



Mechanics of claim drafting



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1



dependent – independent claims

1. **all essential features in independent claims with at least 1 novelty conferring feature**
2. **fall back positions in dependent claims**
3. **group claims together**

2



types of claims

Form all the possible independent claims, try all the possible categories:

- product
- apparatus
- process
- use

Claim the solution not the problem or aim!


3



Inventive step

- **problem – solution – approach**
 1. Determine the “closest prior art”
 2. Establish the “objective technical problem” to be solved, and
 3. consider whether or not the claimed invention, would have been obvious to the skilled person
- **what is the technical effect? (make sure you have one - otherwise: alternative!)**


4



Remember

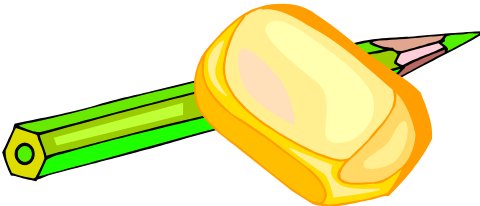
- Generic – Specific
- two part claim : “characterized in that”
- 1st and 2nd medical use
- 2nd non medical use
- scope of process claims
- product-by-process
- “product for....”
- use claim = process claim
- sufficient disclosure
- clarity

5




Novelty - an example

The Prior Art – what was known



The Invention



Novelty - Yes

Inventive Step –
????

6



How would we claim our "Pencil Invention"

1. An elongated writing implement comprising at one end of the implement a first component capable of marking a surface and at a distally remote point on the implement a second component capable of removing any marking made by the first component.
2. A writing implement as claimed in claim 1 wherein the first component is a graphite tip.
3. A writing implement as claimed in claim 1 or 2, wherein the second component is an eraser.

7



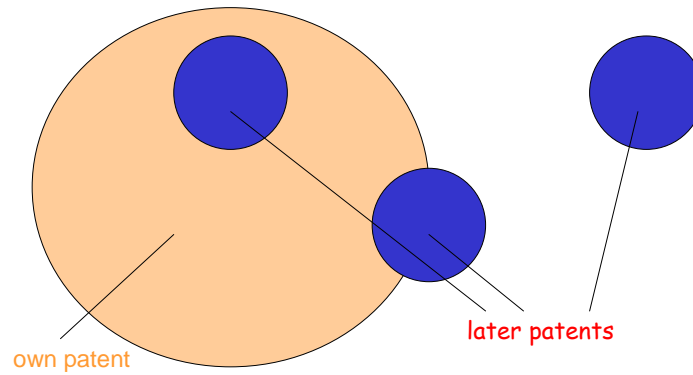
Is claim 1 of "Pencil Invention" novel?



8



own patent vs. later patents



**Always claim preferred aspects
otherwise someone else will!**

9



Case studies and practical exercises

1. **Case study : Pharma**
2. **Case study : Chemistry**
3. **Case study : Biotech**

10



example 1 - Pharma

Your client informs you that he has found that compound X which is known to be an effective insecticide shows an excellent activity as a detergent. Further, when heated to a temperature of about 200 °C for about 15 min and subsequently cooled to roomtemperature, it can be used against skin burns. Compound X without this heating process has no such activity. Your client has tried to analyse the chemical structure of compound X after this heating process, however, he is not able to determine the structural difference.

Write all possible claims!

11



Possible claims – example 1

1. Use of compound X as a detergent.
2. Detergent, characterized in that it comprises compound X.
3. Compound X1, obtainable by heating compound X to a temperature of 150 to 250°C, preferably, 190 to 210°C, for 10 to 20 min, preferably 15 min, and subsequently cooling it to roomtemperature.
4. Compound X1 according to claim 3 for use as a medicine.
5. Compound X1 according to claim 3 for use as a medicine to treat skin burns.
6. Pharmaceutical formulation comprising compound X1 according to claim 3.
7. The formulation according to claim 5, characterized in that it is a topical formulation, preferably a cream, lotion, butter, solution and/or powder.

12



Discuss cases – example 1

1. According to the search report of the EPO, compound X1 is known as an insecticide.
2. According to the search report of the EPO, compound X1 is known as the active ingredient in creams against acne.
3. After filing the application your client informs you that he has found that also X can be used against skin burns.
4. After filing the application your client informs you that he has found that X1 can be used as insecticide
5. After filing the application your client informs you that he has found that X1 can be used as medicine against acne

13



Answers to cases – example 1

1. No product claim for X1 possible, but 1st medical use claim
2. No product and no 1st medical use, only 2nd medical use claim for X1 possible
3. File new application with 1st medical use claim for X
4. File new application with 2nd non-medical use claim for X1
5. File new application with 2nd medical use claim for X1

14



example 2 - Chemistry

Your client informs you that he has found new processes a to c for producing compound X. Further, he has found that these processes lead to new crystal forms of compound X, namely A to C. He analysed these forms and form A is particularly stable and form B is very soluble which are both advantageous characteristics. However, he didn't find any advantage for form C. Additionally, he obtained a form D but does not know how he produced it. He characterized all forms with d-values, IR spectra and T_m.

Write all possible claims!

15



example 2 – possible claims

1. Form A of compound X characterized in that it has the d-values....., an IR spectra.... and/or a T_m of.....
2. Form B of compound X characterized in that it has the d-values....., an IR spectra.... and/or a T_m of.....
3. A process for producing form A according to claim 1, characterized in that....
4. A process for producing form B according to claim 2, characterized in that....

16



example 2 – discuss cases

1. The search report of the EPO cites a document which discloses a crystal form of compound X which is characterized by NMR.
2. A competitor has filed a later application claiming a new use Z for crystal form A. What is the situation?
3. An earlier granted patent exists claiming compound X as such. Can your client use his forms?
4. Your client found a prior art which discloses process d for producing form D. Can he now claim D in his application (knowing the process)?

17



example 2 – answers to cases

1. "A new parameter doesn't make an known object new" – be prepared to prove that the claimed forms are new over the known one (define NMR of claimed forms)
2. Form A is claimed as product claim: use falls under scope of protection. But your client cannot use form A as claimed by his competitor – cross licence?
3. No, his forms fall under the scope of protection of the earlier patent.
4. No, a prior art disclosing a process for producing form D is novelty destroying for form D (even if form D is not described).

18



Biotech short introduction

- R. 23(b) : definitions
- R. 23(c) : patentable biotechnological inventions
- R. 23(d) : exceptions to patentability
- R. 23(e) EPC: the human body and its elements

19



R. 23(c): patentable biotechnological inventions

Biotechnological inventions shall also be patentable if they concern

- biological material which is isolated from its natural environment or produced by means of a technical process even if it previously occurred in nature
- plants or animals if the technical feasibility of the invention is not confined to a particular plant or animal variety
- a microbiological or other technical process or a product obtained by means of such a process other than a plant or animal variety

20



Example 3 – Biotech

A client has found a DNA sequence which leads to a mutant protein with increased binding affinity to a specific receptor compared to the natural protein. This binding to the receptor of the mutant protein leads to increased insulin production and can therefore be used as a medicine against diabetes.

write all possible claims!

21



Example 3 – possible claims I

1. An isolated DNA molecule, characterized in that it comprises
 - the sequence SEQ ID No 1;
 - a sequence which is at least 80%, preferably at least 90%, still preferred at least 95% identical to the sequence SEQ ID No 1;
 - a sequence which hybridizes under stringent conditions (define in description!) to the sequence SEQ ID No 1; or
 - a sequence which is complementary to the sequence SEQ ID No 1.
2. An isolated polypeptide, characterized in that it is coded by the DNA sequence according to claim 1.

22



Example 3 – possible claims II

3. An isolated polypeptide comprising the sequence SEQ ID No. 2.
4. Expression vector, characterized in that it comprises a DNA molecule according to claim 1.
5. A host cell, characterized in that it comprises an expression vector according to claim 4.
6. A method for producing a polypeptide according to claim 2 or 3, characterized in that an expression vector according to claim 4 is inserted into a host cell which is then cultivated so as to express said polypeptide after which said polypeptide is isolated.

23



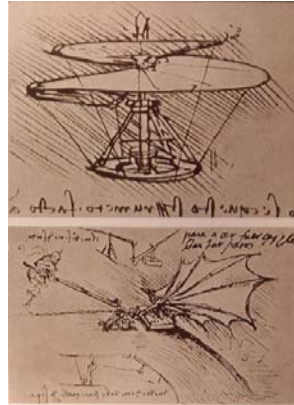
Example 3 – possible claims III

7. A polypeptide according to claim 2 or 3 for use as a medicine.
8. A pharmaceutical formulation comprising a polypeptide according to claim 2 or 3 and at least one pharmaceutically acceptable excipient.
9. Use of a DNA molecule according to claim 1 or a polypeptide according to claim 2 or 3 for the production of a medicament for the treatment of diabetes.

24



BE CREATIVE!



25