

Ministry of Commerce and Industry
Department for Promotion of Industry and Internal Trade
Office of the Controller General of Patents, Designs & Trade Marks
(O/o CGPDTM)

BOUDDHIK AAGMAN

An Induction Journey at IP Office

Patent and Patentability

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What is Patent?

- The term “Patent” has its origin in the Latin term “Litterae Patentes”.
- The expression meant grant of some privilege by the government of the country to one or more individuals.

What is Statutory Definition of Patent

- The Patent Act, 1970 does not define the term “Patent”. Section 2(1)(m) of the Act only says that “Patent” *means a patent for any invention granted under this Act.*

But as we go through the various provision of the Act, the term “Patent” can be defined as **“An exclusive monopoly right on an invention granted to the inventor for a limited period of time in a fixed geographical area (Country), in consideration of the disclosure of the invention.”**

Exclusive Monopoly Right

- A patent is a form of “Industrial Property”.
- The owner of the Patent can sell whole or part of the property or can licenses to others to use it.

➤ There is an obligation to the owner of patent to work the invention on a commercial scale either by himself or through licenses.

Form 27
THE PATENTS ACT, 1970
(39 of 1970)
AND
THE PATENTS RULES, 2003

STATEMENT REGARDING THE WORKING OF PATENTED INVENTION(S) ON A COMMERCIAL
SCALE IN INDIA

[See section 146(2) and rule 131(1)]

I/We, the Patentee(s)/Licensee

Name : NANO BIOTECHNOLOGY RESEARCH CENTER, INDIAN FARMERS FERTILISER COOPERATIVE LIMITED (IFFCO) KALOL,

Address : INDIAN FARMERS FERTILISER COOPERATIVE LIMITED (IFFCO) KALOL, P O- KASTURI NAGAR, DISTRICT - GANDHI NAGAR, PIN 382423 (GUJARAT), INDIA,

State : Gujarat,

Country : India

Nationality : India

in respect of patent number(s) **400681**

furnish this statement,

(Explanation: One form may be filed in respect of multiple patents, provided all of them are related patents, wherein the approximate revenue / value accrued from a particular patented invention cannot be derived separately from the approximate revenue/value accrued from related patents, and all such patents are granted to the same patentee(s)).

in respect of the financial year **2022-2023**

Please state whether each patent in respect of which this form is being filed is worked or not worked

Worked Patent(s)

| | | Approximate revenue / value accrued in India to the patentee(s) licensee furnishing the statement from patent number(s) where the working is through: | |
|---------------------|---|--|-------------------------------|
| Patent Number(s) | Brief in respect of above | Manufacturing in India (in INR) | Importing into India (in INR) |
| 400681 | The Patent is worked, and approximate revenue was Rs.680 crore during 2022-23 | 6800000000 | |

Object of granting an Exclusive Monopoly Right:-

By granting an exclusive right, patents provide incentive to individuals

- Offering them reorganization for their creativity.
(Alexander Graham Bell, Elisha Gray)
- Material reward for their marketable invention.
- These incentive encourage innovation, which in turn contributes to the continuing enhancement of the quality of human life.

What is an Invention

Section 2(1)(j) defines:- "invention" means a new product or process involving an inventive step and capable of industrial application.

- Novelty
- Inventive Step
- Industrial Applicability

Novelty

Section 2(1)(1) define "new invention" means **any invention or technology** which has not been **anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing of patent application with complete specification**, i.e., the subject matter has not fallen in public domain or that it does not form part of the state of the art.

Water Jar



New water Jar to store more water







Example:-

Improved Toothbrush with a Different Bristle Arrangement

- **Invention:** A toothbrush with bristles arranged in a slightly different pattern (e.g., a new spiral or zigzag arrangement).
- **Prior Art:** Various toothbrushes already have innovative bristle patterns (like those in electric toothbrushes or manual ones). The idea of arranging bristles for better cleaning.

Example:-

A New Navigation Menu with a Slightly Different Hover Effect.

Invention: An **educational website** navigation menu that has a hover effect where the background color changes slightly when you mouse over a menu item, similar to many websites.

Prior Art: Hover effects on navigation menus are commonly used across **e-commerce websites**.

Inventive Step

Section 2(1)(j) defines "inventive step" means a feature of an invention that involves **technical advance** as compared to the existing knowledge or having **economic significance** or **both** and that makes the invention **not obvious to a person skilled in the art** .

Two Test

Technical advance and /or economic significance
and
Not obvious to person skilled in the art

Novelty- A relative concept.



- Is technically advance?
- Having economic significance?
- Would be obvious to a person skilled in the art?



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- Is technically advance?
- Having economic significance?
- Would be obvious to a person skilled in the art?

Invention

A **smart power strip** that intelligently manages the power consumption of connected devices based on real-time usage patterns. The strip detects when devices are in standby mode or idle and automatically cuts power to those devices, saving energy. It also adapts to the user's routine and adjusts the power supply accordingly to optimize electricity usage without human intervention.

D1:- A power strip with the ability to cut off power to devices when they are in standby mode to reduce unnecessary power consumption. The power strip includes a sensor that detects whether the device is drawing current and automatically cuts power to the device when it is idle or in standby.

D2:- Smart power management system for electronic devices. This patent describes a smart power management system that connects to the internet and uses predefined schedules to control the power supply to connected devices. The system allows users to manually set on/off schedules for devices like lights, televisions, or appliances.

- Is technically advance?
- Having economic significance?
- Would be obvious to a person skilled in the art?

Limitation of D1: The system described in this prior art only shuts off power when a device is in standby mode based on current draw, but it **lacks intelligent adaptive control** and does not account for **user habits** or real-time scheduling.

Limitation of D2: The system only works based on **predefined schedules** and does not adapt to real-time usage or **user behavior**. Users must manually program when they want the devices to be powered on or off, which can be inconvenient and inefficient.

Invention 1:

A method for compressing Image files using a combination of JPEG and PNG.

D1 discloses JPEG compression technique for lossy compression method used for reducing the size of image file by discarding non-essential information.

D2 discloses PNG compression method for lossless compression to preserve all the original data in the file.

- Is technically advance?
- Having economic significance?
- Would be obvious to a person skilled in the art?

Invention: A water-saving showerhead with adjustable flow.

A showerhead with built in sensor that adjust water flow based on user 's proximity to conserve water.

D1 discloses a low flow showerheads for water conservation.

D2 discloses proximity sensors in consumer product such as lighting for automating control.

- Is technically advance?
- Having economic significance?
- Would be obvious to a person skilled in the art?

Industrial Applicability

In order for an invention to be patentable, an invention must be capable of industrial application. Industrial Application in relation to patentability means that the invention is capable of being made or used in an industry.

Example:

- A perpetual motion machine.
- Invention that can only exist in highly unusual or impossible condition may not be industrially applicable.
- A method of turning steel into gold.
- A universal code generator for any possible software application.
- A mere discovery of scientific principle an abstract theory.

The term of Patent

- As per section 53, the term of Patent is 20 years from the date of filing of application in respect of all the patents.
- Provided that the renewal fee is paid every year before the due date or within the extended period.
- After the 20 year term, the invention fall under public domain, **meaning anyone can use it without requiring the patentee's permission.**

Territorial Right

Patent is territorial right. This means that a patent only provides protection within the country or region where it was granted.

Sufficiency of Disclosure

Every complete specification shall:

- a) fully and particularly describe the invention and its operation or use and the method by which it is performed.
- b) disclose the best method of performing the invention which is known to the applicant for which he is entitled to claim protection.

Object:-

It is mandatory on the part of applicant to disclose fully and particularly various features constituting the invention. Disclosure of invention in a complete specification must be such that **a person of average skill and average knowledge in India should be able to perform the invention based on what is disclosed in the specification.**

Patentability

- Novelty
- Inventive Step
- Industrial Applicability
- Sufficiency of Disclosure
- Should not fall under chapter II (Invention not Patentable)
- Unity of invention

Unity of Invention

- The Claims of a Specification shall relate to a single inventive concept.
- Unity of invention between process and apparatus or means requires that the apparatus or means have been specifically designed for carrying out the process.

Independent claims of different categories may relate to a single inventive concept and may be allowed in one application, when they are linked to form a single inventive concept and are supported by the description. For example

- a) Claims for a product and process specially adapted for manufacture of the product.
- b) Claims for a process and apparatus or means specifically designed for carrying out the process.
- c) A mould for casting an article, a method of making that mould, a process of casting the article by using the said mould will constitute a single invention.
- d) A locking system containing plug and socket wherein separate independent claims for a plug and socket may constitute a single inventive concept.
- e) A broadcasting system comprising transmitter and receiver.

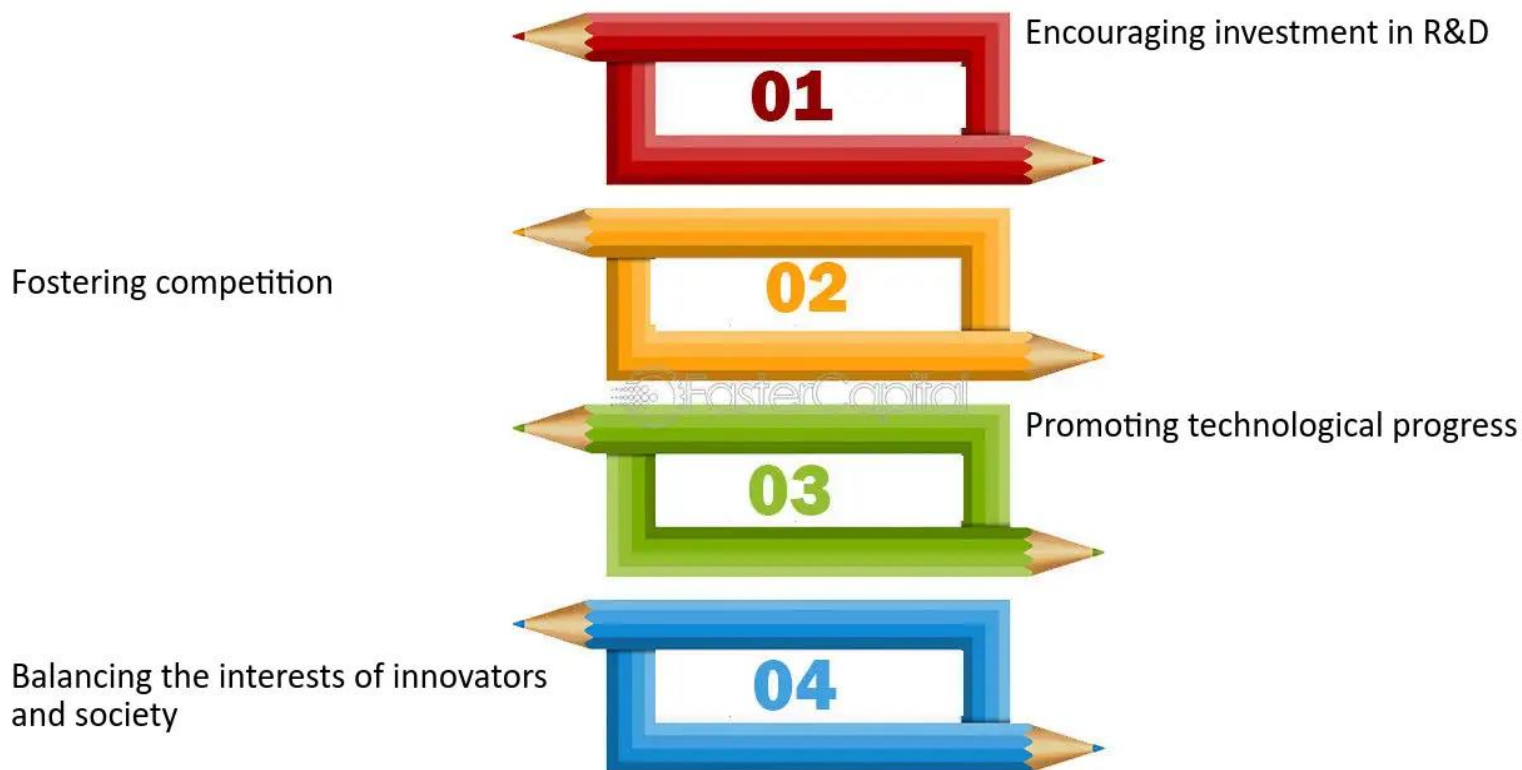


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IMPACT OF PATENTS

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The Role of Patent Rights in Promoting Innovation



Complex and multifaceted nature of the patent system that is shaping the economic and social landscape.

Evolving Landscape of Patents

- **Incentivizing Innovation: Patents provide inventors with exclusive rights, encouraging them to invest in research and development, ultimately driving the creation of new technologies and products.**
- **Fueling Economic Growth: By granting inventors a temporary monopoly, patents stimulate investment, foster competition, and create new industries and jobs, contributing to economic growth.**

Evolving Landscape of Patents

- **Driving Technological Advancement: Patent protection encourages inventors to push the boundaries, leading to advancements in various fields, such as medicine, technology, and engineering.**
- **Promoting Competition: While granting exclusive rights, patents stimulate competition by encouraging other inventors to find improvised and alternative solutions of existing technologies.**

Evolving Landscape of Patents

- **Addressing Ethical Concerns: The patent system can raise ethical concerns, such as the potential for "patent trolls" to exploit the system, such as increasing drug prices of essential medicines.**
- **Balancing Public Interest: Striking a balance between incentivizing innovation and ensuring public access to technology is crucial, requiring careful consideration of patentability and accessibility.**

Evolving Landscape of Patents

- **Legal and Policy Challenges:** The patent system faces ongoing legal and policy challenges, including determining patentability criteria, fair enforcement and addressing new technologies like AI.
- **Global Implications:** International cooperation and harmonization of patent laws are essential in a global economy to facilitate international trade, protect inventors' rights, and promote innovation.

Technical Impact Examples

Edison's Light Bulb and its

Impact: Patented by Edison, the invention of the light bulb revolutionized society by powering homes and industries, marking a significant step towards modern electrification.

Early History of Patents: The concept of patents dates back to 1416 with the first known patent granted in Venice. These early patents, with their "right to exclude," laid the foundation for incentivizing innovation and driving technological advancements.



Source: <https://dailytechstories.medium.com/the-future-of-electrical-engineering-emerging-technologies-5dce6eecf846>

Technical Impact

- Google's Page Rank algorithm transformed search and accessibility.
- Evolution of advanced antibiotics from Penicillin to drug resistant advance antibiotics e.g. Azithromycin and recently developed Nafithromycin.
- CRISPR-Cas9 gene-editing technology revolutionized the field of genetics
- Advances in drug delivery technologies e.g. polymeric nanobots for drug delivery.
- UPI developed by NPCI revolutionized the payment mechanism.

IMPACT OF PATENTS

b. Legal Impacts:

- Evolving Legal Frameworks
- Encouraging Quality Patents
- Public Interest Safeguards
- Prevention of Patent Misuse
- Abusive licensing agreements can create unfair market conditions, limiting competition

IMPACT OF PATENTS

c. Business & Economic Implications:

- Stimulate Economic Growth through Cutting-edge Transformative Inventions play a vital role in incentivizing R&D in such sectors, pharmaceutical and Agriculture.
- Fostering New Firms and Industries & Job Creation
- Market Distortions
- High costs of licensing and restrictive agreements
- Differentiate product
- Protect competitive advantage
- Revenue generation
- Patent Thickets
- May pose challenge to fair competition
- Patent Litigation Challenges

Conclusion

- **Broad Implications:** Patents have far-reaching implications, covering technology, legal, economic, and business landscapes. The patent system needs to adapt to address emerging challenges like AI patentability and ethical considerations, such as gene editing.
- **Addressing Healthcare Access:** While monopolies in healthcare can be problematic, leveraging options within the Indian patent ecosystem, such as encouraging domestic innovation and balancing rights, can help mitigate these challenges.
- **Role of Prior Art:** Increased patent filings from India and abroad can contribute to a larger body of published prior art, helping to prevent the grant of trivial patents globally.
- **Crucial Role of Patent Examiners:** Patent examiners play a vital role in ensuring that patent rights are granted only to deserving inventions by adhering to statutory provisions and guidelines during the search and examination process.

Thanks You