UNIVERSITAT DE BARCELONA

Centre de Patents

Jornadas de estudio y actualización en materia de patentes "Los Lunes de Patentes"

OEPM, Madrid, 13 de noviembre de 2017

Posibles cuestiones sobre redacción de una solicitud PCT con vocación de entrar -como mínimo- en EP y US

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Elected member of the first Academic Advisory Board of the European Patent Academy, European Patent Office

Legal Texts & Guides (1)

PCT (http://www.wipo.int/pct/en/)

- Patent Cooperation Treaty (April 2002)
http://www.wipo.int/pct/en/texts/articles/atoc.htm
- Regulation under the Patent Cooperation Treaty (July 2015)
http://www.wipo.int/pct/en/texts/rules/rtoc1.htm
- Administrative Instructions under the PCT (July 2015)
http://www.wipo.int/pct/en/texts/ai/ai_index.html
- The PCT Applicants Guide (updated almost every week)

EPO (http://www.epo.org)

- EPC & Regulations (15th ed., Oct. 2013)
http://www.epo.org/law-practice/legal-texts/html/epc/2013/e/ma1.html
- EPO Guidelines for Examination in the EPO. Parts F & G (November 2016 Edition). Referred to as **"[EPO Guidelines 2016]"** in the slides.
http://www.epo.org/law-practice/legal-texts/html/guidelines2016/e/index.htm
- *How to get a European Patent* - Guide for applicants (16th ed. May 2016)
- *Euro-PCT Guide* - PCT procedure at the EPO. Guide for appls. (9th ed. Jan. 2016)

Legal Texts & Guides (2)

USPTO (http://www.uspto.gov/)

- 35 United States Code - Patents (35 USC), including some 'pre-AIA' (pre America Invents Act 2011-13) or 'transitional' provisions.
http://www.uspto.gov/web/offices/pac/mpep/mpep-9015-appx-l.html

- 37 Code of Federal Regulations (37 CFR)
http://www.uspto.gov/web/offices/pac/mpep/mpep-9020-appx-r.html

- Manual of Patent Examining Procedure (MPEP), Chapter 600 (Parts, Fom, and Content of Application), 9th Edition, Revision 07.2015: November 2015. Referred to as **"[US MPEP]"** in the slides. http://www.uspto.gov/web/offices/pac/mpep/index.html

- Nonprovisional (Utility) Patent Application Filing Guide (January 2014)
http://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/nonprovisional-utility-patent

OEPM (www.oepm.es)

- Ley 11/1986 de Patentes (LP1986) y RD 2245/1986 - Regl. Ejecución (RLP1986)

- Ley 24/2015 de Patentes (LP2015) y RD 316/2017 - Regl. Ejecución (RLP2015), que entró en vigor el 1.04.2017

- OEPM Directrices de Examen de Solicitudes de Patente (Ver. 2, Julio 2016)
http://www.oepm.es/es/invenciones/patentes_nacionales/directrices_de_examen/index.html

CUESTIÓN 8

OBJETIVOS Y MEDIOS DISPONIBLES

¿Es distinta la aproximación en el caso de que el objetivo del solicitante sea obtener patentes fuertes en US y los principales países europeos, respecto al caso de que meramente se quiera publicar una solicitud PCT "de imagen"?

Objetivo: PCT para obtener patentes fuertes

para disfrutar -o licenciar- el derecho a **impedir la explotación de la invención de forma eficaz**, lo que se presumirá si, y sólo si:

- La invención [reivindicación] es **susceptible de ser imitada**.
- Se confía en **poder detectar** la eventual infracción.
- Se confía en **poder probar** la eventual infracción.

| ***enforceable***

- Se confía en que la posible condena del infractor compensaría los gastos y molestias en patentar, pleitear, etc.
- Se considera que la invención es **patentable**.
- Se confía en convertir las solicitudes de patentes en patentes concedidas y válidas en los países de interés

enforce a patent right = hacer valer un derecho de patente

Si se quiere publicar una solicitud PCT "de imagen"

La validez y eficacia no importan. Hay que controlar el coste. Este tipo de solicitud puede estar justificada p.ej.:

- Para **obtener desgravaciones fiscales** por inversión en I+D+i (p.ej. mediante el *Patent Box*)

- Para **publicar** a voluntad y precio moderado, **con intención de impedir que otro lo patente** (alternativa a las publicaciones defensivas, p.ej. nota en *Research Disclosure*). No tiene sentido si se hacen publicaciones científicas.

- Para **embellecer una licencia de know how** acompañándola de una licencia de patente.

- Para **dar una imagen tecnológica avanzada**, que impresione y pueda servir para obtener homologaciones o subvenciones.

- Por motivos de **marketing**: animar a empleados y vendedores, **poder marcar p.ej. "patented" o "patent pending".**

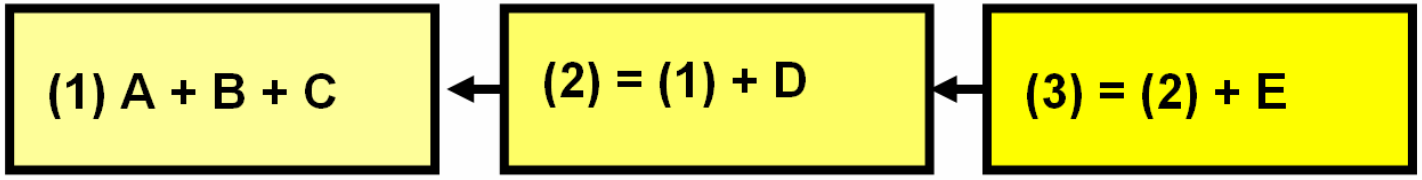
- Para **confundir** a competidores respecto a los verdaderos intereses del solicitante.

CUESTIÓN 8.1

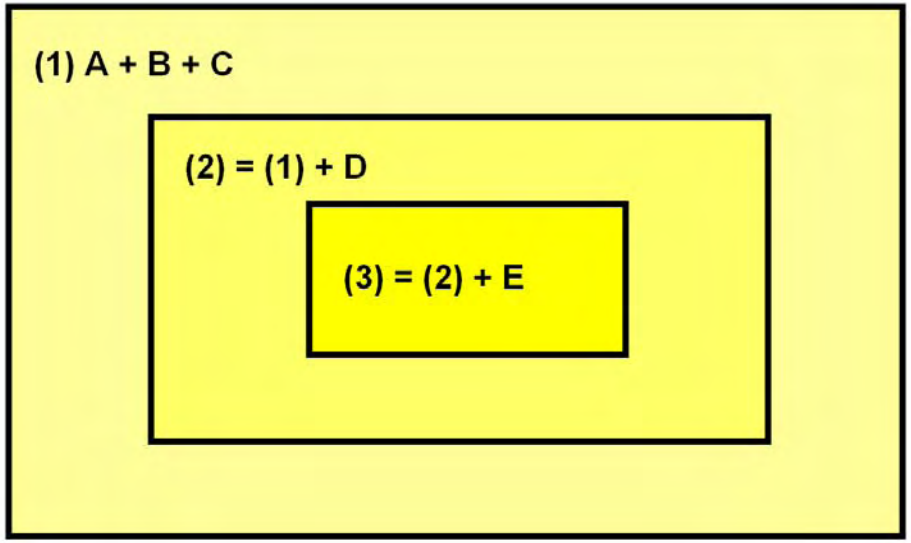
OBJETIVOS Y MEDIOS DISPONIBLES

En el primer caso, que es lo que se supone en todo lo que sigue, además de reivs. estrechas para proteger las realizaciones particulares más interesantes, ¿se debe intentar obtener reivs. tan amplias como sea posible?

Typical drafting of claims with a dependency line/chain



Claiming scopes



Military analogy: A fortress with 'fallback' positions, prior art being 'the enemy'

A non military analogy: onion layers are claims

Some codes of professional ethics of patent attorneys

- A patent agent should **never knowingly file an invalid patent application** (unless so desired by the clients).

- **The patent agent must be an advocate for his client**: **Not to draft only narrow claims** unless his client has requested it (the examiner has no duty to say that broader claims are possible); **not to conform to the caprices of the examiner just to expedite allowance of a case**, but be ready to **argue** on his client's behalf.

Excerpts from: WIPO Patent Drafting Manual, pp.125-126.

CUESTIÓN 8.2

OBJETIVOS Y MEDIOS DISPONIBLES

8.2. En cualquier caso, ¿es importante intentar minimizar los costes por número extra de reivs., número extra de páginas, gastos extra de traducción, u honorarios extra por adaptación de reivs.?

Goal: to draft a patent application designed to get international protection and to be acceptable by the PCT and the IP5 offices, without wasting applicant's money

An application that, as such or with minimal adaptation of claims (but not in description or drawings) ...

- it is accepted by PCT, EPO, USPTO, SIPO, JPO, KIPO (thus Common Application Format -CAF- is recommended);

- it provides the best available protection, with minimal risk of lack of unity, avoiding imposed divisionals;

- it does not pay unnecessary fees for extra number of claims; and

- it is not unnecessarily long (to avoid payment of fees for extra number of pages, and of extra honoraria for translations).

Being aware that **the 'perfect application' is an unreachable ideal**, as it is impossible to know in advance *all* relevant prior art, and to foresee all later developments.

Some fees associated to the number of pages and the number of claims in patent applications

PCT fees (2016 Nov.)

- **14 EUR / page in excess of 30** (the request takes a 5 or more)

(nothing paid for claims -> claims for both USPTO and EPO can be included)

EPO fees (2016 Nov.)

- 15 EUR / page in excess of 35 in appln. (sequence listing does not pay)
- **235 EUR / *numbered* claim in excess of 15** (580 EUR in excess of 50)

USPTO fees (2016 Nov.)

- **80 USD per each *actual* claim in excess of 20**
- **420 USD per each independent in excess of 3**
- **780 USD per each claim written in multiple dependent form [deterrent!]**

Note: In the Spanish Patent & Trademark Office (OEPM) no fees are paid for number of pages or number of claims.

Some 2017 PCT fees (EPO vs. OEPM-LP2015)

- Int. filing (all countries)	1,219.00
- E-filing reduction (PDF)	- 183.00
- Int. Search Report + Written Opinion (EPO or OEPM as ISA)	1,875.00
- Transmittal, EPO as ISA	130.00
- Transmittal, OEPM is ISA	74.25
- Transmittal of priority document, OEPM as ISA	29.69

TOTAL E-filing (PDF), EPO as ISA	3,041.00
TOTAL E-filing (PDF), OEPM as ISA	3,014.94

(in LP2015 Spanish public universities no longer have PCT discounts at the OEPM)

(+ 14 EUR/page in excess of 30)

- Preliminary examination, EPO as IPEA		1,930.00
- Preliminary examination, OEPM as IPEA	(30%)	583.65

Professional honoraria = major source of expenses

Approximate income of patent attorneys/agents

- **US patent attorneys** have billing rates within **350-650 $/h** in the USA

- **European patent attorneys** have billing rates within **150-350 €/h**

- **Spanish** industrial property agents should charge **190 €/h** when working at the **office**, and **253 €/h** when working **outside,** according to a non-binding recommendation of their professional association.

CUESTIÓN 9

OBJETIVOS Y MEDIOS DISPONIBLES

¿Conviene aclarar previamente de qué medios dispondrá el redactor de la solicitud?

El inventor es el protagonista principal de la invención. El técnico redactor de patentes es fundamental para protegerla. Y la colaboración del abogado *especializado* lo es para transferir o hacer valer sus derechos.

Títulos oficiales

ES: agente de la propiedad industrial

EP: European patent attorney (EPA)

US: patent agent & patent attorney

GB: patent attorney

DE: Patentanwalt

NOTA: Los EPA con el *Patent Litigation Certificate* podrán actuar ante la UPC

Patent application drafting: inventor's/applicant's knowledge plus drafter's skills/time

Inventors/applicants knowledge

- **"Positive" experiments** (those that "work", preferably ordered by their activity)

- **"Negative" experiments** (those that "do not work"). They are not part of the invention, but they may be useful to define limits (comparative examples) and/or as inventive step arguments

- **Technical ideas/drawings** related to de invention

- **Business considerations (PATENTS ARE ABOUT MAKING MONEY!)**, often provided from non-inventors (e.g. managers or marketing people)

- **Known prior art**

- **Etc.**

?

Inventions, i.e. claims

- **products/entities,**

- **processes of making products,**

- **other processes/methods, including "uses"**

claims which are:

... technical solutions to technical problems (have technical character and industrial applicability)

... patentable (are novel, involve inventive step, are supported by the description, etc.)

... enforceable before courts (to deter imitation or to prosecute infringers), and

... protecting against imitation of some profitable activity (to provide a competitive advantage)

CUESTIÓN 9.1

OBJETIVOS Y MEDIOS DISPONIBLES

¿Debe solicitarse al redactor un presupuesto cerrado? ¿O es mejor solicitarle un presupuesto abierto en función de las horas que dedique?

Un consejo

En lo relativo al proceso de patentar una invención, **una deficiente redacción de la solicitud -descripción, dibujos y reivindicaciones- se traduce en una protección pobre y un desperdicio de recursos para el solicitante.**

Evidentemente, todos estamos condicionados por nuestras circunstancias, y no siempre disponemos del tiempo y tranquilidad necesarios para hacer las cosas como nos gustaría.

No obstante, **mi consejo es que el redactor dedique el tiempo y el esfuerzo necesarios para producir una buena redacción** de la solicitud de patente, resistiéndose a las presiones para realizar una "redacción chapucera".

Pero que, además de reivindicar bien la invención, el redactor *reivindique* el reconocimiento y la remuneración que merezca por su formación y esfuerzo.

CUESTIÓN 9.2

OBJETIVOS Y MEDIOS DISPONIBLES

¿Debe contar el redactor con un inventor de contacto o debe "perseguir" a los inventores para disponer de la información necesaria?

Algunas "clases" de inventores (subjetivamente)

- **El ocupado:** no tiene tiempo para nada (hablar, leer, escribir...). El trabajo del experto-redactor puede resultar muy difícil.

- **El desorganizado**: No da toda la información de entrada, lo que luego obliga a replantear la invención. O da la información justo antes de publicarla, lo que obliga a preparar una "redacción contra el tiempo".

- **El "abogado" (que desea aprender derecho de patentes)**: quiere aprender más de lo razonable; hace perder al experto-redactor más tiempo del necesario; puede cuestionar su trabajo.

- **El "genio" incapaz de explicar la invención a los que saben menos**, tales como el experto-redactor y el examinador (quizás hay que enviarlo a otro redactor que sepa más sobre la técnica).

- **El razonable**: entiende los distintos papeles; enseña bien al redactor y aprende de él lo imprescindible del sistema de patentes (educación mutua). Ambos aprovechan el tiempo y no se malgasta dinero.

Drafting the priority application is a cooperative task between the patent expert and (usually only one of) the inventors: the 'contact inventor'

Patent drafting is mainly an iterative intellectual task between a patent drafter and inventors. When there are several inventors **it is generally practical to have as interlocutor only one 'contact inventor', namely, someone who knows most of the details of the invention, who can deal with -and collect information from- the rest of inventors, and who has enough time to effectively cooperate with the drafter** (frequently 'junior inventors' are preferred to senior and very busy ones).

The technical information will be mainly provided in writing, by means of invention disclosures, sketches, technical drawings, laboratory reports, manuscripts of (unpublished!) papers, prototypes, etc. **It is highly recommendable that written information is supplemented with personal interviews and discussions.**

Interviews with the (contact) inventor (1/3)

El objetivo de la primera entrevista es introducirse en el tema y obtener del inventor suficiente información para realizar una buena **búsqueda de patentabilidad**.

Dejar que el inventor cuente la "historia" de su invención, sin tener prejuicios sobre ella y sin menospreciarla: En principio toda invención puede tener su mérito y puede llegar a dar beneficios.

Así pues hay que **escuchar** con interés lo que el inventor tenga que decir sobre...

- ¿**Qué** (cree que) **ha inventado**?
- ¿**Por qué funciona**? (no irá a la patente, pero es importante)
- ¿**Para qué puede servir**? ¿qué importancia económica puede tener? ¿**Con qué modelo de negocio se piensa explotar**?
- **Cualquier otra cosa** (anotando los aspectos prácticos).

El inventor no suele distinguir entre lo que son características técnicas nuevas e inventivas y lo que son ventajas, fines o propósitos.

Interviews with the (contact) inventor (1/3)

Obtener del inventor una **descripción suficiente para que sea ejecutable,** así como *the best mode*. Para ello **preguntar...**

- ¿**Qué es lo que tiene de nuevo** su invención sobre lo conocido?
- ¿**Cómo sabe lo conocido**? (pedir ver los documentos que él considera más pertinentes).
- ¿**Qué ha publicado él** sobre el tema? (congresos incluidos)
- **Buscar mejor o en otras fuentes de información** (el inventor puede engañarnos, con buena o mala fe).
- **El inventor no debe decidir por sí solo si una publicación anterior es un antecedente** de novedad o actividad inventiva para su invención (decidirá siempre que "no", pues está "enamorado" de su invención).
- **Analizar lo que el inventor ha hecho o sus protocolos para poder hacer** (experimentos, dibujos, etc.), pidiéndole que lo describa por escrito, preferiblemente en inglés. Recopilarlo para la parte de *ejemplos o descripción detallada* (en pasado o en presente, respectivamente)
- **Preguntar qué piensa hacer durante el año de prioridad** (podremos hacer sugerencias sobre ejemplos a realizar).
- **Analizar las diferencias** estructurales o funcionales que hay entre lo que él ha hecho y lo que consideramos el estado de la técnica más próximo (diferenciando características de ventajas).

Interviews with the (contact) inventor (1/3)

- **El redactor no debe redactar las reivindicaciones demasiado pronto** (antes del *brainstorming*), para evitar el riesgo de "enamorarse" de ellas.

- Redactar las reivindicaciones con el inventor al lado (o en estrecha colaboración), especialmente las reivs. independientes. El objetivo es que estas últimas abarquen todos los aspectos de toda la técnica que sea nueva, que no sea obvia y que esté soportada por la descripción.

- Empezar a decidir qué es lo que se va a reivindicar, **extrapolando y preguntando** al inventor si la invención funcionaría al extrapolarse.

- Definir los límites de no-funcionamiento de la invención para **detectar las características técnicas imprescindibles o esenciales (que son las únicas que irán a las reivindicaciones independientes).**

- Elegir "el problema técnico" a resolver y los documentos a citar (patentes). Redactar la parte de *estado de la técnica*, con introducción sencilla, definiciones, etc.

- Redactar las reivindicaciones, como un proceso iterativo, hasta que se esté totalmente satisfecho con ellas.

CUESTIÓN 9.3

OBJETIVOS Y MEDIOS DISPONIBLES

¿De qué materiales de partida escritos debe disponer el redactor?

Some possible starting materials for drafting

- Ideas, together with interests and expectations, transmitted by inventors orally, and partially in writing.
- Sketches
- Technical drawings
- Prototypes
- Finished products
- Laboratory reports
- An invention disclosure
- A publication manuscript (full article, communication, thesis, etc.)
- Supplementary material: search results, related documents
- Etc.

CUESTIÓN 10

REQUISITOS MATERIALES

¿Cómo conviene cumplir con los requisitos materiales del PCT (Regla 11)?

Patent Cooperation Treaty (PCT)

CHAPTER I

INTERNATIONAL APPLICATION AND INTERNATIONAL SEARCH

Art. 3 PCT. The International Application

(1) Applications for the protection of inventions in any of the Contracting States may be filed as international applications under this Treaty.

(2) **An international application shall contai**n, as specified in this Treaty and the Regulations, **a request, a description, one or more claims, one or more drawings (where required), and an abstract.**

(3) **The abstract merely serves the purpose of technical information** and cannot be taken into account for any other purpose, particularly not for the purpose of interpreting the scope of the protection sought.

(4) The international application shall:

(i) be **in a prescribed language**;

(ii) **comply with the prescribed physical requirements;** ⟵

(iii) comply with the **prescribed requirement of unity of invention**;

(iv) be subject to the payment of the **prescribed fees**.

PCT Rule 11. Physical Requirements of the Int. Appl.

11.1. *Number of Copies*

(a) Subject to the provisions of paragraph (b), the international application and each of the documents referred to in the check list (Rule 3.3(a)(ii)) shall be **filed in one copy**.

...

11.2 *Fitness for Reproduction*

(a) All elements of the international application (i.e., the request, the description, the claims, the drawings, and the abstract) shall be so **presented as to admit of direct reproduction** by photography, electrostatic processes, photo offset, and microfilming, in any number of copies.

(b) All sheets shall be free from creases and cracks; they shall not be folded.

(c) **Only one side of each sheet shall be used**.

(d) Subject to Rule 11.10(d) and Rule 11.13(j), each sheet shall be used **in an upright position (i.e., the short sides at the top and bottom).**

11.3. *Material to Be Used*

All elements of the international application shall be on **paper which shall be flexible, strong, white, smooth, non-shiny, and durable. [today mostly on PDF]** (cont.)

CUESTIÓN 10.1

REQUISITOS MATERIALES

¿Qué tipo de letra usar, y de qué tamaño?

11.9. *Writing of Text Matter*

(a) The request, the description, the claims and the abstract shall be **typed or printed**.

(b) **Only graphic symbols and characters, chemical or mathematical formulae**, and certain characters in the Chinese or Japanese language may, **when necessary, be written by hand or drawn.**

(c) The typing shall be **1½-spaced [18 points in word-processors]**

(d) All text matter shall be **in characters the capital letters of which are not less than 0.28 cm high [font sizes 11 or 12]**, and shall be in a dark, indelible color, satisfying the requirements specified in Rule 11.2, provided that any text matter in the request may be in characters the capital letters of which are not less than 0.21 cm high.

11.10. *Drawings, Formulae, and Tables, in Text Matter*

(a) The request, the description, the claims and the abstract shall **not contain drawings**.

(b) The description, the claims and the abstract **may contain chemical or mathematical formulae.**

(c) The description and the abstract **may contain tables**; any **claim may contain tables only if the subject matter of the claim makes the use of tables desirable**.

....

37 CFR [2015-10] § 1.52. ... paper, writing, margins

(a) (1) All papers, other than drawings, that are submitted on paper or by facsimile transmission, and are to become a part of the permanent USPTO records..., **must be on sheets of paper that are the same size**, not permanently bound together, and:

(ii) Either 21.0 cm by 29.7 cm (DIN size A4) or 21.6 cm by 27.9 cm (8 1/2 by 11 inches), with each sheet including a **top margin of at least 2.0 cm** (3/4 inch), a **left side margin of at least 2.5 cm** (1 inch), a **right side margin of at least 2.0 cm** (3/4 inch), and a **bottom margin of at least 2.0 cm** (3/4 inch);

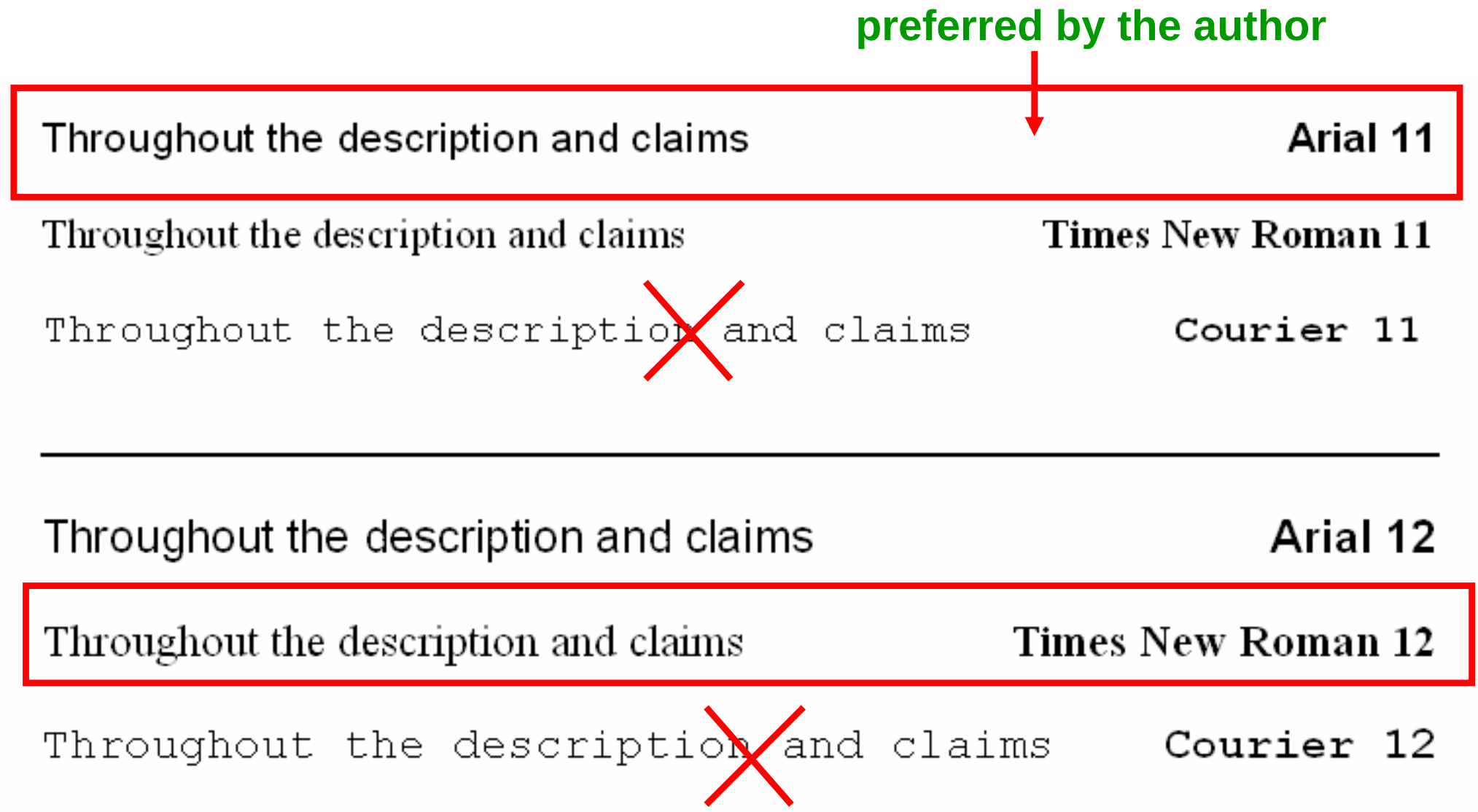
(b) (2) The specification (including the abstract and claims)...must have:

(i) Lines that are 1 1/2 or double spaced; **[18 points in word-processors]**

(ii) Text written in a nonscript type font (*e.g.*, Arial, Times Roman, or Courier, preferably a font size of 12) lettering style having capital letters which should be at least 0.3175 cm. (0.125 inch) high, but may be no smaller than 0.21 cm. (0.08 inch) high... **[Arial 11 is recommended: it is slightly smaller than 0.32 cm, but not smaller than 0.21 cm; it is accepted in the PCT and the EPO. Obliged in OEPM]**

(b) (5) ...**the pages** of the specification including claims and abstract must be numbered consecutively, starting with 1, the **numbers being centrally located above or preferably, below, the text. [both above and below are accepted by PCT and US; above is recommended as it is the only one accepted at the EPO]**

Recommended fonts and sizes in patent applications



Times Roman 11 is not high enough. Arial 12 is unnecessarily large. Courier 11 and 12 are out of question, as they involve a substantial waste of space.

CUESTIÓN 10.2

REQUISITOS MATERIALES

¿Qué espaciado elegir?

37 CFR [2015-10] § 1.52. ... paper, writing, margins

(a) (1) All papers, other than drawings, that are submitted on paper or by facsimile transmission, and are to become a part of the permanent USPTO records..., **must be on sheets of paper that are the same size**, not permanently bound together, and:

(ii) Either 21.0 cm by 29.7 cm (DIN size A4) or 21.6 cm by 27.9 cm (8 1/2 by 11 inches), with each sheet including a **top margin of at least 2.0 cm** (3/4 inch), a **left side margin of at least 2.5 cm** (1 inch), a **right side margin of at least 2.0 cm** (3/4 inch), and a **bottom margin of at least 2.0 cm** (3/4 inch);

(b) (2) The specification (including the abstract and claims)...must have:

(i) Lines that are 1 1/2 or double spaced; **[18 points recom. in word-processors]**

(ii) Text written in a nonscript type font (*e.g.*, Arial, Times Roman, or Courier, preferably a font size of 12) lettering style having capital letters which should be at least 0.3175 cm. (0.125 inch) high, but may be no smaller than 0.21 cm. (0.08 inch) high... **[Arial 11 is recommended: it is slightly smaller than 0.32 cm, but not smaller than 0.21 cm; it is accepted in the PCT and the EPO. Obliged in OEPM]**

(b) (5) ...**the pages** of the specification including claims and abstract must be numbered consecutively, starting with 1, the **numbers being centrally located above or preferably, below, the text. [both above and below are accepted by PCT and US; above is recommended as it is the only one accepted at the EPO]**

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(a) The request, the description, the claims and the abstract shall be **typed or printed**.

(b) **Only graphic symbols and characters, chemical or mathematical formulae**, and certain characters in the Chinese or Japanese language may, **when necessary, be written by hand or drawn.**

(c) **The typing shall be 1½-spaced [18 points is recom. in word-processors]**

(d) All text matter shall be **in characters the capital letters of which are not less than 0.28 cm high [font sizes 11 or 12]**, and shall be in a dark, indelible color, satisfying the requirements specified in Rule 11.2, provided that any text matter in the request may be in characters the capital letters of which are not less than 0.21 cm high.

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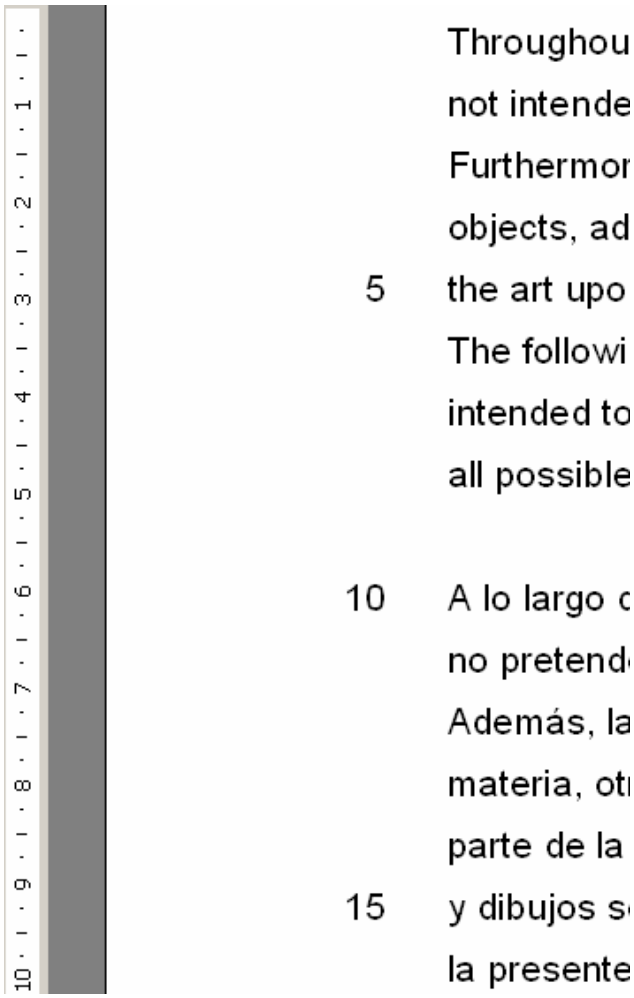
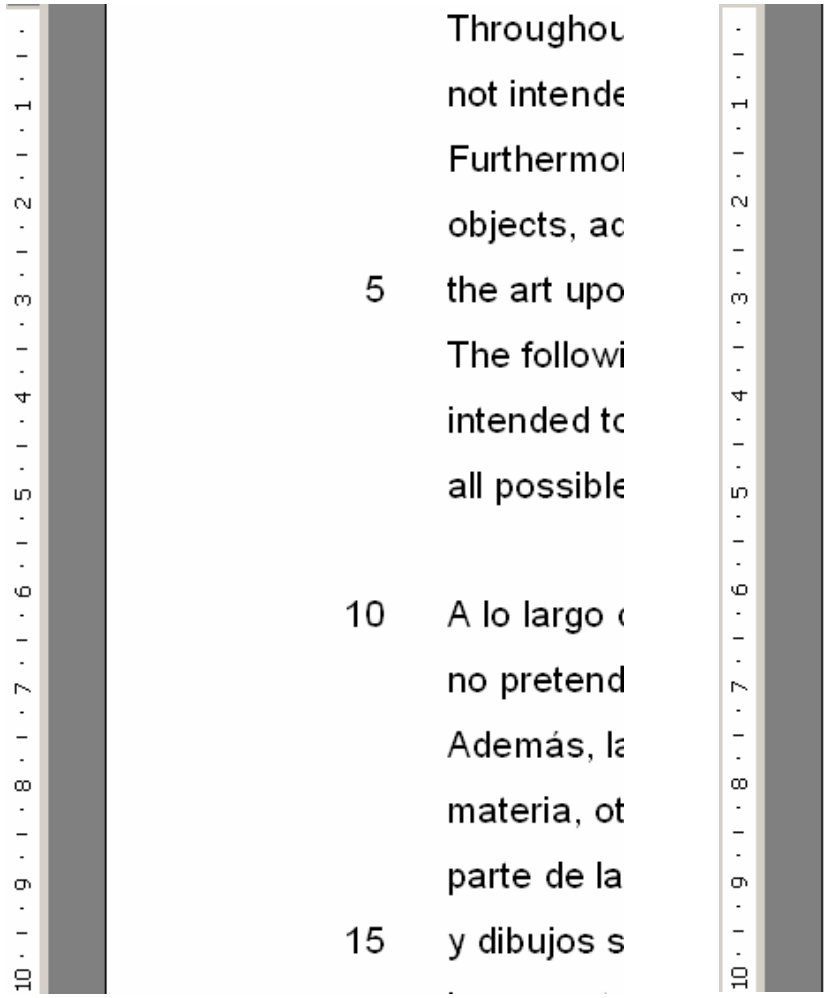
(b) The description, the claims and the abstract **may contain chemical or mathematical formulae.**

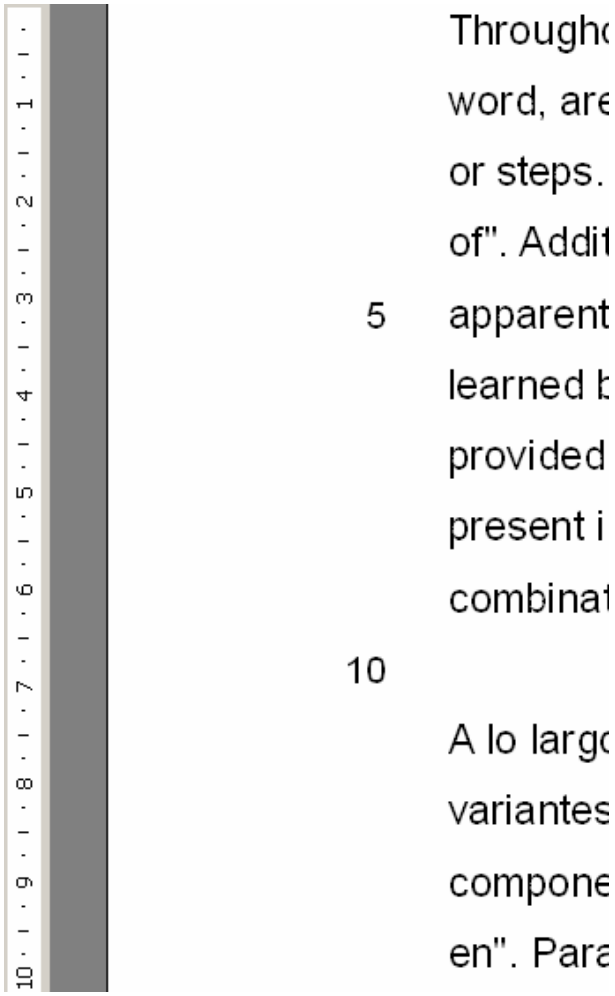
(c) The description and the abstract **may contain tables**; any **claim may contain tables only if the subject matter of the claim makes the use of tables desirable**.

....

The 1½-spacing requirement comes from old times, when typewriters were used. With word-processors a fixed spacing of 18 points (4 lines/inch) is recommended







Font size 11 / Spacing 18 po.
16 lines / 10 cm (4 lines/inch)

Font size 11 / Spacing 1.5 lines
15 lines / 10 cm

Font size 12 / Spacing 1.5 lines
14 lines /10 cm

For saving space a fixed spacing of 18 points is recommended for any font size

CUESTIÓN 10.3

REQUISITOS MATERIALES

¿Qué márgenes poner?

11.6. *Margins*

(a) The **minimum margins** of the sheets containing the **description, the claims, and the abstract**, shall be as follows:

- **top: 2 cm**
- **left side: 2.5 cm**
- **right side: 2 cm**
- **bottom: 2 cm.**

[all margins are 2 cm, except the left one, which has 0,5 cm extra "for binding"]

Use minimun margins for saving money!

(b) The recommended maximum, for the margins provided for in paragraph (a), is as follows:

...

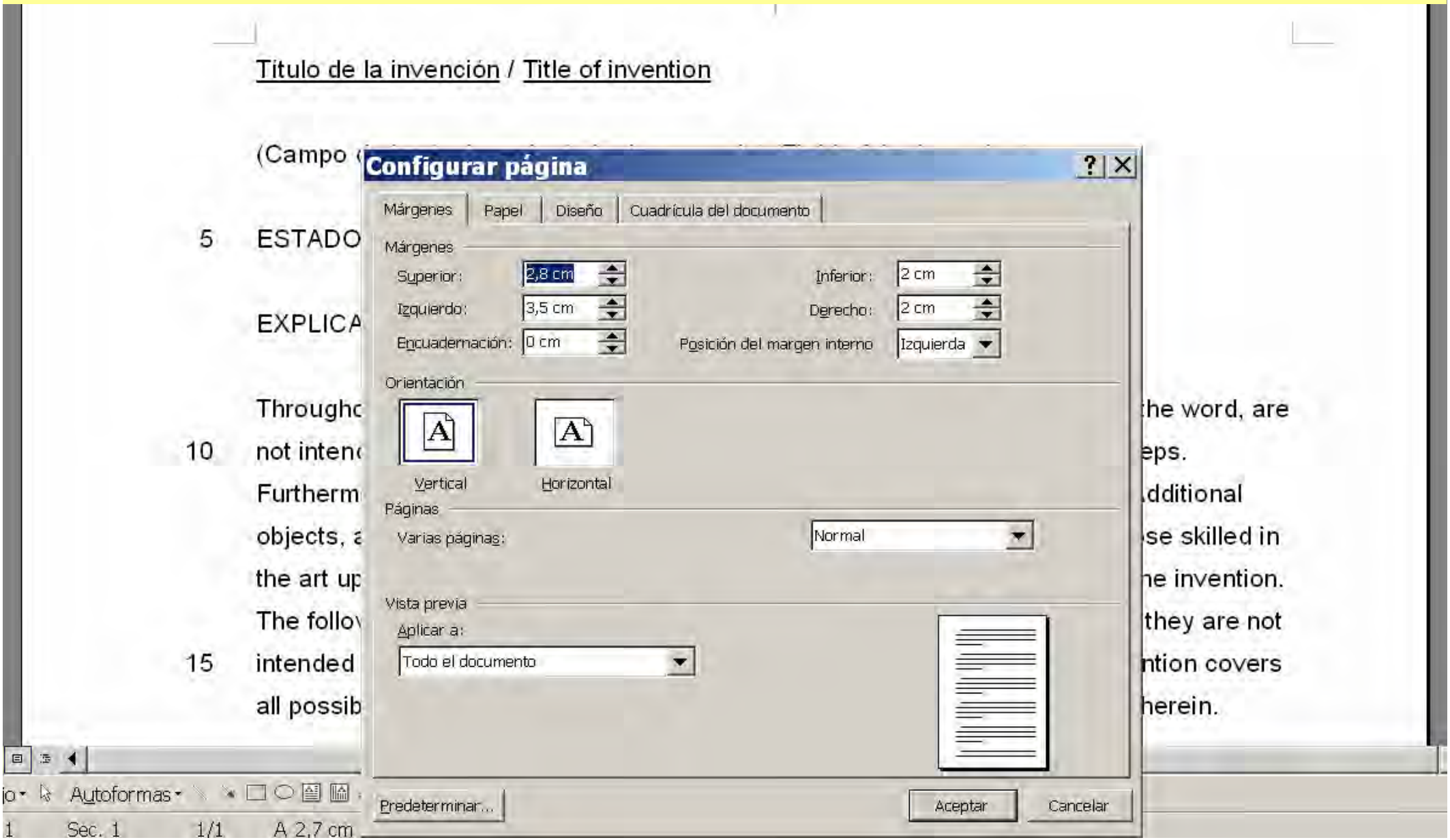
(c) On **sheets containing drawings**, the surface usable shall not exceed 26.2 cm x 17.0 cm. The sheets shall not contain frames around the usable or used surface. The **minimum margins** shall be as follows:

- top: 2.5 cm
- left side: 2.5 cm
- right side: 1.5 cm
- bottom: 1 cm.

...

(e) Subject to paragraph (f) and to Rule 11.8(b), **the margins** of the international application, when submitted, **must be completely blank.**

When using line numbering, to get a left margin of 2,5 cm and a top margin of 2,0 cm, "left margin" and "top margin" should be set at 3,5 and 3,0 cm in Word, as ca. 1 cm is used by line and page numbering



CUESTIÓN 10.4

REQUISITOS MATERIALES

¿Numerar las páginas arriba o abajo?

37 CFR [2015-10] § 1.52. ... paper, writing, margins

(a) (1) All papers, other than drawings, that are submitted on paper or by facsimile transmission, and are to become a part of the permanent USPTO records..., **must be on sheets of paper that are the same size**, not permanently bound together, and:

(ii) Either 21.0 cm by 29.7 cm (DIN size A4) or 21.6 cm by 27.9 cm (8 1/2 by 11 inches), with each sheet including a **top margin of at least 2.0 cm** (3/4 inch), a **left side margin of at least 2.5 cm** (1 inch), a **right side margin of at least 2.0 cm** (3/4 inch), and a **bottom margin of at least 2.0 cm** (3/4 inch);

(b) (2) The specification (including the abstract and claims)...must have:

(ii) Text written in a nonscript type font (*e.g.,* Arial, Times Roman, or Courier, preferably a font size of 12) lettering style having capital letters which should be at least 0.3175 cm. (0.125 inch) high, but may be no smaller than 0.21 cm. (0.08 inch) high... **[Arial 11 is recommended: it is slightly smaller than 0.32 cm, but not smaller than 0.21 cm; it is accepted in the PCT and the EPO. Obliged in OEPM]**

(b) (5) ...**the pages** of the specification including claims and abstract must be numbered consecutively, starting with 1, the **numbers being centrally located above or preferably, below, the text. [both above and below are accepted by PCT and US; above is recommended as it is obliged by Rule 49(6) EPC]**

11.4. *Separate Sheets, Etc.*

(a) **Each element (request, description, claims, drawings, abstract) of the international application shall commence on a new sheet...**

11.5. *Size of Sheets*

The size of the **sheets shall be A4 (29.7 cm x 21 cm) [recommended, as it is so in EPO and US]** However, any receiving Office may accept international applications on sheets of **other sizes** provided that **the record copy**, as transmitted to the IB, and, **if the competent ISA so desires, the search copy, shall be of A4 size.**

11.7. *Numbering of Sheets*

(a) All the sheets contained in the international application shall be **numbered in consecutive Arabic numerals.**

(b) The **numbers shall be centered at the top [recom. as it is obliged by Rule 49(6) EPC] or bottom of the sheet, but shall not be placed in the margin.**

11.8. *Numbering of Lines*

(a) It is strongly recommended to number **every fifth line** of each sheet of the **description**, and of each sheet of **claims**.

(b) The numbers should appear **in the right half of the left margin**.

CUESTIÓN 10.5

REQUISITOS MATERIALES

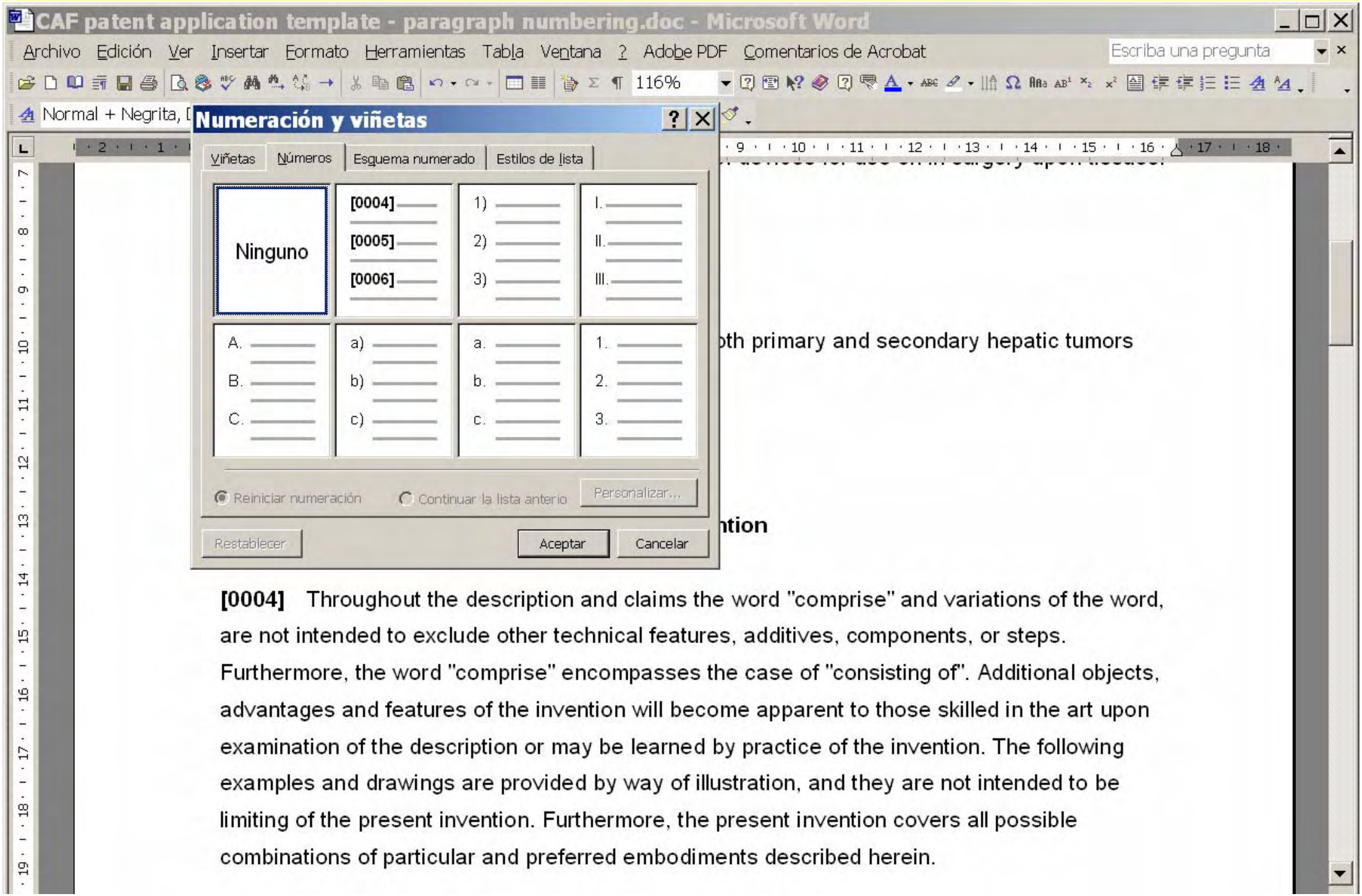
¿Numerar las líneas (cada cinco) o numerar los párrafos?

37 CFR [2015-10] § 1.52. ... paper, writing, margins

(b) (6) Other than in a reissue application or reexamination or supplemental examination proceeding, **the paragraphs of the specification, other than in the claims or abstract, may be numbered at the time the application is filed**, and should be individually and consecutively numbered using Arabic numerals, so as to unambiguously identify each paragraph. **The number should consist of at least four numerals enclosed in square brackets,including leading zeros (*e.g.,* [0001])**. The numbers and enclosing brackets should appear to the right of the left margin as the first item in each paragraph, before the first word of the paragraph, and should be highlighted in bold. A gap, equivalent to approximately four spaces, should follow the number. Nontext elements (*e.g.,* tables,mathematical or chemical formulae, chemical structures, and sequence data) are considered part of the numbered paragraph around or above the elements, and should not be independently numbered. If a nontext element extends to the left margin, it should not be numbered as a separate and independent paragraph. A list is also treated as part of the paragraph around or above the list, and should not be independently numbered. Paragraph or section headers (titles), whether abutting the left margin or centered on the page, are not considered paragraphs and should not be numbered.

[In US paragraph numbering is recommended -compatible with CAF- but line numbering is still accepted by USPTO]

Paragraph numbering is standard (and saves aprox. 1 cm of text)



fiveIPoffices

European Patent Office /// Japan Patent Office /// Korean Intellectual Property Office /// State Intellectual Property Office of the People's Republic of China /// United States Patent and Trademark Office

Annex I

Common Requirements for All Types of Documents

Ver.2.0

Prepared by the Five IP Offices

h. Numbering of Paragraphs

The paragraphs of the description shall be numbered consecutively using Arabic numerals. The title of the invention and section titles (such as "Summary of Invention" and "Example 1") shall not be numbered.

j. Formulae

In English, each of the images shall be preceded by a sign that shows that it is a mathematical ("Math.") or chemical formula ("Chem."), space, and with an Arabic numeral that designates the mathematical or chemical formula. (e.g., Math. 1, Math. 2, Chem. 1, Chem. 2) In a language other than English, the format shall be determined in line with the purpose of this rule, based on the characteristic of the language.

Common Application Format (CAF)

l. Claims

In English, each of the claims shall be preceded by a sign that shows that it is a claim ("Claim"), space, and with an Arabic numeral that designates the claim. (e.g., Claim 1, Claim 2) In a language other than English, the format shall be determined in line with the purpose of this rule, based on the characteristic of the language.

11.4. *Separate Sheets, Etc.*

(a) **Each element (request, description, claims, drawings, abstract) of the international application shall commence on a new sheet...**

11.5. *Size of Sheets*

The size of the **sheets shall be A4 (29.7 cm x 21 cm) [recommended, as it is so in EPO and US]** However, any receiving Office may accept international applications on sheets of **other sizes** provided that **the record copy**, as transmitted to the IB, and, **if the competent ISA so desires, the search copy, shall be of A4 size.**

11.7. *Numbering of Sheets*

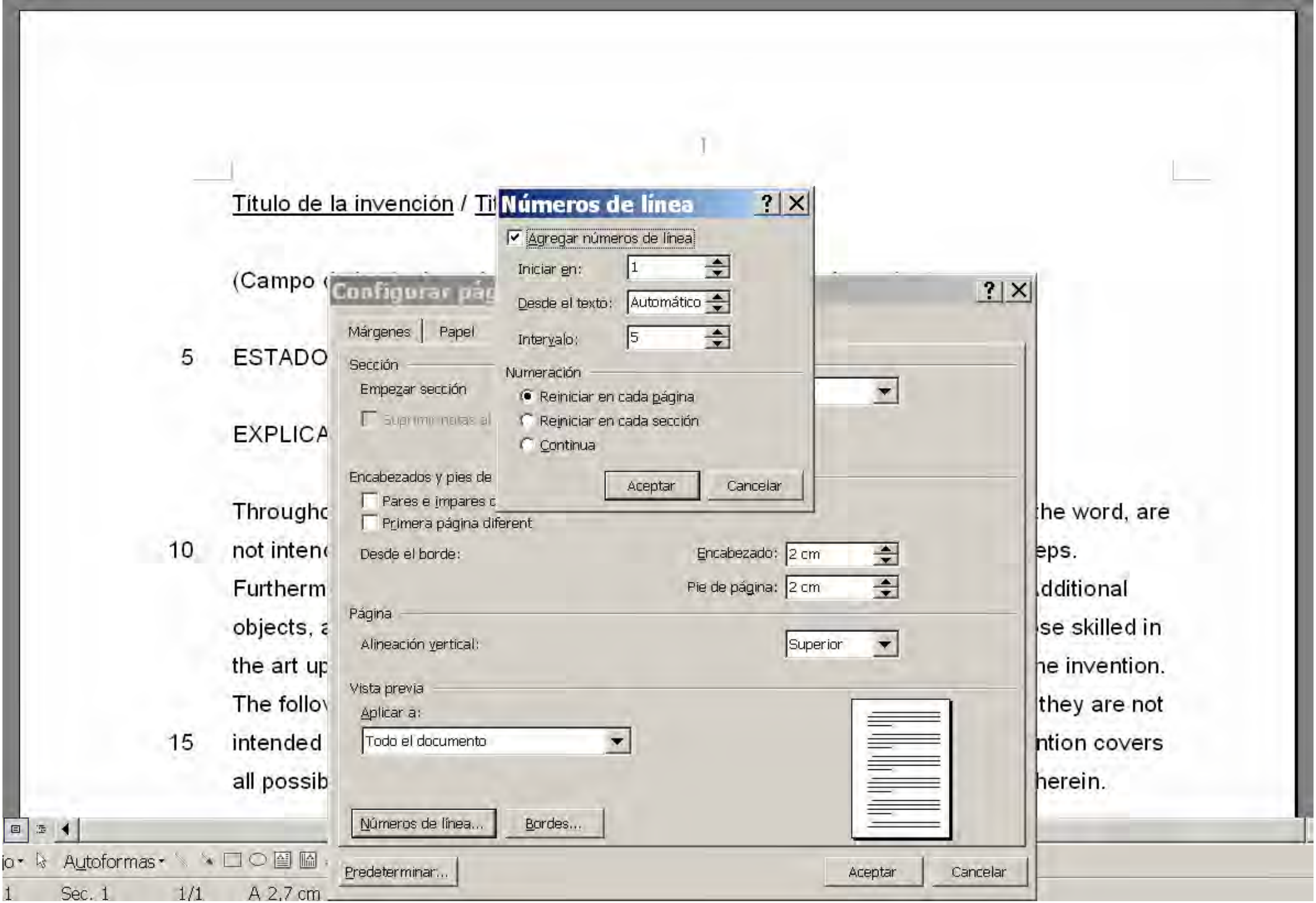
(a) All the sheets contained in the international application shall be **numbered in consecutive Arabic numerals.**

(b) The **numbers shall be centered at the top [recommended, obliged in the EPO] or bottom of the sheet, but shall not be placed in the margin.**

11.8. *Numbering of Lines*

(a) It is strongly recommended to number **every fifth line** of each sheet of the **description**, and of each sheet of **claims**.

(b) The numbers should appear **in the right half of the left margin**.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Iniciar en: 1
Desde el texto: Automático
Intervalo: 5
Numeración
Reiniciar en cada página
Reiniciar en cada sección
Continua
Aceptar
Cancelar
Márgenes
Papel
Sección
Empezar sección
Encabezados y pies de
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Primera página diferent
Desde el borde:
Encabezado: 2 cm
Pie de página: 2 cm
Página
Alineación vertical: Superior
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Aplicar a:
Todo el documento
Números de línea...
Bordes...
Predeterminar...
Aceptar
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CUESTIÓN 10.6

REQUISITOS MATERIALES

En las reivs. ¿conviene usar viñetas, indentaciones o renumeración automática?

Cuestiones prácticas para rellenar la plantilla

- **La plantilla debe tener un formato muy simple, i.e.: sin viñetas, sin espacio adicional entre párrafos, sin caracteres especiales, sin indentaciones, ... SÓLO CON TEXTO SIMPLE**.

- La plantilla se convierte en el **borrador del archivo de la solicitud**, a base de escribir en ella, o de copiar en ella textos provenientes de otras fuentes, en particular la parte experimental de los inventores.

- Dialogar y recibir instrucciones e información a través de **un único inventor de contacto** (que él hable con los demás, si es necesario).

- **Incorporar los diferentes textos** al archivo de borrador de la solicitud, **aplicándoles previamente su formato** (a mano o con el "copiador de formato" del Word), para que no haya "contaminación de formatos".

- Copiar las fórmulas químicas o matemáticas en "cuadros de texto", para que no se mezclen con el texto.

- **No permitir que un inventor revise o "corrija" el borrador del archivo de la solicitud: enviárselo en PDF y que agregue comentarios** o que señale las modificaciones que quiera hacer en un archivo de texto aparte.

Las viñetas y numeraciones automáticas son caras

CLAIMS — **AUTOMATIC NUMBERING OF WORD**

1) A [preamble] comprising: — **(not recommended)**

a) a first element..., comprising:

i) an element A1 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxxx xxxx xxxx xxxx xxxxx; and

ii) an element A2 xxxxx xxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxxxxx;

CLAIMS — **MANUAL NUMBERING WITHOUT INDENTATIONS**

1. A [preamble] comprising:

a) a first element..., comprising:

i) an element A1 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxxx xxxx xxx xxxx xxxxx; and

ii) an element A2 xxxxx xxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxxxxxx;

Mejor hacer pequeñas indentaciones (2-3 caracteres)

CLAIMS **US-STYLE INDENTATIONS** (WITHOUT NUMBERING)

1. A [preamble] comprising: **(only 2 or 3 spaces)**
  a first element..., comprising:
    an element A1 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxxx xxxxxxxxxxx
      xxxx xxxx xxxxx; and
    an element A2 xxxxx xxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxxxxxxx
      xxxxx xxxxx xxxxx xxxxx xxxxxxxx;

CLAIMS **INDENTATIONS WITH NUMBERING**

1) A [preamble] comprising:
  a) a first element..., comprising:
    i) an element A1 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxxx xxxxxxxxx
    xxxx xxxx xxxxx; and
    ii) an element A2 xxxxx xxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxxxxx
    xxxxxxxxxx xxxxx xxxxx xxxxx xxxxx xxxxxxxx;

[US MPEP] 608.01(m) Form of Claims

Each claim begins with a capital letter and ends with a period. **Periods may not be used elsewhere in the claims except for abbreviations**. See *Fressola v*. *Manbeck,* 36 USPQ2d 1211 (D.D.C. 1995). Where a claim sets forth a plurality of elements or steps, **each element or step of the claim should be separated by a line indentation...**

There may be plural indentations to further segregate subcombinations or related steps. In general, the printed patent copies will follow the format used but printing difficulties or expense may prevent the duplication of unduly complex claim formats.

Reference characters corresponding to elements recited in the detailed description and the drawings may be used in conjunction with the recitation of the same element or group of elements in the claims. The reference characters, however, should be **enclosed within parentheses** so as to avoid confusion with other numbers or characters which may appear in the claims. **The use of reference characters is to be considered as having no effect on the scope of the claims.**

We claim:

1. A computerized combination lock assembly for a secured enclosure, comprising:

input means operable in accordance with a manually entered code sequence;

means for providing code sequence signals in response to manual operation of said manual input means;

a memory for storing data signals representing a predetermined code sequence;

a computer for comparing said code sequence signals with data signals stored in said memory;

operating means responsive to said computer for enabling opening of said secured enclosure when said code sequence signals correspond to said predetermined code sequence;

means for sensing a rate at which a code sequence is entered through said manual input means; and

means including said computer for inhibiting said operating means when the rate sensed by said sensing means exceeds a predetermined rate corre-

United States Patent [19]
Miller et al.

[11] Patent Number: 5,061,923
[45] Date of Patent: Oct. 29, 1991

[54] COMPUTERIZED COMBINATION LOCK

A2533340 9/1982 France .
A2175638 12/1986 United Kingdom .

It is recommended to add a small indentation to non-indented PCT claims when entering the US phase

3. Drafting tools

The EPO provides its applicants free of charge with an add-on to Microsoft Word called PatXML, which configures Word with the page settings meeting the requirements of the EPC, provides the CAF document structure, generates an XML stream according to WIPO standard ST.36 and can generate a PDF version of the application.

- Improving online services
- Find a professional representative
- **Online filing**
  - Features & benefits
  - What you need to use Online Filing
  - Download software for filing with the EPO
  - **Download auxiliary software**
  - **PatXML**
  - FAQ
  - Common application format
  - Sequence submission tools
  - Download documentation
  - Online Filing in national offices
  - PMS interface
  - Open source
  - FAQ
- New online filing (CMS)
- Web-form filing
- My Files

PatXML

PatXML software helps you draft your patent documents in Microsoft Word by creating a template with built-in EPC rules. Documents can then be printed and filed in paper form, or converted to PDF with a button or saved as XML (eXtensible Markup Language) to allow you to take advantage of reduced online filing fees, thus giving you a choice of filing formats.

Download

- PatXML software (MSI, 20 MB)
- PatXML user manual (PDF, 0.6 MB)
- Quick Reference Guide for PatXML (PDF, 1.2 MB)
- Quick training guide (ZIP, 1.1 MB)
- Brochure (PDF, 0.4 MB)
- Integration of Online Filing into existing patent management systems - XML documentation for developers (PDF, 1.5 MB)

Software requirements

Microsoft Word 2000, 2002, 2003, 2007 or 2010

Features

With PatXML you can

- draft the first outline of your patent documents (description, claims, abstract and drawings), as well as further outline as suggested, for example, by Rule 42 EPC2000 or PCT
- draft patent documents in XML without prior knowledge
- import existing patent documents in Microsoft Word and save in XML
- use standardised citation formats in line with WIPO standards
- use standardised section headings compliant with WIPO requirements
- carry out document content management easily
- verify references via a link to the Espacenet database from inserted patent citations

Claims

1. A monopolar electrosurgical instrument (1) for tissue coagulation and cut comprising a cylindrical metallic electrode which is connected to one pole of a radio frequency generator (14) on one extreme; said electrode comprising a liquid supply for cooling, a handle (7) that covers part of the electrode, a part (6) covered with an insulative material, and a coagulating and cutting uninsulated tip; said tip comprising a round ending part (2), a part (3) attached to a cutting metal blade (5) near the end, and a part (4) non-attached to a cutting metal blade.
2. The instrument according to claim 1, wherein the radio frequency generator produces an unmodulated current.
3. The instrument according to any of the claims 1-2, wherein the tissue is a parenchyma (11).

Automatic renumbering is dangerous when there are multiple dependencies and/or multiple definition references!

CUESTIÓN 11

LA DESCRIPCIÓN

¿Cómo organizar y redactar la descripción?

PCT Rule 5. The Description *[Descripción]*

5.1. *Manner of the Description* [cf. EPC Rule 42]

(a) The description shall first state the **title of the invention as appearing in the request *[petitorio]*** and shall:

(i) specify the **technical field** to which the invention relates;

(ii) **indicate *[indicar]* the background art** which, as far as known to the applicant, can be regarded as useful for the understanding, searching and examination of the invention, **and, preferably, cite the documents reflecting such art**;

(iii) **disclose *[divulgar]* the invention, as claimed,** in such terms that **the technical problem (even if not expressly stated as such) and its solution can be understood**, and **state the advantageous effects, if any, of the invention with reference to the background art;**

(iv) **briefly describe *[describir]* the figures in the drawings**, if any;

(v) **set forth *[indicar]* at least the best mode contemplated by the applicant for carrying out the invention claimed**; this shall be done **in terms of examples, where appropriate, and with reference to the drawings, if any**; where the national law of the designated State does not require the description of the best mode but is satisfied with the description of any mode (whether it is the best contemplated or not), failure to describe the best mode contemplated shall have no effect in that State; (cont.)

PCT Rule 5. The Description (cont.)

(vi) indicate explicitly, **when it is not obvious from the description or nature of the invention, the way in which the invention is capable of exploitation in industry** and the way in which it can be made and used, or, if it can only be used, the way in which it can be used; the term "industry" is to be understood in its broadest sense as in the Paris Convention for the Protection of Industrial Property.

(b) **The manner and order specified in paragraph (a) shall be followed except when**, because of the nature of the invention, a different manner or a different order would result in a better understanding and a more economic presentation.

(c) Subject to the provisions of paragraph (b), **each of the parts referred to in paragraph (a) shall preferably be preceded by an appropriate heading as suggested in the Administrative Instructions (PCT Adm. Ins.)**.

Plantilla de solicitud de patente adaptada al CAF
CAF-adapted patent application template (1)

1

Descripción / Description (nueva página)

Título / Title

Campo de la técnica / Technical Field

Estado de la técnica / Background Art

Explicación de la invención / Summary of Invention

(Breve descripción de los dibujos / Brief Description of Drawings)

(FIG. 1 shows/muestra ....; FIG. 2 ...)

Descripción de realizaciones / Description of Embodiments

Ejemplos / Examples

Lista de signos de referencia / Reference Signs List

Referencia a material biológico depositado / Reference to Deposited Biological Material

(Texto libre del listado de secuencias / Sequence Listing Free Text)

Lista de citas / Citation List

Literatura de patentes / Patent Literature

Literatura no-patente / Non Patent Literature

Reivindicaciones / Claims (nueva página)

Claim 1. XXXX

Resumen / Abstract (nueva página)

(Dibujos / Drawings) (en archivo aparte, numerado 1/3, 2/3, 3/3)

(Listado de secuencias / Sequence Listing) (archivo de texto con BISSAP o PatenIn)

Plantilla de solicitud de patente adaptada al CAF
CAF-adapted patent application template (2)

IDENTIFICATION OF ELEMENTS

Each image must be preceded by a sign showing that it is a matematical ("Math.") or chemical ("Chem.")

Math. 1

Chem. 1

Each claim must be preceded by "Claim", a space, and an Arabic numeral, e.g.:

Claim 1.

Configurar la página en Word como sigue (en cm):

Fuente: Arial 11

Márgenes: Izquierdo 3,5. Superior 2,8. Inferior 2,0. Derecho 2,0.

Encabezado 2,0. Pie de página 2,0. Interlineado: 18 pt.

Cuestiones prácticas para rellenar la plantilla

- **La plantilla debe tener un formato muy simple, i.e.: sin viñetas, sin espacio adicional entre párrafos, sin caracteres especiales, sin indentaciones, ... SÓLO CON TEXTO SIMPLE**.

- La plantilla se convierte en el **borrador del archivo de la solicitud**, a base de escribir en ella, o de copiar en ella textos provenientes de otras fuentes, en particular la parte experimental de los inventores.

- Dialogar y recibir instrucciones e información a través de **un único inventor de contacto** (que él hable con los demás, si es necesario).

- **Incorporar los diferentes textos** al archivo de borrador de la solicitud, **aplicándoles previamente su formato** (a mano o con el "copiador de formato" del Word), para que no haya "contaminación de formatos".

- Copiar las fórmulas químicas o matemáticas en "cuadros de texto", para que no se mezclen con el texto.

- **No permitir que un inventor revise o "corrija" el borrador del archivo de la solicitud: enviárselo en PDF y que agregue comentarios** o que señale las modificaciones que quiera hacer en un archivo de texto aparte.

CUESTIÓN 11.1

LA DESCRIPCIÓN

¿Hasta qué punto conviene adoptar el *Common Application Format (CAF)*, ya aceptado por las *IP5 Offices* y el PCT?

Common Application Format

Espacenet - Home page | Common Applicat

www.fiveipoffices.org/activities/globaldossier/CAF.html

Buscar

Banner: Working together towards a sustainable patent system

fiveIPoffices

European Patent Office / Japan Patent Office / Korean Intellectual Property Office / State Intellectual Property Office of the People's Republic of China / United States Patent and Trademark Office

Common Application Format (CAF)

The Common Application Format is designed to standardise the style of descriptions, claims, abstract and drawings (name of each item or order of items) that are different at each office. The Common Application Format will reduce the burden of applicants to re-draft specifications in accordance with each country's original format. In addition, the Common Application Format enables examiners to understand the specifications of other countries more easily.

At the IP5 Deputy Heads meeting 15-16 May 2012 in Munich, the IP5 Deputy Heads endorsed the new CAF Definition V2.0, including the required definitions for both KIPO and SIPO to accept CAF filings. The new CAF Definition V2.0 is also more generically designed to also support CAF filings at other non-IP5 Offices.

- Download the CAF Definition v2.0 (PDF, 58 KB)

The Common Application Format is described in Annex I.

- Download the CAF Definition v2.0 Annex I (PDF, 250 KB)

The comparative table of examples for each type of the applications is shown in Annex II.

- Download the CAF Definition v2.0 Annex II (PDF, 138 KB)

Common Application Format

In addition to the standard format requirements of the PCT, applicants may also prepare applications in accordance with the Common Application Format (CAF) developed by the Trilateral Offices – the European Patent Office (EPO), the Japan Patent Office (JPO) and the United States Patent and Trademark Office (USPTO).

The Common Application Format streamlines and simplifies direct filings in the Trilateral Offices since applications prepared in accordance with the CAF will not be subject to any additional formality requirements before being processed by the Trilateral Offices.

The CAF is fully compliant with the PCT and provides an additional filing option for applicants.

Additional information on the CAF may be obtained from the Trilateral Cooperation website.

Shortcuts

An example of a PCT application formatted according to the CAF

Direct filing of PCT applications with the International Bureau as PCT receiving Office (RO/IB)

Common Application Format, CAF

2. What is CAF?

Essentially CAF provides a common structure for patent applications. An application which complies with the common application format will be accepted without amendment as a national/regional application by any of the trilateral offices as far as the agreed formal requirements are concerned. Each trilateral office may lay down requirements which are more favourable for applicants than those of the common application format.

- **Section titles and order in the description**

  The order and wording in the description must be as follows:

  - **Description**
    - **Title of Invention** or **Title**
    - **Technical Field** or **Field**
    - **Background Art** or **Background**
    - **Summary of Invention** or **Summary**
      - Technical Problem
      - Solution to Problem
      - Advantageous Effects of Invention
    - **(Brief Description of Drawings)**
    - **Description of Embodiments**
      - Examples
    - Industrial Applicability
    - Reference Signs List
    - Reference to Deposited Biological Material
    - **(Sequence Listing Free Text)**
    - Citation List
      - Patent Literature
      - Non Patent Literature
- **Section Titles for the rest of the Application**
  - **Claims**
  - **Abstract**
  - **(Drawings)**
  - **(Sequence Listing)**

(virtually) universally acceptable!

Notes:

- *Section titles shown above in bold and without parentheses must be included in the application.*
- *Section titles shown above in bold and with parentheses must be included in the application when the latter contains a corresponding reference.*
- *The placing of the citation list is unimportant as long as it is in the description. When European patent applications are filed in a non-official language under EPC 2000, a citation list forming part of the description must be translated into one of the official languages of the EPO.*
- *The brief description of each figure in "Brief Description of Drawings" must be preceded by a heading that identifies the figure (e.g. Fig. 1, Fig. 2).*

- **Identification of elements**
  - Each image must be preceded by a sign showing that it is a mathematical ("Math.") or chemical ("Chem.") formula, a space, and an Arabic numeral designating the mathematical or chemical formula (e.g. Math. 1, Math. 2, Chem. 1, Chem. 2).
  - Each table must be preceded by a sign showing that it is a table ("Table"), a space, and an Arabic numeral designating the table (e.g. Table 1, Table 2).
  - Each claim must be preceded by a sign showing that it is a claim ("Claim"), a space, and an Arabic numeral designating the claim (e.g. Claim 1, Claim 2).

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European Patent Office /// Japan Patent Office /// Korean Intellectual Property Office /// State Intellectual Property Office of the People's Republic of China /// United States Patent and Trademark Office

Annex I

Common Requirements for All Types of Documents

Ver.2.0

Prepared by the Five IP Offices

h. Numbering of Paragraphs

The paragraphs of the description shall be numbered consecutively using Arabic numerals. The title of the invention and section titles (such as "Summary of Invention" and "Example 1") shall not be numbered.

j. Formulae

In English, each of the images shall be preceded by a sign that shows that it is a mathematical ("Math.") or chemical formula ("Chem."), space, and with an Arabic numeral that designates the mathematical or chemical formula. (e.g., Math. 1, Math. 2, Chem. 1, Chem. 2) In a language other than English, the format shall be determined in line with the purpose of this rule, based on the characteristic of the language.

l. Claims

In English, each of the claims shall be preceded by a sign that shows that it is a claim ("Claim"), space, and with an Arabic numeral that designates the claim. (e.g., Claim 1, Claim 2) In a language other than English, the format shall be determined in line with the purpose of this rule, based on the characteristic of the language.

PCT Rule 6. The Claims

6.1. *Number and Numbering of Claims*

(a)The **number of the claims shall be reasonable** in consideration of the nature of the invention claimed. **[as many as necessary, because no claim fee is paid]**

(b) If there are several claims, they shall be **numbered consecutively in Arabic numerals.**

(c) The **method of numbering** in the case of the amendment of claims shall be governed by the Administrative Instructions (PCT Adm. Ins.).

PCT Adm. Ins. Sec. 204bis. Numbering of Claims

The number of each claim referred to in Rule 6.1(b) shall **preferably be preceded by the expression "Claim"** (for example, "Claim 1", "Claim 2", "Claim 3").

Note: This numbering method is part of the Common Application Format (CAF)

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最終頁に続く

(54)【発明の名称】励磁機と、送電系統に接続されない電力変換器とを有する可変速風力タービンのための電圧低下対応ライドスルーシステム

【請求項１】 [Claim 1]

可変速風力タービンを動作させるための方法であって：

動力伝達系を回転させるためのローターを用いて風力エネルギーを機械的動力に変換する工程と；

前記動力伝達系に結合される二次励磁形誘導発電機（ＤＦＩＧ）を利用して前記機械的動力を電力に変換する工程と；

前記動力伝達系に結合された励磁機および送電系統から絶縁された電力変換システムを使用して、ＤＦＩＧのローターが発生する電力を受け取り、またはＤＦＩＧの前記ローターが要求する電力を提供する工程と；

前記送電系統内で発生した電圧低下に応じて、前記電力変換システムおよび前記励磁機を通じて、前記ＤＦＩＧの前記ローターと前記動力伝達系との間で電気エネルギーを転送する工程とを備える；

方法。

【請求項２】

送電系統接続要件を満たす所望のステータ電流を発生するためローター電流を調整する工程をさらに含む、

請求項１の方法。

.....

【請求項１５】

直流（ＤＣ）電源を生成する前記励磁機に結合される交流／直流（ＡＣ／ＤＣ）変換器と、

交流（ＡＣ）補助電源を生成するＤＣ電源に接続される直流／交流（ＤＣ／ＡＣ）変換器とをさらに備える、

請求項１２の可変速風力タービン。

【発明の詳細な説明】

Claims at the beginning, with "Claim #. "

CUESTIÓN 11.2

LA DESCRIPCIÓN

¿Qué *section headings* deben usarse?

Common Application Format, CAF

- **Section titles and order in the description**
  The order and wording in the description must be as follows:
  - **Description**
    - **Title of Invention** or **Title**
    - **Technical Field** or **Field**
    - **Background Art** or **Background**
    - **Summary of Invention** or **Summary**
      - Technical Problem
      - Solution to Problem
      - Advantageous Effects of Invention
    - **(Brief Description of Drawings)**
    - **Description of Embodiments**
      - Examples
    - Industrial Applicability
    - Reference Signs List
    - Reference to Deposited Biological Material
    - **(Sequence Listing Free Text)**
    - Citation List
      - Patent Literature
      - Non Patent Literature
- **Section Titles for the rest of the Application**
  - **Claims**
  - **Abstract**
  - **(Drawings)**
  - **(Sequence Listing)**

Preferable section headings in US applications

It is preferable to use all of the section headings described below to represent the parts of the specification. **Section headings should use upper case text without underlining or bold type**. It is **desirable [not compulsory yet]** to include an indentation at the beginning of each new paragraph and for **paragraphs to be numbered** (e.g., [0001], [0002], etc.).

TITLE OF INVENTION

CROSS-REFERENCE TO RELATED APPLICATIONS

BACKGROUND OF THE INVENTION

BRIEF SUMMARY OF THE INVENTION

[BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING]

DETAILED DESCRIPTION OF THE INVENTION

CLAIM OR CLAIMS

ABSTRACT OF THE DISCLOSURE

[DRAWINGS]

[SEQUENCE LISTING]

[cf. **USPTO Nonprovisional (Utility) Patent Application Filing Guide** (Jan 2014) - http://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applications/nonprovisional-utility-patent]

Comparison between a full paper and a patent document

A typical scientific paper

- **TITLE** (long and very descriptive)

- **INTRODUCTION/BACKGROUND** with many citations to papers (bibliographic review)

- **RESULTS**, describing what has been found, with tables and figures (present & past tenses)

- **DISCUSSION,** justifying the results by theories, modeling, reasoning, etc., distinguishing between what is real (present) and what is possible (conditional); comparison with other studies; perspectives (future), etc.

- **EXPERIMENTAL PART** (Materials & Methods; Examples): What has been really done (past), with full detail to be reproducible.

- **REFERENCE LIST**

- **ACKNOWLEDGEMENTS**

- **ADDITIONAL MATERIAL**

A patent document

- **TITLE OF INVENTION** (little descriptive)

-**TECHNICAL FIELD** (short intro.)

- **BACKGROUND ART: problem** (if already known); **closest prior art** (usually few citations to patents) and its limitations

- **SUMMARY OF INVENTION:** extrapolation (present) of particular embodiments, providing support to independent claims; **problem & solution**; industrial application; advantages.

- **BRIEF DESCRIPTION OF DRAWINGS**

- **DESCRIPTION OF EMBODIMENTS / EXAMPLES:** dependent claims; what has been really done (past) and/or *paper examples* (present); explanation of FIGs, if any.

- **CLAIMS**: defining the subject-matter (entities or activities) whose protection is sought.

- **DRAWINGS** (FIG 1, ..)
- **SEQUENCE LISTING**

ABSTRACT (limited to 150 words in patents)

CUESTIÓN 11.3

LA DESCRIPCIÓN

¿Cuándo y cómo usar acrónimos?

Clarity and conciseness of description and claims

Art. 83 EPC: Disclosure [*revelación o divulgación, no descripción*] of the invention

"The EP **application shall disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art**."

Art. 84 EPC (Art. 27 LP): Claims

"The claims shall define the matter for which protection is sought. They **shall be clear and concise** and be supported by the description."

Art. 36. LP2015. Emisión del IET y de la opinión escrita

"3. Cuando la **falta de claridad o coherencia de la descripción o de las reivindicaciones impida proceder en todo o en parte a la elaboración del IET, la OEPM** ... notificará ... realizará una búsqueda parcial. Si ello no fuere posible, se **denegará la solicitud** mediante resolución motivada, y así se le notificará."

La falta de claridad en las reivindicaciones no es causa de oposición/nulidad, aunque sí lo es la falta de claridad en la descripción (Art. 83 EPC).

Art. 35 USC 112 (2)

"The specification shall conclude with one or more claims particularly **pointing out and distinctly** (*claramente*) **claiming** the subject matter which the applicant regards as his invention.

Uso de acrónimos en aras de la claridad y concisión

Usar acrónimos en la descripción cuando un término/expresión aparezca repetidamente, excepto con los muy bien establecidos (p.ej. DNA/ADN, NMR/RMN), **definir los acrónimos la primera vez que aparecen, y usarlos después libremente**.

Al traducir del inglés al español, si en español se suele utilizar el término del acrónimo en inglés, traducir su significado pero seguir usando el acrónimo en inglés (¡no inventarse acrónimos en español que nadie use!) P. ej.: calorimetría diferencial de barrido (DSC, *differential scanning calorimetry*); multiplexión por división ortogonal de frecuencia (OFDM, *orthogonal frequency division multiplexing*).

Repetir la definición del acrónimo la primera vez que aparece en las reivindicaciones, las cuales han de poderse interpretar sin tener que mirar la descripción, e incluso pueden publicarse separadamente (p.ej. T1 en ES).

CUESTIÓN 11.4

LA DESCRIPCIÓN

¿Qué tipo de lenguaje conviene usar?
¿Seguimos poniendo *"said"*, o simplemente *"the"* ?

"On the unfortunate choice of language adopted by some patent agents"

"Accuracy is essential, but **not high-sounding pomposity**.

No doubt there are those who feel that their first duty to their client is to **alter the wording** he has used to describe his invention, and that once they have altered the client's clear but specific description **into a vague and ambiguous but high sounding jargon their fee is earned.**

It is **as if they purposely use obscure language in order to make the specification a mystery unintelligible to the uninitiated**. They are those who cannot bear to call a spade a spade.

Most people are familiar with plain English, so **let us use plain English wherever plain English will do the job.**

The word "said", meaning "the", and others ("thereto" instead of "to it"; "therefrom" instead of "from it"...) make a sentence more cumbersome than it otherwise might be.

Some specifications seem to be drafted with the **object of keeping the reader as much as possible in the dark** as to what it is all about.

Disclosure is measured by facts and not by folios."

Cf.: **E.W.E. Micklethwaite, "Brushing up our drafting", 1945-6**.
Reprinted in: *The CIPA Journal,* 2003, pp. 320-324 & 379-386. (cited in P.W. Grubb et al., "Patents for Chemicals, Pharmaceuticals, and Biotechnology", 6th ed., Oxford University Press, 2016, p. 369

folios = $, €

When drafting claims and description, one should keep it short & simple ('The KISS style')

- **Write clearly and effectively** (only one idea per sentence is recommended)

- Use short sentences (in active or passive), and avoid twisting (do not alter the natural order of sentence parts). Compare e.g.:

- *"This device has proved capable of effecting savings of fifty percent of the time required at the present time" (19 words).*
- *"This device can save half the time now needed" (9 words).*

- **Avoid the uncertainties associated to relative pronouns whose antecedent are ambiguous.** It is better to write a full stop or a semicolon, and to repeat the subject.

- **The Golden Rule: One element - one term/phrase - one number.** For a given element only one term/phrase (and one number in figures, if any) should be used in the whole document. And vice versa: a given term or expression should only be used for only one element. **In case an element can be named with several synonyms, these should be mentioned together the first time they appear, but only one should be chosen to be used afterwards.**

Avoid long-winded redundant expressions

1. An optoelectronic modulable light emitting **device**, comprising
a dielectric (1) with embedded nanocrystals (2); characterized in that the optoelectronic modulable light emitting **device** further comprises:
first charge injection means (3) to inject charges into the dielectric (1) in such a way these first charge injection means (3) are able to inject charges comprising ... ;
second charge injection means (4), different from the first charge injection means (3), wherein these second charge injection means (4) are able to ... , and wherein these second charge injection means (4) are able to..;

A preferred drafting:

1. An optoelectronic modulable light emitting **device**, comprising:
(i) **a dielectric (1)** with embedded nanocrystals (2);
(ii) **first charge injection means (3)** that are able to inject charges into the dielectric (1), the charges comprising ... ;
(iii) **second charge injection means (4)** that are to ..., and they are able to ..;

CUESTIÓN 12

LOS DIBUJOS

¿Cuándo conviene añadir dibujos, y con qué tipo de referencias (números arábigos, letras ...)?

Art. 7 PCT. The Drawings

(1) Subject to the provisions of paragraph (2)(ii), **drawings shall be required when they are necessary for the understanding of the invention**.

(2) **Where, without being necessary** for the understanding of the invention, the nature of the invention admits of illustration by drawings:

(i) the applicant may include such drawings in the international application when filed,

(ii) any designated Office may require that the applicant file such drawings with it within the prescribed time limit.

EPC Article 69(1): Extent of protection [Art. 60.1 LP]

The **extent [scope] of the protection** conferred by a European patent or a European patent application **shall be determined by the claims**. Nevertheless, the description and drawings shall be used to interpret the claims.

Drafting specific descriptions in electromechanics

- This is the most time consuming part (but more thinking is involved in claims).

- **Names** are given to features/elements and **numerals** are attributed to each of those features in the drawings. Numerals do not have to be consecutive (the may be grouped e.g. 1-99, 100-199, 200-299...).

- **It is very important not to rely on the drawings at the expense of the text**. In normal life a picture may be worth a thousand words, but in the world of patents one cannot incorporate pictures into claims. Thus **a "blind man" test** should be applied: **The description should be written as though the drawings were not there** (i.e. as though they were invisible to the blind man). This is particularly useful if, later on, an aspect from the specific description needs to be incorporated into the claims to provide patentability.

- Sometimes is useful to start with an **overview section**, to describe in summary the main features and the way they work, highlighting the principal advantages. It may include a **glossary of broad terms** in the claims, with indication of the breadth of meaning (recommedable for US).

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Annex I

Common Requirements for All Types of Documents

Ver.2.0

Prepared by the Five IP Offices

i. Drawings

Drawing requirements shall be based on PCT Rule 11.13. Drawings shall be disclosed in black and white images. (Color drawings and photographs will be the subject of a PCT task force.) Indications such as "actual size" or "scale 1/2" on the drawings should not be permitted since they lose their meaning with reproduction in a different format.

In English, each of the figures shall be preceded by a sign that shows that it is a figure ("Fig." or "Figure"), space, and with an Arabic numeral that designates the figure. (e.g., Fig. 1 or Figure 1) In a language other than English, the format of the sign denoting the figure, excepting the Arabic numeral, shall be determined in line with the purpose of this rule, based on the characteristic of the language.

Fig. , FIG. or FIG (not Figure) are recommended

k. Tables

Tables are based on PCT Rule 11.10.

In English, each of the tables shall be preceded by a sign that shows that it is a table ("Table"), space, and with an Arabic numeral that designates the table. (e.g., Table 1, Table 2) In a language other than English, the format shall be determined in line with the purpose of this rule, based on the characteristic of the language.

CUESTIÓN 12.1

LOS DIBUJOS

¿Conviene introducir los *drawings* en el mismo archivo de *description-claims-abstract*, o en uno separado?

PCT Adm Ins. Sec. 207. Arrangement of Elements and Numbering of Sheets of the International Application

(a) In effecting the sequential numbering of the sheets of the international application in accordance with Rule 11.7, the elements of the international application shall be placed **in the following order**:

(i) **the request**;

(ii) **the description** (if applicable, including the sequence listing free text referred to in Rule 5.2(b) but excluding the sequence listing part of the description referred to in item (vi) of this paragraph);

(iii) **the claims**;

(iv) **the abstract**;

(v) if applicable, **the drawings**;

It is recommended to prepare drawings in a separate file (with different margins, without numbering of paragraphs/lines, often made with a drawing program different from word-processor, etc.)

(vi) if applicable, **the sequence listing part of the description**.

cont.

CUESTIÓN 12.2

LOS DIBUJOS

¿Cómo numerar las páginas de los dibujos?

PCT Adm Ins. Sec. 207. Arrangement of Elements and Numbering of Sheets of the International Application (cont.)

(b) The **sequential numbering of the sheets** shall be effected **by using the following separate series of numbering:**

(i) the first series applying to **the request only and commencing with the first sheet of the request;**

(ii) the second series **commencing with the first sheet of the description** (as referred to in paragraph (a)(ii)) **and continuing through the claims until the last sheet of the abstract;**

(iii) if applicable, **a further series applying to the sheets of the drawings only** and commencing with the first sheet of the drawings; the number of each sheet of the drawings shall consist of **two Arabic numerals separated by a slant**, the first being the sheet number and the second being the total number of sheets of drawings **(for example, 1/3, 2/3, 3/3); [this is also accepted by EPO & USPTO - recommended]**

(iv) if applicable, **a further series applying to the sequence listing** part of the description commencing with the first sheet of that part.

CUESTIÓN 12.3

LOS DIBUJOS

¿De qué manera conviene referirse a las figuras de los dibujos, en la descripción y las reivs.?

Reference signs (numerals) in claims

Rule 43(7) EPC: "Where the European patent application contains drawings including **reference signs [typically reference numerals],** the technical features specified in the claims shall preferably be followed by such reference signs related to these features, **placed between parentheses, if the intelligibility of the claim can thereby be increased.** These reference signs **shall not be construed as limiting** the claim." (El "not" no apareció en la versión española del BOE en el RCPE1973; se ha corregido en el RCPE2000, BOE 2017.02.13).

[EPO Guidelines] F-IV, 4.19. Reference signs... If text is added to reference signs in parentheses in the claims, lack of clarity can arise (Art. 84). Expressions such as **"securing means (screw 13, nail 14)" ... are not reference signs** in the sense of Rule 43(7) but are special features, to which the last sentence of Rule 43 (7) is not applicable. Consequently it is unclear whether the features added to the reference signs are limiting or not. Accordingly, **such bracketed features are generally not permissible**. However, **additional references to those figures where particular reference signs are to be found, such as "(13 - FIG 3; 14 - FIG 4)", are unobjectionable**.

NOTE: In US applications it is common not to use reference numerals in claims, as some judges have [wrongly] interpreted them as being limiting.

CUESTIÓN 12.4

LOS DIBUJOS

Aunque quizás no sea recomendable para US, ¿conviene poner números de referencia de los dibujos en las reivs. de la solicitud PCT?

What is claimed is:

1. A computer-implemented method, comprising:

at a device with a touch screen display:

displaying a first portion of an electronic document;

detecting a movement of an object on or near the touch screen display;

in response to detecting the movement, translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion;

in response to an edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display:

displaying an area beyond the edge of the

and

displaying a third portion of the electronic

wherein the third portion is smaller tha

portion; and

in response to detecting that the object is no

or near the touch screen display, translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion.

2. The computer-implemented method of claim 1, wherein

19. A device, comprising:

a touch screen display;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the programs including:

instructions for displaying a first portion of an electronic document;

instructions for detecting a movement of an object on or near the touch screen display;

instructions for translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;

instructions for displaying an area beyond an edge of the

nt and displaying a third portion of

ument, wherein the third portion is

rst portion, in response to the edge

ocument being reached while trans-

ic document in the first direction

still detected on or near the touch

d

lating the electronic document in a

second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.

20. A computer readable storage medium having stored therein instructions, which when executed by a device with a touch screen display, cause the device to:

only claim in jury verdict

To add reference numerals after having drafted the priority application is difficult (i.e. expensive)

Apple's US 7,469,381 B2

Apple's EP 2.126.678 B1 (ES 2.376.788 T3) eq. to US 7.469.381 B2

Claims

1. A computer-implemented method, comprising:

at a device (100; 1700) with a touch screen display (112; 1740):

detecting (702) a movement of an object on or near the touch screen display;
in response to detecting the movement, translating (704) an electronic document displayed on the touch screen display in a first direction;
characterized by
in response to translating, in the first direction, the electronic document beyond an edge of the electronic document while the object is still detected on or near the touch screen display (710 - Yes), displaying (714) an area beyond the edge of the document; and
in response to detecting that the object is no longer on or near the touch screen display, translating (720) the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed.

2. The computer-implemented method of claim 1, wherein the movement of the object is on the touch screen display.

+ Claims 3-17, dependent from Claim 1

18. A computer readable storage medium having stored therein instructions, which when executed by a processor of a device (100; 1700) with a touch screen display (112; 1740), cause the device to:

detect (702) a movement of an object on or near the touch screen display;
translate (704) the electronic document displayed on the touch screen display in a first direction in response to detecting the movement;
characterized in that
the instructions when executed on the device further cause the device to:

display (714) an area beyond an edge of the electronic document, if (710 - Yes) the electronic document is translated, in the first direction, beyond the edge of the electronic document while the object is still detected on or near the touch screen display; and
translate (720) the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed in response to detecting that the

19. A claim with a definition reference

19. A device (100; 1700), comprising:

a touch screen display (112; 1740);
one or more processors (120; 1710); and
a computer readable storage medium according to claim 18.

CUESTIÓN 12.5

LOS DIBUJOS

¿Cómo adaptar gráficas proporcionadas por los inventores para que cumplan los requisitos de los dibujos?

11.11. *Words in Drawings*

(a) **The drawings shall not contain text matter**, except a single word or words, when absolutely indispensable, such as "water," "steam," "open," "closed," "section on AB," and, **in the case of electric circuits and block schematic or flow sheet diagrams, a few short catchwords indispensable for understanding.**

(b) **Any words used shall be so placed that, if translated, they may be pasted over without interfering with any lines of the drawings....**

11.13. *Special Requirements for Drawings*

(a) Drawings shall be executed in durable, black, sufficiently dense and dark, uniformly **thick and well-defined, lines and strokes without colorings.**

(b) Cross-sections shall be indicated by oblique hatching which should not impede the clear reading of the **reference signs** and **leading lines**.

(c) The scale of the drawings and the distinctness of their graphical execution shall be such that **a photographic reproduction with a linear reduction in size to two-thirds would enable all details to be distinguished without difficulty.**

(d) When, in exceptional cases, the scale is given, it shall be represented graphically.

(e) All numbers, letters and reference lines, appearing on the drawings, shall be **simple and clear**. **Brackets, circles or inverted commas shall not be used in association with numbers and letters.**

(cont.)

11.13. *Special Requirements for Drawings* (cont.)

(g) Each element of each figure shall be **in proper proportion** to each of the other elements in the figure, except where the use of a different proportion is indispensable for the clarity of the figure.

(h) **The height of the numbers and letters shall not be less than 0.32 cm**. For the lettering of drawings, the Latin and, where customary, the Greek alphabets shall be used.

(i) **The same sheet of drawings may contain several figures**. Where figures on two or more sheets form in effect a single complete figure, the figures on the several sheets shall be so arranged that the complete figure can be assembled without concealing any part of any of the figures appearing on the various sheets.

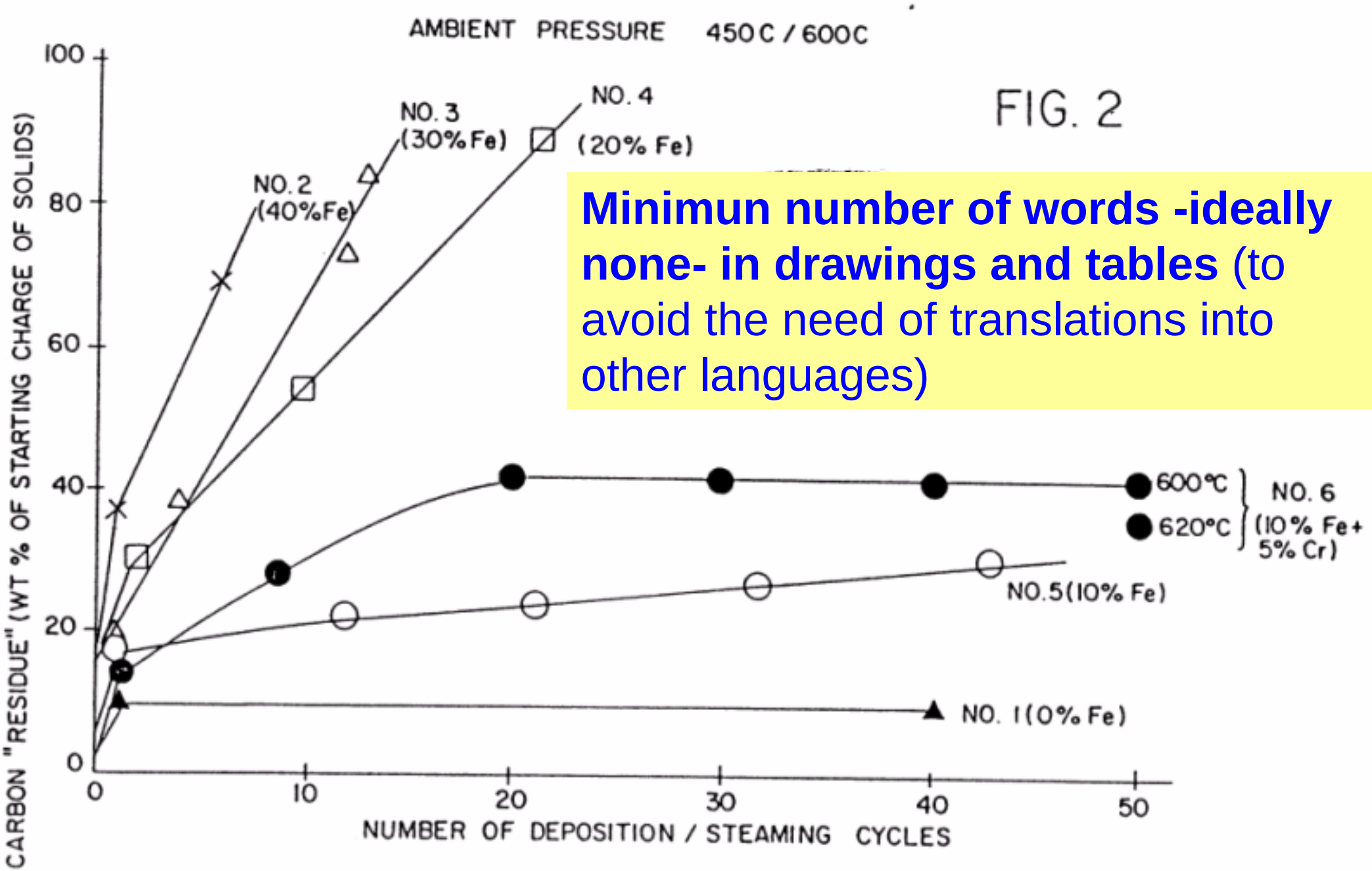
(j) **The different figures** shall be arranged on a sheet or sheets **without wasting space, preferably in an upright position, clearly separated from one another**. Where the figures are not arranged in an upright position, they shall be presented sideways with the top of the figures at the left side of the sheet.

(k) **The different figures shall be numbered in Arabic numerals** consecutively and independently of the numbering of the sheets.

(l) **Reference signs not mentioned in the description shall not appear in the drawings, and vice versa.**

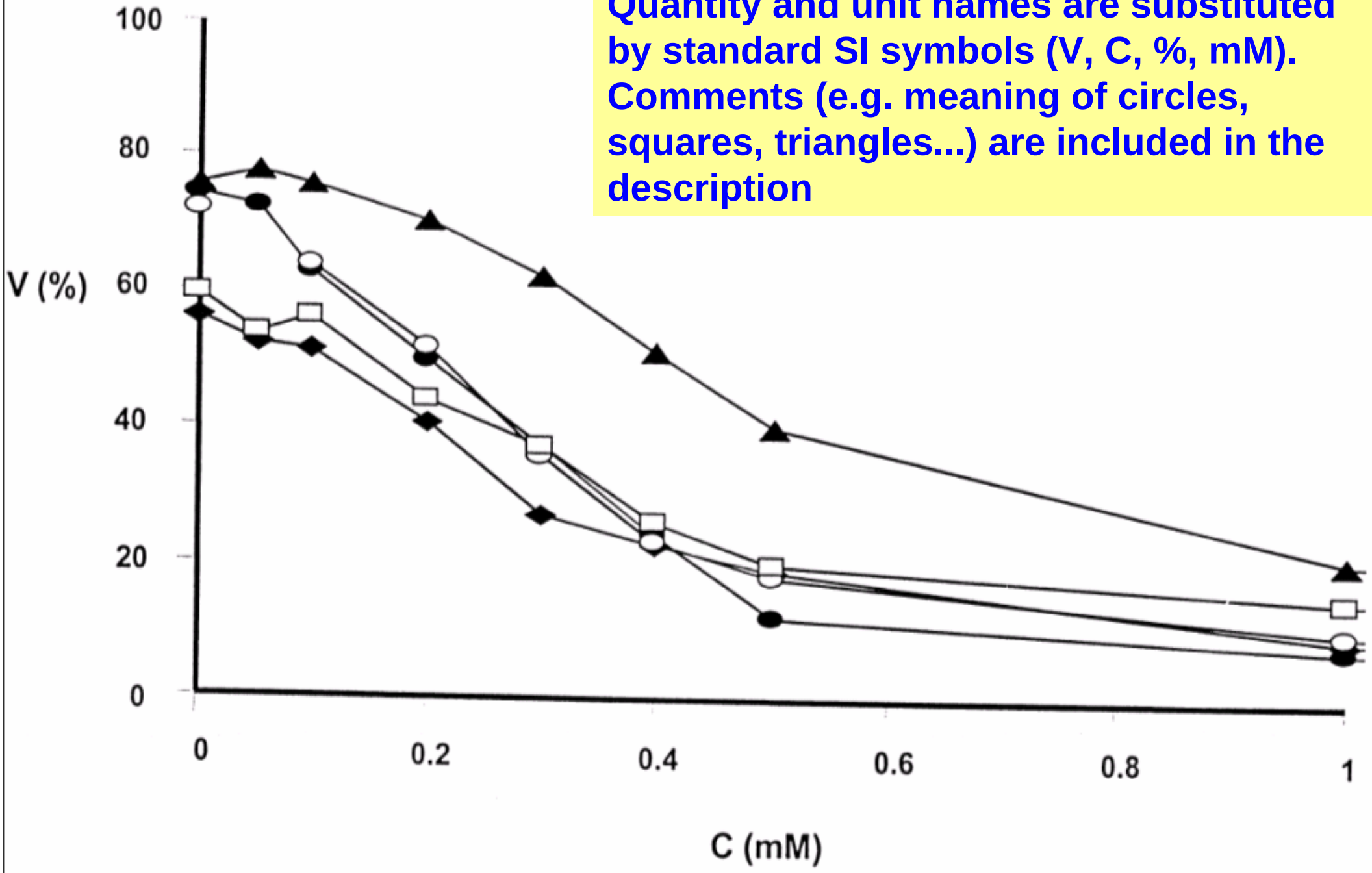
(m) **The same features, when denoted by reference signs, shall, throughout the international application, be denoted by the same signs**.

(n) If the drawings contain a **large number of reference signs**, it is strongly recommended to attach a separate sheet **listing all reference signs and the features denoted by them.**



Minimun number of words -ideally none- in drawings and tables (to avoid the need of translations into other languages)

Quantity and unit names are substituted by standard SI symbols (V, C, %, mM). Comments (e.g. meaning of circles, squares, triangles...) are included in the description



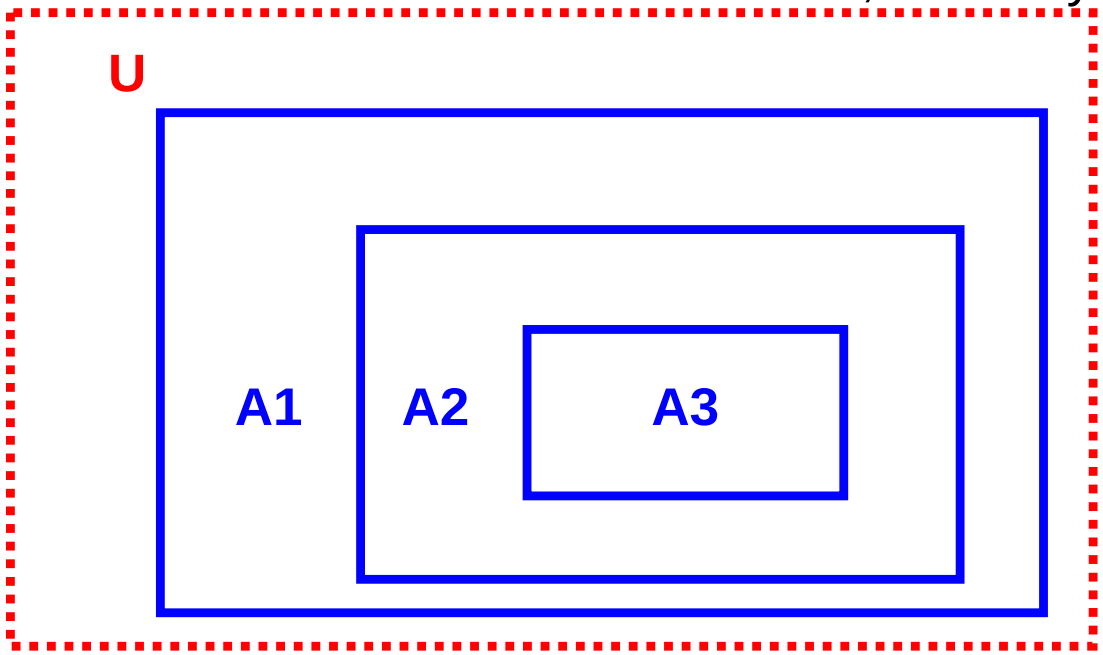
CUESTIÓN 13

REIVINDICACIONES INDEPENDIENTES

En función del caso, ¿qué formato elegir: estándar, en-dos-partes, Markush, *purpose-limited product*, ...?

A patent claim is a defining sentence of a technical set (i.e. a technical "subject-matter"), within a universe of technical entities/products or technical activities/methods/processes, that we claim is our "protected property".

"Technical universes" will be kinds/categories of claims: electromechanical entities (apparatus, devices, machines, articles of manufacture), chemical entities, biological entities, general industrial activities, preparation processes, etc. To simplify, the representation of the universal set (U) will be omitted here. Rectangles will be used as "boundaries" or "fences" of our property (not circles or ellipses, because rectangles are easier to draw with the Power Point, and they can be easily filled with information).



Thus, within the [not drawn] universe/category of a subject-matter:

A1 represents a patent claim. A2 and A3 represent other patent claims.

Since A2 & A3 are [proper] subsets of A1, both claims A2 & A3 are dependent from claim A1.
$A3 \subset A2$ & $A2 \subset A1$ => $A3 \subset A1$.
A3 will be written as depndt. from A2

Distinction: to be dependent from vs. to be written in dependent from

What goes into independent claims?

F-IV. 4.5.2 Definition of essential features

Essential features of a claim are those necessary for achieving a technical effect underlying the solution of the technical problem with which the application is concerned (the problem usually being derived from the description). **The independent claim(s) should therefore contain all features explicitly described in the description as being necessary to carry out the invention.** Any features which, even if consistently mentioned in the context of the invention throughout the application, do not actually contribute to the solution of the problem are not essential features.

As a general rule, the technical effect or result produced by the feature will provide the key to answering the question of whether or not the feature contributes to solving the problem (see also G-VII, 5.2).

...

In particular, **where patentability depends on a technical effect, the claims must be so drafted as to include all the technical features of the invention which are essential for the technical effect** (see T 32/82).

A claim starts with a preamble, typically written in the form of noun phrase whose head noun -in the singular- determines the claim type (category, kind or class)

A **noun phrase** or **nominal phrase** *(locución/sintagma nominal o sustantiva)* is a phrase which has a **noun** (or indefinite pronoun) as its head word, or which performs the same grammatical function as such a phrase. In addition to the head, **a noun phrase may contain one or more determiners** (typically, articles)**, premodifiers and postmodifiers**.

Examples:

determiner(s)	**premodifier(s)**	**noun**	**postmodifier(s)**
a	very small	dog	
a	red and blue	chair	for children
the	wonderful	recipe	of yours for blueberry pie

Source: Wikipedia

Standard claim format

A claim is a single defining sentence of a technical set, without periods/full stops, heavily punctuated, with three parts:

The preamble [designation of subject matter]: introduction that **plays the role of "subject"**, usually in the form of a **noun phrase** whose **noun -in the singular-** determines the claim type/category/kind/class.

- Prevalently in US, and always recommendable, it starts with:

"A/An" in independent claims (**"A"***a* before words that begin with a consonant sound)

"The" in dependent claims [prevalent in US]

and continues with: **[one or more adjectives] noun** (apparatus, device, product, compound, composition, method/process, etc.) **[for one or several purposes, of a some type]...**

The transitional word/phrase : **comprising:** [better than *including, having, composed of, etc.* Never *consisting of* !!]

The body : rest of **elements, technical features** [EPO] **or limitations** [US]**, including their inter-relationships** [relational elements]. In general, this is not a mere lists of parts.

Claim (over)punctuation

Preamble,[comma] transitional phrase:[colon] element 1;[semicolon] element 2;[semicolon] and element 3.

Claim 1. A hand-held device for writing, comprising: a pencil; and a light attached [relationship] to the pencil.

PCT Rule 6. The Claims

6.3. *Manner of Claiming* [cf. EPC Rule 43. Form and content of claims]

(a) **The definition of the matter for which protection is sought [done by the claims, cf. PCT Art. 6] shall be in terms of the technical features of the invention**.

(b) **Whenever appropriate, claims shall contain [in a two-part claim]**:

(i) **[first part]** a statement indicating **those technical features** of the invention which are necessary for the definition of the claimed subject matter but **which, in combination, are part of the prior art,**

(ii) **a characterizing portion** -preceded by the words **"characterized in that," "characterized by," "wherein the improvement comprises,"** or any other words to the same effect- stating concisely the **technical features which, in combination with the features stated under (i), it is desired to protect**.

(c) Where the national law of the designated State does not require the manner of claiming provided for in paragraph (b), failure to use that manner of claiming shall have no effect in that State provided the manner of claiming actually used satisfies the national law of that State.

Format of a Two-Part Claim (*Jepson* in US)

First part:

Preamble [introductory noun phrase whose **noun** determines the category] **plus other elements** [with the **implied admission that the whole first part is disclosed in a single piece of prior art**, tipically a single document. Sometimes the whole "first part" is referred to as "preamble", not being confusing by the context].

Transitional phrase : **characterized in that/characterized by ["wherein the improvement comprises/ the improvement being" in US]**

Characterizing portion : **rest of elements, technical features or limitations that the claim adds to those of the first part. Protection is determined by all elements together ("All elements rule").**

a/an .... the/said

The first time a term is introduced, the indefinite article "a" or "an" should be used. Later "the" and "said" are used when referring back. Both are interchangeable, but **"said" is old-fashioned legalese, while "the" makes claim language more accessible to non-professionals** (cf. WIPO, "Patent Drafting Manual", p. 75, 2006).

Example of a US claim in two-part format

US 2,664,653 patent ("Steam and dry iron").The invention provides the **improvement** of supplying steam to the article being ironed in advance of, and while moving the iron across the article whether in frontward or backward direction.

*"**Claim 1. A steam and dry iron comprising**:*
a housing having an ironing surface; the ironing surface having a front side and a rear side with respect to motion of the ironing surface over an article to be ironed;
steam ports at the ironing surface for delivery of steam to the ironing surface;
a steam supply for delivering steam to the steam ports;
wherein the improvement comprises:
the steam ports including a front steam port at the front side of the ironing surface and a rear steam port at the rear side of the ironing surface;
a valve connected between the steam supply and the front and the rear ports, ...
a valve operator connected with ...
***whereby** steam will exit the front and rear ports, respectively, to lead the iron in its motion toward the front and the rear sides of the ironing surface."*

This illustrates the use of **"whereby clauses"** for describing a function, operation, or result that *necessarily* follows from the previously recited structural or functional elements of the claim. Other words/phrases with a usage in claim drafting similar to *whereby* are ***wherein*, *such that,* and *so as to***. In claim drafting *wherein* is also used to add a selection of an element in a dependent claim.

Claims with Markush groups. Markush Formulas

A **Markush group** is a **closed group of alternative elements,** and it is tipically introduced with the expression ***"consisting of".*** The standard drafting is: ***"... wherein element A is selected from the group consisting of A1, A2, A3 and A4".*** For example: "wherein the material is a metal selected from the group consisting of copper, lead, and gold", or "wherein R1 is a radical *selected from the group consisting of* hydrogen, methyl, *and* ethyl".

Shorthand Markush groups can also be drafted simply by using the verbal form ***is/are***, and with the final member preceded by a conjunction ***or*** : "wherein A *is* A1, A2 , *or* A3"; e.g.: "wherein R1 is hydrogen, methyl, *or* ethyl".

In product claims that structurally define a group of chemical products using a general formula it is very common that *the whole claim is a Markush group*, the general formula being then referred to as a ***Markush formula****.*

Markush groups can also be used to define alternative **electromechanical elements, s**uch as in: *"a fastener selected from a group consisting of a nail, a screw, and a rivet".* However, in practice **Markush groups are rarely used for electromechanical elements** because generic words that describe the elements of a group (e.g. *a fastener*) or functional elements (e.g. *fastening means*) provide a broader definition of alternatives.

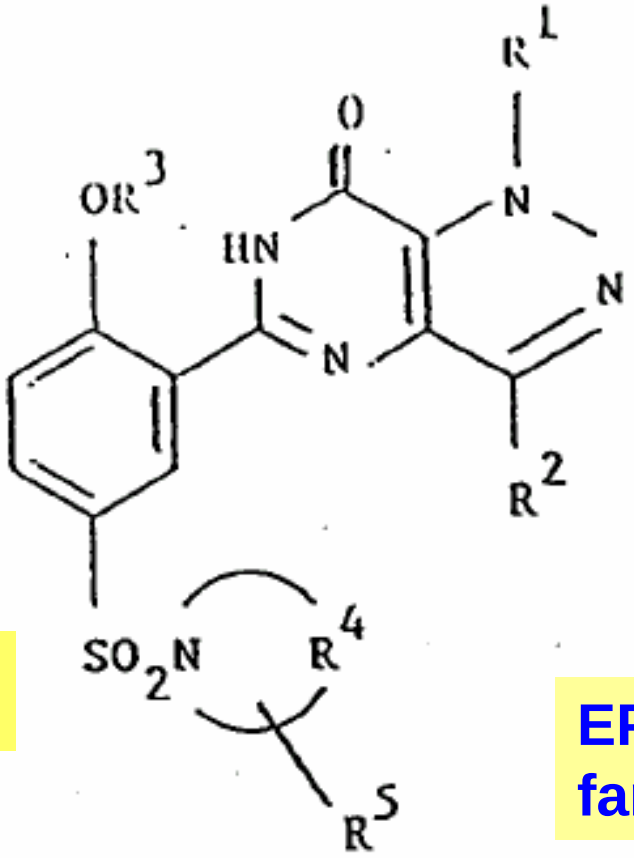
When the whole claim is a single Markush group (e.g. a Markush formula), there is **a high probability of being considered in unity; but there is the risk of leaving outside some potentially interesting alternatives.**

Claims

Claims for the following Contracting States : AT, BE, CH, DE, DK, FR, GB, IT, LI, LU, NL, SE

1. A compound of the formula:

pharmaceutical product



(I)

[definitions of variables R1, R2, etc. have been deleted]

EP 463.756 B1: from first patent family of Pfizer on sildenafil

and pharmaceutically acceptable salts thereof.

Unity of invention among members of a Markush group

The members of a Markush group should bear some technical interrelationship to one another, or the Markush group could be found improper for lack of unity. The degree of interrelationship required depends upon the type of subject matter. For chemical compounds defined by a Markush group, the unity requirement is illustrated in **Annex B of the Administrative Instructions under the PCT (Unity)** by saying:

"(f) "Markush Practice." The situation involving the so-called "Markush practice" wherein a single claim defines alternatives (chemical or non-chemical) is also governed by Rule 13.2. In this special situation, the requirement of a technical interrelationship and the same or corresponding special technical features as defined in Rule 13.2, shall be considered to be met when the alternatives are of a similar nature.
*(i) When the Markush grouping is for **alternatives of chemical compounds**, they shall be **regarded as being of a similar nature** where the following criteria are fulfilled:*
*(A) **all alternatives have a common property or activity, and***
*(B)(1) **a common structure is present**, i.e., a significant structural element is shared by all of the alternatives, **or***
*(B)(2) in cases where the common structure cannot be the unifying criteria, all alternatives **belong to a recognized class of chemical compounds** in the art to which the invention pertains. ..."*

Purpose-limited claims (with "for"): product vs. method

[EPO Guidelines] F-IV, 4.13 "Apparatus for ...", "Method for ...", etc.

If a claim commences with such words as: **"Apparatus for** carrying out the process etc..." this must be construed as meaning merely apparatus **suitable for** carrying out the process. Apparatus which otherwise possessed all of the features specified in the claims, but which would be unsuitable for the stated purpose, or which would require modification to enable it to be so used, should not normally be considered as anticipating the claim.

Similar considerations apply to a claim for **a product for a particular use**. (Example of "mold for molten steel")...Similarly, a claim to a **substance or composition for a particular use** should be construed as meaning a substance or composition which is in fact suitable for the stated use; a known product which *prima facie* is the same as the substance or composition defined in the claim, but which is in a form which would render it unsuitable for the stated use, would not deprive the claim of novelty. However, **if the known product is in a form in which it is in fact suitable for the stated use, though it has never been described for that use, it would deprive the claim of novelty**. An exception...[purpose-limited product claim for medical uses]

Purpose-limited claims (cont.)

F-IV, 4.13 "Apparatus for ...", "Method for ...", etc.

... An exception to this general principle of interpretation is where the claim is to a known substance or composition for use in a surgical, therapeutic or diagnostic method (see G-II, 4.2). Similarly, in the data-processing/computer program field, apparatus features of the means-plus-function type ("means for ...") are interpreted as means adapted to carry out the relevant steps/functions, rather than merely means suitable for carrying them out. In this way novelty is conferred over an unprogrammed or differently programmed data-processing apparatus

In contrast to an apparatus or product claim, in case of a method claim commencing with such words as: "**Method for remelting** galvanic layers" **the part "for remelting** ..." should not be understood as meaning that the process is merely suitable for remelting galvanic layers, but rather as a **functional feature** concerning the remelting of galvanic layers and, hence, defining one of the method steps of the claimed method (see T 848/93).

EPC Article 54: Novelty (cont.)

(4) Paragraphs 2 and 3 shall **not exclude the patentability of any substance or composition, comprised in the state of the art, for use in a [any] method referred to in Article 53(c) [surgery, therapy or diagnosis]**, **provided that its use** for any such method is not comprised in the state of the art **[i.e. is new]**.

[allows patentability of "general (first) medical use" claims]

(5) Paragraphs 2 and 3 shall also **not exclude the patentability of any substance or composition referred to in paragraph 4 for any specific use** in a method referred to in Article 53(c), provided that such use is not comprised in the state of the art.

[allows claims of "specific (second/subsequent) medical uses"]

This articles provide an exception from the general principle that product claims can only be obtained for (absolutely) novel products [*purpose-limited* product claims]

Product for use in therapy, surgery or diagnosis: A new claim category for general (first) & specific (second) medical uses in the EPO?

1. A product of formula X [e.g. a Markush formula], for use in the treatment of an disease Y, in a patient population Z [the latest is optional]**.**

2. The product for use according to claim 1, wherein the product is of formula X1 [X1 ⊂ X].

3. The product for use according to claim 2, wherein the product is of formula X11 [X11 ⊂ X1 ⊂ X].

4. The product for use according to any of the claims 1-3, wherein the disease is Y1 [Y1 ⊂ Y].

5. The product for use according to any of the claims 1-4, wherein the patient population is Z1 [Z1 ⊂ Z].

Etc.

Typically the "Product for use" is drafted as "Substance for use" (substance being a pure chemical or biological product) or "Composition for use" (composition being a pharmaceutical composition).

Since its enactment in 1973, the EPC has allowed an *extra* (and peculiar) patent protection in situations where for the first time a medical use of a chemical product is invented. The reason behind this is to encourage research and development on medical uses of the (enormous) amount of products which are chemically known, but of which no medical uses are known.

Let us consider the following situation: (i) A chemical product X is comprised in the state of the art, therefore the claim "Product X" is not longer patentable for lack of novelty. (ii) Either no industrial use of product X is known, or the only known uses of X are in non-medical fields. And (iii) an invention is made, whose subject matter refers to one medical use of X, or a group of different medical uses of X that are technically related. In this situation, this is the first invention referred to *specific* medical use(s) of product X and in many jurisdictions these specific medical uses of X can be protected with the so-called *specific/second medical use claims.*

In the situation of the first invention referred to medical use(s) of product X, the EPC (and the national laws of those EPC countries that have an analogous provision) considers that **the patent owner deserves an *extra* patent protection that is the one conferred by a peculiar purpose-limited claim, generally called *first medical use claim*, that should be called *general medical use claim* since the claim encompasses the *general* use of product X in the whole field of medicine**. Examples of format for this general/first medical use claims are the following (product, substance or compound being synonymous in this context):

Claim 1. Product X for use as a medicament.
Claim 1. Compound X for use as an active pharmaceutical ingredient.
Claim 1. Substance X for use in human or animal therapy.

The protection granted by the general/first medical use claims is very important, as the exploitation of any *specific* subsequent medical use of X, that competitors might find or even patent, would be an infringement of the general medical use claim.

CUESTIÓN 13.1

REIVINDICACIONES INDEPENDIENTES

¿Cómo elegir el preámbulo y la *transitional word/phrase* (típicamente, *comprising*) en una reiv. escrita en formato estándar?

The claim preamble (1)

The preamble's noun typically corresponds to:

- One of the **broad types of claims**, such as: product, compound, molecule, composition, mixture, plant, animal, strain, culture, cell, apparatus, machine, device, system, article, process/method, use ...

- But it also **may be a narrower term**, such as: reactant, catalyst, alloy, gel, cream, antibody, seed, fruit, computer, program, shaver, depilatory, tray, container ...

Adjectives as premodifiers of the preamble's noun are very common. They may correspond to broad types of entities, such as: natural, artificial, chemical, pharmaceutical, biological, transgenic, cosmetic, food ...; or to broad types of process/methods, such as: preparation, diagnostic, etc.

Complements with *of* or *for* as postmodifiers of the preamble's noun are also very common, and **they frequently are equivalent to adjectives**, e.g.: preparation process = process of/for preparing (obtaining, making, manufacturing ..); diagnostic method = method of/for diagnosis.

The claim preamble (2)

Claim preambles can be very divers in length, as illustrated by the following preambles, all of them having *"composition"* as the preamble's noun:

- A chemical composition, ...

- A chemical composition for moisturizing, ...

- A cosmetic composition for moisturizing human skin, ...

***- An emulsified cosmetic makeup composition for revitalizing, smoothing, moisturizing and tightening human skin, ...* (cf. WO 96/19180 A1).**

From top to bottom these four preambles become narrower and narrower. The fourth one will be very limiting from the point of view of protection scope, and it may be interpreted as being known in the art from the point of view of patentability.

The claim preamble (3)

From the point of view of infringement, i.e. for the purpose of the All Elements Rule, **the terms of the claim preamble will be considered as elements limiting the protection scope of the claim, in the same manner as the terms of the claim body**. Thus, the exploitation of a questioned embodiment not reproducing -literally or under the doctrine of equivalents- the preamble of a claim would not be considered to infringe the claim.

From the point of view of patentability, however, **in some jurisdictions the preamble will be assumed to be known in the art, in a manner similar to what happens with the first part of a two-part claim (see later)**. Therefore, to be on a safe side, it is important that the preamble is chosen carefully and at a right level of breath: **it should not accidentally limit the protection scope, and it should be broad enough so it does not include any contribution of the invention to the art**. Sometimes (not always!!!) it may be a good idea to keep the preamble consistent with the title of the invention. Sometimes a broad preamble may be useful from the point of view of unity.

CUESTIÓN 13.2

REIVINDICACIONES INDEPENDIENTES

¿Cuándo usar el formato en-dos-partes (i.e. con *characterized by/in that*) en una reiv. independiente? ¿Y para entrar en US?

Casos en los que conviene usar la reivindicación-en-dos-partes (*Jepson claim* en US)

- Preferiblemente **cuando la primera parte se puede basar en un único documento del estado de la técnica** (el más próximo), y la invención consiste en un **perfeccionamiento concreto** del estado de la técnica representado por dicho documento. En US se llaman ***improvement claims*** y se usan muy poco.

- Cuando conviene **para resaltar la actividad inventiva**, presentando un problema concreto que la invención resuelve "con chispa".

En cualquier caso la **elección de la primera parte** es muy importante:

- Puede convenir generalizar el estado de la técnica en la primera parte para presentar la **parte caracterizadora como selección inventiva** (cf. Epilady vs. Remington).

- **¡CUIDADO! ¡No incluir en la primera parte elementos no conocidos o nunca combinados!, pues se interpretará como que el solicitante acepta que son conocidos en combinación** (por este riesgo en US las 'improvement claims' apenas se usan).

Casos en los que la reivindicación en dos partes (Jepson en US) suele resultar inapropiada

- en **combinaciones de elementos conocidos** [A y B en el ej.] en las que la elección de uno de ellos como punto de partida daría una visión distorsionada (p.ej.: "1. Composition comprising A and B,...").

- en **sistemas complejos de partes interrelacionadas** con modificaciones en varias partes.

- para **modificaciones de la técnica por omisión** de características técnicas.

- en algunas invenciones químicas, como la de **producto puro.** P. ej.: *"2-Ethyl-3-methylpyridine or a pharmaceutically acceptable salt thereof").*

- para un **uso** (Ej.: "Use of substance X as insecticide").

- **cuando se redacta sin tener un buen conocimiento del estado de la técnica** (resulta arriesgado entonces elegir la primera parte).

CUESTIÓN 13.3

REIVINDICACIONES INDEPENDIENTES

Cuando la reiv. independiente tiene formato en-dos-partes, ¿debe ponerse *characterized by/in that* en las reivs. que dependen de ella?

The two-part format is not to be used in dependent claims

[EPO Guidelines] F-IV, 3.4 ... Since a **dependent claim** does not by itself define all the characterising features of the subject-matter which it claims, expressions such as **"characterised in that" or "characterised by" are not necessary in such a claim** but are nevertheless permissible.

Claim 1. A preamble comprising A and B, characterized by further comprising C; and wherein A is A1.

Claim 2 [standard drafting]**. The preamble according to claim 1, characterized by further comprising D; and wherein B is B1.**

Claim 2 [full text equivalent]**. A preamble comprising A and B, characterized by further comprising C; wherein A is A1; charaterized by further comprising D; and wherein B is B1.**

Claim 1

A + B

characterized by

C , A = A1

Claim 2

A + B

characterized by

C , A = A1

characterized by

D , B = B1

If claim 1 is rejected in a lawsuit for some ground different from lack of novelty, which would be the part admitted as prior art in this 'three-part' claim 2?

CUESTIÓN 14

REIVINDICACIONES DEPENDENDIENTES

¿Qué añadir en una reiv. dependiente respecto a la reiv. (base) de la que depende?: *further comprising vs. wherein.*

What goes into the dependent claims?

- Extra interacting features (additional features that provide advantages)

- Extra non-interacting features

- Features that may be commercially important

- Terms to clarify elements of the independent claim

- Terms to clarify the broad meaning of the related term in the independent claim. When the independent claim has a broad term and a dependent claim includes a narrower expression of that term then, by inference, the main claim must cover more than just the narrow expression of the term as otherwise the dependent claim would be redundant.

- Etc.

Proper antecendent basis (two dependent claims)

Claim 1. A hand-held device for writing, comprising: a pencil; and a light attached [relationship] **to the pencil.**

Claim 2. The device according to [*as claimed in, as in, of, as defined in...*] **claim 1, further comprising an eraser attached to one end of the pencil.**

Claim 3. *[Idem]*, wherein/in which the light is detachable [requires an antecedent]

Single-dependency group with a chain and a pyramid

Claim 1. Preamble-P comprising A + B [+ any other element(s), implicitly]

Claim 2. Preamble-P comprising A + B + C

Claim 3. Preamble-P comprising A + B + C + D
[D = Markush group consisting of D1, D2, and D3]

Claim 4. Preamble-P comprising A + B + C + D1 [D1 ⊂ D]

Claim 5. Preamble-P comprising A + B + C + D2 [D2 ⊂ D]

Claim 6. Preamble-P comprising A + B + C + D3 [D3 ⊂ D]

EPC Rule 43(4, 5, 7). Form and content of claims

(4) **Any claim which includes all the features [including the preamble; therefore of the same type/category] of any other claim (dependent claim)** shall contain, if possible **at the beginning, a reference to the other claim [its "base" claim]** and then state the **additional features [i.e. its scope is a proper subset of the one of the base claim].** A dependent claim directly referring to another dependent claim shall also be admissible. All dependent claims referring back to a single previous claim, and all **dependent claims referring back to several previous claims [multiple dependency]**, shall be grouped together to the extent and in the most appropriate way possible.

(5)The number of claims shall be reasonable with regard to the nature of the invention claimed. The claims shall be numbered consecutively in Arabic numerals...

(7) Where the European patent application contains **drawings** including reference signs, the technical features specified in the claims shall preferably be followed by such **reference signs** relating to these features, **placed in parentheses**, if the intelligibility of the claim can thereby be increased. These reference signs **shall not be construed as limiting the claim**.

[EPO Guidelines] F-IV, 3.4 Independent and dependent claims

All applications will contain **one or more "independent" claims directed to the essential features** of the invention. Any such claim may be **followed by one or more [dependent] claims concerning "particular embodiments"** of that invention. It is evident that **any claim relating to a particular embodiment** must effectively include also the essential features of the invention, and hence **must include all the features of at least one independent claim**. The term **particular embodiment should be construed broadly** as meaning any more specific disclosure of the invention than that set out in the independent claim or claims...

... A claim defining further particulars of an invention may include all the features of another dependent claim and should then refer back to that claim. Also, **in some cases, a dependent claim may define a particular feature or features which may appropriately be added to more than one previous claim (independent or dependent)**. **It follows that there are several possibilities: a dependent claim may refer back to one or more [multiple dependency] independent claims, to one or more dependent claims, or to both independent and dependent claims.**

PCT Rule 6. The Claims

6.4. *Dependent Claims* [cf. EPC Rule 43(4)]

(a) **Any claim which includes all the features of one or more other claims (claim [written] in dependent form, hereinafter referred to as "dependent claim")** shall do so by **a reference, if possible at the beginning**, to the other claim **[its "base" claim]** or claims and shall then state the **additional features** claimed. **Any dependent claim which refers to more than one other claim ("multiple dependent claim")** shall refer to such claims in the alternative only. **Multiple dependent claims shall not serve as a basis for any other multiple dependent claim [it is so in US, but no in EPO!!]** Where the national law of the national Office acting as ISA does not allow multiple dependent claims to be drafted in a manner different from that provided for in the preceding two sentences, failure to use that manner of claiming may result in an indication under Article 17(2)(b) in the ISR. Failure to use the said manner of claiming shall have no effect in a designated State if the manner of claiming actually used satisfies the national law of that State.

(b) Any dependent claim shall be construed as including all the limitations contained in the claim to which it refers or, if the dependent claim is a multiple dependent claim, all the limitations contained in the particular claim in relation to which it is considered.

(c) All dependent claims referring back to a single previous claim, and all dependent claims referring back to several previous claims, **shall be grouped together [in a 'dependency group'] to the extent and in the most practical way possible.**

Dependent claims in US

35 U.S.C. 112 Specification

(b) CONCLUSION. The specification shall conclude with **one or more claims particularly pointing out and distinctly claiming the subject matter** which the inventor or a joint inventor regards as the invention.

(c) FORM. **A claim may be written in independent** or, if the nature of the case admits, **in dependent or multiple dependent form**.

(d) REFERENCE IN DEPENDENT FORMS. Subject to subsection (e), **a claim [written] in dependent form shall contain [at the beginning] a reference to a claim previously set forth [the "base" claim, in MPEP] and then specify a further limitation** of the subject matter claimed. **A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.**

- **35 USC 112**: a claim that **is written in a ind./dep./multiple dep. form**
- **Rule 6.4 PCT:** a claim that **is in dependent form**
- **Rule 43.4 EPC**: a claim that **is dependent**, and **the form it is written**

CUESTIÓN 14.1

REIVINDICACIONES DEPENDENDIENTES

Al escribir una reiv. dependiente, ¿qué parte del preámbulo de la reiv. base debe repetirse?

For better conciseness and clarity, the beginning of dependent claims should only repeat the preamble's noun of the independent claim, not the adjectives and/or complements accompanying the noun

EXAMPLE:

1. An **optoelectronic modulable light emitting device**, comprising ...

BAD PRACTICE:

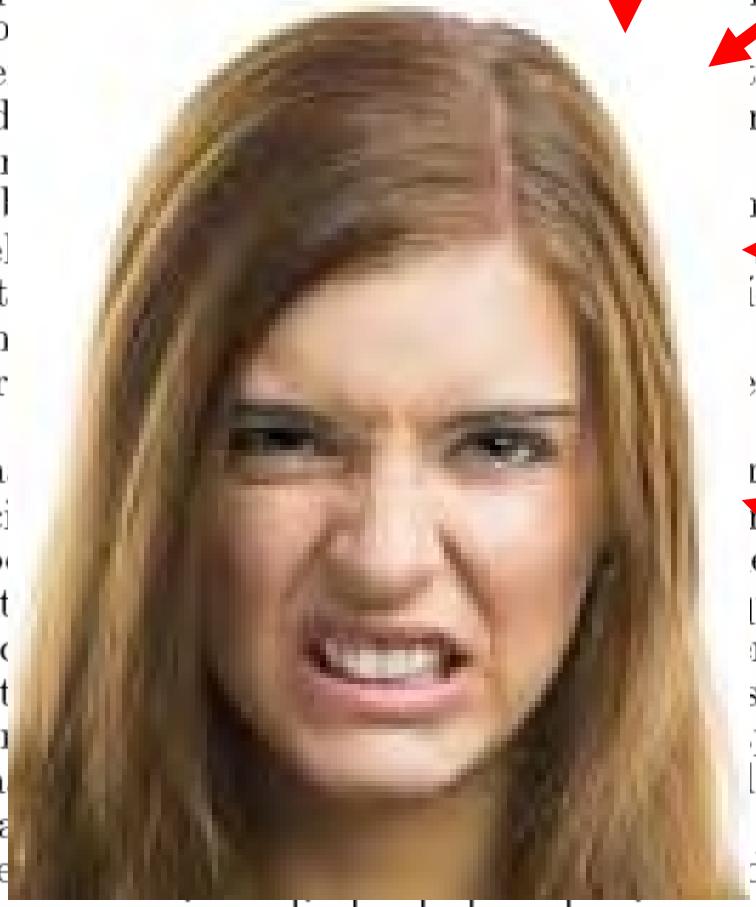
2. The **optoelectronic modulable light emitting device** according to claim 1,..

PREFERRED DRAFTING:

2. The **device** according to claim 1,...

REIVINDICACIONES

1. Procedimiento para la obtención y aplicación de reproducciones murales y arquitectónicas a base de la proyección de resina y fibra de vidrio sobre moldes, **caracterizado** porque comprende una primera fase en la que sobre el muro o elemento arquitectónico a reproducir se ap pa de silico muro o ele uir el mold n una segu sobre una l ilar a la del de posit quida desm como color mez- clen de la resin repro- ducci lde en p e me- diant ue no han n una cuart su po- sició pa de resin la con carga bre los re dos de acetona para impedir las bolsas de aire en dicha capa de resina; en la sexta fase se procede al desmoldeo del elemento reproducido cuando éste se



haya secado totalmente, y ulteriormente se cortará el sobrante periférico del elemento reproducido dejándolo con las medidas previstas.

2. Procedimiento para la obtención y aplicación de reproducciones murales y arquitectónicas, según la reivindicación 1, en el que en la primera fase, antes de la aplicación de la capa de silicona, se procede a la limpieza del muro o elemento arquitectónico y a la previa aplicación sobre el mismo de una capa de materia desmoldeante.

3. Procedimiento para la obtención y aplicación de reproducciones murales y arquitectónicas, según la reivindicación 1, en el que el depósito de las tierras determinantes del color se lleva a cabo en dos fases, en una primera se deposita una fina capa de tierra-color en la cavidad de cada relieve según el color que corresponda y en una segunda fase se deposita en todo el molde la tierra con el color correspondiente a las juntas.

4. Procedimiento para la obtención y aplicación de reproducciones murales y arquitectónicas, según la reivindicación 1, en el que la proyección de la resina de poliéster y la fibra de vidrio con cargas de sílice en el molde se realiza en dos fases, en la primera según una capa fina de resina de alta tixotropía y en una segunda fase se lleva a cabo la proyección total de resina, fibra y sílice hasta adquirir el grueso previsto.

5. Procedimiento para la obtención y aplicación de reproducciones murales y arquitectónicas, según la reivindicación 1, en el que una

CUESTIÓN 14.2

REIVINDICACIONES DEPENDENDIENTES

De todas las expresiones usadas para indicar una dependencia simple *(of, as per, as in, according to, as claimed in, as set forth in, as recited in, as defined in, etc.)*, ¿cuál preferimos?

"according to" is (slightly) preferred,

(but others are commonly used without any problem)

Proper antecendent basis (two dependent claims)

Claim 1. A hand-held device for writing, comprising: a pencil; and a light attached [relationship] **to the pencil.**

Claim 2. The device according to [*of, as per, as in, as claimed in, as in, of, as set forth in, as recited in, as defined in...*] claim 1, (further) comprising an eraser attached to one end of the pencil.

Claim 3. The device according to [*of, as per, as in, as claimed in, as in, of, as set forth in, as recited in, as defined in...*] claim 1, wherein/in which the light is detachable [requires an antecedent]

CUESTIÓN 14.3

REIVINDICACIONES DEPENDENDIENTES

De todas las expresiones usadas para indicar una dependencia múltiple *(according to any one of the claims X-Y, as in any of claims X-Y, etc.)*, ¿cuál preferimos?

600.01(n) I. A. Acceptable Multiple Dependent Claim Wording

35 USC 112 has been revised in view of the practice introduced by the PCT. **It authorizes multiple dependent claims as long as they are in the alternative form**. **Cumulative claiming** (e.g. "A machine according to claims 3 **and** 4, further comprising...") **is not permited.**

Claim 5. A gadget **according to claims 3 or 4,** further comprising ---
Claim 5. A gadget **according to any of the claims 3 or 4,** further ------
Claim 5. A gadget **as in any one of the preceding claims,** in which ---
Claim 5. A gadget **as in any one of claims 1, 2, and 3,** in which ---
Claim 3. A gadget **as in either claim 1 or claim 2,** further comprising ---
Claim 4. A gadget **as in claim 2 or 3,** further comprising ---
Claim 16. A gadget **as in claims 1, 7, 12, or 15**, further comprising ---
Claim 5. A gadget **as in any of the preceding claims**, in which ---
Claim 8. A gadget **according to one of claims 4-7**, in which ---
Claim 5. A gadget **as in any preceding claim**, in which ---
Claim 10. A gadget **as in any of claims 1-3 or 7-9**, in which ---
Claim 11. A gadget **as in any one of claims 1, 2, or 7-10 inclusive**, in which

[US MPEP] 600.01(n) I. B. Unacceptable Multiple Dependent Claim Wording

1. Claim Does Not Refer Back in the Alternative Only

Claim 5. A gadget **according to claim 3 and 4**, further comprising ---

Claim 9. A gadget **according to claims 1-3**, in which ---

Claim 9. A gadget **as in claims 1 or 2 and 7 or 8**, which ---

Claim 6. A gadget **as in the preceding claims** in which ---

Claim 6. A gadget **as in claims 1, 2, 3, 4 and/or 5**, in which ---

Claim 10. A gadget **as in claims 1-3 or 7-9**, in which ---

2. Claim Does Not Refer to a Preceding Claim

Claim 3. A gadget **as in any of the following claims**, in which ---

Claim **5**. A gadget as in either claim **6** or claim **8**, in which ---

3. Reference to Two Sets of Claims to Different Features

Claim 9. A gadget **as in** claim 1 or 4 **made by the process of** claims 5, 6, 7, or 8, in which ---

4. Reference Back to Another Multiple Dependent Claim

Claim 8. A gadget **as in claim 5 (claim 5 is a multiple dependent claim) or claim 7**, in which ---

Claims written in multiple dependency form

Claim 1. A preamble comprising A + B.
Claim 2. The preamble's noun according to claim 1, further comprising C.
Claim 3. The preamble's noun **according to any one of claims 1 or 2,** further comprising D. ("any + or" = alternatives ; "and" would be improper)

Claim 3, is **only one *numbered* claim**, but it includes ***two actual claims***, namely:

- The **actual claim 3/1 (*"claim 3 insofar it depends on claim 1"*, as it is usually referred to in the EPO)**, only comprising the elements of numbered claim 1 plus the element added in claim 3 (A+B+D)

- The **actual claim 3/2**, comprising the elements of numbred claim 2 plus the element added in claim 3 (A+B+C+D).

Singular dependency from a multiple dependent claim

Claim 4. The preamble's noun **according to claim 3**, further comprising E.

Claim 4 is **only one *numbered* claim**, but it includes ***two actual claims***, namely:

- The **actual claim 4/3/1**, comprising A+B+D+E

- The **actual claim 4/3/2**, comprising A+B+C+D+E

CUESTIÓN 14.4

REIVINDICACIONES DEPENDENDIENTES

En US se permiten las reivs. con dependencia múltiple, aunque *"a multiple dependent claim shall not serve as a basis for any other multiple dependent claim"* (35 U.S.C. 112(e)). ¿Conviene considerar presentar reiv. con dependencia múltiple en US?

Some fees associated to the number of pages and the number of claims in patent applications

PCT fees (2016 Nov.)

- **14 EUR / page in excess of 30** (the request takes a 5 or more)

(nothing paid for claims -> claims for both USPTO and EPO can be included)

EPO fees (2016 Nov.)

- 15 EUR / page in excess of 35 in appln. (sequence listing does not pay)
- **235 EUR / *numbered* claim in excess of 15** (580 EUR in excess of 50)

USPTO fees (2016 Nov.)

NO!

- **80 USD per each *actual* claim in excess of 20 [deterrent!]**
- **420 USD per each independent in excess of 3**
- **780 USD per each claim written in multiple dependent form [deterrent!]**

Note: In the Spanish Patent & Trademark Office (OEPM) no fees are paid for number of pages or number of claims.

CUESTIÓN 14.5

REIVINDICACIONES DEPENDENDIENTES

¿Debe la PCT redactarse con reivs. con dependencia múltiple, pensando en la entrada en EP, o bien sin ellas, pensando en la entrada en US?

It is recommended to draft with multiple dependencies to prepare for claim amendments that do not add subject matter to a patent application as filed

If the applicant has the following **claim set, with *only singular dependencies*:**

Claim 1. A Preamble-P, comprising: an element A selected from the group consisting of A1, and A2; and an element B selected from the group consisting of B1, B2, and B3.
Claim 2. The P's noun according to claim 1, wherein A is A1.
Claim 3. The P's noun according to claim 1, wherein A is A2.
*Claim 4. The P's noun **according to claim 1** , wherein B is B1.*
*Claim 5. The P's noun **according to claim 1** , wherein B is B2.*
*Claim 6. The P's noun **according to claim 1** , wherein B is B3.*

*and, for some reason (e.g. it is the only one reaching the market), the embodiment "Preamble-P comprising A1 and B3" is so interesting that **the applicant wants to amend the claim set by replacing previous Claims 1-6 with a new independent claim reading:***

[new] Claim 1. A Preamble-P, comprising: element A1; and element B3.

*Unless in the application's description there is an embodiment specifically disclosing "Preamble-P comprising A1 and B3" (what we assume does not happen in this case), **in the EPO such amendment would likely be objected under Art. 123.2 EPC (added subject matter) saying that it artificially adds new subject matter by creating what the EPO case law calls "undisclosed selection from two lists of certain length."***

cont.

According to EPO case law, such an objection would not be raised if there is a dependent claim *specifically* claiming "Preamble-P comprising A1 and B3". This does not happen in the above set of six claims drafted with only singular dependencies, but it does happen in the following set of claims, where **Claims 4-6 have been written with *multiple dependencies*:**

Claim 1. A Preamble-P, comprising: an element A selected from the group consisting of A1, and A2; and an element B selected from the group consisting of B1, B2, and B3.

Claim 2. The P's noun according to claim 1, wherein A is A1.

Claim 3. The P's noun according to claim 1, wherein A is A2.

[new] *Claim 4. The P's noun **according to any one of claims 1-3**, wherein B is B1.*

[new] *Claim 5. The P's noun **according to any one of claims 1-3**, wherein B is B2.*

[new] *Claim 6. The P's noun **according to any one of claims 1-3**, wherein B is B3.*

As Claim 6*/2* (Claim 6 insofar it depends from Claim 2), written in independent form, reads exactly as the new desired Claim 1 (*A Preamble-P, comprising: element A1, and element B3*) the amendment is allowable as it does not add any subject matter to the application as filed.

Multiple dependencies also prepare for claim amendments that do not extend the conferred protection of a granted patent

Having many actual claims coming from multiple dependencies is also very convenient to patent's proprietor in case the validity of a granted patent is challenged by third parties, or in case the proprietor wants to limit the protection scope on his own initiative, for example, limiting it to a very narrow - and very strong- claim which protects the only commercial product that is susceptible of being imitated. In these cases claim amendments will only be allowable if they do not extend the protection conferred by the granted patent. This can be illustrated by comparison between the two dependency groups of six claims of the previous example, without and with multiple dependencies, respectively, in a nullity action.

If the only embodiment of interest is "Preamble-P comprising A1 and B3" (e.g. the only authorized active pharmaceutical ingredient, that is the only one that generic companies want to exploit). **In a nullity action, a prior art document disclosing "Preamble-P comprising A2 and B3" would be novelty destroying for Claim 1 and Claim 6 of the first claim set**, invalidating the two granted claims that protect the embodiment of interest. **However, this prior art document would not be novelty destroying for Claim 6/2 of the second claim set, that reads "Preamble-P comprising A1 and B3" and specifically protects the embodiment of interest.**

A schematic example: Brainstorming phase

i) *Preamble-P* is appropriate for the designation of the claimed subject matter, i.e. for being used at the beginning of the only independent claim of the example.

ii) Inventors have made a prototype "Preamble-P having A11, B11, C1, D, E, and F" that will be disclosed in detail in the *Description of Embodiments* section of the patent application.

iii) Only elements A11, B11 and C1 (as such or broadened) of the prototype are considered essential elements of the invention.

iv) The order of importance of the rest of elements of the prototype is D > E > F. Although not included in the prototype, element G is also interesting, after F in importance order.

v) An element having two mutually exclusive alternatives, H1 and H2, is considered useful to differentiate two market sectors.

vi) The closest prior art known by inventors and drafter is a document disclosing "Preamble-P having A11 and B11".

vii) Of the three essential elements in the prototype, there is a *strong* support to broaden terminology from A11 to A1, and from A1 to A ($A11 \subset A1 \subset A$).

viii) There is a *very reasonable* support to broaden terminology from B11 to B1, and from B1 to B ($B11 \subset B1 \subset B$).

ix) It is *reasonable* to think that a person skilled in the art would consider that element C1 of the prototype is equivalent to C2, C3, and C3, what makes reasonable to use a Markush group consisting of the four elements.

Drafting in the EPO style

From the premises the following **independent claim** will be straightforwardly drafted:

[standard] *Claim 1. A preamble-P comprising: element A; element B; and an element C selected from the group consisting of C1, C2, C3, and C4.*

Claim 1 is drafted in standard format. Depending on the case, an EPO examiner could ask that Claim 1 is drafted in two-part format, in which, having in mind that "Preamble-P having A11 and B11" is part of prior art, Claim 1 would read:

[two-part] *Claim 1. A preamble-P comprising: element A; and element B; characterized by further comprising an element C selected from the group consisting of C1, C2, C3, and C4.*

Regardless of which format is used in Claim 1, **before drafting dependent claims that add extra elements**, in order to get **fallback positions** it will be advisable to draft **dependent claims that add selected elements** from the broad elements of Claim 1.

In this case, the addition of selected values will follow the order A > B > C, given the different degrees of support in the respective broadening of prototype elements A11, B11 and C1. Thus, the first two dependent claims will read:

Claim 2. The P's noun according to claim 1, wherein element A is A1.

Claim 3. The P's noun according to claim 2, wherein element A1 is A11.

So far, Claims 1-3 form a dependency chain with **only singular dependency, as it is recommended when successive selected elements are added**. However, **when an extra element is selected or added, writing the claim in multiple dependent form is strongly recommended for the EPO**. Thus, Claims 4-6 will read:

Claim 4. The P's noun according to any one of claims 1-3 , wherein element B is B1.

Claim 5. The P's noun according to claim 4, wherein element B1 is B11.

Claim 6. The P's noun according to any one of claims 1-5 , wherein element C is C1.

Now claims **adding the rest of elements in order of importance (D > E > F > G)** are drafted, with the two mutually exclusive alternatives H1 and H2 at the end, as follows:

Claim 7. The P's noun according to any one of claims 1-6, further comprising element D.

Claim 8. The P's noun according to any one of claims 1-7, further comprising element E.

Claim 9. The P's noun according to any one of claims 1-8, further comprising element F.

Claim 10. The P's noun according to any one of claims 1-9, further comprising element G.

Claim 11. The P's noun according to any one of claims 1-10, further comprising element H1.

Claim 12. The P's noun according to any one of claims 1-10, further comprising element H2.

Such a claim set has 12 numbered claims (3 below the limit of 15 which is allowed in the EPO without paying extra claim fee); but a simple calculation shows that the set has a total of 844 actual claims. This claim set will be appropriate for the EPO and those patent offices that allow multiple dependencies from multiple dependent claims (not for the USPTO!).

CUESTIÓN 14.6

REIVINDICACIONES DEPENDENDIENTES

Si en la PCT se han redactado las reivs. con dependencias múltiples pensando en la entrada en EP, ¿debe dejarse en manos del corresponsal US la adaptación de las reivs. para la entrada en US, o debe de hacerse la adaptación por el redactor original de la PCT? ¿Cómo hacer tal adaptación?

Example of a dependency group of five claims, two of which (3 & 5) are written in multiple dependent form

EP 2.145.597 A1 (original drafting of application for electorsurgical instrument)

1. A monopolar electrosurgical instrument (1) for tissue coagulation and cut comprising a cylindrical metallic electrode which is connected to one pole of a radio frequency generator (14) on one extreme; said electrode comprising a liquid supply for cooling, a handle (7) that covers part of the electrode, a part (6) covered with an insulative material, and a coagulating and cutting uninsulated tip; said tip comprising a round ending part (2), a part (3) attached to a cutting metal blade (5) near the end, and a part (4) non-attached to a cutting metal blade.

2. The instrument according to claim 1, wherein the radio frequency generator produces an unmodulated current.

3. The instrument according to any of the claims 1-2, wherein the tissue is a parenchyma (11).

4. The Instrument according to claim 3, wherein the parenchyma (11) is selected from the group consisting of liver, lung, spleen and kidney,

5. The instrument according to any of the claims 1-4, wherein the electrode has a diameter between 3 mm and 1 cm.

US 2010/0137856 A1: Example of an adaptation of claims done by a US patent attorney, from the first five claims of EP 2.145.497 A1

1. A monopolar electrosurgical instrument (1) for tissue coagulation and cut comprising a cylindrical metallic electrode which is connected to one pole of a radio frequency generator (14) on one extreme; said electrode comprising a liquid supply for cooling, a handle (7) that covers part of the electrode, a part (6) covered with an insulative material, and a coagulating and cutting uninsulated tip; said tip comprising a round ending part (2), a part (3) attached to a cutting metal blade (5) near the end, and a part (4) non-attached to a cutting metal blade.

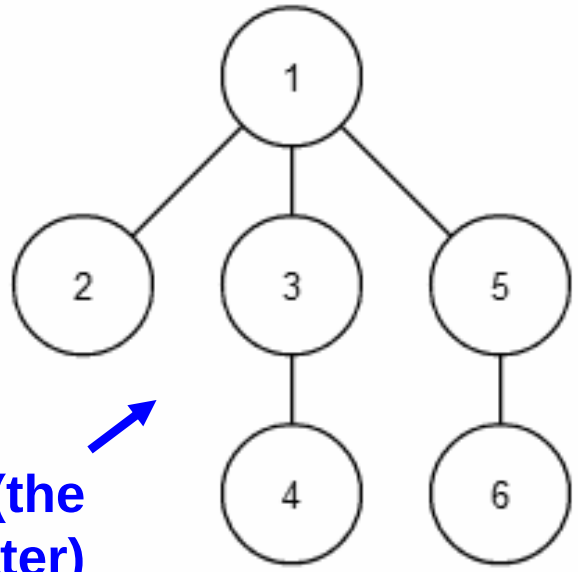
2. The instrument according to claim 1, wherein the radio frequency generator produces an unmodulated current.

3. The instrument according to claim 1, wherein the tissue is a parenchyma (11).

4. The instrument according to claim 3, wherein the parenchyma (11) is selected from the group consisting of liver, lung, spleen and kidney.

5. The instrument according to claim 1, wherein the electrode has a diameter between 3 mm and 1 cm.

6. The instrument according to claim 5, wherein the electrode has a diameter between 3 and 6 mm.



Corresponding claim tree (the one of Espacenet, see later)

Adapting a claim set in the EPO style to the USPTO practice

Before the PCT with the previous claim set enters the US national phase, the applicant should make use of the opportunity of amending the claims (cf. Art. 26 PCT. Opportunity to correct before Designated Offices) for the US practice. **Drafting a claim set appropriate for the USPTO should be done with great care, ideally by the same patent drafter who has drafted the PCT application, as he knows in detail what is behind the original claim set**. **If this task is merely left -without specific instructions- in the hands of a US patent expert, it might happens that he would merely remove all the multiple dependencies**, by transforming every claim "according to any one of claims 1-x" into a claim "according to claim 1", thus creating a *dependency pyramid* with Claim 1 as its vertex, a structure that is not recommendable as it does not provide good fallback positions for the eventual case where the vertex Claim 1 is found not to be novel.

A systematic approach for adapting to the USPTO style dependency groups originally drafted in the EPO style, is here illustrated using the previous 12 claims. To start, original Claims 1-3 are equally appropriate for the USPTO, as they do not have any multiple dependency.

Original Claims 4 and 6-12 are written in multiple dependent form. **In order to 'deconstruct' multiple dependencies into appropriate singular dependencies, the following steps may be followed**: (i) firstly, drafting dependency chains with the broadest meaning of the elements; (ii) secondly, drafting dependency chains with the narrowest meanings of the elements; and (iii) finally, drafting claims with intermediate meanings of the elements, in case the total number of claims is still reasonable (ideally no more than 20, to avoid having to pay extra claim fee).

(i) drafting dependency chains with the broadest meaning of the elements:

[US-Claims 1-3 = Claims 1-3 in EPO style, in standard format]

US-Claim 4. The P's noun according to claim 1 , wherein element B is B1.
US-Claim 5. The P's noun according to claim 4, wherein element B1 is B11.
US-Claim 6. The P's noun according to claim 1 , wherein element C is C1.
US-Claim 7. The P's noun according to claim 1, further comprising element D.
US-Claim 8. The P's noun according to claim 7, further comprising element E.
US-Claim 9. The P's noun according to claim 8, further comprising element F.
US-Claim 10. The P's noun according to claim 9, further comprising element G.
US-Claim 11. The P's noun according to claim 10, further comprising element H1.
US-Claim 12. The P's noun according to claim 10, further comprising element H2.

(ii) secondly, drafting dependency chains with the narrowest meanings of the elements:

US-Claim 13. The P's noun according to claim 3 , wherein element B is B11.
US-Claim 14. The P's noun according to claim 13 , wherein element C is C1.
US-Claim 15. The P's noun according to claim 14, further comprising element D.
US-Claim 16. The P's noun according to claim 15, further comprising element E.
US-Claim 17. The P's noun according to claim 16, further comprising element F.
US-Claim 18. The P's noun according to claim 17, further comprising element G.
US-Claim 19. The P's noun according to claim 18, further comprising element H1.
US-Claim 20. The P's noun according to claim 18, further comprising element H2

Comments to USPTO-style adaptation

US-Claim 4 is written as dependent from the broadest of the first three (Claim 1) and it adds B1, the broadest selected element from B, whereas US-Claim 13 is written as dependent from the narrowest of the first three (Claim 3) and it adds B11, the narrowest selected element from B.

Thus, US-Claim 6 is written as dependent from the broadest claim (Claim 1), whereas US-Claim 14 is written as dependent from the narrow US-Claim 13, both of them adding selected element C1.

US-Claim 7, adding extra element D, is written as dependent from the broadest claim (Claim 1), so US-Claims 8-12, all hanging from US-Claim 7, are claiming broadly.

However, US-Claim 15, adding extra element D, is written as dependent from narrow US-Claim 14, so US-Claims 15-20, all hanging from US-Claim 15 are claiming narrowly.

With this claim set of 20 claims, and a criteria of added matter of low severity, the USPTO will surely accept as amendment any claim with scope between those of US-Claim 1 (broadest one) and US-Claims 19-20 (narrowest ones).

CUESTIÓN 14.7

REIVINDICACIONES DEPENDENDIENTES

¿Resulta útil elaborar el llamado *claim tree* para analizar las relaciones de dependencia dentro de un grupo de reivs. que dependen de una sola reiv. independiente? ¿En qué casos? ¿Qué notación usaríamos para las reivs. con dependencia múltiple?

Espacenet's limited claim trees 1/2

Claims: EP2145597 (A1) -

In my patents list | EP Register | Report data error | Print

ELECTROSURGICAL INSTRUMENT FOR TISSUE COAGULATION AND CUTTING

Claims of EP2145597 (A1)

A high quality text as facsimile in your desired language may be available amongst the following family members:

ES2307427 (A1) US2010137856 (A1) WO2008135613 (A1)

Translate this text into

Select language

patenttranslate powered by EPO and Google

Original claims | **Claims tree**

1. A monopolar electrosurgical instrument (1) for tissue coagulation and cut comprising a cylindrical metallic electrode which Is connected to one pole of a radio frequency generator (14) on one extreme; said electrode comprising a liquid supply for cooling, a handle (7) that covers part of the electrode, a part (6) covered with an insulative material, and a coagulating and cutting uninsulated tip; said tip comprising a round ending part (2), a part (3) attached to a cutting metal blade (5) near the end, and a part (4) non-attached to a cutting metal blade.

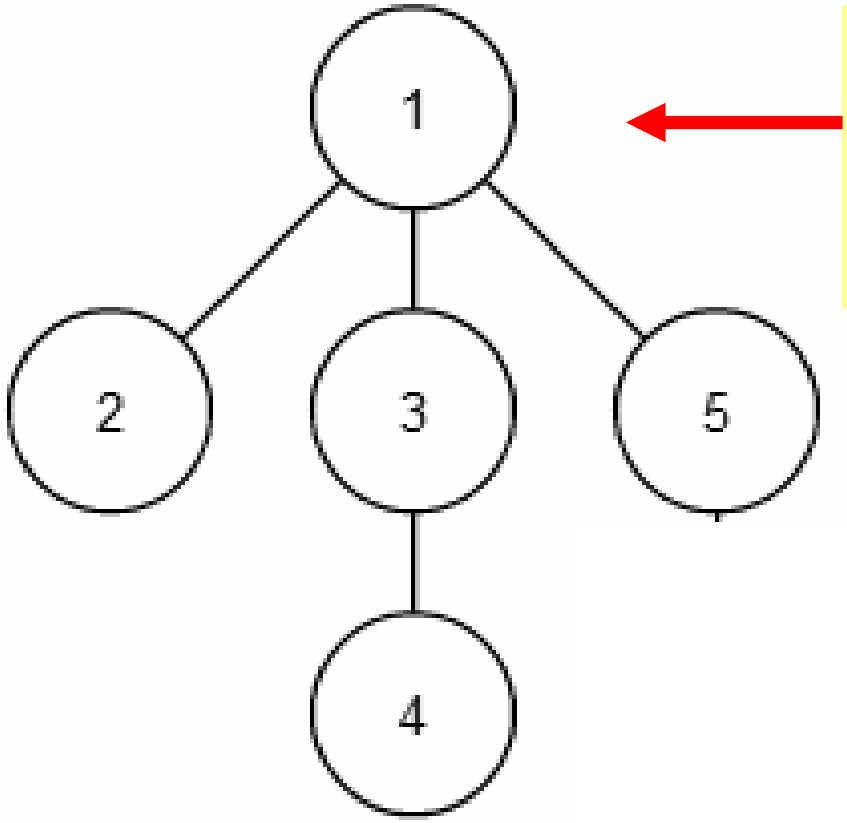
2. The instrument according to claim 1, wherein the radio frequency generator produces an unmodulated current.

3. The instrument according to any of the claims 1-2, wherein the tissue is a parenchyma (11).

4. The Instrument according to claim 3, wherein the parenchyma (11) is selected from the group consisting of liver, lung, spleen and kidney,

5. The instrument according to any of the claims 1-4, wherein the electrode has a diameter between 3 mm and 1 cm.

Espacenet's limited claim trees 2/2



In Espacenet's (pseudo) claim trees, only simple/singular dependencies are shown, thus being wrong when there are multiple dependencies in the group of claims

5/3/2

↓

3/2 ← **4/3/2** ← **5/4/3/2**

↓

2 ← **5/2**

↓

1 ← **5/1**

↑

3/1 ← **4/3/1** ← **5/4/3/1**

↑

5/3/1

This is the true claim tree in this case (see previous slides)

[US MPEP] 608.01(n) I. F. Handling of Multiple Dependent Claims by the Examiner

The following practice is followed by patent examiners when making reference to a dependent claim either singular or multiple:

(A) When identifying a **singular dependent claim which does not include a reference to a multiple dependent claim**, either directly or indirectly, reference should be made only to the number of the dependent claim.

(B) When identifying the embodiments included within a **multiple dependent claim, or a singular dependent claim which includes a reference to a multiple dependent claim**, either directly or indirectly, each embodiment should be **identified by using the number of the claims involved, starting with the highest, *to the extent necessary* to specifically identify each embodiment.**

Claim No.	Claim dependency	Approved practice
1	Independent	1
2	Depends from 1	2
3	Depends from 2	3
4	Depends from 2 or 3	4/2 4/3
5	Depends from 3	5
6	Depends from 2, 3, or 5	6/2 6/3 6/5
7	Depends from 6	7/6/2 7/6/3 7/6/5

CUESTIÓN 15

REIVINDICACIONES CON REFERENCIAS DE DEFINICIÓN

Al redactar una reiv. ¿cuándo conviene usar referencias de definición (que no crean dependencia)?

Claim practice of EPO (OEPM & many others): use of definition references to simplify drafting

F-IV, 3.8 Independent claims containing a [definition] reference to another claim or to features from a claim of another category

A claim may also contain a reference to another claim even if it is not a dependent claim as defined in Rule 43(4). One example of this is a claim referring to a claim of a different category (e.g. "Apparatus for carrying out the process of claim 1 ...", or "Process for the manufacture of the product of claim 1 ..."). Similarly, in a situation like the plug and socket example of F-IV,3.2(i), a claim to the one part referring to the other co-operating part (e.g. "plug for co-operation with the socket of claim 1 ...") **is not a dependent claim**. In all these examples, the examiner should carefully consider the extent to which the claim containing the reference necessarily involves the features of the claim referred to and the extent to which it does not...

Para simplificar la redacción de las reivs. se pueden usar tanto dependencias múltiples como referencias de definición (simples o múltiples) que no crean dependencias

Sin crear dependencias múltiples, en la EPO (siempre) y en la USPTO (casi siempre) es frecuente usar referencias de definición a otras reivs. anteriores, eliminando la necesidad de repetir el texto de lo ya definido en las reivs. referenciadas. Lo más típico (y recomendable en opinión del autor) es usar la expresión *"as defined in claim #" = "como se define en la reiv. #"*, siendo # el número de la reiv. referenciada.

Esto es especialmente útil cuando se hace en una reiv. independiente, creando así un nuevo grupo de dependencia, con una única reiv. formal.

Sin embargo, una reiv. dependiente, dentro de un mismo grupo de dependencia correspondiente a una única reiv. independiente, tiene dos propiedades: la reiv. dependiente y la reiv. de la que se depende (su reiv. base) tienen la misma categoría, porque comparten el mismo preámbulo; y además el alcance de la protección (estrictamente, de la materia reivindicada) de la reiv. dependiente es un subconjunto del alcance de la protección de la reiv. de la que se depende. Para la redacción de la reiv. dependiente se recomienda la expresión *"according to claim #" = "según la reivindicación #"* al principio, siendo # el número de la reiv. de la que se depende (reiv. base).

Apple's EP 2.126.678 B1 (ES 2.376.788 T3) eq. to US 7.469.381 B2

Claims

1. A computer-implemented method, comprising:

at a device (100; 1700) with a touch screen display (112; 1740):

detecting (702) a movement of an object on or near the touch screen display;
in response to detecting the movement, translating (704) an electronic document displayed on the touch screen display in a first direction;
characterized by
in response to translating, in the first direction, the electronic document beyond an edge of the electronic document while the object is still detected on or near the touch screen display (710 - Yes), displaying (714) an area beyond the edge of the document; and
in response to detecting that the object is no longer on or near the touch screen display, translating (720) the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed.

2. The computer-implemented method of claim 1, wherein the movement of the object is on the touch screen display.

+ Claims 3-17, dependent from Claim 1

18. A computer readable storage medium having stored therein instructions, which when executed by a processor of a device (100; 1700) with a touch screen display (112; 1740), cause the device to:

detect (702) a movement of an object on or near the touch screen display;
translate (704) the electronic document displayed on the touch screen display in a first direction in response to detecting the movement;
characterized in that
the instructions when executed on the device further cause the device to:

display (714) an area beyond an edge of the electronic document, if (710 - Yes) the electronic document is translated, in the first direction, beyond the edge of the electronic document while the object is still detected on or near the touch screen display; and
translate (720) the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed in response to detecting that the object is no longer on or near the touch

19. A claim with a definition reference

19. A device (100; 1700), comprising:

a touch screen display (112; 1740);
one or more processors (120; 1710); and
a computer readable storage medium according to claim 18.

Some claims of US 5,633,435, later amended or deleted in its reissue patent US Re39247 (Monsanto)

28. A glyphosate-tolerate plant comprising plant cells of claim **27**.

29. A glyphosate-tolerant plant of claim **28** in which the promoter is from a DNA plant virus promoter.

30. A glyphosate-tolerant plant of claim **29** in which the promoter is selected from the group consisting of CaMV35S and FMV35S promoters.

31. A glyphosate-tolerant plant of claim **30** selected from the group consisting of corn, wheat, rice, barley, soybean, cotton, sugarbeet, oilseed rape, canola, flax, sunflower, potato, tobacco, tomato, alfalfa, poplar, pine, eukalyptus, apple, lettuce, peas, lentils, grape and turf g

.....

86. A transgenic soybean plant which cor
ologous gene which encodes an EPSPS enzym
for phosphoenolpyruvate (PEP) between 1 an
a K_i(glyphosate)/K_m(PEP) ratio between abo
said plant exhibiting tole
N-phosphonomethylglycine herbicide at a rat
without significant yield reduction due to herbicide application.

87. Seed of a soybean plant of claim **86**.

definition ref.

reference of a dependent claim

In the US ***multiple*** definition references are not used, as they would be considered as ***multiple*** dependencies for claim-fee purposes

a definition reference

Some claims amended or deleted in US Re39247 (Monsanto)

28. A glyphosate-tolerant plant comprising *the* plant **[**cells**]** *cell* of claim **27**.

29. **[**A**]** *The* glyphosate-tolerant plant of claim **28** in which the promoter is from a DNA plant virus promoter.

30. **[**A**]** *The* glyphosate-tolerant plant of claim **29** in which the promoter is selected from the group consisting of CaMV35S and FMV35S promoters.

31. **[**A**]** *The* glyphosate-tolerant plant of claim **30** selected from the group consisting of corn, wheat, rice, barley, soybean, cotton, sugarbeet, oilseed rape, canola, flax, sunflower, potato, tobacco, tomato, alfalfa, poplar, pine, **[**eukalyptus**]** *eucalyptus*, apple, lettuce, peas, lentils, grape and turf grasses.

definition ref.

references of dependent claims.

"A" is improper and is substituted by "The"

.....

[86. A transgenic soybean plant which contains a heterologous gene which encodes an EPSPS enzyme having a K_m for phosphoenolpyruvate (PEP) between 1 and 150 μM and a K_i(glyphosate)/K_m(PEP) ratio between about 2 and 500, said plant exhibiting tolerance to N-phosphonomethylglycine herbicide at a rate of 1 lb/acre without significant yield reduction due to herbicide application.**]**

[87. Seed of a soybean plant of claim **86**.**]**

a definition reference

Some claims added in US Re39247 (Monsanto)

116. A glyphosate-tolerant plant comprising a DNA sequence encoding an EPSPS enzyme having the sequence of SEQ ID NO: 70.

117. The plant of claim 116, wherein the plant is corn, wheat, rice, barley, soybean, cotton, sugarbeet, oilseed rape, canola, flax, sunflower, potato, tobacco, tomato, alfalfa, poplar, pine, eucalyptus, apple, lettuce, peas, lentils, grape or turf grasses.

reference of a dependent claim

118. The plant of claim 117, wherein the plant is corn.

119. The plant of claim 117, wherein the plant is soybean.

120. The plant of claim 117, wherein the plant is canola.

121. The plant of claim 117, wherein the plant is cotton.

122. A seed of the plant of claim 116, wherein the seed comprises the DNA sequence encoding an EPSPS enzyme having the sequence of SEQ ID NO: 70.

definition reference

123. The seed of claim 122, wherein the seed is corn, wheat, rice, barley, soybean, cotton, sugarbeet, oilseed rape, canola, flax, sunflower, potato, tobacco, tomato, alfalfa, poplar, pine, eucalyptus, apple, lettuce, peas, lentils, grape or turf grass seed.

reference of a dependent claim

124. The seed of claim 123, wherein the seed is corn seed.

125. The seed of claim 123, wherein the seed is soybean seed.

CUESTIÓN 15.1

REIVINDICACIONES CON REFERENCIAS DE DEFINICIÓN

De todas las expresiones usadas para redactar las referencias de definición (que en la práctica son las mismas que para las referencias de dependencia), ¿cuál preferimos?

To make drafting simpler, definition references can be made to claims of different preambles

Claim 1. A product, comprising: elements A; B; and C.

Claim 10. Use of the product comprising: elements A; B; and C, for doing ...

Claim 10 (simplified)**. Use of the *product as defined in claim 1*, for doing ...**

Claim 20. A preparation process of the *product, comprising elements A; B; and C*, comprising the following steps: (i)...; (ii)...; and (iii)..

Claim 20 (simplified)**. A preparation process of the *product as defined in claim 1*, comprising the following steps: (i)...; (ii)...; and (iii)...**

Claim 30. (simplified) **An apparatus for carrying out the *preparation process as defined in claim 20*, comprising: elements H, I and J.**

In this example, only singular definition references are made. Multiple definition references are also possible (see later)

CUESTIÓN 15.2

REIVINDICACIONES CON REFERENCIAS DE DEFINICIÓN

Si se desea elaborar un *claim tree*, ¿qué notación usaríamos para las reivs. con referencias de definición?

Examples of drafting dependency groups of different preambles by using multiple definition references to a previous dependency group

1.-7. : Seven claims of "Method for [doing something]", with the claim tree:

1 ← 2 ← 3 ← 4 ← 5
↑
6 ← 7

8. A device for carrying out the method as defined in any of claims 1-7, etc. etc.

8(1) ← 8(2) ← 8(3) ← 8(4) ← 8(5)
↑
8(6) ← 8(7)

9. A computer program [product] comprising computer program code instructions adapted to perform all the steps of the method as defined in any of claims 1-7.

9(1) ← 9(2) ← 9(3) ← 9(4) ← 9(5)
↑
9(6) ← 9(7)

NOTE: Use of brackets is a claim notation proposed by the author

CUESTIÓN 15.3

REIVINDICACIONES CON REFERENCIAS DE DEFINICIÓN

¿Qué diferencias prácticas hay entre la EPO y la USPTO respecto al uso de reivs. con referencias de definición?

EP 2.145.597 A1 (continuation)

10. The instrument according to claim 9, wherein the part (4) non-attached to the blade has a total curvature amounting to an angle α from 40 to 60° with respect to the axes of the electrode.

11. The instrument according to claim 10, wherein the angle is 45°.

12. The instrument according to any of the claims 1-11, wherein the metal blade (5) forms part of a metallic ring (17), which is in contact with the electrode through a anular piece of a non-conductor material, thereby the metallic blade is electrically isolated.

13. A radio frequency-assisted device for tissue coagulation and cut, comprising:

definition reference to create a dependency group of a different category

(a) an electrosurgical instrument as defined in any of the claims 1-12;
(b) a source (12) of cooling solution connected to the Inner part of the electrode so the cooling solution circulate near the end of the electrode tip, by means of a pump (13);
(c) an outer collection assembly (16) for collecting the used cooling solution; and
(d) a radio frequency generator (14) with one pole connected to the electrosurgical instrument and the other pole to the body of the animal or human,

In the USPTO a claim with a multiple-dependent reference would be considered as a multiple dependency claim for fee purposes, and it would pay extra 780 USD (plus 90 USD per each actual claim included); consequently, today neither multiple definition nor multiples dependencies are virtually used.

Inventors have synthesized several *new chemical compounds*, three of which -of specific formulas Cx, Cy and Cz- have closely related structures and, according to some preclinical experimental data, have a very high probability of being developed (as such; salts or other derivatives not being contemplated in this case) as active pharmaceutical ingredients *for treating disease X in humans*. The patent drafter has prepared the following claim set for a priority application to protect the invention, that is foreseen *to be protected in several countries via a PCT application*:

Claim 1. A compound of formula C1 [a Markush formula with a fixed part and one or more radicals having alternative values].

Claim 2. The compound according to claim 1, wherein ... [radicals corresponding to a general formula C2 $\subset$ C1].

Claim 3. The compound according to claim 1, wherein ... [radicals corresponding to a general formula C3 $\subset$ C2].

Claim 4. The compound according to claim 3, having the [specific] formula Cx.

Claim 5. The compound according to claim 3, having the [specific] formula Cy.

Claim 6. The compound according to claim 3, having the [specific] formula Cz.

cont.

The drafter has considered worth claiming preparation processes, pharmaceutical compositions, general (first) medical use, and specific (second) medical uses, the later in several formats (he will leave only one in the PCT, providing support to all formats in the description). These are the claims:

Claim 7. A preparation process of a compound as defined in any one of claims 1-6 , comprising the steps: ... [those steps corresponding to a general process P].

Claim 8. A pharmaceutical composition comprising a compound as defined in any one of claims 1-6 , together with pharmaceutically acceptable excipients.

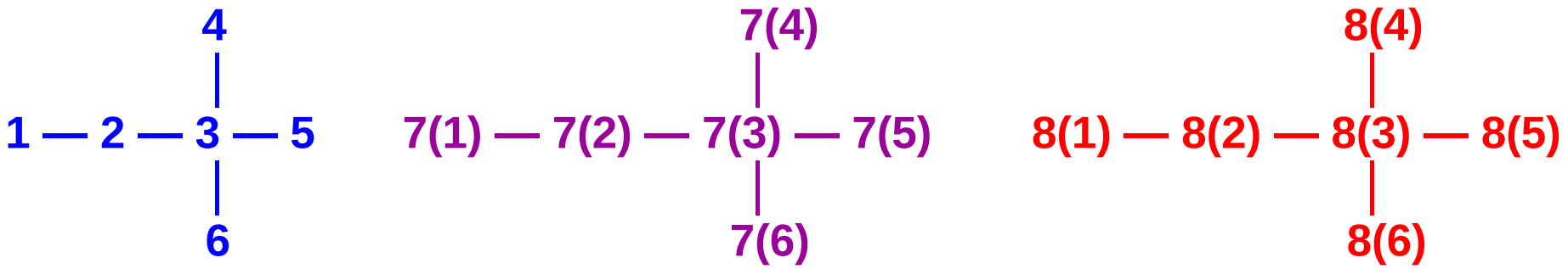
Claim 9. A compound as defined in any one of claims 1-6 , for use as an active pharmaceutical ingredient.

Claim 10. A compound as defined in any one of claims 1-6 , for use in the treatment of disease X in humans.

Claim 11. Use of a compound as defined in any one of claims 1-6 , in the manufacture of a medicament for the treatment of disease X in humans.

Claim 12. A method of treatment of a human having disease X, comprising the administration to the human of an effective X treatment amount of a compound as defined in any one of claims 1-6.

Trees of Claims 1-8, with multiple definition references to a dependency group (Claims 1-6) that only has singular dependency references



compounds **preparation processes** **pharmaceutical compositions**

(analogously for Claims 9-12)

In the claim set of this example, the total number of actual claims is 42:

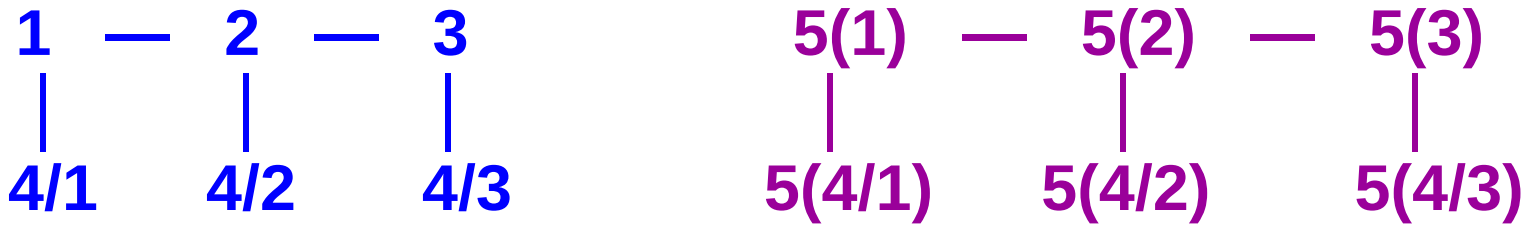
- 6 corresponding to the dependency group of numbered Claims 1 to 6;
- plus 36 coming from the six dependency groups (of 6 actual claims each) created by the six numbered Claims 7 to 12.

However, the total of numbered claims are 12, 3 claims below the limit of 15 without extra claim fee in the EPO.

Simultaneous use of multiple dependency refs. and multiple definition refs.

The invention relates to the use of certain new compositions as insecticides. For the EPO non-medical use claims may be drafted as "Use of a composition X as insecticide". But in this cases ***process of using* claims** have been drafted, that will grant the same protection and will be acceptable in most countries. The corresponding claim trees illustrate the **simultaneous use of the notation used for claims coming from singular and multiple definition references, and the notation used for claims coming from multiple dependency references.**

Claim 1. ***A chemical composition*** *comprising: compound A; and compound B.*
Claim 2. ***The composition according to claim 1****, further comprising compound C.*
Claim 3. ***The composition according to claim 2****, further comprising compound D.*
Claim 4. ***The composition according to any one of claims 1-3*** *, further comprising compound E.*
Claim 5. ***A process of killing insects using a composition as defined in any one of claims 1-4 .***



composition claims **process claims**

Format, style, order, number, dependency (independent, dependent, multiple dependent), **definition references** ...

Why should the claim drafter worry about such complex issues, which do not refer to technical terminology?

Because:

- **prosecution easiness** during examination;
- **protection/validity level** in a nullity and/or infringement lawsuit;
- **time** invested by inventors during prosecution;
- **claim fees** paid for by applicant, and
- **patent experts' honoraria** paid for by the applicant...

... will very much depend on how claims were initially drafted!

To know more on patent application drafting...

WIPO
Patent Drafting
Manual

Written by more than 10 authors, from 7 different countries (no Spain) and the WIPO. Published ca. 2006 (137 pp.)

This author has cooperated in its updating and revision, particularly in Parts VI & VII.

WIPO
WORLD INTELLECTUAL PROPERTY ORGANIZATION

section

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3

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8

DRAFTING PATENT CLAIMS AND CLAIM SETS

(Excerpts from the first draft of "WIPO Patent Drafting Manual", 2nd edition, *in press*)

VI. Fundamentals of Claim Drafting

A. The Patent Claim Concept

1. The (Undefined) Concepts of Invention and Technology
2. A Claim Is a Defining Sentence of a Set of Technical Subject Matter for Which Protection Is Sought
3. Claim Infringement: Protection Scope and Questioned Embodiments. All Elements Rule. Element-by-Element Comparison. Kinds of Elements/Limitations/Technical Features
4. Drafting a Claim as if It Would be Interpreted Literally, and as if Any Attempt to Imitate its Subject Matter Would Infringe It Directly

B. Claim Formats

1. Standard Claim Format: Preamble + Transitional Phrase (*comprising*) + Body. Punctuation, References, and Brackets
2. Two-Part Claim Format: *characterized by/in that* in the EPC; *wherein the improvement comprises* in US
3. Claims with Markush Groups. Markush Formulas
4. Claims with Elements Defined as Means-Plus-Function

C. Basic Types of Claims: Entity/Product and Activity/Process/Method. Claims of Process/Method to Obtain. US Statutory Classes of Claims

D. Special Types of Claims

1. Product-by-Process Claims
2. Claims of Products Defined by Parameters
3. Non-Medical Use Claims in the EPO. Process/Method of Using Claims in US and Other Countries
4. Claims on Specific (Second) Medical Uses: Method of Treatment Claims in US, Swiss-type Claims, Purpose-Limited-Product Claims in the EPO
5. Claims on General (First) Medical Use in the EPO

VII. Claim Dependency and Claim Sets

A. Dependency between Different Patents, Concerning Infringement

B. Dependency between Claims of the Same Patent, Concerning Scope

1. A Claim Written in Dependent Form Includes All the Elements of the Claim to Which It Refers (*Base Claim*), by Using a *Dependency Reference* at the Beggining. Singular and Multiple Dependencies
2. Claims Written in Singular Dependent Form. Claim Trees
3. Claims Written in Multiple Dependent Form
4. Analysis of Claim Dependency as an Aid for the Assessment of Validity and Infringement
5. Multiple Dependencies in Claim Sets to Prepare for Claim Amendments That Do Not Add Subject Matter and Do Not Extend the Conferred Protection
6. Schematic Example of Drafting a Dependency Group of Claims

C. Claim Drafting Simplification by Using *Definition References* to Claims of Different Preambles

Bibliography on patent application drafting

- **J.G. Sheldon, "How to Write a Patent Application"**, Practising Law Institute, New York, 2nd Edition (loose-leaf, updated approx. 1-2 times/year); Release No.1, April 2010, more than 1.300 pp.; ISBN 978-1-4024-1295-0.

- **R.C. Faber, "Faber on Mechanics of Patent Claim Drafting"**, Practising Law Institute, New York, 6th edition (loose-leaf, updated approx. 1 time/year); more than 1.000 pp; Release No. 3, July 2010; ISBN 9781402411342.

- **P. Cole** (author & compiler)**, "Fundamentals of Patent Drafting"**, The Chartered Institute of Patent Attorneys (CIPA), London 2006, 306 pages; ISBN 0903932237. Price (postage not included): 25 GBP.

- **G. Roberts, "A Practical Guide to Drafting Patents"**, EIPR Practice Series # 3, Thomson-Sweet & Maxwell, London 2007, 168 pages; ISBN 10 0421938609. Price (postage not included): 85 GBP.

- **S.A. Becker, "Patent Application Handbook"**, 2008 edition, West Group; more than 1.000 pages; ISBN 0314102426. Price: 607 USD.

- "**WIPO Patent Drafting Manual"**, Pub. No. 867E (2009). **"Manual de la OMPI de redacción de solicitudes de patentes"**, Pub. No. 8675 (both are free of charge in www.wipo.int).

Módulos	Duración	Ciudades	Fechas
Fundamentos	4 días	Madrid	12-15 febrero 2018
		Barcelona	4-7 junio 2018 15-18 octubre 2018
Documentación	1 día	Madrid	16 febrero 2018
		Barcelona	19 octubre 2018
Transferencia	1 día	Madrid	19 febrero 2018
		Barcelona	22 octubre 2018
Drafting	4 días	Madrid	20-23 febrero 2018
		Barcelona	23-26 octubre 2018
CII & Software	2 días	Barcelona	11-12 junio 2018
Química-Farmacia	2 días	Barcelona	18-19 junio 2018
Biotecnología-Biomedicina	2 días	Barcelona	20-21 junio 2018

Curso sobre patentes y modelos de utilidad 2018

Fundamentos
Documentación
Transferencia
Drafting
CII & Software
Química y Farmacia
Biotecnologia y Biomedicina

Module on Drafting

Preparation of Claims, Description, and Drawings

Lugar y fechas

Madrid: 20-23 de febrero de 2018
Barcelona: 23-26 de octubre de 2018

Profesor

Pascual Segura

A quién va dirigido

A quien, habiendo asistido al módulo de Fundamentos o recibido una formación equivalente, desee redactar solicitudes de patentes o analizar las solicitudes redactadas por otros. Se necesitan conocimientos de inglés, dado que el enfoque es internacional (PCT, EPO, USPTO, OEPM, etc.)

Module on Drafting

Preparation of Claims, Description, and Drawings

• **Introduction.** The goal of drafting a patent application designed to get a strong international protection and to be acceptable by the PCT and the IP5 offices, without wasting applicant's money. Application drafting as the most fundamental skill of a patent expert. Professional ethics: not to draft only narrow claims; not to conform to the caprices of the examiner just to expedite allowance. Materials (laws, rules, guidelines and manuals of PCT, EPO, USPTO, OEPM ...) and bibliography.

• **Preliminary considerations.** Use of language and terminology looking for clarity and conciseness: the KISS (keep it short & simple) approach. Reasons for drafting the priority application in (plain) English. Clarity golden rule: a single word/phrase and a single number -if there are drawings- for a single element, and vice versa. Examples of lack of clarity. Do we have any invention worth being patented? Drafting as a cooperative task between a patent expert and (preferably) a single inventor of contact. Structure and contents of a patent application vs. a scientific full paper. Example: "Electrosurgical instrument for tissue coagulation and cut". CAF (Common Application Format) and preferred section headings. Exercise: Order and contents of the different sections of a patent document ("Alimentary pasta of short cooking time").

• **The patent claim concept.** The (undefined) concepts of invention and technology. A claim as a defining sentence of a set of technical subject matter for which protection is sought. Claim infringement: protection scope and questioned embodiment. All Elements Rule. Element-by-element comparison. Kinds of elements/limitations/technical features: structural, functional, relational, intentional, parametric, and activity steps. Drafting a claim as if it would be interpreted literally, and as if any attempt to imitate its subject matter would infringe it directly.

• **Claim formats.** Standard claim format: preamble + transitional phrase (*comprising*) + body. Punctuation, references, and brackets. Selection and interpretation of the claim preamble. Introducing elements with *a/an*, and referring back with *the* (preferred to old-fashioned *said*). Two-part claim format: *characterized by/in that* in EPC; *wherein the improvement comprises* in US. Cases where the two-part format is not appropriate. Exercises: Draft one independent claim in standard format (the "lollipop invention"). *Idem* in two-part format ("invention of an improved lollipop"). Claims with Markush groups. Markush formulas. Claims with elements defined as means-plus-function. Other ways of achieving functional language. Tips & tricks.

• **Basic types of claims.** Rights to prevent the direct exploitation of the invention. Entity/product claims. Example: European lawsuits about the importation from Argentina of meal from glyphosate-resistant soybeans. Activity/process/method claims. Example: Apple vs. Samsung, North California DC, 2012. Claims of process/method to obtain. Example of lansoprazole preparation process. US statutory classes of claims. Types/kinds/categories of independent claims to be used, depending on the case.

• **Special types of claims.** Purpose-limited claims (with *for*). Example: "Contenedor de bolsas para recogida de excrementos caninos". Product-by-process claims. Example: EP patent on a "homogeneous and stable cereal suspension", and related infringement lawsuit in ES. Claims of products defined by parameters. Example: "Form 2 of ranitidine hydrochloride". Non-medical use claims in the EPO. Process/method of using claims in US and other countries. Claims on specific (second) medical uses: method of treatment claims in US, Swiss-type claims, and purpose-limited-product claims in the EPC. Example: "Use of AZT against AIDS". Claims on general (first) medical use in the EPC.

• **Dependency between different patents, concerning infringement.** Potential infringement of a previous dominant patent by exploitation of a later dependent patent. Infringement reciprocity. Examples: ondansetron; sumatriptan as an example of selection invention.

• **Dependency between claims of the same patent, concerning scope.** A claim written in dependent form includes all the elements (including the preamble) of the claim to which it refers (*base* claim), by using a *dependency reference* at the beginning. Two basic ways of writing a dependent claim: *further comprising* vs. *wherein*. Only the preamble's noun of the base claim should be repeated in dependent claims. Claims written in singular dependent form. Claim trees. False dependency: preparation process of simvastatin. Claims written in multiple dependent form. Exercises: identify all *actual* claims of two claim sets, and draw the corresponding claim trees. Analysis of claim dependency as an aid for the assessment of validity and infringement. A quiz on claim dependency (win a prize!). Multiple dependencies in claim sets to prepare for claim amendments that do not add subject matter (e.g. avoiding the risk of *undisclosed selection from two lists* in the EPO), and that do not extend the conferred protection. Initial brainstorming and iterative drafting of claims. Schematic example of drafting a dependency group of claims: drafting first in the EPO style, and later adapting to the USPTO practice by the same drafter.

Module on Drafting

Preparation of Claims, Description, and Drawings

- **Claim drafting simplification by using definition references to claims of different preambles.** Singular and multiple definition references. Examples of EPO and USPTO practice. Exercise: identify all actual claims in the claim set of the first patent on sildenafil, and draw the corresponding claim trees.

- **Basic principles for independent claims: (i) Identifying essential elements.** Two phases: forming a mental picture of what is to be claimed, and putting that mental picture into words that clearly say what they mean. Limitations on the number of independent claims. From drawings to words in electromechanical claims. Do not claim what you have; claim what the prior art does not have. Claim the invention, not the product. Novelty lies in the claim; inventive step lies in the argument. Claim the invention on the shelf (kits, components and distributed inventions).

- **Basic principles for independent claims: (ii) Approach to draft** (illustrated by the hypothetical invention of an "anti-drip tray"): (1) Spot the invention. (2) Identify the novel element. (3) Select the claim type. (4) Choose the preamble. (5) Do a validity check: Is it novel? Does the inventive step argument work? Is the claim a 'mere desideratum'? (6) Do an infringement check: Does the claim have a too limiting word or element? Does the claim cover what is made or sold? Is the claim self-contained?

- **Basic principles for dependent claims: (i) From independent claims downward.** Ordering and numbering. What goes into dependent claims. How are dependent claims structured: chain or line, pyramid, branched selections, and combination thereof. Adding elements successively in decreasing order of importance. Example: claim set to protect the "anti-drip tray" invention.

- **Basic principles for dependent claims: (ii) From prototypes upward.** Example: "the tailor's scissors". Removing non-essential elements, one at a time. Using broader terms. Combining elements. Example: US and EP patents on "a computerized combination lock". Exercise: draft a claim set to protect "the UB artificial nest". Exercise: draft a claim set to protect "the lotion against psoriasis".

- **Physical requirements of the application.** Numbering of sheets. Numbering of lines or paragraphs. Fonts. Margins. Preparing a CAF-compatible application template, and practical issues on 'filling' it.

- **Drawings and the Brief Description of Drawings section.** Margins. Numbering. Line thickness. Lead lines, arrows, and views. Reference characters (preferably Arabic numerals). Fonts. Words (preferably absent). Using FIG. Special requirements of drawings.

- **General issues on description drafting.** Thinking of potential readers. What should be left out. Duty of candor and good faith in US. Information disclosure statements (IDS). Lack of support vs. insufficient disclosure (written description and enablement in the US). As it is impossible to know *all* the relevant prior art at the time of drafting, try to keep the (undefined) invention as 'flexible' as possible, being careful with statements of obligation.

- **Drafting of particular embodiments (examples). Working with inventors.** Ownership vs. inventorship. Inventor identification. Interviewing inventors. Starting materials for drafting. Providing support over the whole claimed scope. Best mode. 'Fallback positions' to avoid future selection inventions? Terminology. Physical values & units. Proper names & trademarks. The 'blind man' test. Drafting specific embodiments in electromechanics: structure, operation, fabrication, advantages, and variants.

- **The Title and the Technical Field & Background Art sections.** Avoid a 'too descriptive' title. It may be appropriate that the title includes some words from the preamble(s) of independent claim(s). The Technical Field section as a general introduction paragraph, broader than the broadest claims. Do not include unknown problems or unknown element combinations in the Background Art section. It may be appropriate to present a *known* technical problem, but without pointing towards any solution. Educating potential readers and preparing inventive step arguments (teaching-away prior art, prior-art limitations overcome by the invention, etc.). Do not mention 'objects of the invention' or statements of desired improvement over the prior art.

- **Summary of Invention and Abstract.** Alternative solutions vs. selections. Providing support to all the claims by copying them into the description. Presenting every independent claim as an aspect of the invention. Statements of advantage. Importance of drafting a good Abstract, indicating the technical field, allowing a clear understanding of the technical problem and the gist of its solution, and stating the principal use(s). US abstracts should not be narrower than the broadest claim.

- **Final example and conclusion.** Example of a patent on "a glycoprotein for the protection of liposomes". Acknowledgments. Recognition and remuneration that patent drafters should 'claim'.

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IT HAS BEEN A PLEASURE TO BE WITH YOU...

TIME WAS SHORT...
HOPEFULLY WE HAVE MADE A GOOD USE OF IT