Searching for patents

- Why does patent information matter?
- Espacenet
- The European Patent Register

Contents

Presentation

- Why patent information matters
- Espacenet
- The European Patent Register
Why patent information matters

At least seven good reasons
Because **patent information** helps you to

1. **Avoid duplication of R&D expenditure**
Because **patent information** helps you to

2

**Find out what technology already exists and build on it**

More and more applications every year
Four applications a minute
- every hour of the day and night!

Applications in the 5 biggest offices

- China
- United States of America
- Japan
- Republic of Korea
- European Patent Office
Over **50%** of applications are in an **Asian language**
Searching technical information in Espacenet

- More than 95 million patent documents (applications, granted patents, search reports, non-patent literature)
- Data from 90 patent authorities worldwide
- Data from 1836 to today
- Source of technical information
- Available free-of-charge via the internet at
- Secure access (https)

www.epo.org/espacenet

The old days: Paper documentation

papers groups
central library
Where to find Espacenet

Espacenet patent search

Espacenet landing page

Espacenet: free access to the database of over 90 million patents

New in Espacenet
You can now do full-text searches in English, French or German. Simply select the database in the language you require.

Online products – need some answers?
Visit our FAQ Forum to get all the latest news and answers about our online products. Read the regular postings from the forum members, post your questions – and answer those of other users.

URL to remember:
www.epo.org/espacenet
Example

Spectacles with liquid lens to adjust focal length

Source: http://www.eyejusters.com

Espacenet truncations (wildcards)

? Replaces 0 or 1 character

```
car? • car, cars, card, cards, carrier
```

# Replaces exactly 1 character

```
car# • car, cars, card, cards, carrier
```

* Replaces a character string of any length

```
car* • car, cars, card, cards, carrier
```

Only right-hand truncation

```
car+ • car, cars, card, carrier; cards
```
European Patent Office

Espacenet: free access to the database of over 80 million patents

Advanced search
Classification search

ZPAT results found in the WO database for:
(substrate OR glass) AND (not = glass?) AND (not = water?) AND (not = aliphatic) AND (not = fluid) AND (not = liquid) AND pol within 1924-1934 using Smart search

Sort by [ ] Priority [ ] Date
Sort order [ ] ascending [ ] descending

1. CRYSTAL TEM LENS CIRCUIT
Inventor: [details]
Applicant: [details]
CPC: [details]
Publication Info: [details]
Priority Date: [details]

6. Optical apparatus and method
Inventor: [details]
Applicant: [details]
CPC: [details]
Publication Info: [details]
Priority Date: [details]

7. An optical apparatus and method
Inventor: [details]
Applicant: [details]
CPC: [details]
Publication Info: [details]
Priority Date: [details]

7. VIDEO DISPLAY DEVICE
Inventor: [details]
Applicant: [details]
CPC: [details]
Publication Info: [details]
Priority Date: [details]

Bibliographic data: EP0830620 (B1) — 2004-02-04

AN OPTICAL APPARATUS AND METHOD

Abstract not available for EP0830620 (B1)

Abstract of corresponding document: WO9638744 (A1)

This application also relates to an apparatus in the form of a fibula endoskeleton which can be used to support the lower leg in the case of a lower leg amputation. The apparatus is attached via the fibula to the leg stump and is therefore permanently related to the requirements of the individual. The fibula also relates to an apparatus in the form of a fibula endoskeleton.
Excursion: Classification systems

“Bottle opener”

“Method of opening a bottle”

“Cable recliner”

“Lift arrangement”

“Lift arrangement”

“Bottle opener”

“Method of opening a bottle”

www.epo.org/pi-tour
International Patent Classification (IPC)

The IPC has a hierarchical structure:

Sections:
A, B, C, D, E, F, G, H

Classes:
e.g. A47

Sub-classes:
e.g. A47J

Groups:
e.g. A47J37

Sub-groups:
e.g. A47J37/08

CPC:
e.g. A47J37/0821

Cooking; Apparatus for making beverages

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A47J</td>
<td>Domestic ovens, non-domestic baking apparatus or equipment</td>
</tr>
<tr>
<td>A47J</td>
<td>* Roasters; Grills; Sandwich grills</td>
</tr>
<tr>
<td>A47J</td>
<td>** Bread-toasters (electric heating elements)</td>
</tr>
<tr>
<td>A47J</td>
<td>*** with automatic bread ejection or timing means</td>
</tr>
<tr>
<td>A47J</td>
<td>**** with mechanical dose control timer</td>
</tr>
</tbody>
</table>

*asterisk denotes precedance
6. An optical apparatus and method

Inventor: SILVER JOSHUA DAVID
Applicant: SILVER JOSHUA DAVID [GB]

European Patent Office

Fig. 1
Claim reading

unclear part

Claim reading

scope of the claim
In practice

re-focus

European Patent Office
Name searches

Hint: Use phrase search for natural persons, i.e. "<LastName> <FirstName>", to avoid hits with first/last names belonging to different persons

Because patent information helps you to

Check out where an invention is protected by a patent, and where it is not
Looking up legal information in the **European Patent Register**

- Free online access to:
  - legal status information
  - procedural status information of patent applications at the EPO
  - post-grant information of European patents
- Secure access
- Register alert monitoring tool

**www.epo.org/register**
### All documents = online public file inspection

#### Data sources:
- Espacenet, Register, OPS, GPI, PATSTAT
- Commercial databases

#### Worldwide legal status information (INPADOC)

The EPO collects legal status data from over 40 countries.
Because patent information helps you to

4 Avoid infringing other people's patent rights
More than 1 million patents granted each YEAR

Nearly 50% of all applications filed each year are granted
Highest damages awarded

Top ten damages awards in US Federal District courts since 1995:

<table>
<thead>
<tr>
<th>Year</th>
<th>Plaintiff</th>
<th>Defendant</th>
<th>Technology</th>
<th>Award (in USDm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Centocor Ortho Biotech Inc.</td>
<td>Abbott Laboratories</td>
<td>Arthritis drugs</td>
<td>1,673</td>
</tr>
<tr>
<td>2007</td>
<td>Lucent Technologies Inc.</td>
<td>Microsoft Corp.</td>
<td>MP3 technology</td>
<td>1,538</td>
</tr>
<tr>
<td>2012</td>
<td>Carnegie Mellon University</td>
<td>Marvell Technology Group</td>
<td>Noise reduction on circuits for disk drives</td>
<td>1,169</td>
</tr>
<tr>
<td>2012</td>
<td>Apple Inc.</td>
<td>Samsung Electronics Co.</td>
<td>Smartphone software</td>
<td>1,049</td>
</tr>
<tr>
<td>2012</td>
<td>Monsanto Company</td>
<td>E.I. DuPont De Nemours and Company</td>
<td>Genetically modified soybean seeds</td>
<td>1,000</td>
</tr>
<tr>
<td>2010</td>
<td>Mirror Worlds LLC</td>
<td>Apple Inc.</td>
<td>Operating system</td>
<td>626</td>
</tr>
<tr>
<td>2005</td>
<td>Cordis Corp.</td>
<td>Medtronic Vascular, Inc.</td>
<td>Vascular stents</td>
<td>595</td>
</tr>
<tr>
<td>2004</td>
<td>Eolas Technologies Inc.</td>
<td>Microsoft Corp.</td>
<td>Internet browser</td>
<td>521</td>
</tr>
<tr>
<td>2011</td>
<td>Bruce N. Saffran M.D.</td>
<td>Johnson &amp; Johnson</td>
<td>Drug-eluting stents</td>
<td>482</td>
</tr>
<tr>
<td>2008</td>
<td>Bruce N. Saffran M.D.</td>
<td>Boston Scientific Corp.</td>
<td>Drug-eluting stents</td>
<td>432</td>
</tr>
</tbody>
</table>

Source: PricewaterhouseCoopers, 2014 patent litigation study.
Where is it happening?
Because patent information helps you to

6 Identify new partners for licensing IP
Because **patent information** helps you to

7 **Spot trends in technology or the market at an early stage**

Statistics/trends

E.g. energy storage:

![Energy storage: Patent applications to the European Patent Office](source: stats.oecd.org)
### European patent applications (Annual report 2015)

#### Top technical fields

Medical technology was still the field where the most applications were filed and was also one of the fastest growing areas. Other fields with strong growth were Engines, pumps and turbines, Pharmaceuticals, Measurement and Computer technology. Only Transport and Electrical machinery and energy showed a slowdown in the number of applications.

<table>
<thead>
<tr>
<th>Field</th>
<th>Applications</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Medical technology</td>
<td>12,474</td>
<td>+11.7%</td>
</tr>
<tr>
<td>2. Digital communication</td>
<td>10,762</td>
<td>+3.3%</td>
</tr>
<tr>
<td>3. Computer technology</td>
<td>10,549</td>
<td>+7.9%</td>
</tr>
<tr>
<td>4. Electrical machinery apparatus, energy</td>
<td>10,198</td>
<td>-1.3%</td>
</tr>
<tr>
<td>5. Transport</td>
<td>7,802</td>
<td>-1.4%</td>
</tr>
<tr>
<td>6. Measurement</td>
<td>7,727</td>
<td>+8.0%</td>
</tr>
<tr>
<td>7. Organic fine chemistry</td>
<td>6,414</td>
<td>+42.1%</td>
</tr>
<tr>
<td>8. Engines, pumps, turbines</td>
<td>6,374</td>
<td>+47.9%</td>
</tr>
<tr>
<td>9. Biotechnology</td>
<td>6,048</td>
<td>+9.1%</td>
</tr>
<tr>
<td>10. Pharmaceuticals</td>
<td>5,884</td>
<td>+49.5%</td>
</tr>
</tbody>
</table>

Analyses based on European patent applications filled with the EPO Direct European applications and International (PCT) applications marking the Continue of technology developments. Methodology, visit at: http://www.epo.org/publications/databasemethods/technology.pdf
Technical information at www.epo.org

European Patent Office

Legal information at www.epo.org

European Patent Office
Take-home message

- Use (free) patent databases to retrieve strategic information.
- Consult them before and during research, development and commercialisation.
- Remember that patent information is an important source of technical, legal and business-related information.
- Use Espacenet and other free sources to identify existing technologies, gaps in technology, key players, potential infringement and trends.

Thank you for your attention!