

Patent Application Strategies

US Patent Prosecution and Application Drafting Tips

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Outline

- **Patent Application Strategies**
- **US Patent Prosecution**
- **Drafting tips**

Patent Application Strategy

- Where to apply?



Where to apply?

- Factors:
 - Whether there is sound patent system.
 - The technology has important market in the country.
 - Patent application fees and Portfolio maintenance fees
 - Business activities of competitors in the country
 - The technology is patentable in the country

Where to apply?

- **Europe** \$\$\$\$\$
- **Korea** \$\$\$
- **Japan** \$\$\$
- **US** \$\$
- **CN** \$

Patent Application Strategy

- Many would choose to apply in **America** and **European** countries, or **Japan** and **South Korea** for Asian companies.
- The reason to choose America
 - Biggest market
 - Reasonable application and maintenance fees (One fifth of European countries; less than Japan and Korea.
 - The most effective patent right protection . Extremely high compensation.

Therefore, US is the most important country for filling patents.

From Taiwan to Other Countries

1. TW Application → Paris Convention Filings
 - If not filing in many countries

2. TW Application → PCT (US or China) → various countries
 - Good for filing in many countries 適合對多個國家申請
 - 20 year term starts from PCT filing 從PCT申請日開始有20年有效期

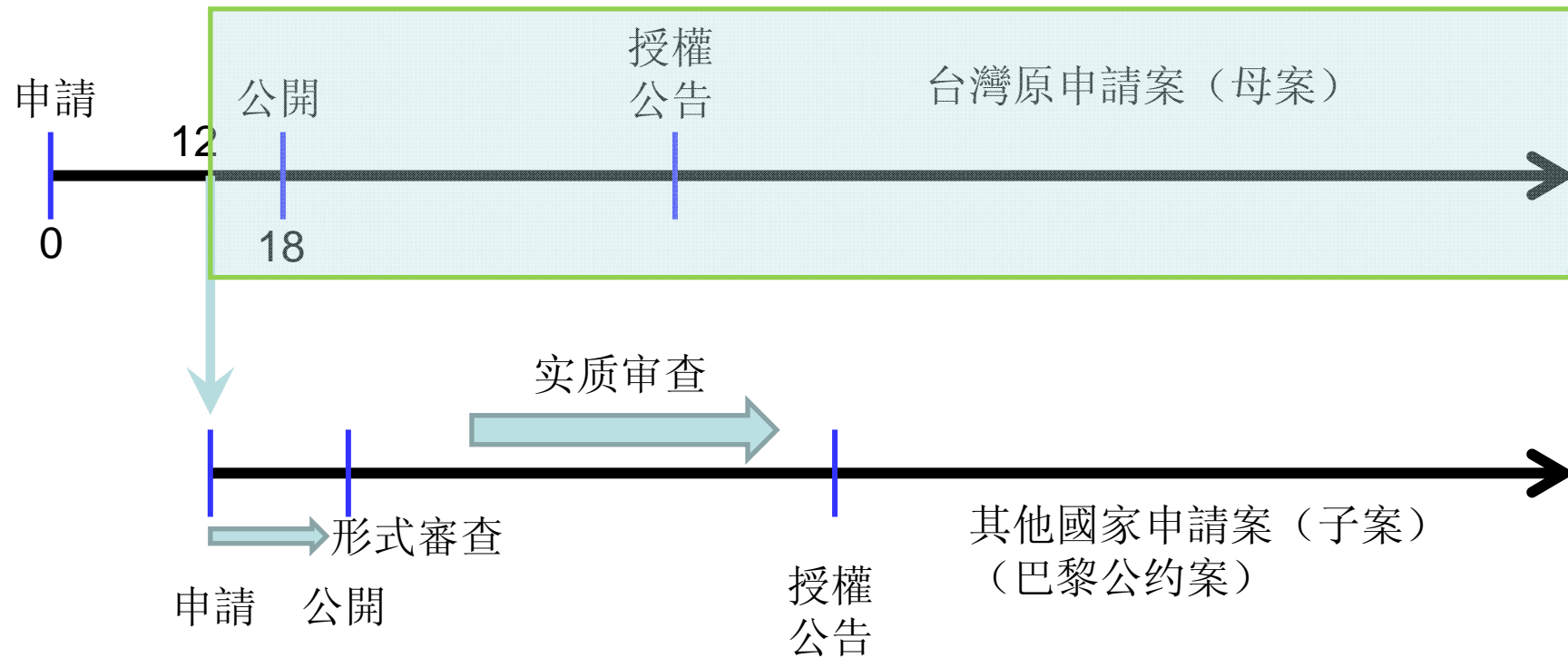
Paris Convention (1883)

- 任何國家地區都可以參加
- 目前有174個會員
- 公平對待本國和外來的申請案 – 相同的法規
- 優先權規定（12個月之內要求）
- 各個會員國要遵守共同的規則
- 可要求翻譯成當地的語文



巴黎公約:專利申請優先權

- 巴黎公約申請



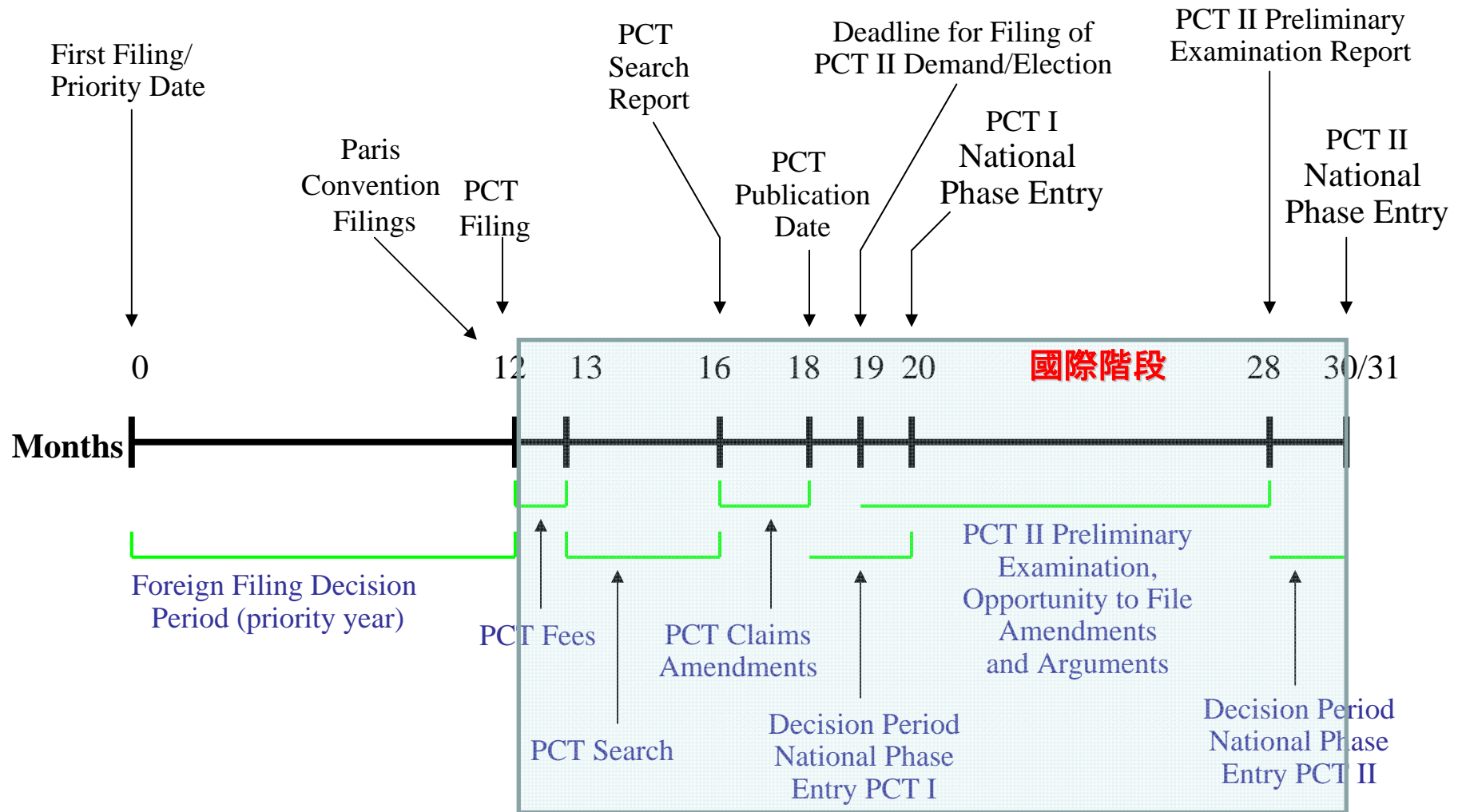
1. 發明人要一致；
2. 可以修改申請文本，但發明主題不能變；
3. 要交優先權案副本

Patent Cooperation Treaty (PCT)

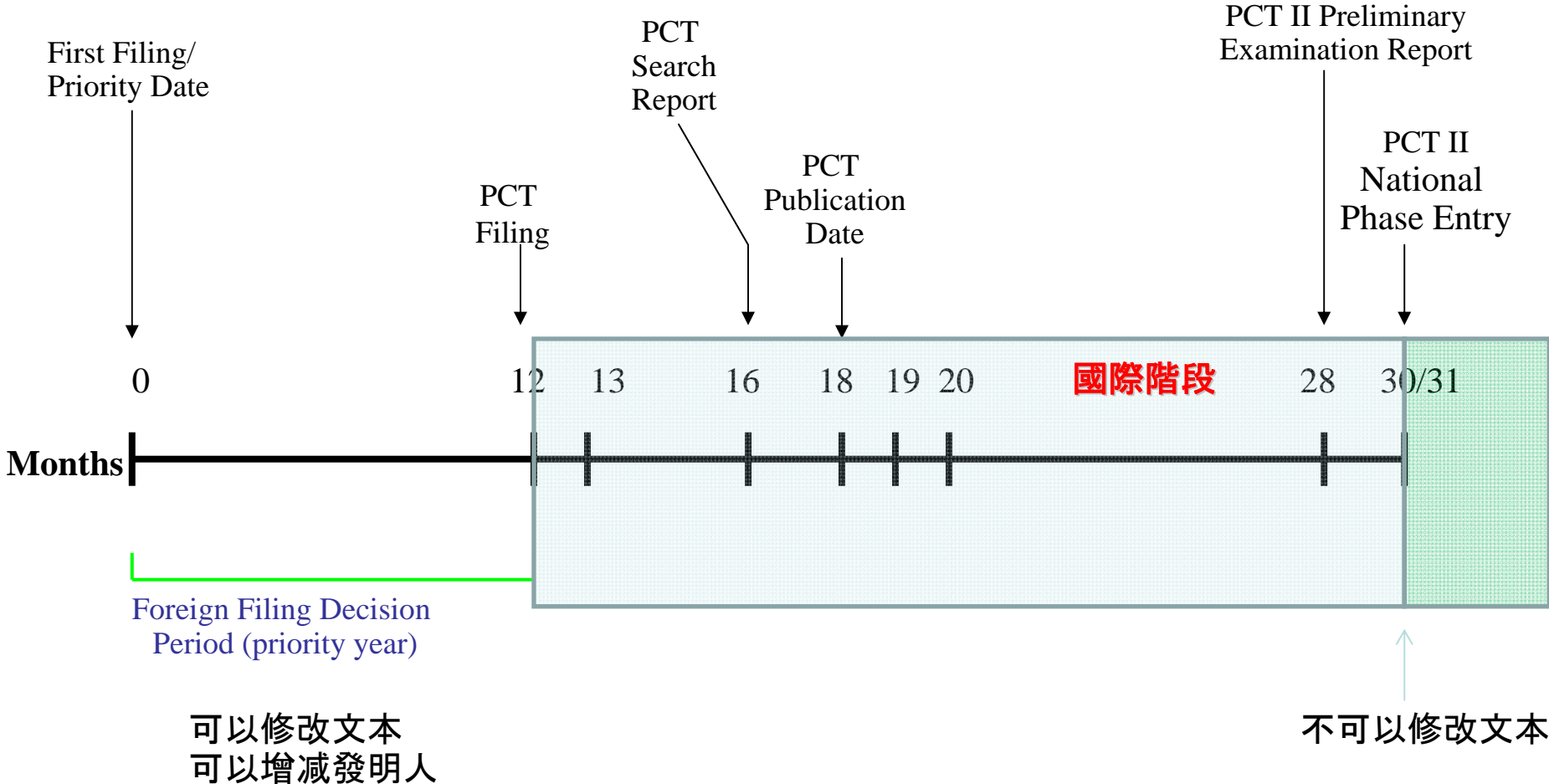
- 根据巴黎公约第19条，1970制定了專利合作條約（PCT）
- 由國際智慧財產组织（WIPO）管理
- 現有140多 個會員國佳及地區
- PCT條約是國際上有關智慧財產的主要條約



先向美國或中國申請PCT，再國際申請



PCT國際申請



PCT to US Filing Strategy

1. National Phase Application (PCT Rules)

- Less restrictive “unity of invention” rules
- Accurate Translation needed

2. Continuation Application (or By-Pass Application) (US Rules)

- Restriction Requirement is more restrictive
- Can be a Continuation-in-Part (CIP)
- Certified Copy of Priority Application needed

Bypass versus National Phase

- Bypass
 - Narrower US restriction rules apply
 - Can submit amended application
 - Must submit certified copy of priority document
 - Creates 102(e) date
可获得102(e)的申请日
 -
- National Phase
 - Broader unity of invention standard applied
 - Difficult to present extensive amendments
 - No need to submit certified copy
 - No 102(e) date if publication was not in English 如果不是用英文申请，102e的条款不适用

Commonly Encountered Problems with Foreign Arising applications in the U.S.

- Translation problems
- Communication difficulties
- Differences in laws and common practices

Translation Problems

- Most translations of patent specifications from foreign countries contain errors in English usage
- Precision of language required by USPTO often lacking in translations
 - Example: “*a*” or “*the*”
- Most errors are not corrected

Typical Problems Caused by Translation Issues

- Quality of examination is decreased
 - Examiner less likely to take time to read a specification that is difficult to understand
- Duration and expense of prosecution is increased
 - Rejections/objections on formal matters
 - Multiple rejections due to lack of examiner's understanding

Typical Problems Caused by Translation Issues

- U.S. attorney cost increases
 - More time spent to understand specification
 - More time spent to address formal matters
- Difficult claim construction
 - Meaning of words in the claim determined by usage in specification
 - If claims re-written by U.S. attorney, correspondence between claims and specification may be lost.

Typical Problems Caused by Translation Issues

- Enforcement more difficult
 - Most patent cases in US go to a jury
 - Jury is non-technical, non-patent
 - Clarity of specification and claims is major advantage in litigation
 - Foreign-sounding patent may be subject to bias from jury

Solutions to Translation Problems

- Recognition of importance of this issue
- Revision of both specification and claims at time of U.S. filing
 - Adds some cost at time of filing
 - Reduces cost during prosecution
 - Reduces prosecution delay
 - Results in stronger patent

Differences in Laws and Common Customs

- Areas where differences in practices negatively affect quality of U.S. patent
 1. Use of multiple independent claims
 2. Avoiding multiply dependent claims
 3. Avoiding “narrative” claim language
 4. Avoiding functional language in apparatus claims
 5. Avoiding claims directed to “use

Possible solutions

- Pay particular attention to use of definite and indefinite articles
- Always refer to “in an embodiment of the invention” rather than “according to the invention
- Give examples of alternate configurations; possible substitutions
- Ask U.S. attorney to review specification and claims for limiting or language before filing

Use of Multiple Independent Claims

- Having the right type of independent claim of significant importance to enforcement Can mean the difference between direct and indirect infringement
 - Can effect the base from which a royalty is calculated
- Many claiming opportunities are missed in applications from overseas companies

Use of Multiple Independent Claims

- Examples
 - Apparatus
 - Product
 - Apparatus for making product
 - Method of using
 - Method of making
 - Method of installing

Use of Multiple Independent Claims

- restriction requirements
 - Applied strictly by current USPTO
 - Add cost by requiring multiple applications
 - Use same scope in corresponding method and apparatus claims

Use of Multiple Independent Claims

- Avoiding restriction requirements
 - Consider using PCT, so that broader unity of invention rules apply
 - PCT approach allows one independent claim in each category
 - US may allow multiple independent claims in one category while, for example, restricting between apparatus and method

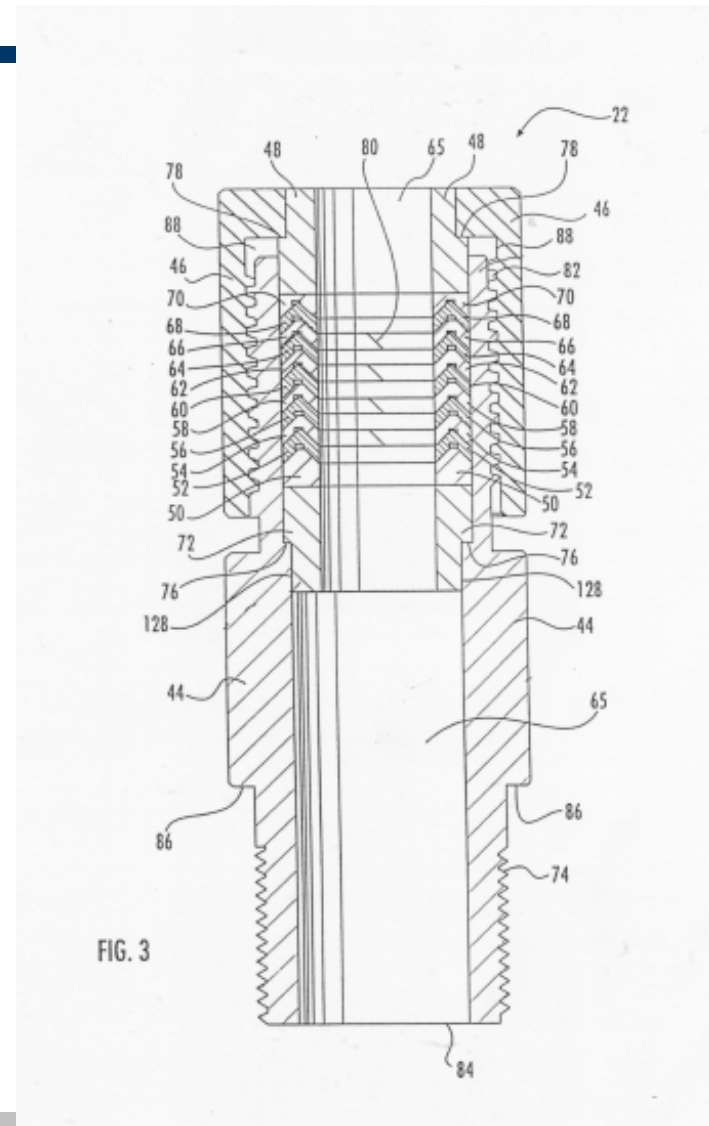
Avoid Multiply Dependent Claims

- Allowed in U.S., but give no advantage
- Additional surcharge required
- Each dependency counted as separate claim for fee calculation purposes
- Disliked by examiners

Use “Outline Form” Claims

- Outline form is preferred by U.S. Examiners
- Narrative form considered difficult to understand
 - Difficult to separate one element from another
- Functional language in apparatus claims may not be given weight by examiner

Example



“Narrative” Claim

- A sealing apparatus for a reciprocating polished rod, comprising a seal having a plurality of seal rings disposed between a first bushing and a second bushing, the seal and the two bushings being placed within a channel in a body to which a cap is releasably attached, such that upon connection of the cap to the body opposing mating surfaces on the body and the cap compress the seal against the reciprocating polished rod.

Outline Form Claim

- **A sealing apparatus** for a reciprocating polished rod, comprising:
- **a body** having a first end, a second end, a channel for receiving the polished rod, and a first mating surface formed on an interior surface of the body, wherein the first end is adapted for engagement with a well;
- **a first bushing** disposed within the channel and engaging the first mating surface;
- **a plurality of seals** disposed within the channel adjacent the first bushing;
- **a second bushing** disposed adjacent the plurality of seals; and
- **a cap** having an aperture for receiving the polished rod and defining a second mating surface, the cap being removably engaged with the second end of the body such that the second mating surface engages the second bushing

Means Plus Function Claim

- A sealing apparatus for a reciprocating polished rod, comprising:
- a body having a first end, a second end, and a channel extending longitudinally therethrough, the first end being adapted for engagement with a well;
- a cap releasibly engageable with the second end of the body; and
- sealing **means for** effecting a sliding seal against the polished rod upon engagement of the cap.

Requirements to Invoke §112, 6th

- "An element in a claim for a combination"
 - Claim must be to a combination
 - At least two elements must be recited
 - “Single means claim” not allowed
- “Without the recital of structure, material, or acts in support thereof”
 - To qualify, element must not recite details, only function

Requirements to Invoke §112, 6th

- Supporting structure or acts must be disclosed
 - Claim will be invalid if sufficient structure or acts not disclosed in specification
 - Invalidity now based on indefiniteness rather than « undue breadth »
- Relationship between claimed function and supporting structure/acts must be clear
 - Specification must explain which structure/acts perform recited function Ensure one-to-one correspondence between means plus function limitations and disclosed structure/materials

Determining when §112, sixth paragraph applies

- If the word **means (step) for** is used, positive presumption applies
 - If structure, materials, or acts in support are recited, presumption is overcome
 - §112, sixth paragraph, does not apply
- If the word **means (step) for** is not used, negative presumption applies
 - If function is claimed without structure, materials, or acts in support, presumption is overcome
 - §112, sixth paragraph, does apply

Construction of means/step plus function elements

- Determine if presumption applies → “means for” or “steps for”?
- Determine if presumption is rebutted → description of structures or actions in the claim?
- If §112, sixth paragraph applies
 - Identify structure, material, or acts corresponding to recited function
 - Determine equivalents

Example 1

- “lever moving element”
 - Word “**means**” not used
 - Presumption that §112, sixth paragraph does **not** apply
 - Court found no structure recited in claim
 - Claim purports to cover every possible structure for moving a lever
 - §112, sixth paragraph, was applied limited to embodiment disclosed in specification, and equivalents thereof

Example 2

- “**Means** responsive to pressure increases in a chamber”
 - Word means is used, so presumption applies
 - Flexible wall disclosed in specification
 - Claim limited to flexible walls and equivalents thereof
 - Movable, rigid wall found not to infringe

Example 3

- “**mechanism for moving said finger**”
 - Word “**means**” not used
 - Presumption that §112, sixth paragraph does apply
 - Court noted that term “mechanism,” standing alone, connotes no more structure than the term “means”
 - Court limited structure of “mechanism” to be limited to particular structures disclosed in specification that perform the claim function
 - If “**finger displacement mechanism**” had instead been recited, Court noted that §112, sixth paragraph would **not** have applied

Increased risk of generic disclosures for means plus function

- Federal Circuit court finds such claims to be indefinite
 - If **means or step plus function** language is used, there must be **specific** disclosure beyond “black box”
- Casts doubt on many issued patents

Example 4

- “A first bank computer...including means for generating an authorization indicia”
 - Word means is used, so presumption applies
 - “A bank computer” was disclosed in specification
 - Claim found invalid by court as indefinite
 - Court required there must be disclosure of “internal structure” (i.e., software) for bank computer to perform the claimed means “means” function
 - “Because...computers can be programmed to perform very different tasks in very different ways, simply disclosing a computer as the structure to perform a particular function does not limit the scope of the claim...as required by § 112 ¶ 6.”

Conclusions

- Means and step plus function elements require careful interpretation
- Use only when necessary, or in alternate independent claim
- Disclose **multiple** structures/acts to support claim language
- Ensure clear correspondence between claim language and disclosed embodiments

Patent Draft and Review

Overall Considerations

- Abstract
 - Suggested practices
 - Rewrite broadest independent claim into “plain language”
 - This may help to prevent unwanted limitations get read into the claims.

Overall Considerations

- Abstract
 - Avoid limiting language
 - The “most characteristic feature” (*See* U.S. Pat. No. 6,358,615)
 - This composition “makes it possible to provide . . . without any expensive materials ”

Overall Considerations

- Background
 - Avoid inadvertent prior art admissions – so-called “Applicant’s Admitted Prior Art”
 - May be used to reject claims – most often found when Applicant has made broad statements about what is known in the art or what a prior art reference discloses
 - Do not describe the invention or inventive feature in the background

Overall Considerations

- Background
 - Avoid discussing “problems” with prior art
 - Prior art “expensive,” “difficult,” “failure to achieve high yield” (*See Organic NTC Composition application*)
 - Similarly, avoid stating that invention was made “in consideration” of the problems (*See Id.*)
 - Courts may require the claims to achieve these goals

Overall Considerations

- Background
 - Suggested practices
 - Use exact language from prior art reference—do not generalize
 - Omit negative characterizations of prior art
 - Omit statements that indicate present invention was created to overcome problems with prior art
 - Re-phrase as advantages of invention

Overall Considerations

- Summary of Invention
 - Avoid stating that the invention “**is**” something
 - “The first invention is for solving the above problems”
(*See* U.S. Pub. 2004/0129542)
 - May cause a court to limit claim scope

Overall Considerations

- Summary of Invention
 - Avoid “numbering” inventions
 - The first invention is . . . The second invention is (*See* U.S. Pub. 2004/0129542)
 - This may cause U.S. Examiner to issue one or more restriction requirements

Overall Considerations

- Summary of Invention
 - Avoid “objects” and “purposes” of the invention
 - “A first object is to overcome the deficiencies in the prior art discussed above...”
 - A court is likely to read this as a limitation of the claims

Overall Considerations

- Summary of Invention
 - Suggested practices
 - Copy language from independent claims
 - Use phrases like “In one aspect, the invention relates to” rather than “The invention **is**”
 - Avoid numbering inventions

Overall Considerations

- Description of Figures Avoid limiting language when describing figures
 - “FIG. 10 is a sectional view of an **essential** portion” (*See* U.S. Pub. 2004/158975)
 - Refer to the figures as showing “embodiments”, not “the” invention

Overall Considerations

- Description of Figures
- Suggested practices
 - Use generic language, describe as alternative embodiments
 - “Figure 10 is a sectional view in accordance with an embodiment of the present invention”

Overall Considerations

- Detailed Description
 - Avoid limiting language
 - The “first essential ingredient” (*See* U.S. Pat. No. 6,358,615)
 - Include sources of compounds bought commercially
 - Define the terminology if necessary.
 - Disclose multiple embodiments and alternative structures

U.S. Patent No. 6,358,615

- The **most characteristic feature** of the inventive connector consists in the use of a conductive silicone rubber composition comprising, instead of conventional silver particles, a specified weight or volume fraction of conductive particles of which **each particle** has a composite structure consisting of a core particles of an electrically non-conductive material such as silica and a metallic plating layer thereon having, preferably, a bilayered structure formed from an underplating layer of nickel and a top plating layer of gold.
 - Claim 1—why require that “each” have this feature? A potential infringer could avoid claim by adding silver particles
 - No method claims
 - Only a single independent claim

Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.

(Fed. Cir. 2013)

- Claim 1 of U.S. Patent No. [6,054,430](#) :
 1. Copolymer-1 having over 75% of its molar fraction within the **molecular weight** range from about 2 kDa to about 20 kDa, prepared by a process comprising the steps of:
 - reacting protected copolymer-1 with hydrobromic acid to form trifluoroacetyl copolymer-1 having over 75% of its molar fraction within the **molecular weight** range from about 2 kDa to about 20 kDa, wherein said reaction takes place for a time and at a temperature predetermined by test reaction, and
 - treating said trifluoroacetyl copolymer-1 having over 75% of its molar fraction within the **molecular weight** range from about 2 kDa to about 20 kDa with aqueous piperidine solution to form copolymer-1 having over 75% of its molar fraction within the molecular weight range from about 2kDa to about 20kDa.

Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.

(Fed. Cir. 2013)

- There are at least three ways to calculate average molecular weight: peak average molecular weight (M_p), number average molecular weight (M_n), and weight average molecular weight (M_w).
- Specification discloses only one way to measure "molecular weight" of these molecules using Size Exclusion Chromatography (SEC)

Overall Considerations

- **Claims**
 - Avoid introducing “new language” (i.e., terms not found in specification)
 - Avoid having only one independent claim
 - Avoid having only a small number of dependent claims
 - Avoid Multiple dependent claims

U.S. Patent No. 6,537,627

- Precision Product Container
 - Summary of Invention
 - It is an object of the invention, which is free from operational errors—very limiting language, as a potential infringer might argue that a device having a minor failure rate does not infringe

U.S. Patent No. 6,537,627

– Claims

- A more typical US claim approach would be to state “essentially free of volatile chlorine,” and
- define “essentially free” in terms of criteria.

谢谢！

