USPTO University Outreach: Patent Searching and Search Resources

Presenter

Date
Objectives

• Where can you search?
• What are the benefits of searching?
• When should you search?
  and most importantly:
• How do you search using USPTO search tools?
• What are some important strategies?
Overview of IP: Why Get a Patent?

• A patent can be
  – Used to gain entry to a market
  – Used to exclude others from a market
  – Used as a marketing tool to promote unique aspects of a product
  – Sold or licensed, like other property
What is patentable?

- NEW, USEFUL, NONOБVIOUS, ENABLED & CLEARLY DESCRIBED
- compositio
- Machine
- Manufacture
- Method/or process
- Improvements thereof
Types of Patents

• Utility - New and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof Term – 20 years from earliest effective filing date

• Design - Any new, original and ornamental design Term - 15 years from issue date

• Plant - Whoever invents or discovers and asexually produces any distinct and new variety of plant... Term – 20 years from earliest effective filing date
Overview of IP: What is a Patent?

• A Property Right
  – Right to *exclude others* from making, using, selling, offering for sale or importing the claimed invention
  – Limited term
  – Territorial: protection only in territory that granted patent; **NO world-wide patent**

• Government grants the property right in exchange for the disclosure of the invention
What Type of Application?

- Provisional – abandoned after one year, no claims required, written disclosure must meet same requirements as non-provisional, not allowed for design.

- Non-Provisional - claims required, written disclosure must meet requirements of 35 USC 112(a). Examined for patentability, may result in a patent grant.
What are the Benefits of Searching?

- **Save money**
  - Your invention might not be new
  - Many alternatives may be known

- **Streamline prosecution**
  - Optimize specification and claims to distinguish prior art and avoid a rejection
  - Identify prior art showing typical features to simplify specification

- **Hone your business plan**
  - Identify potential competitors
  - Identify potential customers or licensees
Where can you search?

**USPTO resources**

- PubEAST and PubWEST (at USPTO and PTRC facilities)
- Patent Full-text and image database (PatFT)
- Published Application Full-Text and Image Database (AppFT)
- Patent Application Image Retrieval (PAIR)
  - Complete prosecution history of patents and published applications
- Patent Assignment Database
  - USPTO record of patent ownership

Links to these sites all found at: [www.uspto.gov/patents/process/search/](http://www.uspto.gov/patents/process/search/)
Where can you search?

Online Resources - Foreign

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

Links to these sites all found at: [www.uspto.gov/patents/process/search/](http://www.uspto.gov/patents/process/search/)
Where can you search?

Additional Non-USPTO Resources

- Google Patent Search™ service
  - https://patents.google.com/
- Any web-based search engine
  - www.archive.org
  - Wayback Machine will show older cached versions of the webpage URL
- Think outside the box
  - Video websites
  - IEEE
  - Magazines, Newspapers, other Publications
  - Scientific Journals
  - Visit stores that may sell similar items
When should you search?

• During development of your idea?
• Prior to filing a provisional application?
• Prior to filing a regular application?

• Search may be an ongoing process, not necessarily a point in time.
How to Search in EAST

Public EAST Training Modules are Available on the USPTO Website

Examiner Assisted Search Tool (EAST)

The EAST patent class is a fast-paced course for users with on-line database and Boolean logic experience. Text searching using indexes and the use of the browser screen for rapid patent retrieval. This is a four-hour class given once a month.

Application for EAST Training [PDF]

You may also wish to review an introductory online training package about EAST by linking to: The EAST Training Package Page


Topics include using EAST operators, customizing your workspace, and a brief CPC Introduction
Search Strategies

• Use multiple different search strategies
• Forward/Backward Search on a good reference
• “Building Block” Method
  • Search various features or concepts individually
  • Combine features and concepts to get closer to the invention
• Using synonyms or multiple versions of words
  • Not everyone calls a widget a widget
  • We frequently accept British English spellings
  • We don’t always catch misspellings
• Classification searching can be extremely helpful
  • CPC schedule
  • Common classifications in prior art
Search Strategies-
Forward/Backward Search-EAST

USPN 5,074,473: Pinch trigger pump water gun
Search Strategies-
Forward/Backward Search-EAST

97 documents which were either cited in USPN 5,074,437 OR which have cited that document since it was published
Search Strategies-
Forward/Backward Search

Pinch trigger pump water gun
US 5074437 A

ABSTRACT

The present invention is directed toward a toy water gun which is operated by selectively releasing water from a water reservoir that is pressurized with air. The present invention is a one piece device formed in the general shape of a gun that has a manually operated air pump incorporated into the design. The air pump pressurized a water reservoir and consequently pressurizes any water found therein. The pressurized water has an avenue of release that is regulated by the trigger mechanism of the invention. When no force is applied to the trigger, the pressurized water is held at bay with no means of release. When force is applied to the trigger, water is released from the pressurized container and is channeled through a narrow nozzle. The escape of the pressurized water through the narrow nozzle creates a stream of propelled water that lasts as long as the trigger is engaged or until the pressure of the water equals the ambient air.

Other commercial search engines have a similar feature, but you have to click on each document individually instead of having them available to you as a group of results you can scroll through in EAST.
Search Strategies-
Building Block/Synonyms-USPAT

Radio Sunglasses
Search Strategies - Building Block/Synonyms-USPAT

• Search Primary Concepts Separately
  • Radio and synonyms
  • Sunglasses and synonyms

• Use “and” to find the union of the two sets of information
Search Strategies - Building Block/Synonyms-USPAT

- First Search Statement
  - Radio or receiver or tuner
  - Include any other synonyms as well
- Search returns over 705,000 documents

USPTO Patent Full-Text and Image Database

Searching US Patent Collection...

Results of Search in US Patent Collection db for:
((radio OR receiver) OR tuner): 705572 patents.
Hits 1 through 50 out of 705572
Search Strategies-
Building Block Synonyms-USPAT

• Second Search Statement using truncation
  • sunglass$ or eyeglass$ or spectacl$
  • Include any other synonyms as well

• Search returns over 22,000 documents
Search Strategies-
Building Block/Synonyms-USPAT

• Use the union of the two statements for a more refined search
  (radio or receiver or tuner) AND (sunglass$ or eyeglass$ or spectacl$)

• Search returns just over **3500 documents**

• The same techniques can be used in **EAST and commercial search engines, such as, Google patents**
  • Note that EAST will save your previous search queries which can save you some time
Search Strategies-
Classification Searches (CPC)

• What is CPC?
  • Joint partnership with the European Patent Office (EPO)
  • Harmonization of USPC and ECLA
• But I was so happy with USPC! How do I know where to search in CPC?
  • You can use the statistical mapping tool on the Classification Search Page to get started
  • 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
Search Strategies - Classification Searches (CPC)

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**
The CPC is divided into 8 main areas, A-H

- **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
Search Strategies - Classification Searches (CPC)

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 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}
Search Strategies-
Classification Searches (CPC)

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
Search Strategies - Classification Searches (CPC) - USPAT

**USPTO Patent Full-Text and Image Database**

**CPC Class**

**Text Search**

Searching US Patent Collection...

Hits 1 through 50 out of 1786

Searching US Patent Collection...

Hits 1 through 50 out of 1010

Searching US Patent Collection...

Hits 1 through 50 out of 1013

Searching US Patent Collection...

Hits 1 through 50 out of 28753

Searching US Patent Collection...

Hits 1 through 50 out of 20235

Searching US Patent Collection...

Results of Search in US Patent Collection db for: ((balloon AND catheter) AND (multiple OR more)): 28365 patents.
Hits 1 through 50 out of 28365
Thank You!

Presenter Name
Presenter Title
Presenter@USPTO.gov
Google Patents Content

- All documents originate from USPTO, China, Germany, Canada, the European Patent Office (EPO) and the World Intellectual Property Organization (WIPO).
- Entire collection of granted patents and published patent applications from the USPTO is from 1790. EPO and WIPO coverage is from 1978.
- Coverage for Chinese, German and Canadian patent data is unknown.
- Google Patents provides links to Google Scholar and Google Books through the Find Prior Art interface. The exact content of Google Scholar and Google Books is unknown.
Google Patent Features:

• The interface is intuitive.
• Relevancy ranking enables quick searches.
• Prior Art Finder feature searches patent and non-patent literature sources.
Google Patents: Searches CPC Classification

- Click Options icon to access Advanced Patent Search.
Google Patents: Searches CPC Classification

Use Advanced Patent Search to limit with Cooperative Patent Classification (CPC) code G06F19/322 (Management of patient personal data...).
Google Patents: Searches CPC Classification

About 12,500 results (0.23 seconds)

Method and system for providing relevant content based on...

System for processing healthcare claim data

System and method for reviewing medical and financial...
Google Patents: Find Prior Art

Google Patents: Find Prior Art Button
Google Patents: Prior Art Finder

Features

• Identifies key phrases from EPO, WIPO and post-1976 US patents and combines them into a search query.

• Searches not only Google Patents, but simultaneously searches Google Scholar, Google books and the rest of the Web.

• Results can be tuned by date and are ranked by relevancy using algorithms that combine multiple signals to determine order of search results.
**Google Patents: Prior Art Finder Search Results**

- **Structuring agglomerated products for improved performance**
  - PC Knight - Powder technology, 2001
  - The rate of sedimentation of individual granules, before they have dissolved, within the washing machine drum, will also increase with increase ... In a feeder drawer, water is sprayed onto the powder. The water must penetrate into the powder in order to wash it from the drawer ...

- **... of hamstring and patellar tendon graft anterior cruciate ligament reconstruction techniques, the impact of fixation level and fixation method under cyclic loading**
  - An anterior drawer with increasing loads of 20 N increments was applied at 30° of ... Both graft constructs (HST and HST Washer) were positioned at 30° of flexion with ... The load-elongation data were digitally recorded from the material testing machine and transferred ...

- **Space and design requirements for wheelchair kitchens**
  - HE McCullough, MB Farnham - 1990
  - Page 1. This document was created by the Digital Content Creation Unit University of Illinois at Urbana-Champaign 2011 Page 2. SPACE AND DESIGN REQUIREMENTS FOR WHEELCHAIR KITCHENS By Helen E. McCullough and Mary B. Farnham BULLETIN 861 ...

- **What Does It Mean to Be Design-led?**
  - ... an extremely small and flat motor so that the two-drawer design could ... Indeed, Dyson combined traditional techniques for hand-washing with new technical advances and environmental concerns over water usage to develop the ContraHot washing machine ...
Google Patents: Prior Art Finder Search Results

Costantino Mariotti
Inventor
Scholar Search - Patent Search - Book Search

Luca D'Andrea
Inventor
Scholar Search - Patent Search - Book Search

Maurizio Baldini
Inventor
Scholar Search - Patent Search - Book Search

Gianluca Pierucci
Inventor
Scholar Search - Patent Search - Book Search

Giovanni Bombardieri
Inventor
Scholar Search - Patent Search - Book Search

Ingo Schulze
Inventor of a cited patent
Scholar Search - Patent Search - Book Search

Application US20130263631
Washing machine comprising a drawer for loading washing agent

Inventors: Luca D'Andrea, Giovanni Bombardieri, Gianluca Pierucci, Maurizio Baldini, Costantino Mariotti
Assignees: Elisa Mariotti, Maria Angela Mariotti, Fernanda Gaggioli
Publication number: US20130263631
Application number: 13/054,989
Filing date: Jun 9, 2009
Discuss this Patent Application