

innovative
PARTNERS



Patent Inspiration: New Insights, Inspiration and Ideas

Gijs Bakker & Joris Craandijk

25-8-2015

Innovative Partners is a small consulting & training firm based in Amsterdam

We generate with & for our clients New Insights, Inspiration & Ideas in relation to complex challenges

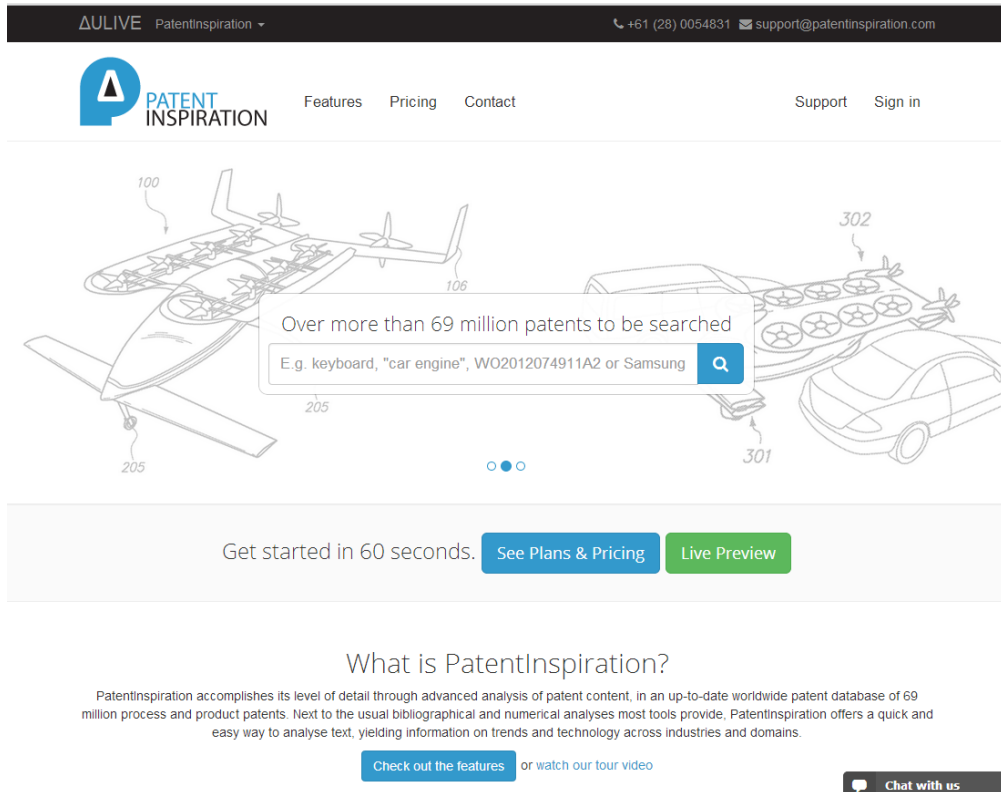
We apply the TRIZ Methodology as we are convinced solutions can be found in other domains. Hence we are looking for unusual relevant connections: i.e. a person, company or institution which operates in an other sector, industry or domain and does, knows or owns something what is of any value for our challenge.

To find unusual relevant connections Aulive's Patent Inspiration is the most powerful, cost effective and intuitive tool

Next to using Patent Inspiration in our daily work, we sell licenses and train users

Patent Inspiration is a visual driven, user friendly web-enabled tool for experts like R&D staff, engineers, product developers, scientists and innovators enabling them to:

1. Gather information about recent developments in their “own” domain (i.e. sector, industry, competitors and institutes) regarding technologies, techniques, inventions and innovations,
2. Scout for specific information about the area of interest of the user like material, technology, process, application etc.
3. Generate New Insights and Ideas regarding one’s complex challenges i.e. finding inspiration in unusual domains other than the usual domain



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Over more than 69 million patents to be searched

E.g. keyboard, "car engine", WO2012074911A2 or Samsung

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What is PatentInspiration?

PatentInspiration accomplishes its level of detail through advanced analysis of patent content, in an up-to-date worldwide patent database of 69 million process and product patents. Next to the usual bibliographical and numerical analyses most tools provide, PatentInspiration offers a quick and easy way to analyse text, yielding information on trends and technology across industries and domains.

[Check out the features](#) or [watch our tour video](#)

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STRENGTHS

- Unique in text analysis
- Powerful visualizations
- Internally developed (30 man years)
- Hands-on interface
- No background patent knowledge required
- Unique systematic innovation method
- Continuous development
- 69 million patent database engine
- Database updated weekly

FOR WHOM

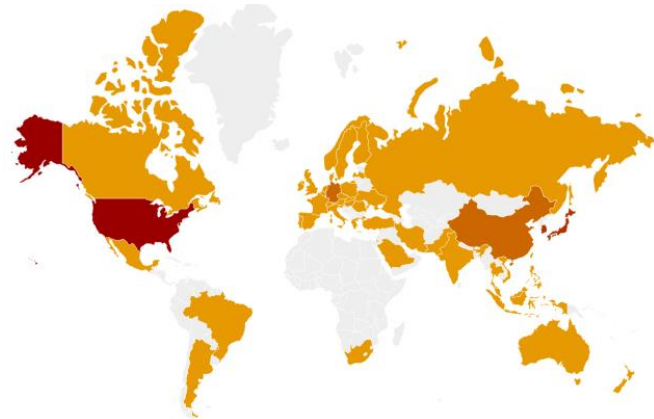
- R&D managers
- Innovation managers
- Marketing managers
- Strategic managers
- Technology managers
- Scientists

PatentInspiration accelerates your R&D process

- Supporting the innovation process
- Obtaining competitive intelligence in great detail
- Technology mapping and discovering technology transfer opportunities

The PatentInspiration database

- based on the DOCDB database from the EPO (European Patent Office)
- contains bibliographic data from over 90 countries
 - Titles
 - Abstracts
 - Applicants
 - Inventors
 - Citations
 - literature citations
 - code classifications
 - family info
- updated on a weekly basis
- contains full text (claims & descriptions) of the main searched authorities (WO,EP, US, CA, ...)
- Patent images are also available of more than 10 authorities (WO, EP, US, GB, ...)

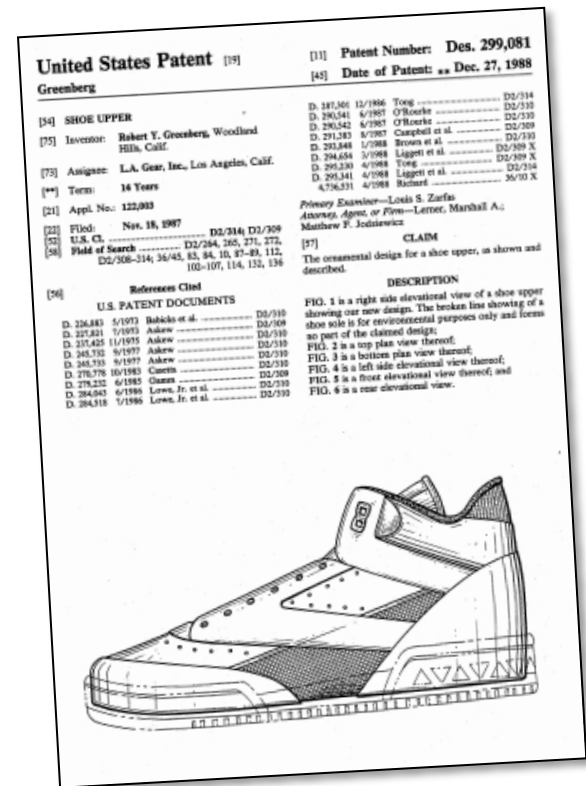


A detailed coverage can be found at <http://www.epo.org/searching/data/data/tables/weekly.html>, see "Contents and coverage of the DOCDB bibliographic file".

Why patents?

Patents are a great source of knowledge to explore:

- Well defined problems with well defined solutions
- Last year over 2 million were published
- Lots of data available (now 69 million in our database)
- Current state of the art of products and processes
- Patents are a window to the future as well
- English text often available
- Well structured by title, abstract, claims, description and mosaics: ideal for algorithms to data mine with clustering and Natural Language Processing technologies
- Easy to use for cross industry searches (TRIZ)
- Extracting meaningful patterns and evolutions (TRIZ)



How can I survey growing or declining competitors?

Who are the competitors of my clients?

Can I identify the high quality patents?

Can I detect or be alerted for new players?

Can I detect high temperature ranges or other units?

Who are the competitors of my suppliers?

Can I scan the values or characteristics of companies that are working in my domain?

On which components is my competitor working?

How can I be visually inspired by designs?

What is the relevant knowledge for my company?

Which other industries have solved my problem?

Which other domains need my technology?

Are there any neighbouring companies or institutions?

Who is working on the same topics as me?

What are clients in other or new domains?

Which other products can inspire my own developments?

What are potential academic partners and contacts?

Can I find new products for my existing machine park?

How can I be visually inspired by designs?

Are there new production processes for my product?

What has been the trend of research directions in my domain?

How can I find new materials?

Which new directions are patented and what is whitespace?

What has been the trend of research directions in my domain?

In which direction can my product or process still evolve?

What are other ways to perform my (cleaning) process?

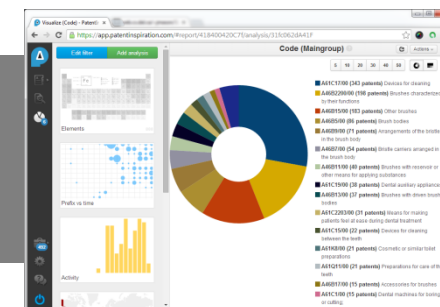
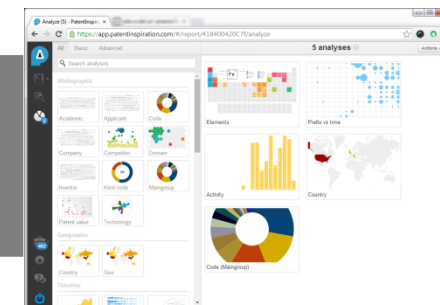
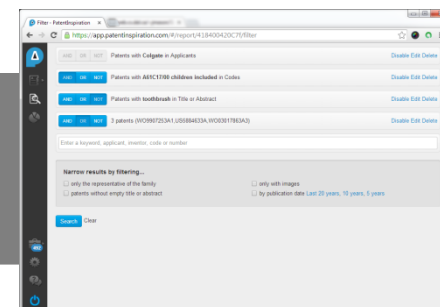
In which direction can my product or process still evolve?

Refining your filter based on results
New report based on results

Step 1: Defining a patent pool
Filtering patents

Step 2: Analyzing data
Analyzing relevant filtered data
(Applicants, Domains, Activity, Inventors, Country, Problems, Fields etc)

Step 3: Processing information
View and study the results of the analysis or export
(graphics, PowerPoint, Excel)



Applicant filter

AND OR NOT

Patents with **Colgate** in Applicants

Disable Edit Delete

Code filter

AND OR NOT

Patents with **A61C17/00 children included** in Codes

Disable Edit Delete

Keyword filter

AND OR NOT

Patents with **toothbrush** in Title or Abstract

Disable Edit Delete

Number filter

AND OR NOT

3 patents (WO9907253A1,US5884633A,WO03017863A3)

Disable Edit Delete

Combine operators



Combination of filters

AND OR NOT

Patents with **Colgate** in Applicants

Disable Edit Delete

AND OR NOT

Patents with **A61C17/00 children included** in Codes

Disable Edit Delete

AND OR NOT

Patents with **toothbrush** in Title or Abstract

Disable Edit Delete

AND OR NOT

3 patents (WO9907253A1,US5884633A,WO03017863A3)

Disable Edit Delete

• 3 different views

Refine search

7407 patents

Number	Title	Published	Applicant
USD6908051	Shaver	1 Oct 2013	BRAUN GMBH
US2013250084	Electric shaver with imaging capability	26 Sep 2013	MAY PATENT ...
US2013250122	Electric shaver with imaging capability	26 Sep 2013	MAY PATENT ...
WO2013140300	Shaver having adaptive surface	26 Sep 2013	KONINK PHIL...
WO2013193934	Tooth socket repair kit	26 Sep 2013	ELASKARY A...
US2013239413	Hair Removal Apparatus	19 Sep 2013	BRAUN GMBH
US8533960B1	Electrical devices, particularly electrical shavers, having magnetically coupled drives	17 Sep 2013	BARISH BENJ...
US2013233142	Block ice shaver	12 Sep 2013	RUPP CARL A
GB2500033A	Razor cleaning accessory	11 Sep 2013	REAVEY OLV...
US2013227841	Heated element based shaver with hair regrowth suppression	5 Sep 2013	RADIANCY INC
CA148351S	Two head dry shaver	3 Sep 2013	PHILIPS ELEC...
CA148352S	Two head dry shaver	3 Sep 2013	PHILIPS ELEC...
USD689242S1	Shaver head	3 Sep 2013	BRAUN GMBH
WO201312634	Device for retaining disposable shaver blade cartridges in a sealed condition	29 Aug 2013	BONFIT AMER...
US2013212885	Electric head shaver	22 Aug 2013	LYLES JOHN
US2013213829	Retaining disposable shaver blade cartridges in a sealed condition and simultaneous...	22 Aug 2013	BONFIT AMER...
US2013205594	Vacuum Shaver	15 Aug 2013	OAK NOVATI...
WO201311691	Microbicial shaving system using heterogeneous photocatalysis, generated by radiat...	15 Aug 2013	DUARTE VIEI...
WO201311109	Inductive charger for hand-held appliances	1 Aug 2013	BRAUN GMBH
EP2621050A1	Inductive Charger for Hand-Held Appliances	31 Jul 2013	BRAUN GMBH
RU2487690C1	Method of surgical treatment of chronic dacryocystitis	20 Jul 2013	EKATERINBU...
US2013180112	Rotary electric shaver	18 Jul 2013	IZUMI PROD CO
EP2614937A1	Rotary electric shaver	17 Jul 2013	IZUMI PROD CO
EP2612735A2	Multi-blade electric rotary razor	10 Jul 2013	DORCO CO LTD

Refine search

7407 patents

PUBLISHED

- 2013 (279)
- 2012 (310)
- 2011 (287)
- 2010 (324)
- 2009 (339)

APPLICANT

- MATSUSHITA ELECTR... (603)
- BRAUN AG (424)
- IZUMI PROD CO (322)
- PHILIPS NV (249)
- KONINKL PHILIPS EL... (176)

INVENTOR

- SHIBA TAKESHI (143)
- IWASAKI JYUZAEMON (103)
- SHIMIZU HIROAKI (94)
- KOMORI SHUNSUKE (90)
- SATO MASAOKI (79)

CODE

- B26B19/04 (410)
- B26B19/14 (398)
- B26B19/38 (391)
- B26B19/3853 (344)
- B26B19/384 (257)

Refine search

422 of 7407 patents

Rotary electric shaver

US2013180112A1 G

Abstract

A rotary electric shaver includes an outer cutter case secured to the outer periphery of an outer cutter and having a sliding surface formed on the outer periphery. An outer cutter case holder is fitted in a mounting port to vertically move with an upper limit position restrained and pivotably holds the outer cutter case to guide the sliding surface. A pushup plate imparts an upward return tendency to an outer cutter case assembly including the outer cutter, the outer cutter case and the outer cutter case holder. The outer periphery of the outer cutter case is provided with a projection extending to the upper surface of the outer cutter frame, serving as a stopper which prevents the outer cutter case from sinking into the mounting port. This arrangement prevents the outer cutter from being caught by the inner edge of the mounting port and improves shaving performance.

Publication date
18 Jul 2013

Applicants

- IZUMI PROD CO [JP]

Inventors

- KOIKE HIDEAKI [JP]

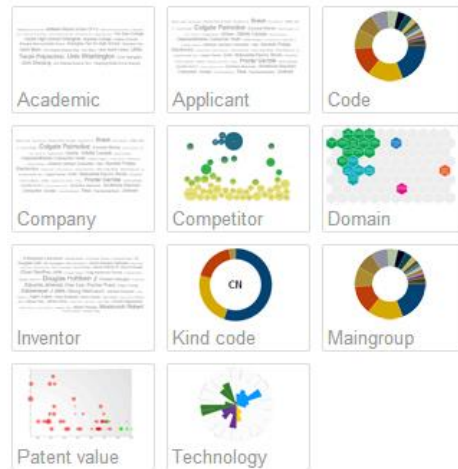
Codes

- B26B19/145
- B26B19/14
- B26B19/384
- B26B19/143

Claims Description Citations Family Literature

1. A rotary electric shaver with a plurality of cutter units, each of which has an outer cutter and an inner cutter, the respective outer cutter being pivotably held at a mounting port of an outer cutter frame held on a main body, and the respective inner cutter being urged upward and rotated by a drive shaft while being in resilient contact with the bottom surface of the outer cutter, the rotary electric shaver comprising an outer cutter case which is secured to an outer periphery of the outer cutter and which has a spherical sliding surface formed on a lower portion of the outer periphery of the outer cutter case; an outer cutter case assembly including the outer cutter, the outer cutter case and the outer cutter case holder, the outer periphery of the outer cutter case is provided with a projection which extends out to an upper surface of the outer cutter frame so as to serve as a stopper which prevents the outer cutter case from sinking into the mounting port.
2. The rotary electric shaver according to claim 1, wherein the outer cutter case has a plurality of engaging hooks extending downward, which is formed integrally with the outer cutter case, and distal ends of the engaging hooks engage the outer cutter case holder from below to connect the outer cutter case with the outer cutter case holder in a vertical direction such that the outer cutter case is pivotable in all directions with respect to the outer cutter case holder.
3. The rotary electric shaver according to claim 2, wherein the outer cutter case holder has a substantially mortar-shaped sliding surface on an upper portion of the inner periphery thereof and a spherical sliding surface on a lower portion of outer periphery thereof, the substantially

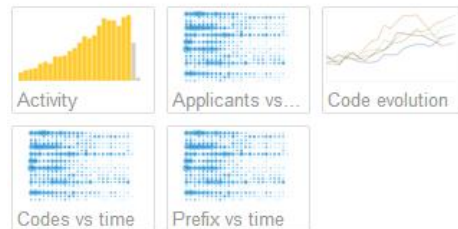
Bibliographic



Geographic



Timeline



AULIVE Method



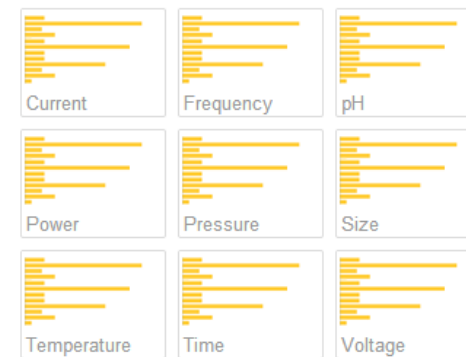
Customs



Text



Unit



Exporting to other software:



- Each visualisation is interactive
- Quickly explore data of an analysis

The image shows a software interface for viewing analysis results. The main window displays a bar chart titled 'Activity' showing patent counts from 1994 to 2013. The y-axis ranges from 0 to 300. The x-axis shows years from 1994 to 2013. A table below the chart shows the number of patents per year:

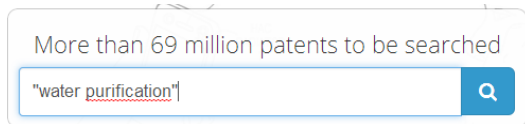
Year	Patents
1994	95
1995	102
1996	101
1997	112
1998	166
1999	116
2000	114
2001	150
2002	145
2003	210
2004	225
2005	260
2006	280
2007	270
2008	310
2009	320
2010	300
2011	280
2012	310
2013	280

A large grey arrow points from the 2012 bar in the chart to a detailed view of the 2012 data. This detailed view shows a list of 310 patents for the year 2012, with columns for Number, Title, Published, and Applicant.

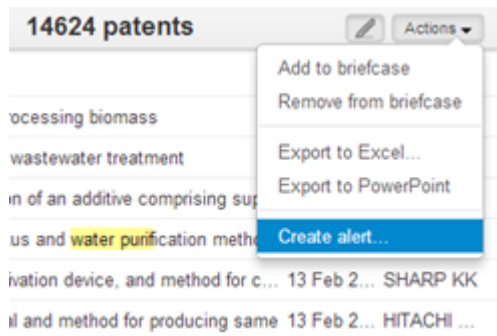
Number	Title	Published	Applicant
KR20120140302A	Auto clipper	31 Dec 2012	KONG JUNG HO
US2012324732A1	Electric shaver	27 Dec 2012	PANASONIC C...
CN202622849U	Shaver capable of displaying electricity quantity	26 Dec 2012	WANG HUAJUN
US2012317815A1	Electric shaver	20 Dec 2012	PANASONIC C...
US2012317817A1	Electric shaver with imaging capability	20 Dec 2012	MAY PATENT...
US2012320180A1	Electric shaver with imaging capability	20 Dec 2012	MAY PATENT...
CN102829338A	Flashlight	19 Dec 2012	CHEN YUPING
CN202603984U	Toothbrush shaver	19 Dec 2012	WANG FEI
CN202607697U	Conveniently detachable rotating shaver device	19 Dec 2012	ZHEJIANG PAI...
CN202607700U	Multifunctional shaver	19 Dec 2012	QIN JIAYOU
CN202616345U	Square lithium-ferrous disulfide battery	19 Dec 2012	HUIZHOU EVE...
CN202616482U	Plug mechanism for shaver	19 Dec 2012	ZHEJIANG PAI...
CA145415S	Styler for shaver	17 Dec 2012	PHILIPS ELEC...
CA145416S	Styler for shaver	17 Dec 2012	PHILIPS ELEC...
US2012311863A1	Shaving device	13 Dec 2012	KONINKL PHIL...
US2012316591A1	Arthroscopic shaver handpiece with modular attachments	13 Dec 2012	LINVATEC CORP
CN202592402U	Shaver	12 Dec 2012	SICHUAN PIS...
CN202602382U	Wireless electric energy transmitting system	12 Dec 2012	SUZHOU QIAN...
USD672504S1	Electric head shaver	11 Dec 2012	LYLES JOHN
CN102806571A	Magnetic suspension head device for shaver	5 Dec 2012	NINGBO KALI ...
CN202572443U	Disposable electric shaver	5 Dec 2012	WANG JIANFE...
CN202572444U	Electric shaver convenient for use by people with weak gripping strength and disabled h...	5 Dec 2012	LI QUNXING
CN202572445U	Multifunctional shaver	5 Dec 2012	CEN XIAFENG

Example: Get each week the new patents related to “water purification”

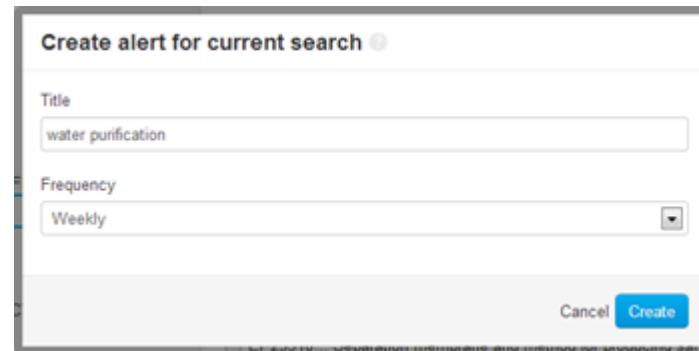
1.Type “water purification” and click on *Search*



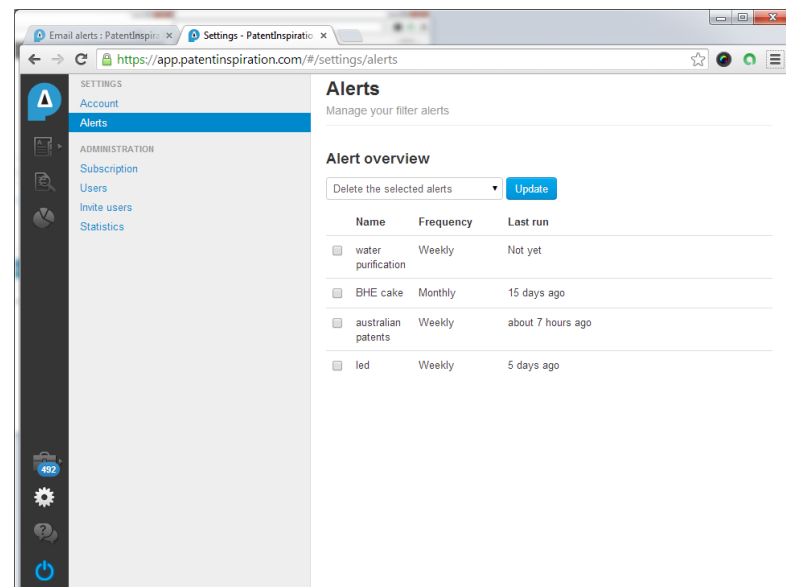
2.Go to Actions and select Create Alert



3.Type ‘water purification’ as Title and choose Weekly as Frequency



4. Goto settings and click on Alerts to get an overview



- Public
- Team (only for Team and Company license)
- Private (default)
 - Option: give list of users that may view/edit report

Report sharing settings ?

Link to share

<https://app.patentinspiration.com/#/report/51B22A5B11B5/filter/patents>

Visibility options


- Public**
Anyone who has the link can access the report.
- Team**
All your team members can access the report.
- Private**
Only the users listed below can access the report.

jve@creax.com(You) Is owner

Enter email addresses separated by comma's

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- [Academic analysis](#)
- [Activity analysis](#)

Administration (2) »

-

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- [Keyword filter](#)
- [Applicant filter](#)

Glossary (12) »

- [AULIVE method](#)
- [Description](#)
- [CPC](#)

Tips & Tricks (6) »

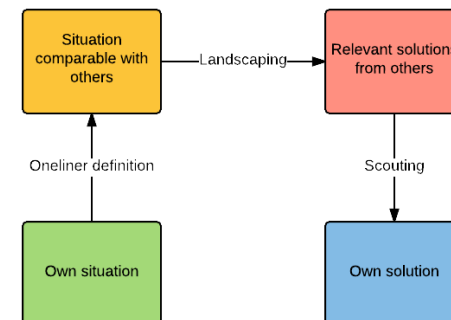
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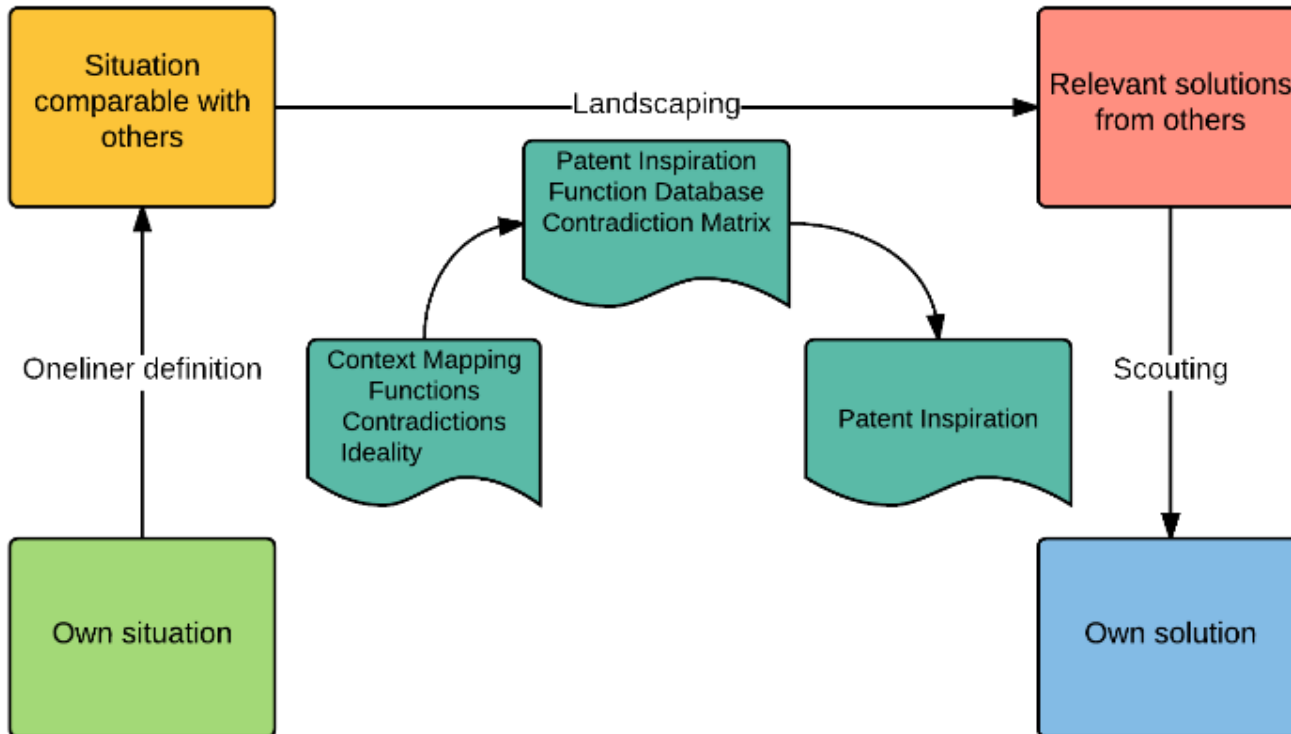
Patent Inspiration is based on TRIZ. TRIZ includes a practical methodology, tool sets, a knowledge base, and model-based technology for generating innovative solutions for problem solving. It is intended for application in problem formulation, system analysis, failure analysis, and patterns of system evolution (next generation product or market).

The research has produced three primary findings:

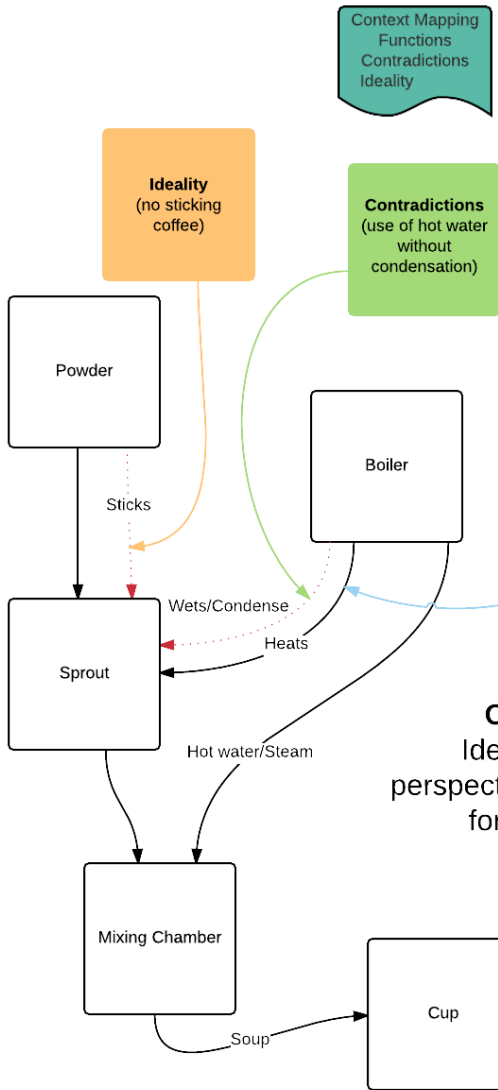
- problems and solutions are repeated across industries and sciences
- patterns of technical evolution are also repeated across industries and sciences
- the innovations used scientific effects outside the field in which they were developed

TRIZ presents a systematic approach for understanding and defining challenging problems: difficult problems require inventive new perspectives, and TRIZ provides a range of strategies and tools for finding these. One of the earliest findings of the massive research on which the theory is based is that the vast majority of problems that require inventive solutions typically reflect a need to overcome a dilemma or a trade-off between two contradictory elements. The central purpose of TRIZ-based analysis is to systematically apply the strategies and tools to find superior solutions that overcome the need for a compromise or trade-off between the two elements.





A manufacturer of coffee machines has a problem with **condensation** coming from the steam. Due to this the coffee powder sticks on the sprout



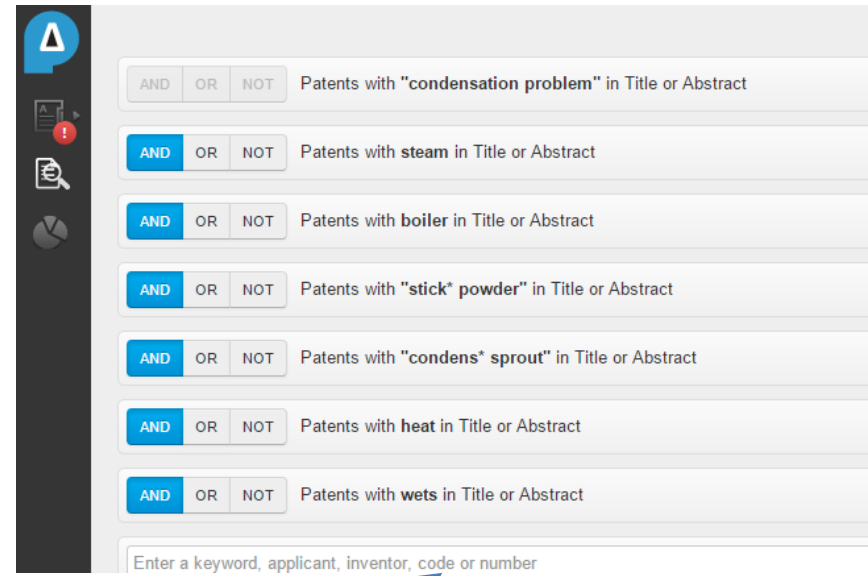
Context Mapping
Functions
Contradictions
Ideality

Contradictions
(use of hot water
without
condensation)

Functions
(verb-noun)
heats sprout
sticks coffee
condense sprout

Patent Inspiration

ContextMapping:
Identifying the several
perspectives setting up the filters
for Patent Inspiration



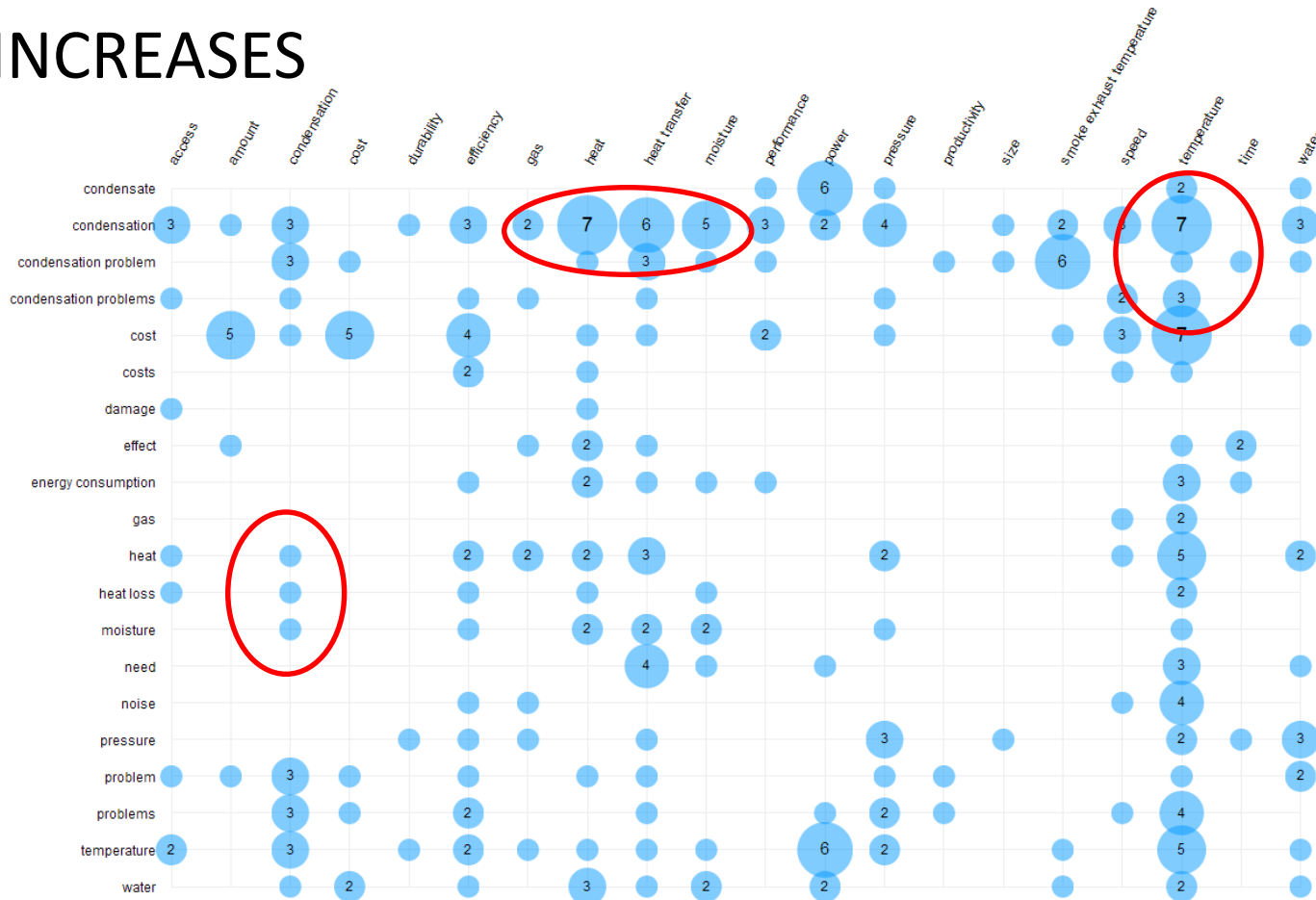
the Filter

Looking for unusual domains with a similar condensation problem

1223 patents		Published	Applicant
<input type="checkbox"/>	Number		
<input type="checkbox"/>	Title		
<input type="checkbox"/>	US9194281B2	24 Nov 2015	FORD GLOBAL TECH LLC
<input type="checkbox"/>	US2015292711A1	15 Oct 2015	BRANSON MARK
<input type="checkbox"/>	US2015292713A1	15 Oct 2015	BRANSON MARK
<input type="checkbox"/>	US2015292841A1	15 Oct 2015	FULTZ DAN L
<input type="checkbox"/>	US9145823B2	29 Sep 2015	FORD GLOBAL TECH LLC
<input type="checkbox"/>	US9127359B2	8 Sep 2015	CKD CORP
<input type="checkbox"/>	US9127607B2	8 Sep 2015	FORD GLOBAL TECH LLC
<input type="checkbox"/>	US9119326B2	25 Aug 2015	MCDONNELL GERALD
<input type="checkbox"/>	KR101539085B1	24 Jul 2015	DSTECH CO LTD
<input type="checkbox"/>	CN103196180B	22 Jul 2015	ZHUHAI GREE ELEC AP...
<input type="checkbox"/>	US9067036B2	30 Jun 2015	KORNEFF NEIL
<input type="checkbox"/>	US9061282B2	23 Jun 2015	ICKE RICHARD GEOFFR...
<input type="checkbox"/>	US9057669B2	16 Jun 2015	VAN STRAATEN MARK
<input type="checkbox"/>	US9058731B2	16 Jun 2015	SIMPLEXGRINNELL LP
<input type="checkbox"/>	US9051598B2	9 Jun 2015	TANG BENZHONG
<input type="checkbox"/>	CN102856825B	3 Jun 2015	CHANGZHOU POWER S...
<input type="checkbox"/>	US9046406B2	2 Jun 2015	MAUDUIT LAURENT
<input type="checkbox"/>	US2015136201A1	21 May 2015	COMMISSARIAT I ÉNER...
<input type="checkbox"/>	US9027576B2	12 May 2015	CHO YONG-JHIN
<input type="checkbox"/>	CN104566840A	29 Apr 2015	HAIER GROUP CORP
<input type="checkbox"/>	US2015109009A1	23 Apr 2015	ESSAI INC
<input type="checkbox"/>	US9007080B2	14 Apr 2015	ESSAI INC
<input type="checkbox"/>	US8991123B2	31 Mar 2015	STORAGE SYSTEMS N...
<input type="checkbox"/>	US8991111B1	31 Mar 2015	HARKINS DANIEL J
<input type="checkbox"/>	EP2644993B1	18 Mar 2015	ELOMATIC OY
<input type="checkbox"/>	GB2518148A	18 Mar 2015	LANDA CORP LTD
<input type="checkbox"/>	CN204208235U	18 Mar 2015	TAICANG JINGHAIXING ...
<input type="checkbox"/>	US8980621B2	17 Mar 2015	KOPP MARTIN
<input type="checkbox"/>	US8981802B2	17 Mar 2015	BARABI NASSER
<input type="checkbox"/>	WO2015033174A1	12 Mar 2015	SKEHAN PROJECT SER...
<input type="checkbox"/>	GB2506642B	11 Mar 2015	JGM INTERNAT T AS FL...

VS INCREASES

DECREASES



Finding similar condensation contradiction for updating the filter decreasing versus increasing parameter

abating • anchoring • binds • defrosting • dehumidifying • delimited • desulfurized • dewatering •
dewing • diluted • drilled • drum • drying • elongated • exhaled • flushed •
framing • fueling • gasifying • glazing • humidifying • implant • impregnated • ironing • knitted •
locking • moisture • netting • pivoted • precipitate • preconditioning • prefabricated • profiling • pyrolyzing •
reacting • recirculated • refrigerating • retrofit • spanning • spinning • steaming • stimulated •
stretched • tensioned • throttling • treating • washing • wetting • woven • zig-zag •

Finding new nouns (perspectives) for updating the filter

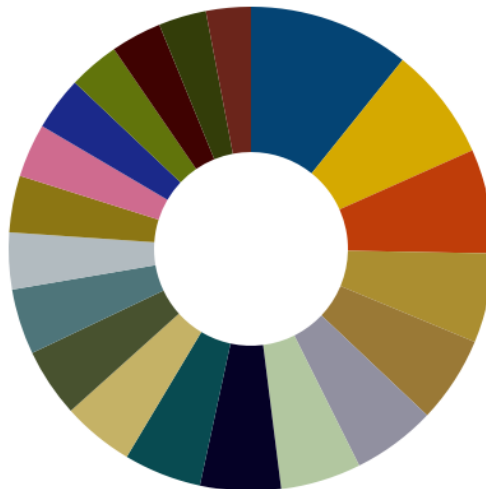
Landscaping – finding unusual domains

aperture • atmosphere • **barrier** • beam • blower • cabinet • cavity • chemical • combustion •
 compressor • conditioner • conduit • dew • door • duct • enclosure • **energy** • exterior • fan •
 flange • floor • flue • formation • fuel • gases • glass • heater • humidity • **inlet** •
 interior • **moisture** • nozzle • **outlet** • pane • panel • passage • path • port •
 profile • reaction • recovery • refrigeration • **roof** • skin • steam • stream • tank • web •
 window • zone •

Finding new verbs (perspectives) for updating the filter

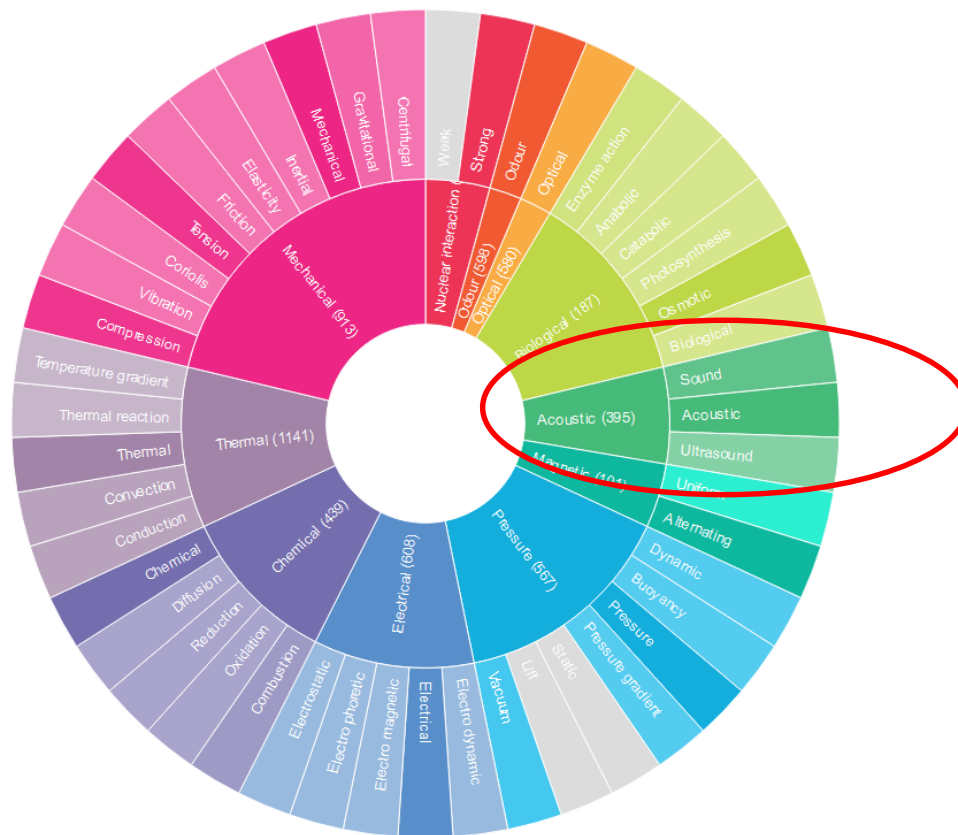
auto • autocatalytic • autocorrelated • autocorrelates • autocorrelating • autocorrelation • autocorrelations •
autocorrelator • **autogenous** • autoimmune • automakers • **autonomous** • **self** • self-absorption •
self-adhesive • self-adhesives • **self-adjust** • self-affinity • self-align • self-centering •
self-cleaning • self-compensation • **self-contained** • self-correct • self-drilling • self-driven •
self-extinguishing • self-explanatory • **self-heating** • self-ignition • self-insulating • self-luminous • self-metering •
self-powered • self-pulsed • self-pulsing • self-purging • self-quinching • **self-regulating** • self-saturating •
self-sealing • self-similar • self-similarity • self-sufficient • self-supported • **self-supporting** •
self-sustaining • selftapping • **self-tapping** • self-terminating •

Finding new ideality (perspectives) for updating the filter

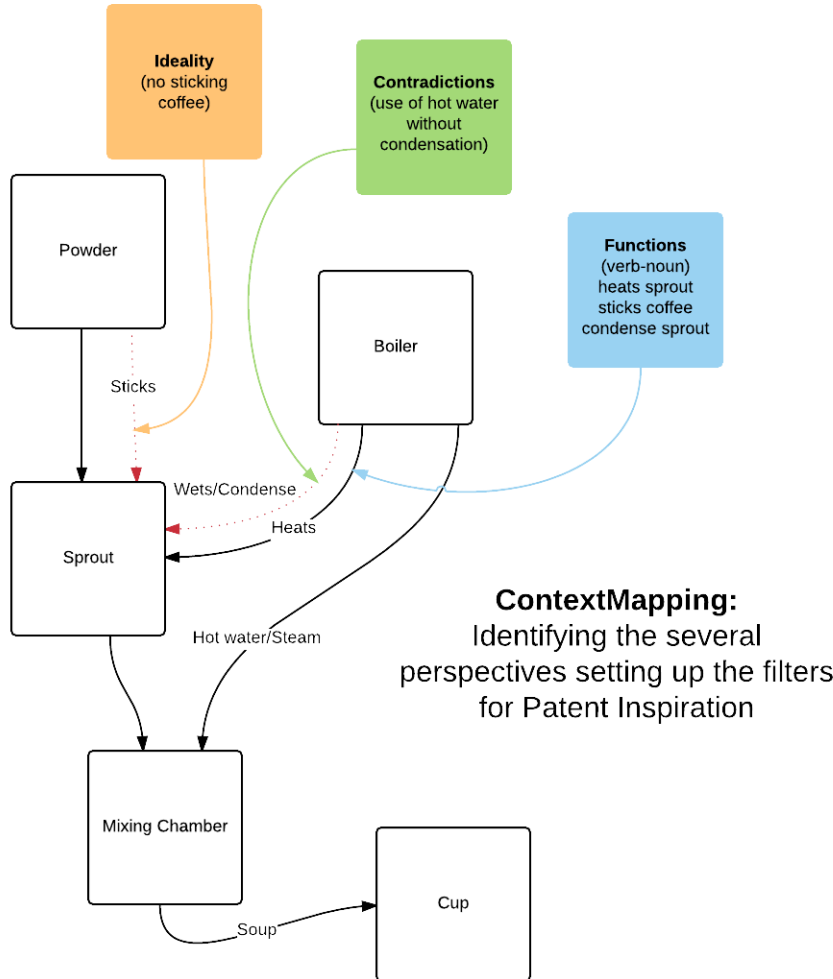


- E06B3/00 (54 patents) Window sashes
- E04D13/00 (38 patents) Special arrangements or devices in connection with roof coverings;
- E04B1/00 (35 patents) Constructions in general;Structures which are not restricted either to walls
- Y10T428/00 (30 patents) Stock material or miscellaneous articles
- Y02T10/00 (29 patents) Road transport of goods or passengers
- F24F13/00 (28 patents) Details common to
- B01D53/00 (27 patents) Separation of gases or vapours;Recovering vapours of volatile solvents from gases;Chemical or biological purification of waste gases
- Y02B30/00 (27 patents) Energy efficient heating
- Y10T1137/00 (26 patents) Fluid handling
- F24F7/00 (24 patents) Ventilation
- H01L21/00 (23 patents) Processes or apparatus adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof
- Y02E10/00 (22 patents) Energy generation through renewable energy sources
- F25D21/00 (19 patents) Defrosting;Preventing frosting;Removing condensed or defrost water
- Y10T29/00 (19 patents) Metal working
- G01N33/00 (18 patents) Investigating or analysing materials by specific methods not covered by the preceding groups
- F24J2/00 (18 patents) Use of solar heat
- E06B7/00 (17 patents) Special arrangements or measures in connection with doors or windows
- A61M16/00 (17 patents) Devices for influencing the respiratory system of patients by gas treatment
- F24F3/00 (16 patents) Air-conditioning systems in which conditioned primary air is supplied from one or more central stations to distributing units in the rooms or spaces where it may receive secondary treatment;Apparatus specially designed for such systems
- F24F11/00 (15 patents) Control or safety systems or apparatus

Finding new domains & industries (perspectives) for updating the filter



Finding new fields(perspectives) for updating the filter

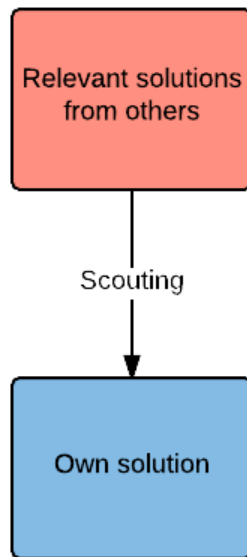


ContextMapping:
Identifying the several perspectives setting up the filters for Patent Inspiration

Results of Landscaping - a list of unusual domains

Self-cleaning
Medical devices
Defrosting
Hydrofobic
Ultrasound

.....



unusual domains

Self-cleaning
Medical devices
Defrosting
Hydrofobic
Ultrasound

.....

What is relevant?

unusual

Medical devices

relevant

Filter

condensation

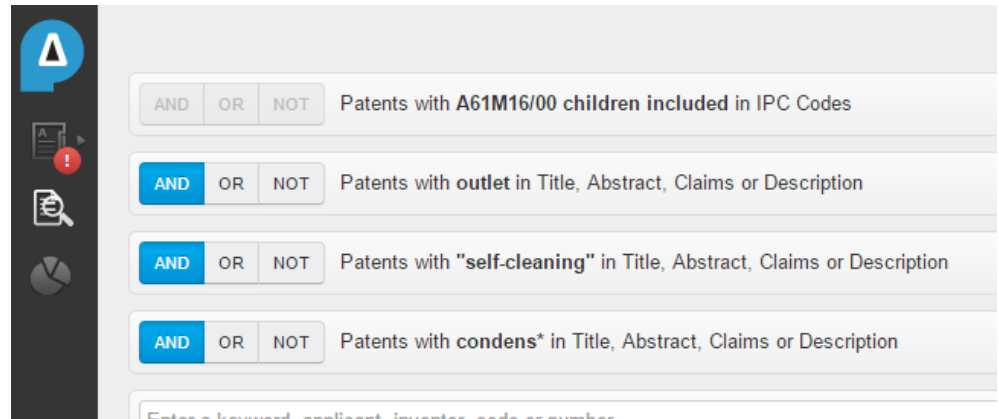
self-cleaning

flow

Outlet

IPC-code A61...

.....



What is relevant?

ASVADI SIMA • BECHTEL MARTIN • BIENER ACHIM • BOERNERT PETER • BOMBARD D LA •

CHEN ZONGNAN • CLIFFORD EARL W • CRANDALL NORMAN CLYDE • DEPEL WILLIAM • ECKART RAINER • EIFLER MARTIN •

FAN GUANRONG • FELDHAHN KARL ANDREAS • FRENCH ROBERT C • FRERICHS ARNOLD • GOBEL FRED G • GREY CHRISTOPHER •

HAARTSEN JACOB ROGER • HAFER KEVIN • HEIDMANN DIETER •

HENDRIKS CORNELIS PETRUS • HILL STEPHEN D • HOLLISTER WILLIAM H •

KEUPP JOCHEN • KLEE MAREIKE • KOLOBOW THEODOR •

LANG BERND • LEVITSKY GERSHON • MADAUS STEFAN • MARX THOMAS •

MECIKALSKI MARK B • MUTO RUDOLPH • NIE SHINAN • OVERWEG JOHANNES ADRIANUS •

POTZE WILLEM • RISKIN EFIM • SCHNELL RALF • SCHULZ GERD •

SORCE PETER S • THUESON DAVID OREL • TRAWOGER RUDOLF • TRIPLETT CARL •

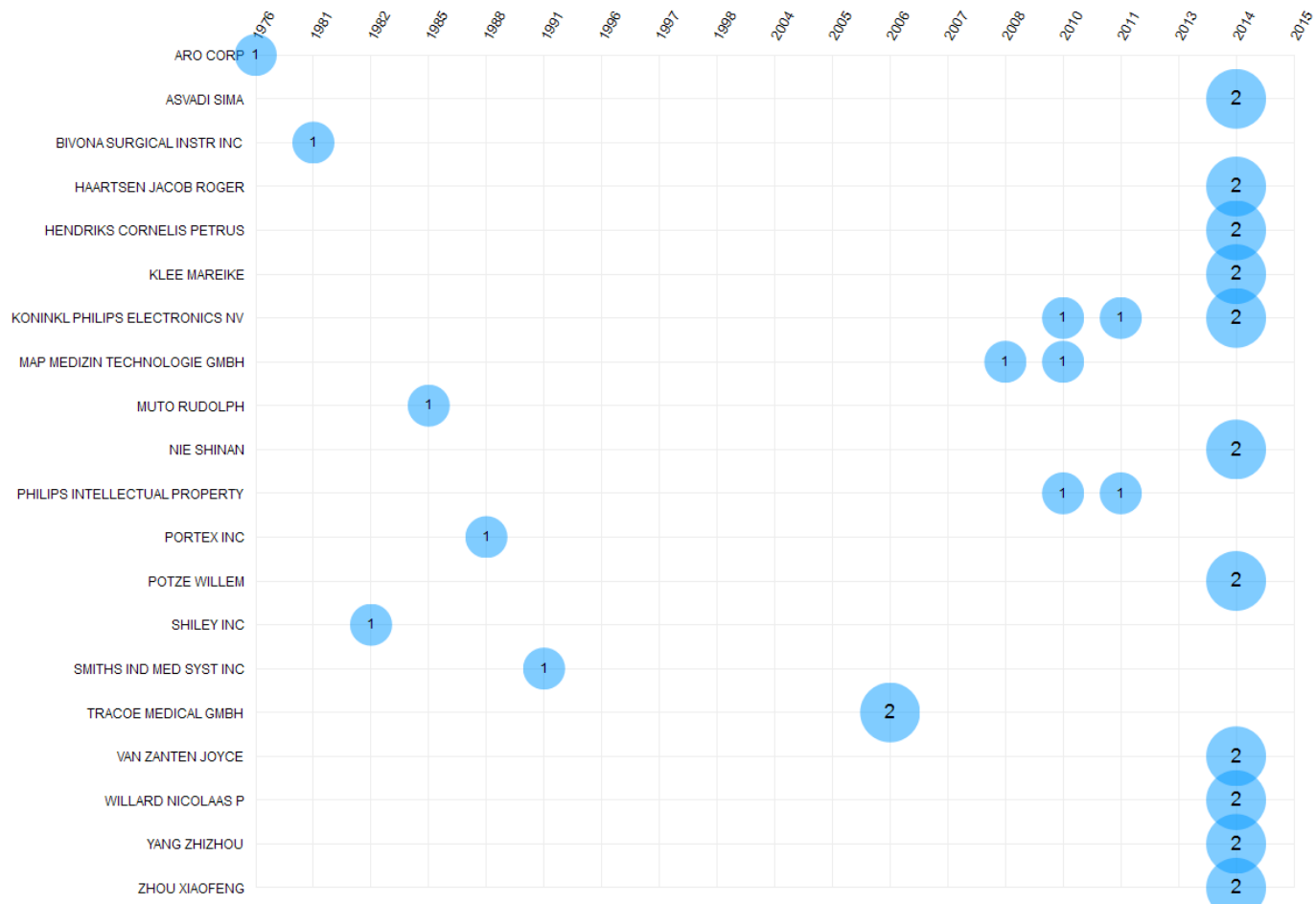
VAN ZANTEN JOYCE • VOEGELE HARALD • VOGELE HARALD •

WILLARD NICOLAAS PETRUS • WILLIAMS DAVID R • YANG HAIHUI •

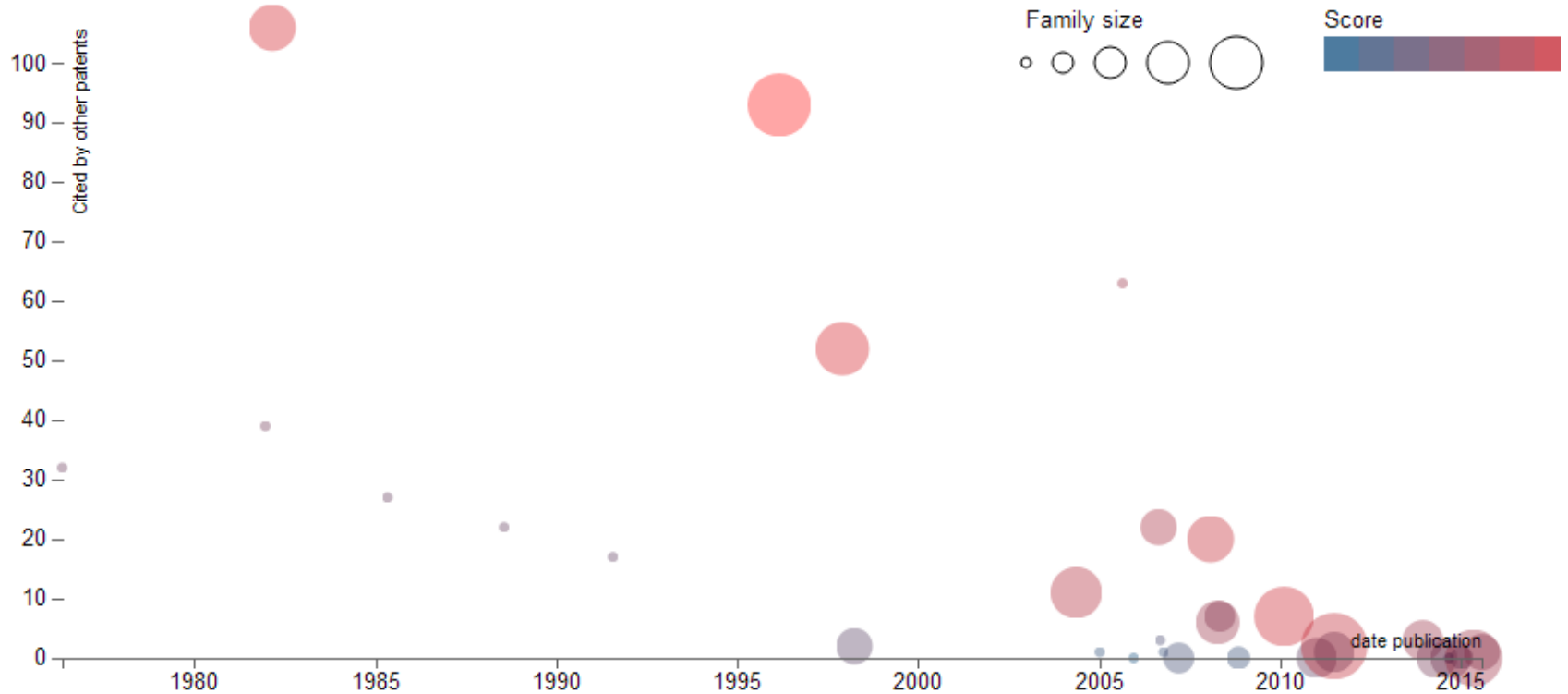
YANG ZHIZHOU • ZHOU XIAOFENG •

Find out who are the main inventors in this domain

Scouting – finding unusual relevant domains



The number of patents per applicant versus time in years in this domain.



Which of the patents in your patent pool are most valuable

◀ 3 of 33 patents ▶

Title	Abstract	Claims	Description
condens...	1	8	131
condens...	0	0	2

Filter Hits: condens* problem*,outlet*,self*... 633

User Defined Hits: condensation 1 of 2

Outlet connection assembly and method of making the same θ .

Abstract

A connection assembly for a respiratory therapy system, comprising: an **outlet** assembly, said **outlet** assembly including an **outlet** housing and a swivelling disc located on said **outlet** housing, said **outlet** housing and said swivelling disc defining, at least in part, a recess; an **outlet** connector located at an end of a tube portion, said **outlet** connector including an electrical connector; and a cable having a first end to connect to the electrical connector and a second end to connect to at least one electrical component of the respiratory therapy system, said cable having a slack portion, wherein said **outlet** connector and said swivelling disc are rotatable in unison between a first position and a second position, and wherein the slack portion of the cable extends from the recess and wraps around the swivelling disc as the swivelling disc is rotated from the first position to the second position.

Publication

WO2014205513A1 (31 December 2014) [↗](#)

Application

AU2014050089W (24 June 2014)

Granted

No

Applicants (Standard names ▼) ?

RESMED LTD [AU]

Inventors (Standard names ▼) ?

FOOTE ROGER MERVYN LLOYD [AU]

HUBY RONALD JAMES [AU]

NASR SAAD [AU]

STANISLAS LUKE ANDREW [AU]

TANG ZHUO RAN [AU]

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IPC Codes

A61M16/16

CPC Codes

A61M16/0816

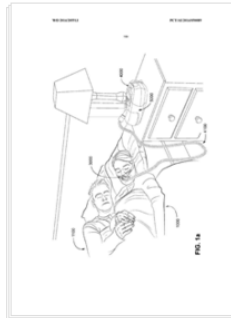
A61M16/0051

A61M16/0825

A61M16/0875

A61M16/1085

[+]



Claims Description Citations Family Literature Notes

4100 is configured to prevent occurrence of an **condensation**, especially in the air circuit 4100. To this end, the air circuit 4100 may be provided with a heating element as will be described in greater detail below. The humidifier 500 and the air circuit 4100 may be further configured to allow the patient 1000 to arrange the air circuit 4100 to improve their sleeping comfort. Further, the humidifier 5000 and the air circuit 4100 are configured to allow cleaning of the air circuit 4100 and/or the humidifier 5000, and to prevent ingress of water into any electronic components, such as in the humidifier 5000, the air circuit 4100 or the RPT device 4000.

[279] An example of a humidifier 5000 which is integrated with an RPT device

4000 is shown in Figures 3b- 3d. Another example of a humidifier 500 is shown in Figs. 3g-3h.

6.6 AIR CIRCUIT-OUTLET CONNECTION

6-6.1 Comiecti n overview

[280] As described in some detail above, a respiratory therapy system ma


include certain components such as RPT device 4000, a humidifier 5000, and a patient interface 3000. The RPT device 4000 and humidifier 5000 may be combined into a single, integrated unit as shown in Fig. 3h-3d. Alternatively, the RPT device 4000 and the humidifier 5000 may be separable such that the patient can use the RPT device without the humidifier. In either scenario a connection must be made to the patient interface 3000 so that the patient can receive the flow of gas from the RPT device 4000 and/or the humidifier 5000. An air circuit 4100, as described above, may be provided to pneumatically connect the patient interface 3000 to the RPT device 4000 and/or the humidifier 5000. As shown in Fig. 4a, the air circuit 4100 may include a tube portion 4102 and an **outlet** connector 4106 to connect the air circuit to the RPT device 400 and/or the humidifier 5000. The tube portion 4102 may also include a helical coil 413 to provide support for the tube portion. The air circuit 4100 may also incorporate a heating element, which may be provided within the helical coil 413. The heating element in the air circuit 4100 may heat the air circuit 410 and the flow of gas travelling therethrough in order to prevent rainout (**condensation**) of water vapor, for example, within the tube portion 4102 or the patient interface 3000. When a heating element is provided in the helical coil 4103 electrical power and/or signalling may be necessary if, for example, the heating element is an electrical resistance heater. In some instances, an electrical connection may be required between the patient interface 3000 and the RPT device 4000 and/or the humidifier 5000 for electrical power and/or communication theret eeen. 1] Fig. 20a and Fig. 20b show an example of the RPT device 4000 and a humidifier 5000 that has been combined into a single, integrated unit, wherein a water reservoir is not shown. Fig. 20a shows an air circuit 4100 separated from the RPT device 4000 in an exploded view, and Fig. 20b shows the air circuit 4100 assembled with the RPT device 4000.

6.6.1.1 Pneumatic and electrical connections with a single connector

] The air circuit 4100 may require both pneumatic and electrical connections to be formed to the humidifier 5000 (or the RPT device 4000), as well as a mechanical connection. These connections may be formed through the **outlet** connector 4106 to allow the pressurized gas to flow to the patient: interface 3000, to provide electrical power and signalling t the heating element in the helical coil 4103 and to locate and secure the air circuit 4100 relative to the humidifier 5000 (or the RPT device 4000). These connections may be formed simultaneously or in series such that one of the mechanical, pneumatic or electrical connections i completed before others. The air circuit 41.00 may comprise on another end a patient interface connector 4107

Outlet connection assembly and method of making the same

Inventors (Standard names ▼) ?

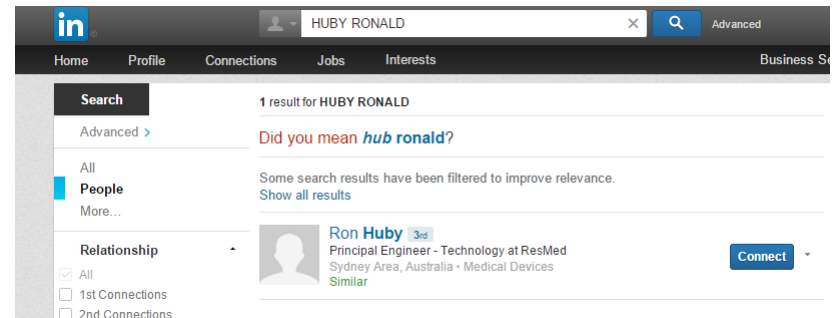
- FOOTE ROGER MERVYN LLOYD [AU]
- HUBY RONALD JAMES [AU]  x
- NASR SAAD [AU]
- STANISLAS LUKE ANDREW [AU] [View on LinkedIn](#)
- TANG ZHUO RAN [AU]

[+]

CPC Codes

- A61M16/0816
- A61M16/0051
- A61M16/0825
- A61M16/0875
- A61M16/1085

[+]



Which person is interesting & relevant for you to contact