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
Technology Transfer & Corporate Partnerships

Topics

• Overview of intellectual property (IP)

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• 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

Overhauled by 2012 America Invents Act (AIA), in full force as of 3/16/2013

Goal is to balance benefits to the inventors and to society
Purpose of a US patent: Patentee

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: Society

Put the public in intellectual possession of the invention so that it can

• benefit from the invention after the patent has expired

• improve on the invention, and

• 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

NOT

The right to make, use, offer for sale or sell the 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 over the “prior art”

... 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)

35 U.S.C. § 112
United States Patent

Coffin, Sr.

Patent Number: 5,205,473

Date of Patent: Apr. 27, 1993

References Cited

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1,391,212 10/1919 Boeken ................ 229/456
2,290,126 12/1942 Sklar ................ 229/101
2,290,472 10/1942 Woody ................ 229/476
3,081,118 11/1963 Itami ................ 229/476
3,081,129 11/1963 Kupers ............... 229/476
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OTHER PUBLICATIONS

Primary Examiner—Gary E. Elkins
Assistant Examiner—Von—Synenske & Lechner

Claim 18, 1 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...

_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?

National phase entry?

Patenting process overview
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*
Patenting timeline

- **Invention disclosure**
- **US provisional patent app. filed**
- **Provisional expires**
  - 12 months
  - "Conversion"
  - Non-provisional US patent app.
  - Priority date

- **"Conversion"**
- **Non-provisional US patent app.**
- **PCT ("international") app.**
- **PCT expires**
  - ~18 months
  - 30 months

- **Related new invention disclosure**
- **Continuation-in-part (CIP) application**
- **Continuation or divisional application**
- **Office action**
- **Response**

- Issued U.S. patent
- Issued foreign patent(s)
- National phase entry?
When to disclose/file?

Conception

Reduction to practice

Less prior art

Timing of filing

Better data
Under AIA, disclosure of the invention:

- In a printed publication or patent, by another, anywhere in the world (including a foreign patent filing as of its filing date)
- By public use, sale, or offer for sale anywhere in the world

Date of invention no longer relevant for patentability:
now “first inventor to file,” not “first to invent”

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
• 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
“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?