Patent Law

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Monday, October 24, 2016
Class 14 – Utility

Recap

Recap

→ Evaluating obviousness

→ Categories of prior art

→ Timing of obviousness

→ Analogous art

Today's agenda

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- → Utility overview
- → Operability
- → Beneficial or moral utility
- → Practical or specific utility

Utility overview

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→ Three core requirements for patentability

- Useful (§ 101) ← utility requirement
- Novel (§ 102)
- Nonobvious (§ 103)

(Post-AIA) 35 U.S.C. § 101 — Inventions patentable

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.

Utility overview

→ Three core requirements for patentability

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- Novel (§ 102)
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Utility overview

→ Three core requirements for patentability

- Useful (§ 101) ← utility requirement
- Novel (§ 102)
- Nonobvious (§ 103)

→ …and a fourth:

- Patentable subject matter (§ 101)

Utility overview

→ Usually not very important

- Utility is usually clear
- Difficult issues only arise in a few areas

→ Overlaps with enablement

→ Overlaps with patentable subject matter (next two classes)

- Patentable subject matter is far more important

Utility overview

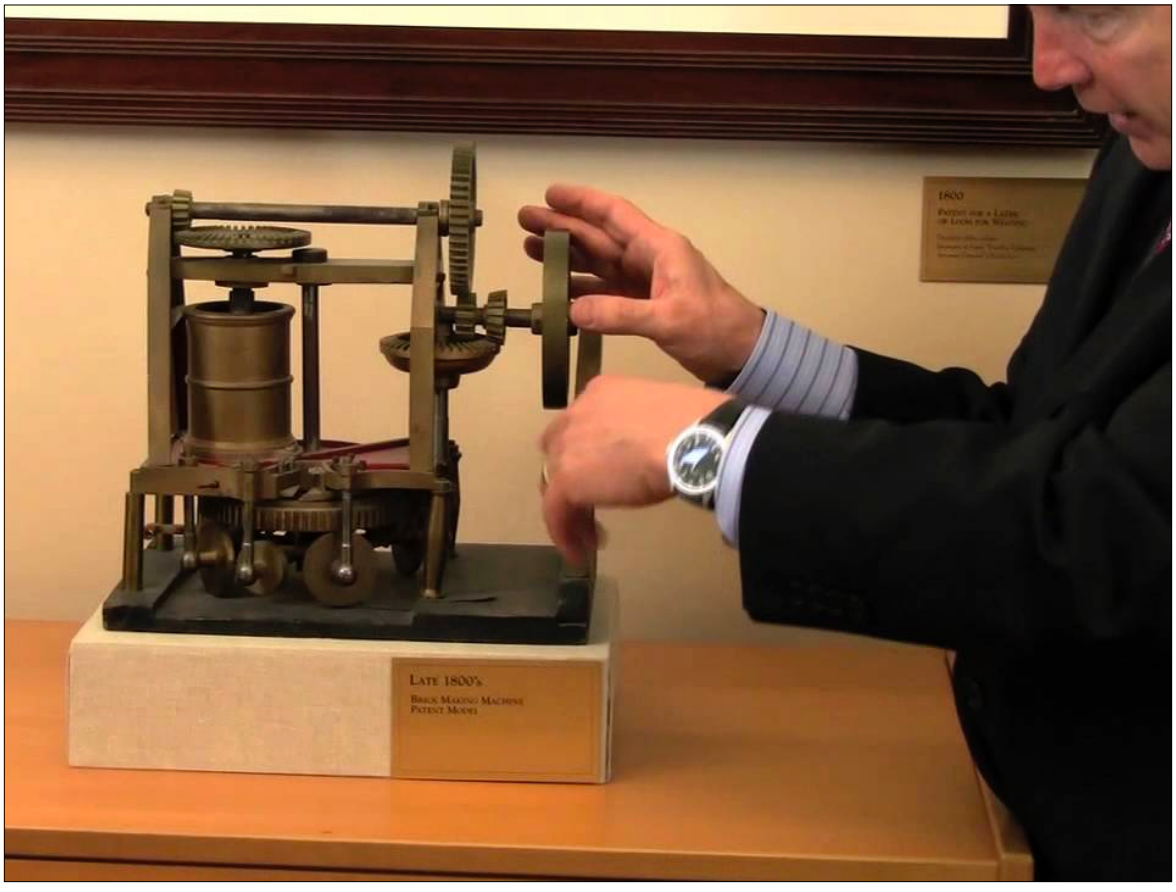
→ Three specific kinds of utility

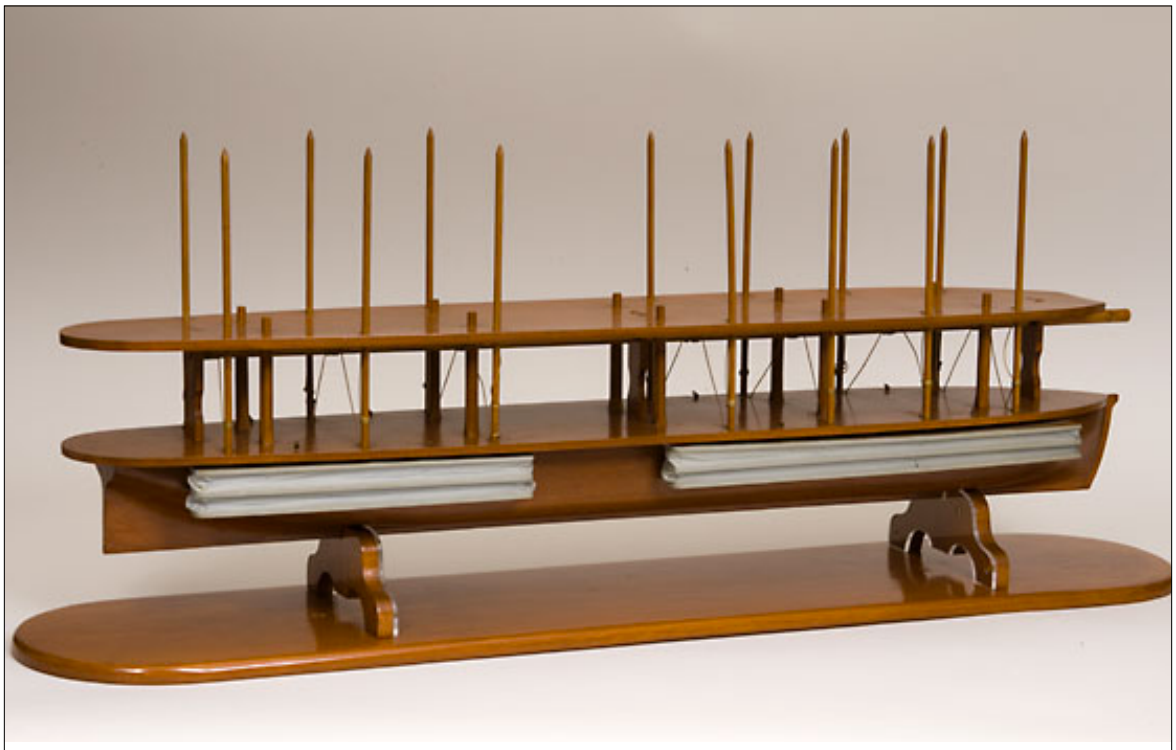
- Operability – does it work?
- Beneficial or moral utility – is it something we want to encourage?
- Practical or specific utility – does it have a real-world use?

→ All three are required at the time of the invention

Utility overview

- → From 1790 to 1880, inventors not only had to describe their invention, they had to submit a physical model
- → A bunch of these are on display in the library





Abraham Lincoln, patent model, U.S. Pat. No. 6469 (1849),
for a system of bellows used to float a boat off a sandbar

Operability

Operability

→ For the most part, the patent system assumes that inventions work

- They don't have to work well or be commercially practical
- Just work at all

Operability

→ But if the examiner has reason to believe the invention wouldn't work, operability can be the basis for a rejection

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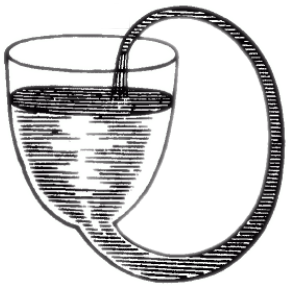
- Good reasons: it would violate a law of physics or "suggests an inherently unbelievable undertaking"



Operability

→ Inventor mistakes

- *Process Control Corp. v. Hydreclaim Corp.* (M&D 211): "In other words, clause [d] requires determining a quantity from the sum of that exact same quantity and something else, or symbolically, A = A + B, which is impossible, where, as here, B is not equal to zero. Accordingly, we hold that the correctly construed claims are invalid because they are inoperative, and thus the claims fail to comply with the utility and enablement requirements...."

Operability

→ Courts are skeptical of these rejections

- The PTO has rejected patents on things once thought impossible, later to be proved possible
- *E.g.*: baldness cures
- A possible future example: cold fusion

Operability

→ Procedure

- In PTO, an examiner must meet a difficult burden to reject an application due to operability
- In court, the challenger has to prove invalidity by clear and convincing evidence
- …but this would rarely come up, except when timing is an issue

Operability

→ Why do we care about operability, if it's impossible to infringe a patent that isn't operable?

Operability

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- Eliminate potential fraud
- Eliminate pointless examination
- Clear out the patent thicket?

Operability

→ One possible solution to operability requirements: patent models

- MPEP 608.03: "With the exception of cases involving perpetual motion, a model is not ordinarily required by the Office to demonstrate the operability of a device. If operability of a device is questioned, the applicant must establish it to the satisfaction of the examiner, but he or she may choose his or her own way of so doing."

Beneficial or moral utility

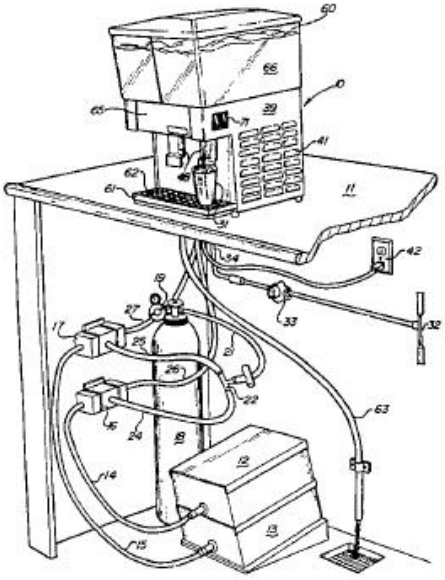
Beneficial or moral utility

→ Historically, one purpose of utility doctrine was to prevent patents on immoral things

- Gambling machines
- Sex toys
- Explosives
- &c

→ There are parallels in trademark and copyright law

Juicy Whip v. Orange Bang



Juicy Whip v. Orange Bang

→ Two kinds of drink dispensers:

- "Pre-mix": drink is pre-mixed and kept in a reservoir
- "Post-mix": drink is mixed as it is dispensed

→ Invention: a post-mix dispenser that looks like a pre-mix dispenser

Juicy Whip v. Orange Bang

→ Kind of an odd argument, no?

- Orange Bang: The Juicy Whip dispenser is so unethical – anyone should be free to use it!
- Does granting patents on immoral inventions lead to more or fewer people using those inventions?
- Patent system's tradeoff: short-term versus long-term efficiency

Juicy Whip v. Orange Bang

→ What's the argument against the Juicy Whip product?

Juicy Whip v. Orange Bang

→ What's the argument against the Juicy Whip product?

- It lies to consumers: the drink they see is not the drink they're getting
- Second Circuit cases from the early 1900s: patents on a method to create spots on tobacco leaves and a seamless stocking with a fake seam were invalid

Juicy Whip v. Orange Bang

→ What's the argument for the Juicy Whip product?

Juicy Whip v. Orange Bang

→ What's the argument for the Juicy Whip product?

- Higher capacity than pre-mix dispenser
- More sanitary
- Doesn't lie to consumers about what the product is, just where it comes from (which is immaterial, maybe?)

Juicy Whip v. Orange Bang

→ Holding?

Juicy Whip v. Orange Bang

→ Holding?

- Those cases from the early 1900s? We don't do that anymore
- Lots of inventions make something look like something else – cubic zirconium, synthetic fibers, fake leather
- This is a form of utility – it can be cheaper, not hurt animals, have different properties, &c

"We decline to follow *Rickard* and *Aristo Hosiery,* as we **do not regard them as representing the correct view of the doctrine of utility** under the Patent Act of 1952. The fact that one product can be altered to make it look like another **is in itself a specific benefit sufficient to satisfy the statutory requirement of utility**.

"It is not at all unusual for a product to be designed to appear to viewers to be something it is not. For example, cubic zirconium is designed to simulate a diamond, imitation gold leaf is designed to imitate real gold leaf, synthetic fabrics are designed to simulate expensive natural fabrics, and imitation leather is designed to look like real leather. * * * **Much of the value of such products resides in the fact that they appear to be something they are not**."

Juicy Whip, Merges & Duffy at 218

Juicy Whip v. Orange Bang

→ What do we think the court was concerned about in those cases from the early 1900s?

Juicy Whip v. Orange Bang

→ What do we think the court was concerned about in those cases from the early 1900s?

- Inventions that are only useful to commit consumer fraud
- Tobacco: fool the consumer into believing a cigar is higher-quality
- Stockings: fool the consumer into believing a stocking is higher-quality

Juicy Whip v. Orange Bang

→ Is that concern applicable here?

Juicy Whip v. Orange Bang

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- Arguably no – the consumer is getting the same drink
- The relevant consumer here is the restaurant, not the consumer
- On the other hand, why does the restaurant want to show the reservoir? It must serve some marketing purpose…

Juicy Whip v. Orange Bang

→ So maybe these cases are consistent

- Nevertheless, this case is read as holding that beneficial utility is a dead doctrine
- Court: other agencies (FTC, FDA) police consumer fraud, not the PTO
- Court: Congress can carve out categories of inventions if it wants to (e.g., atomic energy)

Juicy Whip v. Orange Bang

→ Exception: inventions illegal in all 50 states

- Drug inventions
- Murder inventions
- But it's a pretty narrow category

Practical or specific utility

Practical or specific utility

→ In general, this is the most important form of utility

- Most relevant in chemical, pharmaceutical, biotech, and research cases

Brenner v. Manson

→ Invention: novel method of producing a known chemical

- Steroid with a high ratio of anabolic to androgenic effects
- Tumor-inhibiting properties in mice

Brenner v. Manson

→ Procedural posture: Patent race between Ringold/Rosenkranz and Manson teams

- Ringold/Rosenkranz issued patent in 1959
- Manson filed in 1960, but claimed priority to previous application filed in 1956
- So Manson has to show that the invention was useful <u>as of 1956</u>

Brenner v. Manson

→ Possible criteria for utility

- A process for making a compound inherently has utility (holding of the court below)
- A process for making a compound has utility if the compound is the subject of active research
- A process for making a compound has utility if an analog of the compound has been shown to have tumor-fighting properties (Manson's argument)
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Brenner v. Manson

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Brenner v. Manson

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Brenner v. Manson

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- Timing: We want the invention to be advanced to a certain point before granting a patent
- Bargain: We want to grant the patent to the right inventor – the one that contributed value to society
- Similar to the enablement and written-description requirements

Brenner v. Manson

→ Why are we worried about granting a patent too early?

Brenner v. Manson

→ Why are we worried about granting a patent too early?

- It grants a patent before society has gotten the full benefit of the invention
- It might cut off the other team doing the same work

Brenner v. Manson

→ But this is useful as a research tool – isn't that good enough?

→ Or, relatedly, there is a market to purchase this steroid – doesn't that make a cheaper method useful?

→ Or, even, why isn't this method useful as a means to produce landfill or material with a known weight or fuel to burn?

Brenner v. Manson

→ Toys are patentable – their pure curiosity value is a sufficient utility

→ Objects of research are not – their pure scientific curiosity value is not a sufficient utility

→ What's the difference?

Brenner v. Manson

→ Toys are patentable – their pure curiosity value is a sufficient utility

→ Objects of research are not – their pure scientific curiosity value is not a sufficient utility

→ What's the difference?

- One response: a monopoly on ongoing research has a value that is not commensurate with the contribution – it would be an excessive reward
- Another response: the toy invention is complete; the research invention is not

In re Brana

→ Federal Circuit, after *Brenner v. Manson*

→ Invention: a variant on a known antitumor compound

In re Brana

→ Good example of a one-reference § 103 obviousness case

- Prior art: other benzo [de]isoquinoline-1,3-dione compounds with known properties
- Examiner: This is an obvious variant because it just makes an obvious substitution
- Applicant: No, this particular (asymmetrical) substitution has unexpectedly good antitumor properties compared to symmetrically substituted versions

In re Brana

→ So what is this compound used for?

In re Brana

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- Nothing yet!
- "The specification states that these non-symmetrical substitutions at the 5- and 8-positions produce compounds with 'a better action and a better action spectrum as antitumor substances' than known benzo[de]isoquinolines…"
- Sounds a lot like *Brenner*

In re Brana

→ Court: effectiveness against tumor models in mice is sufficient

- Also, test results showing several compounds have antitumor activity *in vivo*
- Also, structurally similar compounds proved to be effective antitumor compounds

In re Brana

→ Is this remotely reconcilable with *Brenner v. Manson?*

In re Brana

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- Maybe. The Supreme Court emphasized the unpredictability of substitutions in *Brenner;* maybe here they are more predictable
- But the Federal Circuit never cited (!) *Brenner v. Manson*

In re Brana

→ One way to think about this case:

- It's about <u>how much evidence</u> is necessary to show utility

In re Brana

→ Upshot:

- Some test results are probably needed
- *In vitro* test results can be enough
- *In vivo* test results are almost certainly enough
- But remember written description – you have to show the link between the tests and the claimed invention

In re Fisher

→ Technology: ESTs ('expressed sequence tags')

- Strings of nucleotides that correspond to certain genes
- When mixed with DNA, binds with matching DNA
- Can be used in various biotech experiments

In re Fisher

→ Court: the invention lacks specific utility

- Mere "research intermediaries" used in the course of research, with no specific real-world use, are not useful
- What about microscopes? Lab tools? Ingredients used in cooking?
- Compounds undergoing further work?

Next time

Next time

→ Patentable subject matter