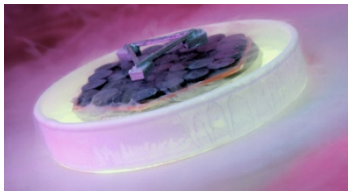
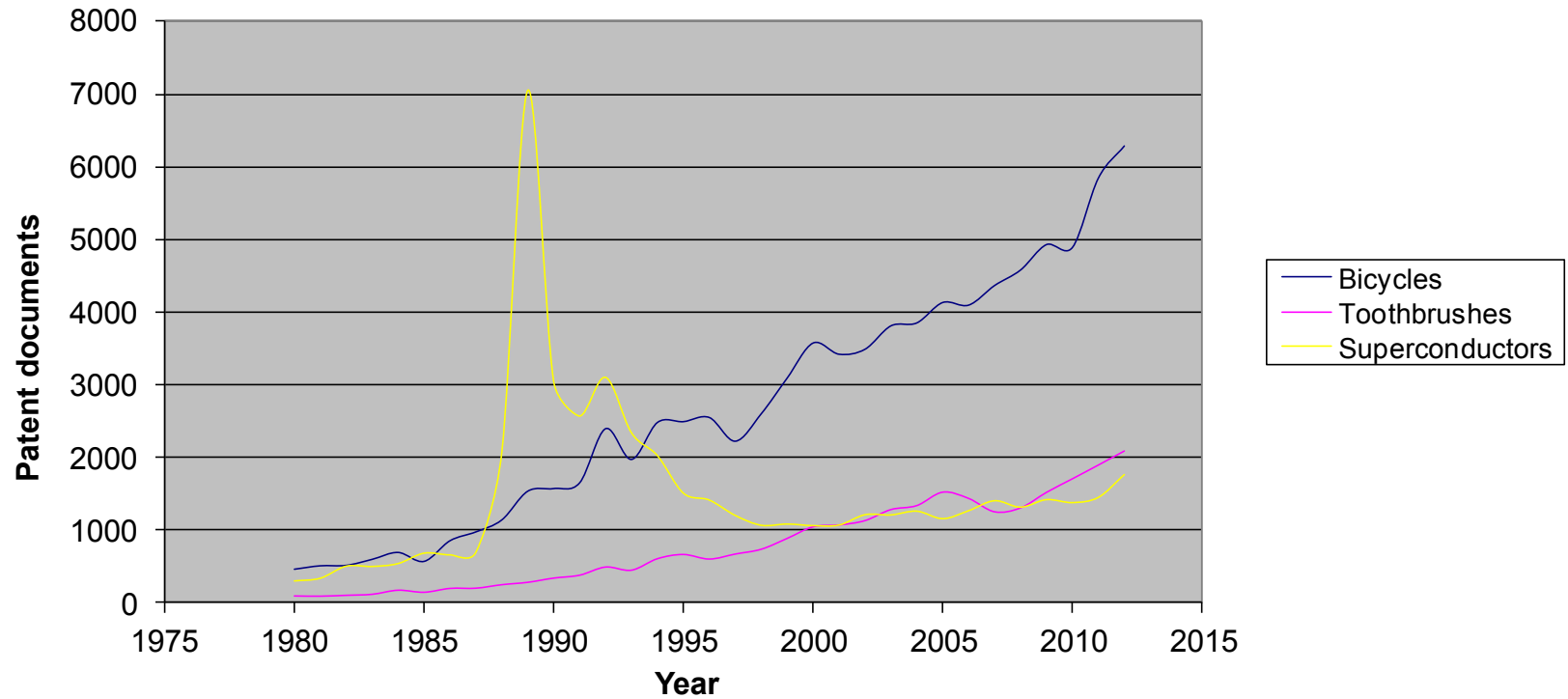


PATENTS

Patents are all around us



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
- Publication
- Incentive to innovate and to share knowledge

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



Patent applicant

Reveal
invention
(disclosure)



Get
exclusivity
(patent)



Public

Rights conferred by patents

- Right to prevent others from making, using, offering for sale, selling or importing infringing products in the country where the patent was granted

Exception: non-commercial purposes (private use, academic research)

- Right to assign, sell or license these rights



These rights belong to the patent holder.



What is a patent?

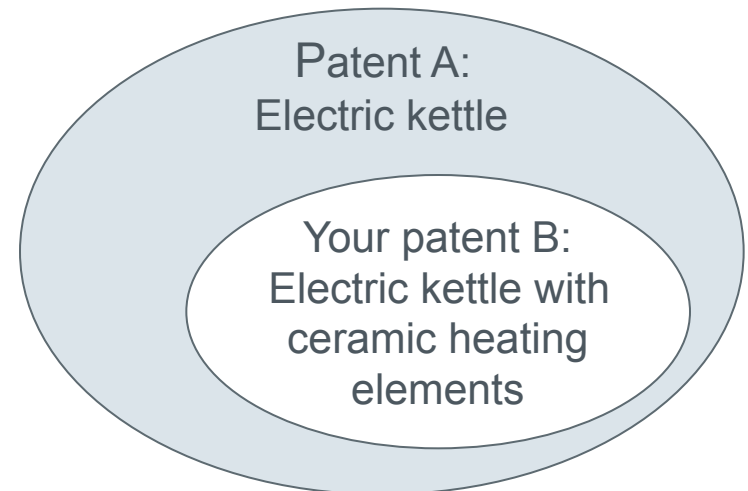
- Does a patent give you the right to exploit an invention?

- 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:



What do patent documents look like?

Date of publication

Date of filing

Applicant



Abstract

Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 520 497 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication: 06.04.2005 Bulletin 2005/14 (51) Int Cl.: A47G 19/22, C02F 1/00

(21) Application number: 04256130.8

(22) Date of filing: 04.10.2004

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL HR LT LV MK

(30) Priority: 03.10.2003 GB 0323237
27.02.2004 GB 0404293

(71) Applicant: STRIX LIMITED
Ronaldsday, Isle of Man IM9 2RG (GB)
Designated Contracting States:
DE FR IT

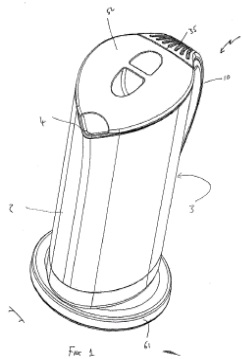
(72) Inventor: Scott, Michael James
Isle of Man IM9 5PH (GB)

(74) Representative: Samuels, Adrian James
Frank B. Dehn & Co.,
179 Queen Victoria Street
London EC4V 4EL (GB)

Remarks:
A request for correction of the drawings has been filed pursuant to Rule 88 EPC. A decision on the request will be taken during the proceedings before the Examining Division (Guidelines for Examination in the EPO, A.V. 3).

(54) Water Storage Apparatus

(57) A water treatment and storage vessel has a reservoir 50 for untreated water and filter means 51 in fluid communication with the reservoir 50. A main vessel portion 2 is provided for receiving and storing treated water which comprises a Pellet-effect device 25 for removing heat from treated water therein, thereby cooling the water.



Printed by Jouve, 75001 PARIS (FR)

EP 1 520 497 A2

Application number
Technical class
Inventor



Claims

1. A portable water treatment and storage vessel comprising:

a reservoir for untreated water;
filter means in fluid communication with said reservoir; and
a main vessel portion for receiving and storing treated water;

wherein said main vessel portion comprises electro-thermal cooling means for removing heat from the treated water therein, thereby cooling the water.

Claim(s)

1 Description

EP 1 520 497 A2

2

has an inlet for the filter device is provided under the cover and which can be removed from the vessel.

[0001] The present invention relates to the filtering and storage of fresh, untreated water, in domestic situations.

[0002] Although untreated water is often strictly regarded as fit for drinking, there are many possible reasons of contamination. Consumer concerns about the potential spread and health-related problems arising from the presence of these contaminants has prompted the development of water storage containers designed to prevent the growth of water-borne bacteria and reduce the presence of certain contaminants resulting in odorous water and/or taste and/or staining water for household use.

[0003] Typically, untreated water (fresh or tap water) is stored in a jug which is covered with a lid. The jug is used for drinking water. Such a jug and lid are well known.

[0004] A number of different water storage jugs are available in a variety of shapes and sizes. Some have a lid which is attached to the jug and some have a lid which is ready for drinking but the lid may not be attached to the jug and so is not suitable for drinking water.

[0005] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0006] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0007] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0008] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

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[0010] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0011] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

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[0013] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0014] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0015] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0016] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

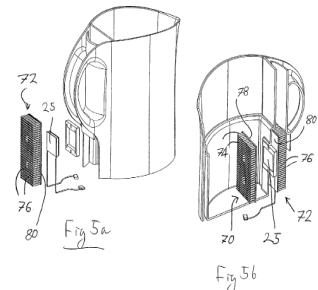
[0017] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0018] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0019] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

[0020] There are also jugs which are available for drinking water. For example, some jugs are available for drinking water. For example, some jugs are available for drinking water.

Description



Drawing(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*

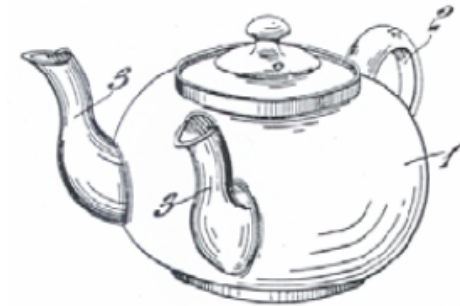


Fig. 1.

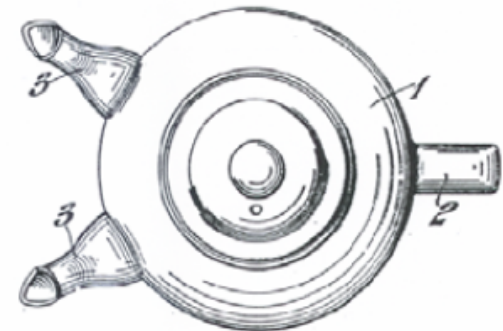


Fig. 2.

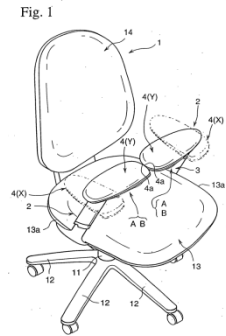
What can and can't be patented

Patents protect technical inventions which solve technical problems:

- Products, devices, systems



- Chemical substances, pharmaceuticals
- Processes, methods, uses



For an invention to be patentable, it must usually be

- ✓ **new** to the world (i.e. not available to the public anywhere in the world)
- ✓ **inventive** (i.e. not an "obvious" solution), and
- ✓ susceptible of **industrial application**

In most countries, patents are not granted for mere business methods or rules of games, or for methods of treatment, diagnostics and surgery of the human or animal body, or for inventions that are contrary to *ordre public* or morality, or for plant and animal varieties.



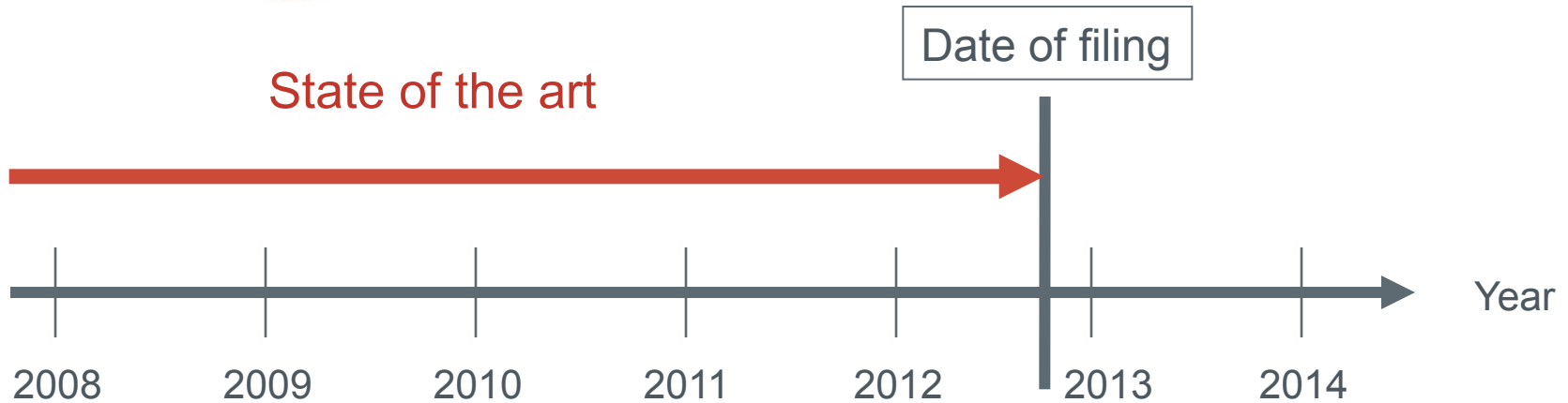
When is an invention "new"?

- 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

Keep your invention confidential until you have filed your application!



Patent application



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



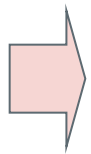
Do's

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

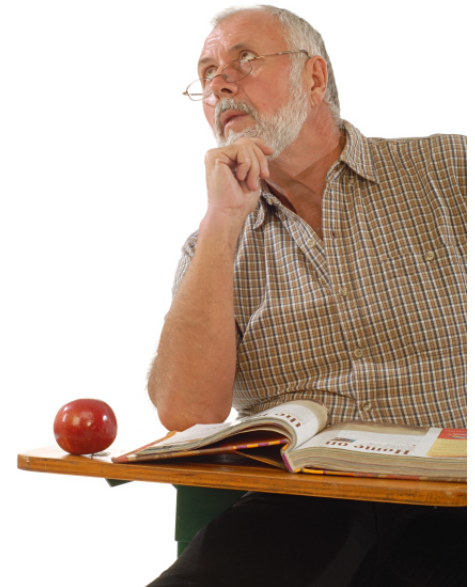
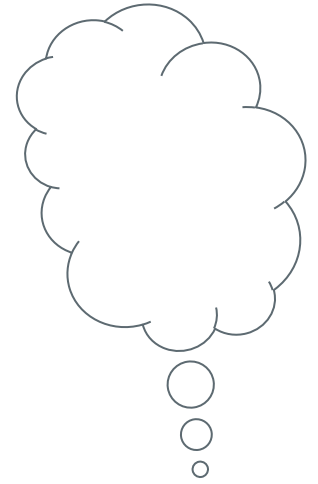


When is an invention "inventive"?

- When it is not obvious to the person skilled in the art in view of the state of the art
- The person skilled in the art
 - is a skilled practitioner in the relevant technical field
 - has access to the entire state of the art
 - is aware of general technical knowledge
 - is capable of routine work



**He knows EVERYTHING,
but has ZERO imagination!**



Assessing novelty

Claim: A pouring vessel comprising
(a) a compartment for liquids (1),
(b) a handle (2),
(c) a lid, and
(d) two spouts (5) extending from the compartment (1),
(e) whereby the tops of the two spouts are arranged at the same height.

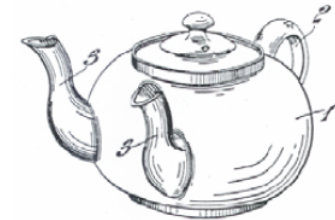


Fig. 1.

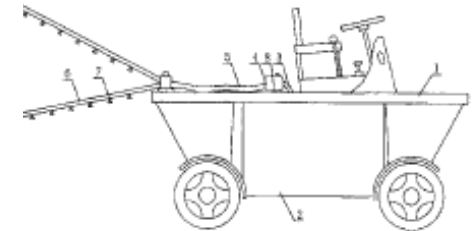
Stage 1: Prior art

The prior art search revealed the following documents:

Document D1:
A teapot with one spout.



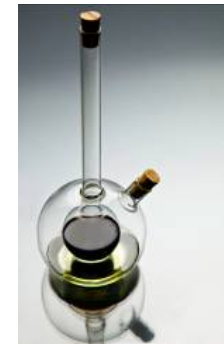
Document D2:
High efficiency distributor for fertilizer. Each rod has several nozzles for spraying liquid.



Document D3:
A filter handle with two spouts to be used with a coffee-maker.



Document D4:
An oil and vinegar bottle which reveals a second bottle inside. The two spouts are cleverly arranged to ensure the second bottle never drips while the first one is in use.



Assessing inventive step (I)

Stage 1

- Determine the closest prior art and common features:
 - (a) a compartment for liquids
 - (b) a handle
 - (c) a lid
 - (d) one spout



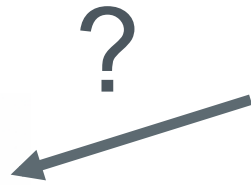
Stage 2: Problem

- Differences over D1:
 - two spouts instead of one
 - particular arrangement of the spouts
- Drawback of prior art:
 - time-consuming
- Advantage/effect of the invention:
 - the time needed to fill multiple cups is reduced
- Objective problem to solve:
 - how to modify the teapot of D1 to reduce the time needed to fill multiple cups



Assessing inventive step (II)

Is the claimed solution obvious in view of the prior art?



+



Objective problem for the skilled person: How to modify the teapot of D1 in order to reduce the time needed to fill multiple cups

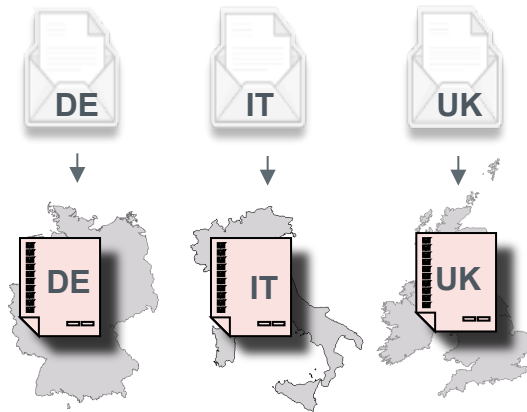


How to obtain patent protection in Europe (options 1 and 2)



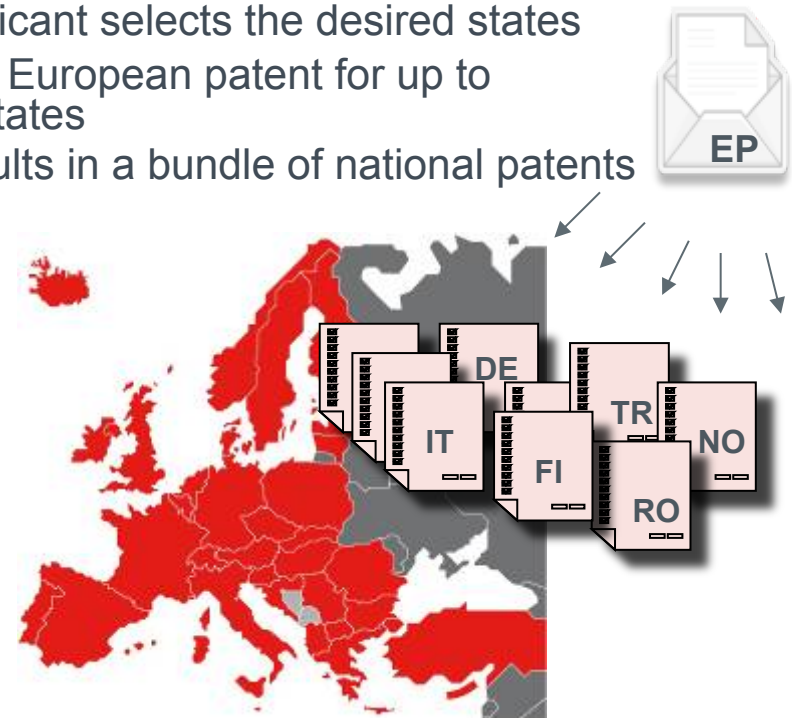
The national route

- Separate procedures for each state
- Procedures differ according to national law



The regional route: European Patent Convention

- One application filed at one office for up to 40 states
- One procedure
- Applicant selects the desired states
- One European patent for up to 40 states
- Results in a bundle of national patents



Key facts about the unitary patent

- A European patent with unitary effect
- Further option in addition to European patent and national patents
- Protection in a single step for 25 participating EU member states
- Unitary effect can be registered by the patentee after the grant of the European patent
- Unitary character for said 25 states: limitation, transfer, revocation, lapse (only in respect of all states)
- No translation after grant, machine translation sufficient



- One-stop shop with centralised post-grant administration by the EPO (single renewal fee, register entries)

Key facts about the Unified Patent Court

- A specialised patent court with exclusive jurisdiction for litigation relating to European patents with unitary effect (“unitary patents”) and European patents



- **Court of First Instance** with local and regional divisions located in the member states, and central divisions

- **Court of Appeal**

- Multinational panels composed of legally and technically qualified judges



How to obtain patent protection in Europe (option 3)

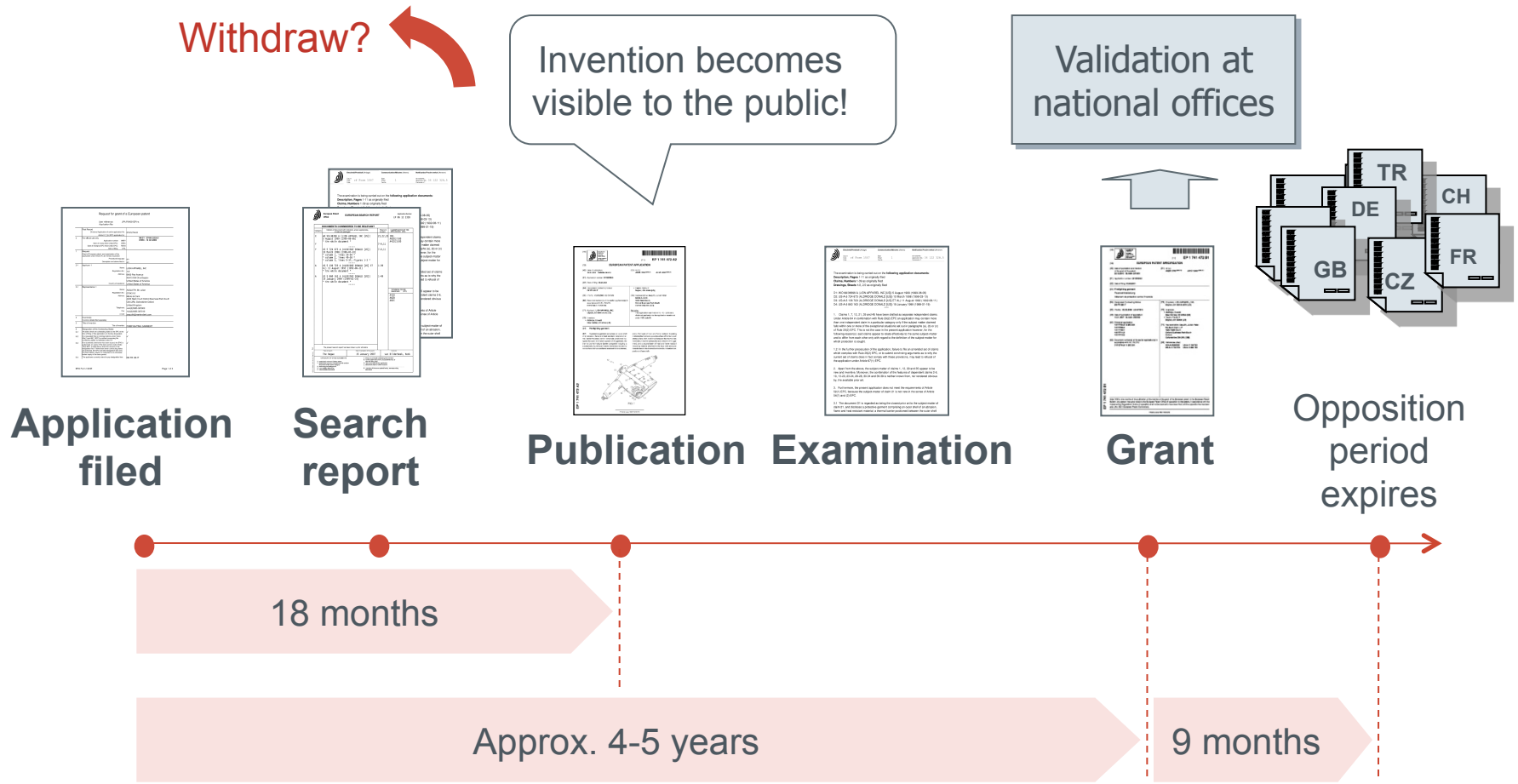
The international route: Patent Cooperation Treaty (PCT)

- One single application for up to 148 countries*
- Harmonisation of formal standards (language, patent agent, fees)
- Search report and opinion on patentability
- After 30-31 months, decision by applicant on which countries to proceed in.



*December 2013

The grant procedure before the EPO



What can happen after a European patent has been granted?

- Opposition
- Limitation/revocation
- Renewal fees
- Invalidity proceedings (before a court)
- Infringement proceedings (before a court)



What is infringement?

- Making use of a patented product or process without the consent of the patent owner
- Making, offering, putting on the market, importing or stocking the product
- Making, offering, putting on the market, importing or stocking a product directly obtained from a protected process
- Using a process or offering the process for use



- Infringement is determined by the national courts or by the Unified Patent Court (once it enters into force)
- What constitutes infringement in one country may differ from other countries
- Patent proprietors can claim damages and other remedies from alleged infringers

How is infringement determined? (I)

Claims

- Define the features of the invention = matter for which protection is sought
- Description and drawings are used to interpret the claims

Extent of protection

- Everything that is literally covered by the claims
- May also encompass equivalents



Infringement occurs when the infringing product possesses all the features of the claimed invention

Example:

Are PAPER-FIX infringing HAIRY-CUT's patent?



PAPER-FIX produce scissors with eye rings covered by plastic in Italy and sell them in the UK



HAIRY-CUT have a UK patent claiming cutting means with two eye rings



How is infringement determined? (II)



Are PAPER-FIX infringing HAIRY-CUT's patent?

Cutting means with two eye rings

HAIRY-CUT's UK patent



PAPER-FIX sell in UK



Scissors with plastic eye rings

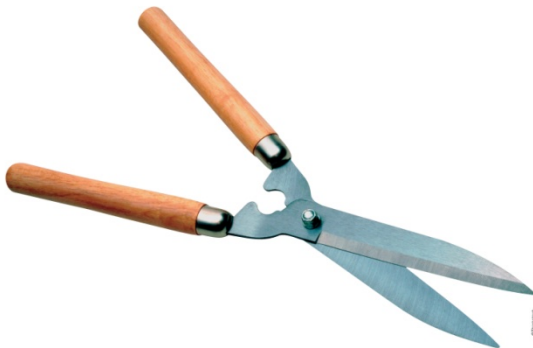
1. Generally speaking, production and sale are acts of infringement.



2. **UK:** Yes. The scissors are within the extent of protection.



3. **Italy:** No. HAIRY-CUT do not have a patent in Italy. PAPER-FIX and others can freely produce insulated scissors (provided no one else has a patent there → perform patent search!)



What about the garden shears imported into the UK by SHEAR-MAN?

UK: No. The shears do not have eye rings. They are outside the extent of protection.

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)

Disadvantages

- Reveals invention to competitors (after 18 months)
- **Can be expensive**
- Grant may take 3-5 years
- 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 reverse-engineering/duplication of invention
- Difficult to enforce
- Secrets often leak quite fast

Do nothing

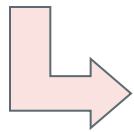
- No effort required

- Does not offer exclusivity
- Competitors will often learn details

What to consider before filing an application

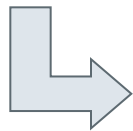
Should you patent your invention?

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?



SEEK LEGAL ADVICE!



What might happen if I decide not to patent my invention?

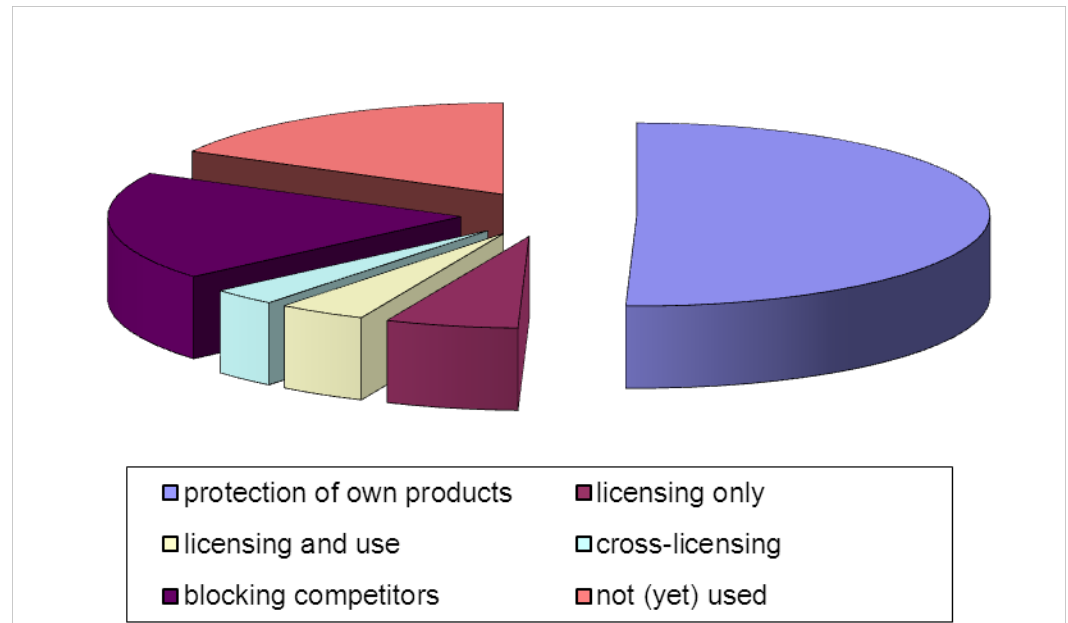
Somebody else might patent it!

Competitors might take advantage of it!

Potential for licensing, selling or transferring the technology would be severely curtailed!

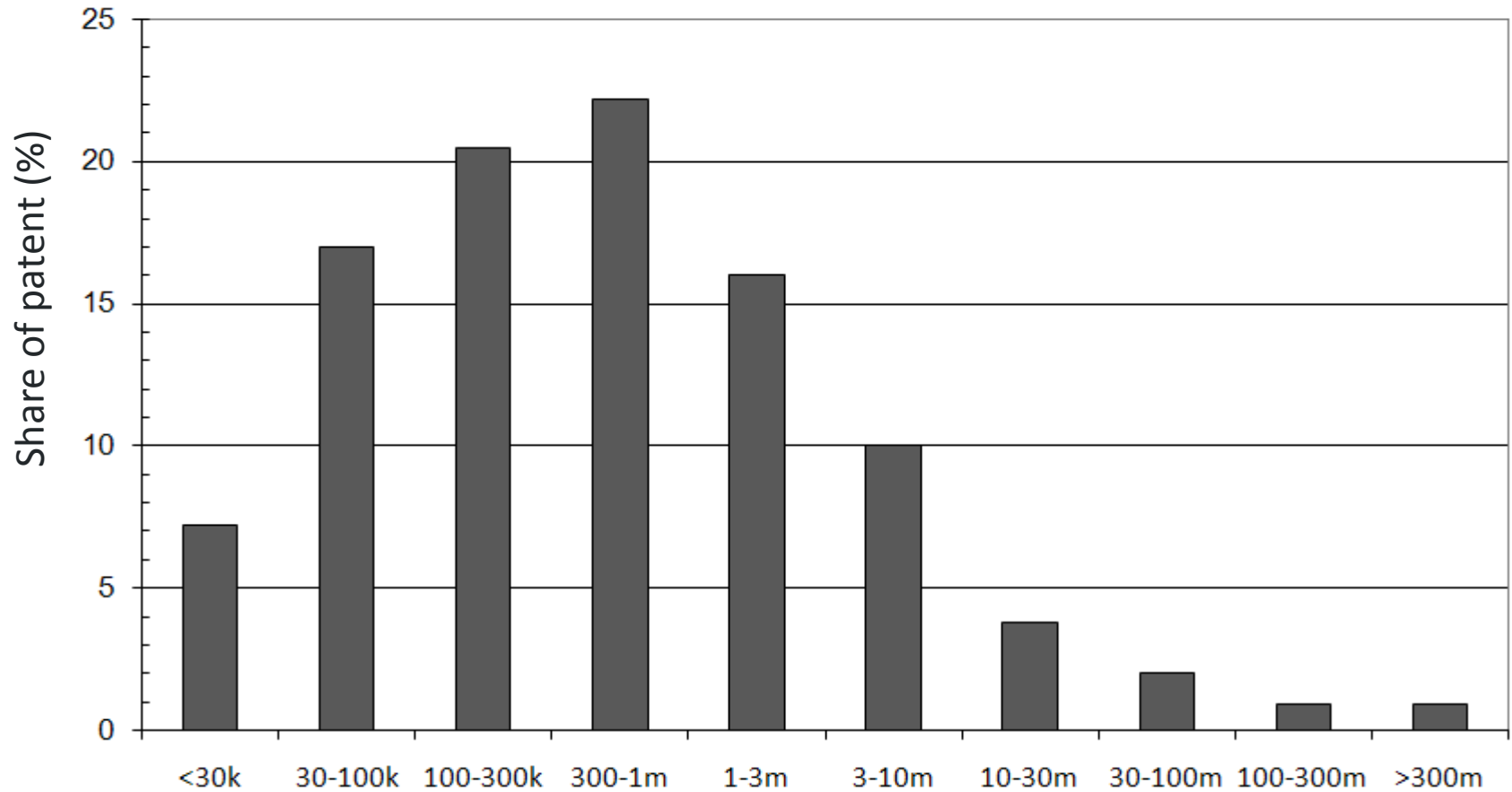
How patents are used

- Protecting products and processes
 - increasing turnover and profits
 - attracting investors
- Licensing
- Cross-licensing
- Blocking competitors
- Building reputation
- Not (yet) used



Survey of approx. 7 000
European patents in 2005

The value of European patents



Patent value (EUR)

Survey of approx. 9 600
inventors in 2005

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!

UK Patent Application **GB (11) 2 365 393 (13) A**
 (43) Date of A Publication 20.02.2002

(21) Application No 0019361.5
 (22) Date of Filing 07.08.2000

(71) Applicant(s)
 Peter John Ginn
 153 Waller Road, New Cross, LONDON, SE14 5LX,
 United Kingdom

(72) Inventor(s)
 Peter John Ginn

(74) Agent and/or Address for Service
 Peter John Ginn
 153 Waller Road, New Cross, LONDON, SE14 5LX,
 United Kingdom

(51) INT CL⁷
 B64C 25/40

(52) UK CL (Edition T)
 B7G 8H

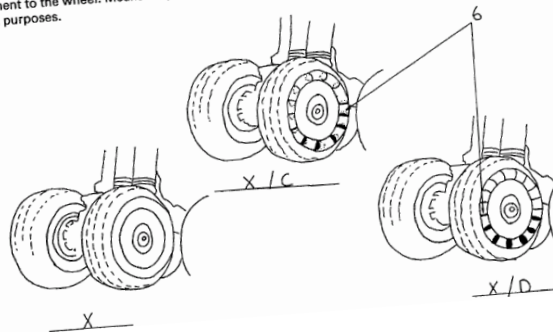
(56) Documents Cited
 GB 2242401 A
 GB 2334925 A
 GB 2183932 A
 GB 1407358 A
 US 4040582 A
 GB 2080217 A
 GB 0516738 A
 US 3233849 A

(58) Field of Search
 UK CL (Edition R) B7G
 INT CL⁷ B64C 25/40

20.02.2002

(54) Abstract Title
Rotating aircraft wheels prior to landing

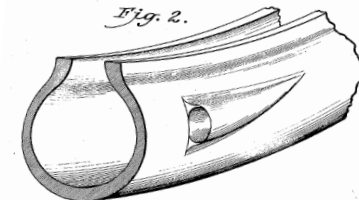
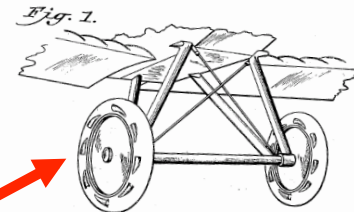
(57) An aircraft tyre or wheel is provided with pockets or ridges 6, which catch the airflow past the wheel and cause the wheel to rotate. The pockets/ridges may be formed in the tyre or an additional member for attachment to the wheel. Means may be provided for diverting air from a pocket into the wheel assembly for cooling purposes.



US-A-1833019 - 24.11.1931

Nov. 24, 1931.

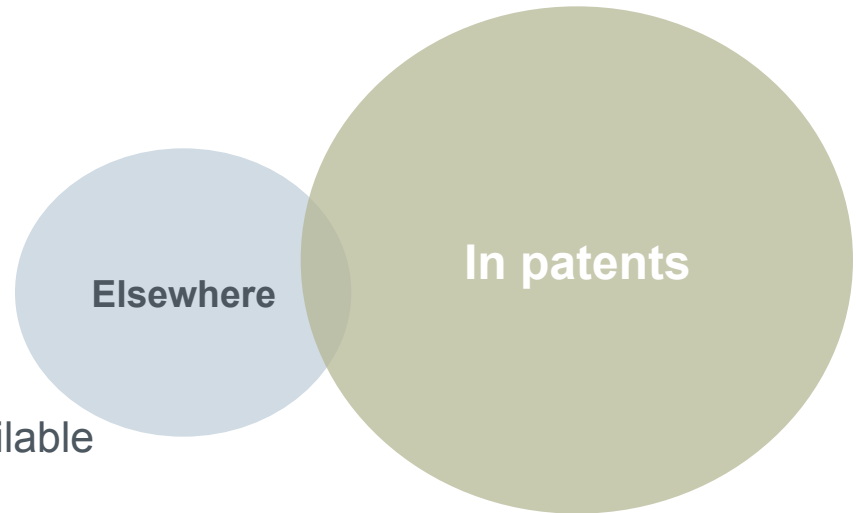
J. A. FAUCHER ET AL
 AIRPLANE TYRE
 Filed Nov. 1, 1929
 1,833,019



Solutions found in patent documents

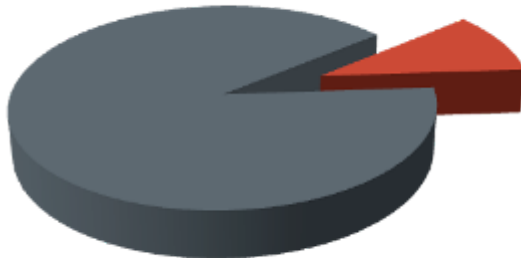
Where do competitors publish their R&D?

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



90%
in public
domain

10%
protected



You can find many great solutions for free!

Reasons

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

Searching for patents is easy

Smart search
Advanced search
Classification search

- Quick help** -
- [How many search terms can I enter per field?](#)
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Title or abstract: [i](#) hair

Enter numbers with or without country code

Publication number: [i](#) WO2008014520

Application number: [i](#) DE19971031696

Priority number: [i](#) WO1995US15925

Enter one or more dates or date ranges

Publication date: [i](#) yyyyymmdd

Enter name of one or more persons/organisations

Applicant(s): [i](#) Institut Pasteur

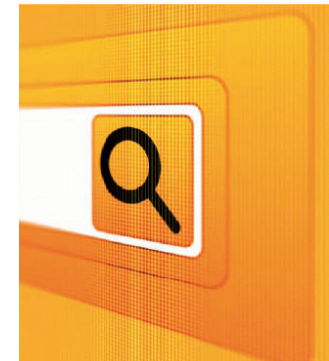
Inventor(s): [i](#) Smith

Enter one or more classification symbols

CPC [i](#)



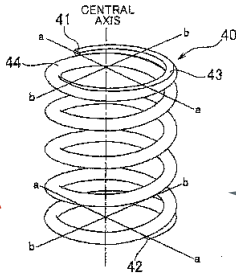
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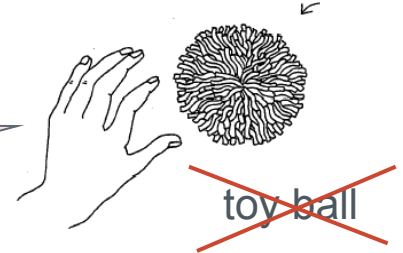
... but a basic knowledge of patent jargon is needed!

~~spring~~



"energy-storing means"

Beware of "naïve" keyword searches!

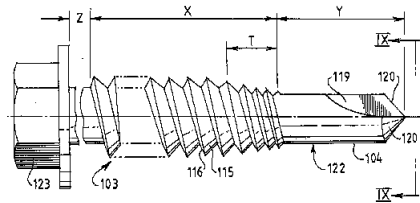


"spherical object with floppy filaments"

Patent jargon is used to broaden scope of the patent.

Sometimes the applicant simply doesn't want his application to be found.

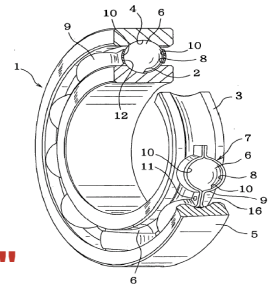
~~nail, screw, rivet~~



"fastening means"

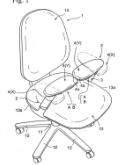
~~ball bearing~~

"plurality of balls"



Quiz

1. Can anyone apply for a patent?
2. Who is the inventor?
3. What is the difference between patent holders and inventors?
4. What can you get a patent for?
5. What are the requirements for obtaining a patent?
6. What is the term of a patent?
7. What routes are there for obtaining a patent in Europe?
8. What is the difference between a patent application and a patent?
9. Even if an invention is patentable, is it always wise to apply for a patent?



5. What are the requirements for obtaining a patent?



6. What is the term of a patent?

7. What routes are there for obtaining a patent in Europe?



8. What is the difference between a patent application and a patent?

