Outline

- IP overview and Statutes
- What is patentable
- Inventorship and patent process

US821,393 – Flying Machine – O. & W. Wright
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What is meant by “Intellectual Property”

- Of the intellect; created in the mind
- Intangible; value is derived from concepts, not a physical existence
- Subject to protection under the law
Key forms of IP

Trademark → Names & Logos
Copyright → Expressions
Patent → Inventions & Know-how
Trade Secret → Secrets
Implementing Patent Law

- Constitution – Third act of congress
- 35 United States Code – 37 chapters
- Case Law
IP Rights are Constitutionally Committed

Article I, Section 8:

“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”

US3216423 – Apparatus for facilitating the birth of a child by centrifugal force – G.B. Blonsky
Key patent facts

- **Contract theory**: the Government gives an inventor a period of exclusive use in exchange for full disclosure of the invention to the public ("quid pro quo")

- Gives the right to exclude all others from making, using, offering for sale, selling, or importing – limited monopoly
  - Does NOT give a right to make or sell a product, e.g., a patent on making illegal drugs doesn’t make them legal

- Patent awarded only if invention is found useful, novel, and non-obvious

- Expire 20 years after the patent was applied for

- Cover U.S only; foreign patents may be needed
Types of patents

- **Utility Patent**: A process, machine, manufacture, composition of matter, or useful improvement

- **Plant Patent**: Asexually reproduced varieties of plants e.g., hybrid corn

- **Design Patent**: Ornamental designs for articles of manufacture.
Criteria for receiving a patent

- **Utility**
  - Must be written in the Patent application and present at the time of submission.
  - Cannot be added later
  - 35 USC § 101, 112

- **Enablement**
- **Best Mode**
- **Novelty**
  - In light of the Prior Art
  - 35 USC § 102, 103
- **Non-obviousness**
Statute

35 USC §101 – Patentable subject matter

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.

US5443036 – Method for exercising a cat – Kevin T Amiss
35 USC §102 - Novelty

(A) a person shall be entitled to a patent unless
   1. It was patented or in a printed publication or in use or on sale already
   2. Was in another patent application

(B) Exceptions
   1. The prior art is yours and is less than a year old
   2. The prior art was derived from your work

(C) Common ownership will remove prior art

(D) Patent applications are prior art as of their filing date
A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.
35 USC §112 – fully enabled and described

(A) In General.— The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

(B) Conclusion.— The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.
Main parts of a patent

The “Written Description”
- Must describe the invention and “the manner and process of making and using it”
- Must be “clear, concise, and exact”
- Often includes examples and figures

The “Claims”
- Numbered formal sentences at the end that define the boundaries of the “patent monopoly” you seek
- The claims are the battleground of examination!
- Whatever is not claimed in the final patent is “dedicated to the public,” and anyone can use it for free

*Also requires an abstract and at least one drawing/figure

US 2012/0225476 – Systems for the utilization of ruminant animal methane emissions – Markus Herrema
Example claim
Example claim

Claim 1. In a folding chair having a seat, front legs pivoted to said seat at intermediate side portions thereof, said front legs having a hollow portion containing axial slots of less width than the inside width of said hollow portions disposed above said seat and opening rearwardly, rear legs pivoted to said seat at rearwardly disposed side portions thereof, said rear legs having end portions rigid therewith and slideably received in said slots, retaining means carried by said end portions and disposed to engage the inside’ surface of said hollow portions adjacent said slots preventing complete withdrawal thereof from said slots, and bearing surfaces adjacent the upper end of said rear legs disposed to engage ‘a rear ward surface of said front legs when said chair is erected, the improvement comprising, in combination: means forming a ledge disposed transversely to and within at least one of the said front legs adjacent the normally uppermost end of said slot, and a hook member secured to the said end portion and adapted to engage said ledge to prevent downward movement of said end portion along said slot, said retaining means being disposed to establish sufficient freedom of axial movement of said rear legs in the erected position to engage and disengage said hook member from said ledge.
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What is patentable?

“Anything under the sun made by the hands of man”

- Patentability is a legal determination and not a good indicator of innovativeness

- Specifically excludes
  - Laws of Nature
  - Physical Phenomena
  - Abstract Ideas

- But there is a gray area...

US5,255,452 Method and means for creating anti-gravity illusion – Michael Jackson
What is patentable?

Isolated DNA

No
What is patentable?

Purified Natural Products

No
What is patentable?

A newly discovered signaling pathway

No
What is patentable?

A human antibody

Maybe
What is patentable?

A humanized antibody

Yes
What is patentable?

A known drug that you have now defined its mechanism of action

No
What is patentable?

You’ve discovered a new drug to a new target so you want to patent the target.

No
What is patentable?

A new method of use of a known drug

Yes

But potentially very tough to enforce
What is patentable?

A piece of software

It Depends
What is patentable?

A new diagnostic

It Depends
But Probably not
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What makes an invention?

Conception + Reduction to practice = Invention

Inventorship
Who is an inventor?

- Inventorship = Conception

- Formation in the mind of a definite and permanent idea of the complete and operative invention

- Must include every feature of the claimed invention

- Need not know it will work
Conception is not:

- One who merely suggests an idea of a result to be accomplished
  - An “invitation to invent” is not contributing to conception
  - E.G. “We need a device that can ...”

- Exercise of ordinary skill in implementing instructions of another

- Reduction to practice
Three filing strategies for Utility patents

- Provisional patent application
- Non-provisional patent application
- PCT (Patent cooperation treaty) application
Current USPTO Dashboard 8/1/2015

The Patent Composite was discontinued at the end of Fiscal Year 2015 and new quality metrics are currently being baselined. For additional information regarding Patent Quality, please click here.

http://www.uspto.gov/dashboards/patents/main.dashxml
Patent timelines

- Provisional Application Filed
- Nonprovisional Application Filed
- Office Action #1 Received: Response Filed
- Office Action #2 Received: Response Filed
- Notice of Allowance Received: Issue Fee Paid: $2K Continuation Application Filed
- Foreign Patent Issued

- 12 Months
- 20-30 Months
- 6 Months
- 6 Months
- 3 Months