USPTO Inventor Info Chat Series: How to Search and why you want to?

Office of Innovation Development
Robert Hodge & Zandra Smith
March 16, 2017

Email questions to: inventorinfochat@uspto.gov
Office of Innovation Development

• In Person Assistance (by appointment) for Pro Se Applicants
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• Inventor Outreach
  – Independent Inventor Conferences
  – Education for Inventor Organizations
• http://www.uspto.gov/inventors

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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
What is Prior Art?

Prior art consists of information disclosed to the public including:

• 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.

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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
- 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

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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

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USPTO Prior Art Search Resources

- Free patent and trademark searching
- Patent searching with EAST, same software used by patent examiners
- USPTO’s main campus and satellite offices

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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Examples of Non-USPTO Resources

• Google Patents: https://patents.google.com/
• Free Patents Online: http://www.freepatentsonline.com/
• Espacenet: http://worldwide.espacenet.com/
• Private Patent Search Firms:
  • Pay for a professional searcher to perform a prior art search
• Any web-based search engine
  • www.archive.org
  • Wayback Machine will show older cached versions of the webpage URL
• Others - Think outside the box
  • Video websites
  • IEEE
  • Magazines, Newspapers, other Publications
  • Scientific Journals
  • Visit stores that may sell similar items

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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

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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

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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

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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 USPC
- 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

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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

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CPC – (cont.)

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; oesophagal tubes A61J 15/00})

A61M 25/1002 . {characterised by balloon shape (A61M 25/1006, A61M 25/1009 take precedence)}

A61M 2025/1004 . . {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 2025/1013 . . {with concentrically mounted balloons, e.g. being independently inflatable}

A61M 2025/1015 . . {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

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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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</table>

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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

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CPC Scheme Search Results for “Balloon Catheter”

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Use CTRL-F to search within the page

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USPTO CPC Classification Search

http://www.uspto.gov/web/patents/classification/

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<table>
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<td>Hood</td>
<td>Bonnet</td>
</tr>
<tr>
<td>Trunk</td>
<td>Boot</td>
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American vs. British Spelling Differences

**-ER vs. -RE**
- **American**: center, meter, theater
- **British**: centre, metre, theatre

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

**-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**: analogy, 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

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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:

• Espace net 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/

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Upcoming OID Events

• March 23, 2017 – Working with Patents and Trademarks – Indianapolis, IN

• April 20, 2017 – Inventor Info Chat – Webinar; How to File a Patent Application

For more information or to register for any of the above events contact us at oidevents@uspto.gov

https://www.uspto.gov/patents-application-process/inventor-info-chat
Thank You!

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