Intellectual Property and Patenting Overview
Evaluation and Disposition of Inventions

• A key aspect of the intellectual property (IP) assessment is determining whether or not the invention contains intellectual property that can be protected

• Your technology transfer office reviews each invention disclosure and makes a decision based upon IP protection potential, marketability, commercialization/licensing potential, and cooperativeness of the inventors.

• There are several types of intellectual property, but the most common forms are either patent or copyright protection.
Types of Intellectual Property

Patents

Trade Secrets

Trademarks

Copyrights
## Types of Intellectual Property

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<tr>
<td><strong>Patents</strong></td>
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<td>Utility Patents</td>
<td>Any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement (chemical, mechanical or electrical)</td>
<td>20 years from the date of filing (subject to payment of maintenance fees)</td>
</tr>
<tr>
<td>Design Patents</td>
<td>ornamental designs</td>
<td>(14 years from date granted)</td>
</tr>
<tr>
<td>Plant Patents</td>
<td>new varieties of plants</td>
<td>(20 years from date of filing)</td>
</tr>
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<td><strong>Trade Secrets</strong></td>
<td>A formula, pattern, process or device that a company keeps secret to give it an advantage over the competition</td>
<td>As long as the owners are able to keep it secret</td>
</tr>
<tr>
<td><strong>Trademarks</strong></td>
<td>A word, name, symbol or device that is used in trade to indicate the source of goods and to distinguish them from the goods of others</td>
<td>As long as it is still in use and renewal fees are paid</td>
</tr>
<tr>
<td><strong>Copyrights</strong></td>
<td>Original works of creative expression fixed in any tangible medium</td>
<td>Varies: published/unpublished, US/other, ...</td>
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What Are Patents For?

- An invention is any new article, machine, composition, process, or new use developed by a human.

- A patent is a grant from the government that excludes and prevents others from making, using, selling, importing, or offering an invention for sale for a fixed period of time (20 years).

- A patent does now allow someone to do something, it only prevents others from doing it.

- A patent in essence gives the patent owner or licensee a limited monopoly to practice the claims of the patent.

- A patent is a form of personal property that can be sold outright or licensed to another in return for royalty payments.

- If someone else attempts to make, use, sell, import or offer for sale an invention that is covered in your patent claims, the patent owner can file a patent infringement lawsuit in federal court.
Types of Patents

Utility Patent:
- New and useful process, machine, manufacture, or composition of matter
- Any new and useful improvement thereof
- 20 year patent lifetime

Design Patent:
- New and nonobvious ornamental design for an article of manufacture
- 14 year patent lifetime

Plant Patent:
- Any distinct and new variety of plant, including cultivated sports, mutants, hybrids - asexually reproduced
- 20 year lifetime
Requirements for Utility Patents

- Inventions must pass three bars to be patentable

- An “inventive step”
Requirements for Utility Patents

• Usefulness – A patentable invention must serve a useful purpose; this is typically the easiest hurdle to achieve

• Novelty – A patentable invention must be absolutely novel; ideas that have been described previously in patents or publications cannot be patented; inventions must not be for sale or in public use

• Non-Obviousness – A patentable invention must be non-obvious to one of ordinary skill in the art; i.e. one should not be able to combine the inventions of two or more other inventors to create your invention
Requirements for Enablement

- **Inventor must disclose:**
  - **Best Mode** – cannot conceal the best embodiment
  - **Enablement** – provide sufficient detail for one “of skill in the art” to recreate the invention
  - **Description** – must fully describe the invention to support the requested claims
Patenting Pros and Cons

• Pros
  – Keep others out of the market
  – Restrict competitors
  – Revenue from licenses or sale
  – Retain the right to practice the invention
  – Give your product credibility
  – Market yourself

• Cons
  – Cost
  – Liability
  – Must reveal how to do it – enablement
The Steps in Filing a Patent Application

- **Provisional Patent Applications (PPAs)**
  - A less formal patent application in which claims are not required
  - Low in cost (less than $1000) using attorney; only $125 for small entity
  - Can be filed quickly to establish a priority date with the U.S. Patent and Trademark Office (USPTO)
  - In the case of competitors with similar inventions, you want to be the first inventor to file a patent application so that you have the best chance of being awarded the patent
  - PPAs are not reviewed by an examiner
  - PPAs are valid for 12 months; before the 12 months expire one must file a Utility Patent Application to keep the invention from being abandoned
  - More data can be gathered during the 12 months and can be used in drafting the utility application
  - Permits use of “Patent Pending” for your product for the 12 months that it is valid

- **Negatives?**
  - Scope of the patent may be limited since the invention is usually very early stage
  - New data may change the scope of the invention from the original application
Filing a Utility Patent Application

• Utility Patent Application or “Non-Provisional” Application
  – A Utility application is a formal application with a specific layout
  – If issued, lasts for 20 years from the date of filing
  – Applications are published electronically 18 months after filing
  – Cost more money (paying the patent attorneys for drafting; generally $7K-$20K)
  – Specific sections include the abstract, figures, background, summary, specification, and claims
  – Claims establish the boundaries of the intellectual property
  – Infringement is determined based on others practicing your patent claims
Patent Anatomy - Front Page

**Number**: 3,748,701

**Issue Date**: July 31, 1973

**Title**: Adhesive Element in Cloth Form

**Inventor(s)**: De Meurat

**Assignee**: Velcro S.A., Lausanne, Switzerland

**Abstract**:
A fastening member is disclosed for use in a fastening mechanism of the type including a fastening member each having an engaging surface, distinct by a plurality of hooking elements. At least one of the members comprises a base sheet having a plurality of resilient threads in the form of a series secured to the base sheet and extending from one surface thereof. The threads are of unitary construction and include a core portion and at least one rib extending from the core. Each of the ribs includes a plurality of serrated hooks which define a multitude of hook-type hooking elements of each of the hooks.

**Citations**:
United States Patents
- 3,750,619
- 3,741,909
- 3,734,701
- 3,732,014

**Assignee**:
- Primary Examiner: Bernard A. Grelot
- Attorney: Proctor, Edmonds, Morton, Taylor and Grelot

**Owner of the patent**: [Information not visible in the image]
Patent Anatomy - Figures
Background

Usefulness

Does not define claims

Summary

Description of invention

Description of figures

Does not define claims

BRIEF DESCRIPTION OF THE DRAWINGS

The drawings show, schematically and by way of example, a preferred embodiment of the fastening element according to the present invention in which:

Fig. 1 is a perspective view of a greatly enlarged scale of a section of the textile fiber for manufacturing the fastening elements.

Fig. 2 is a perspective cross-sectional view of an enlarged scale of a fastening element.

Fig. 3 is a schematic view showing a fastening element as a fastening member.

Fig. 4 is a perspective view in section showing a fastening member in combination with a loop hook device.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the drawings and specifically to FIG. 1, there is shown a textile fiber or thread 3,748,701 in the present invention.
Claims

- Independent claims
- Dependent claims
- Define the property rights
- These will be what determines whether others are infringing your patent
Types of Claims

• Independent Claims
  – Stand-alone claims

• Dependent Claims
  – Refer to an independent claim
  – If the independent claim were to be invalidated, all dependent claims
    would also be invalid
  – Usually define “variations on the theme” – different materials, different
    ranges, …
  – Use to broaden patent coverage
Patent Pending

- You can mark your product “patent pending” starting on the date the application is filed
- You have no protection until your patent issues
- Patent applications are typically published eighteen months after filing
United States versus International Patents

**United States**
- First to invent (until 3/16/13)
- 12 month grace period to file after public disclosure or first sale
- USPTO
- As of March 2013, US will switch to a first inventor to file format

**International**
- First to file
- Forego ability to file after public disclosure
- PCT – Patent Cooperation Treaty covers many countries
Priority Date and Date of Invention

Priority Date
• Establishes the start of term-limited patent protection
• Patent office will determine novelty based on priority date
• This is the date that you first submit an application

Date of Invention
• Not the same a priority date
• In case of a dispute over first to invent (in the U.S.) a “swear-behind” can establish an earlier date of invention
• Well documented lab notebooks, presentations, and grants can help support earlier date of invention in a dispute
Public Disclosure and Timing

- Foreign patent rights may be lost within 12 months.
- Filing of provisional or utility application for US rights must be completed within 12 months.
- Provisional patent must be converted to utility application within 12 months.
- Foreign filing rights are preserved up to 18 months.
Public Disclosure Facts

- Public disclosure – in the form of publications, discussion in a meeting, offer for sale, presentations (even undergraduate/graduate poster sessions at UWM), and discussions with companies can compromise ability to obtain a patent
- In the U.S., the inventor has 12 months after public disclosure to file a patent
- For foreign patents, any public disclosure may prevent ability to obtain a patent
- If you want to publish on a patentable concept, file a patent first (or at least a provisional patent)
- If you want to discuss potentially patentable concepts, have meeting participants sign a non-disclosure agreement
- Grant applications generally do not constitute public disclosure, but there are risks and tradeoffs
The Patent Process and Timeline

Invention Disclosure
- Inventorship
- Funding Source

Invention Disclosure
- Establish priority date
- Precludes claims by others
- Documented lab notebooks or disclosure form

Equity Review by Tech Trans Office

Filing
- Provisional Patent Application
- Utility Patent Application
- $10k-$100k
- Start of 20 year protection
- Assignment

Review
- USPTO
- 20 yrs

Patent
- Granted Patent
- Allowed claims

Useful Life
- 20 yrs

Defense
- 15 yrs
Patent Review Process

- Application is examined by patent examiner at the U.S. Patent and Trademark Office
- Examiner issues an “Office Action”
- Response is provided to the Office Action with amendments and arguments in support of patentability
- It can take months to years to receive the first office action depending on the type of invention
- If a patent issues it is usually 9 months to 4 years later
Patent Economics

• The costs for obtaining, maintaining and defending a patent can be significant
Goals of your Technology Transfer Office

- Our goal is not to obtain patents

- A patent is only useful if someone wants to make and sell a product based on the patent claims

- Our goal is to find development partners for our researchers, license technologies, and get inventions out to the public and in use!

- When in doubt, submit an invention disclosure and your office will be happy to evaluate the invention and meet with you to discuss further
Online Resources

• Patents and Intellectual Property
  – Google patents: http://www.google.com/patents
  – Inventor Basics: http://www.inventorbasics.com/
  – WIPO: http://www.wipo.int/portal/index.html.en

• Patents Search Tutorials
  – UT Link to patent tutorials and patent information: http://www.lib.utexas.edu/engin/patent-tutorial/index.htm