Patent Law

- Module 1
- Introduction

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Patent Law – class overview

- First half – five key elements of patentability
  - ***Patentable subject matter***, i.e., patent eligibility
  - ***Useful/utility*** (operable and provides a tangible benefit)
  - ***New*** (statutory bar, novelty/anticipation)
  - ***Nonobvious*** (not readily within the ordinary skills of a competent artisan at the time the invention was made)
  - ***Disclosure & Claiming requirements***

Measured w/r/t the claims

- Claims, claim interpretation, and infringement
- Prosecution and post-grant procedures
- Defenses and remedies

Constitutional “IP Clause”

- Article I, § 8, cl. 8, of the Constitution gives Congress the power **“[t]o promote the Progress of** Science and **[the] useful Arts**, **by securing for limited Times to** Authors and **Inventors the exclusive Right to their** respective Writings and **Discoveries**” (emphasis added).
- Justice Story: “In short, the only boon, which could be offered to inventors to disclose the secrets of their discoveries, would be the exclusive right and profit of them, as a monopoly for a limited period.”

Story, Commentaries on the Constitution of the United States (1833)

Bonito Boats v. Thunder Craft

Bonito Boats v. Thunder Craft

- "[D]rawing a line between the things which are worth to the public the embarrassment of an exclusive patent, and those which are not."
- Our excerpt from the case summarizes the essence of the patent "bargain" and sketches the elements of patentability.
  - "From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy."

Bonito Boats v. Thunder Craft

- Benefits to the public
  - Incentives to generate sufficiently new ideas and technology
    - Reward is period where patentee has right to exclude others from using the invention
      - Note: Patents only provide "negative" rights to exclude, but not "positive" rights to use.
    - This right allows patentee to recoup development costs that would otherwise be unrecoverable due to lower-priced (because they had no research and development costs) imitators replicating the invention
    - The right allows patentees to engage in highly risky activity because it provides greater returns to investment in R & D and commercialization.
  - Disclosure of ideas that otherwise might have been kept cloistered and protected under the state law of trade secrets
      - obtained by providing exclusive rights to the patentee for a limited time to create
  - Eventual "free" use of the idea when patent expires and the idea falls into the public domain

Bonito Boats v. Thunder Craft

- Costs put on the public
  - Loss of “free” use of idea by consumers for approximately twenty years
  - Third-party innovators excluded from using claimed ideas during patent term
  - Duplicated development costs and “patent races”
    - Patents on “complex products” actually slow commercialization of technology. “Actual” “reduction to practice” is not required for patenting.
  - Overinvestment in R & D relative to other endeavors
  - High costs of administering the patent system
    - $8-12 bn per year in patent prosecution and litigation costs
- Fast-forward 20 years: “Patent Reform” Efforts
  - Continuing debate over how to set the innovation/use balance of patent law in various contexts
    - “Reform” Bills in Congress since 2005
  - <u>Main driver</u>: non-practicing entities (NPEs)—often called “patent trolls,” because many view them as abusing the system and upsetting the balance

Bonito Boats v. Thunder Craft – foreshadowing 102(a)

102(a) – if the prior art reference occurred prior to the date of invention of what is claimed, then the claim is not novel if that reference <u>anticipates</u> the claim (has all the limitations/elements of the claim).

N.B.: There is an error in *Bonito Boats* on the use of the phrase “anticipate” (at p.6, top)--novel/anticipated vs. nonobvious/ “rendered obvious.”

N.B. #2 – it can be a very detailed and technical inquiry to determine what the date of the reference is and what the date of the invention is. Note that almost every other country is “first-to-file” regime and uses date of filing, not invention.

	public knowledge or	“Public” is an implied requirement, knowledge must be used in a way that is publicly available to a person having ordinary skill in the art (PHOSITA)
	used by others	One use is sufficient. Generally, use must be of a “public” nature.
	patented or	A grant of exclusive rights, evaluated for what is claimed, accessible to public & not secret
	printed publication	Public accessibility – the document was made available to the extent persons interested and ordinarily skilled in the art, exercising due diligence, could locate it. The test for what is a “patent or printed publication” is the same under 102(a) & (b).

Bonito Boats v. Thunder Craft – foreshadowing 102(b)

102(b) – if the applicant does not file within one year of the date of the prior art reference or activity, then the patentee is barred from applying for the patent.		
	in public use or	No purposeful hiding of use. Experimental use exception.
	on sale	Commercial offer for sale and invention is ready for patenting
	patented or	same as 102(a).
	printed publication	same as 102(a).

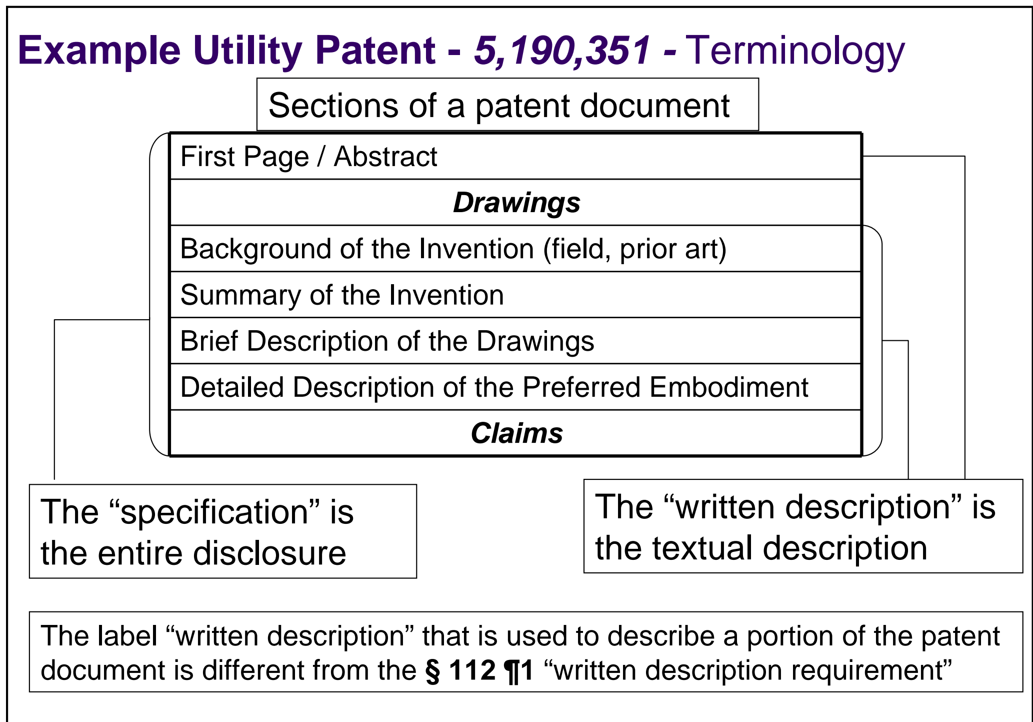
Bonito Boats v. Thunder Craft – foreshadowing 103

- Obviousness
  - Roots in *Hotchkiss v. Greenwood* (1851)
  - "Graham" Test of *Graham v. John Deere* (1966):
    - Whether "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person [having] ordinary skill in the art."
    - Test reaffirmed in *KSR v. Teleflex* (2007).
  - PHOSITA: "Persona having ordinary skill in the art"
    - Hypothetical person used in many areas of patent law
    - Like the "reasonable person" in torts

Bonito Boats v. Thunder Craft

- Holding?
  - State law protection for techniques and designs already sold in the market "may conflict with the very purpose of the patent laws by decreasing the range of ideas available as the building blocks of further innovation"
  - Federal IP protection "would be rendered meaningless in a world where substantially similar state law protections were readily available"
  - "To a limited extent, the federal patent laws must determine not only what is protected, but also what is free for all to use."
    - But note that trade secret law is a creature of state law. Thus, variations in state trade secret law will impact the innovation balance set up by federal patent law.

Example Utility Patent - *5,190,351* - Terminology



The label "written description" that is used to describe a portion of the patent document is different from the **§ 112 ¶1** "written description requirement"

Example Utility Patent - *5,190,351*

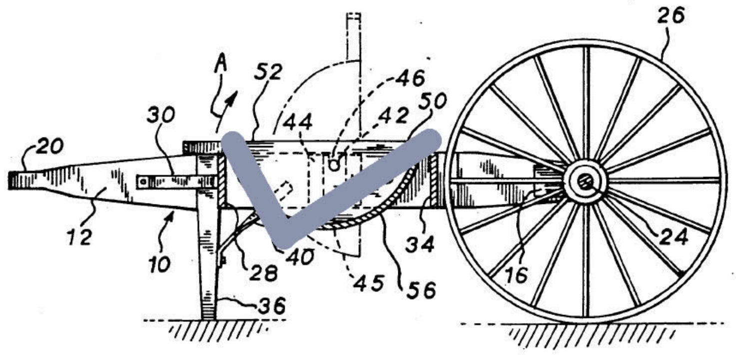
- To look at the five key elements of patentability through the "lens" of the claims we must first know how to read and interpret the claims
  - This requires "parsing" the claim for purposes of comparison
  - This also requires claim "construction" to determine the legal meaning of the claim

Example Utility Patent - *5,190,351*

Claim 1	Reference in Patent?	Interpretation of element?
1. A wheelbarrow . . . comprising		
a frame having two . . . rails . . . and at least one cross brace . . .	frame [10]	
an axle . . .	axle [24]	
a wheel . . . [with] minimum diameter of 30 inches	wheel [26]	
a pair of mounting brackets . . . mounted . . . Intermediately . . .	brackets [42, 44]	
a box having a semicylindrical closed bottom, upstanding side walls having a C-shaped bottom edge . . . Including a pair of axially aligned pivot posts . . .	box [50]	
a support . . .	support [36, 38]	

Example Utility Patent - *5,190,351 - claims*

- Infringement preview as a vehicle to examine claim scope . . .
- What happens if a competitor makes the exact same wheelbarrow with the following shaped box:



Patent Bargain – challenges to the traditional justifications

- Elements of the bargain (mapped to the five requirements of patentability, i.e., of obtaining an invention)
  - Costs put on the public
    - Loss of "free" use of idea for certain things for approximately twenty years
      - in exchange for
  - Benefits to the public
    - Eventual "free" use of the idea for certain things when patent expires and the idea falls into the public domain
    - ***Disclosure of ideas that otherwise might have been kept cloistered and protected under the state law of trade secrets***
      - obtained by providing exclusive rights to the patentee for a limited time to create
  - ***Incentives to generate sufficiently new ideas***
    - Reward is period where patentee has right to exclude others from using the invention
    - This right allows patentee to recoup development costs that would otherwise be unrecoverable due to lower-priced (because they had no research and development costs) imitators replicating the invention

Patent Bargain – challenges to the traditional justifications

Economists question whether patents in fact promote disclosure of inventions that would otherwise be kept secret: (i) secrecy is not always practical; (ii) secrets can be reverse engineered; (iii) if long term secrecy is achievable, why settle for 20 years of patent term; (iv) greater enforcement difficulty for inventions that can be practiced in secret.
But, the patent system facilitates licensing, allowing "risk-free" disclosure of the idea/information in order to close the transaction.

- ***Disclosure of ideas that otherwise might ... kept cloistered and protected under the state law of trade secrets***
  - obtained by providing exclusive rights to the patentee for a limited time to create
- ***Incentives to generate sufficiently new ideas***

Other incentives may be enough: (i) first-mover advantage; (ii) competitive pressures: "keep up with rivals"; (iii) other forms of IP protection (e.g., copyright, trademark, trade secret); (iv) market advantages and "complementary assets" (e.g., marketing muscle, high barriers to entering market)

Incentives Revisited …

Invention: Generally, ideas & designs	Innovation/ Commercialization: Post-invention testing, marketing, distribution
↑	↑
Incentives to Invent & Disclose (Traditional Theory)	Incentives to Commercialize (Alternative Contemporary Theory)

Reasons to Patent

- Graham & Sichelman (2008) and Sichelman (2009): There is no overarching reason explaining patenting—multiple theories are correct.
- Reasons:
  - (1) Prevent competition; maintain supernormal profits.
  - (2) Litigation and (one-way) licensing.
  - (3) "Defensive" patenting; stop infringement suits through counterclaiming and lodging prior art.
  - (4) Strategic "bargaining" chips (e.g., for cross-licensing).
  - (5) Secure financing/investment.
  - (6) Increase value upon exit (IPO, acquisition, liquidation).

Reasons to Patent

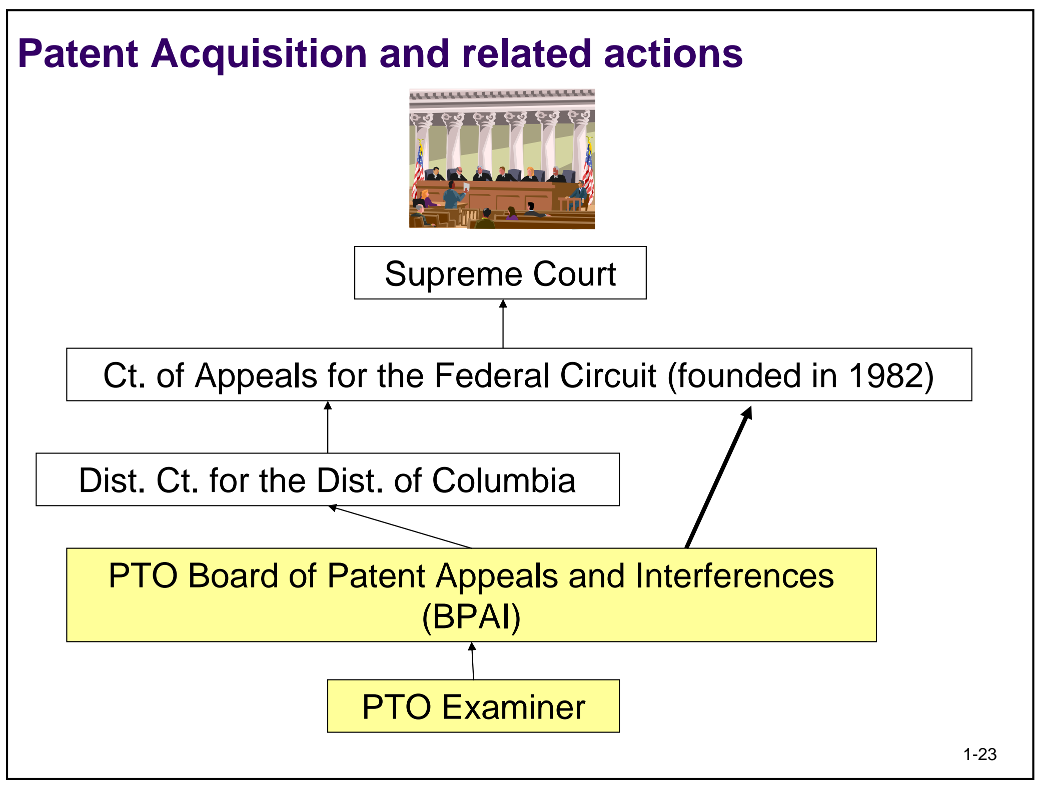
- (7) Gain access to competitors' technologies—threat value of incumbents' patents vs. entrants technologies or patents.
- (8) Gain "blocking patents" to stop evolution of others' technology.
- (9) Marketing: "Patent Pending" moniker.
- (10) Reputation & Vanity—inventor reputation; patent plaques.

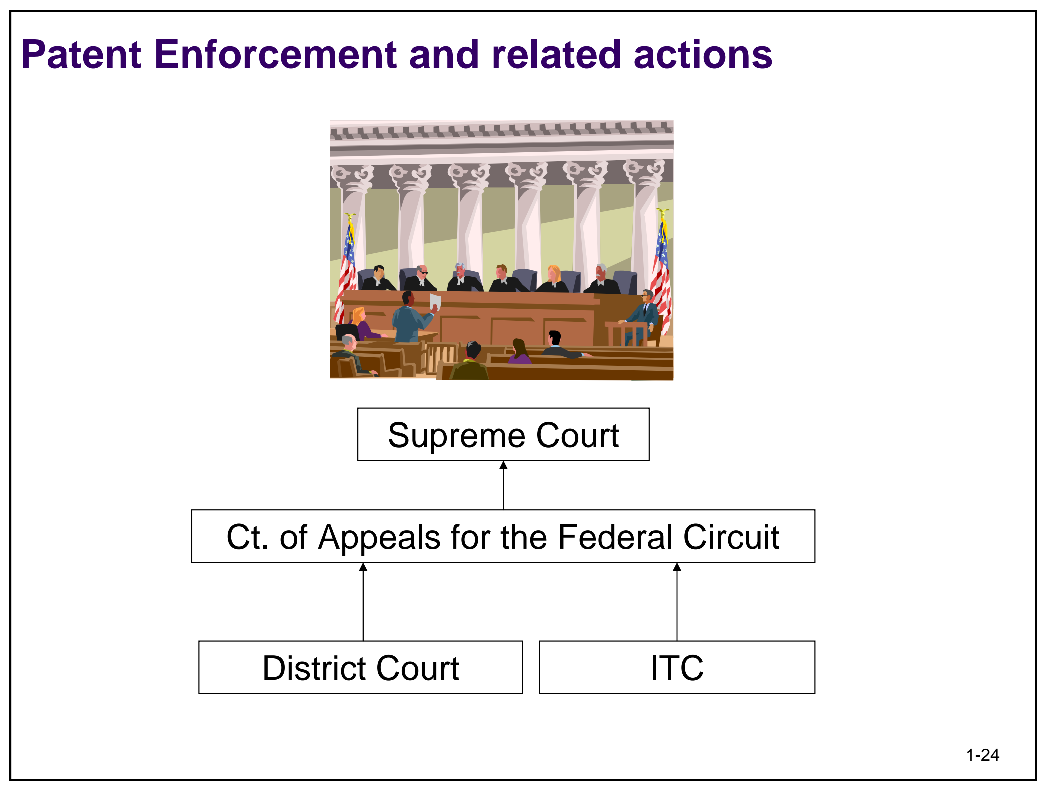
Reasons Not to Patent

- (1) Don't want to disclose information; trade secrets better form of protection.
  - Trade secrets cover a wider array of subject matter.
  - No expiration (if can prevent disclosure).
  - Costs: Must undertake "reasonable" efforts to keep secret; no protection against legitimate reverse engineering; no prior user rights against third-parties that later patent (except biz methods).
- (2) High costs of prosecution and enforcement relative to commercial value.
- (3) Patent too easy to "invent around."
- (4) Invention is obvious.

Forms of Patent Protection

- Utility patents
- Design patents
  - new, original and ornamental design for an article of manufacture (unless design is "primarily functional")
- Plant patents
  - distinct and new varieties of plants that have been asexually reproduced
- Patent-like USDA Plant Variety Protection Act
  - PVP certificates, only for sexually reproduced plants, including most seed-bearing plants. Fungi and bacteria are ineligible for certification. Plant must be a clearly distinguishable variety, and must breed true with a reasonable degree of reliability.
- Patent-like FDA "Data Exclusivity"
  - Exclude others from using pharmaceutical safety testing data


Patent Acquisition and related actions
Supreme Court
Ct. of Appeals for the Federal Circuit (founded in 1982)
Dist. Ct. for the Dist. of Columbia
PTO Board of Patent Appeals and Interferences (BPAI)
PTO Examiner
1-23


Patent Enforcement and related actions
Supreme Court
Ct. of Appeals for the Federal Circuit
District Court
ITC
1-24

International Patent Treaties

- Paris Convention, 1884
  - National treatment: patent “equal protection” principle
  - Patent independence: patents rise and fall in individual jurisdictions
    - Even with EPO patent, patentees must file suit in separate countries
  - International priority: allows 12-month grace period to file in foreign countries (PCT today)
- GATT-TRIPS
  - Mandates that member countries must have a patent system with minimum standards
  - Debates over pharmaceuticals and “traditional knowledge”