



# Technique of Patent Search and Analysis for Agri-innovations

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# Overview About The Talk

- **Different forms of Intellectual Property**
- **Importance of Patent Search**
- **Anatomy of Patent document**
- **Patent Searching tools**
- **Strategies for Patent Search**
- **Steps to be followed for Patent Search**
- **Types of Patent Search reports**
- **Patentability Assessment Report: Insights and Case Study**
- **Patent Landscape Report: Insights and Case Study**
- **Understanding of Freedom to Operate Report**

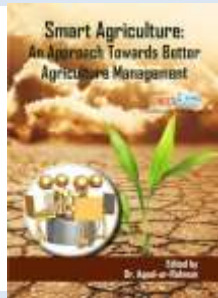
# Different Forms of Intellectual Property



**Trademark:** Service mark with logo and tagline



**Industrial design:** Aesthetic look of machine



**Copyright:** Book explaining approaches for mentioning agriculture management



Intellectual property refers to creation of mind: Inventions, literary & artistic work, symbols, names, images and designs used in commerce



**Protection for plant variety of lime**



**Patent on** method for improving nutritional value of plants



**Geographical indication:** a sign used on agricultural products that have a specific geographical origin

# Background

## What are Patents?

- Types of Intellectual Property
- Exclusive legal rights given to the owner
- Negative right: Excludes others from making, using, or selling an invention
- Limited period rights (20 -Years in most of countries)
- Territorial rights: Governed by particular jurisdiction and enforceable in that jurisdiction
- In exchange for disclosure of the invention to the public
- Subject matter: Process or Method, Machine or apparatus, Article of manufacture  
Improvements of any of the above
- Criteria: **N**ovelty, **U**tility, **N**on-obviousness, **S**ubject matter (NUNs)
- 80% of the technical disclosures are published in Patents

# What Is Prior Art?



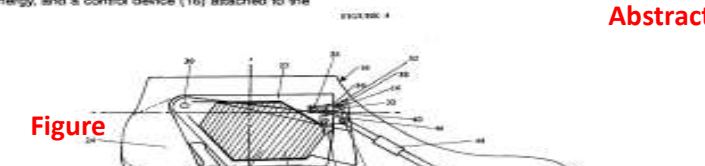
- It refers to scientific and technical information that exists prior to the effective date of a Patent application
- Effective date=Filing date
- Rich in information of cutting-edge technologies
- Can be freely used to support research
- Problem solving approach



# Why to Perform Patent Search?



## Typical Patent document

 Europäisches Patentamt European Patent Office Office européen des brevets		 (11) EP 0 893 111 A1	
(12) <b>EUROPEAN PATENT APPLICATION</b>		<b>Patent number</b>	
(43) <b>Publication date</b> 27.01.1999 Bulletin 1999/04		(51) Int. Cl. <sup>5</sup> A61F 2/66	
(21) Application number: 97305616.1		<b>IPC</b>	
(22) Date of filing: 25.07.1997			
(84) Designated Contracting States: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE		(72) Inventor: May, Denis Ronald William Esher, Surrey KT10 9QG (GB)	
(71) Applicant: May, Denis Ronald William Esher, Surrey KT10 9QG (GB)		(74) Representative: Spencer, Michael David, Dr. et al Bromhead & Co., 19 Buckingham Street London WC2N 9EF (GB)	
<b>Applicant name</b>		<b>Inventor name</b>	
(54) <b>A prosthetic foot</b>			
(57) A prosthetic foot (10) comprising a movable heel mechanism (12), an energy storing means (14) acted on by the movable heel mechanism (12) to store energy, and a control device (16) attached to the		energy storage means (14) and to a release device which enables the stored energy to be released to provide a lift-off force in push-off.	
<b>Figure</b>		<b>Abstract</b>	
			

Description	1	EP 0 893 111 A1	2
Description	<p>The present invention relates to a prosthetic foot for use by amputees.</p> <p>The design of such a prosthetic foot including an ankle presents some of the most difficult problems in the field of prosthetics from the engineering point of view.</p>	5	<p>metres per degree at 7°, rising through 6 newton metres per degree at 9°, to a maximum torque of about 40 newton metres in excess of 12° of movement. Inversion/eversion of the foot is often omitted in ankle designs, but when this is incorporated an angular movement of about <math>\pm 18^\circ</math> is desirable. Again, with a stiffness of about 1.2 newton metres per degree, resulting in a torque output of <math>\pm 20</math> newton metres.</p>

<p><b>Claims</b></p> <p>Claims</p>	<p>13. A prosthetic foot substantially as described herein with reference to and as shown in Figures 4 and 5 of the accompanying drawings.</p>
<p>1. A prosthetic foot comprising a movable heel mech-</p>	



# Patent Fields and Outputs

Fields	Actionable conclusion
<b>Name of assignee</b>	<ul style="list-style-type: none"><li>• Potential partners, customers, licensees, acquisition candidates or organizations who are using the technology, competitor details</li></ul>
<b>Name of inventor</b>	<ul style="list-style-type: none"><li>• Scientist working the invention</li></ul>
<b>Priority date, application date, publication date</b>	<ul style="list-style-type: none"><li>• Date of the first filing from which one year priority period starts</li><li>• Filing trends about the invention</li></ul>
<b>Legal status</b>	<ul style="list-style-type: none"><li>• To know Patent has been granted or not, valid or expired</li></ul>
<b>Protection, filing, designated countries</b>	<ul style="list-style-type: none"><li>• If the application is regional or international, the countries to which the rights may be extended; to know global market</li></ul>
<b>Citation and references</b>	<ul style="list-style-type: none"><li>• References to related technology information uncovered by the applicant or by a Patent examiner during the Patent granting procedure</li></ul>
<b>Description</b>	<ul style="list-style-type: none"><li>• Explanation of known existing technology, explanation about how the invention could be applied to address the problem in prior art, specific embodiments of the new technology</li></ul>
<b>Claims</b>	<ul style="list-style-type: none"><li>• Legal boundary of the invention, unique technical features, supported by description</li></ul>



# Where the Patent Information can be Searched?

## Databases for Patent search

**Free databases (National Patent office)**

[Patentscope](#), [USPTO](#), [ESPACENET](#), [INPASS](#)

**Free databases (private sector)**

[Google patents](#), [Lens.org](#)

**Paid databases**

[Orbit](#), Derwent, [PatBase](#), [PatSeer](#), [STN](#), [SciFinder](#)

**Chemical structures/ Markush structures/ Chemical reaction**

[PubChem](#), [Chemspider](#), [Reaxys](#), [STN](#), [SciFinder](#), [Patentscope](#),  
[SureChEMBL](#)

**Agriculture section:** [Agricola](#)

**Biosequences**

[PubMed](#), [Orbit BioSequence](#), [STNNext](#), [Lens.org](#), [BLAST<sup>®</sup>](#)

**Traditional medicinal knowledge/herbal medicaments**

[Traditional Knowledge Digital Library \(TKDL\)](#)

# Snippets of Patent Information Search Databases

## Search fields

Create a search with your choice of fields and operators (AND, OR, NOT). Need help? Learn [query creation basics](#), or see details for specific fields in the selection menus

**Derwent Innovation**

Claims

styrene or butadiene or S-SBR or diene

+

AND OR NOT

IPC-Any

Look up

(B60C000100) OR (C08L000902) OR (C08L000906)

+

-

AND OR NOT

Title/Abstract/Claims

(tire\* or tyre\*) near75 (wet or slip\* or ice or icy) near (traction or grip\*)

+

-

AND OR NOT

Publication Year

1999

to

2019

+

-

Save as a new template

## Preview or edit query

Edit your query here, or manually enter a search string. Click the Check syntax button to ensure it is correct before you run your search. [Need help?](#)

Create your search query above or type directly into this box

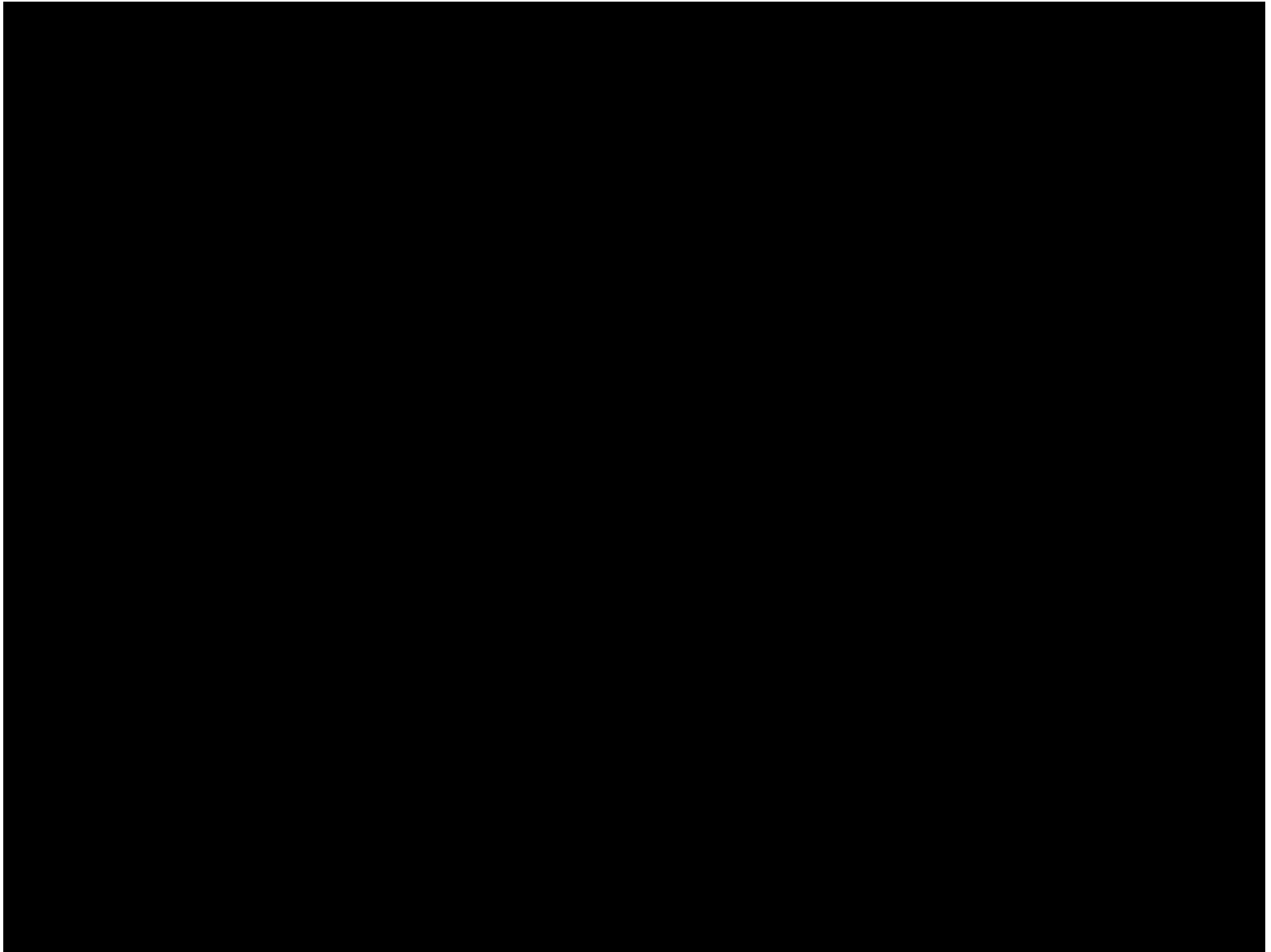
```
(CL=(styrene or butadiene or S-SBR or diene) OR IC=((B60C000100) OR (C08L000902) OR (C08L000906))) AND CTB=((tire* or tyre*) near75 (wet or slip* or ice or icy) near (traction or grip*)) AND PY>=(1999) AND PY<=(2019);
```

Check syntax

Syntax is correct! Click "Search" to run this query.

Clear all Revert Search

# Patent Information Search Database: ESPACENET



# Strategies for Patent Information Search

## Keywords

- Inclusion of synonyms, different representations of words, exclusion of homonyms by operators, truncations, nesting in title abstract , claims and description

## Classifications

- By using standardized classification system followed by Patent examiners for invention belonging same technological groups

## Names

- Assignee, Inventor, Agent, Examiner

## Numbers

- Application number, publication number, priority number, Patent grant no.

## Countries

- Filing country, protection country, designated country, priority application country

## Legal status

- Latest status of Patent /Patent application, rights associated with it like (in force/not, withdrawn, objected, lapsed, revoked), objection filed if any.

## Licensing details

- Licensing interest reported by assignee of Patent

## Citation

- Cited documents (Forward and backward citations), Patent families

# Searching with Keywords: Operators

## AND

- Documents having both the word
- Narrow your results



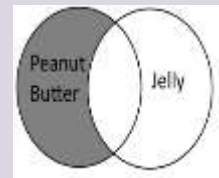
## OR

- Documents having either of the word
- To broaden your search



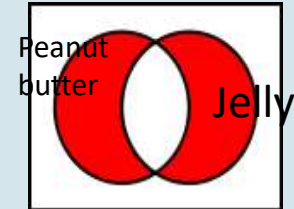
## ANDNOT

- Documents having first word but not second word
- Exclude words from your search



## XOR

- Documents having first word or second word but not both



## Proximity Operators: NEAR/W/ADJ

Used with a numerical to define the maximum distance between the search terms E.g. mouse NEAR<3 trap

the mousetrap is placed at a place where a mouse often runs out, bait for trapping the mouse is placed in the trap body, when the mouse treads on the other side of the seesaw, the seesaw rotates to incline towards the inner side of the trap body, the mouse enters the trap body, and

## Truncations: \*/+:Unlimited

?: Replacing 0 or 1

#: Replacing exactly 1

E.g.. Fung\*= Fung<sup>us</sup>, Fungi, Fungal, Fungicidal, Fungible

Alumin?m=Aluminium, aluminum

Med#cine=Medicine, Medecine

# Searching with Classification codes

- Hierarchical classification system used primarily to classify and search Patent documents according to the technical fields to which they pertain
- International Patent Classification (IPC), Cooperative Patent Classification (CPC), United States Patent Classifications (USPC), European Classifications (ECLA), Japanese Classification Systems (F-Term and F-Index)

US 2002/0029690 A1

(19) United States  
(12) Patent Application Publication (10) Pub. No.: US 2002/0029690 A1  
(43) Pub. Date: Mar. 14, 2002

(54) ELECTROSTATIC PRECIPITATOR (52) U.S. CL. 95/99

(70) Inventors: Russel E. Ridgway, Reynoldsburg, OH (US); John F. Mainieri, Garrettsville, OH (US); John D. Hunz, New Albany, OH (US)

Correspondence Address:  
SAND & NEBOIT  
4001 DRENNER RD., N.W.  
SUITE 104  
CANTON, OH 44718 (US)

(21) Appl. No.: 09/915,799  
(22) Filed: Jul. 26, 2000

Related U.S. Application Data:  
(62) Division of application No. 09/299,536, filed on Apr. 26, 1999.

Publication Classification  
(51) Int. Cl.<sup>7</sup> B01C 1/00

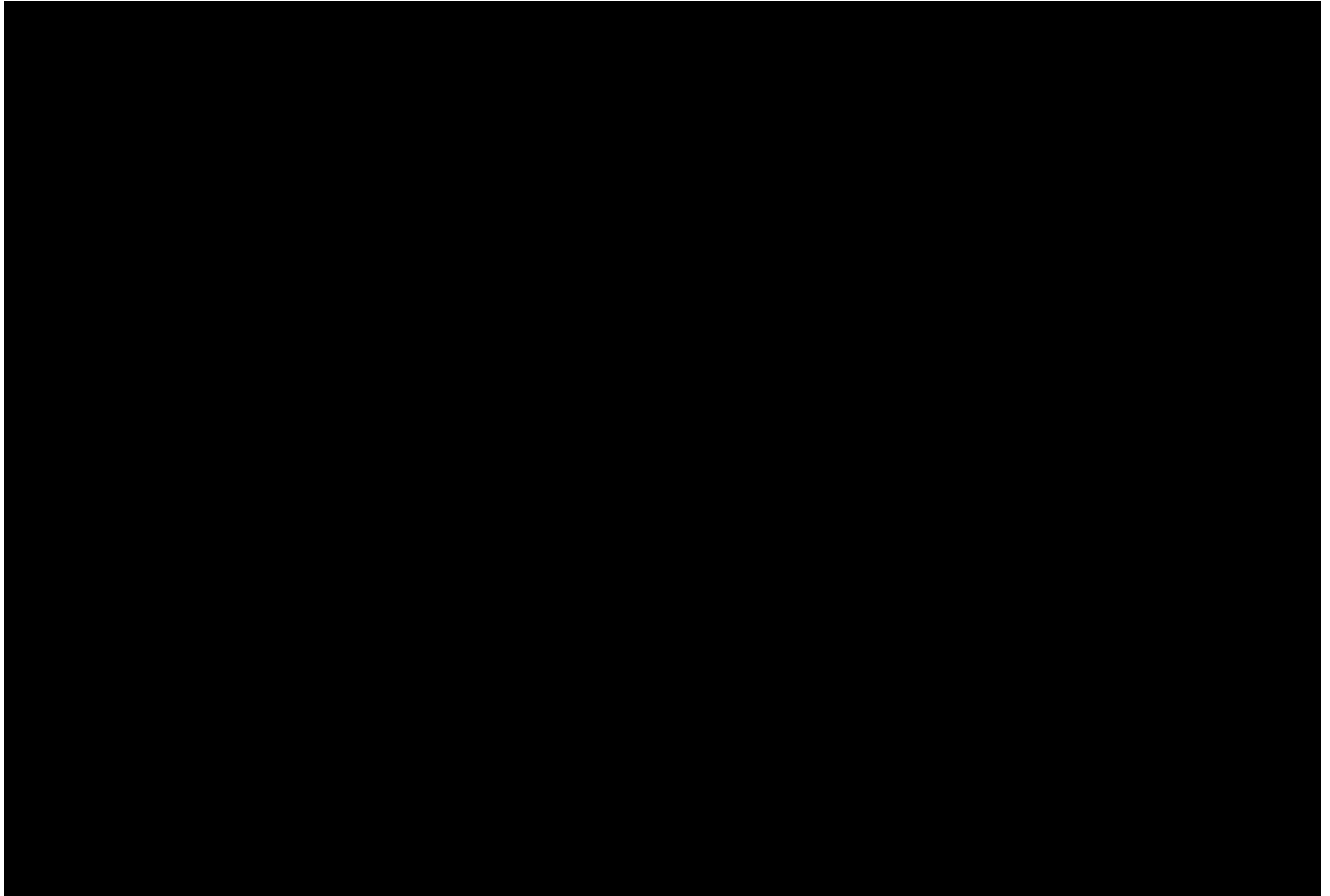
(57) ABSTRACT  
A low density ash particle separation and collection method and device for separating low density particles, primarily fluffy-solid particles with internal and external porosity and thick walled hollow particles, from the overall mixture of higher density particles including raw fly ash as produced by coal fired power plants. Specifically, the invention relates to a device and method for separating and collecting the low density fly ash fraction composed of thick walled hollow fly ash particles and freely generally solid particles with both internal and external porosity and a relatively small amount of uncombusted from the overall mixture of ash particles composed raw ash as produced by coal fired power plants by de-emerging one or more fields of large electrostatic precipitators during electrostatic precipitation of the ash resulting in the dropping out of the lower density particles in the hoppers located below the de-emerged field(s) of the electrostatic precipitators.

A	HUMAN NECESSITIES
B	PERFORMING OPERATIONS; TRANSPORTING
C	CHEMISTRY; METALLURGY
D	TEXTILES; PAPER
E	FIXED CONSTRUCTIONS
F	MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING
G	PHYSICS
H	ELECTRICITY

## International Patent classification (IPC)

IPC Publication		HELP	POORVASHREE JOSHI		
Scheme	RCL	Compilation	Catchwords	Search	
[REDACTED]					
-	A63B 102/00	Application of clubs, bats, rackets or the like to the sporting activity [2015.01]			
	A63B 102/02	• Tennis [2015.01]			
	A63B 102/04	• Badminton [2015.01]			
	A63B 102/06	• Squash [2015.01]			
	A63B 102/08	• Paddle tennis, padel tennis or platform tennis [2015.01]			
	A63B 102/10	• Battledore [2015.01]			
	A63B 102/12	• Hanetsuki [2015.01]			
	A63B 102/14	• Lacrosse [2015.01]			
	A63B 102/16	• Table tennis [2015.01]			
	A63B 102/18	• Baseball, rounders or similar games [2015.01]			
	A63B 102/20	• Cricket [2015.01]			
	A63B 102/22	• Hockey [2015.01]			
	A63B 102/24	• Ice hockey [2015.01]			
	A63B 102/26	• Hurling [2015.01]			
	A63B 102/28	• Bandy [2015.01]			
	A63B 102/30	• Floorball [2015.01]			
	A63B 102/32	• Golf [2015.01]			
	A63B 102/34	• Polo [2015.01]			
	A63B 102/36	• Croquet [2015.01]			
	A63B 102/38	• Gateball [2015.01]			

# How to Search Classification codes on WIPO?





# Steps to be Followed for Patent Search

Determine purpose of search

Deconstruct the Invention :  
keywords, classification codes

Preparation phase

Develop combined search  
strategy by using operators  
and truncations

Perform a search  
using search string

Search phase

Find out relevancy of  
the search results

Analyze and  
Summarize

Compilation of  
report

-search phase

## Features

### Device

Form  
Parts, structure  
How it functions  
The effect it produces

### Process

Sequence of steps

### Combination of devices and process

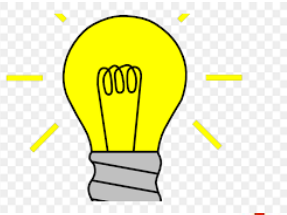
Has an end product  
Does not have an end product

### New chemical substance

New use for a known substance

# Types of Patent Search Reports

## Discovery



New idea



State of art report

Competitor analysis report

Patent landscape report

## Idea screen



Before sharing



Novelty search report

Complete patentability report

Freedom to operate report

## Development



12 months period from provisional to complete filing

## Testing and validation



New Idea



Freedom to operate report

## Product



New Idea



Freedom to operate report

Validity/invalidity report

Infringement analysis report

Patent search report follows the product development journey

# Patent Search Reports: Differentiations

	Patentability assessment report/Novelty search report	Patent Landscape/ State of art search/White space analysis	Freedom to operate Report	Infringement analysis report
<b>Questions solved by</b>	<p>-Is the invention patentable as per law?</p> <p>-Is the invention novel/new with respect to the prior art?</p>	<p>-What all being patented by whom in this domain?</p> <p>-Which technologies exist in a given field?</p> <p>-Who is active in a given field of technology?</p> <p>-What work has previously been done ?</p> <p>-What problems have been discovered ?</p> <p>-how they have been solved?</p> <p>-Are there gaps in patent coverage related to this topic?</p>	<p>-Can product or process be used without infringing upon valid IPRs of others?</p> <p>-Can it be possible to practice knowhow freely in certain region?</p>	<p>-Is any technology infringing claims protected by patent?</p>

# Patent Search Reports: Differentiations

	Patentability assessment report/Novelty search report	Patent Landscape/ State of art search/White space analysis	Freedom to operate Report	Infringement analysis report
<b>Scope of search</b>	Patents (worldwide), publications	Patents (worldwide) – Publications [For whole technical field] , Market documents	Claims of Patents (worldwide)	Claims of Patents (specific country) (last 20 years data only)
<b>Who will be benefited</b>	Researchers and innovators, Product developers, Applicants legal teams	Researchers and innovators Corporate and business developers Public policy makers Human resource teams, legal teams	Researchers and innovators Corporate and business developers	Corporate and business developers
<b>When to do?</b>	Writing a new Patent application	At ideation stage	Before launching a product in market	Before launching a product in market
<b>Search restrictions</b>	Date: Prior to application	No restrictions	Legal status: Inforce patents, country	Legal status: Inforce patents, country

# Patentability clauses of Indian Patent Act (1970): Agriculture sector

- Basic requirement of Patentability (NUNS test): **N**ovelty, **U**tility, **N**on-obviousness, **S**ubject matter

**Patentable subject matter:** Agricultural machinery and implements, microorganisms formulations, biofertilizers, bio-control agents, plants (asexually reproducing), dairy and horticultural product, by-products, enzymes

## **Plant Patent**

**Protection for:** Asexually reproduced plants

**Subject of invention:** Inventive process and product

**Criteria for protection:** NUNS

**Denomination of subject matter:** Not essential

**Term:** 20 years from date of application

**Non-patentable subject matter** (Section 3(h) & 3(j), Indian patent law 1970): Method of agriculture and horticulture, plant /animal as whole or in part thereof other than microorganism , including seeds, varieties, species, essentially biological processes of production/ propagation of plant and animals

## **Plant Variety Protection**

**Protection for:** Sexually reproduced plants including edible tubers

**Subject of invention:** Plant variety

**Criteria for protection:** Novelty and DUS

**Denomination of subject matter:** essential

**Term:** 25 years for trees and vines and 20 years, for other species, from date of grant

# Patentability Search: Case Study

## Invention:

An enzyme preparation for prophylaxis of infections caused by fungi, in particular oomycetes, and bacterial infections in crop and ornamental plants

- an aqueous solution of a single serine protease derived from *Nocardia* sp., and
- one or more adhesive agents and/or one or more wetting agents and/or one or more rain stabilizers and/or one or more UV stabilizers
- pH ranging from 4.0 to 8.0, a concentration ranging from 0.001% to 1%.

	Questel orbit
Keywords	Enzyme preparation, bacteriolytic enzyme, prophylaxis , treatment composition, pathogenic, Adjuvants, preservatives or sterilants, adhesives, Infection, fungal, bacterial, lysis of pathogenic fungi, bactericidal or fungicidal, microbial contamination, serine protease, serine protease variants, subtilisin variants, proteolytic activity, proteinases
Search query	Enzyme OR ((bacteri*) W (enzyme?)) AND (treatment? OR prophylaxis) AND (Bacteric* OR fungic* OR pathogen* ) AND ((serine W (protease? OR variants?)) OR (subtilisin W variant?) OR (proteol* W activity) OR (proteinas*))
Classification Codes	A01P 1/00 , A01P 3/00, A01N 37/46, A01N 63/00, A01N 63/02
Results retrieved	PL:10,NPL: 20
Relevant results	PL:4 (D1: JPS5473182A , D2: : CN103461383A, D3:WO2012151480A2, D4:WO2009052344A2)

# Patentability Opinion: Case Study

Enzyme composition comprising serine protease, glucanase and adjuvant materials such as stabilizer, surfactants etc.

**D1, D2, D3, D4**

an enzyme composition comprising serine protease along with other enzyme or adjunct materials

Enzyme composition derived from the genera Trichoderma and Bacillus for the prophylaxis and therapy of mycoses in fish and invertebrates

**D5**

Use of proteolytic enzyme, papain for inhibiting fungal or bacterial growth

**D6**

**Novelty** : So the subject matter lacks novelty w.r.t D1-D4

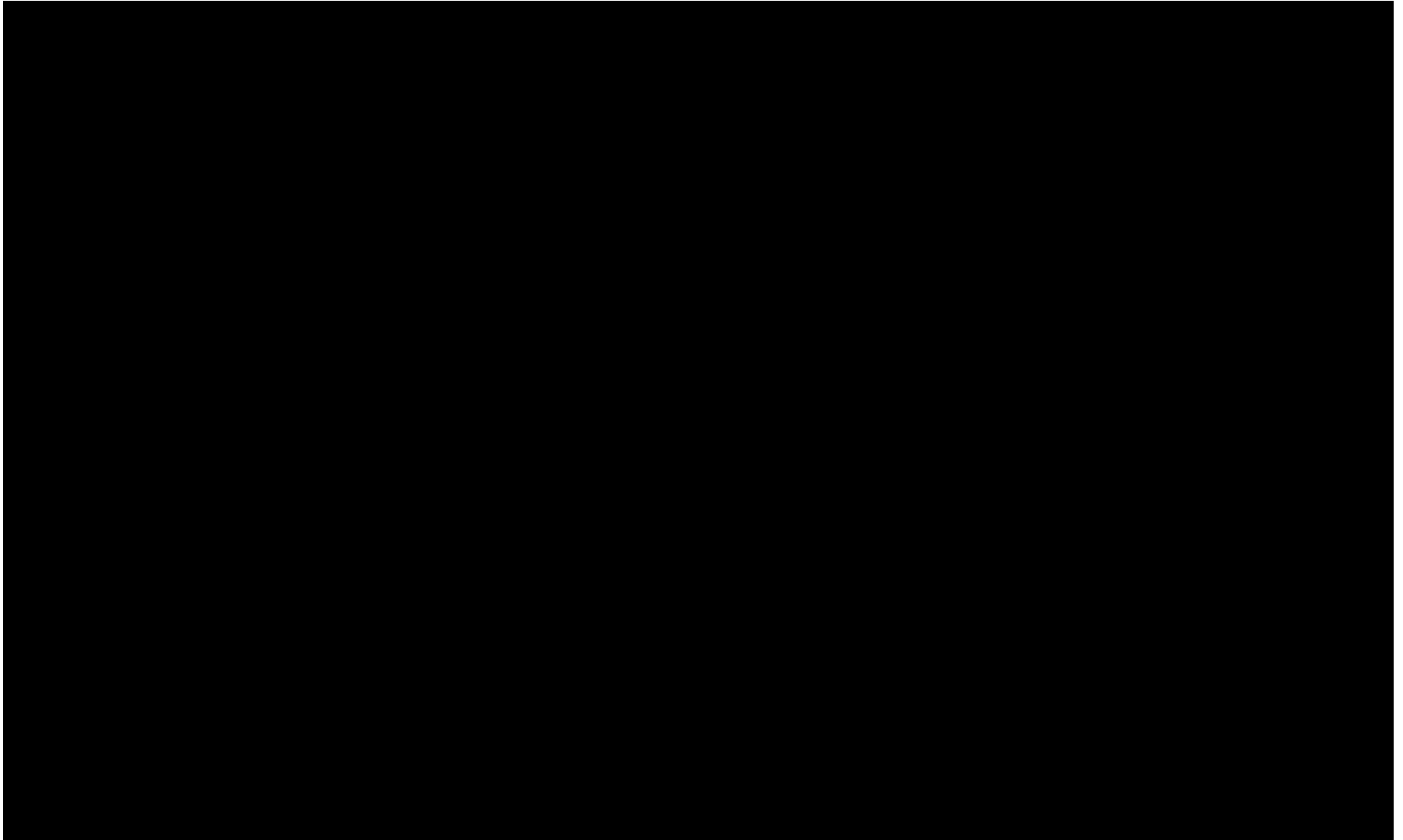
**Non-obviousness**: it would have been obvious for a person skilled in the art to arrive at the alleged invention by combining the disclosures of D1-D6 and common general knowledge regarding specifying particular amount/wt% of the components using routine experimentation

**Non patentable subject matter**: Claims pertains to a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components and without having any demonstrated synergistic effect; hence not allowable u/s 3(e) of The Patents Act, 1970

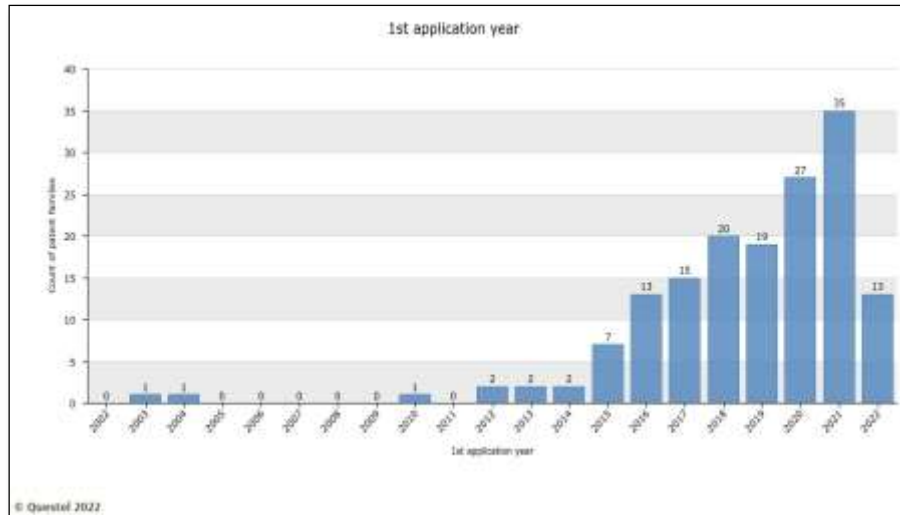


# Patent Landscape Report (PLR): Case Study

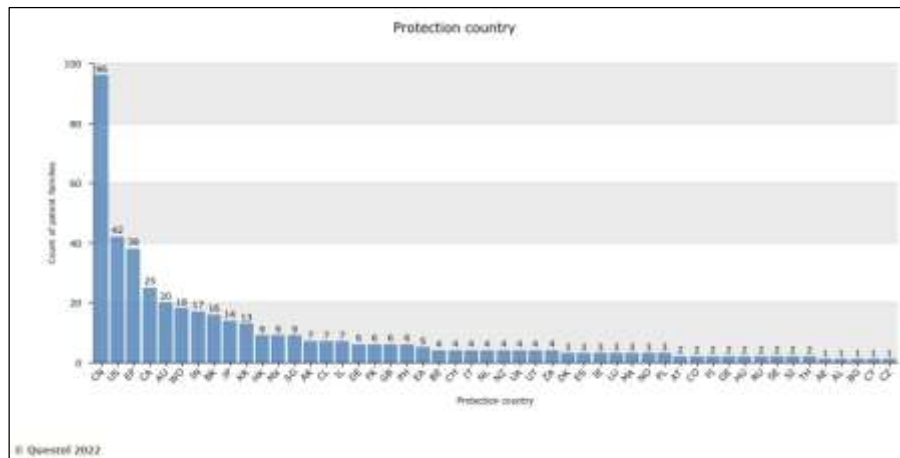
Query: Patent landscape report on “Short Palindromic repeats (CRISPR) technology in Agri-inventions



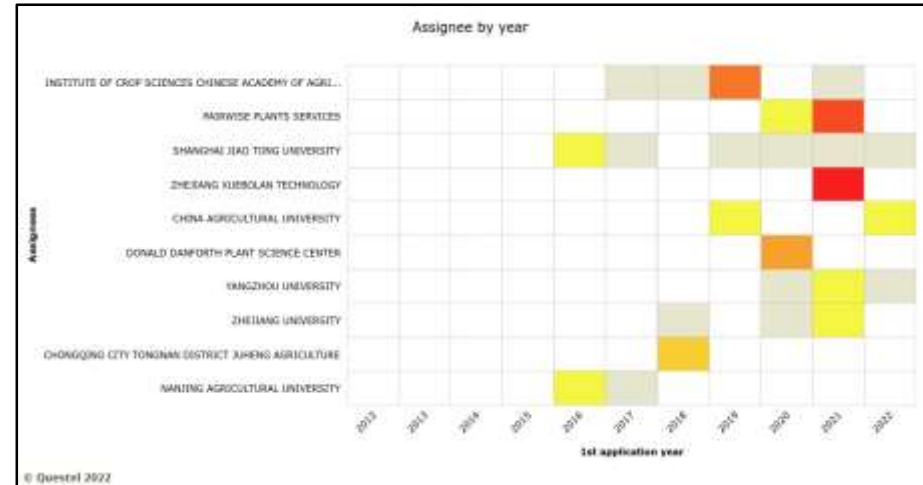
# Patent Landscape Report: Graphical Representations



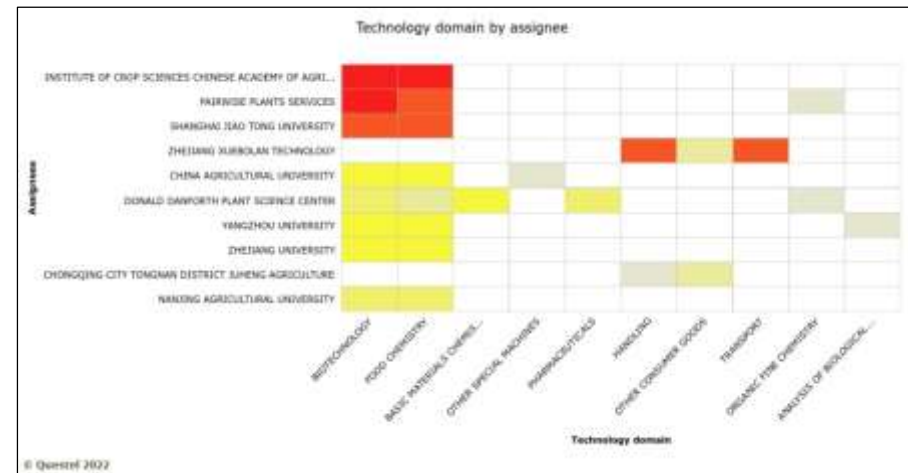
Filing trends for patents in Short Palindromic repeats (CRISPR) technology.



Geographical distribution of patents in CRISPR technology CN, US, EP are the top demanding markets.



Top assignees filing patents on CRISPR technology in agriculture domain.

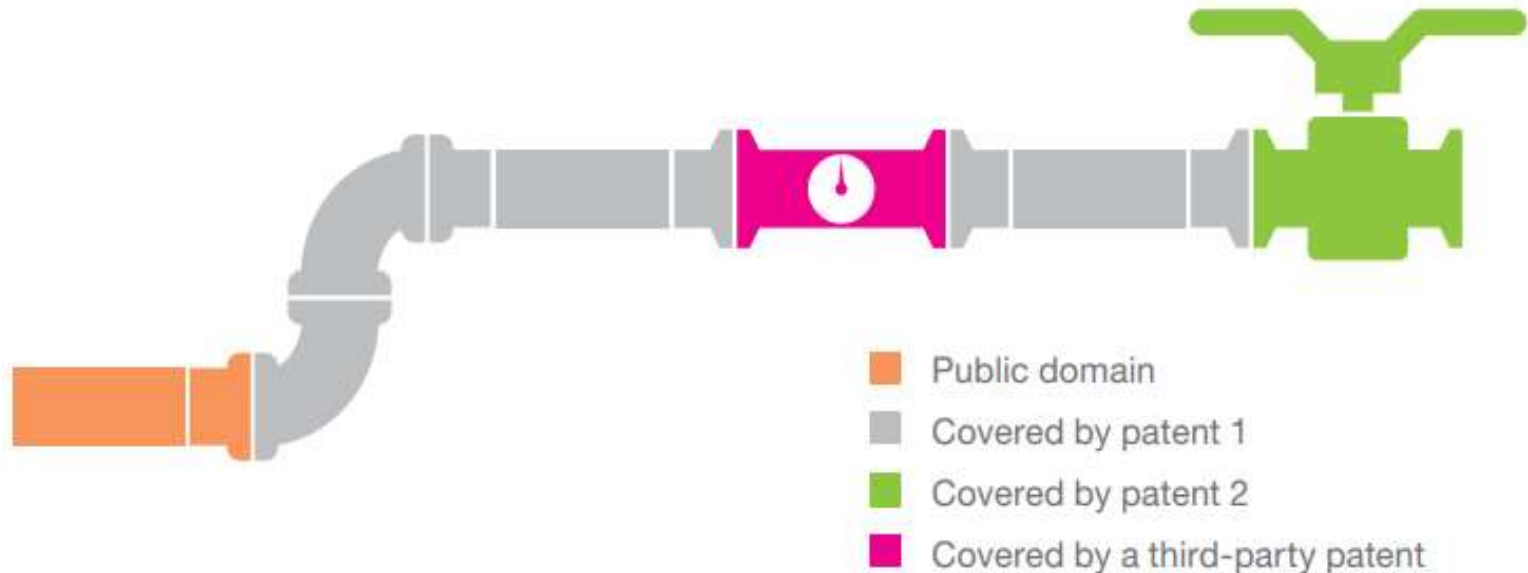


The top technology classification : Biotechnology and food chemistry

# Understanding About FTO

Product A of 7 Sub-components

A Startup wants to produce and sell product A



## Strategies for entry of product A in market:

- To remove the protected valve from the final product
- To adopt a different design (invent around/ design around) that avoids using the Patented valve.
- To buy the Patent or secure a license from the Patent owner to use the valve technology.
- To challenge the validity of the Patent

**Having a Patent  $\neq$  Freedom-To-Operate**

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# Proprietary databases for prior art searching and analytics

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## NEW SERVICE

Access to paid databases

1

**SciFinder**

2

**Questel  
orbit**

3

**Derwent  
Innovation**

# Analytics services provided by TechEx.in



**TechEx.in**  
Tech Transfer Hub at Venture Center

TECHNOLOGY TRANSFER HUB

OPERATED BY



VENTURE CENTER, PUNE,

SUPPORTED BY



THE NATIONAL BIOPHARMA MISSION (GOI)



ignite innovation together

INFORMATION SEARCH  
AND ANALYTICS DESK

SCIENTIFIC AND PATENT  
LITERATURE SEARCH  
AT VENTURE CENTER LIBRARY

DO IT YOURSELF (DIY)

- FOR START-UPS/ FELLOWS IN VENTURE CENTER'S INCUBATION PROGRAMS (RESIDENT PROGRAMMES, AIP, EKLAVYA)
- ONE TIME TRAINING FROM VENTURE CENTER'S SEARCH EXPERT STAFF

TECHEX.IN aims to

- Help technology developers and technology commercialisation entities find each others,
- Forge partnerships
- Advance the technology closer to the market in a win-win partnership.

FOR MORE INFO

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Email at: [poorvashree@ipface.org](mailto:poorvashree@ipface.org)

Visit us at: [www.Techex.in](http://www.Techex.in)

EXPERT SEARCH

- EXPERT RUN SEARCH
- EXPORTATION AND SHORTLISTING OF RELEVANT RESULT SET
- COMPILATION OF REPORT

ANALYTICS DESK

- STATE OF ART SEARCH
- PATENTABILITY ASSESSMENT
- PATENT LANDSCAPE
- WHITE SPACE ANALYSIS
- FREEDOM TO OPERATE
- INFRINGEMENT ASSESSMENT
- CITATION ANALYSIS

TECHEX.IN SUBSCRIBED TO: SCIFINDER, DERWENT INNOVATION, QUESTEL ORBIT

## Failing to conduct prior art search



# Thank You





# Forms of prior art

- **What is prior art?**

Information available prior to the effective date i.e. filing date of the any IP





# Anatomy of patent document

## Typical patent document

**United States Patent**  
Asgerlason et al.

**Patent No.:** US 8,177,855 B2  
**Date of Patent:** May 15, 2012

**Title of invention**  
**(54) PROSTHETIC FOOT**

**Inventor name**  
**(71) Inventors:** Sigurdur Asgerlason, Clarkham (USA);  
Cordellgar Olofsson, Nystromsmyr (SE);  
Gustaf Engstrom, Stockholm (SE)

**Applicant name**  
**(72) Applicant:** Olofsson, Stockholm, SE

**Application date and no.**  
**(21) Appl. No.:** 12/943,748  
**(22) Filed:** Oct. 1, 2009

**Publication date and no.**  
**(43) Publication Date:** Dec. 30, 2009  
**(36) Publication No.:** 2009/055555 A1

**IPC**  
**(51) Int. Cl.:** A61F 2/00 (2006.01)

**US PC**  
**(52) U.S. Cl.:** 606/200 (2006.01)

**Cited references**  
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**Abstract**  
**(54) A prosthetic foot**  
**(57) A prosthetic foot (10) comprising a movable heel mechanism (12), an energy storing means (14) acted on by the movable heel mechanism (12) to store energy, and a control device (16) attached to the**

**Figure**  
**FIGURE 4**

**FIELD OF THE INVENTION**

The present invention relates generally to the field of prosthetic devices, and more particularly to prosthetic feet and footplates for use therein.

**DETAILED DESCRIPTION OF VARIOUS EMBODIMENTS**

**A. Environment and Context of the Various Embodiments**

The prosthetic feet in accordance with this disclosure are designed for implementation in connection with typical arti-

**Claims**

The invention claimed is:

1. A prosthetic foot comprising:
  - a first foam element having a first stiffness and substantially defining an outer periphery of the prosthetic foot;
  - a resilient footplate embedded within the first foam element, and having proximal and distal surfaces, and anterior and posterior portions;
  - a second foam element embedded within the first foam element and bonded to the distal surface of the posterior portion of the footplate, and further defining a recess therein, a second foam element of the second foam element, a stiff, puncture and tear resistant outer shell defining a cushion that surrounds a substantial portion of the outer periphery wherein the stiffness of the cushion is within the range of 45-55 on the Shore A scale.
2. The prosthetic foot according to claim 1, and the stiffness of the first foam element is within the range of 45-55 on the Shore A scale.
3. The prosthetic foot according to claim 2, wherein the footplate is a carbon or carbon fiber composite footplate.
4. A prosthetic foot comprising:
  - a first foam element having a first stiffness and substantially

**Description**

The present invention relates to a prosthetic foot for use by amputees.

The design of such a prosthetic foot including an ankle presents some of the most difficult problems in the field of prosthetics from the engineering point of view.

metres per degree at 7°, rising through 6 newton metres per degree at 9°, to a maximum torque of about 40 newton metres in excess of 12° of movement. Inversion/eversion of the foot is often omitted in ankle designs, but when this is incorporated an angular movement of about ± 18° is desirable. Again, with a stiffness of about 1.2 newton metres per degree, resulting in a torque output of ±20 newton metres.

**Claims**

13. A prosthetic foot substantially as described herein with reference to and as shown in Figures 4 and 5 of the accompanying drawings.

**1. A prosthetic foot comprising a movable heel mech-**

# Search by keywords: Proximity operators

## Prox/distance<n, NEAR

- Used with a numerical (after NEAR/Prox/distance to define the maximum distance between the search terms
- E.g. mouse prox/distance<3 trap

the mousetrap is placed at a place where a mouse often runs out, bait for trapping the mouse is placed in the trap body, when the mouse treads on the other side of the seesaw, the seesaw rotates to incline towards the inner side of the trap body, the mouse enters the trap body, and

## Prox/distance<n/ordered

- Used with a numerical to define the maximum distance between the search terms in ordered manner
- E.g. mouse prox/distance<3 /ordered trap

the mouse trapping device and the mouse blocking and trapping plate, the defect that a traditional mouse blocking plate can only block a mouse and cannot trap the mouse is overcome, and the mouse blocking and trapping plate integrates the mouse blocking function and the mouse trapping function.

## Prox/unit=paragraph

- Identifies terms in the same paragraph
- E.g. mouse prox/unit=paragraph trap

The invention provides a mouse trap with an adhesive. A layer of powerful adhesive pad is arranged on a trap plate of the mouse trap, so that a mouse is stuck and cannot move when getting close to and stepping on the powerful adhesive pad. The powerful adhesive pad can be continuously replaced for use after a user handles the stuck mouse, so that the mouse trap is very convenient.

## Prox/unit=sentence

- Identifies terms in the same paragraph
- E.g. mouse prox/unit=sentence trap

A mouse trap. The mouse trap has a tank, a glass tank sited in the tank, a cylinder mounted on the tank, an inclined tray pivotally mounted in the cylinder, a spring linking the cylinder to the inclined tray for biasing the inclined door to seal the cylinder, a door rotatably mounted in the

# Search by keywords: Truncations

Also called as wild card operators, stemming, is a technique that broadens your search to include various word endings and spellings (i.e. shortened to their primary root or stem, by reducing its length)

## question mark (?)

- stands for no characters or one character
- E.g.: Penetrat?

☐ 3. Penetrate sand mechanism  
CN206065343U • 2017-04-05 • SUZHOU SUZHU FOUNDRY MACHINERY MFT CO LTD  
**Earliest priority: 2016-08-24 • Earliest publication: 2017-04-05**  
...The utility model provides a **penetrate** sand mechanism, it makes penetrates quick the flow to the entry position of penetrating... board, **penetrate** the lid adorn in **penetrate** the exit end of sand hopper, **penetrate** and has arranged on the board... board, the ring connecting plate pass through screw

☐ 4. Penetrate a floating installation  
CN207772268U • 2018-08-28 • EVERFINEST PREC MACHINERY SHENZHEN CO LTD  
**Earliest priority: 2018-01-10 • Earliest publication: 2018-08-28**  
The utility model is suitable for an injection molding machine field provides a **penetrate** a floating

## Asterisk (\*)

- Stands for a string of characters of any length
- E.g.. Penetrat\*

...The invention relates to a **penetrator** (10) and to a sub-caliber ammunition or projectile (2) accommodating said **penetrator** (10). The **penetrator** (10) according to the invention is characterized by the fact that the **penetrator** has an interface (14) in... be provided having different **penetrator** tips (15, 16, 17) and completed to form an individual KE **penetrator** (10). ...

☐ 5. Sabot projectile comprising a **penetrator**  
EP1209437A1 (B1) • 2002-05-29 • CONTRAVES PYROTEC AG [CH]  
**Earliest priority: 2000-11-23 • Earliest publication: 2002-01-17**  
The cartridge case projectile, comprises a cartridge case (12) and a shattering **penetrator** (14) arranged in the cartridge case. Shattering **penetrator** has a **penetrating** casing, which can be broken into at least two casing sections upon impact of the shattering **penetrator** at predetermined positions on the casing. Central conduit is arranged in the **penetrator**, and the plastic material forming the ...

## Hash sign (#)

- stands for exactly one character
- Eg. Penetrat#

☐ 4. Penetrate a floating installation  
CN207772268U • 2018-08-28 • EVERFINEST PREC MACHINERY SHENZHE...  
**Earliest priority: 2018-01-10 • Earliest publication: 2018-08-28**  
The utility model is suitable for an injection molding machine field provides a **penetrate** a floating installation, including injecting the unit, penetrating a drive mechanism and **penetrate** a base, **penetrate** a drive mechanism for penetrating a base can install with controlling the

☐ 5. Penetrate crossbow structure  
CN206695682U • 2017-12-01 • UNIV QUJING NORMAL  
**Earliest priority: 2017-04-10 • Earliest publication: 2017-12-01**  
...The utility model relates to a **penetrate** crossbow structure, including penetrating the crossbow handle and putting arrow portion, the head... the utility model discloses a



# National biodiversity act

- **“biological resources” under section 2(c) NBA act:** “plants, animals and micro-organisms or parts of, their genetic material and by-products (excluding value-added products) with actual or potential use or value, but does not include human genetic material”
- **Objectives of NBA act:**
  - the conservation of biodiversity of India,
  - sustainable use of its components, and
  - fair and equitable sharing of benefits arising out of utilization of biological resources, knowledge and for matters connected with or incidental to these factors
- **Requirements under Indian Patents Act and Patent Rules (2003)**
  - section 10: Form 1: details of the source and geographical origin of biological material in the patent application, along with a declaration regarding the permission required from the competent authority in respect of the biological material used

# Differences between paid databases and free databases

	Free databases	Paid databases
Combining multiple search strategies	Not available	Available
Advance visualisation tools	Not available	Quick, easy-to-read bar charts allowing summarization of key bibliographic data
Limit search to patent families	Not available	Available
Citation search	Not available	Available
Coverage of patents by jurisdiction	Limited coverage	Huge coverage
Title, abstract, description, technical advancement illustrations using clear, concise, industry-specific terms	Not available	Available
Alerts	Not available	Available
Saving of result sets	Not available	Available for review for future reference
Extensive hyperlinking to a variety of related information	Not available	Available e.g. commercial sources, cited NPL
Family legal status information	Not available	Available, updated on regular basis