

CONTENTS OF A PATENT APPLICATION

I. CROSS-REFERENCE TO RELATED APPLICATION

A. Has any application been filed by any of the inventors related to the subject matter of this application?

1. What is the Patent Application No.?

2. When was that application filed?

3. What is the title of the application?

II. TECHNICAL FIELD

A. In general, what is the field of technology for this invention?

III. BACKGROUND

A. Describe the problem and why it's important to solve that problem.

B. Describe current solutions you are aware of and their shortcomings.

C. Describe what solutions are still needed.

IV. SUMMARY OF THE INVENTION

A. Generally speaking (in summary), what is the invention and how does it work?
Describe your invention as if you were giving a 30 second sales pitch.

B. How does your invention solve the problem described in the Background section?

C. What are the goals/objectives of your invention?

D. What are the advantages your invention has over the current solutions?

V. BRIEF DESCRIPTION OF DRAWINGS

A. Please provide any drawings (CAD, SolidWorks, hand drawings, etc.) or photographs showing the features of your invention.

B. Helpful views include:

1. Perspective
2. Top/Bottom/Plan
3. Front/Back
4. Side/Elevation
5. Exploded
6. Cross-section
7. Flow charts

VI. DETAILED DESCRIPTION OF THE INVENTION

A. List each component, composition, or step of your invention.

1. *Apparatus/Device/Machine: Name the parts.*
2. *Process: Name the steps.*
3. *Chemical Composition/Formula: Describe the gene, protein, antibody, cell, cell-line, chemical composition, compounds, formulations, etc.*
 - a) *What is the chemical name?*
 - b) *What is the chemical formula?*
4. *Computer/Internet (Combination of Apparatus and Process)*

a) Describe the overall computer architecture¹ (the hardware), i.e. processor, memory, database/storage device, I/O devices, input devices, output devices, network adapters, etc.

b) Describe the overall process in a single flowchart.

i) In general, provide enough information that allows a programmer reading your specification to write the code to generate the desired outcome.

ii) This description should be from the perspective of the computer.

iii) Describe the logic the computer needs to follow.

(a) providing a program specification would be helpful

(b) providing flow diagrams would be helpful

B. For each component/composition/step listed above:

1. Describe the purpose/function/utility of that component or step.

2. Describe the characteristics, properties, steps, and other details that show how the purpose/function/utility is achieved.

a) Apparatus/Device/Machine

i) Is there a preferred shape? If so, why?

ii) Is there a preferred material? If so, why?

iii) Is there a preferred orientation? If so, why?

iv) Are there preferred dimensions? What are the ranges?

v) Describe any particular configuration.

¹ This can be used to meet machine-transformation test of Bilski; however, watch out for insignificant post-solution activity (i.e. did you just add the computer to meet the test?).

b) Process

i) Who or what does it?

ii) How do you do it?

iii) What do you do it with?

iv) What conditions are required when this step is done?

v) Where do you do it?

vi) When does it have to be done?

vii) Why do it?

viii) How else can this step be done?

c) Compound

i) List/Describe the targeted patient population, disease/condition, gene, receptor, protein, antigen, cell-type, etc.

ii) Describe data/results showing utility and efficacy.

iii) Describe the mechanism of action.

d) Computer/Internet

i) Show and describe a series of flow charts that detail the various routines and subroutines that connect together to create the overall process described above.

(a) Present or describe the algorithms² required to perform desired function.

ii) Describe the data structure³.

² **This may help convert a general purpose computer to a special purpose computer to overcome Bilski. Critical if using means plus function language; otherwise, susceptible to 112 rejection.**

³ **This may help overcome abstract and intangible results.**

(a) What is the data being collected?

(b) How is that data used or “transformed”⁴ and presented to the user?

3. Describe any advantages⁵ of the component over existing components having the same or similar purpose/function/utility/characteristics/properties.

4. List substitutes that can achieve the desired purpose/function/utility or have similar characteristics/properties of the component.

a) Think about how your competitor would get around your invention.

b) From a hierarchical standpoint, what genus, family, order, class, etc. does the component or composition fall under.

i) *Chemical Composition/Formulations:*

(a) Identify any salts, enantiomers, derivatives, isomers, intermediates, metabolites, etc.

5. Describe how each component, compound, or step listed relates to, interacts with, or cooperates with the other components, compounds, or steps.

6. Describe the sub-components or sub-steps, particularly the sub-components or sub-steps that create the desired characteristics/properties, using steps 1-5 above as a guideline.

C. Describe how to make the invention (Follow the Process Steps above).

1. Apparatus/Device/Machine

a) Describe the manufacturing steps.

⁴ **This may be used to meet the transformation prong of the machine-transformation test of Bilski.**

⁵ **This could be used to limit claims during litigation.**

b) Describe the assembly steps.

2. Chemical Compositions/Formulations: Describe how the invention was synthesized, isolated, and/or purified.⁶

D. Describe how to use the invention, following the process steps above.

1. Chemical Compositions/Formulations

a) Describe administration protocol.

b) Modes of administration.

c) Dosage/Concentration/timing.

i) Describe acceptable ranges and rationale for those ranges.

ii) Describe the preferred dosage.

d) Provide working examples or prophetic examples.

⁶ This helps get over the natural phenomena exception to patentable subject matter.