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Topic 6: **Claims**

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31 January 2013

Agenda

- Claims
  - Types:
    - independent, dependent claims;
    - one or two part claims
  - Unity of patents
  - Interpretation of claims
  - Evolution of claims

Claims

- Patents are an instrument to protect certain intellectual property
- Claims define the scope of protection
  - Claims have to be clear and concise
  - Claim wording should not permit ambiguous interpretation
  - > Principle of **Legal Certainty**

- Examining claims is the core business of a patent examiner
- Description and drawings are used to interpret the claims

- Only subject matter described in claims is examined for novelty and inventive step
- Claims therefore determine the initial scope of the prior art search
- Effective search is not possible without clear claims

Samples of claims

- EP 2006651 A2
- EP 2006651 B1
- US 7860665 B2

Types of claims

- **Dependent claim**
  - Any claim that refers to at least one other claim, e.g.

    “2. Apparatus according claim 1 where {feature1} ….”
    “3. Apparatus according claim 1 or 2 where {feature2}”
    “6. Apparatus according claim 1 and 2 where {feature3}”
    “7. Apparatus according any of the preceeding claims where {feature4} ….”

  - References only to claims of same category (method, product, device)

Problematic claims

Sample

1. Machine for doing xxxx characterized by ....

2. Machine according claim 1 characterized by ... **Yes**

3. Process according claim 1 whereby.... **No**

5. Process for xxxx using a machine according claim 1 whereby ..... **Yes**

Types of claims

- **Independent claim**
  - Wording of claim does not refer to any other claim, e.g.

    “1. Apparatus for making ….
    “1. Method for mixing …..
    “3. Electrically powered mixer with …

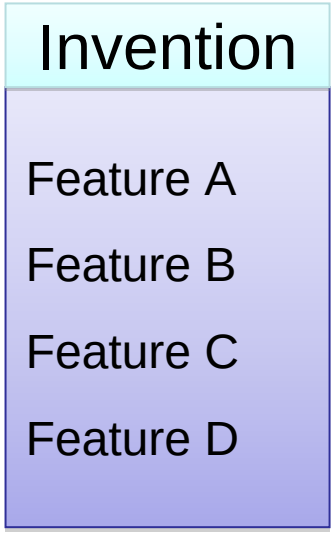
  - First independent claim is **main claim**
  - Further independent claims are possible

Types of claims

- Main claim:
  Includes **all** the features of the invention which are **essential** to solve the problem, and **only** those features!

- Dependent claims:
  additional, e.g. advantageous features

- Further independent claims:
  alternative similar solutions for **same problem (unity of invention!)**



EP 2006651 B1

Unity of patents

- Unity of patents: Combination of diverse inventive subject matter in one application is not admissible, i.e. solutions to several problems
- Main claim defines inventive subject matter
- Further independent claims define other inventive subject matter, e.g.
  - Product and process
  - Different solution
- Unity is checked with respect to independent claims
- Unity is given as long as inventive subject matters are linked to **same problem**
- Lack of unity: solvable by divisional application, or withdrawal of claims

Claim sample – one part claim

1. A method of producing a soya bean product, the method including the step of exposing soya beans to an acidic aqueous solution.
2. A method as claimed in Claim 1, in which the acidic aqueous solution has a pH of between about 2,0 and 5,5.
3. A method as claimed in Claim 1 or Claim 2, in which the soya beans are whole beans.
4. A method as claimed in any one of the preceding claims, which includes the prior step of dissolving an organic acid in water to produce the aqueous acidic solution.
5. A method as claimed in Claim 4, in which the organic acid is citric acid.

WO2005055733

Claim sample – two part claim

Introducing part (category, purpose)

1. A method of determining the torque induced in a rotating shaft (51),

A the shaft (51) having a torsional oscillation frequency that is dependent on the stiffness of the shaft (51),

B where the torsional oscillation frequency and the stiffness are dependent upon the operating conditions of the shaft (51),

the method comprising: ← generic expression

C measuring (35) the torsional oscillation frequency of the rotating shaft (51);

D measuring (39) the twist induced in the rotating shaft (51) by the torque; and

E using (41) the measured value of the torsional oscillation frequency and the measured value of the induced twist to determine the torque induced in the shaft (51).

Sequence of 5 features A - E

EP 2006651 A2

Types of claims

- One part claim:

  includes just list of essential features

  "1. Apparatus {with,where} A,B,C,D"

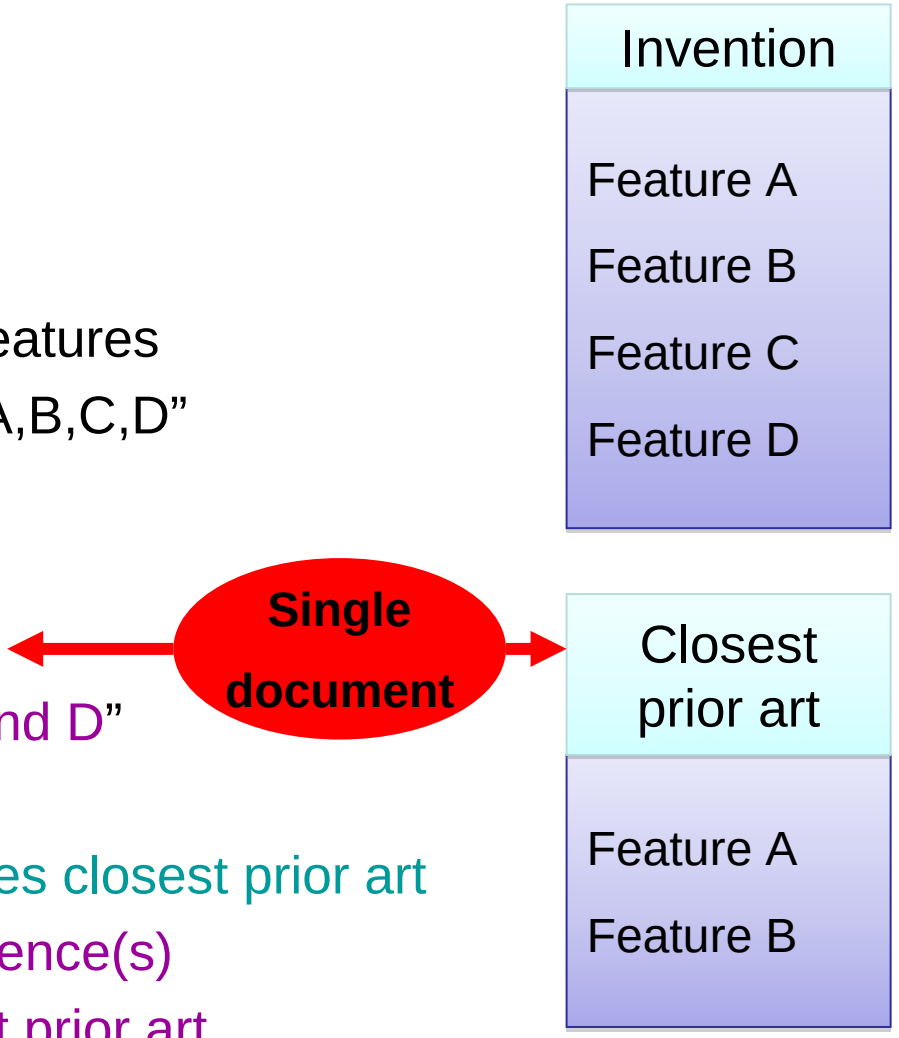
- Two part claim:

  "1. Apparatus with A and B,
  characterized in that C and D"

  > first part (preamble) describes closest prior art

  > second part describes difference(s)

  between invention and closest prior art



One or two parts ?

- Two part claim
  - Standard claim type at EPO whenever possible
  - What is closest prior art ?
  - Inventive step could also be challenged by combining other prior art, e.g. by combining two documents which are not closest
- One part claim
  - Emphasizes the invention as a whole
  - Natural/logical sequence of features instead of artificial separation into two sets
  - Encouraged at DPMA
  - Should always be used if it is not clear what the closest prior art is

Admissible claim amendments

- Inclusion of additional features taken from description or other claims
- Replacement of features
- Completely reworded claims

- All features have to be supported by the original description
- Features from drawings not supported by the description are not permitted, i.e. they have to be mentioned explicitly in description

- Examiner to check whether amended claims are within initial disclosure

Interpretation of claims

- Purpose indicated in introductory part is irrelevant for assessing novelty and inventive step
  - Unless the invention is a new use of a known product/process
- Features or components with reference numeral to drawings:
  - details not explicitly repeated in claim are irrelevant, i.e. expression in claim is interpreted in the widest sense possible
- Optional features are irrelevant, e.g.
  - Features introduced by “especially”, “particularly”, “for example”, “e.g.”…
- “comprising” : non-exhaustive enumeration of items
- “consisting of” : exhaustive enumeration of items

Interpretation of claims

- Process claims: protection extends to product obtained through process
- Product by process claim: if product cannot be described otherwise
- Use claims are process/method claims
- Dependent claims are interpreted as comprisong all the features of the directly and indirectly referenced claims.

Evolution of claims

- Claims are usually different at different publication stages of same application
- Independent claims in applications published before examination (A1, A2) have broader scope
  - Published as originally filed, or
  - As amended up to publication (dependent on jurisdictions)
- Claims of granted patents are
  - Usually narrower, i.e. include additional features
  - May be totally different
- Claims after opposition have often narrower scope
- Only claims of granted patent are relevant for FTO analysis

Claim sample

1. A method of determining the torque induced in a rotating shaft (51),

A the shaft (51) having a torsional oscillation frequency that is dependent on the stiffness of the shaft (51),

B where the torsional oscillation frequency and the stiffness are dependent upon the operating conditions of the shaft (51),

the method comprising:

C measuring (35) the torsional oscillation frequency of the rotating shaft (51);

D measuring (39) the twist induced in the rotating shaft (51) by the torque; and

E using (41) the measured value of the torsional oscillation frequency and the measured value of the induced twist to determine the torque induced in the shaft (51);

F the torsional oscillation frequency of the shaft (51) and the induced twist are measured (35) at the second set of operating conditions;

the method is **characterized by**

G determining the torsional oscillation frequency of the shaft (51) at a second set of operating conditions at which the stiffness of the shaft (51) can be determined (33) and

H determining the stiffness of the shaft (51) at the second set of operating conditions;

I the torque induced in the shaft (51) at the first set of operating conditions is determined (41) using the measured torsional oscillation frequency and the induced twist at the first set of operating conditions, and the measured torsional oscillation frequency and the stiffness at the second set of operating conditions