INVENTION-CON 2017
The Place for Inventors, Makers, & Entrepreneurs
USPTO's Inventors Conference • August 11-12 • Alexandria, VA
How to Search Your Invention

Presented By:
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Overview

• Prior art – what it is and why search for it
• Resources for searching
• Search strategies
• Cooperative Patent Classification (CPC)
• Send your questions to: inventorinfochat@uspto.gov

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How to Search and use the Public Search Facilities
What is Prior Art?

Relevant Information (or “Art”) in the public domain that qualifies under the statute as available as evidence regarding patentability of the claimed invention. Examples include:

- U.S. Patents and published patent applications;
- Foreign Patents and published patent applications;
- Journal and magazine articles;
- Books, manuals, and catalogs;
- Websites and databases;
- Conference disclosures
- Other types of public disclosures
Why Perform a Prior Art Search?

- Ensure you do not waste time and money on an unpatentable invention
  - Initial filing fees
  - Patent prosecution fees
- Helps with claim drafting: Allows you to draft claims around prior art
  - Avoid submitting an application claiming something already described in a patent
Why Perform a Prior Art Search?

• Avoid infringement of existing patents
  • Infringement or “freedom to operate” search
• Hone your business plan
  • Identify potential competitors
  • Identify potential customers or licensees
• Assists with preparation to discuss your ideas with a registered patent attorney or patent agent
When should you search?

Search may be an ongoing process, not necessarily a single point in time.

- During development of your idea
- Prior to filing a provisional application
- Prior to filing a nonprovisional application

https://www.uspto.gov/patents-application-process/inventor-info-chat
Where can you search?

USPTO Resources

• PubEAST and PubWEST
  • Located at USPTO and PTRC facilities
• Patent Full-text and image database (PatFT)
• Published Application Full-Text and Image Database (AppFT)
Where can you search?

USPTO Resources

• Patent Application Image Retrieval (PAIR)
  • Complete prosecution history of patents and published applications

• Patent Assignment Database
  • USPTO record of patent ownership

• Global Dossier
  • Patent family and prosecution history

• Links to these sites are found here:
  www.uspto.gov/patents/process/search/
www.USPTO.gov

- Web Based Tutorial on Searching
- Seven Step Strategy
- Links to Resources
- Patent and Patent Application Databases

https://www.uspto.gov/patents-application-process/search-patents

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How to Search and use the Public Search Facilities
Where can you search?

Online Resources - Foreign

- PATENTSCOPE - World Intellectual Property Organization (WIPO)
- Korean Intellectual Property Rights Information Service (KIPRIS)
- esp@cenet - European Patent Office (EPO)
- State Intellectual Property Office (SIPO) – China
- Other countries including Canada, Germany, Taiwan

Links to these sites are found here:
www.uspto.gov/patents/process/search/
Where can you search?

Additional Non-USPTO Resources

• **Google Patent Search™ service**
  • [https://patents.google.com/](https://patents.google.com/)

• **Any web-based search engine**
  • [www.archive.org](http://www.archive.org)
  • Wayback Machine will show older cached versions of the webpage URL

• **Think outside the box**
  • Video websites
  • Magazines, newspapers, other publications
  • Scientific and/or technical journals
  • Visit stores that may sell similar items

• **Private Patent Search Firms:**
  • Pay for a professional searcher to perform a prior art search
What are Patent and Trademark Resource Centers (PTRCs)?

PTRCs are a nationwide network of public, state, and academic libraries designated by the USPTO to support the public with trademark and patent assistance. There are 85 resource centers in 49 states, the District of Columbia and Puerto Rico.

• PTRCs include:
  • Patent Based tools such as Web-based Examiner Search Tool (WEST) and the Examiner Automated Search Tool (EAST)
What are Patent and Trademark Resource Centers (PTRCs)?

• PTRCs include:
  • Trademark search tools such as X-Search
  • Official Gazettes
  • Annual Indexes (of Inventors)
  • The USPTO web site and additional search aids in various formats

• What information is available?
  • The Manual of Classification and its subject matter index
What are Patent and Trademark Resource Centers (PTRCs)?

- What information is available?
  - Full document text may be searched on U.S. patents issued since 1971 and Optical Character Recognition (OCR) text from 1920 to 1970. U. S. patent images from 1790 to the present may be retrieved for viewing or printing.
  - Some foreign patent documents
  - Patent assignment records of transactions affecting the ownership of patents
  - Pending, registered, and dead trademarks
How Can PTRC Staff Help?

• PTRC library staff are information experts trained on how to use search tools to access patent and trademark information. They provide the human touch to help you find the information you need to protect your intellectual property.

• PTRC library staff can:
  • Provide access to resources such as PubEAST and PubWEST, examiner-based search systems
  • Direct you to information and explain the application process and fee schedule
  • Demonstrate how to use search tools to conduct a patent or trademark search
  • Show you a directory of local patent attorneys who are licensed to practice before the USPTO
How Can PTRC Staff Help?

- PTRC library staff can:
  - Offer classes on intellectual property (varies by location)
  - Offer assistance on how to do historical research patents and trademarks
  - Show you how to track current research by company or nonprofit
  - Help you find assignee information and much more.

- PTRC library staff cannot:
  - Provide legal advice
The Alexandria Public Search Facility

- The United States Patent and Trademark Office (USPTO) Public Search Facility located in Alexandria, VA provides public access to patent and trademark information in a variety of formats including on-line, microfilm, and print. Trained staff are available to assist public users.

- Hours:
  - The USPTO Public Search Facility in Alexandria, VA is open Monday to Friday 8 a.m. to 8 p.m. (Closed weekends and Federal Holidays). Research assistance is offered between the hours of 8 a.m. to 8 p.m., Monday through Friday.

- Phone:
  - Local: (571) 272-3275

- Additional Information:
USPTO Regional Offices also have public search resources available. To learn more about each regional office please visit:

https://www.uspto.gov/about-us/uspto-office-locations
Search Strategies

Create a problem / solution statement of your invention

• Anticipate future developments
• Be more generalized than one specific embodiment of the idea for your search
  • You want to make sure future competitor products cannot change a minor aspect of your invention and avoid infringing your patent
• Provide a basis for your patent claims (the legal boundaries of your patent)
  • Important to think critically and produce an accurate problem solution statement
  • Once a patent search is performed, the problem solution statement can be modified
• Think of different examples of ways your invention could be used
Text Search Strategies

- Use synonyms or multiple versions or words
  - Not everyone calls a widget a widget
  - Frequently accepts British English spellings
  - Does not always catch misspellings
  - Acronyms

- Use truncation (e.g., tune or tuner or tuning)

- Use advanced search logic (e.g., “AND” or “OR” or “WITH”)

- Constantly Evaluate Your Results

- Remember: Text Searching is an Iterative Process
  - Start with a “Big Net” and refine your results step-by-step
Classification Searching

• In general, a classification system is an arrangement of hierarchical categories used to organize “things” by their characteristics and relationships.

• Classification systems are very useful for sorting and searching large collections of information.

• Classification systems
  • Cooperative Patent Classification (CPC) schedule
    • Primary system used for Utility Patent Applications
  • US Patent Classification (USPC) schedule
    • Primary system used for Design Patent Applications
    • USPC is no longer updated for Utility Patent Applications
Cooperative Patent Classification (CPC)

- **What is CPC?**
  - An arrangement of categories by hierarchy used to organize inventions by their characteristics into common subject matter
  - Joint partnership with the European Patent Office (EPO) to harmonize USPC and the European Classification system (ECLA)

- **How do I know where to search in CPC?**
  - You can use the statistical mapping tool on the Classification Search Page to get started if you are familiar with the previous USPC system
  - Any electronic version of an issued US Patent or PGPub accessed via USPAT, EAST/WEST, or Google Patents will list the CPC classification of most published documents
  - CPC symbols are also printed on the face of more recent US Patent and PGPub documents
The CPC is divided into 8 main areas, A-H

- **A – Human Necessities**
  - Agriculture, Foodstuffs
  - Apparel (including footwear, hats, and jewelry), Furniture
  - Medical Devices and Hygiene, Sporting Goods

- **B – Performing Operations; Transporting**
  - Separating, Mixing, Shaping, Printing
  - Transporting
  - Micro- and Nano-Technology

- **C – Chemistry and Metallurgy**

- **D – Textiles and Paper**

- **E – Fixed Constructions**
  - Building
  - Drilling and Mining

- **F – Mechanical Engineering; Lighting; Heating; Weapons; Blasting; Engines or Pumps**

- **G – Physics**
  - Measuring and Testing, Optics, Photography
  - Controlling and Regulating; Computing, Calculating, Counting
  - Musical Instruments
  - Nuclear Physics, Nuclear Engineering

- **H – Electricity**
  - Electric Elements, Electric Circuitry, Electric Communication Techniques
  - Generation, Conversion, Distribution of Electric Power
How to read a Classification Scheme

A61M 25/10   . Balloon catheters (\{A61M 25/0125 takes precedence; embolectomy A61B 17/22032; retractors A61B 17/02\}; inflatable balloons for placing stents or stent-grafts A61F 2/958; \{stomach balloons for treatment of obesity A61F 5/0003; oesophageal tubes A61J 15/00\})
A61M 25/1002 . . \{characterised by balloon shape (A61M 25/1006, A61M 25/1009 take precedence)\}
A61M 25/1004 . . \{Balloons with folds, e.g. folded or multifolded\}
A61M 25/1006 . . \{Balloons formed between concentric tubes\}
A61M 25/1009 . . \{Balloons anchored to a disc or plate\}
A61M 25/1011 . . \{Multiple balloon catheters\}
A61M 25/1013 . . \{with concentrically mounted balloons, e.g. being independently inflatable\}
A61M 25/1015 . . \{having two or more independently movable balloons where the distance between the balloons can be adjusted, e.g. two balloon catheters concentric to each other forming an adjustable multiple balloon catheter system\}
Why do a Classification Search?

• Can be very broad or very narrow
  • A61M 25/10—Balloon Catheters
    • A61M 25/1002—Characterized by Balloon Shape
    • A61M 25/1011—Multiple Balloon Catheters
• Group devices and methods with similar features
• Classification Scheme and Definitions can lead you to other areas of search
The CPC Classification Picture (CP)

- The set of CPC Allocations (i.e., all Inventive and Additional and combination set allocations) on a CPC document family is the CPC classification picture.

- Example of CPC CP on patent image and patent text from and the EAST and WEST search tools.

CPC-ISSUED:

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<th>TYPE CPC</th>
<th>DATE</th>
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</table>

Allocated after publication

US 2015/0047065 image rendition

US 2015/0047065 HTML rendition
Text Searching the CPC Scheme

https://www.uspto.gov/

I'm looking for...

Balloon Catheter CPC

For example, “trademark abandonment”, “EFS-Web”, or “provisional patent”

Help Topic
- General information concerning patents
- Patent forms
- Trademark basics
- Financial Manager
- Fees and payment
CPC Scheme Search Results for “Balloon Catheter”

CPC Scheme - A61M DEVICES FOR INTRODUCING MEDIA INTO, OR ...
The following IPC groups are not used in the CPC ... A61M 27/00 - A61M 35/00 take precedence }; catheters ...
e.g. for counter pulsation, ...

CPC Scheme - A61F FILTERS IMPLANTABLE INTO BLOOD VESSELS ...
The following IPC groups are not used in the CPC ... (closure means for urethra or rectum or for artificial body openings therefor A61F 2 ... {using ...
Use CTRL-F to search within the page
USPTO CPC Classification Search

http://www.uspto.gov/web/patents/classification/
## CPC Scheme Uses British English

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<th>American</th>
<th>British</th>
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<tr>
<td>Gas</td>
<td>Petrol</td>
</tr>
<tr>
<td>Truck</td>
<td>Lorry</td>
</tr>
<tr>
<td>Bathroom</td>
<td>Loo</td>
</tr>
<tr>
<td>Line</td>
<td>Queue</td>
</tr>
<tr>
<td>Stove</td>
<td>Hob</td>
</tr>
<tr>
<td>Napkins</td>
<td>Serviettes</td>
</tr>
<tr>
<td>Hood</td>
<td>Bonnet</td>
</tr>
<tr>
<td>Trunk</td>
<td>Boot</td>
</tr>
</tbody>
</table>
American vs. British Spelling Differences

**-ER vs. -RE**
- **American**: color, favorite, honor, armor
- **British**: colour, favourite, honour, armour

**-LL vs. -L**
- **American**: enrollment, fulfill, skillful
- **British**: enrolment, fulfil, skillful

**-DG vs. -DGE**
- **American**: aging, abridgment, judgment
- **British**: ageing, abridgement, judgement

**-ED vs. -T**
- **American**: dreamed, learned, leaped, burned
- **British**: dreamt, learnt, leapt, burnt

**-OG vs. -OGUE**
- **American**: analog, catalog, dialog
- **British**: analogue, catalogue, dialogue

**-ENSE vs. -ENCE**
- **American**: defense, license, pretense
- **British**: defence, licence, pretence

**-OR vs. -OUR**
- **American**: color, favorite, honor, armor
- **British**: colour, favourite, honour, armour

**-E vs. -OE or -AE**
- **American**: encyclopedia, maneuver, medieval, leukemia
- **British**: encyclopaedia, manoeuvre, mediaeval, lukaemia

**-K vs. -QUE**
- **American**: bank, check, checker
- **British**: banque, cheque, chequer

**-ZE vs. -SE**
- **American**: analyze, criticize, memorize
- **British**: analyse, criticise, memorise
CPC Resources

- CPC General Website:  
  - http://www.CPCinfo.org

- Link to USPTO Classification Homepage:  
  - http://www.uspto.gov/web/patents/classification/

- Guide to the CPC:  

- Espacenet the EPO’s public search tool:  

- CPC Online Resources and Training Materials  
  - http://www.cooperativepatentclassification.org/Training.html

- USPTO PatFT and AppFT  
  - http://patft.uspto.gov/