





## Brain@work - Information Literacy

The state of the art beyond bibliographic search (or patent literature search)

#### **IP Search Tools**

February 3, 2020

Valorisation Unit | Eurecat

Brain@work core topic: Information literacy

The United States National Forum on Information Literacy defines information literacy as "... the hyper ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand."

(Source: Wikipedia)



# Brain@work - Information Literacy Intellectual Property (IP) Search Tools

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## Back to basics: what do we mean by IP?

• Intellectual property is the product of imagination and creativity.



#### Where can IP be created?

- Intellectual property can be a product of the imagination in:
  - artistic fields
  - aesthetic fields
  - commercial fields
  - technical fields.

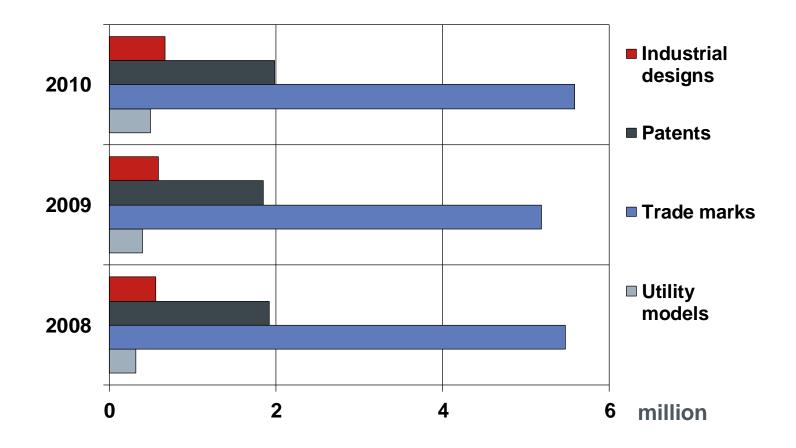








## **Total filing figures for various IP rights 2008-2010**



Source: European Patent Office (EPO)



## The patent system yesterday and today

#### Senate of Venice, 1474

"Any person in this city who makes any new and ingenious contrivance, **not made heretofore in our dominion**, shall, as soon as it is perfected so that it can be used and exercised, give notice of the same to our State Judicial Office, it being forbidden up to 10 years for any other person in any territory of ours to make a contrivance in the form and resemblance thereof".

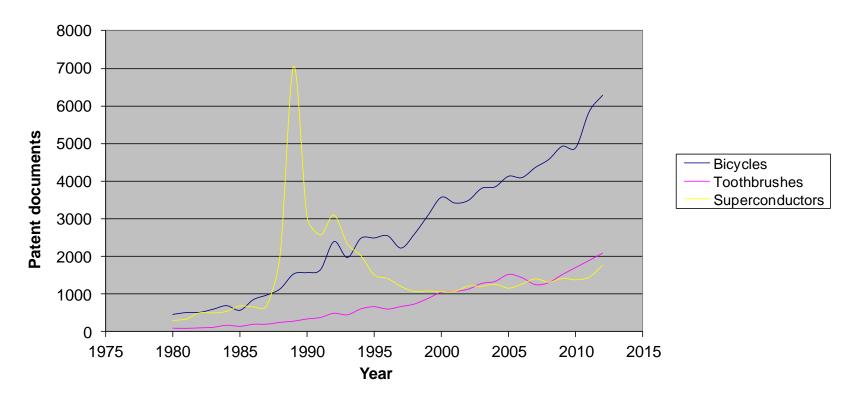
#### **Today:**

- New to the world
- Up to 20 years of protection and to share knowledge
- Publication

- Incentive to innovate



#### Patents are all around us











## The role of the patent system

- To encourage technological innovation
- To promote competition and investment



- To provide information on the latest technical developments
- To promote technology transfer







## Patents as a social contract: The publication deal

Reveal





Patent applicant





**Public** 

In exchange for the legal rights obtained through registration, owners agree to the substance of their IP being made public.



## What is a patent?

Does a patent give you the right to exploit an invention?

- **NO!** 



- A patent is a negative right.
   It gives you the right to prevent others from exploiting the invention.
   It is not an enabling right.
- Patents owned by others may overlap or encompass your own patent.
   -> Seek a licence before commercialising

For example:



Your patent B:
Electric kettle with
ceramic heating
elements

Patent A:

Electric kettle



## Advantages and disadvantages of getting a patent

#### **Advantages**

- Exclusivity enables investment and higher returns on investment
- Strong, enforceable legal right
- Makes invention tradable (licence, sale, assign)

#### **Disadvantages**

- Reveals invention to competitors (after 18 months)
- Can be expensive
- Grant may take 3-5 years at least!
- Patent enforceable only after grant; proceedings can be costly



## **Alternatives to patenting**

#### Disclose (publish) the information

- Cheap
- Prevents others from patenting the same invention
- Does not offer exclusivity
- Reveals the invention to competitors

#### Keep it a secret

- Cheap (but there is the cost of maintaining secrecy)
- Does not reveal the invention
- No protection against reverseengineering/duplication of invention
- Difficult to enforce
- Secrets often leak quite fast

#### Do nothing

No effort required

- Does not offer exclusivity
- Competitors will often learn details



## What to consider before filing an application

#### **Should you patent your invention?**

Cost/benefit analysis





#### Is your invention patentable?

- Conduct a prior art search
- Get advice on legal requirements





**Have you clarified the rights to the invention** with the company, its employees and business partners?







## What do patent documents look like?

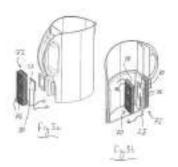
Date of EP 1 520 497 A2 EUROPEAN PATENT APPLICATION publication (43) Date of publication: (51) Int CI.7: A47G 19/22, C02F 1/00 06.04.2005 Bulletin 2005/14 (21) Application number: 04256130.8 Date of (22) Date of filing: 04.10.2004 (72) Inventor: Scott, Michael James (84) Designated Contracting States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR Isle of Man IM9 5PH (GB) filing HU IE IT LI LU MC NL PL PT RO SE SI SK TR Designated Extension States: (74) Representative: Samuels, Adrian James Frank B. Dehn & Co., (30) Priority: 03.10.2003 GB 0323237 London EC4V 4EL (GB) 27.02.2004 GB 0404293 **Applicant** (71) Applicant: STRIX LIMITED A request for correction of the drawings has been Ronaldsway, Isle of Man IM9 2RG (GB) filed pursuant to Rule 88 EPC. A decision on the Designated Contracting States: request will be taken during the proceedings before the Examining Division (Guidelines for Examination in the EPO, A-V, 3.). Water Storage Apparatus (57) A water treatment and storage vessel has a restion 2 is provided for receiving and storing treated water which comprises a Peltier-effect device 25 for removing ervoir 50 for untreated water and filter means 51 in fluid heat from treated water therein, thereby cooling the wacommunication with the reservoir 50. A main vessel por-**Abstract** 

Printed by Jouws, 75001 PARIS (FR)

Application number Technical class Inventor



#### Description



Drawing(s)

#### Cleims

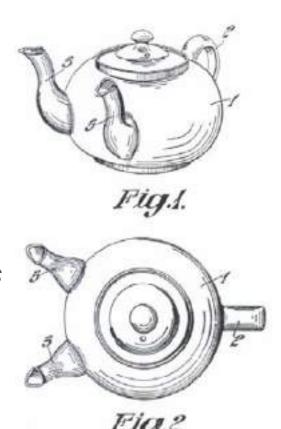
- Aportable water treatment and storage vessel comprising
  - a reservoir for a rorested water.
  - filter means in fluid communication with said receivair; and
  - a main vessel portion for receiving and storing freeled water;

wherein said main vessel portion comprises, electro-hermal cooking means for remaining heat, from the treated water therein, thereby cooking the

Claim(s)

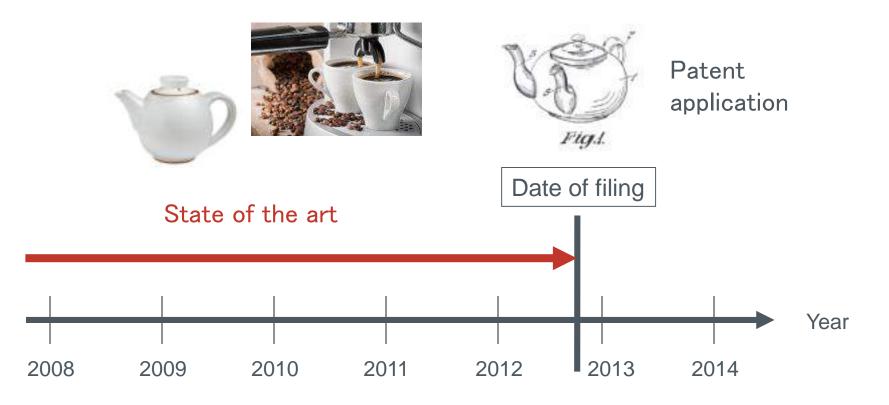
## What does the description contain?

- Prior art
  - teapot with one spout
- Drawback of prior art
  - time-consuming
- Problem to be solved
  - reduce filling time for multiple cups
- Solution
  - provide a second spout
- Advantage of the invention
  - filling time is reduced



#### When is an invention "new"?

- Keep your invention confidential until you have filed your application!
- When it is not part of the state of the art
- State of the art =
   everything made available to the public before the date of filing



#### Do's and don'ts for safeguarding novelty









#### Don'ts

- Do not publish any articles, press releases, conference presentations/ posters/ proceedings, lectures or blog posts, etc. before you file
- Do not sell any products incorporating the invention before you file

#### Do's

- Sign a non-disclosure agreement (NDA)
- Seek professional advice at an early stage
- File before anyone else does!







#### PATENT SEARCH: MOTIVATION

## Why search?

- To find out what others are doing
- New 'ideas'.
- Freedom to operate (also called FtO).
- Enforcement.

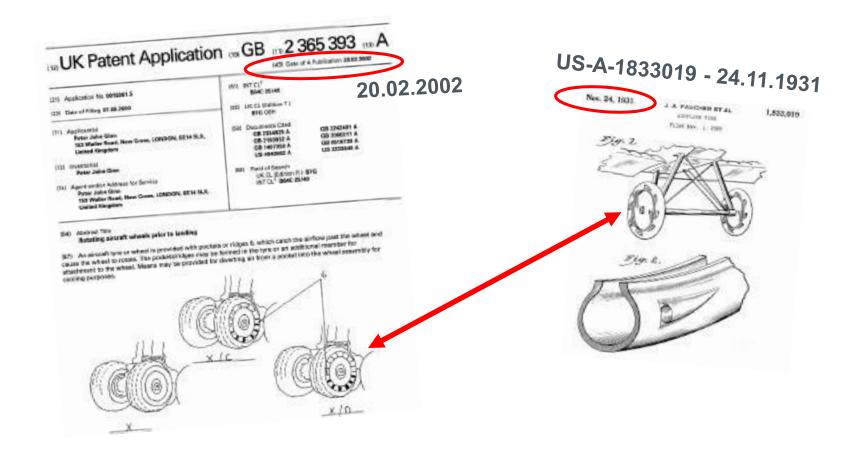
#### Last but not least...

Because it's there!



## Re-inventing the wheel - literally

- 15-25% of all R&D efforts are wasted each year on inventions that have already been invented.
- Don't start your R&D until you have done a search!

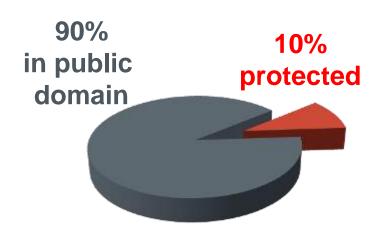




## Solutions found in patent documents

Where do competitors publish their R&D?

Approximately **80%** of the information which can be found in patents is not available anywhere else in comparable detail.



# You can find many great solutions for free!

In patents

#### Reasons

- Applications rejected/withdrawn or patent invalidated
- Payment of renewal fees discontinued

Elsewhere

Patents have lapsed (>20 years)



## **Technology watch**

## Apple Envisions a Mac Made From a Sheet of Curved Glass

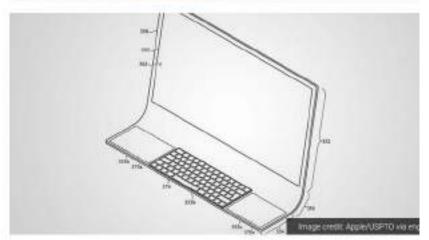
It's not necessarily a new iMac, but it shows Apple's thinking











Nota original publicada en Engadget

Apple is known to explore unusual Mac designs, but its latest may be more eye-catching than most. The company has applied for a patent on a desktop Mac design whose main body consists of a single, curved sheet of glass -- a wedge at the back could both house processing components and prop up the design. A slot at the bottom center would let you slot a keyboard through, and Apple even envisions the possibility of altering the curve to adjust the display angle or fold the system shut.

One section of the patent imagines sliding a MacBook's keyboard section through the slot, suggesting this design could also be used for a laptop dock instead of a fullfledged computer.

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Will be used in accordance Policy

This isn't a product roadmap for Apple -- we wouldn't count on a curvedglass Mac like this arriving soon, if at all. There would be technical limitations to overcome like adjustability of the display (folding phones are barely a thing, let alone desktops), and Apple may simply decide that a 'safer' design like the current iMac is enough. This patent application does shed light on Apple's design process, though, and suggests that it's willing to dramatically revamp desktop Macs if and when that makes sense.



## Searching for patents is easy: Pat Search Tools

&

#### Free patent databases

Free worldwide patent information at

www.espacenet.com



Patentscope (WIPO)

National Patent offices:
US Patent Office (USPTO)
DPMA (Germany)
JPO (Japan)
OEPM (Spain), etc.

Commercial patent databases (Payment)

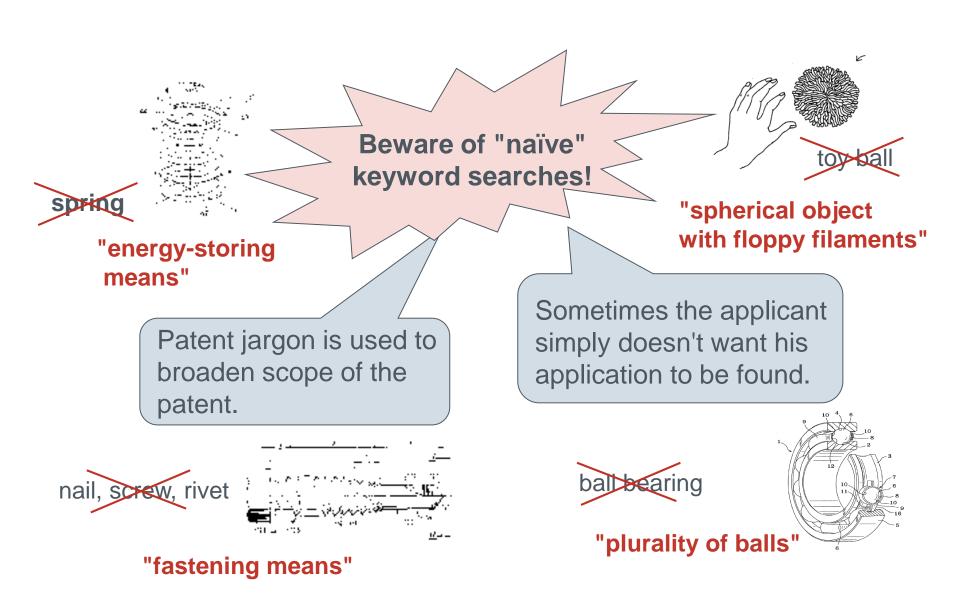
Commercial database servers:
STN (Chemical abstracts)
Questel-Orbit
Proquest Dialog

Dedicated databases:
Patbase (Minesoft)
Derwent (Clarivate analytics, previously Thomson, from Thomon Reuters)

Also Google Patents, a.o.

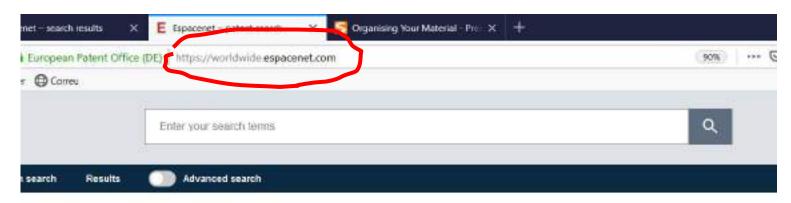


## ... but a basic knowledge of patent jargon is needed!

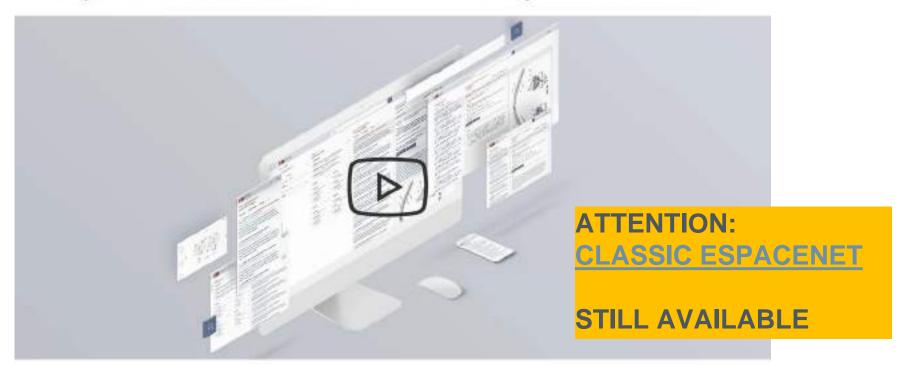




## **ESPACENET**



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ATTENTION: CLASSIC ESPACENET

#### About Espacenet

Pocket guide
Changes in Espacenet
Discussion forum
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More on Espacenet

Coverage

Bibliographic coverage

Full-text coverage

More on EPO data

Service & support

Contact us







## Who are the potential users?

- Scientists
- Engineers
- Lawyers
- Economists/business administrators
- Historians



## The structure of patent documents

- Front page
- Bibliographic data
- Title
- Abstract
- Description
- Drawings
- Claims
- Search report



## The structure of patent documents

## The front page





discharging green books referred how the mouth

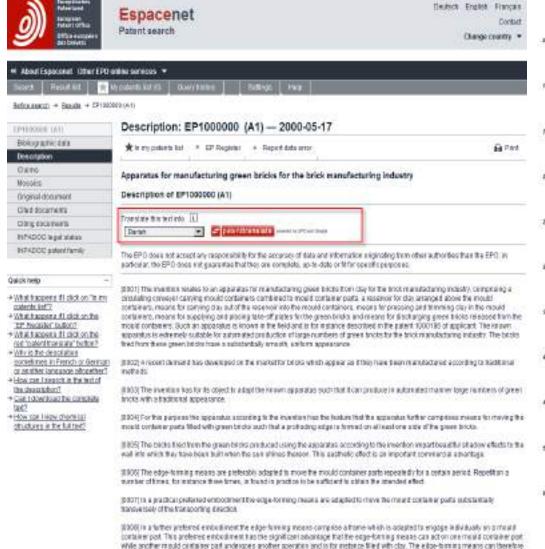
consiners, sharecretted in that the appendue further

comprises means (III) for moving the record mentel-on

pens on fined with green brook made that a



## The description



be added to the known appared a without this affecting the production time.

#### Ceacription

[9001] The immediar relates to an oppositure for manufacturing green bricks from day for the bable researching relatery, comprising a circulating converger counting mode consistent perfect to intend container, parts, a reservair for day arranged above the model containers, means for casying day out of the meeted brick encounter for present and the model containers, means for supplying and placing take of places for the green bricks and means for descharging green bricks released from the model containers. Such as apparature is the fact and is for research described in the potent following of applicant. The known apparature is extremely autable for advanced production of large numbers of green bricks for the book manufacturing relatery. The bricks free from these pass substantially entures, uniform appearance.

(600) A report domaind has developed on the resets for bricks which appear as if they have been manufactured asserting to had been manufactured.

[8003] The invention has to his object to adapt the known appearable such that if can produce in automated representative numbers of green blocks with a traditional appearance.

[8004] For this purpose the oppositue entereding to the invention has the beauter that the apparatus further comprises means for moving the moving containing pasts filled with green bridge such that a protucing edge to formed an actual range size of the cosen british.

[8005] The beds fired from the green bloks graduated using the apparatus according to the invention impart detailed standard offices to the valid to which they have been built when the sun shows thereon. This workfield effect as a frequent commercial devantion.

[6006] The cogotoming moces are preferably adapted to move the mould container parts repeatedly for a benium period. Repeated in number of linear, for instance times times, is found in practice to be surfaces to obtain the standard effort.

[6007] In a practical pretend entrodrom the extentioning means are adepted to have the modificants are adepted to have the modificants parts adeptactedly transversely of the transporting direction.

packs: In a further parliamed embodiment the exige-forming means comprise a frame which is arbitred to engage includually on a mould container park. This proterned contectiment has the displicant advantage that the original parameters are in one mount original container part advantage and the repention and is for instance filled with older. The edge familing moons size therefore be added to the known opportunit without

[9005] In yet another preferred embedievers the frame spans the market combiner part and is provided on both some with stop mannions which are estuded during operation at the location of the stide walls of the model continuer and accordance to the provided property compact embedievers of the inventor to hereby melicinal which williams the envisibility and can be enteringed without difficulty on the known appendix.

[9816] In order to prevent unocommy denage to the mould contained parts, fixed latter are provided an title? see with with stop purfaces, protectly of statio, in genterance the stop rearrises of the forms of the adjutioning movement are not provided with these preferably disalid, sites surfaces.

[9811] The invention is assorbed in more detail hereinbelow with reference to the drawing in which:

figure 1 share achematically a preferred entrediment of the appoint is according to the inventor;

Signa 2 above in more detail a purspective view of a part of the appearing of figure 1 with the edge-leaving resource therein.

figure 3 shows the origin farming means of figure 2 in seven more defail;

figure 4 is a peoperative view of a first preferred embodiment of a mount container part which is suitable for use in the apparatus according to the invention;

Square 5 is a presuperction sleev of a second preferred embodiment of a moute contener part; and

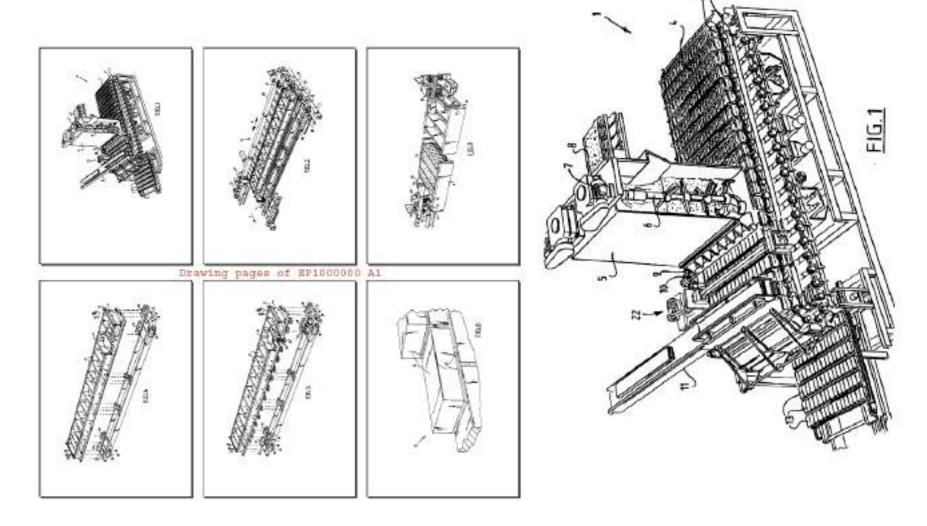
Sque & above adversatically a part of a wall which has been built using bricks provided with an edge and fired from the grean texts resimilarities using the apparatus according to the invention.

(0012) Like components are provided in the liquine with like reference numerals.

[8815] Figure 1 shows a preferred embodiment of an apparetor for menulistating green tricks for the britis manufacturing industry according in the invention Apparetor. I comprise a converyor 3. Most decreasing combined to a unit are placed in the time of a most decreasing control considering part 4 on the conveyor. The most continues parts III closely.

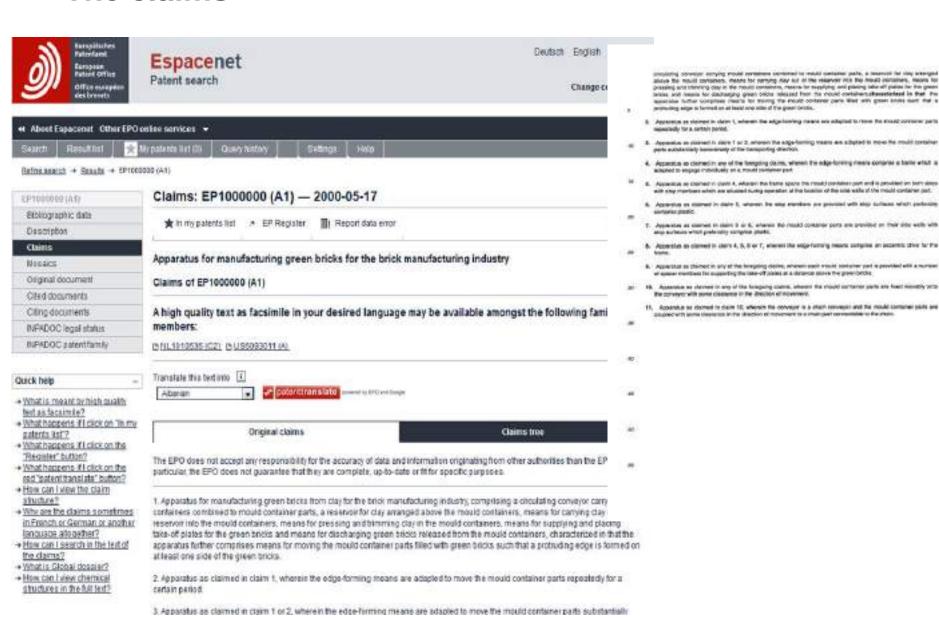


## The drawings

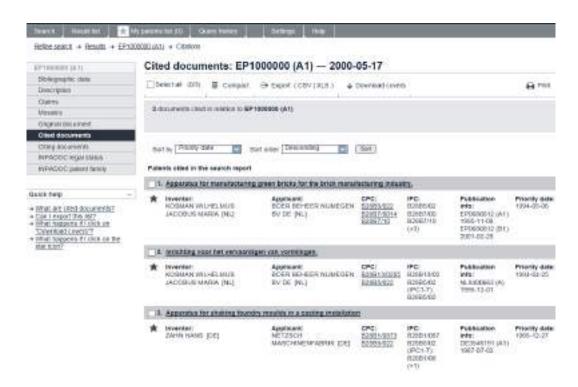




#### The claims

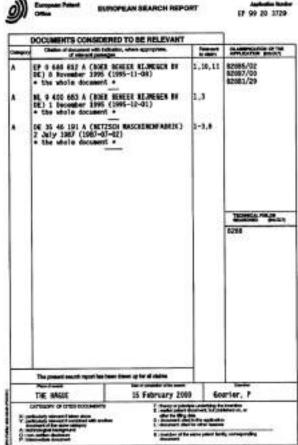






#### "Cited documents" view......

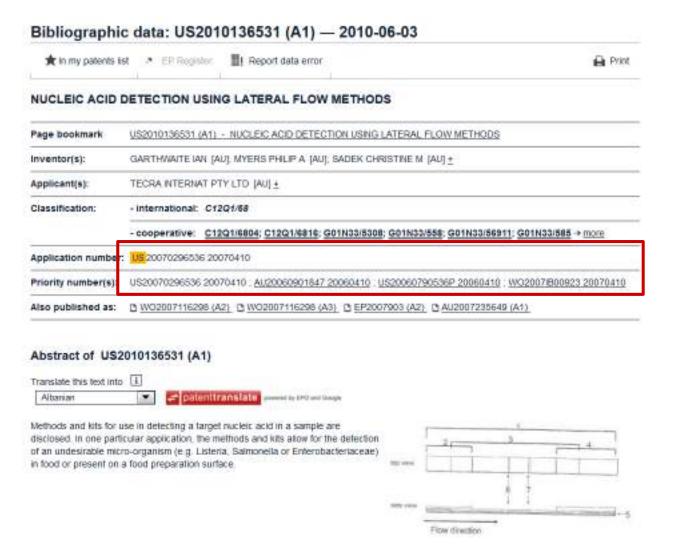




...corresponds to documents cited in the search report, found in the "Original document" view



## **Technology-specific: biochemistry**





## Technology-specific: civil engineering

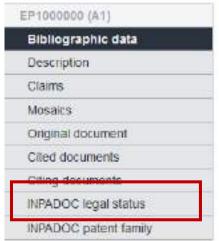




## Legal status

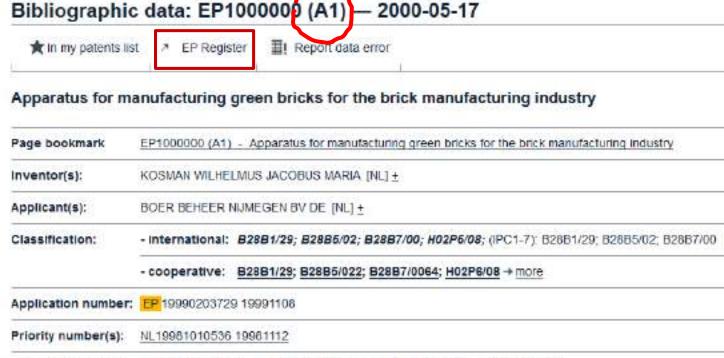
A1, A2: Application (pending, abandoned)

**B1**, **B2** ... : Granted



#### Quick help

- What does A1, A2, A3 and B stand for after a European publication number?
- → What happens if I click on "In my patents list"?
- What happens if I click on the "Register" button?
- → Why are some sidebar options deactivated for certain



EP1000000 (B1) □ US6093011 (A) □ NL1010536 (C2) → AT232441 (T)

Abstract of EP1000000 (A1)

Also published as:



First time here?

Basic definitions

Basic definitions

Patent classification

Patent families

Legal event data

Asian patent information

Events, training and publications

Patent information centres

Patent Translate

Can't find a product?

Updates

A document

European patent application, published 18 months after filing with the EPO or 18 months after priority date

A1 document

European patent application published with European search report

A2 document

European patent application published without European search report (search report not available at the publication date)

A3 document

Separate publication of the European search report

A4 document

Supplementary search report

#### Corrected A document

A8 document

Corrected title page of an A document, ie. A1 or A2 document.

A9 document

Complete reprint of an A document, ie. A1, A2 or A3 document.

B document

European patent specification

B1 document

- B1 document

European patent specification (granted patent)

- B2 document

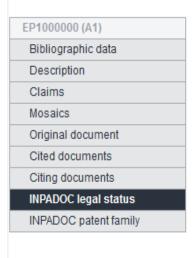
New European patent specification (amended specification)

B3 document



# Legal status: validity

 $\underline{\mathsf{Refine}\;\mathsf{search}}\;\to\;\underline{\mathsf{Results}}\;\to\;\mathsf{EP1000000}\;(\mathsf{A1})$ 



#### Quick help

- → What happens if I click on "In my patents list"?
- → What happens if I click on the "Register" button?
- → What does "legal status" mean?
- → Why is the legal status not always available?
- → How might this information be useful to me?
- → How reliable is this data?

## INPADOC legal status: EP1000000 (A1) — 2000-05-17

FURTHER INFORMATION: AL:LT:LV:MK:RO:SI

n my patents list	A	EP Register	≣!	Report data error	₽ Print
1					I .

#### Apparatus for manufacturing green bricks for the brick manufacturing industry

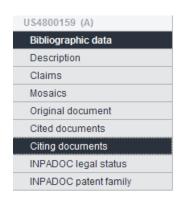
The EPO does not accept any responsibility for the accuracy of data and information originating from other authorities than the EPO; in particular, the EPO does not guarantee that they are complete, up-to-date or fit for specific purposes.

Legal status of EP1000000 (A1) 2000-05-17; EP1000000 (B1) 2003-02-12: EP F 99203729 A (Patent of invention) Event date: 2000/05/17 Event code: AK Code Expl.: + DESIGNATED CONTRACTING STATES: KD OF CORRESP, PAT. : A1 DESIGNATED COUNTR.: AT BE CHICY DE DKIES FIFRIGBIGRIE IT LILU MC NL PTISE Event date: 2000/05/17 Event code: AX Code Expl.: + EXTENSION OF THE EUROPEAN PATENT TO

42



# Commercial relevance: technological impact (I)





#### Abstract of US4800159 (A)

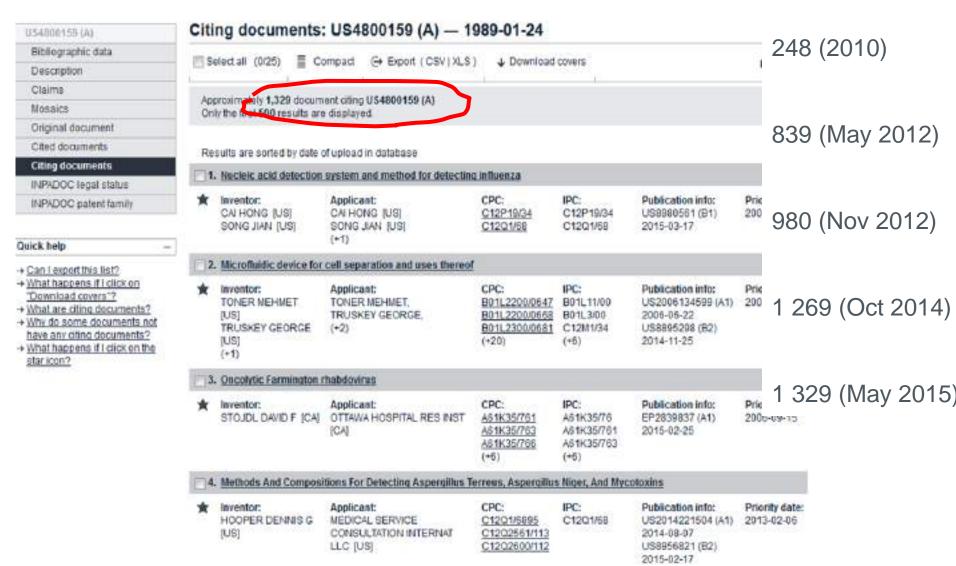
7	ransiate this text into	1	
	Albanian		present by EFG and Group's

The present invention is directed to a process for amplifying and detecting any target nucleic acid sequence contained in a nucleic acid or mixture thereof. The process comprises treating separate complementary strands of the nucleic acid with a motar excess of two oligonucleotide primers, extending the primers to form complementary primer extension products which act as templates for synthesizing the desired nucleic acid sequence, and detecting the sequence so amplified. The steps of the reaction may be carried out stepwise or simultaneously and can be repeated as often as desired, in addition, a specific nucleic acid sequence may be cloned into a vector by using primers to amplify the sequence, which contain restriction sites on their non-complementary ends, and a nucleic acid fragment may be prepared from an existing shorter fragment using the amplification process.

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# Commercial relevance: technological impact (II)





## Commercial relevance: movers and shakers

# In my patents list 

EP Register 

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Print

Process for amplifying, detecting, and/or cloning nucleic acid sequences

Page bookmark 

US4800159 (A) - Process for amplifying, detecting, and/or cloning nucleic acid sequences

Inventor(s): 

MULLIS KARY B [US]; ERLICH HENRY A [US]; ARNHEIM NORMAN [US]; HORN GLENN T [US]; SAIKI RANDALL K [US]; SCHARF STEPHEN J [US] ±

Applicant(s): 

CETUS CORP [US] ±

# Btw, Owner (Assignee, Applicant) ≠ Inventor \*

<sup>\*</sup>Except in some countries as the US



# **PATENT SEARCH: HOW TO**

# **Espacenet landing page**



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## **Advanced search**

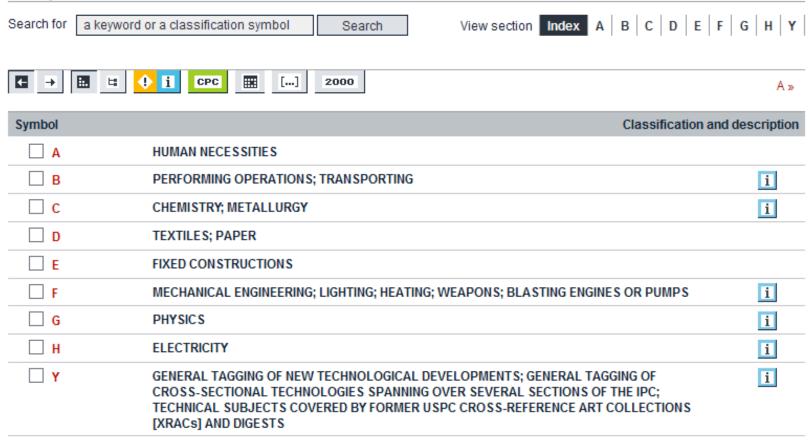


48



## **CPC** classification search

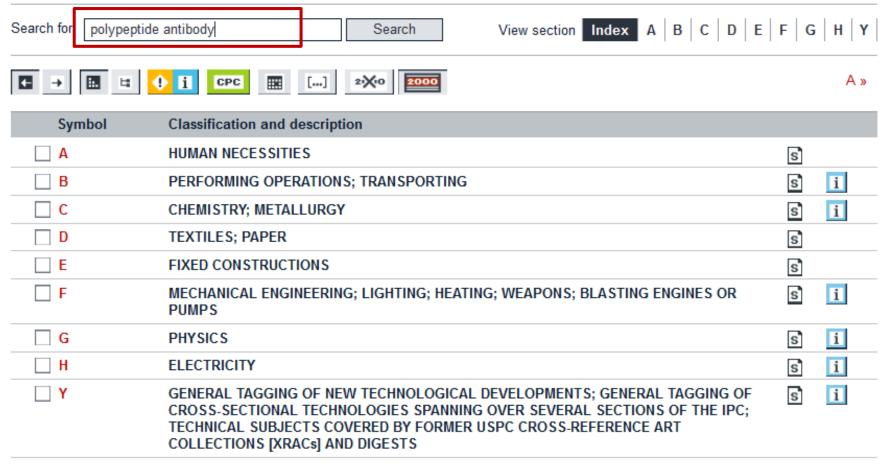
## Cooperative Patent Classification





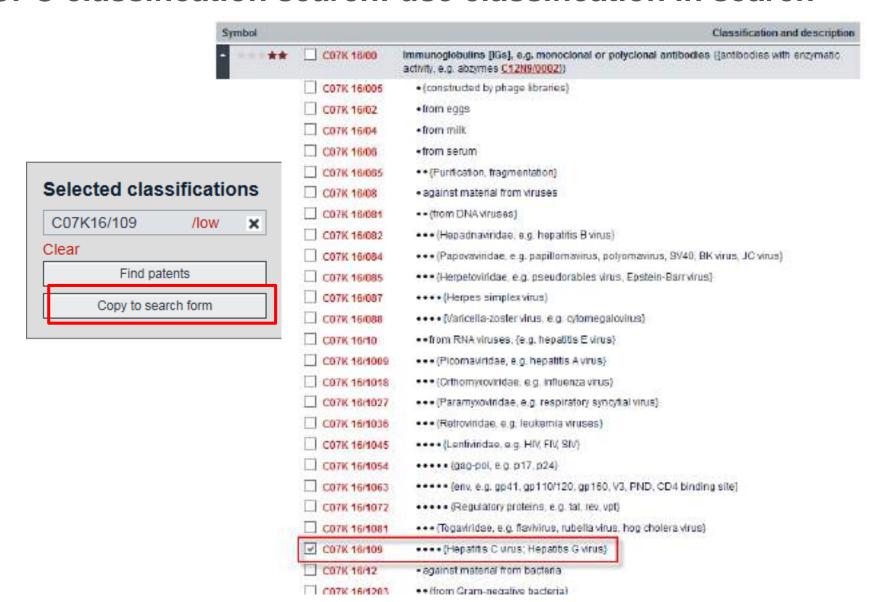
# **CPC** classification search by keywords (I)

## Cooperative Patent Classification





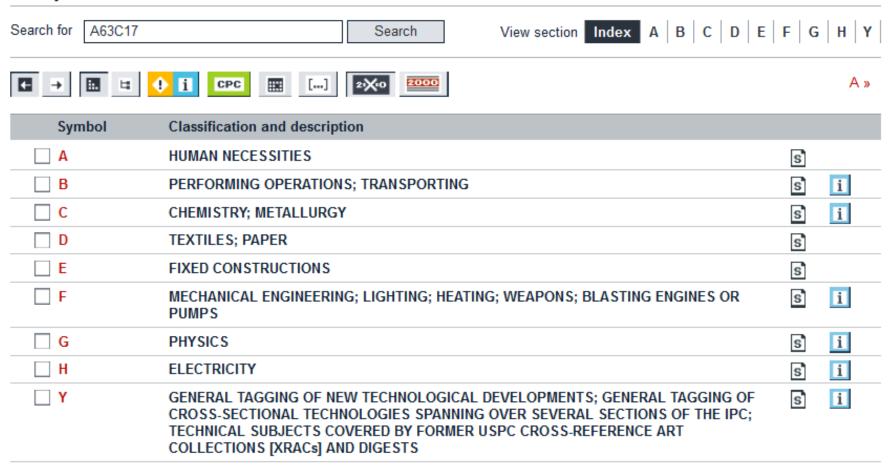
## CPC classification search: use classification in search





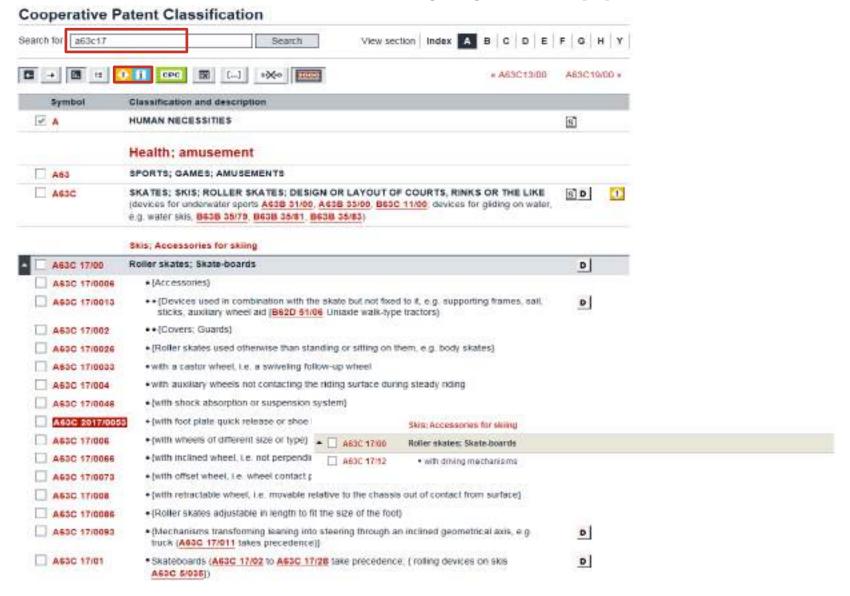
# **CPC** classification search by symbol (I)

## **Cooperative Patent Classification**





# CPC classification search by symbol (II)





## **CPC** classification

- Keywords or classes.
- 'Concept search'.
- Prepare offline (not in Espacenet document databases).
- Principle:
  - Find most appropriate classifications
  - Copy (into advanced search mask)
  - Refine search with keywords (do not repeat)
  - Other search terms.



# Navigation (I)

Breadcrumb navigation

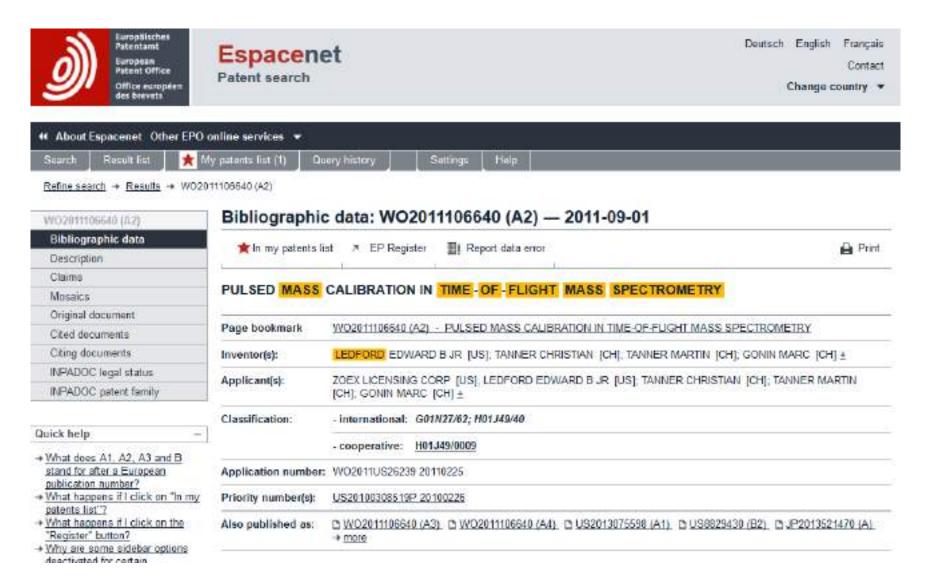


Click Search to refine search

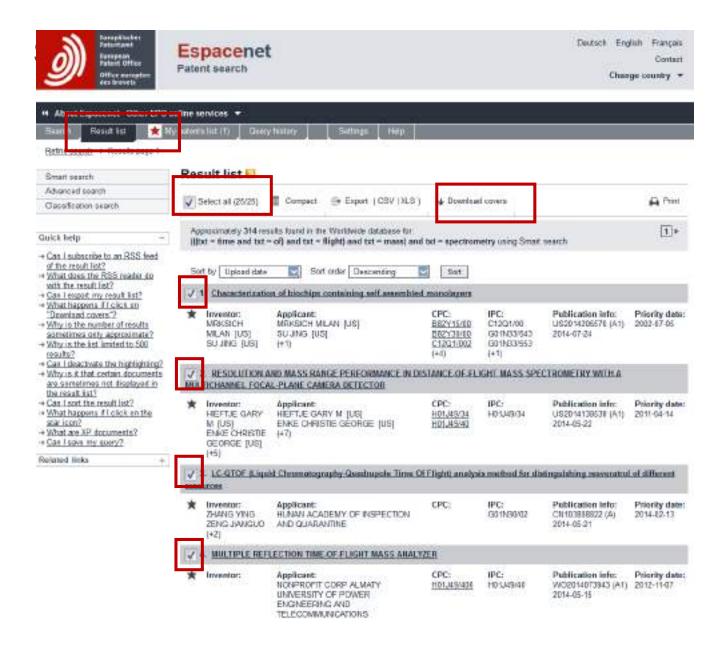
Can always use the browser 'back' button (but not to refine search)



# Saving and downloading

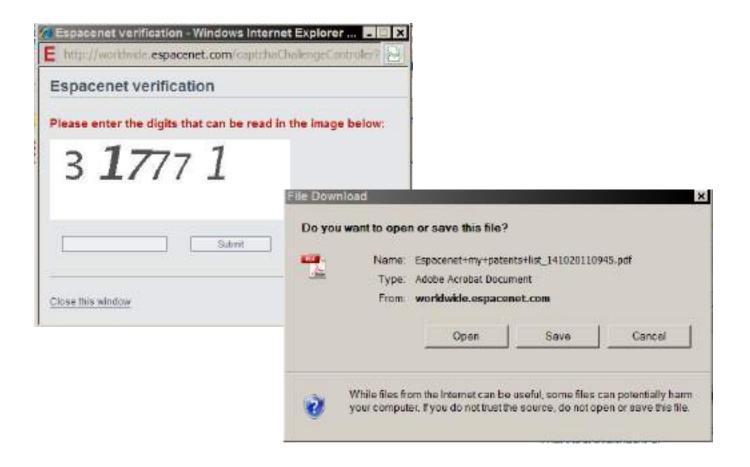








# Saving and downloading





# Saving and downloading



#### Espacenet my patents list on 10-10-2014 17:13

5 items in my patents list Displaying selected publications

Publication	Title	Page
WO2011108640 (A2)	PULSED MASS CALIBRATION IN TIME-OF-FL	2
US2014206570 (A1)	Characterization of biochips containi.	32
US2014138538 (A1)	RESOLUTION AND MASS RANGE PERFORMANCE	49
CN103808922 (A)	LC-QTOF (Liquid Chromatography-Quadru	71
WO2014073943 (A1)	MULTIPLE REFLECTION TIME-OF-FLIGHT MA.	90

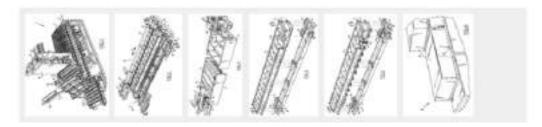
TIP: When using Espacenet, whatever the format you choose to download your data, compact the results using the "Compact" option made available in the interface. It allows getting 30 results on one page, so to download 30 patent notices. To download further notices, you will have to connect to each result page and to re-iterate the downloading procedure



# Google Patents https://www.google.com/?tbm pts

#### Dispositif pour la fabrication de briques crues utilisées dans l'industrie manufacturière des briques

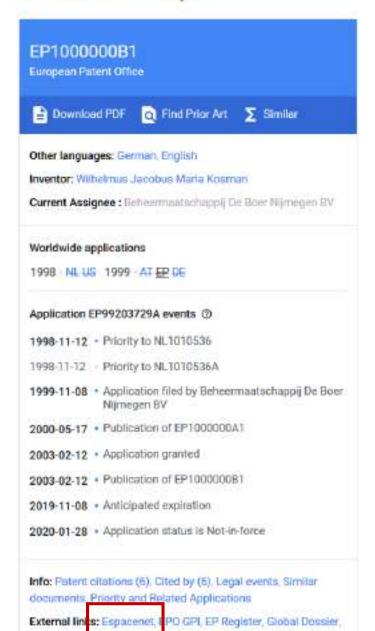
#### Images (6)



#### Classifications

 82885/022 Producing shaped articles from the material in moulds or on moulding surfaces. carried or formed by, in, or on conveyors irrespective of the manner of shaping on conveyors of the endless-belt or chain type the shaped articles being of definite length the moulds or the moulding surfaces being individual independant units and being discontinuously fed

View 3 more classifications





# **EXERCISES**



# **Exercise 1**

- How would you find EP1000000 in Espacenet?
- What is the title of this patent?
- How many simple family members does it have?



## **Exercise 2**

- Albert Einstein and Leo Szilard were friends and colleagues. Albert was known for his theoretical work on relativity, the photoelectric effect and the kinetic theory of matter. Leo was an experimental physicist who conceived nuclear chain reactions, the electron microscope, the linear accelerator and the cyclotron.
- Leo and Albert worked together on inventions in a completely different field. What was that field?



## **Exercise 3**

Imagine you need to look for computer-controlled ABS by means of microprocessors.

- How would you find suitable patent classifications?
- How would you find out how many patents the following companies have in this technology?
  - Citroën
  - Mitsubishi
  - Volkswagen
  - Nissan



# **Technology Watch and Competitive Intelligence**

## Patents and utility models as information source

The existing collection of patents and utility models represents the largest technical database in existence. Approx. 40 million documents (1 million yearly)

- Getting to know the state of the art in a particular technological field
- Getting to know your competitors, experts and potential new partners through their inventions
- Avoid possible third-party patent infringement
- Discover new business opportunities
- Come up with new R&D project proposals
- Reach licensing agreements
- Oppose other patents
- Detecting changes in new technologies, markets, competitors, etc.
- Detecting novel ideas and solutions
- Follow the activity of competitors



## Online resources

## Patents and other IP tools

- European Patent Office EPO <u>www.epo.org</u>
- EPO patent search: Espacenet <u>www.espacenet.com</u>
- WIPO (World IP organization, <a href="http://wipo.int">http://wipo.int</a>) including country profiles and a directory of intellectual property offices
- WIPO patent search: <u>Patentscope</u>
- IPR Helpdesk (<a href="http://www.iprhelpdesk.eu/">http://www.iprhelpdesk.eu/</a>)

# Information sources and tools for trade marks and designs





## **Conventional trade marks**

- Words, letters and numerals, slogans
- Figurative elements, logos
- Three-dimensional shapes
- Colours































## List of tools and sources

## Public databases

- for trade marks
  - TMview
  - TMclass
- for designs
  - DesignView
- for EUTMs and RCDs
  - eSearch Plus
  - EuroLocarno
  - eSearch Case Law

## EUIPO Registry

- EUTM Register
- RCD Register



# **Searching for trade marks**

- Why search for existing trade marks?
  - To maintain peaceful coexistence on the market
  - To protect your own trade marks against similar marks
- Why might it be difficult?
  - Different sources and formats
  - Different languages
  - Some signs may not be registered



## **TMclass**

- A free online tool for use in searching for and classifying goods and services – information which is needed when registering a trade mark.
- The central point from which to access terms that appear in the classification databases of the participating offices.



# **Searching using DesignView**

- Central access point for information on designs from:
  - national offices in the EU
  - the EUIPO.
- EU-wide search
  - national designs
  - RCDs.
- All official EU languages.
- Similar to TMview.





# DesignView search formats: 'List' mode and 'Gallery' mode

