Intellectual Property at Caltech

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Topics

• Overview of intellectual property (IP)

• Patents and patentability

• The patenting process

• Patent ownership
Types of intellectual property

- Patents
  - Utility
  - Design
  - Plant
- Copyright
- Trade secrets
- Trademarks / trade dress
Topics

• Overview of intellectual property (IP)

  • Patents and patentability

• The patenting process

• Patent ownership
US patent laws and regulations

“The Congress shall have power … To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries…”

- U.S. Constitution, Article I, Section 8

• 35 U.S.C. → laws
• 37 C.F.R. → regulations
• MPEP → USPTO examiner guidelines

Goal is to balance benefits to the inventors and to society

Overhauled by 2012 America Invents Act (AIA), in full force as of 3/16/2013
Reward the Patentee with the right to **exclude** (for a certain period of time) others (in the US) from:

- Making
- Using
- Selling, or offering to sell, or
- Importing into the US

the patented invention.

Doing this without a license is **patent infringement**

**Purpose of a US patent: Patentee**
Put the public in intellectual possession of the invention so that it can

• benefit from the invention after the patent has \textit{expired}

• \textit{improve} on the invention, and

• \textit{design around} the claims.
What is a patent?

The right to **exclude** others from making, using, offering for sale or selling the invention.

A patent does **not** guarantee:
- Freedom to operate
- Regulatory approvals
- Lawfulness of patented invention
What is patentable?

- A **process** (e.g., method of expressing a protein)
- A **machine** (e.g., scanning electron microscope)
- An **article of manufacture** (e.g., beaker)
- A **composition of matter** (e.g., chemicals, isolated genes (?))

“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”

-35 USC 101
An invention must be…

- Useful = work as described

- Novel

- Non-obvious

… to be patentable.

35 U.S.C. 101, 102, 103
Specification requirement

- Written description
  - Title
  - Abstract
  - Figures (and their description)
  - Background
  - Summary of the invention
  - Detailed description, examples (embodiments)
  - Claims

- Enablement
- Best mode
  (preferred embodiment)

Examples…

35 U.S.C. 112, ¶ 1
United States Patent [18]

[54] RECYCLABLE COOLING BEVERAGE CONTAINERS AND HOLDERS

[75] Inventor: David W. Coffin, Sr., Fayetteville, N.Y.

[1] Patent Number: 5,205,473

[20] (a) Filed: Mar. 9, 1993

[52] U.S. Cl. ....................................................... 229/16 B, 206/443; 229/441; 229/260; 229/4,5; 229/260; 229/4,5

[51] Int. Cl. ....................................................... B65D 3/28

[50] Field of Search ................................................. 229/16 B, 229/4,5

[56] Referenced Cited

U.S. PATENT DOCUMENTS
1,361,632 10/1978 Winkler et al. ........................................ 229/48
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[57] ABSTRACT

Recyclable beverage containers and holders are described which employ recyclable materials, but provide freezing structures for cooling, insulating air. These products are easy to hold and have a lesser impact on the environment than polyethylene containers.

18 Claims, 4 Drawing Sheets
Claims

1. A recyclable, insulating beverage container holder, comprising a corrugated tubular member comprising cellulosic material and at least a first opening therein for receiving and retaining a beverage container, said corrugated tubular member comprising fluting means for containing insulating air; said fluting means comprising fluting adhesively attached to a liner with a recyclable adhesive.

2. The holder of claim 1, wherein said tubular member comprises a corrugated tube having first and second open ends of unequal cross-sectional dimensions.

3. The holder of claim 1, wherein… (etc.)

U.S. Patent 5,205,473 (Recyclable Corrugated Beverage Container and Holder)
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Scientists invent in research labs

Invention disclosures to OTT

Provisional patent filing

Conversion?

PCT

National phase entry?

US
Invention disclosure to OTT

- Complete **disclosure form** from OTT web site and submit to OTT
  - Inventors (contact info, citizenship)
  - Federal funding, if any
  - Sponsored research support, if any
  - Materials received from elsewhere, if any
  - Invention description (detailed – e.g., white paper, journal article in preparation)
  - Possible barring events (e.g., publications)
- OTT files **provisional patent application**
When to disclose/file?

Conception

Reduction to practice

Less prior art

Timing of filing

Better data
More than one year before applicant’s filing, the invention:

• Described in printed publication or patent (including by applicant) anywhere in the world
• On sale, offered for sale, or in public use in the United States

OR – invention “known or used by others” in US, or patented or published anywhere, prior to applicant’s date of invention
What changes under AIA?

• Grace period applies **only to inventor’s own disclosures**
  • If someone beats you to the patent office, or scoops you with a publication, proving you invented earlier no longer helps

• Definition of “public disclosure” **expanded** to include
  • Public use or sale anywhere in the world
  • “Otherwise available to the public”
  • Foreign patent filings as of their filing date

When in doubt: file early, file often!
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Inventorship

- Inventor = One who conceived the *claimed* invention

  (not one who merely reduces the invention to practice)

Legal determination made by outside lawyers if necessary

**INVENTORSHIP ≠ AUTHORSHIP**
Who owns an invention/patent?

• Inventor owns her/his inventions

• However, universities/companies have employees sign Patent Agreement = obligation to assign inventions to employer

• In turn, employer may share royalties with inventors
Caltech Patent Policy

“All Institute employees shall sign a Patent and Copyright Agreement assigning their rights to patents or inventions that they may make in the line of their duties, or with any use of Institute facilities, to the Institute…”*

“Inventions made by an employee or student outside the line of Institute duty on the inventor’s own time without any use of Institute facilities are not the property of the Institute.”

http://hr.caltech.edu/policies/PM/pm17.pdf

* If Caltech chooses NOT to pursue patent protection, rights to invention offered back to inventors.
The Bayh-Dole Act

- Applies to *all federally-funded research*
- **Reporting/compliance** requirements
- **Allows universities to elect title** to inventions made with federal funding
  - Universities charged with commercializing
  - Government gets paid-up license
  - Royalties shared with inventors
  - Revenues must be used for research or education
  - Patents cannot be assigned to a third party without permission of funding agency
Collaborations

• When inventors from different institutions are on same patent, patent is *jointly owned* by the institutions (by assignment from each inventor)

• Caltech will negotiate *inter-institutional agreement* (IIA) to manage patent prosecution and licensing, and share patent costs and any licensing revenues

• If using materials from someone else (received under an MTA) – let OTT know!
Industry-sponsored research

- Industry sponsors may have certain rights to IP developed through their funding, e.g.,
  - Patenting decisions
  - Option to license

- Therefore, need to *inform OTT of funding sources* when submitting invention disclosure
Questions?