Technique of Patent Search and Analysis for Pharma-Innovations

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Overview about the talk

- Different forms of Intellectual properties
- Importance of Patent search
- Anatomy of Patent document
- Where to search for Patent information?
- Strategies for Patent Information Search
- Steps To Be Followed For Patent Search
- Types of patent search and case studies

Forms of intellectual property

Patents and utility models

Specific chemical formula, its application for tooth related diseases

Trade secrets

Part of technical know-how kept in-house and not published related to procurement, supply chain

Copyright

Artwork done label, packaging

Trademarks

Brand name of company, tooth past name

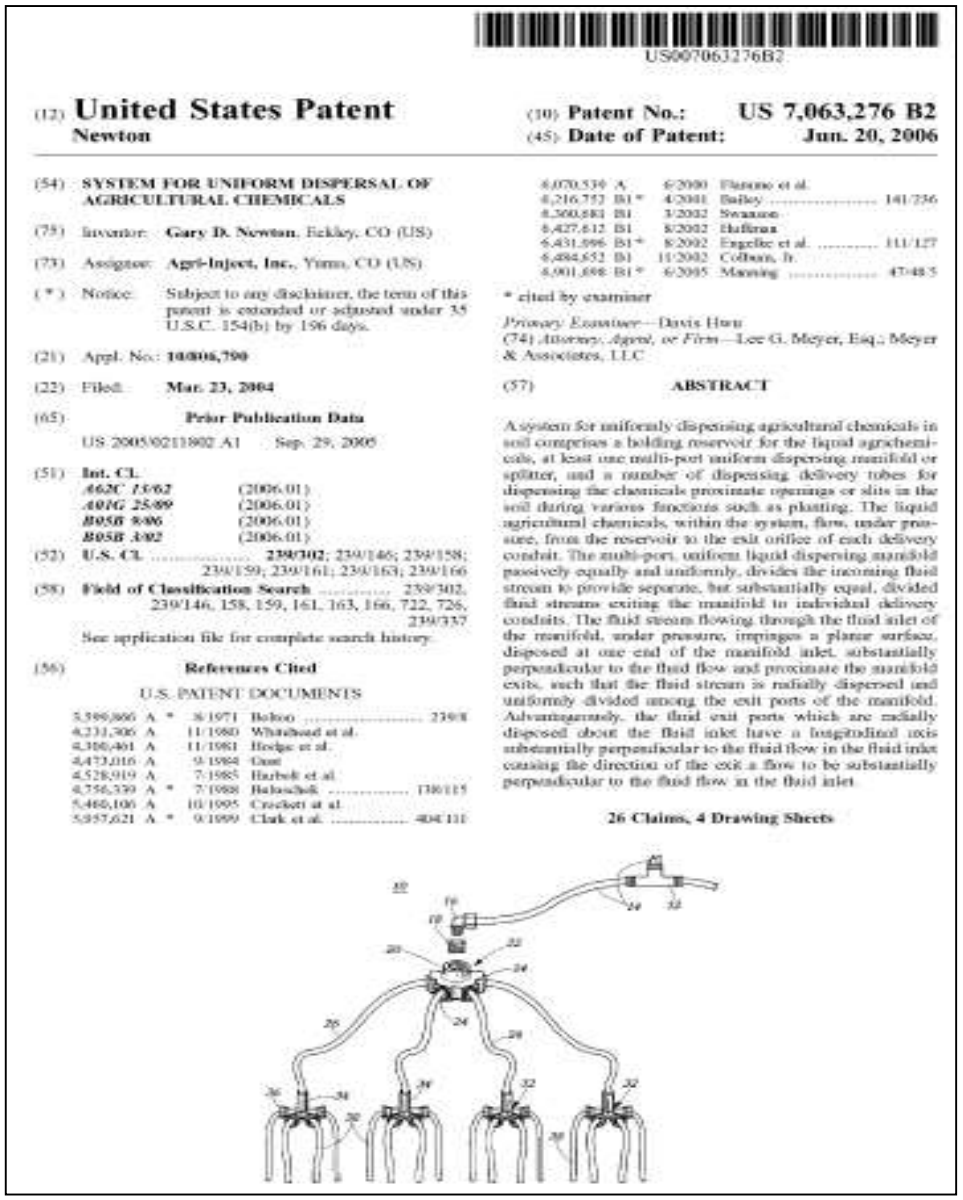
Designs

Form of overall paste containing holder

One product – Many IP rights

Why to Perform Patent Search?

Typical US Patent Document



US007063276B2

(12) **United States Patent**
Newton

(10) **Patent No.: US 7,063,276 B2**
(45) **Date of Patent: Jun. 20, 2006**

(54) **SYSTEM FOR UNIFORM DISPERSAL OF AGRICULTURAL CHEMICALS**

(75) Inventor: **Gary D. Newton**, Eckley, CO (US)

(73) Assignee: **Agri-Inject, Inc.**, Yuma, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 196 days.

(21) Appl. No.: **10/806,790**

(22) Filed: **Mar. 23, 2004**

(65) **Prior Publication Data**

US 2005/0211802 A1 Sep. 29, 2005

(51) **Int. Cl.**
A62C 13/62 (2006.01)
A01G 25/09 (2006.01)
B05B 9/06 (2006.01)
B05B 3/02 (2006.01)

(52) **U.S. Cl.** **239/302**; 239/146; 239/158; 239/159; 239/161; 239/163; 239/166

(58) **Field of Classification Search** 239/302, 239/146, 158, 159, 161, 163, 166, 722, 726, 239/337
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

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4,231,305	A	11/1980	Whitehead et al.	
4,300,401	A	11/1981	Hodge et al.	
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4,528,919	A	7/1985	Harbek et al.	
4,756,339	A *	7/1988	Belanchek	138/115
5,460,106	A	10/1995	Crochet et al.	
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* cited by examiner

Primary Examiner—Davis Hwu
(74) *Attorney, Agent, or Firm*—Lee G. Meyer, Esq.; Meyer & Associates, LLC

(57) **ABSTRACT**

A system for uniformly dispersing agricultural chemicals in soil comprises a holding reservoir for the liquid agrichemicals, at least one multi-port uniform dispersing manifold or splitter, and a number of dispersing delivery tubes for dispersing the chemicals proximate openings or slits in the soil during various functions such as planting. The liquid agricultural chemicals, within the system, flow, under pressure, from the reservoir to the exit orifice of each delivery conduit. The multi-port, uniform liquid dispersing manifold passively equally and uniformly, divides the incoming fluid stream to provide separate, but substantially equal, divided fluid streams exiting the manifold to individual delivery conduits. The fluid stream flowing through the fluid inlet of the manifold, under pressure, impinges a planar surface, disposed at one end of the manifold inlet, substantially perpendicular to the fluid flow and proximate the manifold exits, such that the fluid stream is radially dispersed and uniformly divided among the exit ports of the manifold. Advantageously, the fluid exit ports which are radially disposed about the fluid inlet have a longitudinal axis substantially perpendicular to the fluid flow in the fluid inlet causing the direction of the exit a flow to be substantially perpendicular to the fluid flow in the fluid inlet.

26 Claims, 4 Drawing Sheets

10 Document number:
12 Document type (Patent)
21 Application number
22 Date of application
45 Date of patent
51 IPC classification
52 National classification
54 Title of the invention
56 References:
57 Abstract
58 Field of search
65 Number and date of prior published data
71 Applicant
72 Inventors
73 Assignee
74 Patent attorney, agent or firm

Patent Fields and Outputs

Fields	Actionable conclusion
Name of assignee	• Potential partners, customers, licensees, acquisition candidates or organizations who are using the technology, competitor details
Name of inventor	• Scientist working the invention
Priority date, application date, publication date	• Date of the first filing from which one year priority period starts • Filing trends about the invention
Legal status	• To know Patent has been granted or not, valid or expired
Protection, filing, designated countries	• If the application is regional or international, the countries to which the rights may be extended; to know global market
Citation and references	• References to related technology information uncovered by the applicant or by a Patent examiner during the Patent granting procedure
Description	• 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
Claims	• Legal boundary of the invention, unique technical features, supported by description

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

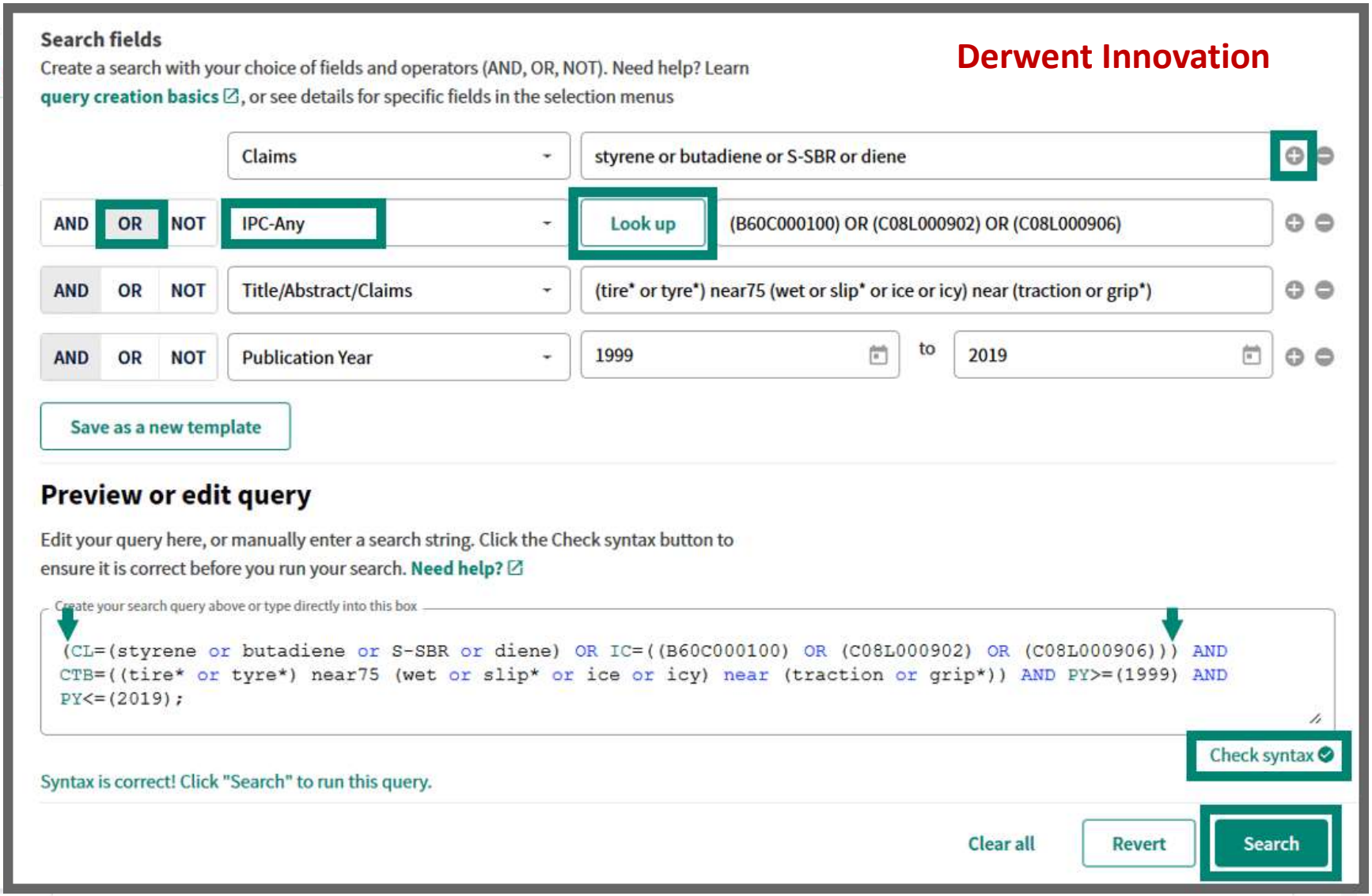
Biosequences

PubMed, Orbit BioSequence, STNNext, Lens.org, BLAST ®

Traditional medicinal knowledge/herbal medicaments Traditional Knowledge Digital Library (TKDL)

Approved drug products Approved Drug Products with Therapeutic Equivalence Evaluations (commonly known as the Orange Book)

Snippets of Patent Information Search Databases

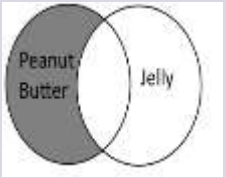


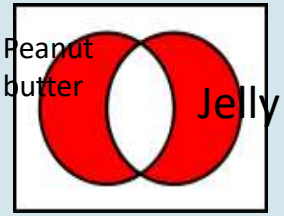
Strategies for Patent Information Search

Keywords	• 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	OR	ANDNOT	XOR
• Documents having both the word • Narrow your results	• Documents having either of the word • To broaden your search	• Documents having first word but not second word • Exclude words from your search	• 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*= Fungus, Fungi, Fungal, Fungicidal, Fungible

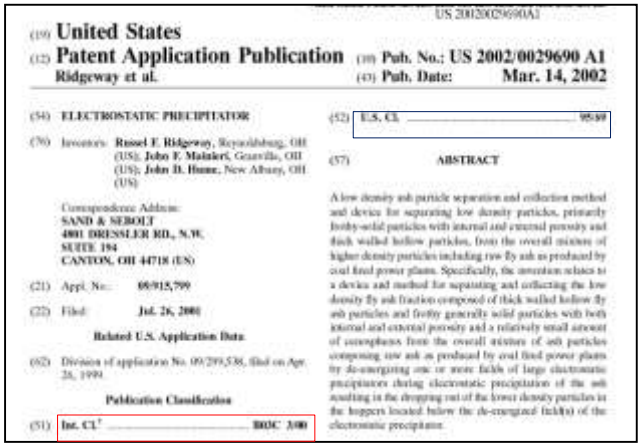
Alumin?m=Aluminium, aluminum

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)



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

(54) **ELECTROSTATIC PRECIPITATOR**

(76) Inventors: **Russel F. Ridgeway**, Reynoldsburg, OH (US); **John F. Mainieri**, Gearville, OH (US); **John D. Hume**, New Albany, OH (US)

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(21) Appl. No.: **09/915,799**

(22) Filed: **Jul. 26, 2001**

Related U.S. Application Data

(62) Division of application No. 09/299,538, filed on Apr. 26, 1999.

Publication Classification

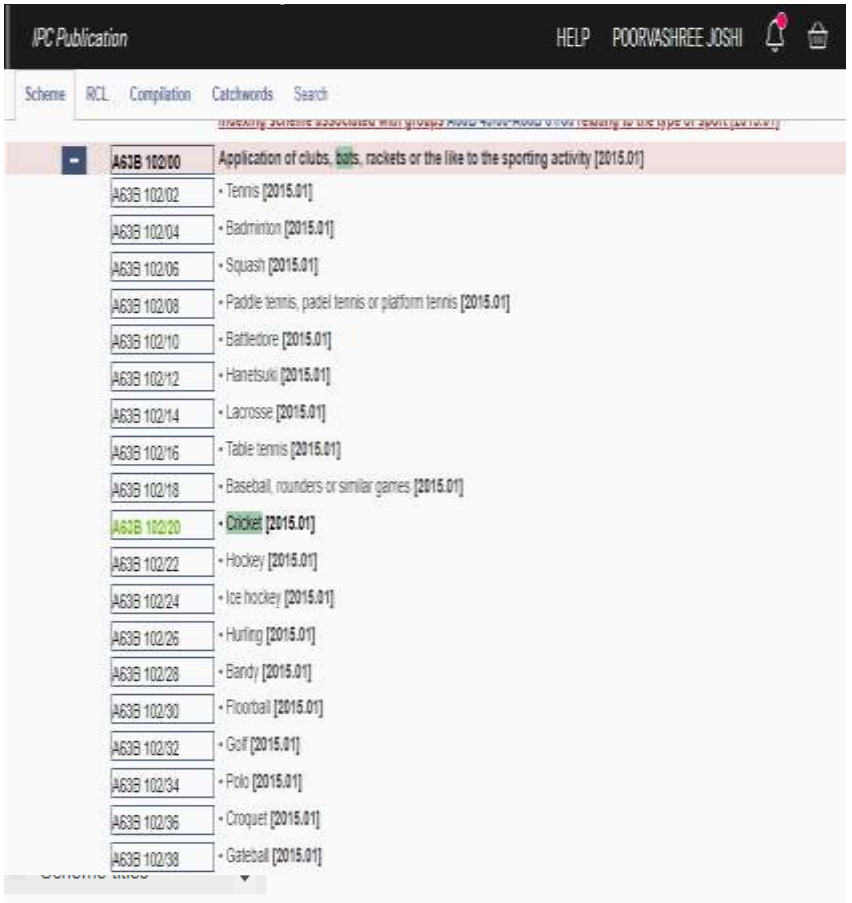
(51) **Int. Cl.**[7] **B03C 3/00**

(52) **U.S. Cl.** **95/69**

(57) **ABSTRACT**

A low density ash particle separation and collection method and device for separating low density particles, primarily frothy-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 frothy generally solid particles with both internal and external porosity and a relatively small amount of cenospheres from the overall mixture of ash particles comprising raw ash as produced by coal fired power plants by de-energizing 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-energized field(s) of the electrostatic precipitator.

- 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



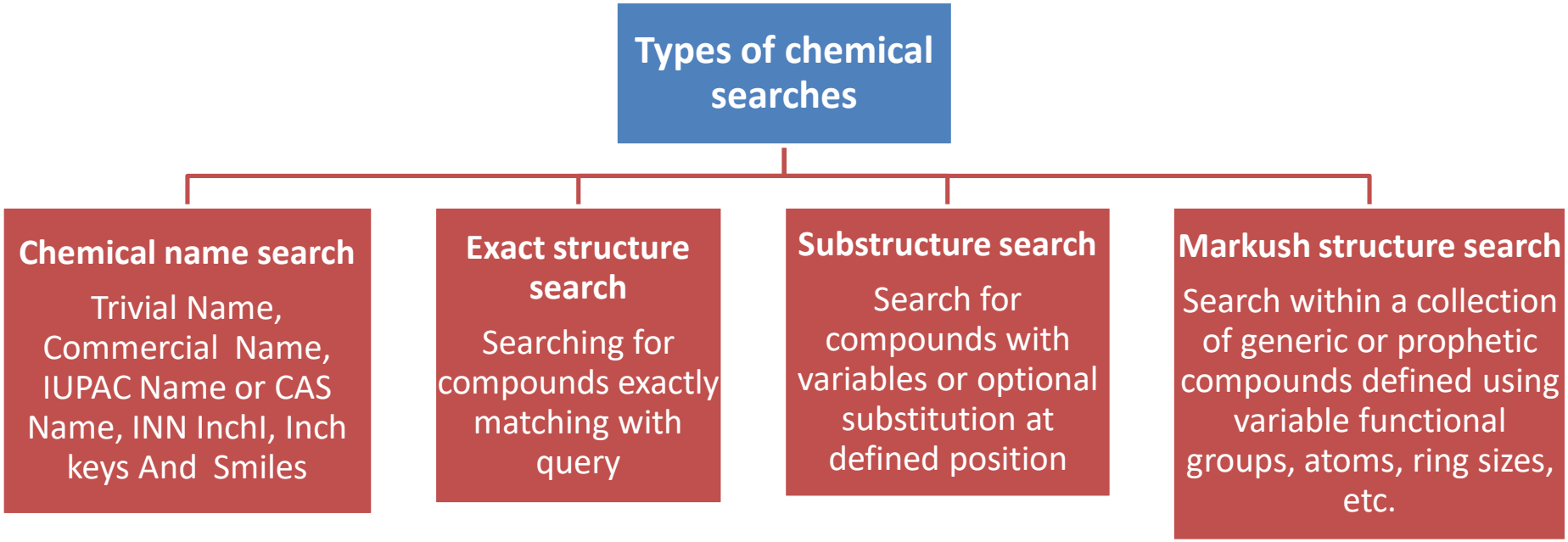
IPC Publication HELP POORVASHREE JOSHI

Scheme | RCL | Compilation | Catchwords | Search

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]

International Patent classification (IPC)

Chemical structure search



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

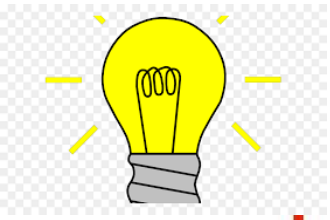
Post-search phase

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 | **Idea screen** | **Development** | **Testing and validation** | **Product**



New idea

Before sharing

12 months period from provisional to complete filing

New Idea

New Idea

- State of art report
- Competitor analysis report
- Patent landscape report
- Novelty search report
- Complete patentability report
- Freedom to operate report
- Freedom to operate report
- Freedom to operate report
- Validity/invalidity report
- Infringement analysis report

Patent search report follows the product development journey

Patentability assessment report: Insights

What is it?

Assessment of invention for its novelty, non-obviousness , industrial utility and patentable subject matter

Insights obtained from it?

Patentability potential of invention, filing strategies for invention, possible prior art citations in first examination report, if any expansion of invention required to over rule the non-obviousness

Whom will be benefited?

Researchers and innovators,
Product developers,
Applicants
legal teams

How to perform it?

Through search of patent and non-patent prior art in global databases, review of prior art, opinion of NUNS parameter for patentability

Importance:

Easy identification or understanding of the state-of-the-art technology and thereby minimizing research time

Helps a product developer to be free from anticipated infringement suits

Helps an inventor to modify his ideas to be suitable for the patentability criteria

Helps applicant to decide weather to go with filing of patent application or to save the application fees

Helps as examiner to determine patentability of application and patentee to assess the strength of invention

Helps during drafting of claims in complete specification

Limitations: Fails to report unpublished documents as patent applications are not published until 18 months from filing

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 Nocardiopsis 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 mater: 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

Indian Patents act,1970: Non-Patentable Subject Matter

- **Section 3 (d): a new form of a known substance** which does not result in the enhancement of the known efficacy of that substance or **any new property or new use for a known substance** or **use of a known process, machine or apparatus** unless such known process results in a new product or employs at least one new reactant.

- **Section 3(e):** a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance

- **Section 3(f):** Mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;

- **Section 3 (i):** Any process for the medicinal, surgical, curative, prophylactic, diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products

- **Section 3(p):** Traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components

Patent Landscape report (PLR): Insights

What is it?

a snapshot of the patent situation of a specific technology, either within a given country or region, or globally

Insights obtained from it?

Patent filing trends, major companies and universities, key patents, emerging players, IP collaboration networks, exploited fields, uncrowded areas, in/ out licensing opportunities

Whom will be benefited?

Researchers and innovators
Corporates and business developers
Public policy makers
Human resource teams, legal teams

How to perform it?

Search, review, and refine the subject matter, Review data, create categories and populate, Create charts/tables and visualizations

Importance:

To Researchers and innovators: provides the current 'State-of-the-Art' , Provides knowledge about major technologies in the market

To Businessmen: helps to formulate plans and strategize for possible business ventures, acquisitions and mergers, compare their technology with competitors and asses the need of in/out licensing opportunities

To Policymakers: strategic decisions related to R&D investment, prioritization, technology transfer or local manufacturing, geographically more representative information to support key policy processes

To human resource teams: areas in infancy/maturity/ declining phase for management of resources

To legal team: identify any potential patent infringement.

For White space analysis: determine ‘crowded' or 'open' a technological area

Patent landscape: Case study

A. Information from client	
Client request	Patent landscape report on "Shampoo Compositions Comprising Gel Networks"
Key questions to be answered	• How are the technology trends? • What are the leading markets to the formulation? • What are the primary technologies and secondary technologies? • What are the technologies in which top companies are focussing on? • Which markets are favored by top players? • Is there any assignee collaboration?
Search instructions	• The claim(s) and the example should contain gel network • Components: Fatty alcohol (especially stearyl alcohol and cetyl alcohol), and anionic surfactant or cationic surfactant
B. Methodology of search	
Relevant keywords	Hair preparation, hair rinses, Gel network, gel matrix, cetyl alcohol, stearyl alcohol, anionic surfactant, shampoo, hair
Classification codes of Subject matter	A61Q-005/02 , A61Q-005/12, C11D, C08L, A61K, A61P
Databases used	ESPACENET
Search query	((Gel Near1 (network OR matrix)) AND (shampoo OR rinse OR (hair NEAR wash)) AND ((cetyl OR stearyl) NEAR 1 alcohol) AND (surfactant)) filtering results for (A61Q-005 OR A61Q-005 OR C11D OR C08L OR A61K OR A61P)

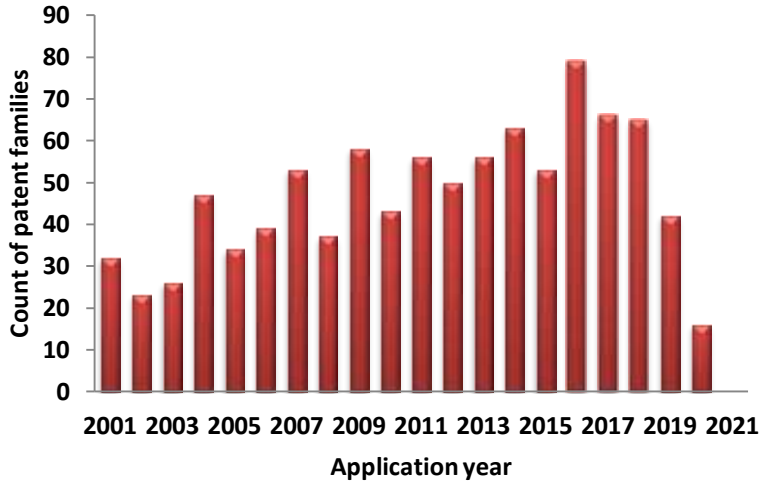
Patent landscape: Case study

Analysis and bucketing of result set

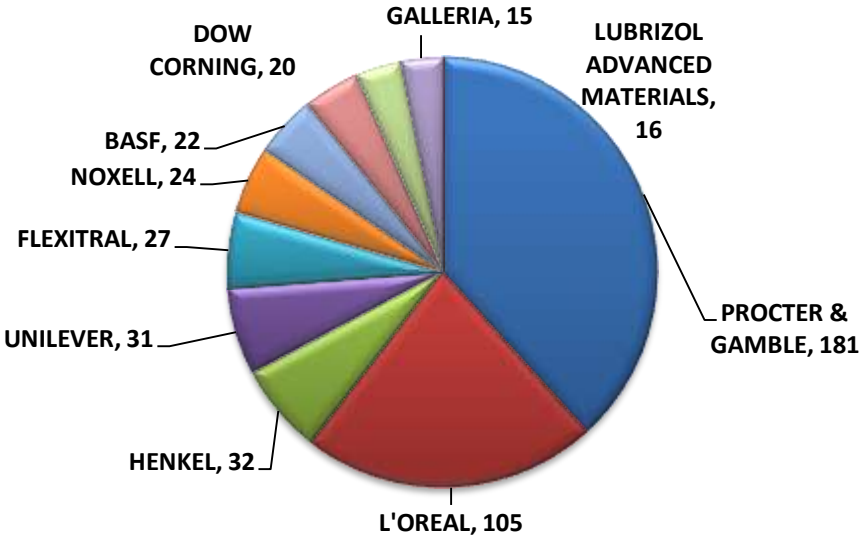
Patent Number	Title	Abstract	Claim 1	Personal care Category	Claim focus	Gel network composition	Gel network claimed	Shampoo composition (Claimed)	Focus of Invention	Assignee	Inventor	Priority Date	Date of Publication	IPC Classes
WO2003101416A1	Shampoo containing a gel network	The compositions of the present invention relate to improved shampoo compositions having from	1. A shampoo composition comprising: a) from about 5 to about 50 weight percent of a	Hair care	Composition/ Process/ MOT/Method of use	1) Fatty alcohol. Mixtures of cetyl and stearyl alcohol (20:80 to 80:20) preferred	A shampoo composition comprising at least about 0.05 weight percent of a fatty alcohol gel network (Claim 1) wherein said fatty alcohol gel network is formed using a cationic	1) Detersive surfactant (5-50% by weight): Anionic (5-50% preferably from about 8-30%, more	Hair cleansing shampoo containing a fatty alcohol gel network and method of use	PROCTER AND GAMBLE	ALLAN ROYCE DOUGLAS ; CRISTINE RICCI NICOLE ; LEE WELLS ROBERT ; NICOLE CRISTINE RICCI ; WELLS ROBERT	4/6/2002	11/12/2003	A61K8/00 ; A61K8/02 ; A61K8/04 ; A61K8/34 ; A61K8/40 ; A61K8/41 ; A61K8/44 ; A61K8/46 ;
US20180098823A1	Personal care compositions substantially free of sulfated surfactants and	A personal care composition substantially free of sulfated surfactants includes a	1. A personal care composition comprising: a dispersed gel network comprising:	Hair care and other personal care composition	Composition/Process/Method of use	1) Fatty alcohols (1-10%) 2) Gel matrix surfactant: anionic surfactants, cationic surfactants,	A personal care composition comprising: a dispersed gel network comprising: about 0.05% or more, by weight of the personal care composition, of one or more	1) A dispersed gel network (5-50% by weight of personal care formulation)	Personal care compositions with dispersed gel network phase, free of sulfated	PROCTER AND GAMBLE	HUTTON HOWARD ; HUTTON II HOWARD DAVID	10/10/2016	12/4/2018	A61K8/04 ; A61K8/34 ; A61K8/44 ; A61K8/46 ; A61K8/60 ; A61Q5/02
WO2017096155A1	Composition for hair frizz reduction	The present invention is directed a shampoo composition for hair frizz reduction comprising	1. A shampoo composition for hair frizz reduction comprising: from 0.1% to 20% of a	Hair care	Composition / MOT	1) High melting point fatty compounds (0.1% to 20%) 2) A cationic surfactant	A shampoo composition according to any proceeding claims wherein the shampoo composition further comprise a gel matrix comprising:	1) A moisture control material or mixture of moisture control materials (0.1-20%)	Shampoo composition for hair frizz reduction	PROCTER AND GAMBLE	MARSH JENNIFER MARY ; PUNYANI SUPRIYA ; SONG BRIAN XIAOQING ; YANG TIFFANY TIEN YUN	4/12/2015	6/6/2017	A61K8/34 ; A61K8/36 ; A61K8/37 ; A61K8/41 ; A61K8/67 ; A61Q5/02 ; A61Q5/06
US20160175210A1	Method of inhibiting copper deposition on hair	A method of inhibiting copper deposition on hair and facilitating the removal of copper	1. A method of inhibiting copper deposition on hair on hair comprising the steps of	Hair care	Composition/ MOT	1) Fatty alcohol (0.1-20%, 0.5-14% more alternatively 1-10% alternatively 6-8%)	A conditioner gel matrix comprising (a) from 0.1% to about 20% of one or more high melting point fatty compound, by weight of the conditioner gel matrix	1) Detersive surfactants: Anionic, amphoteric and Zwitterionic detersive surfactants	Hair composition inhibiting copper deposition on hair and facilitating the removal of	PROCTER AND GAMBLE ; NOXELL CORP	GRAHAM NEIL MCKELVEY ; JENNIFER MARY MARSH ; MARSH JENNIFER MARY ; MCKELVEY GRAHAM NEIL	17/12/2014	23/6/2016	A61K8/02 ; A61K8/04 ; A61K8/22 ; A61K8/34 ; A61K8/36 ; A61K8/362 ; A61K8/37 ; A61K8/41 ;
US9364278B2	Shampoo Composition Comprising Gel Matrix and Histidine	A shampoo composition having from about 0.025% to about 0.25% histidine, by weight of the	1. A shampoo composition comprising: a. from about 0.05% to about 0.2% histidine, by	Hair care	Composition/MOT	1) One or more fatty alcohols (0.1-20%) 2) one or more gel matrix surfactants (0.1-10%)	A gel matrix comprising: i. from about 0.1% to about 20% of one or more fatty alcohols, by weight of the gel matrix;	1) Histidine (0.025-0.25%) 2) zwitterionic or uncharged, detersive copper removal	A shampoo composition that inhibits copper deposition onto hair.	PROCTER AND GAMBLE	CASEY PATRICK KELLY ; HOWARD DAVID HUTTON II ; HUTTON HOWARD DAVID ; HUTTON HOWARD DAVID II ;	25/4/2014	9/5/2017	A61K8/04 ; A61K8/34 ; A61K8/365 ; A61K8/42 ; A61K8/44 ; A61K8/46 ; A61K8/49 ; A61Q5/00 ;
US20130039875A1	Shampoo containing a dendritic macromolecule and a gel network	A hair care composition comprising: i) a cleaning phase comprising a cleansing anionic	1. A shampoo composition comprising: i) a cleaning phase comprising a cleansing	Hair care	Composition/ Method of manufacture	1) Fatty material 2) Anionic surfactant: alkyl group with from 16 to 30 carbons	An aqueous conditioning gel network having no overall charge or is anionic, the gel network comprising: (a) fatty material selected from the group	1) A cleansing anionic surfactant 2) An aqueous conditioning gel network	A hair care composition particularly shampoo comprising dendritic macromolecules with	MURRAY ANDREW MALCOLM ; UNILEVER HINDUSTAN ; PHAM THUY ANH ; UNILEVER PLC ;	PHAM THUY ANH ; MURRAY ANDREW MALCOLM	26/3/2010	14/2/2013	A61K8/34 ; A61K8/36 ; A61K8/37 ; A61K8/40 ; A61K8/41 ; A61K8/42 ; A61K8/44 ; A61K8/46 ;
US20180007705A1	Shampoo Compositions Comprising a Chelant	Described herein is a shampoo composition and methods of using the same, the shampoo	1. A shampoo composition comprising: (a) from about 0.005% to about 5% of one or more	Hair care	Composition/ method of use/MOT	1) Fatty alcohol 2) Surfactant (Claim 13)	The shampoo composition of claim 1, further comprising a gel network, wherein the gel network comprises a fatty alcohol and a surfactant (Claim 13)	1) A copper chelant (0.005% to about 5%) MW 75-400, 100-350, 125-325, 140-300 e.g.	Improved shampoo compositions which inhibit copper depositing and removal from hair	PROCTER AND GAMBLE	MARSH, Jennifer Mary [Kelly, Casey Patrick] Sivik, Mark Robert	30/6/2016	4/1/2018	A61K8/41; A61K8/44; A61K8/46; A61Q5/00; A61Q5/02
EP2960021A1	Hair care compositions comprising polyelectrolyte complexes for durable benefits	Disclosed herein is an aqueous hair care composition capable of providing durable	1. An aqueous hair care composition capable of providing durable non-permanent hair	Hair care	Composition/Method of use/ process of preparation	1) Anionic polymer (A): 0.01 wt. % to about 20 wt. % with molecular weight (1,000,000 200-	An aqueous hair care composition comprising a polyelectrolyte complex having a gel matrix structure or a mixture of gel matrix and mycrogel formed by electrostatic attraction	1) Mixture of gel matrix (Avg particle size more than 15 microns) and mycrogel (Avg particle size	Rinse-off or leave-in type of aqueous hair care composition containing polyelectrolyte complexes	ISP INVESTMENT	ZHOU, Yan [RIGOLETTO, Raymond Jr.] FOLTS, Linda C. [OU, Xin [COLACO, Allwyn	15/3/2013	10/8/2016	A61K8/02; A61K8/04; A61K8/81; A61Q5/02; A61Q5/06; A61Q5/12

C. Search results

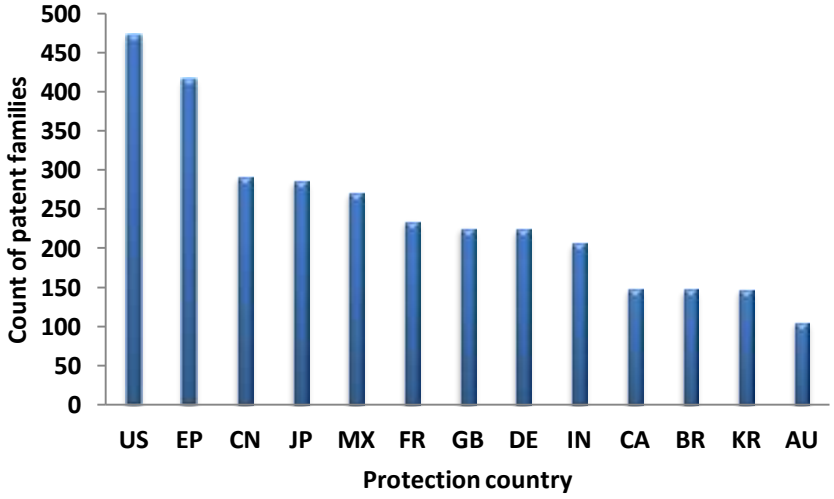
How are the technology trends?



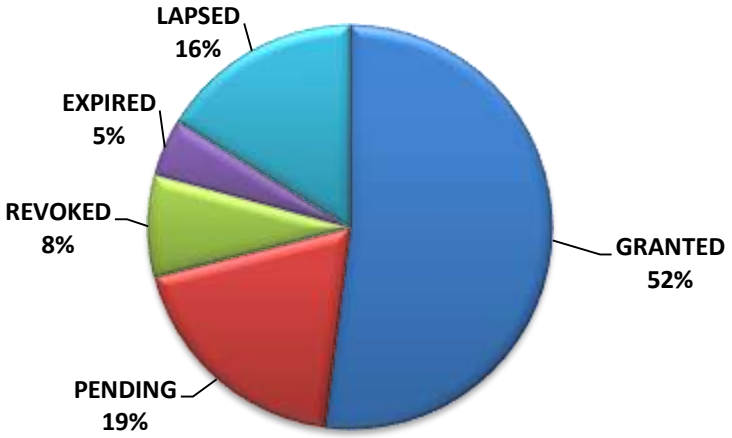
Who are the top players in the market?



What are the leading markets to the formulation?



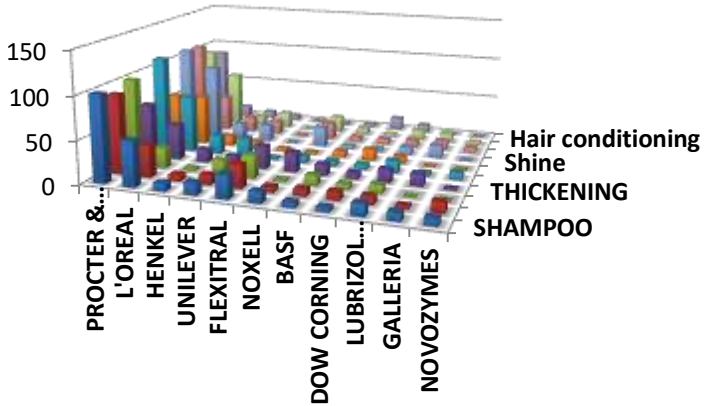
What is the legal status of patents in area?



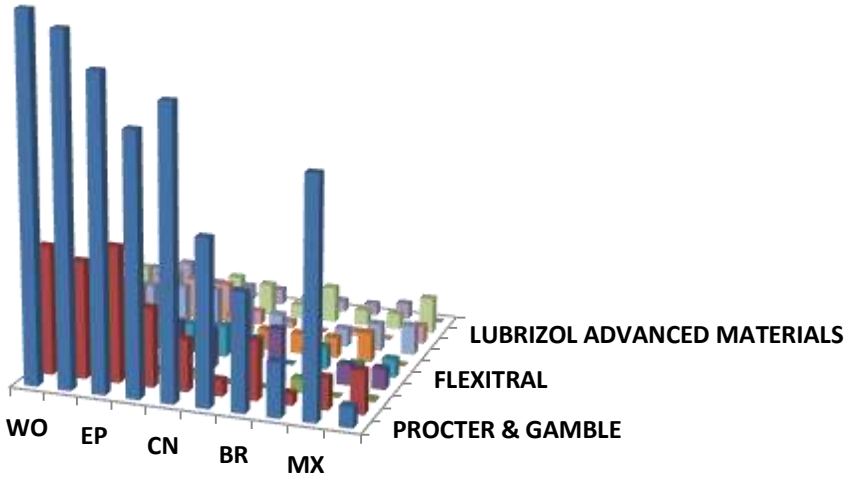
C. Search results

What are the primary technologies and secondary technologies?

What are the technologies in which top companies are focussing on?



Which markets are favoured by top players?



Is there any assignee collaboration?

Freedom to operate (FTO): Insights

What is it?

Right to use or clearance search, "clearance" to make, use, and sell an inventive concept.

Insights obtained from it?

Legal liabilities of product to be commercialized, idea about infringement while making, using, or selling a product or process, options for design around/ wait until expiration of patent/choose different jurisdiction/purchase/ licensing it

Whom will be benefited?

Researchers and innovators
Corporates and business developers

How to perform it?

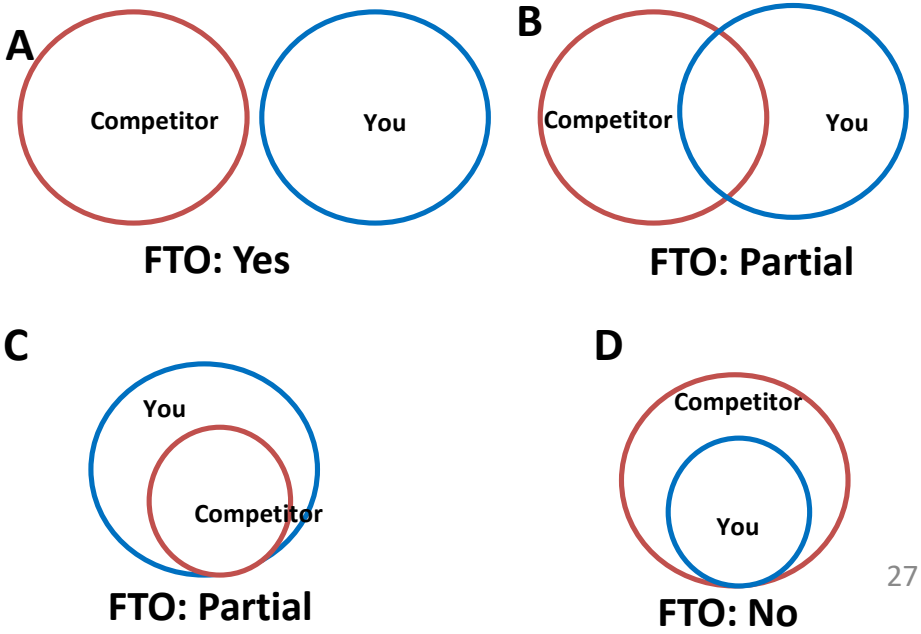
Background study, searching for relevant patent, claims study, mapping of relevant portion, opinion and recommendations
Filtering parameters: Granted active patents, jurisdiction specific

Importance:

For identifying if the product or proposed product violates already existing rights

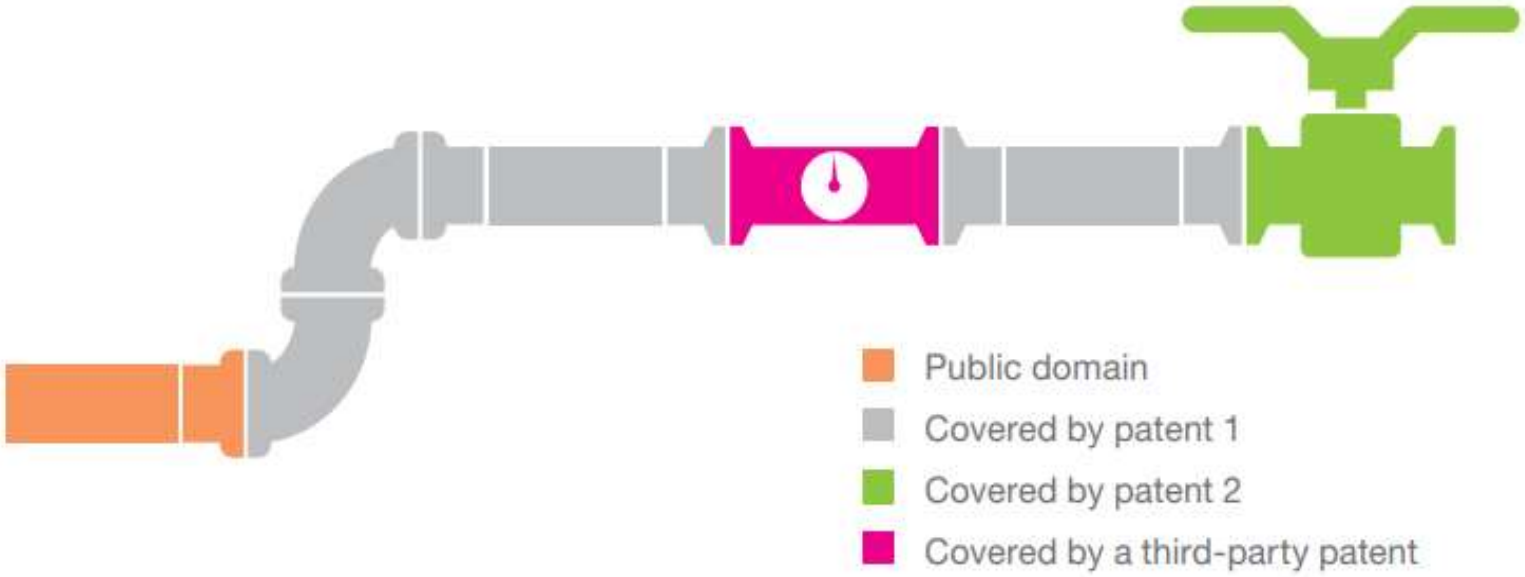
Clarifies as to which countries possibly rights apply

Saves on cost as unnecessary investments in production and marketing can be avoided



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 ≠ Freedom-To-Operate

TechEx.in
Tech Transfer Hub at Venture Center
Supported by NBM - BIRAC

NEW SERVICE
Access to paid databases

Proprietary databases for prior art searching and analytics

1 SciFinder

3 Derwent Innovation

Analytics services provided by TechEx.in

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

Title of invention
Inventor name
Applicant name
Application date and no.
Patent number
Publication date and no.
IPC
US PC
Abstract
Cited references

(12) United States Patent
Asgeirsson et al.

(10) Patent No.: US 8,177,855 B2
(45) Date of Patent: May 15, 2012

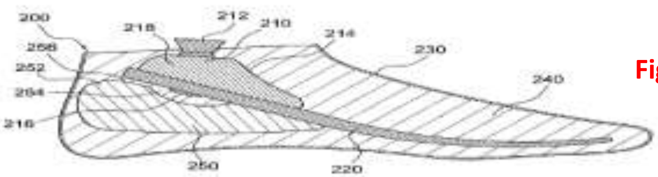
(54) PROSTHETIC FOOT

(21) Appl. No.: 12/243,748

(22) Filed: Oct. 1, 2008

(57) ABSTRACT

19 Claims, 2 Drawing Sheets



Figure

(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 893 111 A1

(12) EUROPEAN PATENT APPLICATION

Publication date
Patent number
IPC
Application date and no.
Inventor name
Applicant name
Abstract

(43) Date of publication:
27.01.1999 Bulletin 1999/04

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(21) Application number: 97305616.1

(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

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Bromhead & Co.,
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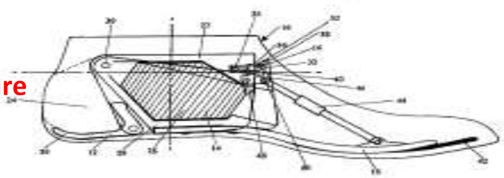
London WC2N 6EF (GB)

(54) A prosthetic foot

(57) A prosthetic foot (10) comprising a movable heel mechanism (12), an energy storing means (14) acted on by to 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.

Figure



FIELD OF THE INVENTION

Field of invention

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

DETAILED DESCRIPTION OF VARIOUS EMBODIMENTS

Detailed description

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-

Description

1 EP 0 893 111 A1 2

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

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

a scuff, puncture and tear resistant outer shell defining a cosmesis that surrounds a substantial portion of the outer periphery wherein the stiffness of the cosmesis is within the range of 45-55 on the Shore A scale.

7. The prosthetic foot according to claim 2, and the stiffness of the first foam element is within the range of 45-55 on the Shore A scale.

8. The prosthetic foot according to claim 2, wherein the footplate is a carbon or carbon fiber composite footplate.

9. A prosthetic foot comprising:

a first foam element having a first stiffness and substan-

Claims

Claims

1. A prosthetic foot comprising a movable heel mech-

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

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 andstepping 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

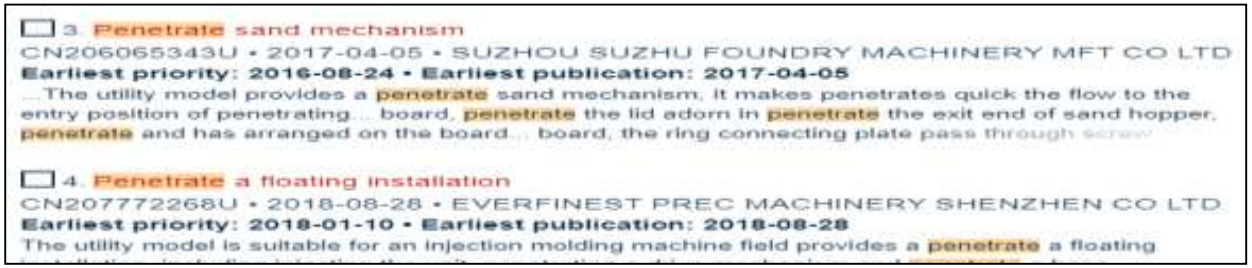
A mouse trap. The mouse trap has a tank, a glass tank sited in the tank, a cylinder mounted on the tank, an inclined tray pivotally mounted in the cylinder, a spring linking the cylinder to the inclined tray for biasing the inclined door to seal the cylinder, a door rotatably mounted in the

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)

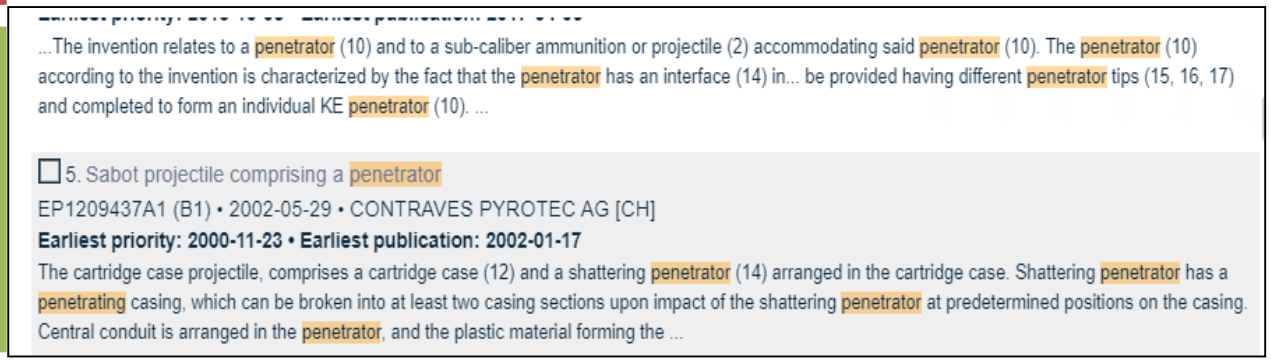
question mark (?)

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



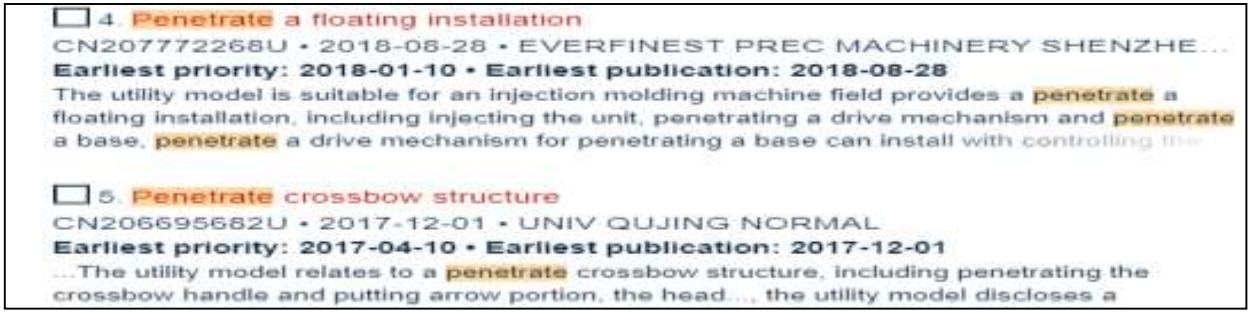
Asterisk (*)

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



Hash sign (#)

- stands for exactly one character
- Eg. Penetrat#



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