

# Patent Law

Prof. Roger Ford  
Wednesday, November 8, 2017  
Class 20 – Infringement:  
the doctrine of equivalents

# Recap

# Recap

- Claim construction
- Claim-construction procedure
- Literal infringement

**Today's agenda**

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- Infringement by equivalents
- Prosecution history estoppel

**Infringement by  
equivalents**

# Infringement by equivalents

- There are products that don't meet all limitations of a claim, but are very close (Why?)

# Infringement by equivalents

- There are products that don't meet all limitations of a claim, but are very close (Why?)
- Maybe due to strategic behavior (pH = 3.95 when the claim requires 4-6)
  - Maybe due to unforeseeable technology (Velcro® instead of mechanical fastener)
  - Maybe due to different design decisions
- Infringement by equivalents fills this gap

# Infringement by equivalents

- Similar role to obviousness
  - Obviousness is there when anticipation doesn't work, but the prior art is very close
  - Equivalents is there when literal infringement doesn't work, but the accused product is very close

# Infringement by equivalents

- How to think about equivalents:
  - Literal infringement: You have to show that every element of the claim is literally met by the accused product
  - Except: Under the doctrine of equivalents, you may be able to show that one or more elements of the accused product are equivalents of the claim limitation
  - Except: Under prosecution history estoppel (or another doctrine), the doctrine of equivalents may not be available

# Infringement by equivalents

→ How to think about equivalents:

- Literal infringement: You have to show that every element of the claim is literally met by the accused product
- Except: Under the doctrine of equivalents, **Factual question** may be able to show that one or more elements of the accused product are equivalents of the claim limitation
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# Infringement by equivalents

→ How to think about equivalents:

- Literal infringement: You have to show that every element of the claim is literally met by the accused product
- Except: Under the doctrine of equivalents, **Factual question** may be able to show that one or more elements of the accused product are equivalents of the claim limitation
- Except: Under prosecution history estoppel (or another doctrine), the doctrine of equivalents may not be available  
**Legal question**

# Infringement by equivalents

- The basic rules:
  - You still have to show infringement of every element or limitation of a claim (the **all-elements rule**)

# Infringement by equivalents

- The basic rules:
  - Factual question: does the defendant's product contain an **equivalent** of a claim limitation?

# Infringement by equivalents

- The basic rules:
- The **insubstantial-differences test**: Are the differences between the claimed invention and the accused product insubstantial?

# Infringement by equivalents

- The basic rules:
- The **function/way/result test**: Does the accused structure or step perform **substantially the same function**, in **substantially the same way**, to achieve **substantially the same result**?

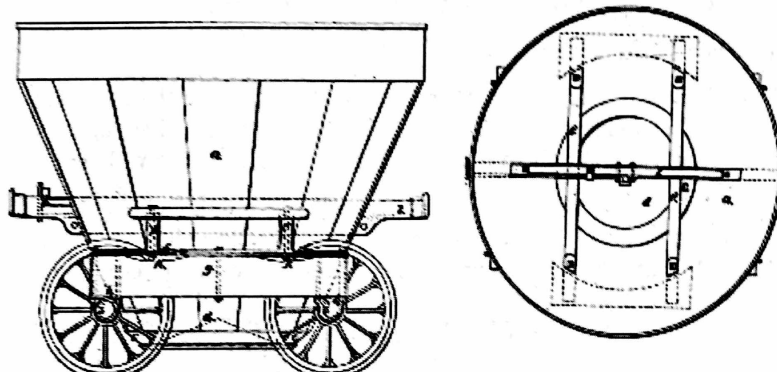


# Infringement by equivalents

- The basic rules:
- Legal question: is there a **reason to limit the doctrine of equivalents?**
  - Four common reasons: **prosecution history estoppel**; the **public-dedication rule**; the **all-limitations rule**; **argument-based estoppel**

## *Winans v. Denmead* (1854)

- Tech: rail car to carry coal with conical design



# *Winans v. Denmead* (1854)

- Accused product: inward-sloping section was eight-sided instead of being conical

# *Winans v. Denmead* (1854)

- Function/way/result test?
  - Function?
  - Way?
  - Result?

# *Graver Tank*

→ So why is this a thing?

# *Graver Tank*

→ So why is this a thing?

- The Court is very concerned with treating patent holders fairly
- Court: "to permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing" (Nard 526)

# *Graver Tank*

→ **So why is this a thing?**

- Court: "Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form." (Nard 526)

# *Graver Tank*

→ **Is this persuasive?**

# *Graver Tank*

## → Is this persuasive?

- Often an inventor will describe and claim the novel portion of the invention with great specificity but describe the non-novel components more generically
- E.g., that a novel computer system requires a hard drive, not considering solid-state drives or RAM disks

# *Graver Tank*

## → Is this persuasive?

- Often an inventor will invent something and describe and claim it in ways that contain implicit assumptions that later become false
- E.g., that a hearing aid requires an external controller because the controller function is too large to fit in the aid

# *Graver Tank*

→ **Is this persuasive?**

- But these problems could all be avoided if patent applicants just write better claims!

# *Graver Tank*

→ **Is this persuasive?**

- And this hurts the notice function of patent claims!
- Dissent: "We have held in this very case that this statute precludes invoking the specifications to alter a claim free from ambiguous language, since 'it is the claim which measures the grant to the patentee.'" (Nard 529)

# *Graver Tank*

## → Is this persuasive?

- And patent owners have tools to fix these problems!
- Dissent: This is what reissue is for
- Dissent: And reissue has careful protections and limitations to protect accused infringers

# *Graver Tank*

- ## → This is a good example of the careful balance patent law seeks
- Interpreting claims too literally hurts patent owners in ways that might hurt the incentive to invent
  - Interpreting claims too broadly hurts accused infringers in ways that might hurt competition

# Graver Tank

- So let's apply the doctrine of equivalents
- Claimed invention: composition containing alkaline earth metal silicates
- Accused product: composition containing silicates of calcium and manganese
  - Manganese is not an alkaline earth metal

Periodic Table of the Elements

The periodic table shows the following elements highlighted with red boxes:

- Group 1: Hydrogen (1), Lithium (3), Potassium (19), Rubidium (37), Cesium (55), Francium (87)
- Group 2: Beryllium (4), Magnesium (12), Calcium (20), Strontium (38), Barium (56), Radium (88)
- Group 7: Manganese (25)

Legend:

- Alkali Metal
- Alkaline Earth
- Transition Metal
- Basic Metal
- Semimetals
- Nonmetals
- Halogens
- Noble Gas
- Lanthanides
- Actinides



# *Graver Tank*

→ **Function/way/result test?**

- **Function?**
- **Way?**
- **Result?**

# *Warner-Jenkinson*

→ **Problem:** The doctrine of equivalents had taken on “a life of its own”

→ **Solution:** The Court cabins its scope

- It applies on a limitation-by-limitation basis (the all-elements rule)
- Prosecution history estoppel remains a significant limitation

# *Warner-Jenkinson*

- But: The Court rejects a single factual test to determine equivalence
- Instead, it embraces both the **insubstantial-differences test** and the **function/way/result test**

**Prosecution history  
estoppel**

# ***Festo v. SKKK***

- Prosecution is a negotiation between the applicant and the examiner
- What are an applicant's options when an examiner rejects a claim?

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  - Argue
  - Amend
  - Appeal
  - Abandon

# *Festo v. SKKK*

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- What are an applicant's options when an examiner rejects a claim?
  - Argue – **claim construction**
  - Amend – **prosecution history estoppel**
  - Appeal
  - Abandon

# *Festo v. SKKK*

- Two amendments:
  - Two sealing rings, each with a lip on one side to hold out impurities
  - Magnetizable sleeve

## ***Festo v. SKKK***

- Patent claim: Two sealing rings, with one lip each
- Accused product: One sealing ring, with lips on both sides
  - Function?
  - Way?
  - Result?

## ***Festo v. SKKK***

- Patent claim: Magnetizable sleeve
- Accused product: Non-magnetizable sleeve
  - Function?
  - Way?
  - Result?

# *Festo v. SKKK*

- Two legal questions
  - Should the doctrine of equivalents apply to amendments for reasons other than prior art?
  - What is the scope of the doctrine of equivalents – is it a “complete bar” or a “flexible bar”?

# *Festo v. SKKK*

- Finally, prosecution history estoppel!
- **What's the principle?**

# *Festo v. SKKK*

- Finally, prosecution history estoppel!
- **What's the principle?**
  - If you originally claimed something broad, but then narrowed it to get a patent, you can't go back and get the broader thing through equivalents
  - The examiner thought there was something wrong with the original claim
  - It's an end run around examination

# *Festo v. SKKK*

- Finally, prosecution history estoppel!
- **What's the principle?**
  - And this has little to do with the reason for the narrowing
  - Prior art
  - Written description/enablement
  - Any other reason that relates to patentability

# *Festo v. SKKK*

- Flexible bar versus complete bar
- **Argument for a complete bar?**

# *Festo v. SKKK*

- Flexible bar versus complete bar
- **Argument for a complete bar?**
  - Administrability – the flexible-bar rule was unpredictable and promoted uncertainty



# *Festo v. SKKK*

- Flexible bar versus complete bar
- **Argument for a flexible bar?**

# *Festo v. SKKK*

- Flexible bar versus complete bar
- **Argument for a flexible bar?**
  - The prosecution history can tell us what a patent doesn't mean, not what it does mean
  - Just because you've surrendered some claim scope doesn't mean that you've suddenly written the perfect claim

# *Festo v. SKKK*

- New rule: when can you get equivalents even after a claim was narrowed during prosecution?

# *Festo v. SKKK*

- New rule: when can you get equivalents even after a claim was narrowed during prosecution?
- If the equivalent was unforeseeable; or
  - If the reason for the amendment was tangential to the equivalent you're trying to capture; or
  - For "some other reason"

# *Festo v. SKKK*

- Unforeseeable technology
  - mechanical fastener → Velcro®
  - Wright brothers' wing warping → wing flaps or ailerons

# *Festo v. SKKK*

- Tangential: *Primos, Inc. v. Hunter's Specialties*
  - Claim: required a "plate"
  - Amendment: added "differentially spaced" limitation
  - Accused product: used a dome instead of a "plate"
  - Court: the amendment had nothing to do with the "plate," so it was tangential

# Infringement by equivalents

## → Preview: the basic rules

- Legal question: is there a **reason to limit the doctrine of equivalents?**
- Four common reasons: **prosecution history estoppel**; the **disclosure-dedication rule**; the **all-limitations rule**; **argument-based estoppel**

# Infringement by equivalents

## → **Public-dedication rule**

- Another form of estoppel
- Example: *Johnson & Johnston*: the claim required a "sheet of aluminum"
- Specification: one could use "other metals, such as stainless steel or nickel alloys"
- Court: patentee had disclosed and dedicated non-aluminum metals to the public

# Infringement by equivalents

## → All-limitations rule

- The doctrine of equivalents cannot apply if it would vitiate an entire claim limitation
- *Freedman Seating v. American Seating*: a rotatably mounted seat cannot be the equivalent of a slidably mounted seat
- *Asyst v. Emtrak*: an unmounted part cannot be the equivalent of a mounted part
- *Novartis v. Abbott Labs*: a surfactant cannot be the equivalent of a nonsurfact

# Infringement by equivalents

## → All-limitations rule

- But, *Cadence v. Exela* (Fed. Cir. 2015): a limitation requiring X before Y can be equivalent to Y before X
- “A holding that the doctrine of equivalents cannot be applied ... because it ‘vitiates’ a claim limitation is nothing more than a conclusion that the evidence is such that no reasonable jury could conclude that an element of an accused device is equivalent to an element called for in the claim....”

# Infringement by equivalents

## → Argument-based estoppel

- An applicant who surrenders claim scope in argument before the examiner cannot regain that scope
- *PODS v. Porta Stor*: To overcome a prior-art rejection, the applicant argued: "As the Examiner acknowledges, the Dousset reference clearly lacks the teachings of the singular rectangular-shaped frame."
- Court: PODS cannot get a non-rectangular frame through the doctrine of equivalents

Next time

# Next time

- **Infringement: indirect and divided infringement; infringement of means-plus-function claims**