

BASICS OF PATENT

(This is not to be taken as legal advice)

Patent: Meaning

A patent is a grant issued by the Government of India giving an inventor the exclusive right to exclude others from making, using, or selling the invention within India for a period of twenty years from the date of filing of the Patent. Similar system of granting of patents exists in all most all countries of the world. As of now there exists no system that grants a global patent valid in all jurisdictions.

Patentability

Patents are granted for inventions (both processes and products) irrespective of the field of technology. Invention means a novel, non-obvious and useful processes, products, machines, manufactures, and compositions of matter. It may cover such things as new or improved devices, systems, circuits, chemical compounds, mixtures, etc. **There is a likelihood of an invention being made when something new and useful has been conceived or developed, or when unusual, unexpected, or non-obvious results have been obtained and such results can be used and commerciality exploited.**

Points to be noted by an Inventor

Though questions relating to patentability require professional assessment, however, an inventor should take into consideration the following points:

(a) Novelty: The invention should be new to be patentable. This indicates that the invention should not have been previously publicly known or used by others or patented or described in a printed publication anywhere. A prior art (prior knowledge, use, patent, publication) is generally required to fulfil the following criteria:

- (i) The prior art should give an exact prior description
- (ii) It has to give clear and unmistakable directions

For determining novelty, several prior arts cannot be combined, all limitations of the proposed invention must be found in a single prior art.

(b) Non-obviousness: The invention must not be obvious to a researcher with ordinary skill in that particular field. The non-obviousness principle ensures that the claimed invention is an adequate leap forward to the existing state of the art and the inventor has contributed something more than the skill of an ordinary mechanic. For example, if an inventor comes out with a porcelain door-knob replacing metal-knob, the invention will be obvious. **It is to be noted that for determining non-obviousness several prior arts may be combined.**

Generally obviousness is determined by looking at

- (i) the scope and content of the prior art;
- (ii) the level of ordinary skill in the art;
- (iii) the differences between the claimed invention and the prior art; and
- (iii) objective evidence of non-obviousness such as commercial success; long-felt but unsolved needs

Non-disclosure

An invention which is otherwise patentable may become unpatentable unless a formal application is filed with the Patent Office within a certain period of time of disclosure of such invention by publication or any other means which results in the details of the invention becoming generally available. Therefore, it is advisable not to disclose the invention unless proper patent application is filed.

As oral and written disclosures in public domain can affect the novelty of the invention, the inventors are advised to exercise due diligence and seek advice from the Institute before making publications, delivering lectures, giving interviews or making demonstration concerning the invention.

Applicant

Application can only be filed by the inventor or his/her assignee. Inventor shall mean and include true and first inventor. The term shall also include the joint inventors when such inventors have made inseparable technical and innovative contributions to the invention or each of the inventors has conceived an essential element of an invention or contributed substantially to the general concept

Examination

When a patent application is filed, the Indian Patent Office reviews it to ascertain as to whether the invention is new (novelty), useful (utility), and non-obvious and, if appropriate, grants a patent.

Important Points to be Noted

- Any potentially patentable invention conceived and constructively or actually reduced to practice, in whole or in part, by the members of the faculty or staff or student of the Institute shall be disclosed to the IPR office without undue delay.
- An invention, although not patentable for various reasons, may still be valuable and important, and such an invention may be protected by other means such as copyright, trade secrets, technical know-how, proprietary unpatentable information etc. Inventors therefore encouraged to report of all inventions to the Institute, whether or not such inventions are considered patentable.

Few More Points

1. Conduct a thorough prior art search as Indian Patent System has two tier opposition proceeding, Pre-Grant and Post-Grant. Prior art search includes search for prior patent as well as non-patent prior published literatures. Please select few keywords from the “inventive area” of your invention. Search using
 - I. <http://www.uspto.gov/patents/process/search/>
 - II. <http://ep.espacenet.com/>
 - III. <http://patentscope.wipo.int/search/en/search.jsf>
 - IV. <http://ipindia.nic.in/ipr/patent/patents.htm>
 - V. http://www.google.co.in/advanced_patent_search
 - VI. www.sciencedirect.com for non-patent literature

2. Please consider the following non-patentable subject matter of Indian Patent Act also,

Invention non-patentable includes:

- Section 3 (a) ...an invention which is frivolous or which claims anything obviously contrary to well established natural laws;
- Section 3 (b)..... an invention the primary or intended use or commercial exploitation of which could be contrary public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment
- Section 3 (c).....**The mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substance occurring in nature**
- Section 3 (d)..... **the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant**
- Section 3 (e)....**a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance**
- Section 3 (f).... **The mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way**
- Section 3 (h) a method of agriculture or horticulture [*Device/system is patentable*]
- Section 3 (i) **any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any for a similar treatment of animals render them free of disease or to increase their economic value or that of their products [*Medical device or system is patentable*]**
- Section 3 (j) plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals
- Section 3 (k) a mathematical or business method or a computer programme per se (**as such**) or algorithms; [*computer programme embedded in a hardware may be patented; consider a system claim*]

1. Background

One day in August 2005, a student of Professor D. Iannuzzi at VU University Amsterdam came to his office because in his experiment on some quantum force measurements, he could not eliminate an obstructive characteristic of the instrument he was using. To solve that specific problem, Professor Iannuzzi came up with the idea of using fiber-top technology. After testing the working principle with some colleagues, Professor Iannuzzi realized that that idea could have many applications well beyond what it was originally devised for. At that time the VU University Amsterdam TTO was still assembling its team and, to avoid slowing down the process, engaged the services of an external patent attorney for the preparation of possible patent applications.

2. Problem faced

With the assistance of a patent attorney, a patent application was lodged, which is now enforced in the US and in Europe. The assistance of a professional patent attorney turned out to be valuable, since the language in patent applications is quite different from research papers. However, Professor Iannuzzi considered it too important to work closely with the patent attorney and to carefully check the formulation of the patent application, since he as the scientific inventor was better placed to verify the boundaries of the envisaged patent.

However, the costs of fabrication of that technology at that time were far too high for the market. Hence, in order to bring the technology to maturity it was necessary to perform further research on the development of alternative, more business-oriented, manufacturing methods.

To get funding for such activities, Professor Iannuzzi applied for an ERC Starting Grant, a EU funding programme that aims to support up-and-coming research leaders who are about to establish a proper research team and to start conducting independent research in Europe.

After the successful evaluation of the proposal, he launched the project. During the period of the ERC Starting Grant, Professor Iannuzzi and his research team further developed two potentially competitive manufacturing methods which led to the lodging of two more patent applications. Some of the costs associated with these patent applications were covered by the ERC grant, since they were eligible costs. In addition, as a result of the project he has acquired unique technical know-how, allowing Professor Iannuzzi and his team to be recognised internationally as pioneers of a unique technology.

3. Outcome

Given the potential of the technology developed and the distinctive character of the know-how acquired during the ERC Starting Grant, Professor Iannuzzi decided to lead a spin-off - Optics11 - with the goal of marketing successful products based on these innovative assets. Even though at the moment the company does not need to rely on venture capital, Professor Iannuzzi is confident that, should that moment arrive, the company will be in a good position given its strong patent portfolio and professional intellectual property management.

The assistance of the VU University Amsterdam in this process has been fundamental, and included not only putting patent professionals at the disposal of Professor Iannuzzi, but also providing space at the university's premises for the new company, time to set it up, and a series of opportunities for professional growth. Another essential factor was the personal motivation of Professor Iannuzzi, who invested five years in this venture to bring to maturity his technology and to launch the company. After the launch of this spin-off, his department has already seen the launching of two more companies.

4. Lessons learned and suggestions

- While patents are of central importance, other forms of intellectual property should be considered, particularly know-how.
- Close collaboration between inventor, university patent office and patent attorney is important.