SOYBEAN COMPETITION
PATENT SEARCHING

WHY, HOW, WHERE

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I AM NOT A LAWYER
PATENT SEARCHING
WHY?
WHY ARE WE DOING THIS?

WHAT'S THE POINT OF PATENTS?

• Patents are limited monopolies granted by the government in exchange for making the details of the invention public
  – Control use, distribution, import, sale, etc.

• Patents have value
  – Technical details
  – Economic impact
But Why Do We Care?

What Does This Have to Do with Soybeans?

• Patent searching is a requirement for this competition

• You need to know the intellectual landscape relating to your product
  – Is it patented? If so, is the patent active?
  – Is there useful technical information in other patents that we can use?

• Just because a product never made it to market doesn’t mean there isn’t a patent issue
**WHAT ARE PATENTS?**

AND HOW DO THEY WORK?

- Three criteria
  - Novel
  - Useful
  - Non-obvious
- “First to File” wins
- Administered by USPTO
  - Can take 2-3 years from application to grant of patent rights
- 20 years from filing date of application paperwork
WHAT ARE PATENTS?

HOW ABOUT PROVISIONAL PATENT APPLICATIONS?

• Provisional Patent Applications save your place in the “first to file” line
• Provisionals ARE NOT patents
• If you do a provisional, you have ONE YEAR to do a full application, or it all gets thrown out
**What Are Patents?**

**Parts of a Patent – Front Page**

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**United States Patent** [19]

**Stillinger**

**[54]** GENERALLY SPHERICAL OBJECT WITH FLOPPY FILAMENTS TO PROMOTE SURE CAPTURE

**[75]** Inventor: Scott H. Stillinger, Los Gatos, Calif.

**[73]** Assignee: OddzOn Products, Campbell, Calif.

**[21]** Appl. No.: 60,640

**[22]** Filed: Jun. 11, 1987

**[51]** Int. Cl. 4 \_______________ A63B37/14

**[52]** U.S. Cl. \_______________ 273/58 K; 273/428; 446/268; 446/490

**[58]** Field of Search \_______________ 446/490, 901, 268; 273/58 R, 58 J, 58 K, 199 R, 199 A, 415, 428; 15/244.1, 244.3

**[56]** References Cited

**U.S. PATENT DOCUMENTS**

- 2,290,216 7/1942 Steinmetz et al. \_______________ 15/244.1
- 2,521,703 9/1950 Emmitt \_______________ 273/58 K
- 2,789,305 4/1957 Weil \_______________ 15/244.1
- 4,131,276 12/1978 Judkins \_______________ 273/58 C

**[11]** Patent Number: 4,756,529

**[45]** Date of Patent: Jul. 12, 1988

- 4,149,723 4/1979 Simon \_______________ 273/428 X
- 4,522,396 6/1985 Girard et al. \_______________ 273/58 K

**FOREIGN PATENT DOCUMENTS**


**Primary Examiner—Richard T. Stouffer**

**Attorney, Agent, or Firm—Kolisch, Hartwell & Dickinson**

**ABSTRACT**

An amusement device which has a substantially spherical configuration, and which is formed from a large plurality of floppy, elastomeric filaments that radiate in a dense, bushy manner from a central core region. The filaments are sufficiently floppy to collapse on impact, thus to absorb enough energy to avoid any tendency to bounce. They are also sufficiently dense and floppy that they tend to quickly thread their way between the fingers of a user on contact with the hand. These features promote sure and quick capture of the device during the act of catching.

8 Claims, 2 Drawing Sheets
WHAT ARE PATENTS?

PARTS OF A PATENT – DRAWINGS

FIG. 4

FIG. 5

10

12

PURDUE UNIVERSITY
WHAT ARE PATENTS?

PARTS OF A PATENT - SUMMARY & DESCRIPTION

Each element of the drawings must be completely described.

This is often where the technical detail is included in the patent.
WHAT ARE PATENTS?

PARTS OF A PATENT – CLAIMS

• Usually begins with “It is claimed” or “We claim” (or similar)
• Defines the precise legal limits of the patent
• The drawings and descriptions are great, but only claims matter
PATENT SEARCHING
HOW?
• Patents are tough to search
• Jargon, obscure and obsolete vocabulary, deliberate obfuscation, etc.
• Keywords don’t work all that well
HOW DO WE SEARCH FOR PATENTS?

CLASSIFICATION SYSTEMS

• If keywords don’t work, then what does?
• Classification systems break down the world of technology into manageable chunks
• Find the right class, and you find all the patents, no matter how they’re described
HOW DO WE SEARCH FOR PATENTS?

CLASSIFICATION SYSTEMS

• There are lots of options, but your best bet is to use the CPC

• Cooperative Patent Classification, a joint venture of US & EU

• Hierarchical, with very specific categories
HOW DO WE SEARCH FOR PATENTS?
CLASSIFICATION SYSTEMS – EXAMPLE

- A
- A23
- A23C
- A23C 11
- A23C 11/103
- Human necessities
- Foods
- Dairy products
- Milk substitutes
- Milk substitutes containing only proteins from oilseeds or nuts

http://worldwide.espacenet.com/classification
HOW DO WE SEARCH FOR PATENTS?
THE OFFICIAL SEVEN STEP METHOD

1. Brainstorm lots of keywords
2. Search classification system with those keywords and identify potentially relevant classes
3. Check the classification definitions for those classes
4. Use those classes to find patents
5. Read those patents
6. Use those patents to augment your search, using the references and the other classes listed
7. Expand your search to include patent applications, international patents, scholarly literature, etc.
HOW DO WE SEARCH FOR PATENTS?

HERE’S WHAT I DO:

- Use keywords to find classes
- Use classes to find patents
- Refine your search

• Iterative process
• Brainstorm possible alternate keywords
• Don’t expect to get it right on the first try
• Mix keyword and classification searches to get new ideas
Patent applications are published 18 months after they’re filed.

They may never become a granted patent, but they’re still public records.

Most databases show you both at the same time (except USPTO).

Patent application numbers have the filing year as the first four digits. Most of the time (but not always) they end with A1 or A2.

– e.g. US2009326290-A1
PATENT SEARCHING
WHERE?
WHERE DO WE FIND PATENTS?

WHICH GOVERNMENT WEBSITES ARE THE BEST?

• USPTO.gov
  – Official U.S. government site for patents & apps
  – If you want to obtain a patent, it’s definitive
  – Difficulty Level: High

• Espacenet.com
  – Official EU government site
  – International coverage, translation resources
  – Difficulty Level: Medium
WHERE DO WE FIND PATENTS?

WHICH FREE WEBSITES ARE THE BEST?

• Google Patents
  – International coverage
  – Not great for classification searching
  – OCR keyword problems
  – Google’s relevance ranking doesn’t always make the right choices
  – Difficulty level: Low

• Lens.org
  – International coverage
  – Modern search tools
  – Difficulty Level: Low
WHERE DO WE FIND PATENTS?

WHICH PURDUE RESOURCES ARE THE BEST?

- PubWEST & PubEAST
  - Super-powerful version of USPTO database
  - By appointment only
  - Difficulty Level: **Very High**

- Derwent Innovations Index
  - Better keyword searches
  - Easier to read titles
  - Better for exploration than for patentability
  - Access via Web of Science, from Purdue Libraries website
  - Difficulty Level: **Low**
WHERE DO WE FIND PATENTS?

LINKS

- USPTO.gov
  - patft.uspto.gov (patents)
  - appft.uspto.gov (applications)
- Espacenet
  - worldwide.espacenet.com
- Google Patents
  - google.com/patents
- Lens
  - lens.org
- PubWEST & PubEAST
  - Contact a librarian
- Derwent Innovations Index
  - purl.lib.purdue.edu/db/diidw
WHO CAN HELP WITH PATENTS?

LIBRARIANS, BASICALLY

• Dave Zwicky
  – Chemistry Library
  – dzwicky@purdue.edu

• Charlotte Erdmann
  – Engineering
  – erdmann@purdue.edu
WHAT DO WE DO NEXT?

HOW DO WE GET STARTED?

- Do some basic searching to get a feel for the patent resources and the type of information you can find
- Make an appointment with a librarian to refine and improve your search strategy
- Watch USPTO videos to see the “official” method for patentability searching
WHERE CAN I LEARN MORE?

LINKS

• Purdue Library Guide
  – [guides.lib.purdue.edu/patents](http://guides.lib.purdue.edu/patents)
  – Includes specific search examples for USPTO database (wildcards, fielded searching, etc.)

• USPTO 7-Step Strategy
  – The official strategy, as mentioned earlier

• How to Conduct a Patent Search
  – Video presentation, approx. 30 minutes