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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)

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An Induction Journey at IP Office

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Understanding Novelty, Inventive step and industrial applicability

Mr. Vishal Shukla
Assistant Controller of Patents & Designs

Mr. Chandan Kumar Jha
Assistant Controller of Patents & Designs

Mr. Rahul Gahlan
Assistant Controller of Patents & Designs

Bouddhik Aagman

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GEOGRAPHICAL INDICATIONS

Objective

- The fundamentals of **Novelty** and how prior art impacts patentability.
- The **Inventive Step** requirement, various assessment approaches, and key legal precedents.
- The concept of **Industrial Applicability** and its approach in different jurisdictions.
- Practical case studies and real-world applications to strengthen understanding.

01 Introduction

Key Patentability Criteria

- **Definition:** Section 2(1)(j) of the Patents Act, 1970 states: "*an invention means a new **product** or **process** involving an inventive step and **capable** of having industrial application*".

- **Three Essential Criteria:**
  - **Novelty**
  - **Inventive Step**
  - **Industrial Applicability**

- **Importance:** Forms the foundation for patent examination and patentability.

02 Novelty

What is Novelty?

In the ordinary sense, novelty means **newness**.

Role of Novelty:

- Differentiates between public domain and patentable subject matter.
- Prevents the granting of patents on known inventions.

Legal Basis: Section 2(1)(l) of the Patents Act, 1970

- *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 a patent application with complete specification.*

- **Novelty Requirement:** An invention must be new and distinct from prior art.
- **Prior Art Definition:** Information made publicly available before the filing date.
- No combination of separate prior art items to determine novelty.

What is a Prior Art?

Prior art encompasses all publicly available information and knowledge relevant to an invention that exists before the priority date of a patent application.

Sources of Prior Art:

- Published patents
- Scientific journals
- Conference presentations
- Books, online databases
- Public oral presentations

Relevance:

- Assesses novelty and inventive step.
- Ensures only genuine advancements receive patents.

Prior Art in Patent Examination

For the purpose of examination, an invention will not be new if it forms part of the prior art or has entered the public domain. For anticipation, such publication must be before the date of priority of the claim under consideration.

In the matter of ***Telefonaktiebolaget LM Ericsson vs Intex Technologies (2015),*** The Delhi High Court emphasized that- public use, whether in India or abroad, constitutes prior art if it discloses sufficient details of the claimed invention. For instance, if a prototype of a mechanical device is displayed at a public exhibition without confidentiality restrictions, it qualifies as public use, destroying novelty. Similarly, a technical presentation at a seminar open to the public can also serve as prior art. The courts have clarified that the intention behind the disclosure is irrelevant; what matters is whether the invention has been made publicly accessible.

- **Key Considerations:**
  - Read by a skilled person in the field.
  - Disclosure must be accessible.

Generic vs. Specific Disclosure of Prior Art

Generic disclosure

A generic disclosure in the prior art **may not** necessarily take away the novelty of a specific disclosure of the claim, as the latter may contain particular features, parameters, or embodiments that are not explicitly or implicitly disclosed within the generic description of the prior art

Specific disclosure

A specific disclosure in the prior art effectively takes away the novelty of a generic disclosure because the specific embodiment generally falls within the scope of the generic concept.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Example 1

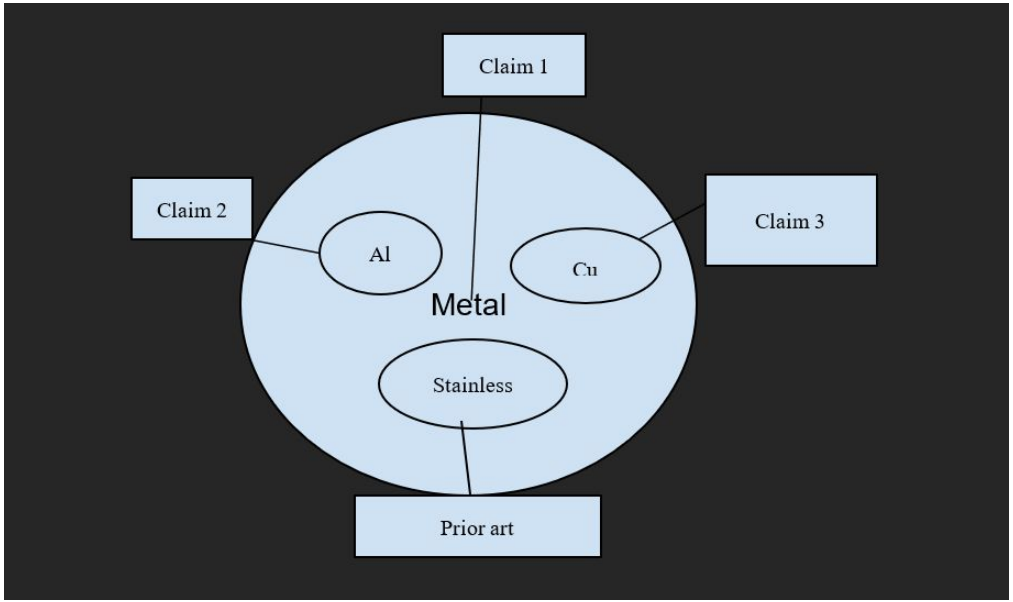
- **Title of the invention:** ‘CUP’
- Contains a detailed explanation of the invention along with an example of a cup made of aluminum, and another example of cup made of copper.

- **Claims:**
  1. A cup made of metal.
  2. A cup made of aluminum.
  3. A cup of claim 1, in which the said metal is copper.

Example 1

Prior art:

A cup made of iron/ stainless steel is known before the application is filed.



Analysis

- Claim 1 includes a cup made of any metal, including metals not explicitly mentioned in the example, such as stainless steel. As the stainless steel cup is known from prior art, claim 1 lacks novelty (not new).
- Claim 2 specifies the cup is made of aluminum, since prior art does not mention cup is made of aluminum, claim 2 is novel.
- Claim 3 is also novel with the same analogy.

Example 2 (subject specific)

- **Title of the invention:** SYSTEM AND METHOD FOR DISPENSING MEDICAL SMART CARDS AND HEALTHCARE SERVICES IN ELECTRONIC KIOSK ’
- It provides a card dispensing kiosk equipped with a computer system that operates electronic components for dispensing medical smart cards, printing receipts and healthcare forms, reading medical and credit cards, biometric authentication, image capturing.

Example 2 (subject specific)

- **Claims:**

- A card dispensing kiosk, comprising:
- a. a frame including a base joined to two vertical sidewalls;
- b. an interactive touch screen accessible through an opening formed in said central panel;
- c. a first printer for printing receipts, and a second printer for printing healthcare related forms, said first printer associated with a printer slot provided in said central panel, and said second printer associated with a second printer slot provided in said front panel;
- d. a card reader system selectively interfacing with medical smart cards
- e. healthcare information stored on said medical smart card, and credit cards;
- f. a card dispenser associated with a card dispensing slot
- g. a biometric authentication system including a biometric sensor situated on said central panel; h. a high definition camera operated to capture images of individuals using said kiosk; and
- i. a keyboard disposed on or within said lateral shelf,
- wherein, the said healthcare information includes an individual's demographic and profile information, medical emergency contact information, physician/specialist information, medical conditions, procedural medical history, information relating to prescription and over-the-counter medicine, vitamins or supplements, vaccination or immunization historical records, advance directives, medical insurance information

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GEOGRAPHICAL INDICATIONS

Example 2 (subject-specific)

Prior art:

An electronic kiosk for dispensing medical smart cards and healthcare related forms, and for managing individual healthcare services and information. The electronic kiosk provides access control to healthcare information stored on medical smart cards by including biometric authentication, a high definition camera for capturing images, and an interactive touch screen. A central client-server configuration is provided where a plurality of electronic kiosks are connected to an application server, via a network. Individuals may access the electronic kiosk to request prescription refills and receive confirmation via, text or email when the prescription is ready.

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GEOGRAPHICAL INDICATIONS

Example 2 (subject-specific)

Analysis:

Claim 1	Prior art
A card dispensing kiosk, comprising	a card dispensing kiosk **(refer column 3)**
a. a frame including a base joined to two vertical sidewalls	a frame including a base joined to two vertical sidewalls extending upwards from the base **(refer column 3)**
b. an interactive touch screen accessible through an opening formed in said central panel;	an interactive touch screen accessible through an opening formed in the central panel **(refer column 3)**
c. a first printer for printing receipts, and a second printer for printing healthcare related forms, said first printer associated with a printer slot provided in said central panel, and said second printer associated with a second printer slot provided in said front panel;	a first printer for printing receipts, and a second printer for printing healthcare related forms where the first printer is associated with a printer slot pro vided in the central panel, and where the second printer us associated with a second printer slot provided in the front panel **(refer column 3)**

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Example 2 (subject-specific)

d. a card reader system selectively interfacing with medical smart cards	a card reader system selectively interfacing with medical Smart cards **(refer column 3)**
e. healthcare information stored on said medical smart card, and credit cards;	healthcare information stored thereon, and credit cards **(refer column 3)**
f. a card dispenser associated with a card dispensing slot	a card dispenser associated with a card dispensing slot **(refer column 3)**
g. a biometric authentication system including a biometric sensor situated on said central panel;	a biometric authentication system including a biometric sensor situated on the central panel **(refer column 3)**

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

h. a high definition camera operated to capture images of individuals using said kiosk; and	a high definition camera operated to capture images of individuals using the kiosk **(refer column 3)**
i. a keyboard disposed on or within said lateral shelf,	and a keyboard disposed on or within the lateral shelf **(refer column 3)**
wherein, the said healthcare information includes an individual's demographic and profile information, medical emergency contact information, physician/specialist information, medical conditions, procedural medical history, information relating to prescription and over-the-counter medicine, vitamins or supplements, vaccination or immunization historical records, advance directives, medical insurance information	Includes personal profile information of a Subscriber Such as contact addresses, numbers and information, social security information, insurance informa tion, religious preferences, employer information, vaccine or immunization administration record, and the like **(refer column 11)** **Or** said healthcare information includes, but is not limited to, demographic and profile information, emergency contact information, physician/specialist information, current medical conditions, medical history, prescriptions, over-the-counter medicines, and supplements, vaccinations or immunization history, advance directives, insurance information, medical test results, labs, or scans, and a picture of a person providing said healthcare information **(refer claim 3)**
Therefore all features of Claim 1 are disclosed by D1 as cited above.	

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Prior Publication and Prior Claiming

Prior Publication:

- Full disclosure of an invention before the filing or priority date.
- Can be in written, oral, or digital form.
- Sources: Journals, books, conferences, patents, digital platforms.
- If a skilled person can replicate the invention, it lacks novelty.

Legal Provisions on Prior Publication:

- **Section 13(1)(a):** Prior publication in Indian patent applications filed on or after **January 1, 1912**.
- **Section 13(2):** Prior publication in documents published in India or elsewhere before the filing date.

Patent examiners conduct searches to identify prior publications.

Case Law on Prior Publication:

Farbewerke Hoechst Aktiengesellschaft vs Unichem Laboratories (1969)

- Prior publication must fully describe or infringe upon the claim.
- The entire invention must be disclosed, not just parts.

Prior Publication and Prior Claiming

Prior Claiming (upholds the first-to-file rule):

- Occurs when an earlier patent application or granted patent already claims the same invention.
- Prevents two patents from covering identical inventions.
- If an earlier claim exists, the subsequent claim is unpatentable.

Legal Provisions on Prior Publication Title:

- **Section 13(1)(b)**
- The examiner investigates whether an invention is claimed in an earlier patent application filed **in India**.
- Earlier applications with a priority date before the subsequent one (even **published later)** are considered prior art.
- **Only claims** are considered for anticipation.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Prior Publication and Prior Claiming

Prior Publication vs. Prior Claiming Title: Key Differences

Aspect	Prior Publication	Prior Claiming
Basis	Public disclosure	Earlier patent claim
Impact	Invalidates novelty	Invalidates patent claim
Scope	Any public domain source	Only earlier patent applications **in India**

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation

Introduction to Anticipation

Definition: Anticipation refers to the state where an invention is not considered novel because it has already been disclosed in the public domain prior to the patent application.

Types of Anticipation:

- Explicit Anticipation
- Implicit Anticipation

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation

Explicit Anticipation

- Occurs when prior art directly discloses all elements of an invention.
- The invention is fully described in prior publication or patent.

Example: A previously published patent describes the same invention word for word.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation

Implicit Anticipation

- Prior art does not explicitly disclose all features but inherently contains them.
- A skilled person would recognize the missing elements as part of the disclosed invention.

Example: A known chemical compound that inherently produces the same effect as a patented invention.

Explicit and Implicit Anticipation (Exercise 1)

Claim:
"A system for profile matching that identifies compatible users by comparing encrypted user attributes without decrypting the data."

Prior Art (D1):

D1 discloses a profile-matching system that:
Stores user attributes in an encrypted format for privacy protection.
Explicitly states that matching is performed directly on encrypted data, without decrypting it, using secure multi-party computation (SMPC) or homomorphic encryption.
Uses the encrypted attribute comparison to determine compatibility between users and generate match scores.

Prior Art (D2):

D2 discloses a **privacy-preserving** profile matching system that follows standard security protocols and compares user attributes for compatibility. However, it does not explicitly state whether the attributes are compared in encrypted or unencrypted form.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation (Exercise 1)

D1: Explicit Anticipation Analysis:

- The exact claimed feature (comparing encrypted attributes without decryption) is already described in D1.
- A person reading D1 directly sees that the system performs profile matching on encrypted data without decrypting it.
- There is no need to **infer** that encrypted matching is occurring—it is clearly stated in D1.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation (Exercise 1)

D2: Implicit Anticipation Analysis:

- In such privacy-focused systems, it is **inherent** that sensitive user data (e.g., names, locations, interests) must be **encrypted** before storage and processing.If encrypted data is stored, any matching algorithm must operate on **encrypted data** unless decryption is explicitly mentioned.

- Since D1 does not state that decryption occurs before comparison, it **implicitly** discloses that encrypted attributes are being compared without decryption—exactly what the patent claim describes.

- Therefore, the feature "comparing encrypted attributes without decrypting them" is already inherently disclosed in D1, even though it was not explicitly mentioned.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation (Exercise 2)

Claim: "A system for AI-driven resume screening system that evaluates job applications based on predefined employer criteria and ranks candidates accordingly, the system comprises:

- ***a module to extract structured information from resumes;***
- ***a ranking algorithm that assigns scores based on skill relevance, experience levels, and cultural fit;***
- ***a module that adjusts ranking scores;***
- ***an interface for recruiters to review and filter ranked candidates.***

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation (Exercise 2)

D1 describes an AI-powered recruitment system that:

- Extracts information from resumes using natural language processing (NLP) and keyword matching;
- Analyzes candidate data by structuring extracted information into categories such as skills, experience, and education;
- Compares extracted details with predefined employer criteria using a machine learning-based ranking algorithm;
- Generates a ranking of candidates based on their suitability for the job;
- Continuously improves ranking accuracy by using feedback from recruiters;
- Provides an interface for recruiters to review and filter ranked candidates.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation (Exercise 2)

- D1 fully discloses all elements of the claimed invention, including NLP-based extraction, attribute comparison, and ranking.
- Since every feature in the claim is already present in D1, the claim lacks novelty and is anticipated by D1.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Exception to Anticipation

Sections 29 to Section 34 of the Act, describe what constitutes public disclosure and the circumstances where disclosures may not be considered prior to publication (e.g., exceptions like disclosure due to abuse or display in an official exhibition).

- Certain disclosures do not count as prior publication.
- Protects applicants in specific circumstances.

Exception to Anticipation

Section 29: Anticipation by previous publication: As per this section, the invention claimed in a patent application shall not be deemed to be anticipated by reason only that the same was published in a patent application made in India and dated before 1st January 1912.

- Inventions published before January 1, 1912, are not considered prior art.
- If published without consent, an applicant can still apply.
- Exceptions apply if the invention was commercially worked in India.

Exception to Anticipation

Section 30: Anticipation by previous communication to the government: An invention shall not be deemed to be anticipated by reason that the same was communicated to the government to investigate the invention or its merits.

- Disclosures made to the government for investigation do not anticipate an invention.

Exception to Anticipation

Section 31: Anticipation by public display: As per this section, an invention will not be anticipated by a public display at an industrial exhibition or publication of the description of the invention or use of the invention in consequence of such display or disclosure of the invention before a learned society by the applicant or any person deriving title from him. Further, the invention will not be anticipated by use of the invention after such display or use at an exhibition, by any other person without the consent of the applicant.

- Public display at exhibitions does not count as prior art.
- Protection applies if the patent is filed within 12 months.

Exception to Anticipation

Section 32: Anticipation by public working: As per this section, the invention shall not be anticipated by public working in India at any time within one year before the priority date of the invention by the applicant or any person deriving title from him. Provided that the working was affected for the purpose of a reasonable trial or the working was necessary, with regard to the nature of the invention.

- Public working of an invention within **one year before** the priority date does not anticipate it.
- Must be for a reasonable trial or necessity.

EX- Guinea pig experimentation trials.

Exception to Anticipation

Section 33: Anticipation by use and publication after provisional specification: As per this section, the invention shall not be refused to grant the patent and the patent shall not be revoked by reason that the matter described in the provisional specification was used in India or published in India or elsewhere at any time after the date of filing of that specification.

Further, in case of a convention application filed in India, the invention will not be refused grant or revoked by reason that the same was used in India or published in India or elsewhere at any time after the priority date of the application.

- Use or publication after provisional specification does not invalidate a patent.
- Applies to convention applications filed in India.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Exception to Anticipation

Section 34: No anticipation if circumstances are only as described in sections 29, 30, 31, and 32: As per this section, the Controller shall not refuse to grant a patent, and a patent shall not be revoked or invalidated by reason of any circumstances which, by virtue of sections 29, 30, 31, and 32, do not constitute anticipation.

- Section 34 confirms that exceptions under Sections 29-32 do not constitute anticipation.
- Provides a 12-month grace period for filing after disclosure.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Exception to Anticipation

Case Law on Exceptions: Merck Sharp & Dohme Corp. vs Glenmark Pharmaceuticals (2015)

- **Confidential trials do not count as public disclosure.**
- **Commercial sale or publication of trial results voids novelty.**
- **Experimental use is an exception to public use.**

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GEOGRAPHICAL INDICATIONS

Selection Inventions

Selection of Individual Elements

- Not Novel: Selecting one or more elements from a single disclosed list.
- Novel: If the prior disclosure is broad, a specific selection may be novel.

Example:

➔ A prior disclosure lists "iron, copper, aluminum"; selecting "copper" alone does not confer novelty.

Selection of Sub-Ranges

- If a sub-range falls within a prior disclosed range, it may not be novel.
- Novelty is conferred if the claimed range is narrow and far removed from prior art examples.

Example:

➔ Prior art: 1-30% concentration
➔ Claim: 3-6% concentration → Novel
➔ Prior example: 4.5% concentration → Not novel

Multiple Identified Selections

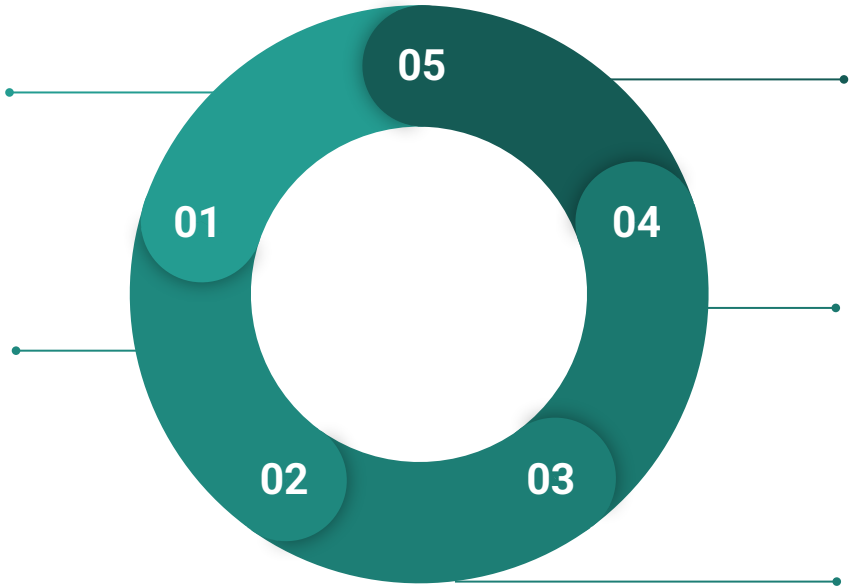
- Novelty conferred if a specific combination is not disclosed in prior art.
- Not Novel: If prior art suggests the combination.

Example:

➔ A catalyst uses metal halides from two lists; selecting a specific pair may confer novelty.

Process for Assessing Novelty

The examiner is expected to follow a structured approach (through the following steps) for assessing novelty for a claim or group of claims that are being examined.



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PCT Guidelines for Novelty Assessment

PCT International Search and Preliminary Examination Guidelines Chapter 12.03 outlines the process for assessing novelty.

Key Steps:

(i) evaluate the elements of the claimed invention;
(ii) determine if a document under consideration forms part of the “prior art”;
(iii) assess whether each and every element or step of the claimed invention was explicitly or inherently disclosed in combination by the document, to a person skilled in the art, on the date of publication of the document.

Seven Stambhas Approach (Delhi High Court)

Introduced in Telefonaktiebolaget LM Ericsson vs Lava International Ltd. (2024)

A systematic, step-wise approach (7 STEPS) for determining novelty:

1. **Understanding Claims**: Define the boundaries of the invention.
2. **Identify Relevant Prior Art**: Gather all pertinent prior art.
3. **Analyze Prior Art**: Compare technical details with claimed invention.
4. **Determine Explicit & Implicit Disclosures**: Identify both direct and indirect disclosures.
5. **Assess Material Differences**: Examine differences indicating novelty.
6. **Verify Novelty**: Ensure the claimed combination of elements hasn't been disclosed before.
7. **Documentation**: Provide a detailed analysis and rationale for the novelty determination.

Other national/regional laws and practices concerning the novelty:

United Kingdom Patent Law, Patent Act 1977 (Section 2)

- Novelty is defined through both explicit and implicit disclosures.
- Implicit disclosures allow a skilled person to deduce certain standard features that are part of the invention.

European Patent Convention (EPC), EPO Guidelines

- Absolute standard for novelty: the invention must differ from prior art.
- Implicit disclosures: subject matter directly derivable from prior art, even if not explicitly mentioned.

Other national/regional laws and practices concerning the novelty:

Japan's Patent Law, Article 29(1)

- Conditions for Patentability:

➔ Publicly known inventions before filing are not novel.

➔ Publicly worked or described inventions in prior publications also lack novelty.

- Novelty includes inventions disclosed without secrecy, even if the inventor did not intend for the information to be shared.

United States Patent Law, 35 U.S.C. 102

- Anticipation occurs if every element of the claim is disclosed by prior art.
- Multiple References: Extra references may be used to clarify terms, explain meanings, or show inherent characteristics.

Explicit and Implicit Anticipation (Exercise 3)

Now consider this claim:

A system for AI-driven resume screening that evaluates job applications based on predefined employer criteria and ranks candidates accordingly. The system comprises:

- *a deep-learning-based natural language processing (NLP) model to extract structured information from resumes;*
- *a multi-stage ranking algorithm that assigns scores based on skill relevance, experience levels, and cultural fit;*
- *a privacy-preserving computation module that enables encrypted candidate comparison using homomorphic encryption;*
- *a bias-mitigation engine that adjusts ranking scores to minimize discrimination based on gender, ethnicity, or other protected attributes;*
- *an interactive recruiter dashboard with explainable AI (XAI) features, providing transparency on how each candidate was ranked."*

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Explicit and Implicit Anticipation (Exercise 3)

D1 fully discloses some features of the claim (NLP-based extraction, candidate ranking) but does not disclose:

- **Homomorphic encryption for privacy-preserving matching.**
- **Bias-mitigation engine for fairness-aware ranking.**
- **Explainable AI (XAI) features in the recruiter dashboard.**

Since D1 lacks at least three critical features, the claim is not fully anticipated but may still be obvious depending on whether these missing elements are known in the field.

03 Inventive Step

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Introduction

- For a patent application to be patentable, it has to, inter alia, fulfil the requirements of Section 2(1)(j) of The Patents Act, 1970 (as amended; hereinafter 'the Act'), wherein 'Invention' is defined.

- Evidently, the product or process shall be new and shall also involve an **inventive step**, in addition to being capable of industrial application.

This begs a question as to why the requirement of '**inventive step**' is stipulated over and above that of novelty, i.e., why the **novelty alone** is not sufficient for a product or process to qualify as an invention (if it's capable of industrial application)?

Rationale Behind Inventive Step

NOVELTY

Ensures that the invention is new and has not been disclosed before.

Why Not Just Novelty?

➔ Novelty alone doesn't guarantee an advancement in the field.
➔ Without inventive step, trivial changes could be patented.

INVENTIVE STEP

-ensures that the invention is not obvious to someone skilled in the field, even if it is novel.

-filters out inventions that are simply minor improvements over existing knowledge.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Rationale Behind Inventive Step

Reasons for Inventive Step Requirement:

1. **Prevention of Trivial Patents:**
   - Without inventive step, trivial combinations could lead to a flood of low-quality patents.
   - Ensures that patents reward only significant technological advancements.

2. **Encouragement of Genuine Innovation:**
   - Inventive step incentivizes inventors to strive for breakthroughs, not just simple adaptations.
   - Fosters technological progress and aligns with public interest.

3. **Avoiding Over-Patenting:**
   - Avoids granting patents that are obvious and could be easily invalidated.
   - Maintains quality and credibility of the patent system.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Defining Inventive Step

Section 2(1)(ja): "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****.*

A product/process must involve:

- ➔ **Technical Advance:** It should contribute to existing knowledge or technology.
- ➔ **Economic Significance:** It should have some economic value or benefit.
- ➔ **Non-Obviousness**: It should not be obvious to a person skilled in the field.

Objective Test: The requirement ensures that inventions are not trivial but represent significant progress.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Defining Inventive Step

The Term “Step” in Inventive Step

- **What Does “Step” Mean?**

➔ The term “step” implies more than just a minor improvement.
➔ It suggests a significant advancement in technology that would not be obvious to someone skilled in the art.

- **The “Gap”:**

➔ The wider the gap between existing knowledge and the invention, the more likely it is to involve an inventive step.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Key Provisions Relating to Inventive Step

- **Section 2(1)(j)**: Defines invention as a new product/process involving an inventive step and capable of industrial application.
- **Section 2(1)(ja)**: Defines inventive step as a feature involving technical advance and economic significance, and not obvious to a person skilled in the art.
- **Section 25(1)(e):** Allows for pre-grant opposition on the grounds of obviousness and lack of inventive step.
- **Section 25(2)(e):** Provides grounds for post-grant opposition for similar reasons.
- **Section 64(1)(f):** Provides grounds for revocation of patents based on obviousness and lack of inventive step.

Other National Laws

- **PCT (Article 33(3)):**
  An invention involves an inventive step if, in light of prior art, it is not obvious to a person skilled in the art at the relevant date.

- **European Patent Convention (Article 56):**
  An invention involves an inventive step if, considering the state of the art, it is not obvious to a person skilled in the art.

- **UK Patents Act 1977 (Section 3):**
  An invention involves an inventive step if it is not obvious to a person skilled in the art, considering any matter in the state of the art.

- **Australian Patents Act 1990 (Section 7(2)):**
  An invention involves an inventive step if it is not obvious to a person skilled in the relevant art, considering prior art and common general knowledge before the priority date.

- **USA's America Invents Act 2011 (Section 103):**
  A claimed invention cannot be patented if the differences from prior art would make it obvious to a person skilled in the art before the effective filing date.

summarizing conditions of Inventive step

1. technical advance as compared to the existing knowledge

or

2. having economic significance

or

BOTH 1 and 2

a n d

3. that makes the invention not *obvious* to a *person skilled in the art*

Key Components of Inventive Step

1. **A Feature of an Invention**: What constitutes a distinct characteristic of the invention.
2. **Existing Knowledge:** The body of prior art or knowledge available at the time of the invention.
3. **Technical Advance:** The degree to which the invention represents a progression in technology.
4. **Economic Significance:** The potential economic impact or value of the invention.
5. **Person Skilled in the Art (PSITA):** A hypothetical person who is a skilled practitioner in the relevant field.
6. **Not Obvious (Obviousness):** The invention should not be easily derived or deduced by someone skilled in the art based on existing knowledge.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Feature of an Invention

Definition: The term 'Feature of an Invention' in patent claims refers to specific, identifiable characteristics that make up the novel or inventive aspect of the invention. It essentially defines the key components distinguishing the invention from existing technologies.

Purpose: This characteristic is essential for the invention to function as described and to distinguish it from prior technologies.

Common Terms Across Jurisdictions:

- **Element**: More commonly used across jurisdictions.
- **Technical Feature**: Used in European Patent Convention (EPC).
- **Limitation**: Used in U.S. patent law and practice.

Structural Elements: Defined by what they are (e.g., "a screw," "a DVD").
Functional Elements: Defined by what they do (e.g., "a fastening means," "an oxidizing agent").
Relational Elements: Defined by relationships (e.g., "attached," "connected").
Intentional Elements: Defined by purpose (e.g., "for coagulation," "for treating cancer").
Parametric Elements: Defined by measurable properties (e.g., flexural strength, resistance).
Activity Elements: Defined by actions or steps (e.g., "fixing," "reading").

Existing Knowledge

Context: As per Section 2(1)(ja), for an invention to involve an inventive step, it must involve technical advance compared to the existing knowledge.

Existing Knowledge: Refers to all publicly available knowledge before the filing date of a patent application, including:

- ➔ **Published Works:** Books, articles, patents.
- ➔ **Public Disclosures:** Conferences, seminars, online platforms.
- ➔ **Prior Art:** Existing inventions publicly disclosed before the application.

State of the Art and Existing Knowledge

State of the Art: A broad term encompassing all publicly available knowledge before the filing date.

- ➔ Includes written, oral, and usage-based disclosures.
- ➔ No restrictions on language or publication date.

Example: The UK Patents Act clarifies that state of the art includes anything made publicly available (e.g., written or oral description, use, or any other way).

Technical Advance

Requirement for Inventive Step: The feature must demonstrate a technical advance over existing knowledge.

Indian Patent Law defines inventive step as a two-step process:

1. Technical Advance: Over existing knowledge.
2. Non-Obviousness: To a person skilled in the art.

Comparison with Other Jurisdictions: Other jurisdictions primarily focus on "non-obviousness," while India uniquely includes technical advance as a precursor.

Technical Advance

In European and UK patent law, a technical contribution is an initial analysis before assessing obviousness.

- **Technical Contribution**: The invention must solve an objective technical problem.

Jurisdictional Examples:

EPC and UK: The invention must contribute to the technical field before obviousness is considered.

German Law defines technical advance as a means to show superiority, provide new solutions, or satisfy a previously unaddressed need.

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GEOGRAPHICAL INDICATIONS

Technical Advance

AgrEvo Case (1995 judgment of the Technical Board of Appeals under the European Patent Convention (EPC)):

Established the 'technical contribution' test for inventive step analysis.

Steps in Analysis:

1. **Identify Technical Contribution**: Does the invention solve a technical problem?
2. **Scope of the Claim**: Does the invention's entire scope contribute technically?
3. **Problem and Solution**: Can the problem and solution be identified from the filed application?

'Anthradipyrazol' (1970 judgment of the German Federal Supreme Court):

According to this judgment, 'technical advance" typically covers:

(i) Showing superiority to what was previously known;

(ii) Providing new means to achieve something that has already been achieved in prior art where there is need for such further means;

(iii) Providing something entirely new with nothing comparable in prior art, such as opening up completely new paths for technology, opening a new area, solving a problem for the first time, or satisfying, for the first time, a previously unconsidered need.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Economic Significance

Context: Economic significance is indirectly considered in many jurisdictions under secondary indicators of inventive step.

Examples:

EPO Guidelines: Commercial success coupled with long-felt need can indicate inventive step.

USPTO: Commercial success can be considered as part of the secondary indicators of non-obviousness.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Economic Significance

Examples of Secondary Indicators:

- **Commercial Success:** Evidence of success linked to technical features.
- **Long-Felt Need:** Addressing a problem that had been unsolved for a long time.
- **Failure of Others:** showing that others failed in solving the same problem.
- **Unexpected Technical Effect:** Demonstrating results not predictable from prior art.

Economic Significance Often relates to reducing manufacturing costs, improving efficiency, and creating savings in raw materials.

Person Skilled In The Art (PSITA)

Under Section 2(1)(ja) of the Patents Act, the definition of ‘inventive step’ is closely tied to whether the invention is obvious to a Person Skilled in the Art (PSITA) and is crucial in determining if the inventive step of an invention is truly novel or obvious.

Definition: A Person Skilled in the Art (PSITA) is typically assumed to possess common general knowledge and is competent in the relevant field of technology or industry.

Key Characteristics:

- **Knowledge**, **Skills** and **Awareness**: The person skilled in the art is presumed to be a skilled practitioner in the relevant field. He is aware of what was common general knowledge in the art on the relevant date.He should also be presumed to have had access to everything in the state of the art and to have had at his disposal the normal means and capacity for routine work experimentation. He is involved in constant development in his technical field. He may be expected to look for suggestions in neighbouring and general technical fields or even in remote technical fields if prompted to do so.

PSITA as Defined by Courts

BISWANATH PRASAD RADHEY SHYAM Vs. HINDUSTAN METAL INDUSTRIES (1978):

Test: Would a skilled craftsman or engineer, with common general knowledge at the time, be able to work upon the prior art document to achieve the desired result?

Focus on PSITA as a skilled worker in the field concerned in the state of knowledge existing at the date of the patent.

Key Insight: Understanding the ‘state of knowledge’ at the time of invention is essential in evaluating the inventive step.

PSITA as Defined by Courts

Roche v Cipla (2012)

Normal Meaning: A skilled person in the art possesses the necessary knowledge and skills related to the particular field of art.

Evaluation: Could the skilled person apply prior art to achieve the invention, absent knowledge of the patented invention?

Key Insight: The skilled person should be capable of achieving the same result in the workshop using prior art, and the focus is on practical knowledge and skill.

PSITA as Defined by Courts

Roche v Cipla (2015): Further Clarification

PSITA Characteristics:

- A person who practices in the relevant field or industry.
- Possess average knowledge and ability.
- Aware of common general knowledge at the relevant time.

Obviousness Test: The first step is identifying the PSITA and their knowledge and skills before determining whether an invention is obvious or not.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

PSITA as Defined by Courts

Rhodia Operations v. Assistant Controller (2024)

Madras High Court Analysis:

The court provided a detailed exploration of the PSITA concept.

This case offers insights into how PSITA is considered in determining inventive steps in patent disputes.

Key Points:

The PSITA has a combination of practical skills, average technical knowledge, and awareness of existing literature.

The decision reinforced the importance of considering the context of knowledge at the time of filing.

Summary

Key Takeaways

PSITA is a Fictional Standard: The PSITA standard is used to assess inventive step and obviousness.

Characteristics of PSITA:

- practical knowledge and skills in the field.
- Awareness of the state of the art at the relevant date.
- Ability to apply existing knowledge to solve technical problems.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Conclusion

- **Competence:** PSITA is a skilled craftsman or engineer, not just a mere artisan, with common general knowledge at the priority date.

- **Capabilities**: PSITA is capable of reading prior art and proceeding with research using their knowledge of the state of the art without needing step-by-step guidance. They possess more than average knowledge and common sense but lack inventive ingenuity.

- **Attributes**: PSITA practices in the relevant field, belongs to the same industry, and is aware of the common general knowledge at the time. PSITA's skill level is above average, and they possess the necessary qualifications and experience.

- **Global Scope:** PSITA can be based anywhere, including India.

- **Mindful of Hindsight**: PSITA avoids hindsight-based mosaicing and should possess practical skills, imagination (but not inventiveness), and the qualities of a proficient person in the field.
- Team-Based Approach: In multidisciplinary cases, PSITA could be a team rather than an individual.

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GEOGRAPHICAL INDICATIONS

Common General Knowledge (CGK)

What is Common General Knowledge (CGK)?

- Critical concept in determining if an invention is obvious.
- Knowledge attributed to those skilled in a particular field.
- Helps assess whether a feature of an invention is obvious.
- Understanding CGK is key to evaluating inventive step.

Common General Knowledge (CGK)

Accessing Patent Applications Based on CGK

- Patent applications must be assessed based on CGK, not just prior documents.
- CGK should be attributed to a skilled person in the field.
- Every skilled person should possess CGK before tackling the problem the patent addresses.

(ENERCON v/s ALLOYS Wobben [dated 03 dec 2010])

- Knowledge is known and accepted without question by professionals in the field.
- Validates the inventive step.
- CGK can invalidate a patent if it was known before the patent's filing date.
- Knowledge is not necessarily found in specific documents.

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GEOGRAPHICAL INDICATIONS

Common General Knowledge (CGK)

Establishing What Constitutes CGK | Proof of CGK | Evidence and Sources for CGK

Proving CGK: The Need for Evidence

- CGK must be proven, not just asserted.
- Case: AGFA NV v/s Assistant Controller (02 June 2023).
- Reference to Terrell on Law of Patents for establishing proof of CGK.

How to Prove CGK

- Witnesses: Competent witnesses can testify on CGK.
- Sources: standard works, textbooks, research articles published at the time.
- Prior publications (e.g., patents) may provide prima facie evidence.
- Evidence must substantiate that a theory or knowledge was known to all skilled persons.

Sources to Establish CGK

- Textbooks, research articles, and standard documents.
- Case Insight: Evidence may show that statements became common knowledge over time.
- Substantial evidence is needed to prove CGK before a patent application's priority date.

CGK across jurisdictions

EPO Examination Guidelines

Sources:

- Handbooks, monographs, encyclopedias, textbooks, and reference books
- Expected knowledge for an experienced person in the field

Characteristics:

- Not reliant on specific document dates
- Can come from various sources

Exclusions:

- Patent literature and scientific articles are generally not considered, except when consistently showing a technique as common knowledge

Databases:

- Adequate source for unambiguous, accessible information without undue burden

UKIPO's Manual of Patent Practice

Central Importance:

- Key to the role of the skilled person in interpreting patents and prior art

Summary:

- Part of the mental toolkit for competence in the art

Industry Standards:

- May be considered part of common general knowledge, even if complex
- Skilled person knows where to find relevant information

CGK across jurisdictions

Australian Patent Manual of Practice and Procedure

Definition:

- Knowledge that every worker in the art is expected to have as part of their technical background

Sources:

- Combination of training, experience, observation, and reading

Canadian Manual of Patent Office Practice

Definition:

- Knowledge widely recognized by skilled persons in the field at the relevant time

Evolution:

- Knowledge undergoes continuous growth

Distinction:

- Common general knowledge vs. publicly available information

Establishment:

- Citing reference works or demonstrating commonality from multiple disclosures

Illustrative Examples for PSITA and CGK

Invention 1: A new drug formulation.

PSITA: A pharmaceutical chemist with several years of experience in drug formulation. This individual has knowledge of active pharmaceutical ingredients (APIs), excipients, and standard methods for creating stable formulations.

CGK:

- Basics of drug formulation and pharmacokinetics.
- Properties and uses of commonly available excipients.
- Techniques like tablet compression, coating, and encapsulation.
- Standard stability testing methods.
- Regulatory guidelines, such as those from the FDA or EMA.

Invention 2: An improved bicycle gear-shifting mechanism.

PSITA: A mechanical engineer with experience in designing and testing bicycle components. This individual understands gear ratios, materials engineering, and standard manufacturing techniques for mechanical assemblies

CGK:

- Principles of gear mechanics and materials science.
- Standard manufacturing techniques like forging, machining, and welding.
- Knowledge of lubricants and their effects on mechanical systems.
- Industry standards for bicycles (e.g., ISO or ASTM standards).

Invention 3: An improved circuit design for a low-power LED driver.

PSITA: An electrical engineer specializing in circuit design, particularly in LED technology, power management, and energy efficiency.

CGK:

- Ohm's Law, Kirchhoff's Laws, and basic circuit analysis.
- Standard circuit components (resistors, capacitors, transistors).
- Techniques for designing energy-efficient circuits.
- Characteristics of LEDs and their power requirements

Illustrative Examples for PSITA and CGK

Invention 4: An energy-efficient hybrid vehicle drivetrain.

PSITA: An automotive engineer with knowledge of hybrid propulsion systems, including mechanical, electrical, and software integration for vehicles.

CGK:

- Basics of internal combustion engines and electric motors.
- Standard drivetrain configurations and hybrid architectures (e.g., parallel, series).
- Knowledge of battery technologies, such as lithium-ion and nickel-metal hydride.
- Standards for vehicle emissions and efficiency (e.g., EPA or EU regulations).

Invention 5: An Online Profile Matching System.

PSITA: A software developer or computer science student with basic knowledge of databases and simple algorithms knowing how to store user data (e.g., hobbies) and compare it using basic programming techniques.

CGK:

- Storing data in a database (e.g., a table with user IDs and hobbies).
- Using loops and conditional statements to compare hobbies between users.
- Basic understanding of user profiles and how they are structured on social media platforms.

Invention 6: A Transaction System at a POS.

PSITA: A software developer or computer science student with basic knowledge of POS systems and simple programming, knowing how to scan items, calculate totals, and apply discounts programmatically.

CGK:

- Storing data in a database (e.g., a table with useditems, accounts, details, and discounts).
- Using data processing for item details.
- Basic understanding coding mathematical calculations.

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GEOGRAPHICAL INDICATIONS

Obviousness

Ordinary Meaning of "Obvious":

- "Does not go beyond the normal progress of technology."
- Follows logically from prior art without any extraordinary skill.

Legal Perspective:

- General Tire & Rubber Co. v. Firestone Tyre: "**Very plain**" from the dictionary meaning.
- Courts avoid strict definitions and methods; no rigid formula.

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GEOGRAPHICAL INDICATIONS

Obviousness

Legal Precedent on Obviousness

- **Indian Supreme Court Judgment:**

  a) Biswanath Prasad v. Hindustan Metal Industries (1982).
  b) Obviousness is a **mixed question of fact and law.**
  c) Must be judged objectively and strictly.

- **Key Insight:** It is impossible to create a one-size-fits-all formula.

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GEOGRAPHICAL INDICATIONS

Obviousness

Haberman's Questions

A number of issues should be considered in determining whether a development is obvious or not. In Haberman v. Jackel [1999] FSR 683 (at 699 to 701), Laddie J considered the following non-exhaustive list of relevant questions, some of which may not be answerable before grant or without evidence:

- What was the problem which the patented development addressed?
- How long had that problem existed?
- How significant was the problem seen to be?
- How widely known was the problem and how many were likely to be seeking a solution?
- What prior art would have been likely to be known to all or most of those who would have been expected to be involved in finding a solution?
- What other solutions were put forward in the period leading up to the publication of the patentee's development?
- To what extent were there factors which would have held back the exploitation of the solution even if it was technically obvious?
- How well had the patentee's development been received?
- To what extent could it be shown that the whole or much of the commercial success was due to the technical merits of the development?

Several approaches or tests have been formulated by various jurisdictions for assessing the obviousness of features of a patent's claims. Though they are not foolproof for all the cases, nor are they absolutely necessary, in the sense that, whether some feature is obvious or not, can also be established without resorting to any of such approaches or tests.

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GEOGRAPHICAL INDICATIONS

Various approaches to assess obviousness

1. Windsurfing/Pozzoli Test (from UK) [aka 5-step test]:

Origin:

- Initially proposed in Windsurfing International Inc. v. Tabur Marine (1984).
- Refined in Pozzoli SpA v. BDMO SA & Anr (2007).

Purpose: To determine if an invention is obvious by examining the inventive step.

Importance: Cited in the Indian Patent Office's Manual of Patent Office Practice and Procedure (2019).

The 4-Step Process (Windsurfing/Pozzoli Test)

1. **Identify the "person skilled in the art" (PSITA)**
   - Who is the competent craftsman or engineer?
   - Distinction between skilled and a mere artisan.
2. **Identify the relevant common general knowledge of the person**
   What knowledge was available to PSITA at the priority date?
3. **Identify the inventive concept**
   - What is the inventive idea of the claim?
   - Dissecting the claims to extract the inventive feature.
4. **Obviousness assessment**
   Would the differences be obvious to PSITA or require inventive steps?

Various approaches to assess obviousness

2. Problem-Solution Approach:

In the problem-solution approach, there are three main stages:

(i) determining the "closest prior art",

(ii) establishing the "objective technical problem" to be solved, and

(iii) considering whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person [aka **Could-Would approach**]

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GEOGRAPHICAL INDICATIONS

Problem-Solution Approach

(i) determining the Closest Prior Art

PSITA: An automotive engineer with knowledge of hybrid propulsion systems, including mechanical, electrical, and software integration for vehicles.

Key Factors:

- Similar purpose or effect.
- Belongs to the same or closely related technical field.
- It requires minimal modifications to arrive at the claimed invention.

Assessment Criteria: Must be viewed from the skilled person's point of view before the filing or priority date of the claimed invention.

(ii) establishing the "objective technical problem" to be solved

Definition: The objective technical problem is the task of modifying the closest prior art to achieve the technical effects of the invention.

Steps:

- Study the application and prior art.
- Identify the "distinguishing features" (the difference between the claimed invention and the closest prior art).
- Determine the technical effect of those features.

Objective Problem: It may differ from the applicant's presented problem and is based on objective facts from prior art.

(iii) considering whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person *[The Could-Would Approach]*

Definition: The key question is whether the skilled person would have been prompted to modify the closest prior art based on the prior art's teachings.

Key Considerations:

- Could the skilled person have modified the closest prior art?
- Would the skilled person have had motivation or incentive to modify the prior art, expecting improvement or advantage?

Conclusion: If the skilled person would have made the modification, the invention is obvious.

gman

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GEOGRAPHICAL INDICATIONS

Problem-Solution Approach

Example 1: Water Bottle with Integrated Filter

Step 1: Determining the Closest Prior Art:

- Closest prior art: A water bottle with a built-in filter that purifies water before consumption.

Step 2: Establishing the Objective Technical Problem:

- Problem: How to purify water as it is consumed, ensuring immediate safety.

Step 3: Considering the Inventive Step:

- Would it have been obvious for someone skilled to modify the prior art to purify water during consumption?
- If the solution isn't obvious, the invention involves an inventive step.

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GEOGRAPHICAL INDICATIONS

Problem-Solution Approach

Example 2: Self-Heating Coffee Mug

Step 1: Determine the Closest Prior Art

- Closest prior art: A conventional insulated coffee mug that only slows down the cooling process.

Step 2: Establish the Objective Technical Problem:

- Problem: How to maintain an optimal beverage temperature for extended periods.

Step 3: Examining the Proposed Solution:

- Solution: A mug with an integrated heating element powered by a rechargeable battery.

Step 4: Assessing Inventive Step:

- Would a skilled person have combined an insulated mug with a heating element?
- Non-obvious because the design requires careful considerations like portability, safety, and battery placement.

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GEOGRAPHICAL INDICATIONS

Teaching Suggestion Motivation (TSM) and Graham Factors

What is the TSM Test?

Concept:
- The test evaluates if the prior art teaches, suggests, or motivates an inventor to combine known elements.

Key Question:
- Did prior art motivate or teach a person of ordinary skill to create the invention?

Origin:
- Developed by the US Court of Customs and Patent Appeals around the 1850s.
- Originated from the Application of Douglas H. Moreton case.

Purpose:
- Prevent **hindsight** in patent evaluations.
- Assesses whether prior art suggests or motivates an inventor to combine elements.

Application:
- If no suggestion or teaching exists in prior art, the patent can meet the inventive step criterion.

Teaching Suggestion Motivation (TSM) and Graham Factors

Graham Factors Overview

Key Case:

- Graham v. John Deere Co., 1966 (U.S. Supreme Court)
- Provides the framework for determining obviousness in patent law.

Focus:

- Objective analysis of whether an invention is obvious or not.
- Considers both factual inquiries and secondary considerations.

The Three Graham Factors

(A) Scope and Content of the Prior Art

- What prior knowledge exists about the technology?
- Understanding the extent of what has already been done.

(B) Differences Between Claimed Invention and Prior Art

- What distinguishes the new invention from prior art?
- Identifying specific innovative aspects.

(C) Level of Ordinary Skill in the Pertinent Art

- What would someone skilled in the field know at the time of invention?
- A standard of skill is needed to assess the obviousness.

Secondary Considerations

Secondary Considerations (Objective Evidence)

Importance:

- Secondary considerations can influence the obviousness determination.

Examples of Secondary Considerations:

- **Commercial Success**: Has the invention been successful in the market?
- **Long-felt but Unsolved Needs**: Was there a long-standing problem that the invention addresses?
- **Failure of Others**: Did others attempt and fail to solve the same problem?
- **Unexpected Results:** Was the outcome of the invention surprising or unanticipated?

Evaluation:

- The weight of these considerations is case-dependent.
- Evidence does not guarantee a specific outcome regarding obviousness.

Supreme Court Reinforcement (KSR Case, 2007)

KSR International Co. v. Teleflex Inc. (2007)

- Reaffirmed the Graham Factors as the basis for determining obviousness.

Key Point from KSR:

- Obviousness analysis must consider what a person of ordinary skill would have reasonably expected to do with the available knowledge (documentary or common sense).
- The factors must be analyzed in each unique case.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Conclusion: Key Takeaways

TSM Test:

- A tool to evaluate whether prior art motivates an invention.
- Helps avoid hindsight in patent analysis.

Graham Factors:

- Provide the legal structure for determining obviousness.
- Include assessing prior art, differences, and the level of skill in the art.

Objective Evidence:

- Secondary considerations like the commercial success or failure of others can influence the obviousness determination.

KSR Ruling:

- Reinforced the application of the Graham Factors with consideration for what an ordinary skilled person would have reasonably known.

Office Circular

It has been noticed that, while assessing the "inventive step" requirement (which is also known as "non-obviousness" under some circumstances) as per Section 2(1)(ja) of the Patents Act, 1970, the concept of "a person of ordinary skill in the art" has been used by some of the Examiners and Controllers of Patents and Designs instead of the concept of "a person skilled in the art" as clearly obligated under Section 2(1)(ja) of the Patents Act. It is therefore, directed to strictly follow the concept of "a person skilled in the art" as per above said provision of the Patents Act while investigating and deciding the patent applications by the Examiners and Controllers, respectively.

It has been further noticed that the concept of "Teaching, Suggestion and Motivation" has been used by some of the Examiners and Controllers to examine and decide the inventive step requirement, which is not as per the provisions of Indian Patents Act. Therefore, the assessment of inventive step should be strictly made as per definition of inventive step provided in Indian Patents Act.

In this regard, attention of the Examiners and Controllers is also invited towards various guidelines issued by this office from time to time and to the manual of patent practice and procedures, wherein the concept of inventive step vis-à-vis a person skilled in the art as per Section 2(1)(ja) of the Act is clearly dealt with reference to illustrative examples. Therefore, all the Examiners and Controllers should strictly follow the concept of inventive step and person skilled in the art as clearly enshrined in the Patents Act and no deviation shall be made in the practice.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Indian Approach (5-step analysis)

Step 1: Identify the Person Skilled in the Art (PSITA)

- A person with competence in the relevant technical field, possessing general knowledge and skills.
- Distinct from an artisan, who may only follow instructions without inventiveness
- It depends on the subject matter of the application and will vary for different technologies or industries.

Step 2: Identify the Relevant Common General Knowledge (CGK)

- The knowledge that the PSITA would have at the priority date, excluding any patent-specific information.
- It helps to determine the baseline of knowledge the skilled person would use.
- Identifying CGK is a factual exercise specific to each case.

Step 3: Identify the Inventive Concept

The specific feature or idea within the claim that leads to its inventiveness.

NOTE:

1. Analyzing the claims to separate the inventive elements from conventional or known ideas.
2. Careful not to misinterpret claims either too broadly or narrowly.

Step 4: Identify Differences with the State of the Art

State of the Art (Prior Art) is the existing knowledge or prior patents that may be relevant to the invention

Identify the gaps:

- How does the invention differ from the prior art?
- Does the prior art teach the same concept or is there a gap in knowledge?

Step 5: Obviousness Assessment

Evaluate the Differences:

- Without assuming knowledge of the invention, are the differences between the prior art and the inventive concept obvious?
- Avoid the influence of hindsight.
- Consider the inventive step required for PSITA to reach the invention.

Key Principle:
Knowledge of the invention must be disregarded in this step to ensure an objective analysis.

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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

Indian Jurisprudence on Inventive Step (self read)

01	Biswanath Prasad Radhey Shyam v. Hindustan Metal Industries	• Supreme Court of India, 13 Dec 1978
02	Enercon (India) Limited v. Aloys Wobben	• IPAB Order No. 123, 2013
03	BRISTOL-MYERS SQUIBB. v. BDR PHARMACEUTICALS	• Delhi High Court, 30 Jan 2020
04	AGRIBOARD v/s DEPUTY CONTROLLER	• Delhi High Court, 31 Mar 2022
05	Avery Dennison v. Controller of Patents	• Delhi High Court, 04 Nov 2022

Miscellaneous Related Terms

1. Teaching Away

Key Points:

- A reference teaches away when it discourages a skilled person from following a suggested path or leads them in a different direction.

- Criteria for combining disclosures:
  1. **Compatibility:** Are the disclosures likely to be combined?
  2. **Technical Fields**: Are the disclosures from similar or remote fields?
  3. **Common Knowledge:** Does the person of skill naturally associate the parts?

- **Text**: As explained by Chisum D. in Chisum on Patents: A Treatise on the Law of Patentability, Validity, and Infringement. New York, pp. 5-130, Vol. II [1978]:

  "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought".

Miscellaneous Related Terms

2. Mosaicing

Key Points:

Mosaicing: Combining unrelated documents is not permissible unless the documents are interlinked or form common knowledge.

Limitations: Multiple documents can only be combined if a skilled person would naturally do so.

- **Text:** In Guangdong OPPO Mobile Telecommunications Corp. Ltd., v. The Controller of Patents and Designs, the Calcutta High Court held:

  "If several prior art documents are to be read in combination, there must be some common thread linking the claim with the Prior art documents obvious to a person skilled in the art. It must be shown that the skilled person when faced with the claim would turn to some other citation to supplement the claim. Otherwise, the combined reading of the prior art documents or mosaicing of the same is impermissible".

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GEOGRAPHICAL INDICATIONS

Miscellaneous Related Terms

3. Hindsight Bias or "Ex post facto" Analysis

Key Points:

- **Hindsight bias**: Be cautious of analyzing an invention with the knowledge of its result.
- **Ex post facto analysis**: The examiner must assess the state of the art before the invention was made, without knowledge of the invention itself.
- **Fair Assessment:** All relevant evidence must be considered to prevent unfair conclusions.

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GEOGRAPHICAL INDICATIONS

CASE STUDY
(to be shown as pdf for convenience)

04 Industrial Applicability

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Understanding the Concept of Industrial Applicability

What Does Industrial Applicability Mean?

- An invention that can be made or used in some kind of industry.
- **Section 2(1)(ac)**: "Capable of industrial application" means an invention is capable of being made or used in an industry.
- The applicant may substantiate the industrial applicability of the invention in the **specification**.

Understanding the Concept of Industrial Applicability

General Principles of Industrial Applicability

- A claimed invention should be industrially applicable (useful).
- It is considered industrially applicable if it can be made or used for exploitation in any field of commercial or economic activity.
- Industrial property, according to **Article 1(3) of the Paris Convention**, applies broadly to industry and commerce, including:

  a) Agriculture
  b) Extractive industries
  c) Manufactured and natural products (e.g., wines, grain, tobacco, cattle, minerals, beer, etc.)

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Understanding the Concept of Industrial Applicability

Indian Practice

- An invention must be capable of being **made or used** in industry to be patentable.

- "Industry" should be broadly understood as **any useful, practical activity** beyond purely intellectual or aesthetic activities.

- The requirement does not necessarily imply the use of a machine or manufacture of an article.

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GEOGRAPHICAL INDICATIONS

Understanding the Concept of Industrial Applicability

Three Essential Conditions for Industrial Applicability To be considered:

1. **Tangible: It can be made.**
2. **Useful: It can be used in at least one field of activity.**
3. **Concrete: It can be reproduced with the same characteristics multiple times.**

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Examples of Non-Industrial Applicability

Cases Where Industrial Applicability is Not Met:

- **Personal or confidential use of a product**
- **Theoretical, interesting compounds without practical use**
- **Mode of administration (e.g., resilience-based methods)**
- **Artisan-made products or techniques**

Examples:

- **Medical treatment methods (e.g., surgical procedures)**
- **Commercially inapplicable inventions (e.g., only for academic research)**
- **Frivolous inventions (e.g., perpetual motion machine, ghost-catcher)**
- **Genetic inventions without clear utility**

Foreign Practices

Industrial Applicability Requirements in USPTO

A claimed invention should have **specific, substantial,** and **credible utility**.

- **Credible Utility**: The assertion must be believable based on evidence and reasoning.
- **Specific Utility**: Should apply to a defined function rather than a general utility.
- **Substantial Utility**: The invention must have a real-world application.

Examples of non-industrially applicable:

- Basic research without practical application
- Methods treating unspecified diseases
- Identifying unknown substances
- Throw-away utilities (e.g., using expensive transgenic mice as snake food)

Foreign Practices

Industrial Applicability Requirements in EPO

- Industrial applicability means “susceptible to industrial application”.
- “Industry” includes practical technical activities, distinguishing from purely aesthetic arts.

Examples of non-industrially applicable:

- Violations of physical laws (e.g., perpetual motion machines)
- Personal use inventions (e.g., contraceptive devices for individual use)
- Gene sequences without disclosed industrial application

Foreign Practices

Industrial Applicability Requirements in JPO/KIPO (Japan & Korea)

- An invention must have a utility described in the specification.
- Special considerations apply to biotech inventions (e.g., genes, vectors, recombinant proteins)

Examples of non-industrially applicable:

- If a biotech invention's utility is not clear from the specification, it fails industrial applicability.

Foreign Practices

Industrial Applicability Requirements in Australia

- **“Manner of manufacture”** and **“usefulness”** overlap significantly with industrial applicability.
- Inventions should offer material advantage and belong to **“useful arts”**

Examples of non-industrially applicable:

- Microorganisms per se without a practical application
- Mere instructions to perform routine work
- Operational methods without technical advancement

Case Law - Human Genome Sciences v Eli Lilly (2011)

- **First Major UK Case on Gene Patents Industrial Applicability**
- A gene, **neutrokine-α,** was identified using data mining but lacked **experimental validation**.
- The UK Patents Court rejected the patent due to lack of industrial applicability.

Case Law - Human Genome Sciences v Eli Lilly (2011)

Key Takeaways from HGS v Eli Lilly

- The invention must have **practical application** and **commercial benefit.**
- A concrete benefit must be evident from the **original description.**
- **Speculative applications are insufficient.**
- The patent should enable skilled persons to **reproduce** the invention without excessive effort.
- A **plausible, credible use** or an **educated guess** can suffice but must be supported later.

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Case Law - Human Genome Sciences v Eli Lilly (2011)

Reasoning:

1) The patent must disclose “a practical application” and “some profitable use” for the claimed substance, so that the ensuing monopoly “can be expected *to lead to+ some … commercial benefit”;
2) A “concrete benefit”, namely the invention’s “use … in industrial practice” must be “derivable directly from the description”, coupled with common general knowledge;
3) A merely “speculative” use will not suffice, so “a vague and speculative indication of possible objectives that might or might not be achievable” will not do;
4) The patent and common general knowledge must enable the skilled person “to reproduce” or “exploit” the claimed invention without “undue burden”, or having to carry out “a research programme”;
5) The patent, when taken with common general knowledge, must demonstrate “a real as opposed to a purely theoretical possibility of exploitation” (T 0604/04, para 15, T 0898/05, paras 6, 22 and 31);
6) Merely identifying the structure of a protein, without attributing to it a “clear role”, or “suggest*ing+” any “practical use” for it, or suggesting “a vague and speculative indication of possible objectives that might be achieved”, is not enough (T 0870/04, paras6-7, 11, and 21; T 0898/05, paras7, 10 and 31);
7) The absence of any experimental or wet lab evidence of activity of the claimed protein is fatal (T 0898/05, paras21 and 31, T 1452/06, para5);
8) A “plausible” or “reasonably credible” claimed use, or an “educated guess”, can suffice (T 1329/04, paras6 and 11, T 0640/04, para 6, T 0898/05, paras 8, 21, 27 and 31, T 1452/06, para6, T 1165/06 para25);
9) Such plausibility can be assisted by being confirmed by “later evidence”, although later evidence on its own will not do (T 1329/04, para12, T 0898/05, para24, T 1452/06, para6, T 1165/06, para25);
10) The requirements of a plausible and specific possibility of exploitation can be at the biochemical, the cellular or the biological level (T 0898/05, paras29-30);

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GEOGRAPHICAL INDICATIONS

Example 1

US 5443036 A

A method for inducing cats to exercise consists of directing a beam of invisible light produced by a hand-held laser apparatus onto the floor or wall or other opaque surface in the vicinity of the cat, then moving the laser so as to cause the bright pattern of light to move in an irregular way fascinating to cats, and to any other animal with a chase instinct.

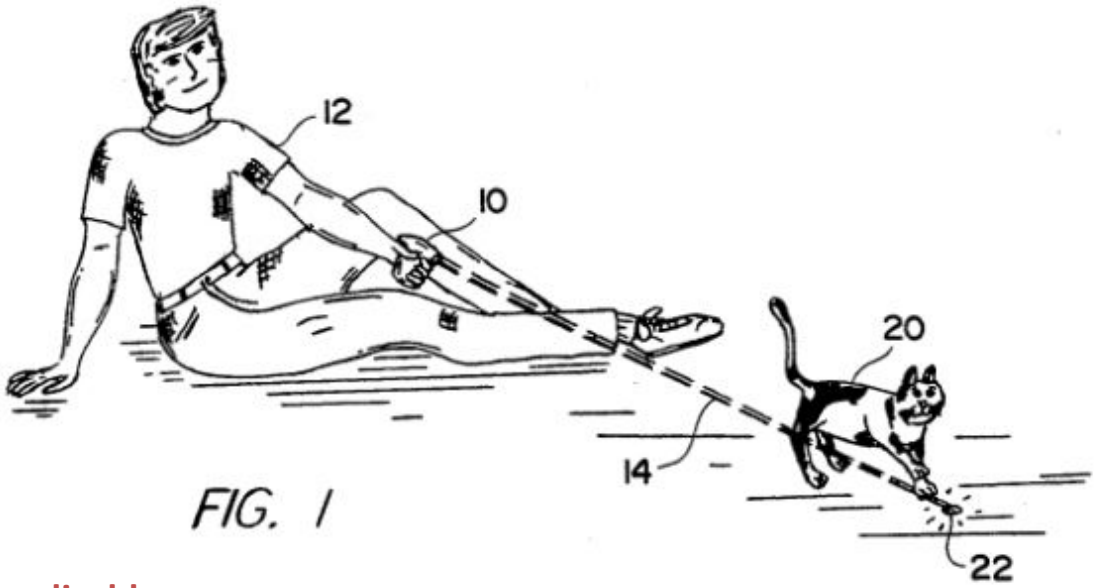

FIG. 1

Not Industrially applicable

Example 2

US 5255452 A

A system for allowing a shoe wearer to lean forwardly beyond his center of gravity by virtue of wearing a specially designed pair of shoes which will engage with a hitch member movably projectable through a stage surface. The shoes have a specially designed heel slot which can be detachably engaged with the hitch member by simply sliding the shoe wearer's foot forward, thereby engaging with the hitch member.

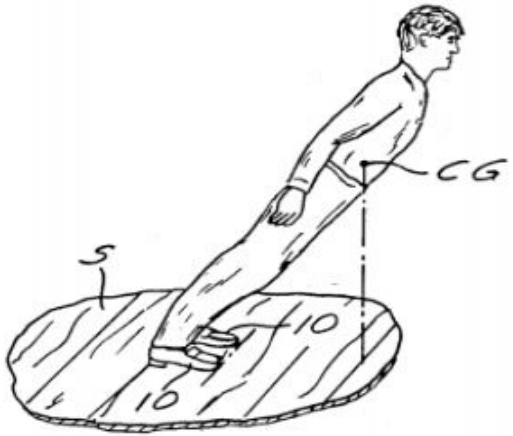

Fig. 6

Fig. 14

Industrially applicable

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Example 3

US20070246939A1: Perpetual motion machine

It is a motor which runs on prepetual motion. It only requires synthetic oil to lubricate metal parts to prevent friction breakdown no Electricity or Fuel required. I, PAUL WAYNE MCDONALD, claim to be the only one who has ever invented a Perpetual Motor to the best of my knowledge.

Not Industrially applicable

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GEOGRAPHICAL INDICATIONS

Conclusion

- Industrial applicability is crucial for patentability.
- Different jurisdictions have **nuanced interpretations**.
- Case law emphasises the need for **practical, non-speculative uses.**
- Inventions must demonstrate **real-world utility**.

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Thank You