inventor certain rights and privileges.

How to make sure a patent for your invention isn't already taken?

The simplest way forward is to conduct a patent search. You have two choices:

- 1) You could hire an attorney or a search person to conduct your search for the invention, or
- 2) Conduct a prior art or patent search yourself.

Different strategies can be adopted to determine the potential results:

A search for the prior-art patents can be conducted using different search databases, most commonly using Google Patents, Patentscope or respective jurisdiction patent office databases. You should define your strategy and steps for conducting a prior-art search, possible steps include:

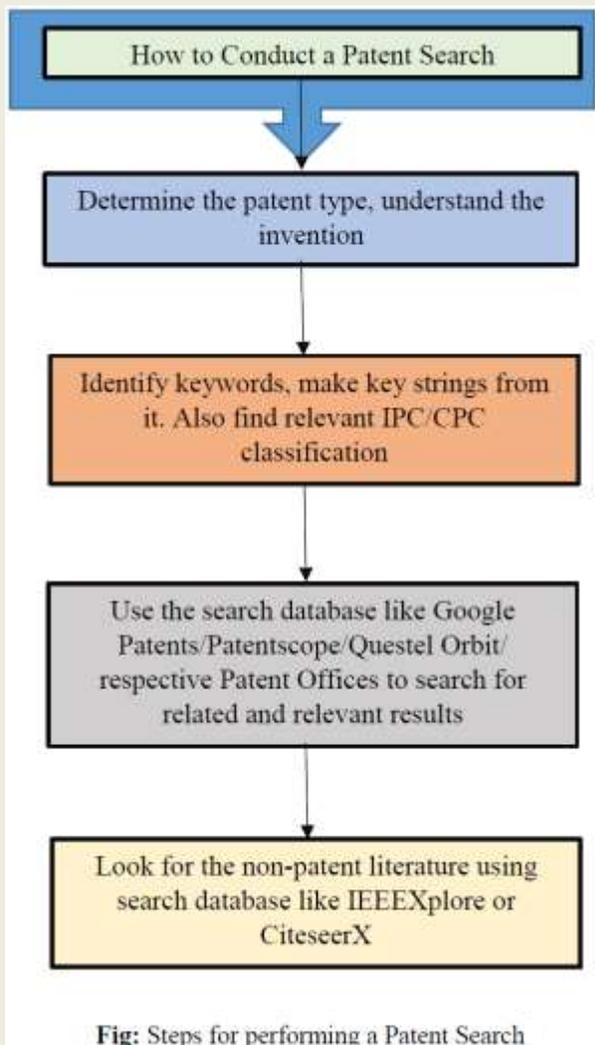
- To conduct a search, you first need to know the novel and inventive features of your invention. That means, what makes your invention, product or any system different from another existing one.
- The next step is break down your novel and inventive features into key words that cover your novel idea. For example, a smart voice enabled speaker storing the password of the user, the novel key feature may cover the password saving feature of the speaker.
- To search the invention, reconstruct those novel elements - (for example: voice-enabled, speaker, smart, password, and user). Now, use the possible synonyms you can think of - example (voice OR sound) AND (speaker OR microphone). Keep refining the search to get the number of hits. Keep track of your strings and searching logic and analyze the results found.
- You can use the International Patent Classification (IPC) or Cooperative Patent Classification (CPC) for finding more relevant results.
- To restrict your search to a specific jurisdiction, use the country restriction option in your search database and perform the search.¹

Along with the patent search², also perform the non-patent prior-art search. Searching of a non-patent literature can aid in finding out if similar invention exists. The non-patent literature search can be conducted using the databases like IEEEXplore, CiteseerX, Science Direct, and Google Scholar which hold huge amount of data relating to non-

¹<https://www.legalzoom.com/articles/how-to-find-out-if-someone-has-already-patented-your-idea>

² <https://www.entrepreneur.com/article/244693>

patent references. Searching for the non-patent literature can uncover technology and would help in making an informed decision regarding the invention. If a similar technology exists in the non-patent literature, it will affect the patentability of the invention



Another search performed for your inventions which claims the product is, Freedom-to-operate Search (FTO). The same procedure is performed while looking for a potential patent. In case of the non-literature, it will have no bearing on the freedom to operate for a product, as non -patent literature does not provide rights to the owner of that publication

from stopping others from making and selling of those products.

The Patent Process

After performing a prior-art search and going forward for getting a patent, you should follow a few steps for getting a patent for your invention:

- Be sure that your invention is patentable and contains novelty. If any prior-art exists which is similar to your invention, you won't be able to obtain a patent.
- While inventing your idea, keep a complete note of your documents, files, diagrams, laboratory test results, and technical information. These information might help you later while you prepare your patent application and during the period of examination and writing responses.
- Prepare and file your patent application. You should provide enough details for your invention that someone with similar skills in the industry could replicate it.

If you find a product that has a patent pending or granted, and you are concerned about the validity of your patent, you can also conduct a validity search. The aim is to find the prior references which the examiner during examination of your invention overlooked.³

Conclusion

Patents require absolute novelty. The patent search is important to determine whether you are infringing another person's intellectual property. When you write your invention, it is best to include details that make it easier to

³ <https://www.invntree.com/blogs/how-can-i-find-out-if-my-invention-has-already-been-invented>

argue and prove that your invention is not obvious and includes the novelty. It is always advisable to know your prior-art in advance and have complete description and documents proving your invention to be novel and non-obvious. Think of your invention as more than just a product or system. Think of your invention as a business.

Impact of turmeric case on Indian patent system

- **Ishan Sambhar**

The prior art is defined by Title 35, United States Code, Section 102, which states: "A person shall be entitled to a patent unless-

First, a person is not entitled to a patent if the invention was "*known or used by others in this country, or was patented or described in a printed publication in this or a foreign country*" before the date of application by the applicant for the patent. If, for example, an invention is known or is being used by someone in the United States, another person who makes the same invention at a later date may not obtain a patent. Prior knowledge or use in a different country, however, is not a bar to a patent application in the United States. In contrast, a prior patent or a printed publication anywhere in the world will bar an applicant for patent in the United States if it appeared before the filing date of the applicant's invention.

Second, a patent is barred if "*the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.*" This definition of prior art is similar to the first with one important distinction. In the first circumstance, the issue is whether the prior art was in existence before the date of application. In the second circumstance, the issue is whether the prior art was in existence more than one year before the patent application was filed. There have been many cases in which an inventor has delayed in filing a

patent application and has discovered, to his or her dismay, that the patent is barred because some other person put the invention into public use or described the invention in a printed publication after the patent applicant's invention but more than one year prior to the filing date of the patent application. This section also requires the inventor to file a patent application within one year of his or her publication, public use or marketing of an invention. If more than one year passes, a patent application is barred. Also in this section, a patent document or printed publication anywhere in the world is prior art, whereas public use or placing the invention on sale has an effect only if it occurs within the United States. The critical point is that if the event is more than one year before the filing date, the patent application is barred. There is no grace period. If a patent application is filed one year and one day after the critical event, the application is too late.

Third, an inventor is barred from obtaining a patent if he or she patents the invention outside of the United States before the date of the patent application in the United States, and if the application outside the United States was filed more than 12 months before filing the application in the United States. In other words, if an inventor files outside of the United States and then files in the United States within a 12-month period, any patent which is issued on the non-U.S. application will not be prior art. However, if the inventor waits more than 12 months, the foreign patent will be prior art. The purpose of the rule is to require reasonable diligence in filing patent applications in different countries and to prevent a stringing out of the patenting process from one country to another.

Turmeric Case

In October 1996, the CSIR filed a re-examination claim with the USPTO for the invalidation of Patent Application No. 5401540- a patent granted to two researchers affiliated with the University of Mississippi, Medical Centre for the 'Use of Turmeric in Wound Healing'. The inventors claimed that the administration of a sufficient amount of turmeric either orally or locally would enhance the wound healing process.

The CSIR primarily contended that the patent so granted lacked the element of novelty, and could be categorised as 'prior art'. In India, the wound healing properties of turmeric were a form of traditional medicine commonly used to treat cuts and rashes. An array of evidence in the form of ancient Sanskrit, Urdu and Hindi references, and a paper published in 1953 by the Indian Medical Association was submitted in order to substantiate this claim.

In response, the inventors argued that the powder and the paste had different qualities, and one of 'ordinary skill in the art' could not expect, with any reasonable degree of certainty, that powder could be put to the same use as the paste. Further, it was also contended that the powder was to be taken with honey, which itself had healing properties.

In its final order, the USPTO, after a perusal of all the evidence, held that the administration of turmeric in a powder form was equivalent to using it in a paste form, and the patent was invalidated on the grounds of 'prior art'.

Effect on Indian Patent System

The turmeric case was the first of its kind where a patent based on the TK (Traditional

knowledge) of a developing country was successfully challenged and revoked by the USPTO. This prompted the need for a more disciplined mechanism for the recognition, cataloguing and digitisation of TK.

In an effort to make all the TK subsisting in India more recognisable, the CSIR, in collaboration with the Department of AYUSH, created a Traditional Knowledge Digital Library (TKDL). A Task Force was set up for this purpose, and it evolved a method of classification known as the 'Traditional Knowledge Resource Classification' (TKRC), using which the TKDL successfully converted and structured ancient texts into 34 million pages. These have further been translated into English, French, German, Japanese and Spanish.

The formation of the TKDL also reformed the International Patent Classification System (IPC), which initially consisted of only one sub-group for medicinal plants. However, following the WIPO's creation of a 'Traditional Knowledge Classification Task Force' the number of sub-groups attributed to medicinal plants rose to 207.

Although the TKDL is a positive step in the classification and recognition of TK, the success of the system is rather questionable. More recently, a private bill has been introduced, which after passage, shall be known as the Protection of Indian Traditional Knowledge Act, 2016. The bill defines TK and what it includes, and makes the Central and State Governments the custodians of all TK in India. The Governments in turn, may transfer such custodianship to communities on the satisfaction of certain criteria. The bill also constitutes authorities and contains provisions

for licensing of TK to non-community members. This bill would ensure better protection of India's TK and is a rather concrete step taken in the regulation of TK.

Patents claims and the doctrine of equivalents

- Anjana Viswanath

Introduction

The true essence and features of an invention may not be conveyed properly through the selection of words used for writing a patent application¹. This may lead to situations where the patent claims do not represent the actual invention, as envisaged by the inventor, in literal terms. Hence, the scope of a patent should not be restricted to its textual meaning but should cover all equivalents to the terms used in the patent claims¹. The purpose of a patent is defeated if competitors are allowed to make devices having minor or insubstantial changes from the patent claims. The doctrine of equivalents is an important legal tool to prevent such practices, which adversely affect the exclusive rights of the patentee. The doctrine of equivalents was adopted by the United States Supreme court in 1854. The doctrine states that “*the scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described*”¹. In the absence of literal infringement, a product in dispute is infringing a patent if it is found to be substantially equivalent to that claimed in the patent¹.

Patent claims

Patent claims refer to certain well-defined rights related to the subject matter of the

¹ <http://docs.manupatra.in/newsline/articles/Upload/5FEA310F-B604-483E-993B-46E346604C57.pdf>

patent, which are legally granted and assured by the jurisdiction for a stipulated period of time. Consequently, third parties are unable to make, use, offer for sale, sell or import the subject matter of the patent without the consent of the patentee². Patent specifications and claims are considered to be one of the most difficult legal instruments to describe precisely². The patent application contains one or more claims, which clearly illustrate what is protected and what is not protected by the particular patent. The claim provides legal definition of the scope of the patent. Only the patentee is permitted to practice the subject matter as outlined by the claim².

Objectives of patent claims

The patent claims serve as public notice on the patent subject matter and they define the scope of the patent. Through the patent claims, the public is informed about the subject matter over which the patent gives exclusive rights. The patent claims also define the actual scope of protection provided by a patent. It is similar to the delineation of the boundaries of a site or property. As of now, the establishment of the actual scope of patent protection is considered to be the most essential characteristic of a patent claim².

Patent infringement inquiry

There are instances wherein the question on the patent infringement arises between

² <http://docs.manupatra.in/newsline/articles/Upload/61DFD921-5C67-4C34-9C6F-FC946AB34821.pdf>

competitors. In such cases, the courts resort to two step analysis as part of the infringement inquiry. The first step involves literal infringement wherein the literal meaning of the claims are compared with the features of the competitor's device or invention². The patent infringement is proven if there is word by word similarity between the patent claims and the characteristics of the device in question. The second step of inquiry is adopted when there is no literal infringement. The courts proceed to apply the doctrine of equivalents to investigate the patent infringement².

Doctrine of equivalents

The doctrine of equivalents is applied during the course of a patent infringement action. If an accused product or process is not found to literally infringe a patented invention, the infringement under the doctrine of equivalents is probed. The critical inquiry involved here is - "*does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention?*" as stated in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*³. In this step, the patent claims are construed beyond their precise textual meaning. Further, the scope of the claims may be broadened to include the traits that are equivalent to those which are literally claimed. The language of a patent claim forms the basis for the exclusive rights provided by a patent. However, the rights of

³<https://www.uspto.gov/web/offices/pac/mpep/s2186.html>

html

the patentee are not exclusively limited to the textual meaning of its claims. Although a patent application needs to have clear and certain claims, the settlement of patent infringement disputes cannot be based solely on the literal meaning of the claims².

Scope of the doctrine of equivalents

The application of the doctrine of equivalents helps the patentee to claim rights to minor or insignificant alterations to the patented product or process. These alterations may not be covered by the language of the original claims, but could be easily achieved. Thus, the doctrine of equivalents prevents practicing a fraud on a patent by the substitution of substantial equivalents for elements in the claims¹. The doctrine of equivalents is generally applicable in cases where the courts are unable to find any literal infringement. Inquiry is made to find out whether the structure or function of the device in dispute is having equivalence to an element described in the patent claim. A claim and the device in question can be said to have equivalence if they perform substantially the same function in similar manner to achieve similar outcome². In order to avoid literal infringement, a competitor may make minor alterations or substitutions in the existing patent claims. The doctrine of equivalents helps judiciary to prevent competitors from adopting such practices and to safeguard the interests of the patentee. The doctrine of equivalents is envisaged in such a way as to protect the patentee from fraud. However, the scope of the patentee's exclusive rights must be well delineated and known to the general public².

Recently, in *Duncan Parking Techs., Inc. v. IPS Group, Inc.*, the US Federal Circuit has given judgment of non-infringement, both literal and under the doctrine of equivalents. The court has evoked the vitiation rule, which prevents the doctrine from being applied too extensively so as to make a claim limitation effectively void⁴. Further, in *Amgen Inc. v. Sandoz Inc.*, the Federal Circuit reiterated the limitation that “*the doctrine of equivalents applies only in exceptional cases and is not simply the second prong of every infringement charge, regularly available to extend protection beyond the scope of the claims*”⁴.

Function-way-result test

The function-way-result test or the tripartite test has traditionally been used to find out patent infringement by means of the doctrine of equivalents^{1,2}. In this test, an accused product infringes under the doctrine of equivalents if it performs “*substantially the same function in substantially the same way to obtain the same result*” as the claimed invention¹. Equivalence can arise even if the devices in question have different name, form, or shape².

The United States Supreme Court adopted the function-way-result test in *Graver Tank & Mfg Co v Linder Air Products*, which established the law related to the doctrine of equivalents². The doctrine of equivalents was reiterated by the court after about fifty years in

⁴[https://www.lexology.com/library/detail.aspx?](https://www.lexology.com/library/detail.aspx?g=0d00b2b9-ac39-4a9a-85f8-4bbf36a2e5ef)

[g=0d00b2b9-ac39-4a9a-85f8-4bbf36a2e5ef](https://www.lexology.com/library/detail.aspx?g=0d00b2b9-ac39-4a9a-85f8-4bbf36a2e5ef)

Warner-Jenkinson Co v Hilton Davis Chem Co. Apart from the function-way-result test the court gave importance to insubstantiality of the differences between the devices in question². In order to find infringement under the doctrine of equivalents, the evidence of insubstantial differences between the patent claims and the accused product is necessary. This is known as insubstantial differences test¹. The accused device or process may have an element interchanged from that in the patent claim². Hence, it is important to determine whether persons skilled in the art would have known about the interchangeability of an element or step in the accused product and the patent claim. If the interchangeability is well known to the persons skilled in the art it becomes an insubstantial difference². The burden of proving that the element in dispute was known to the persons skilled in the art to be interchangeable with the patent claim lies on the patentee¹.

Limitations to the doctrine of equivalents

There are certain limitations or legal bars to the application of the doctrine of equivalents to patent infringement disputes^{1,2}. These legal bars do not define what is within the scope of a patent but define what lies outside the scope¹. These limitations include the all-limitations rule, obviousness, prosecution history estoppel, rule of dedication and the means plus function claims^{1,2}. As per the all-limitations rule, the doctrine of equivalents should be applied on an element by element basis and not to the claimed invention as a whole. This rule was promulgated in the case of *Pennwalt Corp v Durand-Wayland, Inc.*

This rule states that equivalent infringement would exist only if the allegedly infringing article has any claim limitation. In *Streamfeeder v Sure-Feed Systems Inc.*, it was stated that the limitation of obviousness is applicable to those devices or processes that would have been obvious to a person skilled in the art at the time of invention. Thus, a device or process in dispute, which is an obvious variation of prior art invention cannot be accused of patent infringement via the doctrine of equivalents².

The prosecution history estoppel or file wrapper estoppel states that the patent application proceedings can be used for the interpretation of the patent claims². In other words, the claims need to be interpreted in the light of their rejections, cancellations and amendments if any during the patent grant process¹. A subject matter once surrendered during the patent application process cannot be reclaimed later through the doctrine of equivalents. There may be instances where a patent application discloses a subject matter, which is not included in the claims. Such unclaimed disclosures are deemed to have been dedicated to the public as per the rule of dedication. Consequently, the doctrine of equivalents cannot be applied to these subject matters as stated in *Maxwell v J Baker Inc.*². The public dedication bar is related to the notice function of the patent. The public can identify the unclaimed subject matter disclosed in the patent and practice it since it falls outside the scope of the patent¹.

The means-plus-function claims are certain special form of claims, which limit the equivalence to technologies developed after

the grant of patent as stated in *Chiuminatta Concrete Concepts Inc v Cardinal Industries Inc.*². This limitation is an application of the principle of estoppel. The means-plus-functions claim bar directs that a known equivalent element not claimed at the time of the patent filing is considered to be unclaimed, and cannot be claimed later through the doctrine of equivalents¹. This limitation was further reiterated in *Al-Site Corp v VSI International Inc.*, wherein the court stated that, for a device or process to be an equivalent for literal infringement it needs to be existing at the time of the granting of the patent. However, in order to be considered as an equivalent under the doctrine of equivalents, the device or process may come up after the patent granting but before the time of infringement².

Doctrine of equivalents in India

In *Lallubhai Chakubhai v Chimanlal & Chunilal & Co.*, the Bombay High Court stated that the nature of the invention should be clearly described and established in the patent specification. Further, the court stated that the construction of a specification is a matter of law and it must be construed as a whole². In *Bishwanath Prasad Radhey Shyam v Hindustan Metal Industries*, the Supreme Court stated that in order to properly construe a specification appropriately, one must read the description of the invention first. This would help to prepare one's mind for understanding what is to be claimed².

In *Raj Parkeshv Mangat Ram Chowdhary*, the Delhi High Court observed that a true and fair construction of the specifications is required to

establish whether a patent sets out an invention².

In *Ravi Kamal Bali v. Kala Tech* the court applied the doctrine of equivalents and stated that the two products in question had the same usage/purpose, nature of material and also worked on the same principle. The court observed that the difference of main structure of body makes no difference and does not imply a new invention since the constructional and functional aspects of the product had remained the same⁵.

Conclusion

The doctrine of equivalents is designed to protect the patentee's exclusive rights by preventing competitors from making devices or processes with insignificant or insubstantial changes to the patented invention. In addition of preventing fraud on a patent, the doctrine of equivalents has become a widely used second method for settling patent infringement disputes². The doctrine of equivalents expands the scope of the rights of a patentee over the claimed subject matter. The scope of patent claims is expanded beyond the literal meaning so as to include the equivalent devices or processes. Thus, the competitors are prevented from making devices with insignificant or insubstantial changes from that included in the patent claims. However, the competitors and the general public should be provided with a

clear public notice of the scope of the exclusive rights held by a patentee¹. Therefore, efforts are needed during the application of the doctrine, to strike a balance between the inventor's exclusive rights and the interests of the general public to pursue innovations¹. However, there is a need for the development of a precise linguistic framework for the doctrine, in order to reduce unpredictability on the decisions arrived based on the doctrine¹. Further, it should be ensured that the doctrine is applied in its strict sense only so as to prevent it from adversely affecting the public notice function of the patent.

⁵<https://nliujournalofiplaw.files.wordpress.com/2014/>

12/article-6.pdf