Introduction to Patents, Part 2

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Let’s talk about Twitter…
Engage with course materials and current topics in patent law and policy by joining the conversation on Twitter!
Counts toward participation!
Be sure to tag the following in your tweets:
• @DrSinhaEsq
• #PatentLaw
Optional additional tags: @USPTO, #Patent, #IP, #NUSLPatentLaw, #IPLaw, #LawTwitter
Tweets will be shown after the break.

Using Twitter to Amplify Your Own Work

Looking forward to seeing @LEEDHealthPolicy and @LEEDGlobalHealth for a great conversation on antibiotics and innovation!

Fig. 1

Recap: What is a Patent?

A reminder, under President Trump’s leadership, the U.S. intellectual property ecosystem ranks #1 in the world, according to the 2020 International IP Index.” — Andrei Iancu, Director of the USPTO.

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Right to Exclude: From What?

- Use
- Sale / Offering for Sale
- Importation
- Manufacture

- Patent holders have the right to sell/license patent rights to others
- Patents can be extremely lucrative (especially in certain industries)
- Patents are increasingly complex, and patent litigation is on the rise

Thoughts on Hovenkamp article?
Thoughts on Patent Law videos?

Economic Monopoly:
Cost to Consumers and Society

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<thead>
<tr>
<th></th>
<th>Competitive Market</th>
<th>Monopolized Market</th>
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<tbody>
<tr>
<td>Price</td>
<td>( P_c )</td>
<td>( P_m )</td>
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<td>Quantity</td>
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<td>Price = ( P_c )</td>
<td>Consumer Surplus = ( A + B + C )</td>
<td>Price = ( P_m )</td>
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<td>Producer Surplus = ( D + E )</td>
<td>Producer Surplus = ( B + E )</td>
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<td>Deadweight Loss = ( C + D )</td>
<td>Deadweight Loss = ( C )</td>
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Utilitarian Arguments For and Against Patents

Pro-Patent
- Promoting Dynamic Efficiency (no free riding)
- More Administrable and Reliable than $ Rewards
- No Direct Fiscal Outlays
- Saving on Government Information Costs
- Less Susceptible to Corruption and Capture
- Markets Better at Assigning Value (especially compared to Congress)

Anti-Patent
- Sacrificing Static Efficiency (deadweight loss; decreased access/use and increased price)
- Impeding Follow-On Innovation
- Litigation Costs & Waste from “Competitive R&D”
- Market Distortions and Court Inexpertise

Main Patent Institutions

- U.S. Congress
- Executive Branch
  - USPTO: Director, Board, Examiners
  - Under the US Department of Commerce
  - International Trade Commission
- Courts
  - Supreme Court
  - Federal Circuit (1982 -)
  - District Courts
  - Court of Federal Claims
  - Claims against the US government for patent infringement
International Trade Commission (ITC) Section 337 Proceedings

- Allows patentholders to obtain significant prospective relief without filing actions against numerous foreign and/or domestic infringers
- Accused infringers often face the possibility of having entire product lines – or perhaps their entire business – barred from the US market
- Plaintiffs file a claim, ITC refers cases to administrative law judges
- Actions before the ITC protect domestic industries, which generally are businesses that create US jobs and commercialize or license new IP-protected products that are manufactured overseas

What Laws Govern Patents?

Constitution, Article I, Section 8

“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;”

Major US Patent Laws

The Patent Act of 1790
- Defined the subject matter of a U.S. patent as "any useful art, manufacture, engine, machine, or device, or any improvement there on not before known or used"
- Granted the applicant the "sole and exclusive right and liberty of making, constructing, using and vending to others to be used" of his invention

The Patent Act is now codified in 35 U.S.C. and other statutes

Regulatory Guidance

- Code of Federal Regulations
  - Informs USPTO patent examiners, applicants, attorneys, and others of the practices and procedures relative to the prosecution of patent applications before the USPTO

Leahy-Smith America Invents Act of 2011 (AIA)
- Change from “first to invent” to “first to file” system
- Changed patent term from 17 years after issue to 20 years after filing
- Established processes for post-grant opposition

Major US Patent Laws

The Patent Act of 1952
- Created the basic structure of modern patent law
- Required description of patent, basis for infringement
- Novelty, Utility, Non-obviousness

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Standards for Patentability

- Useful (§ 101)
- Within the appropriate subject matter (§ 101)
- Novel (§ 102)
- Nonobvious (§ 103)
- Fully and appropriately described (§ 112)

Utility: § 101 and § 112

35 U.S.C. § 101

“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 ….”

35 U.S.C. § 112(a)

“The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such … terms as to enable any person skilled in the art … to make and use the same ….”

Patentable Subject Matter: §101

35 U.S.C. § 101

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Utility: § 101 and § 112

- Fairly low bar – most patent applications are processed without PTO raising a question as to utility, and utility is rarely litigated
- Requirement is basic operability, not whether a product is ready for commercial use, better than comparable prior art, or superior in terms of qualities/features
- Self-enforcing – a truly useless invention should be worthless, so who would go through the expense to patent it?
- Three major issues:
  - Beneficial utility
  - Substantial or practical utility
  - Credible evidence of operability

Patentable Subject Matter: §101

Number of Cases per Year on Patentable Subject Matter

Novelty and Prior Art

- Determining what is “new” and “old” is a complex problem to solve
- Formal process for identifying prior art and for determining the “critical date” for testing novelty
- Pre-AIA: novelty is tested as of the date of invention
- AIA: novelty is tested as of the date the patent application is filed
- The vast bulk of references that qualify as prior art under the AIA would also qualify under pre-AIA law
Novelty and Prior Art (Pre-AIA): §102

102(a): pre-invention US knowledge or use; prior patent or “printed publication”

102(b),(d): patent or “printed publication,” or US use or on sale, or pre-filing foreign patent from foreign filing, >1 year before US filing

102(c),(f): abandonment; derivation

102(e): US patent or published application from pre-invention application

102(g): prior WTO invention in interference; prior inventor “mak[ing]” in US without “abandon[ment], suppress[ion], or conceal[ment]”

Novelty and Prior Art (AIA): §102(a)(1)

New §102(a)(1) replaces classic §102(a)-(b)

5 Forms of §102(a)(1) Prior Art

- patent
- printed publication
- public use
- on sale
- “otherwise available to the public”

Nonobviousness: § 103

35 U.S.C. §103

The claimed invention cannot, “as a whole,” have been “obvious” to ordinary artisan at time of invention (pre-AIA) or before the effective filing date (post-AIA)

- Burden to Show Obviousness
  - Clear & Convincing Evidence in Court
  - Preponderance of the Evidence at USPTO
- 4 Graham Factors
- Reason-to-Combine Analysis (KSR)

Nonobviousness under § 103

- Question of law but significant, underlying facts
- Invention evaluated “as a whole”
  - Attempt to measure technical accomplishment
  - Triviality: a technically trivial development may still be extremely valuable
- Timing of Relevant Nonobviousness:
  - Pre-AIA: Invention date
  - Post-AIA: Before effective filing date
- Perspective: person having ordinary skill in the art (PHOSITA)
- “the ultimate condition of patentability”


35 U.S.C. § 112

(a) Written description, enablement, & best mode requirements
(b) Claims & claim definiteness
(c)-(e) Independent, dependent, & multiple dependent claims
(f) Means-plus-function & step-plus-function limitations

Disclosure: § 112(a)

Specification Requirements of 112(a)

- Written Description
- Enablement
  - Ordinary Artisan (PHOSITA)
  - “Undue Experimentation Test”
- Best Mode
Written Description/Enablement: § 112(a)

• Disclosure/specification is the price the patentee pays for monopoly rights, a quid pro quo of the right to exclude
• Enablement: an inventor must describe the invention clearly enough that PHOSITA can understand it well enough to make and use it
• Written description: an inventor must describe what he/she claims, and claim what he/she describes
• Claim definiteness: an inventor must claim the invention in such a way that it creates clearly discernable boundaries of the legal right
• Best mode: an inventor must disclose the best mode for practicing the claimed invention

Patent Claims: Often the FOCUS of the Dispute

“To use a colloquial term coined by Judge Rich, ‘the name of the game is the claim.’”


Patent Infringement

Direct Infringement
• “makes, uses, offers to sell, or sells” in US, or “imports” into US (§271(a))

Indirect Infringement (w/ direct infringement)
• active inducement (§271(b))
• contributory infringement (§271(c))

“Extraterritorial Infringement”
• supply for combination abroad (§271(f))
• product from patented process (§271(g))

Patent Exhaustion (1st-Sale Doctrine)

Patent Infringement: Remedies

Injunctions
• 4-factor tests for injunctions

“Ongoing Royalties”

Damages
• Lost Profits
• Reasonable Royalty
• Potential enhancement for willfulness

Attorney Fees

Provisional Rights