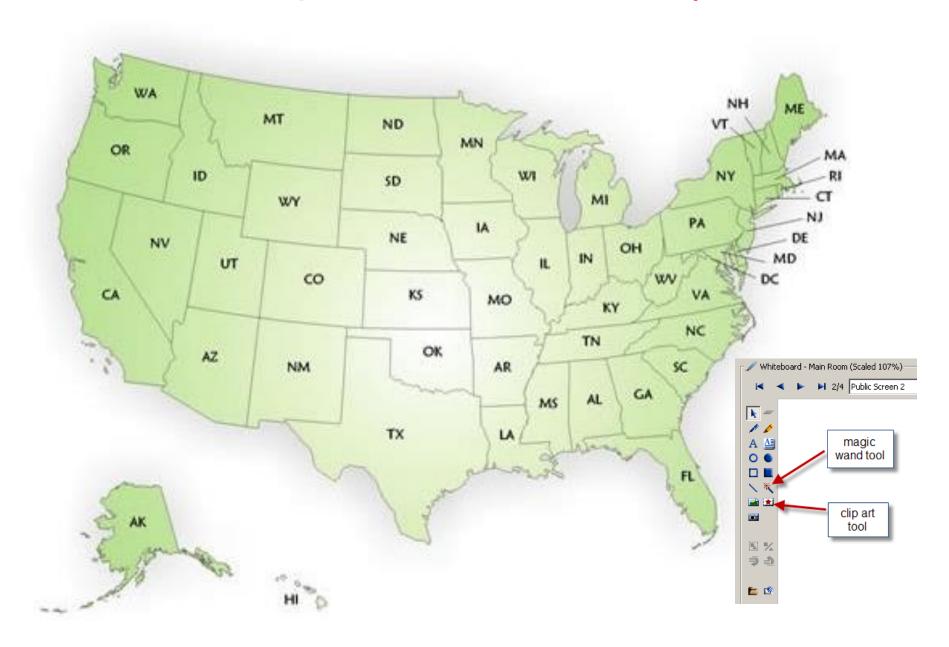
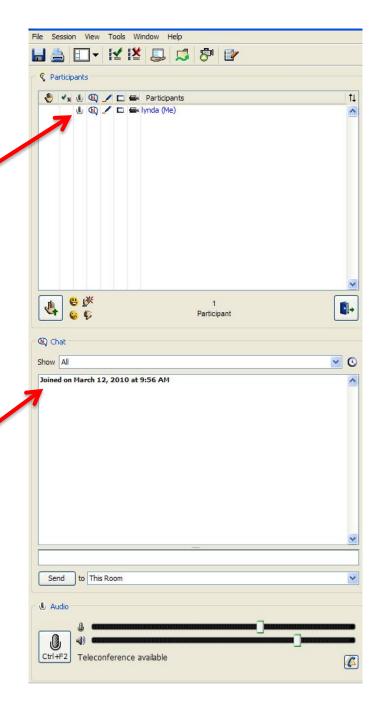
## **Accidental Gov Info Librarian: Patents!**

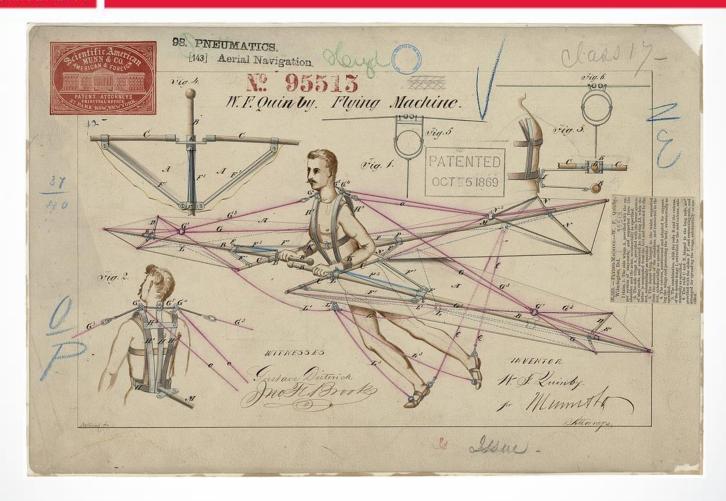


**Technical Stuff** 

Status of group members. If mic is yellow, then you have control of mic.

Chat box. Feel free to chat at anytime.





# BEYOND GOOGLE: EFFECTIVE PATENT SEARCHING IN EVERY LIBRARY

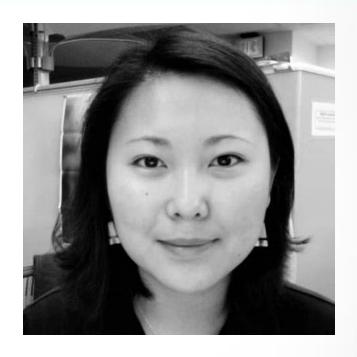
**David Zwicky & Hyun-Duck Chung** 



David Zwicky

Engineering Services Librarian

NCSU Libraries



Hyun-Duck Chung
Librarian and Market Research
Information Specialist
University of Toronto Libraries,
Gerstein Information Science Centre
and MaRS Innovation.

# ARE THERE ANY PATENT LIBRARIANS IN THE AUDIENCE?

- Yes (✓)
- No (X)

#### **WHAT IS A PATENT?**

- A limited time property right granted by the U.S. Government to an inventor
- Confers the right to exclude others from:
  - Making, using, offering for sale, selling, or importing the invention in the United States
- Rights are granted in exchange for disclosing the invention
- Types: Utility, Design, Plant

#### WHY SEARCH PATENTS?

- You need to search to see if your idea has already been patented
  - You are entitled to a patent unless your invention doesn't meet one of the patentability requirements.
  - One of the requirements is "novelty." Your invention must be new
- Patents are a rich source of scientific and technical information

# AT ONE TIME, TO DO A PATENT SEARCH...



# NOW THERE ARE PATENT & TRADEMARK DEPOSITORY LIBRARIES ACROSS THE COUNTRY



### **INCLUDING TWO IN NORTH CAROLINA**

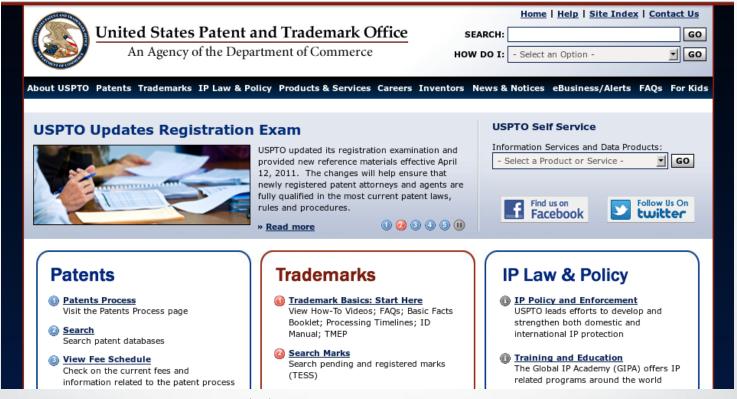


**NCSU** 



**UNC-Charlotte** 

# BUT THERE ARE ALSO A NUMBER OF RESOURCES ON THE INTERNET



http://www.uspto.gov

#### WHAT CAN YOUR LIBRARY DO?

- Install TIFF reader for USPTO patent search tool on public computers
- Direct inventors to websites
  - http://www.lib.ncsu.edu/ptdl
  - http://library.uncc.edu/patents
  - http://www.uspto.gov
  - http://www.uspto.gov/inventors
- Provide search strategy information
- DO NOT search for someone

#### WHAT CAN A PTDL DO?

- Access PubWEST (Web-based Search Tool)
  - More sophisticated search tools (access to Boolean and proximity operators)
  - More patents available for keyword searching
  - Selected international patents
  - Difficult to access and use
  - Optimized for serious, experienced patent searching;
     not as useful for casual use by students or
     researchers

#### WHAT ELSE CAN A PTDL DO?

- View plant patent images in color
  - The web versions are grayscale
- Access print resources
  - USPTO publications
  - How-to guides
  - Inventor & small business resources
  - Much of this is also available on uspto.gov

#### **HAVE YOU SEARCHED FOR PATENTS?**

- Yes (✓)
- No (X)

# THE RIGHT WAY TO SEARCH (OR WHY GOOGLE ISN'T ENOUGH)

- Keyword searching is ineffective
  - Patents are written in a combination of legal and technical language - "patentese"
  - Odd spellings, errors, abbreviations, obsolete terms
  - Patents are intentionally obfuscatory
  - Keyword indexes don't go all the way back
- Class searching is the way to go
  - Patents, all the way back, are organized (and searchable) by class and subclass based on the type of invention

# THE SEVEN STEPS (PLUS ONE)

- 1. Brainstorm synonyms
- 2. Look up synonyms in Classification Index
- 3. Identify classes and subclasses
- Read the class and subclass definitions
- 5. Search patents (and patent applications) in applicable classes
- 6. Review the documents you've found
- 7. Use the references in those documents to identify additional classes and repeat

You will also want to search non-patent literature

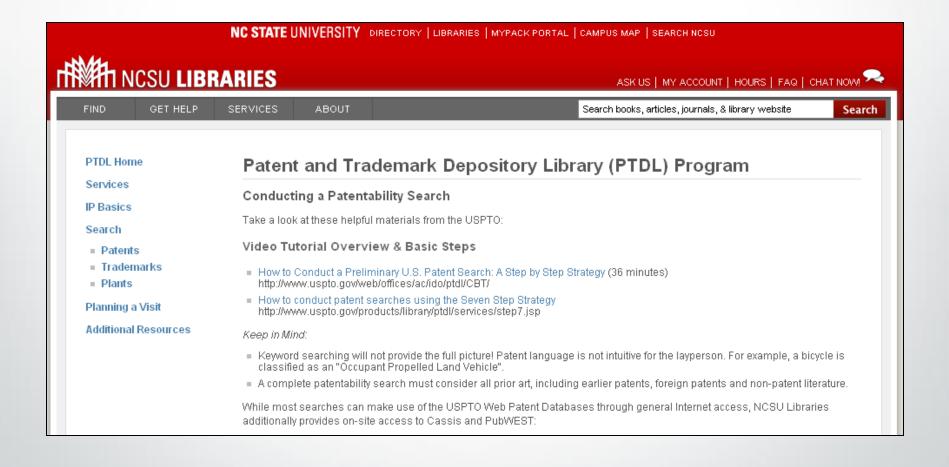
#### WHERE DO I FIND THESE TOOLS?

- A lot of places, but here's where we keep them:
  - http://www.lib.ncsu.edu/ptdl
  - Click on "patents" in the sidebar
  - Click on "I am an inventor doing a patentability search"
  - Click on "How to conduct patent searches using the Seven Step Strategy" (there's also a link to a video tutorial from USPTO)

#### **MOCK SEARCH**

- For sample searching, it's best to pick something that we know is already patented
- We'll be searching for: a heated dog dish

#### FROM LIB.NCSU.EDU



#### FROM USPTO.GOV

#### Product Catalog

#### Locate Libraries

- Patent & Trademark Depository Libraries (PTDLs)
- History and Background
- Mission
- Events Schedule
- Tutorials
- PTDL Locations by State
- Materials & Services
- News & Notices
- · Public Search Facility

#### Training/Events

Customer Information Services

#### Seven Step Strategy

#### **Quick Start**

<u>Patent and Trademark Depository Library (PTDL)</u> staff are available to provide training on U.S. patent search processes and research tools including the <u>Cassis DVD-ROM</u> system, the <u>PubWEST</u> database, and the <u>USPTO</u> website.

#### Classification

- Brainstorm keywords related to the purpose, use and composition of the invention.
- Look up the words in the <u>Index to the U.S. Patent Classification</u> to find potential class/subclasses.
- Verify the relevancy of the class/subclasses by using the <u>Classification Schedule</u> in the <u>Manual</u> of Classification.
- Read the <u>Classification Definitions</u> to verify the scope of the subclasses and note "see also" references.

#### Access Full-Text

Search the <u>Issued Patents</u> and the <u>Published Applications</u> databases by "Current US Classification" and access full-text patents and published applications.

#### Review and References

- 6. Review the claims, specifications and drawings of documents retrieved for relevancy.
- Check all references and note the "U.S. Cl." and "Field of Search" areas for additional class/subclasses to search.

1. Brainstorming

Describe your invention. What does it do? What is it made of? What is the end product? What else could it be used for? What are some alternate ways to describe your invention?

## 2. Look up in Classification Index

```
Index to the United States Patent Classification (USPC) System

Preface to the Index to the USPC
Select the format and section (by letter) ...

Index in HTML

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

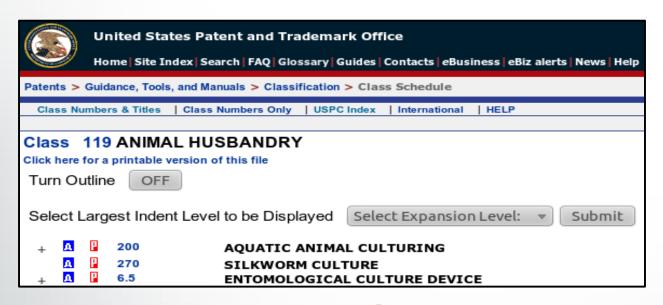
Index in PDF

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
```

```
Animal
  Artificial ......
                                428 / 16
     Having lights ......
                                362 / 124
  Attack resistant stock ..........
                                428 / 907*
  Beds ..........
                                D30 / 118
  Bee culture .....
                                449
  Blocking repelling or chasing ......
                                49 / 58+
  Butchering ......
     Depilating .....
                                452 / 71
  Calls and callers ............
                                446 / 397
     With mouthpiece ..........
                                446 / 207+
  Canopy frame supported by ......
```

43 / 58+ D22 / 119+
119 / 72+ D30 / 121+
231
435 / 325+
435 / 404+

3. Identify classes and subclass(es)





#### 4. Read the definitions

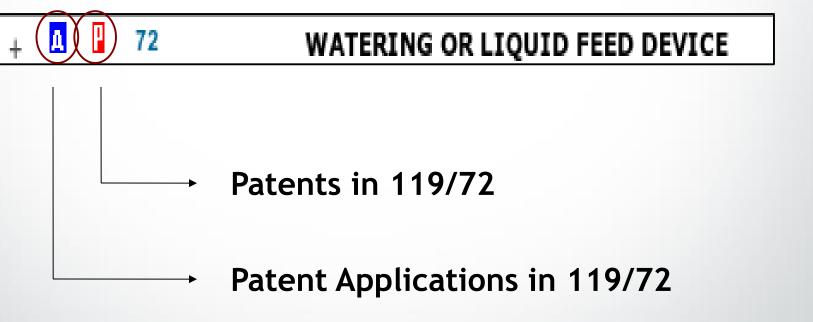
#### 72 WATERING OR LIQUID FEED DEVICE:

This subclass is indented under the class definition. Inventions not otherwise classifiable especially designed for supplying animals with drink. This subclass and the indented subclasses also include those devices designed for supplying liquid-food, such as buttermilk, etc., as well as structures equally adapted to use as a feeding or watering device.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 51.01+, for a feeding device used to supply nourishment to an animal wherein the nourishment, if in a flowable form, has viscosity characteristics significantly different from water.
- 51.5, for a feeding device combined with a watering device.
- 69.5, for a birdbath.

#### 5. Search!



#### USPTO PATENT FULL-TEXT AND IMAGE DATABASE Advanced Home Quick Pat Num <u>Help</u> Next List Bottom View Cart Searching US Patent Collection... Results of Search in US Patent Collection db for: CCL/119/72: 415 patents. Hits 1 through 50 out of 415 Next 50 Hits Jump To Refine Search CCL/119/72 Title PAT. NO. 7,918,186 Grass-growing devices for pet fountains 7,913,648 Water drinking container for animals 7.891,319 Liquid bird feeder

#### US PATENT & TRADEM. PATENT APPLICATION FULL TEXT A Boolean Manual Number Help PTDLs View Shopping Cart Bottom Next List Searching AppFT Database... Results of Search in AppFT Database for: CCL/"119"/72: 106 applications. Hits 1 through 50 out of 106 Next 50 Hits Jump To Refine Search CCL/"119"/72 PUB. APP. Title NO. 20110073044 BIRD DRINKER ASSEMBLY WITH A TRIANGULAR SUPPLY LINE 20110073043 Bird Feeder 20110056438 PUPPY CUP

### A NOTE ABOUT APPLICATIONS

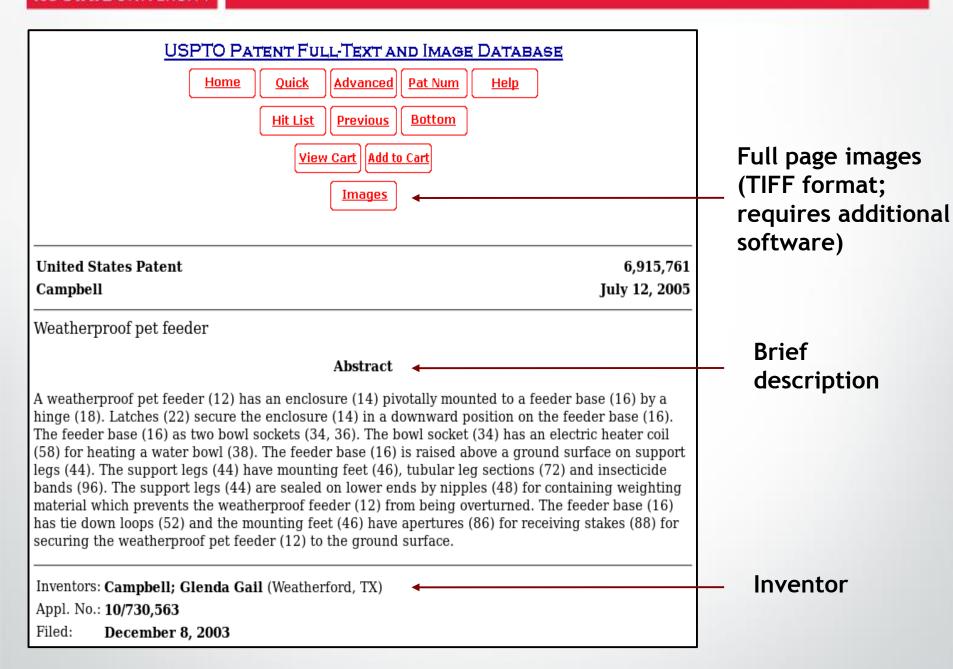
- Patent applications are published eighteen months after they're submitted
- They may not have become patents
- They may not contain the same information as the final patent
- When determining if your invention is novel, they still count
- You can't ignore them

#### 6. Review the documents

- If it's a patent granted since 1976, the full text is on the USPTO website
- Older patents need to be viewed as page images, using the TIFF viewer (or using another website)
- All applications that matter are available in full text on the USPTO website

#### PRINTING PATENTS

- Once you have the patent number, you have more options
  - Google Patents
  - Pat2PDF (pat2pdf.org)
  - Patent Fetcher (free.patentfetcher.com)
  - And many more



#### NC STATE UNIVERSITY

**Current U.S.** 119/51.01; 119/61.3; 119/61.5; 119/61.52; 119/72; 119/73; 119/74; 119/76

Class:

Current A01K 5/00 (20060101); A01K 5/01 (20060101); A01K 001/10 (); A01K 039/00 ();

International A01K 005/00 ()

Class:

Field of 119/410,414,469,470,475,73,72,74,76,61.5,61.53,61.52,61.56,61.3,61.1,51.12,51.01

**Search:** D30/121-133



#### References Cited [Referenced By]

TIC	т.		T	
U.S.	Pa	tent	Docu	ments

<u>1257211</u>	February 1918	Frost
<u>2492604</u>	December 1949	Townsend
<u>2682255</u>	June 1954	Kleeman
<u>2781607</u>	February 1957	Smiley
<u>2841116</u>	July 1958	Nichols et al.
<u>2845896</u>	August 1958	Copeland
<u>2865326</u>	December 1958	Lowe, Jr.
<u>2944364</u>	July 1960	Kelly
<u>3324833</u>	June 1967	Clugston
<u>3654904</u>	April 1972	Kreuger
<u>3763825</u>	October 1973	Fleming
<u>3995595</u>	December 1976	Williams
<u>4029051</u>	June 1977	McKinney
<u>4334501</u>	June 1982	McDaniel et al.
<u>4561384</u>	December 1985	Liff
<u>4860691</u>	August 1989	Mayer
<u>4974546</u>	December 1990	Burgett
<u>5054431</u>	October 1991	Coviello

7.Check references

#### Claims

#### What is claimed is:

- 1. A weatherproof pet feeder for placing outdoors to provide feed and water for a small animal, the weatherproof pet feeder comprising: a feeder base having an entrance section with an open forward end for receiving the animal, and a feeder section which the animal accesses after walking into the entrance section of the feeder base; wherein said feeder base has a substantially planer shape which is horizontally disposed, said entrance section being defined by an entrance slot which extends into said substantially planar shape and defines a U-shaped entrance, said entrance slot extending into said feeder base approximately two-thirds of a longitudinal length of said feeder base; support legs extending downward from said feeder base to a ground surface and suspending said feeder base above the ground surface; an enclosure having a front opening for receiving the animal and an enclosed rearward end, said enclosure fitting over said entrance section and said feeder section of said feeder base, with said front opening registering with said open forward end of said entrance section of said feeder base and said enclosed rearward end enclosing said feeder section of said feeder base; and means for securing said enclosure to said feeder base, such that said enclosure is moveable relative to said feeder base for accessing said feeder section.
- 2. The weatherproof pet feeder according to claim 1, wherein said enclosure has an exterior surface with a top defining a crest which extends from said enclosed rearward end to said front opening, said crest having a rearward ridge defined atop said closed rearward end and a forward ridge disposed adjacent to said front opening, and said crest sloping downward from said rearward ridge and downward from said forward ridge to an intermediate portion, disposed between said forward ridge and said rearward ridge.
- 3. The weatherproof pet feeder according to claim 1, wherein said feeder section includes two bowl sockets for receiving a feed bowl and a water bowl, respectively.
- 4. The weatherproof pet feeder according to claim 3, wherein said feeder section of said feeder base includes a heating element disposed with one of said bowl sockets for warming a water bowl when received within said one of said bowl sockets.

The claims are the meat of the patent. Claims define the precise legal limits of the patent. They're difficult to read and difficult to write. If your claims are too broad, you might infringe on another patent. If your claims are too narrow, you might not get all the protection to which you are entitled.

- ...and repeat.
  - Check other synonyms
  - Check referenced classes and subclasses
  - Check referenced patents
- A thorough patent search can take between twenty and thirty hours, if not even longer

Plus One: Searching non-patent literature

- Articles
- Conference proceedings
- Blogs, websites
- Foreign patents
- Anything that's publicly accessible is fair game

# MISCELLANEOUS CAVEATS (IN NO PARTICULAR ORDER)

- An INVENTOR is the person who created the invention. An ASSIGNEE is the entity that owns the patent (a company, university, etc.)
- Names are tricky. Joe Brown, Joseph Brown, Joseph A. Brown, and J.A. Brown are all valid and may get different results
- The America Invents Act may pass this year, changing us from "first to invent" to "first to file"

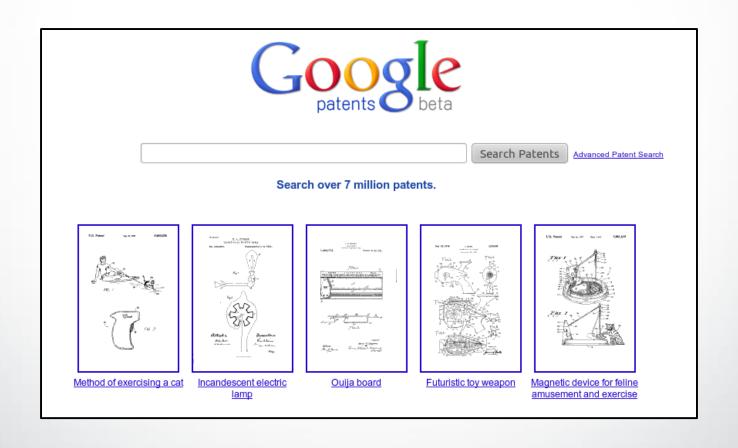
#### DOS AND DON'TS

- DO: Use a generic example
- DO: Explain search strategies
- DO: Direct to print/online resources
- DON'T: Ask for details of the invention
- DON'T: Suggest search terms
- DON'T: Fill out any paperwork

# WHAT YOU MUST NOT DO, UNDER ANY CIRCUMSTANCES

- Offer legal advice or anything that could be interpreted as legal advice (including offering an opinion on whether or not an idea is patentable)
- This is "unauthorized practice of law" and is illegal in North Carolina

## **BUT SERIOUSLY, GOOGLE PATENTS**



### **GOOGLE PATENTS: PROS & CONS**

#### Pros:

- Full PDFs instead of single page images
- No need to install TIFF viewer
- The familiar Google search interface

#### Cons:

- Incomplete coverage
- Keyword searching only, no searching by class
- Issues with optical character recognition for older patents

#### UNITED STATES PATENT OFFICE.

HARRY HOUDINI, OF BROOKLYN, NEW YORK.

DIVER'S SUIT.

1,370,316.

Specification of Letters Patent.

Patented Mar. 1, 1921.

Application filed June 30, 1917. Serial No. 177,971.

To all whom it may concern:

Be it known that I, HARRY HOUDINI, a citizen of the United States, and a resident of the city of New York, borough of Brook-5 lyn, in the county of Kings and State of New York, have invented a new and Improved Diver's Suit, of which the following is a full, clear, and exact description.

The invention relates to deep sea diving
suits or armors, and its object is to provide
a new and improved diver's suit arranged
to permit the diver, in case of danger for
any cause whatever, to quickly divest himself of the suit while being submerged and

#### HAKBY HOTTDINI HAKBY HOTTDINI

# INVESTIGATED FAI DET GEFEN.

> Overview

Abstract
Drawing
Description
Claims

Go

Patent number: 1370316 Filing date: Jun 30, 1917 Issue date: Mar 1, 1921 Inventor: HAKBY HOTTDINI

Read this patent

Download PDF

View patent at USPTO

#### Drawings



# OPTICAL CHARACTER RECOGNITION

### **OTHER RESOURCES**

- http://www.espacenet.com
  - European patent searching tool
  - Remember, foreign patents count
- https://oedci.uspto.gov/OEDCI
  - Searchable database of patent agents and patent attorneys
  - DO NOT recommend a specific attorney, just point your patron to the list

# PTDL CONTACT INFORMATION (BY APPOINTMENT)

- NCSU Libraries: Burlington Textiles Library
  - Dave Zwicky (david\_zwicky@ncsu.edu)
  - http://www.lib.ncsu.edu/ptdl
- UNC-Charlotte: J. Murrey Atkins Library
  - Alison Bradley (adbradle@uncc.edu)
  - http://library.uncc.edu/patents
- Beyond North Carolina, consult the list at http://www.uspto.gov/products/library/ptdl/locations

#### THANKS TO...

- Hyun-Duck Chung (MaRS Innovation)
- Michele Hayslett (UNC Chapel Hill)
- Alison Bradley (UNC Charlotte)
- The PTDLP Staff (USPTO)

# **QUESTIONS?**

### **Session Evaluation**

# http://tinyurl.com/grs-eval5

Please fill out our survey and let us know what you think!

# Upcoming Accidental Librarian Webinars

July 27: Resources for Guard and Reserve Soldiers and their Families with David Durant, East Carolina University

September 7: Good Health (Information) in North Carolina with Rebecca Hyman and Kurt Brenneman, Government & Heritage Library, State Library of North Carolina

September 21: State Agency Databases with Daniel Cornwall

Upcoming topics: Maps, basic legal research, and more!

Brought to you by the North Carolina Library Association's Government Resources Section. Join us!

http://www.nclaonline.org/government-resources