

**"Los Lunes de
Patentes"**

***"The Patent
Mondays"***

**Como, a un solicitante español, se le debe redactar
y adaptar/modificar sus solicitudes de patente
(prioritaria, PCT, US y EP) para optimizar la
protección y los costes en su "intento de obtener
una protección genuina e internacional"**

OEPM. Madrid, 25 November 2024

Prof. Pascual Segura

Patent drafter since 1984. Spanish Patent Attorney since 1992

UB Patent Center founder and director, 1987-2023. UB retired professor with honor distinction since 2024

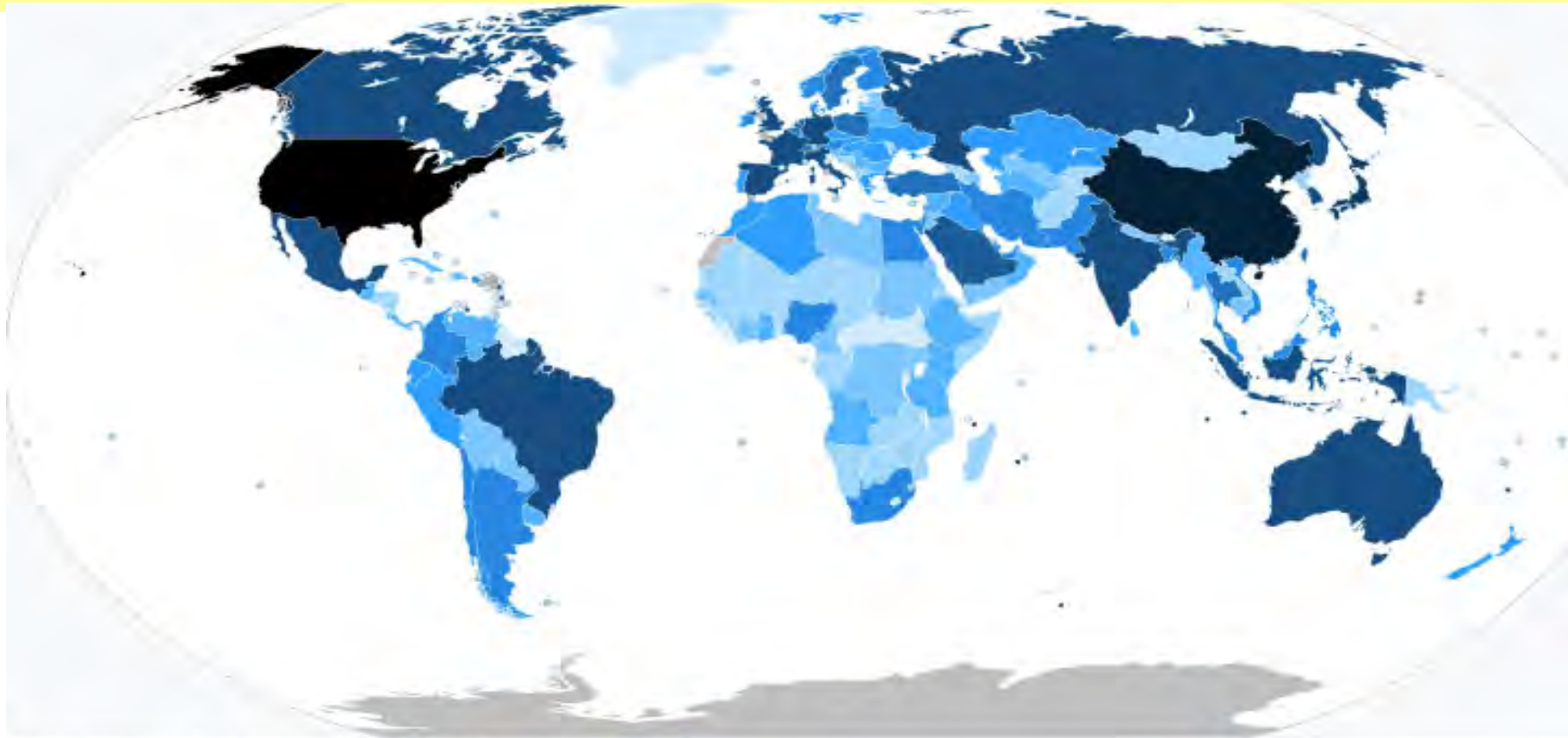
Chemist: MSc Univ. Valencia; PhD UB; postdoc Univ. California; Spanish "1975 End-of-Career" National Prize

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

Co-author of "WIPO Patent Drafting Manual", 2nd ed, 2022

A few statistical facts to think about

World distribution of GDP



Countries by nominal GDP in 2019^[n 2]



It is close to **World distribution of interest in patenting**, modulated by **type of technology**, **patent enforcement ability**, **prosecution easiness** and **total cost**

Top 30 countries by GDP (2023 estimates of IMF, in US\$ million)

= typical countries of choice for patenting

Country/Territory		
World		104,476,432
1	United States	26,949,643
2	China	17,700,899
3	Germany	4,429,838
4	Japan	4,230,862
5	India	3,732,224
6	United Kingdom	3,332,059
7	France	3,049,016
8	Italy	2,186,082
9	Brazil	2,126,809
10	Canada	2,117,805
11	Russia	1,862,470
12	Mexico	1,811,468
13	South Korea	1,709,232
14	Australia	1,687,713
15	Spain	1,582,054

16	Indonesia	1,417,387
17	Turkey	1,154,600
18	Netherlands	1,092,748
19	Saudi Arabia	1,069,437
20	Switzerland	905,684
21	Poland	842,172
22	Taiwan	no Paris Conv., no PCT
23	Belgium	627,511
24	Argentina	621,833 no PCT
25	Sweden	597,110
26	Ireland	589,569
27	Norway	546,768
28	Austria	526,182
29	Israel	521,688
30	Thailand	512,193



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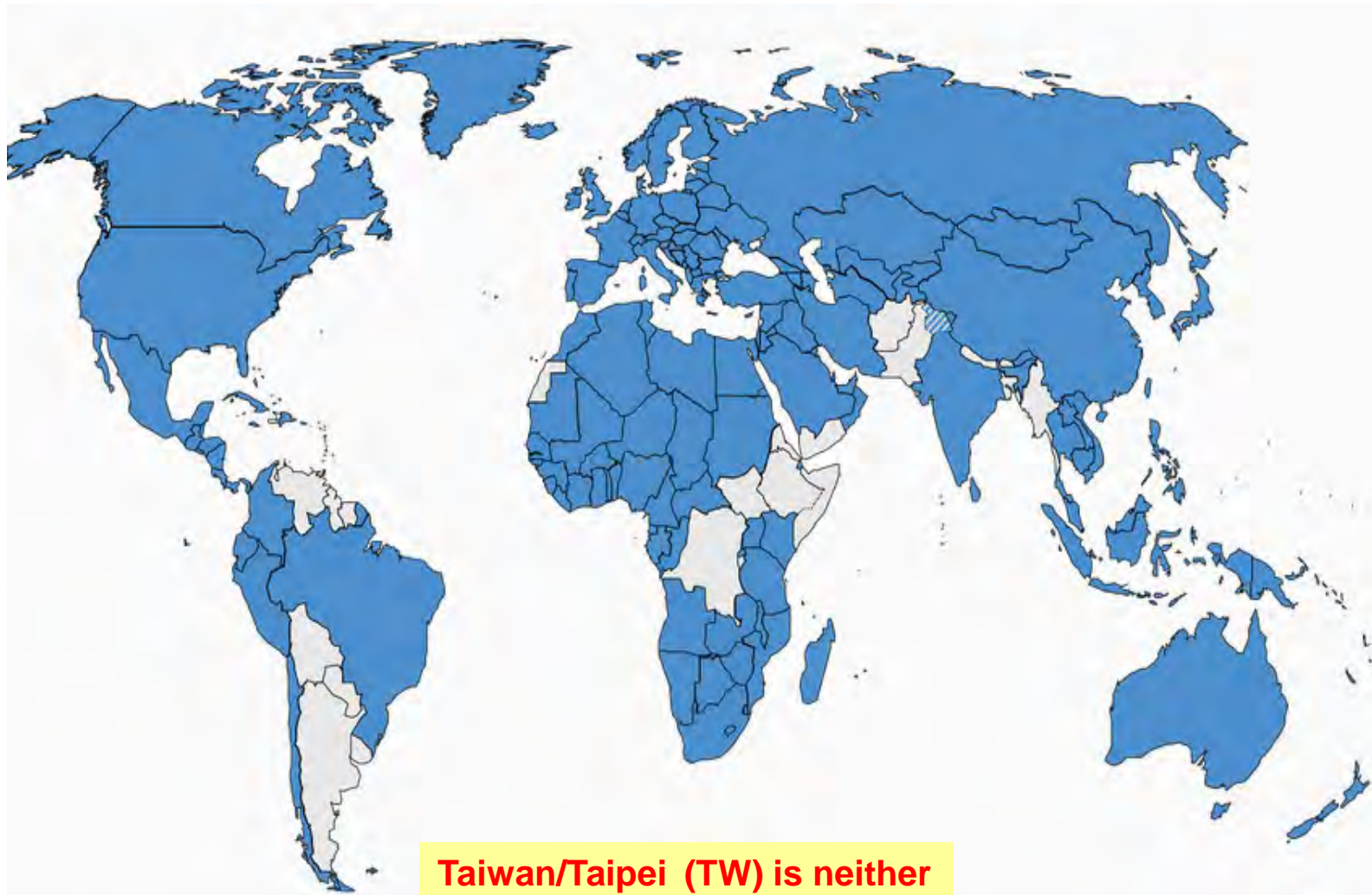


= enforcement difficulties

= EPC countries

= no UP countries

The **Patent Cooperation Treaty (PCT)** is mainly used today "for buying time" [**"Para Comprar Tiempo" in Spanish**], since it represents a simple and affordable (fees slightly above 3.000 EUR) **way of keeping open the possibility of patenting in virtually all industrialized countries**, either nationally or via the EPO, for 18 months, i.e. from month 12th **until month 30th from priority** (in blue the 157 members by the end of 2023)

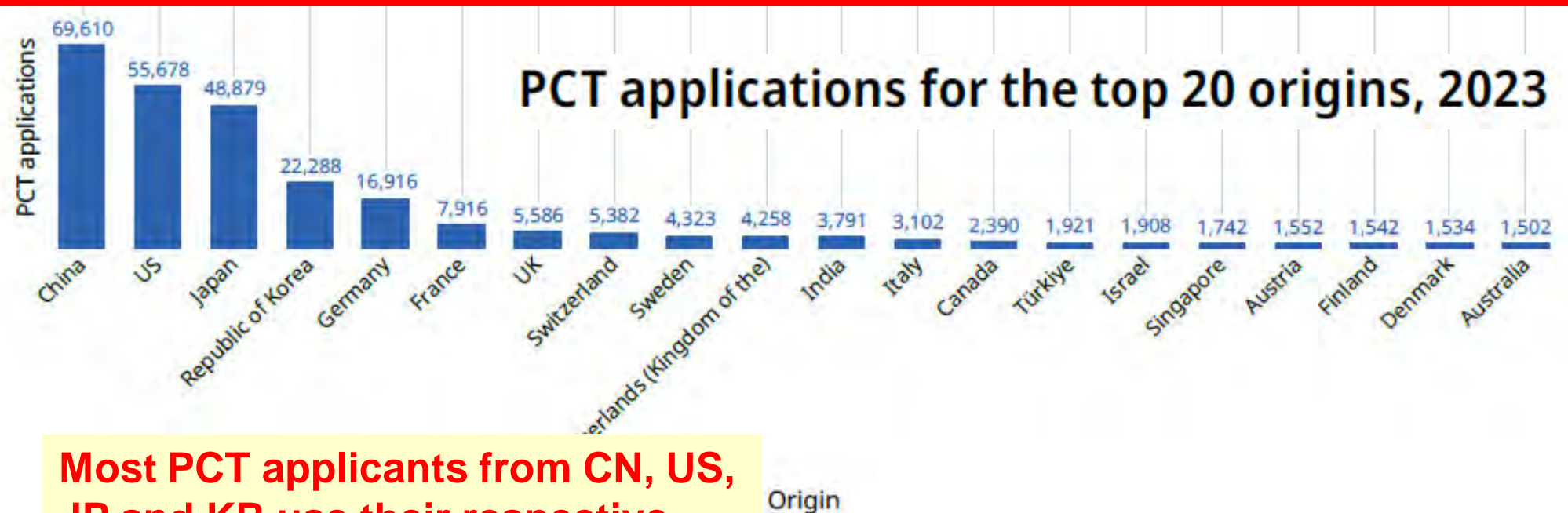
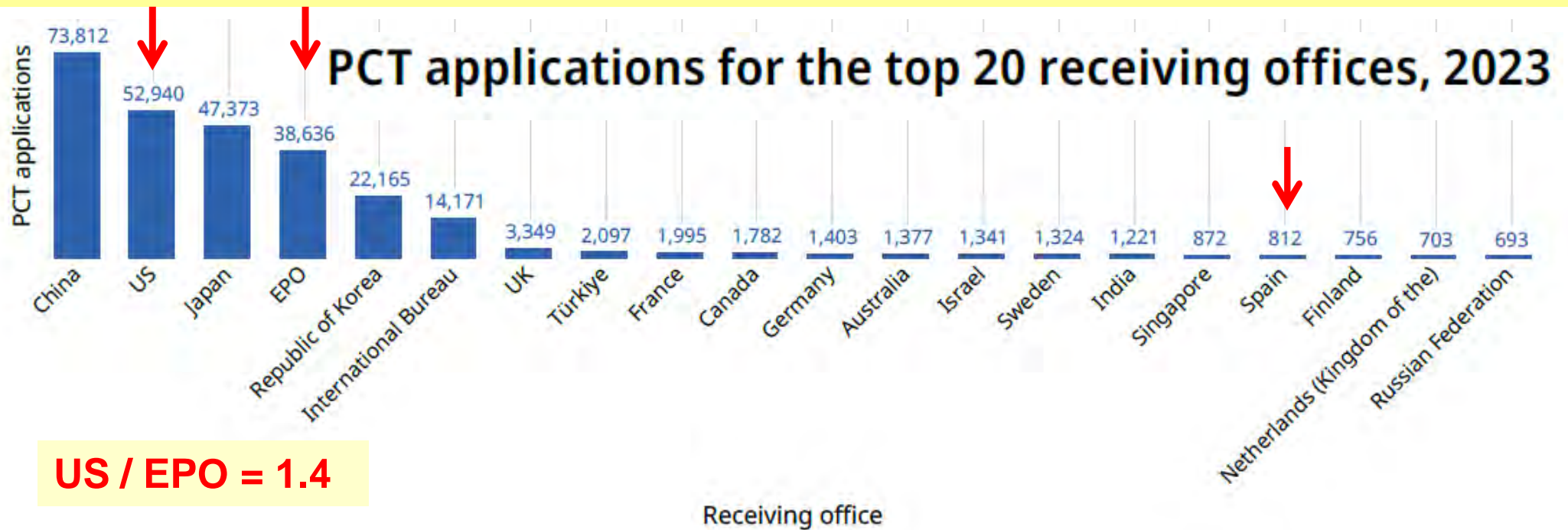


States in Paris Convention, but not in the PCT

- Afghanistan
- Andorra
- Argentina
- Bahamas
- Bangladesh
- Bhutan
- Bolivia (Plurinational State of)
- Burundi
- Democratic Republic of the Congo
- Guyana
- Haiti
- Holy See
- Kiribati
- Lebanon
- Mauritius (will become bound by the PCT)
- Nepal
- Pakistan
- Paraguay
- Suriname
- Tonga
- Uruguay
- Venezuela (Bolivarian Republic of)
- Yemen

Taiwan/Taipei (TW) is neither part of Paris Convention, nor of PCT; but it is part of WTO

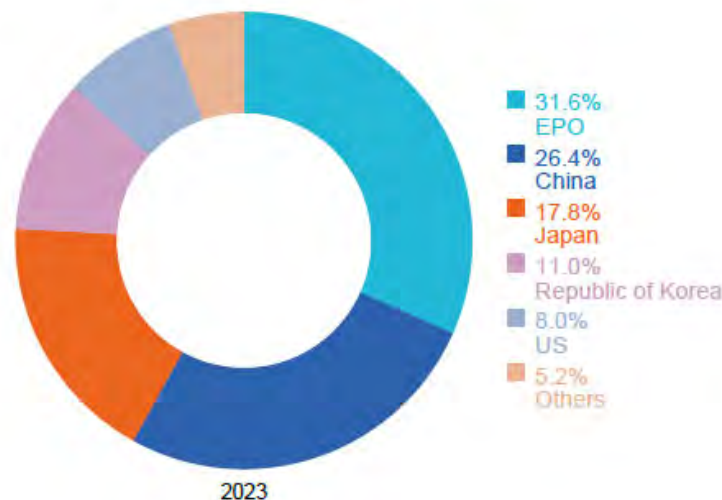
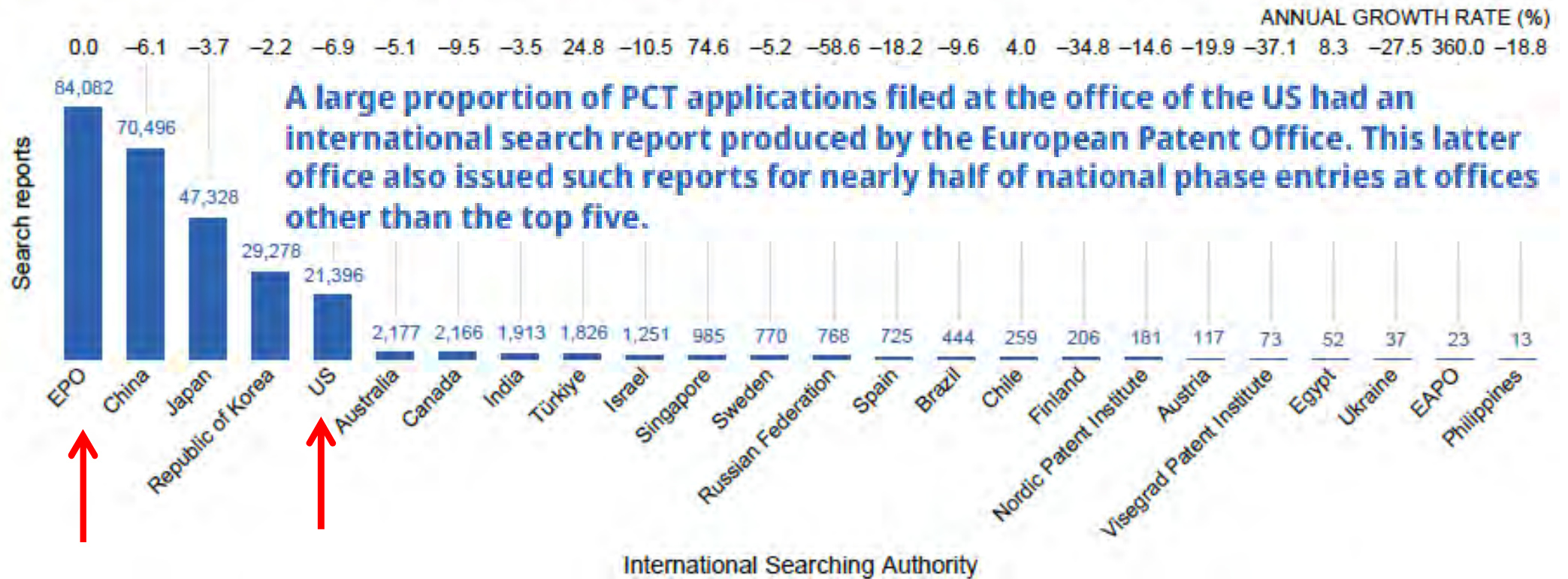
PCT applns. by Receiving Office and origin country, 2023



Most PCT applicants from CN, US, JP and KR use their respective patent office as Receiving Office

PCT International Searching Authorities (ISA), 2023

C17. International search reports issued by International Searching Authority, 2023



US / EPO = 0.25

Art. 19 PCT. Amendment of the claims before the IB

(1) The applicant shall, after having received the international search report, be entitled to one opportunity to amend the claims of the international application by filing amendments with the International Bureau within the prescribed time limit. He may, at the same time, **file a brief statement**, as provided in the Regulations, **explaining the amendments and indicating any impact that such amendments might have on the description and the drawings.**

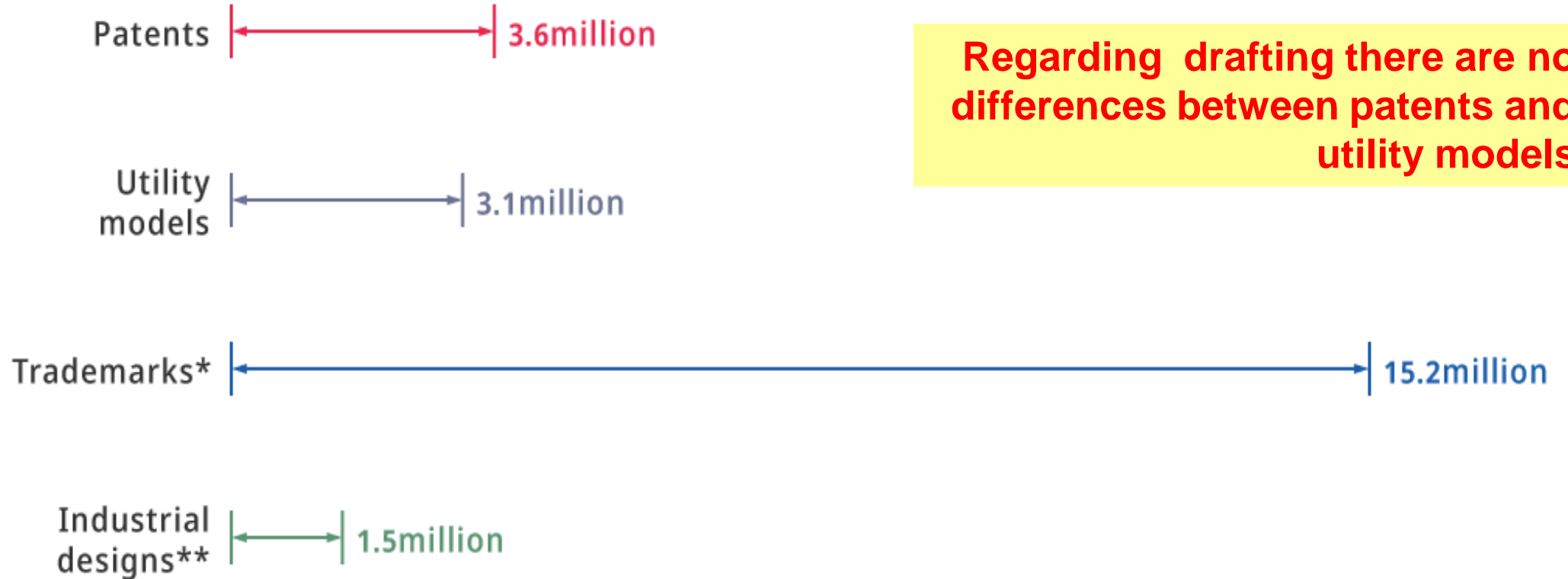
(2) **The amendments shall not go beyond the disclosure in the international application as filed.**

(3) If the national law of any designated State permits amendments to go beyond the said disclosure, failure to comply with paragraph (2) shall have no consequence in that State.

Art. 26 PCT. Opportunity to correct before Designated Offices

No designated Office shall reject an international application on the grounds of non-compliance with the requirements of this Treaty and the Regulations without first **giving the applicant the opportunity to correct the said application** to the extent and according to the procedure provided by the national law for the same or comparable situations in respect of national applications.

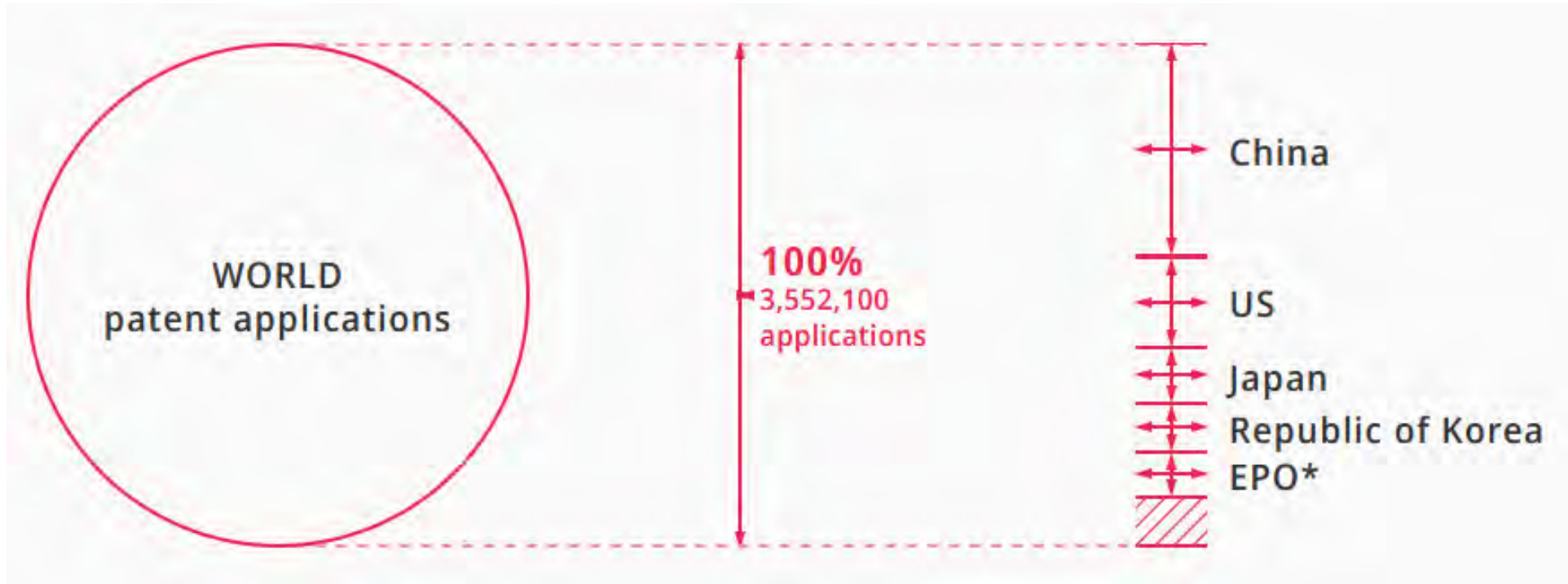
Global IP filing activity 2023



Regarding drafting there are no differences between patents and utility models

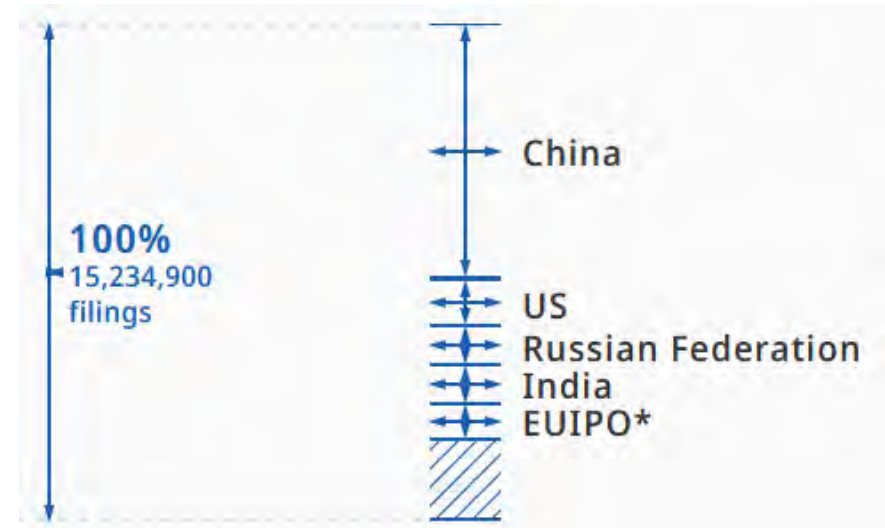
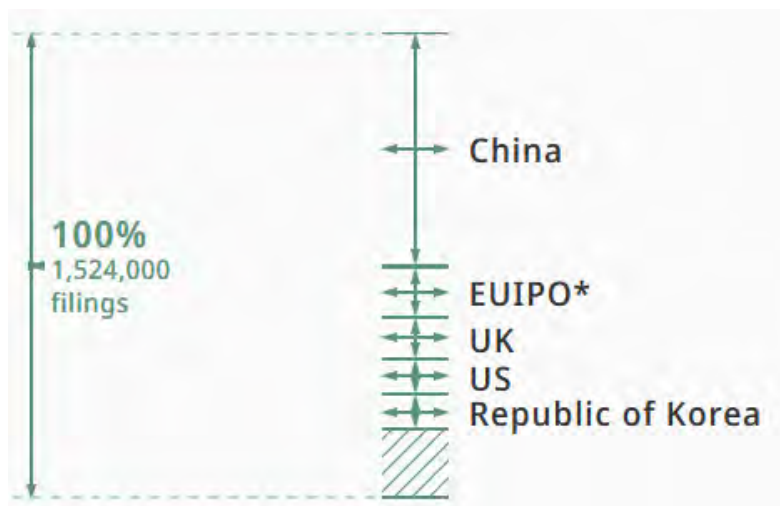
Patent filings worldwide grew by 2.7% in 2023, reaching approximately 3.6 million. Industrial design filing activity also grew in 2023, increasing by 2.8% to 1.5 million designs in applications filed in 2023. On the other hand, trademark filing dropped by 2% to 15.2 million classes in applications. Applications for utility models - a special form of patent right - grew by 3.9% to number 3.1 million applications.

IP applns. 2023: 85% combined share of IP5 offices



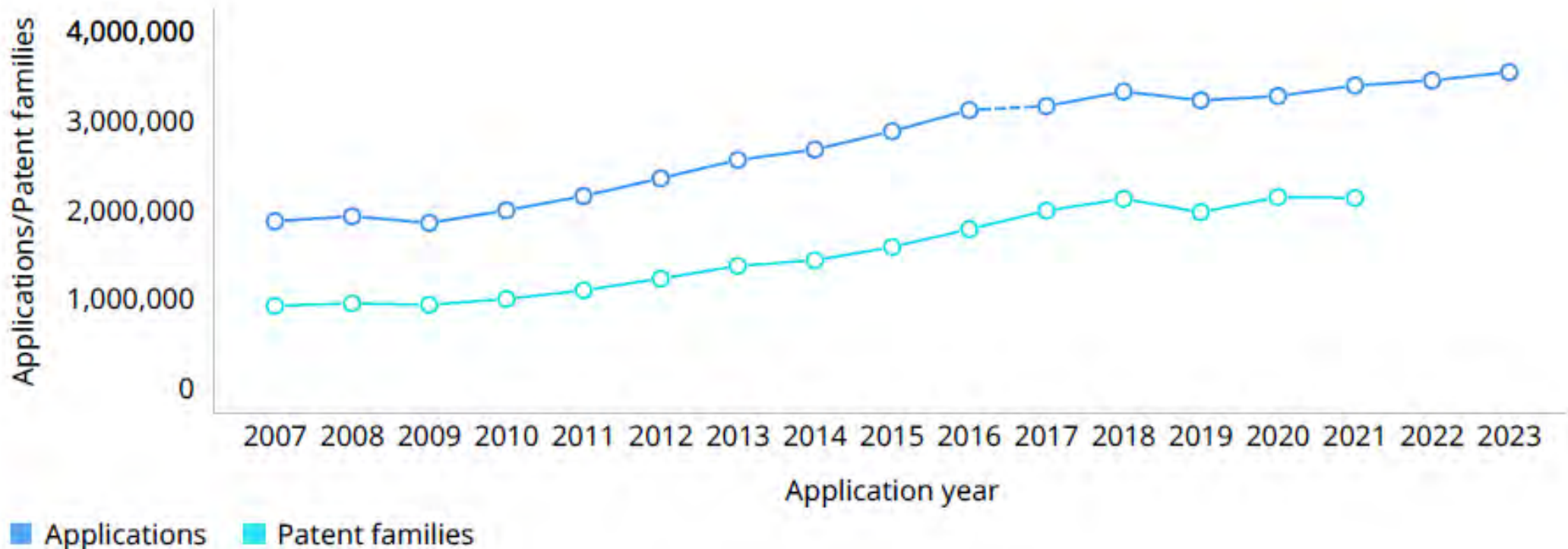
Industrial design applications

Trademark applications



Patent applns. vs. patent families vs. *single-office families* (85%)

Despite a 0.5% decline, patent filings for unique inventions numbered 2.14 million in 2021
1.6. Patent applications and patent families worldwide, 2007-2023

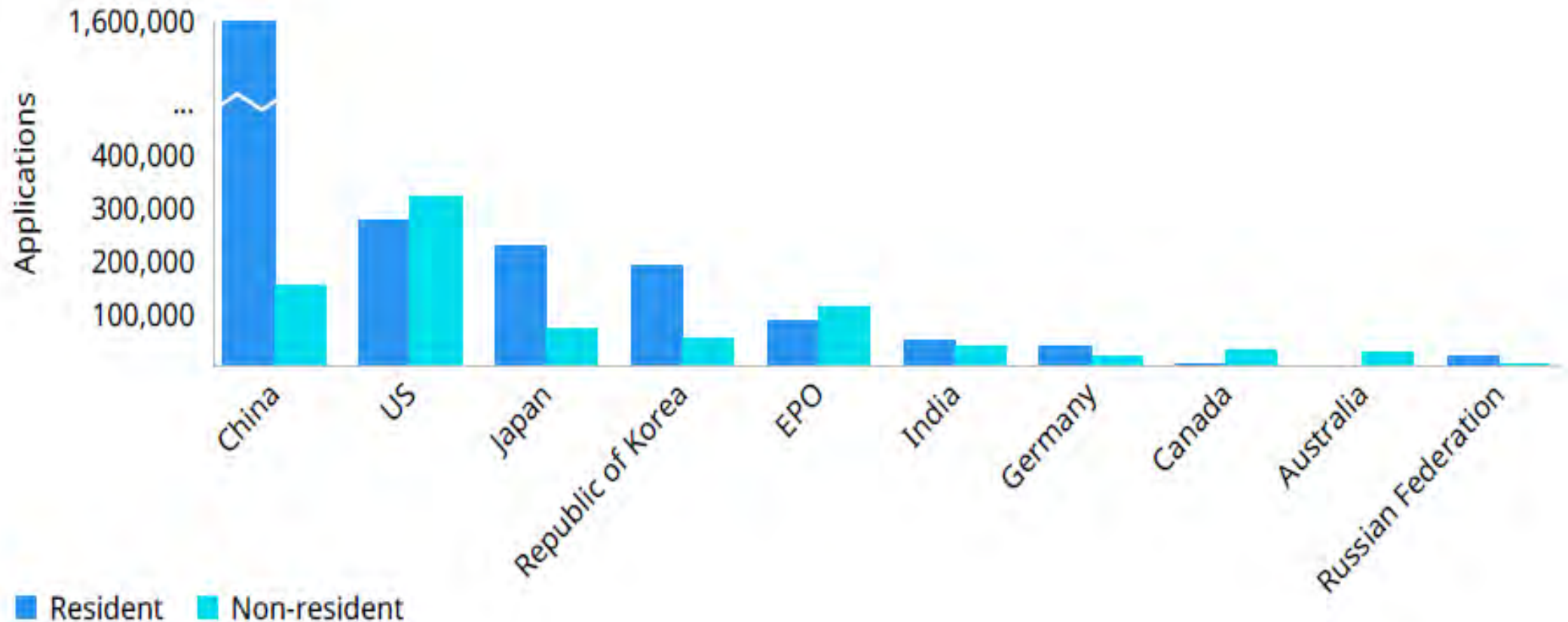


The size of a patent family (indicating the number of offices at which a patent is filed) reflects its geographical coverage. Around 85.3% of patent families created worldwide between 2019 and 2021 were filed at a single office (figure A24). This high percentage of single-office families is mainly attributable to the filing behavior of Chinese applicants, who mostly file applications at a single office – 96.7% of patent families originating from China are single-office families.

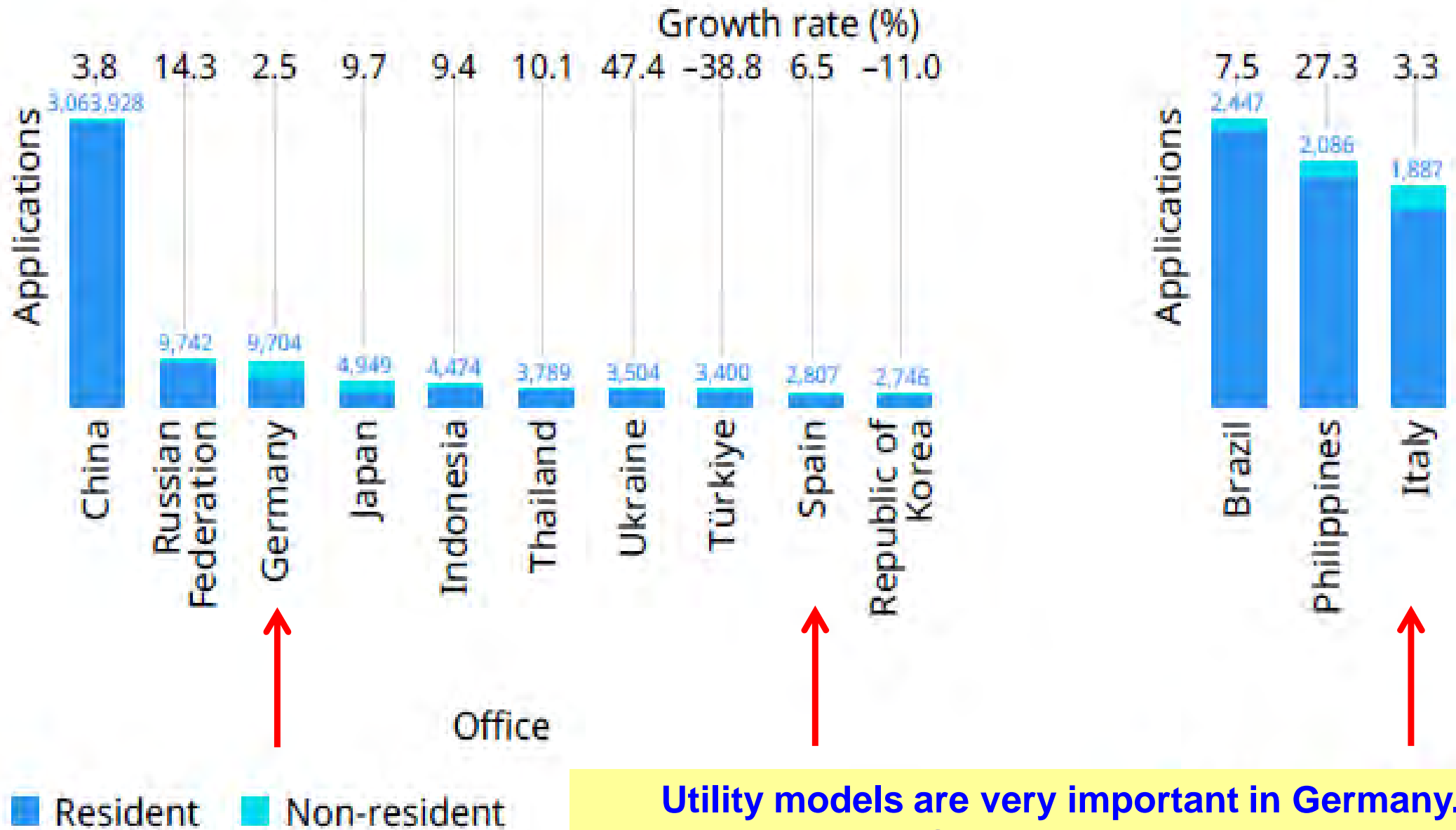
Patent applications at the top 10 offices, 2023

The IP office of the US attracted the most non-resident applications in 2023 - more than twice as many as China

1.2. Patent applications at the top 10 offices, 2023

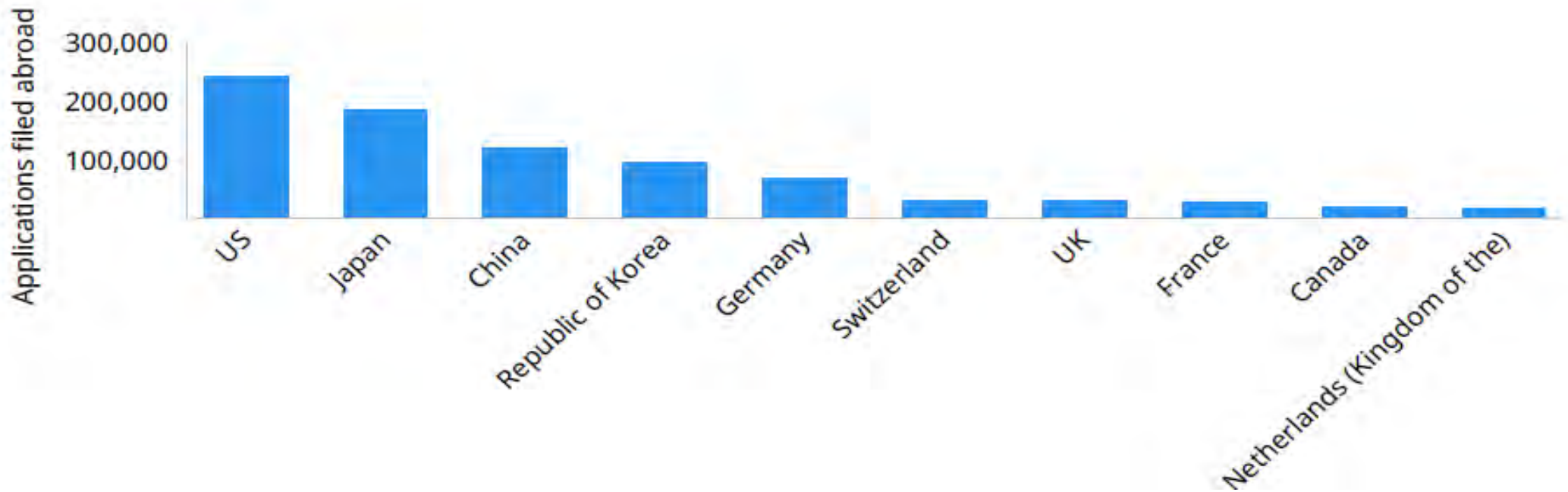


Utility model applications, top 13 countries, 2023



Utility models are very important in Germany. Within Europe, ES & IT ones are also important

Patent applications filed abroad by the top 10, 2023. Single patent applns. seeking 'non-genuine benefits'

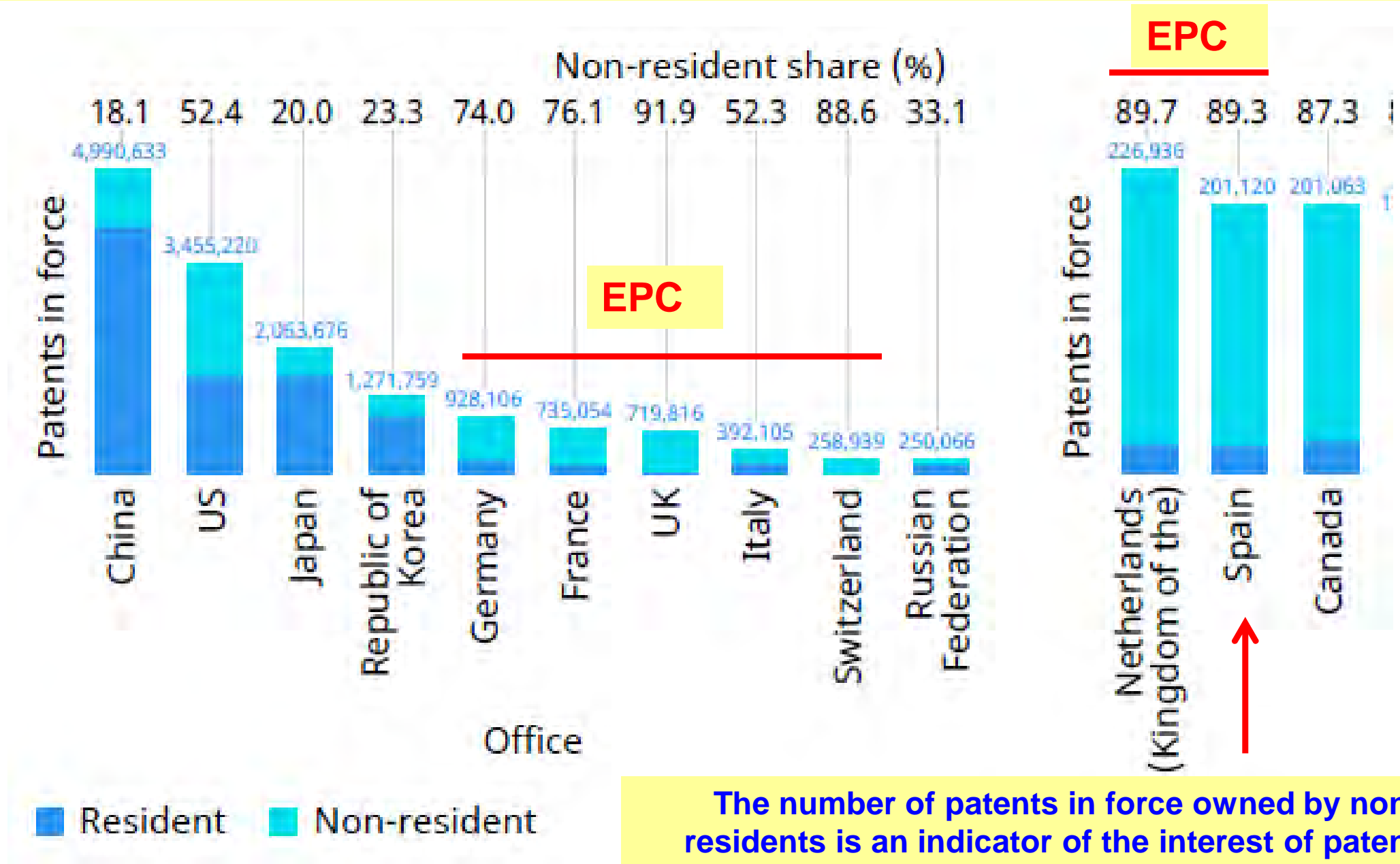


The number of application filed abroad is considered as an indicator of innovation activity.

As mentioned before, about 85% of the appln. worldwide have single-office families (only one patent application is published), mostly by resident applicants (particularly, in China). In my opinion, a significant number of them seek 'non-genuine benefits' derived from: better CV, better tech. image, marketing, lower taxes, rewards, subsidies, etc.

Obviously, seeking 'non-genuine benefits' is a reasonable activity for corresponding applicants and/or inventors. However, the number of 'single-office' applications in the own country, by itself, can hardly be considered as an indicator of innovation activity.

Patents in force, top 13 countries, 2023



The number of patents in force owned by non-residents is an indicator of the interest of patent protection (market size, enforcement ability, etc.)

**My opinions,
and an attempt to justify them
within the available time**

Como, a un solicitante español, se le debe redactar y adaptar/modificar sus solicitudes de patente (prioritaria, PCT, US y EP) para optimizar la protección y los costes en su "intento de obtener una protección genuina e internacional" [ponencia en LP2024-11-25 Mad y LP2025-03-31 Bcn]

De las solicitudes de patente que se presentan cada año en el mundo (3,6 millones en 2023), la gran mayoría (85% de las publicadas en 2019-2021) se tramitan únicamente en una sola oficina (la del país de residencia del solicitante) y usando la vía nacional. Seguramente la mayoría de estas '*single*' *patent applications* son iniciativas que, o bien resultan fallidas, o bien pretenden obtener 'beneficios no genuinos' derivados más de la propia existencia de la solicitud que de la existencia de una protección genuina (patente concedida, válida y enforceable).

Las decisiones sobre presentación de solicitudes de patente responden a un amplio espectro de situaciones de partida, y están siempre sometidas a vicisitudes futuras. No obstante, una situación relativamente frecuente es aquella en la que, en principio, lo que se pretende es obtener protección de una materia técnica ('la invención') con interés industrial o comercial, que la protección sea válida y *enforceable* para disuadir al posible imitador (evitando pleitos y propiciando licencias), y que **la protección se extienda a los países que se consideren más importantes. En la mayoría de los casos estos países incluyen US, algunos miembros del EPC (DE, GB, FR, IT, CH, NL, ES ...) y algunos de los países asiáticos de las IP5 Offices (CN, JP, KR)**. A esta situación, que aquí denominamos "intento de obtener una protección genuina e internacional", es a la que se refiere el presente curso...

Costs for a SPANISH APPLICANT trying to get a genuine patent protection in IP5 Offices via the PCT

EXTERNAL PROFESSIONAL SERVICES

- patent attorneys (EP, US, CN, JP & KR ?) fees for the intellectual work in **drafting** applications (applns.), **adapting/amending** applns. previously filed, and **arguing** with examiners [**these are probably the highest costs!**]
- fees for the **paralegal work** of patent firms
- **translations** (try to translate only from English to Chinese, Japanese and Korean; and later into Spanish and other EPC languages)

PATENT OFFICES FEES (multiplied if imposed divisionals!)

- **basic (inescapable)**
- **searching** (not needed for priority; reduced in some cases)
- **excess of pages in applns.**
- **excess of claims (not in the PCT)**
- **extra proceedings:** official actions, amendments, etc.

INTERNAL TIME & MONEY

- **time** of inventor(s), decision-maker(s) and others
- **money** of all fees and -sometimes- **extra experimental work**

I charge by the minute!



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

PCT (Apr. 2024): 16 EUR / page in excess of 30. No fees for number of claims !!

EPO (Apr. 2024)

- **17 EUR / page in excess of 35 in application** (biosequences do not pay)
- 275 EUR / numbered claim in excess of 15 (685 EUR in excess of 50)

USPTO (Apr. 2024) standard / small entity / micro entity

- **420 / 168 / 84 for each additional 50 sheets that exceeds 100 sheets**
- **480 / 192 / 96 USD per each independent claim in excess of 3**
- 100 / 40 / 20 USD per each *actual* claim in excess of 20 **[deterrent!]**
- 860 / 344 / 172 USD per each multiple dependent/definition claim **[deterrent!]**

JPO (Jan. 2020), among other charges:

- **Examination fee:** (+ 1,535 USD) + **36 USD** (4,000 yen) **per claim**
- **Maintenance fee** (10th or later annuity): 740 USD + **58 USD per granted claim**

German Patent Office: **20 EUR / numbered claim in excess of 10** (no in utility models)

- **No fees for number of pages or number of independent claims.**

OEPM: No fees for number of pages or number of claims, in patents or utility models!!

Tasas y honorarios (aprox.) de presentación de una sol. EP

Tarifas - Enero 2019 - EUR

PATENTES EUROPEAS	Tasas oficiales ¹	Honorarios profesionales	Total
Presentación de patente europea			
Presentación estándar de patente europea		<u>900</u>	2320
- Tasa de presentación	120		
- Tasa de búsqueda	1300		
Otros gastos en la solicitud			
- Traducción de la memoria al inglés (cada 100 palabras)	--	21/100u	
- Tasa adicional por cada página que supere las 35	15/u	--	
- Tasa de reivindicaciones, por reivindicación sobre 15			
De 16 a 50	235/u	--	
A partir de 51	585/u	--	
- Aportación posterior de documentos	--	120	120
- Transmisión del informe de búsqueda (EESR) ²	--	<u>180</u>	180
Petición de examen			
Solicitud de examen y pago de designaciones		300	2520
- Tasa de examen ³	1635		
- Tasa de designación	585		

Presentación sol. EP con no más de 35 pp. y 15 reivs. : 1.420 EUR tasas (+ 1.080 EUR honorarios)

NOTAS:

Los honorarios profesionales arriba mencionados **no incluyen el trabajo de un técnico de patentes**, tal como redactar memorias, responder a acciones oficiales, redactar correcciones y argumentos, reunirse con el cliente y similares. Asimismo, tampoco incluyen gastos de viaje, costes de eventuales traducciones que puedan necesitarse, ni los gastos de envío por mensajero *o courier*.

1. En determinados casos, puede haber descuentos o incrementos sobre estos importes.

2. Este importe se facturará junto con los gastos de solicitud.

3. Si todos los solicitantes son nacionales o residentes de un país europeo cuyo idioma oficial no es el francés, inglés ni alemán, y responden a los criterios de *Small entity* según la definición de la UE, esta tasa puede reducirse en un 30%.

Se requiere un cuidado especial en la estructuración de los grupos de dependencia de reivs., pensando en las modificaciones, tanto en las que puedan forzar los **examinadores** (por rechazo de la reiv. independiente, por rechazo de reivs. dependientes, por objeciones de falta de unidad, etc.), como en las que le puedan interesar al **solicitante**. **Para lo cual, en general, a un solicitante español le interesará que:**

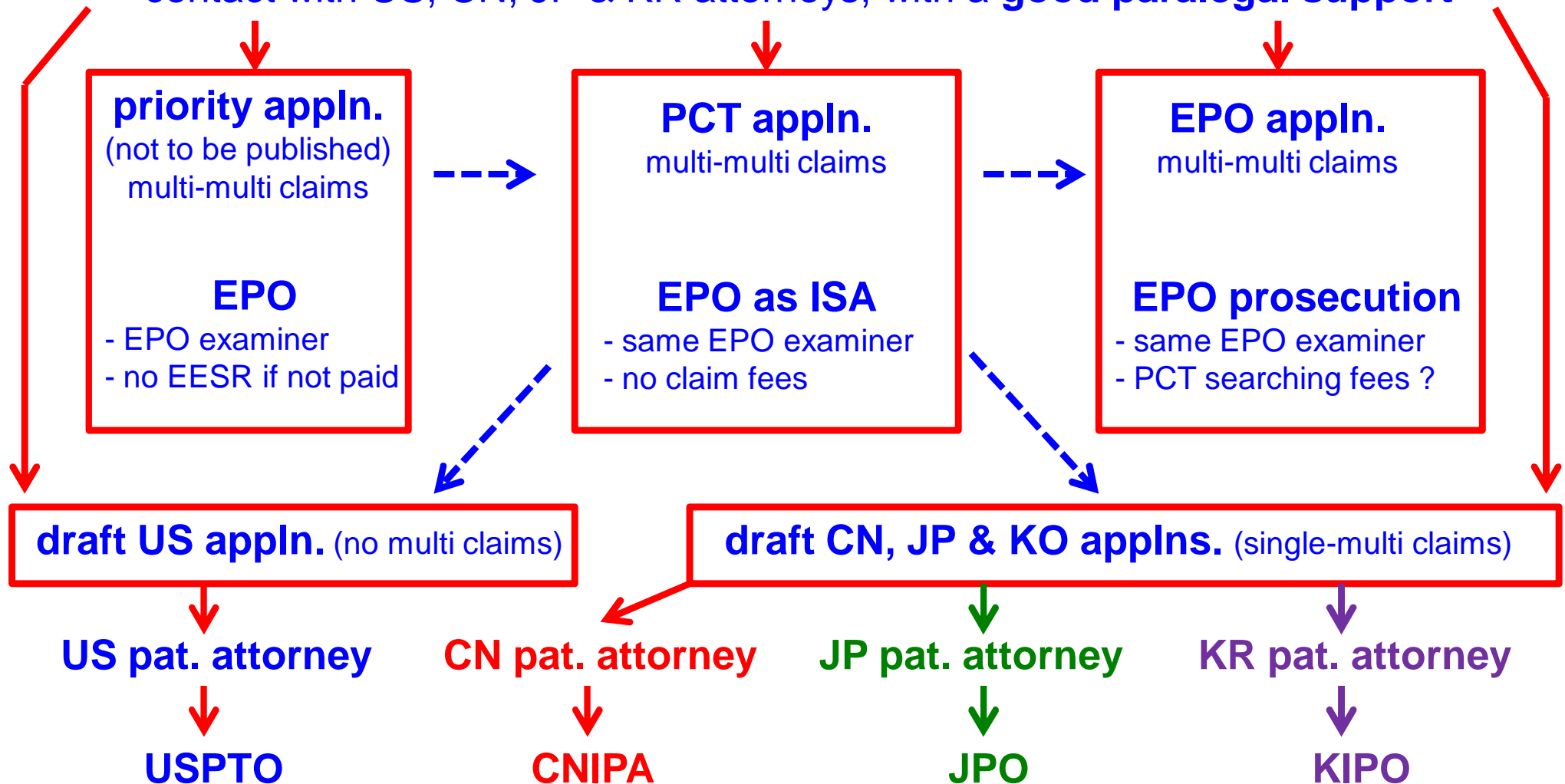
- **La solicitud prioritaria, con la descripción al estilo US y las reivs. al estilo EP, se la escriba un REDACTOR con buen conocimiento del sistema EPC** y que además tenga suficientes conocimientos técnicos para **comunicarse bien con los inventores (estos, en general, no redactarán la solicitud)**.
- **La solicitud prioritaria se presente como solicitud EP a través de la OEPM** (traduciendo título y resumen), bien pagando las tasas y recibiendo el EESR (*Extended European Search Report*), bien sin pagar tasas y sin recibir nada.
- Reivindicando la prioridad, y posiblemente añadiendo materia generada en el año de prioridad, **se presente una PCT con la EPO como ISA** (*International Searching Authority*), **con todas las reivs. y clauses que se quiera**.
- Si es posible, **el mismo REDACTOR original adapte las reivs. de la solicitud PCT para entrar en las fases EP y nacionales**. Inevitablemente el solicitante español tendrá que usar los servicios de representantes de US, CN, JP y KR para la tramitación en estos cuatro países.
- **El mismo REDACTOR haga de TRAMITADOR-ARGUMENTADOR ante la EPO y ASESOR en las tramitaciones en US, CN, JP y KR.**

Strategy to optimize patenting in IP5 offices

SPANISH APPLICANT: single contact-inventor + decision makers + others



a single **PATENT DRAFTER & PROSECUTOR**: an internationally-minded EPA in contact with US, CN, JP & KR attorneys, with a **good paralegal support**



Recommended patenting procedures when the invention has been made totally in Spain

1. If the goal is to patent only in Spain

- Draft the appln. in Spanish (no fees are paid for extra number of pages or claims).
- File a ES-1 application (obviously at the SPTO).
 - . Pay fees if the Search Report (SR) and Written Opinion (WO) are wished; continue prosecution.
 - . Do not pay fees in case no SR & WO are wished: only a priority right is obtained.
- If no fees were payed, or the applicant wants to amend the appln. and/or get one extra year of protection: file a ES-2 appln. claiming priority of ES-1; continue prosecution.

2. If the goal is to patent in several major countries

← assumed here

- Draft the appln. in English, with Description in US-style, and Claims in EPO-style.
- File a EP-1 appln. through the OEPM (Art. 77 EPC), including Spanish translation of only Title and Abstract.
 - . pay fees if the EESR is to be received (within a year, typically is less than 6 months)
 - . do not pay fees if the EESR is not wished (only priority right is obtained).
- File a PCT appln. at the EPO, claiming priority of EP-1 (all or part of the fees may be saved), and enter the PCT into desired offices, that probably will include IP5 (EP-2, US, CN, JP, KR).

ANNEX 2: Main universities with academic patents in European countries (2000–2020)

The tables below feature the top 10 universities for the top three countries and the top five universities (with at least 25 academic patents) for the remaining countries. The ranking is based on the number of European patent applications filed for academic patents, including both direct applications filed by the universities, and indirect

ones filed by other applicants with a university-affiliated researcher listed among the inventors. Because of this definition, the ranking ignores academic inventions for which a patent application may have been filed at another patent office than the EPO.

SPAIN

Rank	University	Academic patents
1	Universitat de Barcelona	330
2	Universitat Autònoma de Barcelona	328
3	Universitat Politècnica de València	301
4	Universitat Politècnica de Catalunya · BarcelonaTech	298
5	Universidad Politécnica de Madrid	260

The report can be downloaded from:
epo.org/university-innovation-study

Reasons why, when considering obtaining patent protection outside Spanish-speaking countries, the **priority application should be written in plain English with US spelling**

- Today worldwide -and particularly in Western countries- **inventors generally know the relevant scientific-technical (sci-tech) terminology in English, and publish mostly in this language** (manuscripts are useful as starting materials for drafting patent applications).
- **Technology has to be described in English in order to carry out prior-art searches**, since most sci-tech databases and documents are in written in English.
- **Translating from English into (e.g.) Spanish** (for obtaining patent protection in the Spanish-speaking country where the invention has been made) **is easier than the other way around**, and to a large extent can be done by the inventors.
- **In some cases (e.g. universities), for TT purposes an English version of the priority application should be available soon after the priority date, so the application can be shown worldwide.**
- **The English text is ready for filing PCT and two IP5 offices (EP & US; also CA & AU), and it will be the most suitable text for being translated into official languages of the other three IP5 offices** (Japanese, Chinese and Korean).
- **In Western countries, patent drafters are often familiar with the English jargon of case law and practice of the European and the US patent systems.**

Examples of patents drafted by the author (licensed and sold, respec.)

United States Patent [19] [11] **Patent Number:** **6,153,742**
Pedroso et al. [45] **Date of Patent:** **Nov. 28, 2000**

- [54] **GENERAL PROCESS FOR THE PREPARATION OF CYCLIC OLIGONUCLEOTIDES** M. V. Rao, et al/Nucleic Acids Research vol. 17, #20 1989 p. 8221–8240.
G. Prakash, et al/Struc. Effects in Rec . . . , 1992 Amer. Ch
Do . . . 21,
#2
Co . . . &4),
351–358 (1993).
De Napoli L., et al/Facile Prep of Cyclic . . . , 1993, J. Chem. Soc. Perkins Trans. vol. I, pp. 747–749.
- [75] Inventors: **Enrique Pedroso; Ana Grandas**, both of Vallirana; **Nuria Escaja; Elmostafa Alazzouzi**, both of L'Hospitalet del Llobregat, all of Spain
- [73] Assignee: **University of Barcelona**, Barcelona, Spain

Drawings were redrawn by the US agent (\$\$)

United States Patent [19] [11] **Patent Number:** **5,595,763**
Guinovart et al. [45] **Date of Patent:** **Jan. 21, 1997**

- [54] **TUNGSTEN (VI) COMPOSITIONS FOR THE ORAL TREATMENT OF DIABETES MELLITUS** Toxicology, 66 (1991), pp. 279–287, J. L. Domingo, et al, "Oral Vanadium Administration to Streptozotocind diabetic Rats . . .".
- [75] Inventors: **Joan J. Guinovart**, Esplugues de Llobregat; **Albert Barberà**, Barcelona; **Joan E. Rodríguez-Gil**, Avinyó, all of Spain
- [73] Assignee: **Química Farmaceutica Bayer S.A.**, Barcelona, Spain

Spelling was changed from British into US practice by the US agent (\$\$)

1993, pp. 411–415, Joan Enric Rodríguez-Gil, et al.
Diabetes, vol. 40, Dec. 1991, pp. 1675–1678, McNeill, et al, "Insulinlike Effects of Sodium Selenate in Streptozocin-Induced Diabetic Rats".

In this sold patent, UB origin is recognized through the identity of inventors

El enfoque internacional al redactar las solicitudes prioritaria y PCT implica p.ej:

- En lo posible, **elegir siempre algo que sea aceptable por todas las oficinas** (p.ej. **usar el *Common Application Format (CAF)***, que es aceptado o adoptado por el PCT y las IP5 Offices).
- **De entre lo que sea aceptable en todas las oficinas, elegir lo que sea obligatorio o aconsejable en alguna de ellas** (p.ej.: usar el sistema EP de paginación; y usar el estilo US de los *headings* en la descripción).
- **Si algo es inaceptable o desaconsejable en una oficina, procurar no usarlo en absoluto** (p.ej.: no usar *preferred/preferably* por ser desaconsejado en US; y no usar reivs. que comiencen por *In*, o que contengan *consisting essentially*, o que contengan *hearby incorporated by reference* respecto a todo un documento, por ser inaceptable en EP).
- En lo posible, **preparar las modificaciones de manera que conlleven borrar y no añadir** (p.ej.: **incluir inicialmente en las reivs. los números de referencia de los dibujos**, aunque se borren después para US; preparar las reivs. para introducir después las *indentations* en US; **repetir -por separado y literalmente- todas las reivs. en la descripción**, por si después en EP hay que borrar fragmentos de la descripción para hacerla coherente con las reivs.).
- Si no hay motivos en contra, **no usar inicialmente la reiv. en dos partes**, esperando a que sea el examinador EP quien nos diga cómo y dónde quiere que pongamos el *characterized by / in that*.

Entre las diferencias a tener en cuenta a la hora de redactar, están:

- El requisito de **suficiencia de la divulgación (*disclosure*)**, mal llamado "suficiencia de la descripción" en España, que es especialmente estricto en US.
- El requisito de **no adición de materia en las modificaciones**, que es especialmente estricto y complejo en EP.
- El requisito de **alta calidad de los dibujos**, especialmente **estricto en PCT y US**.
- El requisito US de **comenzar las reivindicaciones (reivs.)** independientes con el artículo indeterminado **A/An**, y las dependientes con el determinado **The**.
- La **forma de reivindicar las invenciones de uso médico** específico (o segundo uso médico) y de uso médico general (o primer uso médico, solo existente en EP).
- La posibilidad de tener en la solicitud EP **reivs. multi-dependientes colgando de reivs. multi-dependientes**, inexistente en las otras cuatro oficinas IP5 y el PCT. Lo análogo respecto a reivs. con **referencias múltiples de definición**.
- La **imposibilidad de facto en US** (por ser económicamente disuasorio) de tener **reivs. multi-dependientes o reivs. con definiciones múltiples**.
- La costumbre en **US** (basada en jurisprudencia) de **no** poner en las reivs. los **números de referencia de los dibujos**.
- La costumbre en **US de no usar reivs. en dos partes** (i.e. con *characterized by / in that / the improvement being*).
- La práctica frecuente en **EP** de **modificar la descripción** para hacerla coherente con modificaciones de las reivs.
- Las diferentes **tasas por exceso de páginas y por exceso de reivs.**

Diferences in grace periods: Danger of prejudicial inventors disclosures!

A grace period is the time before the priority date (in e.g. US, CA, MX, CN) or before a National/PCT application date (in e.g. EP, JP, TW) , during which certain types of prior art do not invalidate the application. Depending on the applicable law, it may refer to any publications of the invention deriving directly or indirectly from the applicant, or be restricted to exceptional situations such as display in certain exhibitions or publication in breach of confidence (not updated)

12 months (inventors disclosure)

USA(*)

(pre-AIA: first-to-invent system)

(AIA: first-inventor-to-file system)

Canada (since 2019)

Mexico

Korea (since 2012)

Japan (since 2018)

Australia

Malaysia

Philippines ...

(*) US required grace-period-before-priority in Trans Pacific Partnership (TPP) negotiations, before its withdrawal. A Comprehensive and Progressive Agreement for TPP started in 2019.

6 months (non-prejudicial disclosures: exhibitions or evident abuse to the applicant)

China

EPC (Art. 55 EPC)

most EPC states, e.g.:

ES (Art. 7 LP)

Taiwan (not in Paris Conv.)

Brazil ...

The European patent system and the grace period

An impact analysis

June 2022



While an unrestricted grace period in Europe would introduce significant legal uncertainty in the European patent system, a declaration requirement and prior user rights could help preserve the balance in the system

Some substantial and formal requirements in the **EPO** and the **USPTO** are different or are named differently

- **Industrial applicability / utility** (similar)
- **Inventive step / non-obviousness** (similar)
- **Claim clarity and conciseness / distinct claiming** (similar)
- **Disclosure and sufficient basis / enablement and written description** (stricter)
- **No added subject matter / no new matter** (less strict)
- **Excluded subject-matter: (EPC Art. 52.2 & 53) vs. case-law non-eligibility**
- **Prior art: EPC Art 54(3) for novelty vs. US for anticipation and obviousness** (dif.)
- **Unity vs. unity** (similar) **and restriction** (different & stricter)
- **Limitation and revocation vs. continuations and continuation-in-part** (different)
- **Some US peculiarities: provisional applications; best mode; limiting estoppel; duty of candor; no multiple dependency/definition references in claims (allowed *de iure*, but not used *de facto*).**

Drafting description & claims for IP5 Offices, via PCT

The **priority application** should contain **a full as disclosure as possible**.

It is undesirable to submit different versions of the description for different offices (it is imposible when the PCT is used). Since the disclosure requirements for the USPTO are stricter than in most other offices, a text that is suitable for the US will also generally be suitable elsewhere (but not always, so **peculiarities of the other offices** should be taken into account).

Claims may, however, be submitted differently for different offices. In fact, it is recommended to draft claims initially (priority and PCT) in the 'EPO style', in a number as high as desired, possibly including some of the potential claims as 'clauses' in the description ('clauses' do not pay extra claim fees and they are not searched). **Claims in the 'US style' are not recommended for initial drafting**, as in the USPTO no multiple dependency/definition references will be used (EPO claims will later be adapted to US, JP, CN, KR... practices).

When the PCT is used, claim types and claim wordings should be adapted to the law and practice of the ISA (International Searching Authority). **Other types/wordings of claims (typically those of medical use) should be included in the description**, for an easy adaptation of claims before entering the National/European phases.

'Clauses' in a EP appl. as a claim amending tool

These clauses are alternative sets of claims, initially not claimed but placed at the end of the description for their eventual use in amending the initial claims (e.g. they may come from a priority or PCT application). **If not used to amend the claims, they are erased during prosecution to avoid inconsistency between the description and the claims.** They may be introduced so:

"For reasons of completeness, various aspects of the present invention are set out in the following numbered clauses:

Clause 1. An apparatus for.... comprising A, B and C.

Clause 2. The apparatus according to clause 1, wherein C is C'. [etc.]

[EPO Guidelines 2023] F-IV, 4.4 General Statements, "spirit of the invention", claim-like clauses...

Finally, **claim-like clauses must also be deleted or amended to avoid claim-like language prior to grant** since they otherwise may lead to unclarity on the subject-matter for which protection is sought. **[but see next slide]**

"Claim-like" clauses are clauses present in the description which despite not being identified as a claim, appear as such and usually comprise an independent clause followed by a number of clauses referring to previous clauses. These claim-like clauses are usually found at the end of the description and/or in the form of numbered paragraphs, particularly in divisional or Euro-PCT applications, where the original set of claims from the parent or PCT application is appended to the description.

EPO BoA on deletion of 'claim-like' clauses

On 28 April 2022, the Board of Appeal of the European Patent Office (*EPO*) issued its decision in case T 1444/20 (the “Decision”). The Decision concerned a patent application (the “Patent Application”) that was not entirely accepted by the relevant EPO’s examining division, which ordered the applicant to delete claim-like clauses from the descriptive part of the Patent Application. The applicant appealed this decision and **the Board of Appeal ruled in the applicant's favour, stating that the censored claim-like clauses were not likely to create confusion and be mistaken for claims, as they were evidently part of the descriptive content of the Patent Application.** The Decision follows the reasoning of a previous judgment issued by the Board of Appeal on case T 1989/18, where the **Board found that there was no legal basis in the European Patent Convention to require deletion of claim-like description amendments, a practice that was instead envisaged under the EPO Guidelines.**

Orsingher Ortu Avvocati Associati, Lexicology 2022-07-06

**Few notes about
physical requirements,
drawings, and
some parts of the description**

Avoid the horror of the blank page !!



Start with a good template, fully-designed !!

Templates

Basic Reports Books Letters Curricula Vitae

CAF patent application, for PCT & IP5 offices !!

Order of different parts of the patent application

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**: [they will not necessarily be drafted in this order]

(i) **the request**; [usually filled by computer, with inventors, applicants, title, etc.]

(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); [whose preparation will mostly be dealt with after the preparation of claims, in this course]

(iii) **the claims**; [after initial interviews and brainstorming with inventors, taking into account background art and disclosed embodiments, claim types and formats will be selected, their dependency/definition structures will be defined, and the actual drafting will take place with the selected terminology for technical elements. All this will occupy more than half of the course]

(iv) **the abstract**; [typically written at the end]

(v) if applicable, **the drawings**; [of the utmost importance in electromechanics]

(vi) if applicable, **the sequence listing part of the description** [in biotech] cont.

Sheet numbering in the Description/Claims/Abstract part, and in the Drawings part (cf. Chapter 11 for other physical requirements)

PCT Adm Ins. Sec. 207. Arrangement of Elements and Numbering of Sheets of the Int. 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**; **[now done by a computer filing platform]**

(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 numbering is also accepted by EPO & USPTO, so it is highly recommended; *idem* for drawings being placed in a separated file]**

(iv) if applicable, **a further series applying to the sequence listing** part of the description commencing with the first sheet of that part. **[since July 2022, this is done with 'WIPO Sequence Suite']**

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 \(PDF, 138 KB\)](#)

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[Classification \(WG1\)](#)

[Global Dossier and patent information \(WG2\)](#)

- IP5 file wrapper
- IP5 Patent Information

Policy

- Common Citation

Document (CCD)

- **Common Application**

PCT Adm. Ins. Sec. 204. Headings of the Parts of the Description

(a) The headings of the parts of the description shall **preferably** be as follows:

(i) for matter referred to in Rule 5.1(a)(i), **"Technical Field"**;

(ii) for matter referred to in Rule 5.1(a)(ii), **"Background Art"**;

(iii) for matter referred to in Rule 5.1(a)(iii), **"Disclosure of Invention"** or **"Summary of Invention"**;

(iv) for matter referred to in Rule 5.1(a)(iv), **"Brief Description of Drawings"**;

(v) for matter referred to in Rule 5.1(a)(v), **"Best Mode for Carrying out the Invention,"** or, where appropriate, **"Mode(s) for Carrying out the Invention"** or **"Description of Embodiments"**;

(vi) for matter referred to in Rule 5.1(a)(vi), **"Industrial Applicability"**;

(vii) for matter referred to in Rule 5.2(a), **"Sequence Listing"**;

(viii) for matter referred to in Rule 5.2(b), **"Sequence Listing Free Text."**

(b) The heading **"Title of Invention"** shall **preferably** precede the title of the invention.

Note: Headings in red color are part of Common Application Format (CAF)

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.

2016-02-02

■ 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)

According some recent US case-law, the use of "invention" in section titles risks narrowing claim interpretation



(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).

underlined those preferred by this author

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]

**Line numbering or
paragraph numbering
(not both)**

[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]

CAF patent application template (1/3)

1

[DESCRIPTION starts on a new page, without any heading (contrary to ES practice)]

[TITLE] (No heading; in **boldface** and/or underlined)

5

TECHNICAL FIELD

BACKGROUND ART

SUMMARY

10

.../...

Throughout the description and claims the word "comprise" and its variations -such as "comprising"- are not intended to exclude other technical features, additives, components, or steps. Furthermore, the word "comprising" includes the case of "consisting only of". Additional objects, advantages and features of the invention will

15

become apparent to those skilled in the art upon examination of the description or may be learned by practice of the invention. The following examples and drawings are provided by way of illustration, and they are not intended to be limiting of the present invention.

a recommended legal boilerplate (only legal text in application)

CAF patent application template (2/3)

[BRIEF DESCRIPTION OF DRAWINGS]

20 [Fig. 1/ FIG. 1 / FIG 1 shows; Fig. 2 ; etc]

DESCRIPTION OF EMBODIMENTS

Examples ?

25 [Reference signs list]

[Reference to Deposited Biological Material]

[Citation list]

[Patent literature]

[Non patent literature]

30

CLAIMS (on a new page)

Claim 1. A/An [preamble P] comprising

Claim 2. The P-noun according to claim 1,

35 ABSTRACT (on a new page)

[DRAWINGS] (separate file; no heading; no line numbers; page numbering: 1/3, 2/3, 3/3)

[Sequence Listing] (on a separate file created with WIPO Sequence Suite)

CAF patent application template (3/3)

2,8 cm

2 cm

2

3,5 cm

CAF-recommended identification of elements

1½-spacing
(4 lines/inch)
= 18 pt.

Each image must be preceded by a sign showing that it is a mathematical ("Math.") or chemical ("Chem."), e.g.:

Math. 1

Chem. 1

2 cm

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

Claim 1. A depilatory device...

2,5 cm

10

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

Fuente: Arial 11

← why?

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

Encabezado: 2,0.

Pie de página: 2,0.

Interlineado: 18 pt.

15



2 cm

2

Recommended fonts and sizes in patent applications

preferred by the author



Throughout the description and claims

Arial 11

Throughout the description and claims

Times New Roman 11

Throughout the description ~~and~~ claims

Courier 11

Throughout the description and claims

Arial 12

Throughout the description and claims

Times New Roman 12

Throughout the description ~~and~~ claims

Courier 12

Times Roman 11 and Calibri 11 are not high enough. Arial 12 is unnecessarily large. Courier 11 and 12 are out of question, as they involve a substantial waste of space. Arial 11, Times New Roman 12 or Calibri 12 would be OK, although the author prefers Arial 11, which is the one compulsory at the OEPM

Real Decreto 316/2017 - Reglamento de la Ley 24/2015 española

- ANEXO Requisitos formales de la solicitud de patente

1. Diseño de página

a) Formato: A4

b) **Márgenes:**

- **Superior: 35 mm.**

- Inferior: 20 mm.

- **Derecha: 25 mm.**

- Izquierda: 25 mm.

c) **Numeración de páginas:** deberán ir numeradas correlativamente y se iniciará **en página 2, abajo** y centrado.

d) Numeración de líneas en la descripción y en las reivindicaciones, en la parte izquierda: reinicio en cada página e intervalo de 5.

2. Párrafo y fuente:

a) **Tipo de letra: Arial 11.** En el caso de la traducción de reivindicaciones de solicitudes de patentes europeas o del folleto de patentes europeas, el tipo de letra será Arial 9.

b) **Interlineado: 1.5.** En el caso de la traducción de reivindicaciones de solicitudes de patentes europeas o del folleto de patentes europeas, será de un espacio.

c) **Espaciado: una línea en blanco entre párrafos.**

d) No se utilizará el sangrado entre párrafos. No obstante, si se enumeran grupos o subgrupos a), b), c), etc., sí se admitirán sangrados y tabulaciones.

3. Contenido de los documentos:

a) **Cada parte de la solicitud se iniciará en una nueva página con las palabras DESCRIPCIÓN, REIVINDICACIONES (centradas, mayúsculas y negrita) y, si hubiera, DIBUJOS Y LISTA DE SECUENCIAS, RESUMEN.**

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 on Amyuni-PDF & also word-processors files]** (cont.)

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 21.0 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 [not inside the margin!]

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"]

(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.**

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**.

....

Drawings accompanying the description?



description

additional narration that translates images into spoken words



In normal life a picture may be worth a thousand words, but **in patents world one cannot incorporate pictures into claims.** Thus a "**blind man**" test should be applied: The description should be written as if the drawings were not there; but sometimes drawings help a lot!

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.

k. Tables

Tables are based on PCT Rule 11.10.

Recommendation: Use Fig. , FIG. or FIG, but not Figure (to avoid its translation), both in description and in claims

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.

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 (e.g. Arial 15) [not less than 0.21 cm (e.g. Arial 11) in description and claims]**. 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**.

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 po. is recommended in word-processors]**

(ii) **Text written in a nonscript type font (e.g., Arial, Times Roman, or Courier)** 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 not smaller than 0.21 cm; it is accepted in the PCT and the EPO. It is Obligated in the 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 obliged by Rule 49(6) EPC]**

37 CFR 1.84 Standards for drawings

(a) Drawings. There are two acceptable categories for presenting drawings in utility and design patent applications.

(1) **Black ink.** Black and white drawings are normally required. India ink, or its equivalent that secures solid black lines, must be used for drawings; or

(2) **Color. On rare occasions, color drawings may be necessary ...**

...

(q) Lead lines. Lead lines are those lines between the reference characters and the details referred to. Such lines may be **straight or curved** and should be **as short as possible**. They must originate in the immediate proximity of the reference character and extend to the feature indicated. Lead lines **must not cross each other**. **Lead lines are required for each reference character except for those which indicate the surface or cross section on which they are placed...**

(r) Arrows. Arrows may be used at the ends of lines, provided that their meaning is clear, as follows:

(1) On a lead line, **a free standing arrow** to indicate the entire section towards which it points;

(2) On a lead line, **an arrow touching a line** to indicate the surface shown by the line looking along the direction of the arrow; or

(3) To show the **direction of movement**.

US Drawing Requirements

Information on drawing requirements is based substantially on 37 CFR § 1.84.

Black and white drawings are normally required. India ink, or its equivalent that secures black solid lines, must be used for drawings. For nonprovisional utility applications, **the "sheets" of drawings should be contained in an electronic document in PDF format** filed via EFS-Web together with the other application documents in PDF format.

Numbering of Sheets of Drawings and Views

In consecutive Arabic numerals, starting with 1... **in the middle of the top** of the sheet but not in the margin. ... The number of each sheet should be shown by **two Arabic numerals placed on either side of an oblique line**, with the first being the sheet number and the second being the total number of sheets of drawings, with no other marking **[1/3, 2/3 and 3/3, as in PCT]**.

Partial views intended to form one complete view, on one or several sheets, must be identified by the same number followed by a capital letter **[FIG. 1A, FIG. 1B...]**. View numbers must be preceded by the abbreviation "FIG." ... Numbers and letters identifying the views must be simple and clear and must not be used in association with brackets, circles, or quotation marks. The **view numbers must be larger than the numbers used for reference characters.**

Guide for preparation of patent drawings, USPTO, June 2002

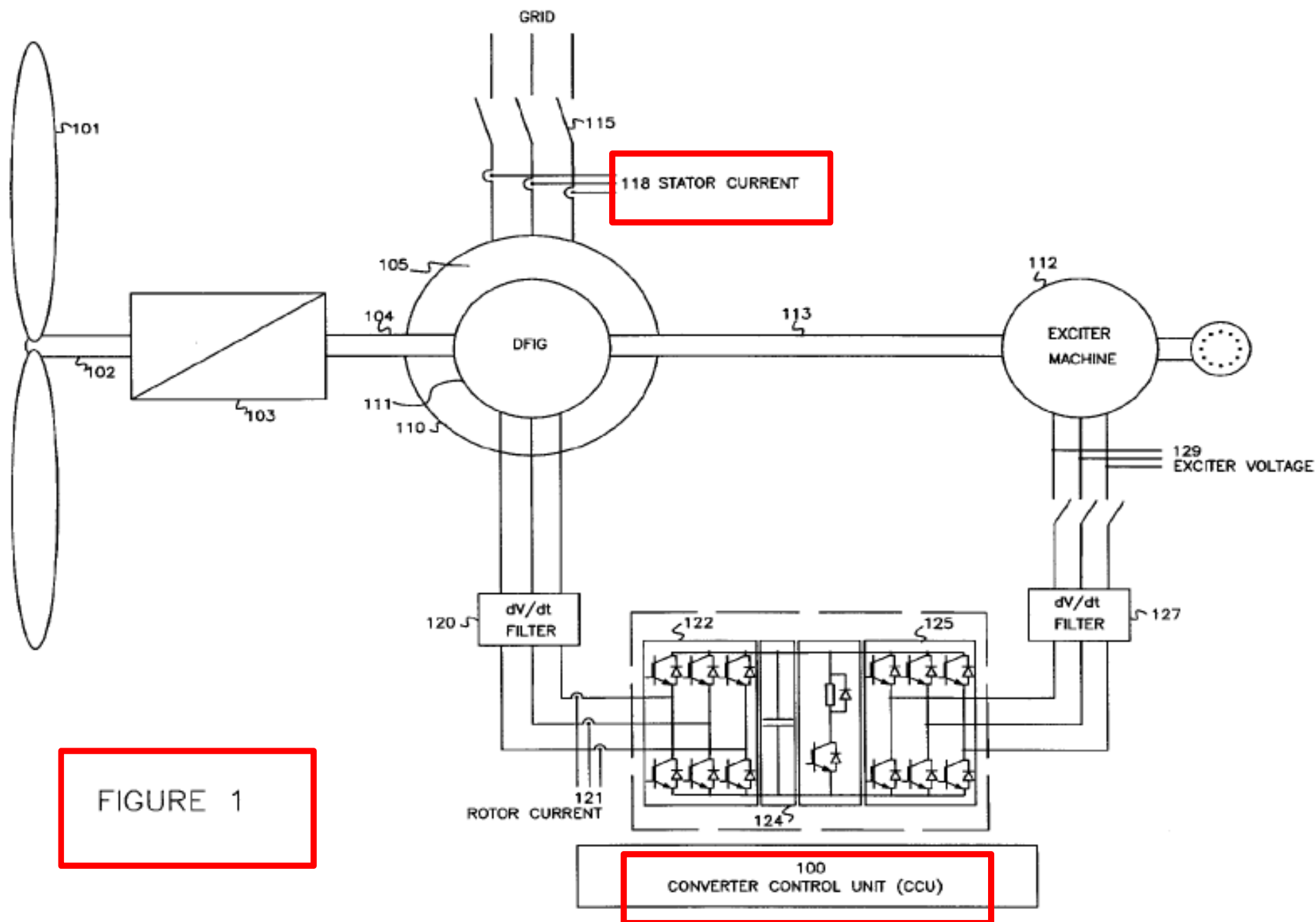
SELECTED U.S. LAWS AND RULES OF PRACTICE RELATING TO PATENT DRAWINGS

35 U.S.C. 113	Drawings.
37 CFR 1.58	Chemical and mathematical formulae and tables
37 CFR 1.74	Reference to drawings.
37 CFR 1.81	Drawings required in patent application.
37 CFR 1.83	Content of drawing.
37 CFR 1.84	Standards for drawings. ←

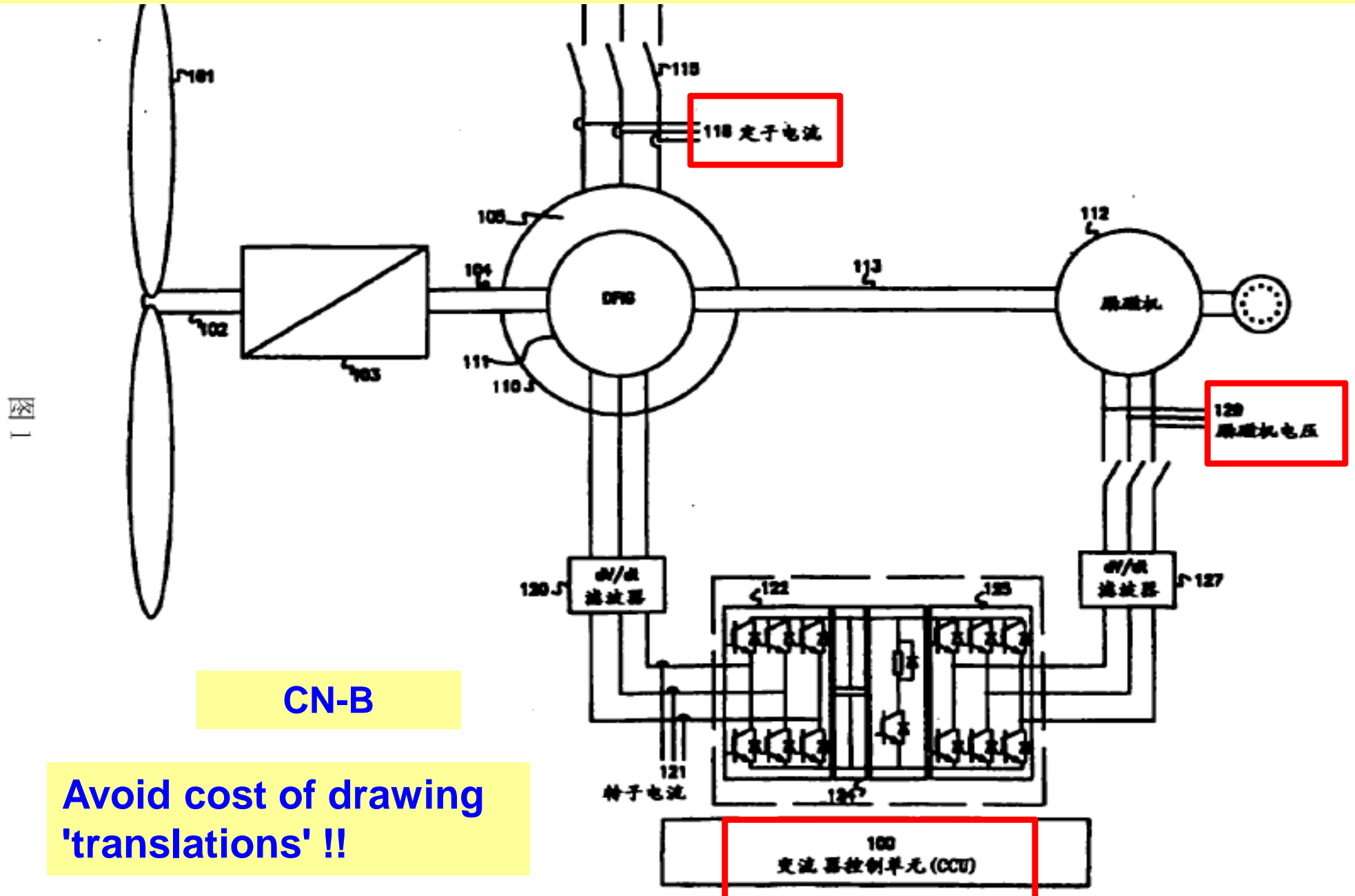
→	(a) Drawings.
	(1) Black ink.
	(2) Color.
	(b) Photographs.
	(1) Black and white.
	(2) Color photographs.
	(c) Identification of drawings.
	(d) Graphic forms in drawings.
	(e) Type of paper.
	(f) Size of paper.
	(g) Margins.
→	(h) Views.
	(1) Exploded views.
	(2) Partial views.
	(3) Sectional views.
	(4) Alternate position.
	(5) Modified forms.
	(i) Arrangement of views.
	(j) Front page view.
	(k) Scale.
	(l) Character of lines, numbers, and letters.
→	(m) Shading.
	(n) Symbols.

	(o) Legends.
	(p) Numbers, letters, and reference characters.
→	(q) Lead lines.
→	(r) Arrows.
	(s) Copyright or Mask Work Notice.
	(t) Numbering of sheets of drawings.
	(u) Numbering of views.
	(v) Security markings.
	(w) Corrections.
	(x) Holes.
	(y) Types of Drawings.
	37 CFR 1.85 Corrections to drawings.
	37 CFR 1.96 Submission of computer program listings. [shown in part]
	37 CFR 1.121 Manner of making amendments in applications. [shown in part]
	37 CFR 1.151 Rules applicable. [Designs]
	37 CFR 1.152 Design drawings.
	37 CFR 1.161 Rules applicable. [Plants]
	37 CFR 1.165 Plant drawings.
	37 CFR 1.171 Application for reissue.
	37 CFR 1.173 Reissue specification, drawings, and amendments.
	37 CFR 1.211 Publication of applications. [shown in part]
	37 CFR 1.215 Patent application publication. [shown in part]
	37 CFR 1.437 The drawings. [International Applications]
	37 CFR 1.530 Statement by patent owner in <i>ex parte</i> reexamination; ame: by patent owner in <i>ex parte</i> or <i>inter partes</i> reexamination; inventorship change in <i>ex parte</i> or <i>inter par</i> reexamination. [shown in part] [Reexaminations]
	Appendix 1 § 1893.03(f) of <i>Manual of Patent Examining Procedure</i>
	Appendix 2 Article 7 of Patent Cooperation Treaty and Selected PCT Rules Pertaining to Drawings
	Appendix 3 Symbols
	Appendix 4 Drawing Examples

A drawing with words and "FIGURE" in the priority appln.



Words had to be translated -and paid for- in patent applns.
published in other languages: **NO WORDS IN DRAWINGS !**



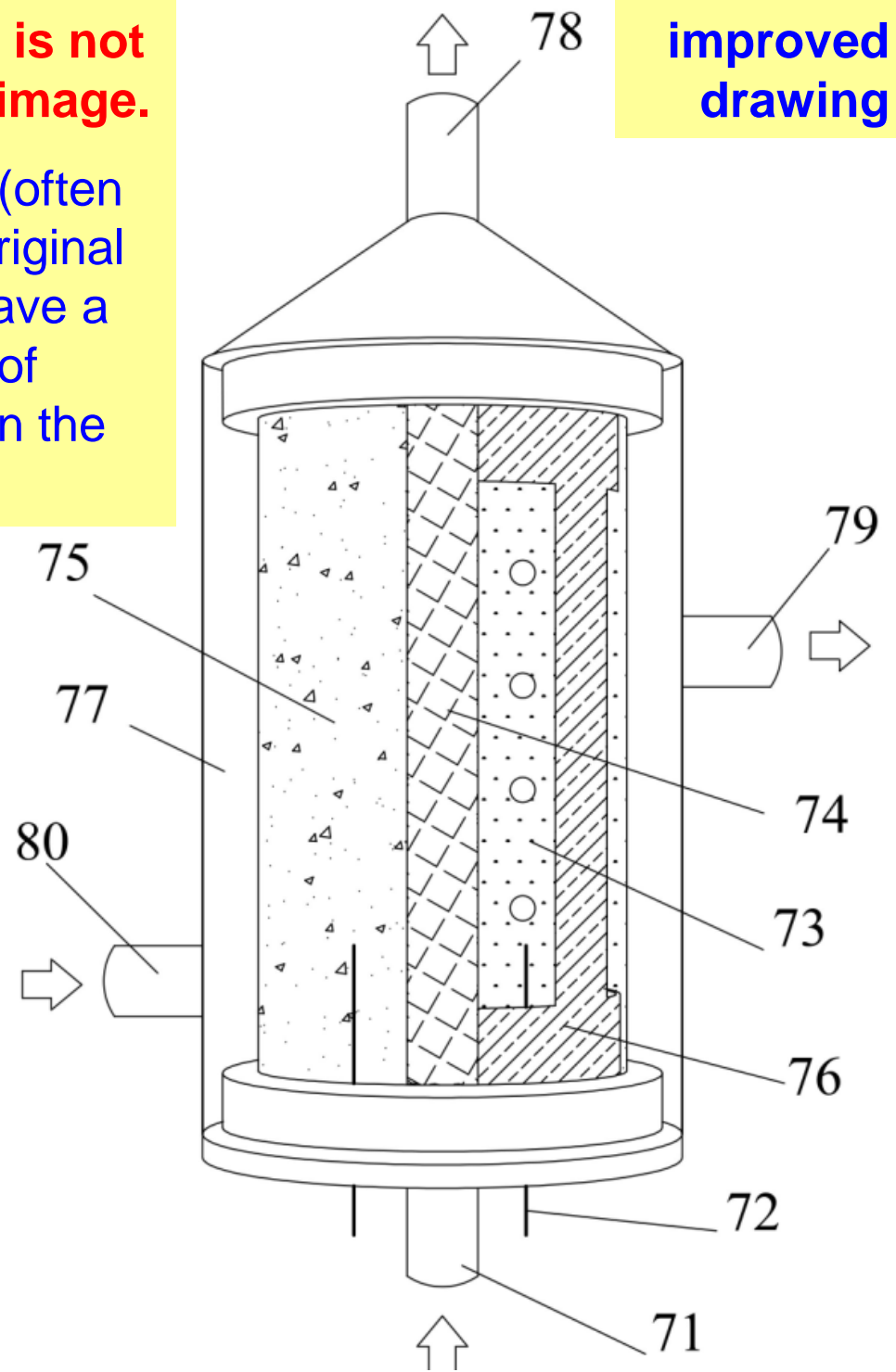
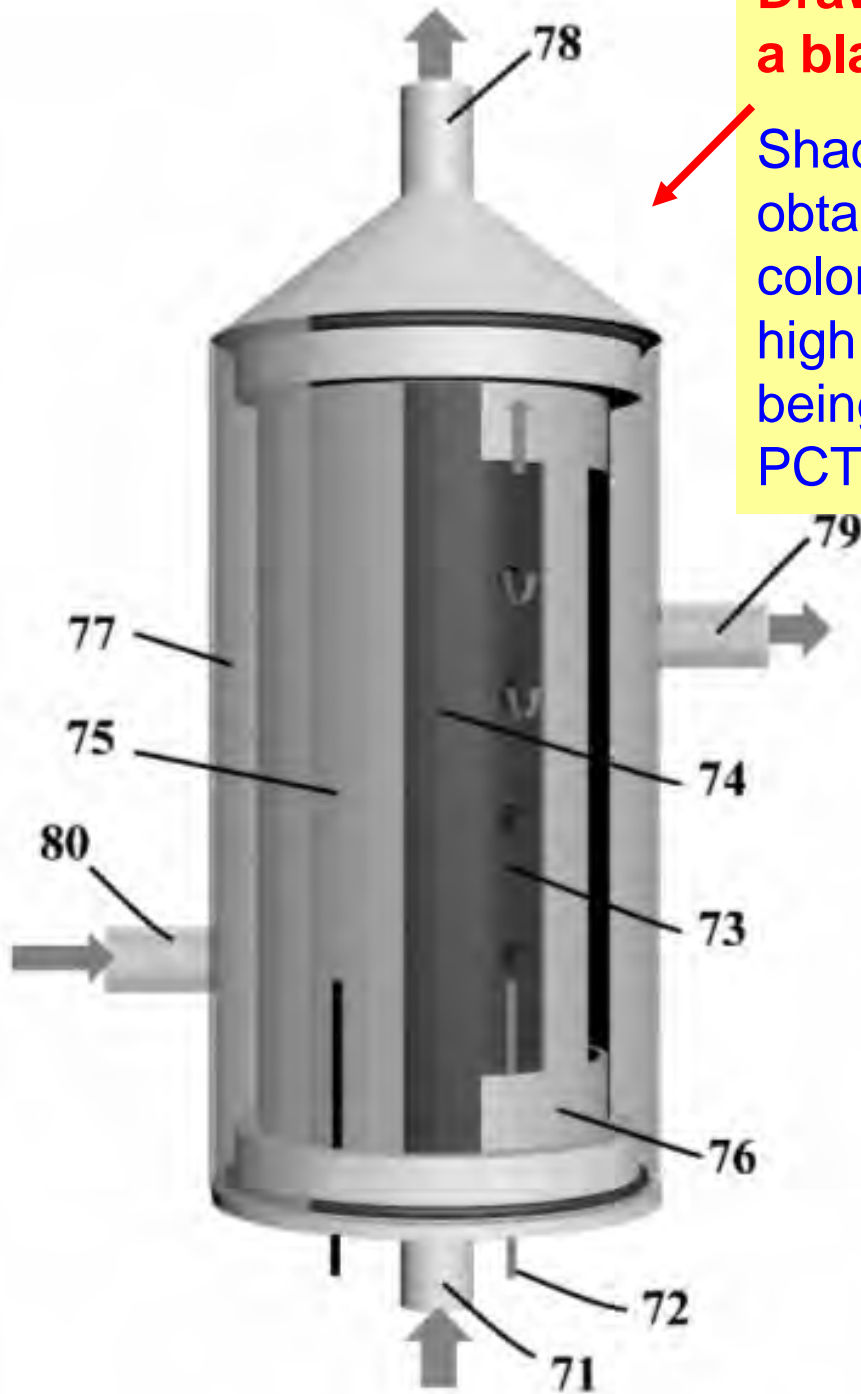
CN-B

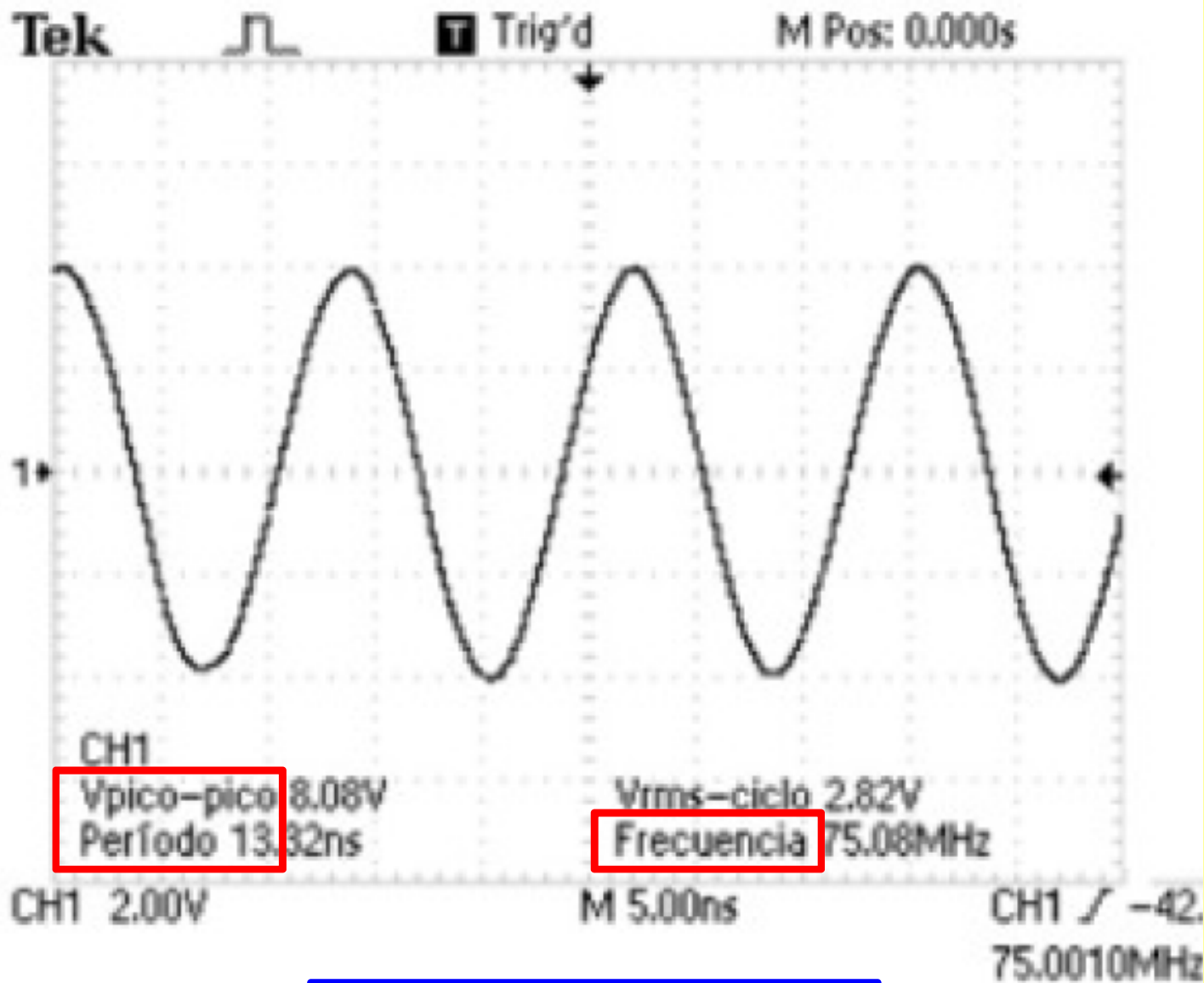
Avoid cost of drawing
'translations' !!

Drawing which is not a black&white image.

Shades of grey (often obtained from original color images) have a high probability of being objected in the PCT & US

improved drawing





The EPO accepted this drawing in the priority application, but rejected it acting as PCT Receiving Office, by saying: "proposed Figure 2A does not fulfil the requirements... as lines are not executed in durable black color and are not clearly defined; furthermore the language of part of Figure 2A is not in a language of publication accepted by this receiving office."

Drawings must be well done from the priority application !!

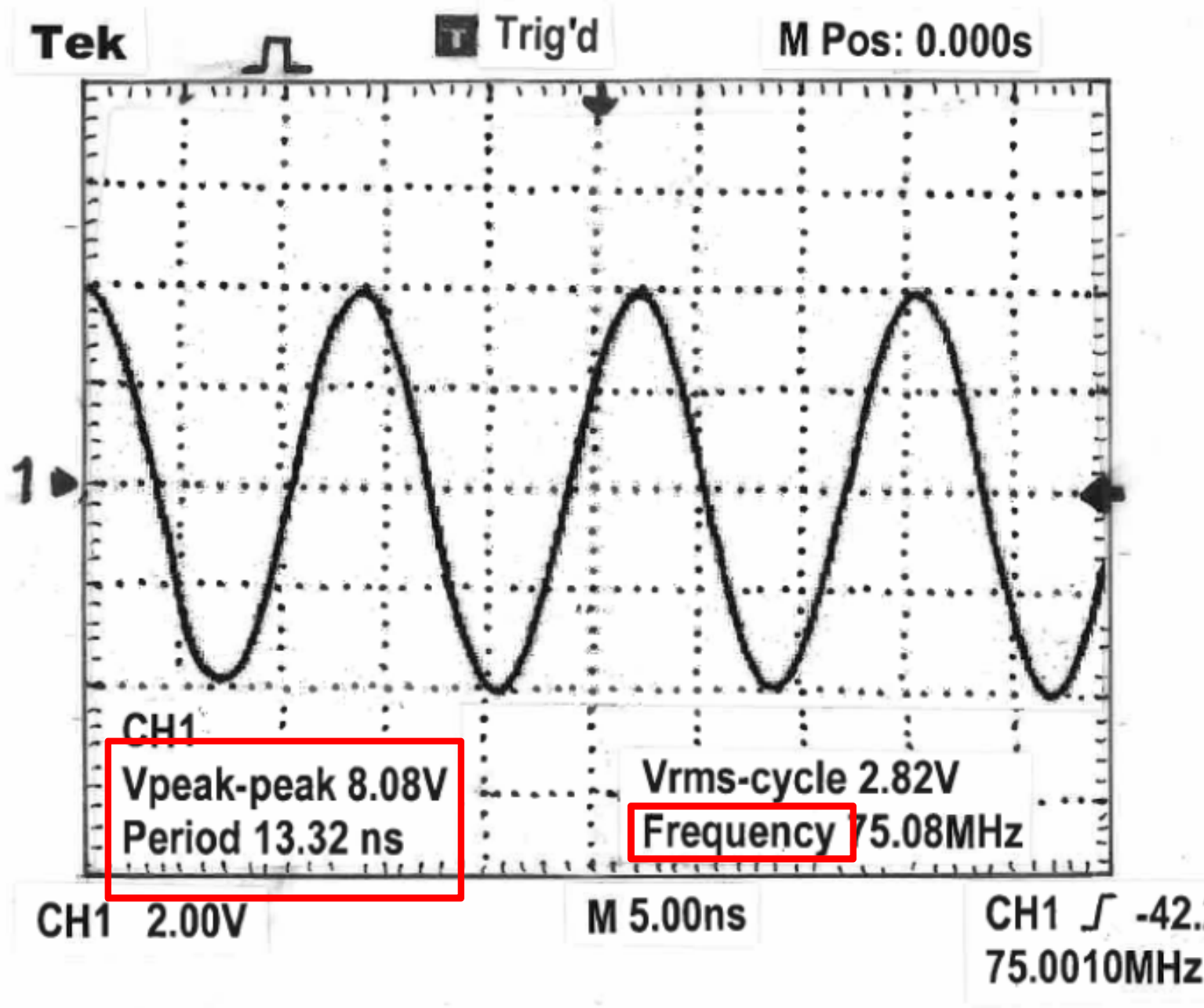


FIG. 2A (Prior Art)

A veces no hay más remedio que sacar los viejos estilógrafos (Rotring®) y el papel vegetal, y ponerse a copiar a mano y a hacer *collages* pegando papeles con letras impresas, corrigiendo con la hoja de afeitar y el Tipp-Ex®).

No importa si no queda 'bonito', lo importante es que quede claro, con todas las líneas suficientemente gruesas.

Al final se escanea... y listo.

'Mechanics' -not 'Art'- of patent application drafting

Practising Law Institute

Intellectual Property Law Library

How to Write a Patent Application

Second Edition

Jeffrey G. Sheldon

Practising Law Institute

Intellectual Property Law Library

Faber on Mechanics of Patent Claim Drafting

Sixth Edition

Formerly
Landis on Mechanics of Patent Claim Drafting

Robert C. Faber

Content of a patent document - Contenido de un doc. de patente

[Description]

[Title] (little descriptive)

TECHNICAL FIELD (short introducción)

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

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

[BRIEF DESCRIPTION OF DRAWINGS]

DESCRIPTION OF EMBODIMENTS /

EXAMPLES: dependent claims; what has been really done (**past**) and/or *paper examples* (**present**); explanation of Figs.

CLAIMS

[numbered] Defining the subject-matter (entities/products, activities/processes) whose protection is sought

ABSTRACT

[DRAWINGS] (Figs., if any)

SEQUENCE LISTING (computer file; if any)

CAF

DESCRIPCIÓN

[Título] (poco descriptivo)

SECTOR DE LA TÉCNICA (introducción corta)

ANTECEDENTES DE LA INVENCIÓN: problema (si ya es conocido); **estado de la técnica más próximo** (gener. pocas citas a patentes) y sus limitaciones

EXPLICACIÓN DE LA INVENCIÓN: extrapolación (**presente**) de realizaciones particulares, proporcionando soporte a las reivindicaciones independientes; **problema y solución;** aplicación industrial; ventajas; etc.

[BREVE DESCRIPCIÓN DE LOS DIBUJOS]

REALIZACIONES PREFERENTES / EJEMPLOS: reivs. dependientes; lo que realmente se ha hecho (**pasado**) y/o *ejemplos sobre el papel* (**present**); explicación de las Figs.

REIVINDICACIONES

[numeradas] Definen la materia u objeto (entidades/products, actividades/procedimientos) que se quiere proteger

RESUMEN

DIBUJOS (Figs., si hay)

LISTADO DE SECUENCIAS (fichero ordenador)

**Manual de la
OEPM**

Clarity in description and claims

Art. 83 EPC: Disclosure [*divulgación*] of the invention

['disclosure' is sometimes used for 'embodiment' or 'invention']

"The EP application shall disclose the invention [in the parts named description and drawings] **in a manner sufficiently clear and complete** for it to be carried out by a person skilled in the art [person having ordinary skill in the art, PHOSITA, in US]."

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. 35 USC 112. Specification. (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.

In US law, claims are part of the specification; but in practice 'specification' is often used as synonymous with PCT/EPC 'description'. In the EPO, 'specification' is used e.g. to name the EP-B document. Thus, **in this course 'specification' will not be used at all !**

Appendix R - Patent Rules

Title 37 - Code of Federal Regulations Patents, Trademarks, and Copyrights

[Editor Note: Current as of August 31, 2017. The Federal Register is the authoritative source and should be consulted if a need arises to verify the authenticity of the language reproduced below.]

THE APPLICATION		<u>SPECIFICATION</u>	
1.51	General requisites of an application.	1.71	Detailed description and specification of the invention.
1.52	Language, paper, writing, margins, compact disc specifications.	1.72	Title and abstract.
1.53	Application number, filing date, and completion of application.	1.73	Summary of the invention.
1.53	(pre-PLT (AIA)) Application number, filing date, and completion of application.	1.74	Reference to drawings.
1.53	(pre-AIA) Application number, filing date, and completion of application.	1.75	<u>Claim(s).</u>
1.54	Parts of application to be filed together; filing receipt.	1.76	Application data sheet.
1.55	Claim for foreign priority.	1.76	(2012-09-16 thru 2013-12-17) Application data sheet.
1.56	Duty to disclose information material to patentability.	1.76	(pre-AIA) Application data sheet.
1.56	(pre-AIA) Duty to disclose information material to patentability.	1.77	Arrangement of application elements.
1.57	Incorporation by reference.	1.78	Claiming benefit of earlier filing date and cross-references to other applications.
1.57	(pre-PLT) Incorporation by reference.	1.79	Reservation clauses not permitted.
1.58	Chemical and mathematical formulae and tables.		
1.59	Expungement of information or copy of papers in application file.		
		<u>THE DRAWINGS</u>	
		1.81	Drawings required in patent application.
		1.81	(2012-09-16 thru 2013-12-17) Drawings required in patent application.
		1.81	(pre-AIA) Drawings required in patent application.
		1.83	Content of drawing.
		1.84	Standards for drawings.
		1.85	Corrections to drawings.

Some recommendations for clarity:

One element - one term/phrase - one number

- **Write clearly and effectively** (having clearly in mind what you want to communicate; only one idea per phrase is recommended)
- **Use short phrases, in active or passive. Do not alter the natural order of words in grammar** (e.g.: subject + verb + predicate).
- **Avoid the uncertainties** associated to relative pronouns whose **antecedents** are ambiguous, or to verbs whose **subjects** are **ambiguous**. In these situations it is strongly recommended to write a period or a semicolon, and to **repeat the subject**.
- **The Golden Rule: One element - one term/phrase - one reference number in drawings.** For a given element only one term/phrase (and one number in drawings) 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 term/phrase should be used afterwards.**

"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.

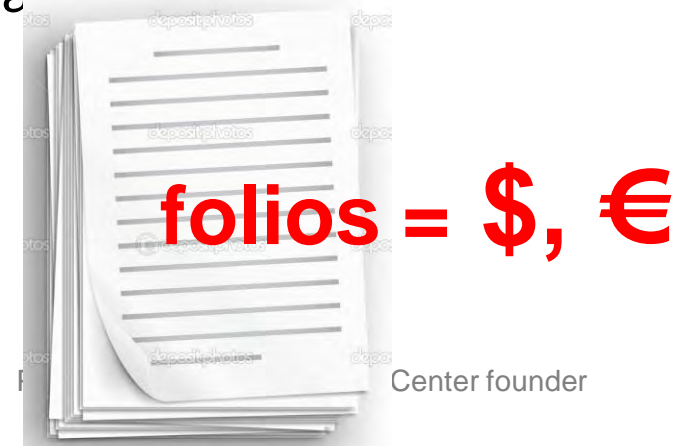
Most people are familiar with plain English, so **let us use plain English wherever plain English will do the job**.

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 [objective] 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



Real example: Avoid long-winded redundant expressions

Claim 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:

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

Never use "characterized by/in that" in the first drafting: at the USPTO we will not use it; at the EPO, we better wait until the examiner ask for it

Do not use claims starting with "In" (common in US)

[EPO Guidelines 20121] F-IV, 4.15. The expression "in".

To avoid ambiguity, particular care should be exercised when assessing **claims which employ the word "in" to define a relationship between different physical entities (product, apparatus), or between entities and activities (process, use), or between different activities.** Examples of claims worded in this way include the following:

- (i) cylinder head in a four-stroke engine
- (ii) In a telephone apparatus with an automatic dialer, dial tone detector and feature controller, the dial tone detector comprising ...
- (iii) In a process using an electrode feeding means of an arc-welding apparatus, a method for controlling the arc welding current and voltage comprising the following steps:...

In examples (i) to (iii) **the emphasis is on the fully functioning sub-units** (cylinder head, dial tone detector, method for controlling the arc welding current and voltage) **rather than the complete unit within which the sub-unit is contained** (four-stroke engine, telephone, process)...

No "preferably/preferred" in claims or description

In the EPO examination, "preferably" in a claim will be accepted and considered to create an **optional claim**, with no limiting effect on the scope of the broader claim without this preference. Besides, "**preferred embodiments**" in the description may act as **pointers to particular combinations** of features, for claim amendment purposes.

But in the US, although "preferably" in a claim and "preferred embodiments" in the description may be accepted by the examiner, during enforcement it may be that only the preferred features or the preferred embodiments are considered within the scope of the claim (cf. e.g.: Wang Labs. vs. American Online, Fed. Cir. 1999; Scimed Life Systems vs. Advanced Cardiovascular Systems, Fed. Cir. 2001; Oak Technology vs. ITC, Fed. Cir. 2001).

Thus, for US purposes "preferably/preferred" should be avoided. Some alternatives are:

- **In one [particular] embodiment, element A may (or can) be X.** In one embodiment, A may be Y. In one embodiment, A may be Z.
- Element A is chosen from A1, A2, A3, A4 and A5. **In an embodiment, element A may be chosen from A1, A2 and A3. In another embodiment, element A may be A1.**

Ideally, preferences in claims should be drafted as dependent claims.

A US and EP Comparison on Added Subject Matter

June 28, 2023

FINNEGAN

Examples of “Patent Profanity” in the U.S.

- Claims limited to **“preferred”** embodiments:
 - Wang Labs., Inc. v. American Online, Inc., 197 F.3d 1337 (Fed. Cir. 1999)
 - Scimed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337 (Fed. Cir. 2001)
 - Oak Technology, Inc. v. ITC, 248 F.3d 1316 (Fed. Cir. 2001)
- Other examples of “patent profanity”:
 - **“Very important”**
 - Inpro II Licensing, S.A.R.L. v. T-Mobile USA, Inc., 450 F.3d 1350 (Fed. Cir. 2006)
 - **“Critical,” “Special,” “Peculiar,” “Superior”**
 - Bayer AG v. Elan Pharmaceuticals Research Corp., 212 F.3d 1241 (Fed. Cir. 2000)
 - **“Essential” “Key”**
 - Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc., 170 F.3d 1373 (Fed. Cir. 1999)
 - **“Necessary”**
 - Atofina v. Great Lakes Chemical Corp., 441 F.3d 991 (Fed. Cir. 2006)
 - **“The invention is”**
 - C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858 (Fed. Cir. 2004)
 - Forest Labs., LLC v. Sigmapharm Labs, LLC, 918 F.3d 928 (Fed. Cir. 2019)



In general, initially do not cite specific prior art documents in the Background Art section

A discussion of the prior art in the description is considered desirable by the USPTO and the EPO. It also **may be useful to the applicant for preparing some 'inventive step arguments'** (e.g. that the invention is 'pointing away' from a specific prior art).

In no office the citation of specific prior art documents is a positive requirement, at least not upon filing ("*preferably* cite the documents..."; cf. EPC Rule 42.1.b), and, except in cases in which it is really necessary for an understanding of the invention, **it is best avoided**, for some reasons:

- **the closest prior art is not always known** at the time of drafting and an elaborate discussion of less relevant prior art serves no useful purpose;
- **the emphasis/interest of the invention may change some years later**, and a prior art discussion will make difficult to change its focus;
- an extensive discussion **adds to the length of the text, increasing costs**.
- **In the EPO** the addition of a citation of specific prior art document -and a short statement- **may be requested by the examiner** (not being considered added matter).
- But there is the **duty to inform the USPTO** of all relevant prior art of which the applicant is aware (via Information Disclosure Statements, **IDS**).

Copying all claims into the description

- The practice of **repeating the features of the claims word by word** - or almost- is **traditional** and it is still **permissible**, but it is being questioned as a waste of space (with the additional problem of having to modify it when redrafting claims).
- Today **some patent offices** [e.g. the EPO] **do not require repetition of the claims** and are happy to **accept** a statement like "**the invention is set out in the claims**".
- One school of thought (to which this author belongs) is that the statements of invention are "good for the judges and other potential readers of the patent" (different from patent examiners). **To repeat the claims** (avoiding claim jargon), **tying them with their advantages or to their solutions to problems identified in the prior-art part, is useful for claim support.** It also and makes easy the reading the document and helps to "tell the story".
- Having the wording of claims in the description is **helpful in case the EPO examiner ask to delete part of description after claim amendment.**

Clarity and interpretation of claims [Guids. 2023]

[EPO Guidelines] F-IV. 4.3. Inconsistencies

(iii) Part of the description and/or drawings is inconsistent with the subject-matter for which protection is sought. According to Art. 84, second sentence, the claims must be supported by the description. This means that **there must not be inconsistency between the claims and the description**. Parts of the description that give the skilled person the impression that they disclose ways to carry out the invention but are not encompassed by the wording of the claims are inconsistent (or contradictory) with the claims. **Such inconsistencies may be present in the application as originally filed or may result from amending the claims to such an extent that they are no longer consistent with the description or drawings.**

For example, an inconsistency may exist due to the presence of an alternative feature which has a broader or different meaning than a feature of the independent claim. Further, an inconsistency arises if the embodiment comprises a feature which is demonstrably incompatible with an independent claim.

However, it is not an inconsistency when an embodiment comprises further features which are not claimed as dependent claims as long as the combination of the features in the embodiment is encompassed by the subject-matter of an independent claim. Similarly, it is not an inconsistency when an embodiment fails to explicitly mention one or more features of an independent claim as long as they are present by reference to another embodiment or implicit.

Clarity and interpretation of claims [Guids. 2023]

[EPO Guidelines] F-IV. 4.3. Inconsistencies (cont.)

For borderline cases where there is doubt as to whether an embodiment is consistent with the claims, the benefit of the doubt is given to the applicant.

The applicant must remove any inconsistencies by amending the description either by deleting the inconsistent embodiments or marking appropriately so that it is clear that they do not fall within the subject-matter for which protection is sought.

The terms "disclosure", "example", "aspect" or similar do not necessarily imply that what follows is not encompassed by an independent claim. Unambiguous expressions have to be adopted to mark an inconsistent embodiment (e.g. by adding "not encompassed by the wording of the claims", "not according to the claimed invention" or "outside the subject-matter of the claims") **instead of replacing the terms "embodiment" or "invention" by one of the aforementioned terms...**

avoid "invention" if possible; use "disclosure"?

Moreover, features required by the independent claims may not be described in the description as being optional using wording such as "preferably", "may" or "optionally".

An **inconsistency** between the description/drawings and the claims may frequently occur **when, after a limitation of the claims following an invitation under Rule 62a(1) or Rule 63(1), the subject-matter excluded from the search is still present in the description.**

Furthermore, an **inconsistency** between the description/drawings and the claims will occur **when, after a non-unity objection (Rule 64 or Rule 164), the claims have been limited to only one of the originally claimed inventions**: the embodiments and/or examples of the non-claimed inventions must be either deleted or clearly indicated as not being covered by the claims.

In the EPO lack of support is rarely objected

[EPO Guids.] F-IV, 6.3 Objection of lack of support.

As a general rule, a claim is regarded as supported by the description unless there are well-founded reasons for believing that the skilled man would be unable, on the basis of the information given in the application as filed, to extend the particular teaching of the description to the whole of the field claimed by using routine methods of experimentation or analysis. Support must however be of a technical character; vague statements or assertions having no technical content provide no basis.

The division should raise an objection of lack of support only if he has well-founded reasons. [Old editions of the Guidelines were saying: "... and the applicant should be given the benefit of the doubt"].

Once the division has set out a reasoned case that, for example, a broad claim is not supported over the whole of its breadth, the onus of demonstrating that the claim is fully supported lies with the applicant (see F IV, 4). Where objection is raised, the reasons should, where possible, be supported specifically by a published document...

Description requirements: US and EPC/PCT

- **Written description (Possession)** (35 USC §112.1): requires inventors to describe invention in sufficient detail so a PHOSITA (Person Having Ordinary Skill In The Art) can reasonably conclude inventors had **possession of the claimed invention**.
- **Enablement**: requires inventors to provide enough information for a PHOSITA to make and use the claimed invention without undue experimentation. **Best mode** of carrying out the invention (35 USC §112.1).

-
- Disclose the invention, as claimed, such that **the technical problem (even if not expressly stated as such) and its solution can be understood**, and state any **advantageous effects** (EPC Rule 42.1.c; PCT Rule 5.1.a.iii). **Experimental results are not always required, but a technical effect should be derived from the application as filed** (cf. G2/21, Patent Mondays 2023-09-18 & 2024-09-30).
 - **Sufficiency** (EPC Art. 83; PCT Art. 5): disclose the invention in a manner sufficiently **clear and complete** for it to be carried out by a PHOSITA. **At least one** way of carrying out the invention.

-
- Generally, **lack of these requirements cannot be cured by post-filed evidence**.
 - The **amount of data** required is inversely proportional to the **predictability/maturity** of the technical field, and it should be **commensurate** with claim scopes.
 - Should we **wait** until more or better data are available?
 - Can we include some information (e.g. mechanism of action, bibliographic support) that explains why the technical effect is derived as being encompassed by the technical teaching and embodied by the same invention? (cf. G2/21)

PATENTE INTERNACIONAL

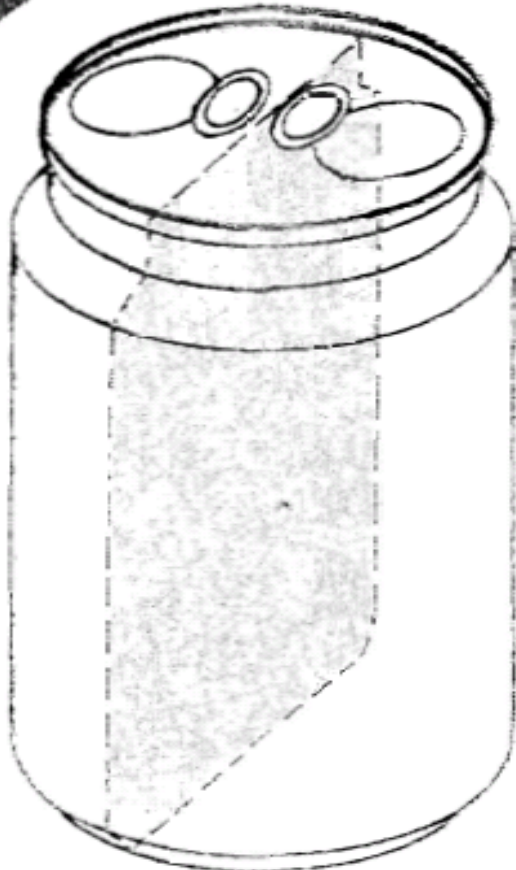
!!!ATENCIÓN!!!

INVERSORES.

EMPRESAS EMBOTELLADORAS.

EMPRESAS ENVASADORAS

DE BEBIDAS.



**LATA DE BEBIDAS PERFECCIONADA CON
2 COMPARTIMENTOS, PARA 2 BEBIDAS,
SIN MEZCLARSE INTERIORMENTE,
Y SERVIR A SU GUSTO.**

**DISPONE DEL ÚNICO SISTEMA QUE
PERMITE VERTER EL CONTENIDO DE
1 COMPARTIMENTO SIN QUE EL LÍQUIDO
DEL OTRO SE DERRAME.**

!! ??

**PARA INFORMACIÓN: SR. JULIO NAVEIRA MANTEIGA -ABOGADO- TEL. 93 790 77 10
O TAMBIÉN TELS. 610 45 59 39 - 670 24 91 17**

NOVEDAD MUNDIAL

Drinks can - Spanish utility model (priority doc.)



OFICINA ESPAÑOLA DE
PATENTES Y MARCAS

ESPAÑA

①① Número de publicación: **1 051 674**

②① Número de solicitud: U 200200853

⑤① Int. Cl.⁷: B65D 17/32

⑫ SOLICITUD DE MOD

②② Fecha de presentación: **05.04.2002**

④③ Fecha de publicación de la solicitud: 16.09.2002

⑤④ Título: **Lata de bebida perfeccionada.**

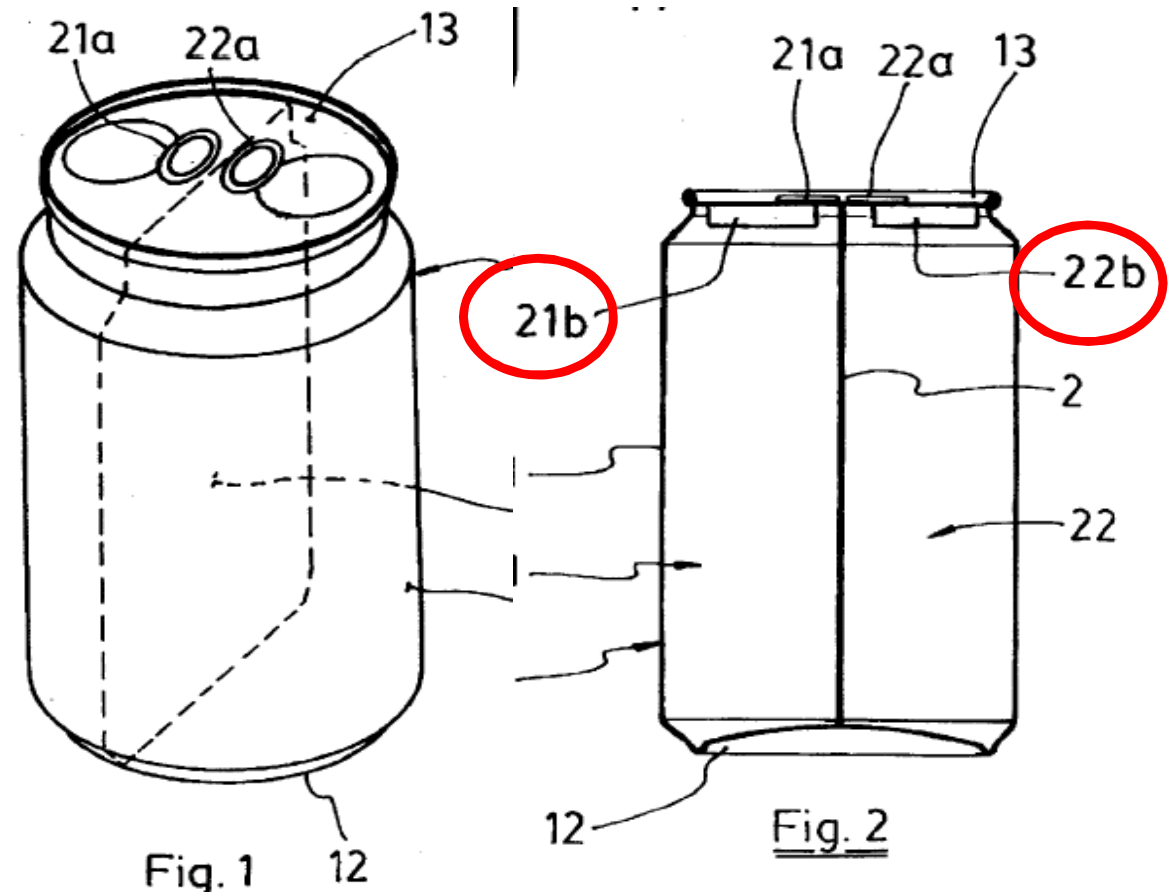


Fig. 1 12

12 Fig. 2

Drinks can - EP-A & US-A patent application publs.



Office européen des brevets

(11)

EP 1 350 729 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
08.10.2003 Bulletin 2003/41

(51) Int Cl.7: **B65D 25/04, B65D 17/32**

(21) Application number: **03380083.0**

**1.405 EPO fees (120 filing + 1.285 search)* +
aprox. 800 attorney's honoraria ≈ 2.400 EUR**

(22) Date of filing: **01.04.2003**

(*) Fees of April 2014

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PT RO SE SI SK TR**
Designated Extension States:
AL LT LV MK

(72) Inventor: **Quispe Gonzalez, David Gustavo**

(74) Representative:

(30) Priority: **05.04.2002 ES 200200853 U**

(19) **United States**

(12) **Patent Application Publication**
Quispe Gonzalez

(10) Pub. No.: **US 2003/0189046 A1**

(43) Pub. Date: **Oct. 9, 2003**

(54) **DRINK CAN**

Even more expensive!

2) U.S. Cl. **220/269; 220/906; 220/524**

Drinks can - excerpts from EP-A description

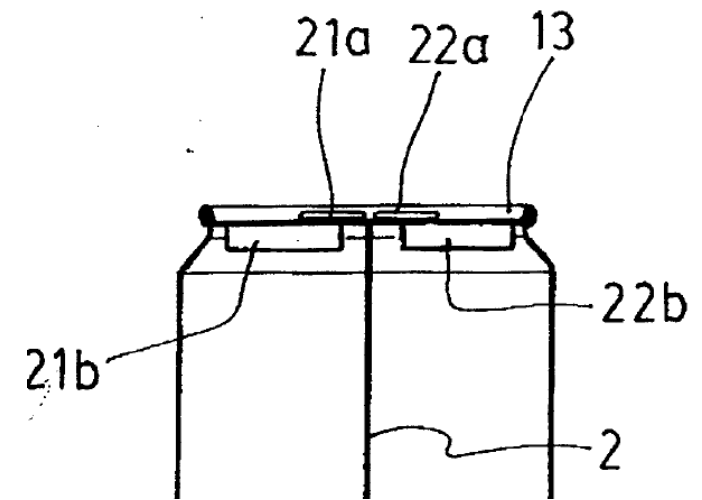
DESCRIPTION OF A PREFERRED EMBODIMENT

[0014] Said vertical wall (2) divides the internal space of the hollow body (1) into two separate compartments (21 and 22), which contain two separate drinks.

[0015] In turn, the lid (13) has some easy opening means (21a and 21b) represented schematically by the respective ring pulls in the areas corresponding to each one of the separate compartments (21 and 22).

[0016] In the example of the embodiment shown in Figure 2, the compartments (21 and 22) have some easy opening means (21a and 22a) connected to the respective compartments with some valves (21b and 22b) that only allow the exit of the drink contained in one compartment (21 and 22) when the can is tilted sideways corresponding to said compartment (21 and 22).

[0017] Once having sufficiently described the nature of the invention, in addition to an example of its preferred embodiment, to whom it may concern let it be known that the materials, shape, size and arrangement of the elements described can be modified provided that it does not mean an alteration to the essential nature of the invention that is claimed below.



← ?? !!



(12)

EUROPEAN PATENT APPLICATION

1. Drinks can, of the type that is made up of a hollowed out sheet body (1), having a side wall (11) that extends from the base upwards (1), and with a lid (13) whose periphery is fixed in a permanent way around the periphery of the upper part of the side wall (11); said lid (13) being fitted with an easy opening device, which includes a line of weakening that outlines a part of the lid which can be torn away by means of a ring pull and **characterised in that** the hollowed sheet body (1) has a dividing wall (2) on its inside that is fixed along the entirety of its periphery to the base (12), to the side surface (11) and to the lid (13) of the drinks can; this arrangement forms two separate compartments (21 and 22) on the inside of said can for the purpose of containing two separate drinks; and **in that** the lid (13) has some easy opening means (21a and 22a) connected to the respective compartments at the areas corresponding to each one of the compartments (21 and 22) for their individualised opening and the separate extraction of the drinks contained in same.

2. Drinks can, according to the previous claim, **characterised in that** the compartments (21 and 22) have connected to the areas of location of the opening means (21a and 22a) corresponding valves (21b and 22b) that only allow the drink contained in one compartment (21 and 22) to exit when the can is tilted sideways towards the corresponding said compartment (21 and 22).



European Patent Office

EUROPEAN SEARCH REPORT

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	PATENT ABSTRACTS OF JAPAN	1
X	GB 21 January 1998 (1998-01-21) * claims 1,2; figures 1,2 *	
A	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 09,	2

Five "X" relevant to Claim 1

Drinks can - EP-A Search Report



European Patent
Office

EUROPEAN SEARCH REPORT

Application number

EP 03 38 1

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF APPLICATION (Int.C)
X	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 05, 14 September 2000 (2000-09-14) -& JP 2000 043879 A (OZEKI NAOMI), 15 February 2000 (2000-02-15) * abstract; figures *	1	B65D25/04 B65D17/32
X	PATENT ABSTRACTS OF JAPAN vol. 016, no. 206 (M-1248), 15 May 1992 (1992-05-15) -& JP 04 031237 A (YASUMI SONODA), 3 February 1992 (1992-02-03) * abstract; figures *	1	
X	GB 2 265 597 A (HOLYOAKE VALERIE) 6 October 1993 (1993-10-06) * figures *	1	
X	US 5 492 244 A (KIM STANLEY D C) 20 February 1996 (1996-02-20) * claims 1,2; figures 1-3 *	1	
X	GB 2 315 057 A (ROBSON GARY) 21 January 1998 (1998-01-21) * claims 1,2; figures 1,2 *	1	



In the European Search Report, five documents with category X are mentioned, that are considered relevant to Claim 1.

However no document is mentioned that is considered relevant to Claim 2.

TECHNICAL FIELDS
SEARCHED (Int)

B65D

One of the five X-docs. cited as relevant to Claim 1 at EPO

United States Patent [19]
Kim

[11] **Patent Number:** **5,492,244**
[45] **Date of Patent:** **Feb. 20, 1996**

[54] **DIVIDED ALUMINUM CAN WITH
INDEPENDENTLY ACCESSIBLE
COMPARTMENTS**

[76] **Inventor: Stanley D. C. Kim, 311 Ohio Ave.**

4,919,295 4/1990 Hitzler 220/906
5,335,813 8/1994 Qi 220/906
5,397,014 3/1995 Aydt 220/271

FOREIGN PATENT DOCUMENTS

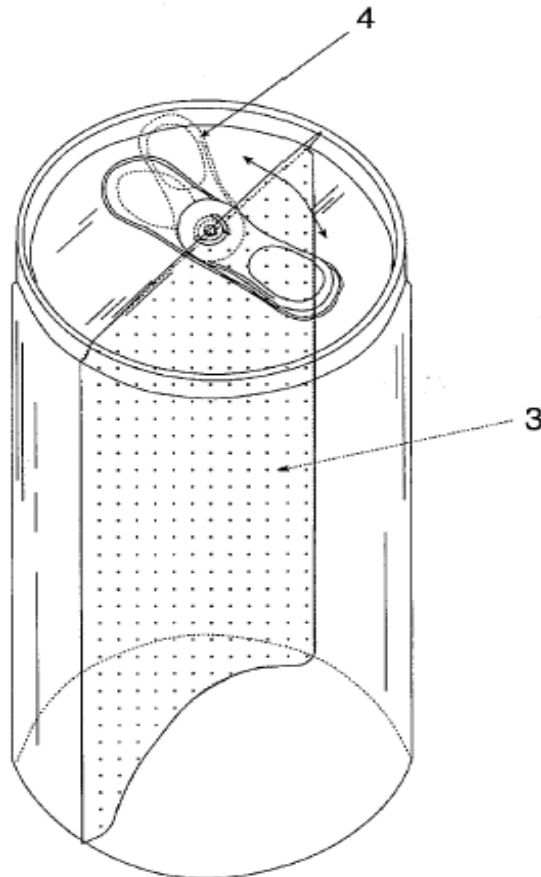
404072143 3/1992 Japan 220/906

Primary Examiner—Stephen J. Castellano
Attorney, Agent, or Firm—Eugene Oak

[57] ABSTRACT

The present invention is a standard, twelve-ounce aluminum can which may be divided into two or three equal size chambers. Partitions are installed within the can which separate the chambers in such a way that each one is air-tight. Each chamber may be opened independently, allowing a user to store unused contents while retaining freshness. A single tab, located on the top of the can, may be rotated to access each of the openings.

As ideal as the aluminum can may be, there is still room for improvement. The twelve ounces present in a standard aluminum can is often too much for a person to finish in one sitting. An aluminum can which has been opened, however, cannot be stored in a refrigerator because it will soon lose its carbonation (become flat). Thus, there are no real alternatives than to either unwillingly finish the contents or to throw the remainder away, neither of which are very desirable.



Drinks can - EP examination

Application No. 03 380 083.0 - 2308	Ref. QUISPE	Date 28.05.2004
Applicant Quispe Gonzalez, David Gustavo		

Examiners are neither applicant's adversaries nor applicant's advisors

Communication pursuant to Article 96(2) EPC

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(1) EPC.

.....

The subject-matter of claim 1 is therefore not new (Article 54(1) and (2) EPC).

Furthermore, documents D2, D3, D4 and D5 also disclose the same features of claim 1.

3. The combination of the features of dependent claim 2 is neither known from, nor rendered obvious by, the available prior art.
If a new independent claim is drafted including these features, the applicant must bear in mind that the features known in combination with D1 should be placed in the preamble of such a claim in accordance with Rule 29(1) EPC.

In simpler words: If initial claim 1 is withdrawn, then claim 2, renumbered as claim 1, would be considered new and inventive, and it would be accepted in a two-part format.

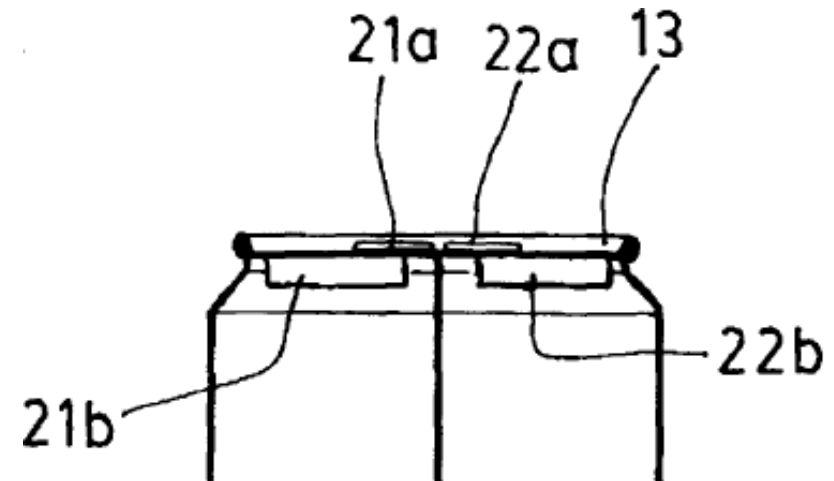
Drinks can - EP-B (single) claim

Claims

1. Drinks can, of the type that is made up of a hollowed out sheet body (1), having a side wall (11) that extends from the base upwards (1), and with a lid (13) whose periphery is fixed in a permanent way around the periphery of the upper part of the side wall (11); said lid (13) being fitted with an easy opening device, which includes a line of weakening that outlines a part of the lid which can be torn away by means of a ring pull and wherein the hollowed sheet body (1) has a dividing wall (2) on its inside that is fixed along the entirety of its periphery to the base (12), to the side surface (11) and to the lid (13) of the drinks can; this arrangement forms two separate compartments

This is the claim 2 of the application (dependent from claim 1 of the application). The first portion (everything before "characterised in that") corresponds to claim 1 of the application, that was considered without novelty during examination.

(21 and 22) on the inside of said can for the purpose of containing two separate drinks; and in that the lid (13) has some easy opening means (21a and 22a) connected to the respective compartments at the areas corresponding to each one of the compartments (21 and 22) for their individualised opening and the separate extraction of the drinks contained in same; said can being **characterised in that** the compartments (21 and 22) have connected to the areas of location of the opening means (21a and 22a) corresponding valves (21b and 22b) that only allow the drink contained in one compartment (21 and 22) to exit when the can is tilted sideways towards the corresponding said compartment (21 and 22).



Drinks can - US-A: detailed description & claims

DETAILED DESCRIPTION OF THE INVENTION

[0017] As can be seen from the referred to drawings, the drink can has a hollowed out sheet body, generically referenced in its entirety as (1) and which is made up of a side wall (11) that extends from the lower base (12) and by an upper enclosing lid (13) fixed around its periphery to the upper part of the side wall (11) in an immovable manner.

[0018] On the inside of the hollowed out sheet body (1) there is a vertical sheet forming a dividing wall (2), with its entire periphery fixed to the base (12), to the side wall (11) and to the lid (13).

[0019] Said vertical wall (2) divides the internal separate space of the hollow body (1) into two compartments (21 and 22), which contain two separate drinks.

[0020] In turn, the lid (13) has some easy opening means (21a and 21b) represented schematically by the respective ring pulls in the areas corresponding to each one of the separate compartments (21 and 22).

[0021] In the example of the embodiment shown in FIG. 2, the compartments (21 and 22) have some easy opening means (21a and 22a) connected to the respective compartments with some valves (21b and 22b) that only allow the exit of the drink contained in one compartment (21 and 22) when the can is tilted sideways corresponding to said compartment (21 and 22).

[0022] Once having sufficiently described the nature of the invention, in addition to an example of its preferred embodiment, to whom it may concern let it be known that the materials, shape, size and arrangement of the elements described can be modified provided that it does not mean an alteration to the essential nature of the invention that is claimed below.

I claim:

1. Drinks can, of the type that is made up of a hollowed out sheet body (1), having a side wall (11) that extends from the base upwards (1), and with a lid (13) whose periphery is fixed in a permanent way around the periphery of the upper part of the side wall (31); said lid (13) being fitted with an easy opening device, which includes a line of weakening that outlines a part of the lid which can be torn away by means of a ring pull and characterised in that the hollowed sheet body (1) has a dividing wall (2) on its inside that is fixed along the entirety of its periphery to the base (12), to the side surface (11) and to the lid (13) of the drinks can; this arrangement forms two separate compartments (21 and 22) on the inside of said can for the purpose of containing two separate drinks; and in that the lid (13) has some easy opening means (21a and 22a) connected to the respective compartments at the areas corresponding to each one of the compartments (21 and 22) for their individualized opening and the separate extraction of the drinks contained in same.

2. Drinks Can, according to the previous claim, characterised in that the compartments (21 and 22) have connected to the areas of location of the opening means (21a and 22a) corresponding valves (21b and 22b) that only allow the drink contained in one compartment (21 and 22) to exit when the can is tilted sideways towards the corresponding said compartment (21 and 22).

?? !!

Drinks can - US rejection for lack of enablement

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the

enablement requirement. The claim(s) contains subject matter which was not described in the

specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Specification does not contain any structural enablement of the valves. The Applicant discloses that the valves "only allow the exit of the drink...when the can is tilted sideways corresponding to the compartment." Examiner notes the term "valve" is extremely broad, and there are many different types of valve structures known in the art. Because the Applicant is describing a specific function to activate the valve (i.e. tilting the can in one direction), the specific structure of how this is accomplished must be disclosed. It is unclear how these valves would work.

Lapsus: the examiner does not give any lack of enablement argument against Claim 1

PCT Rule 8. The Abstract

[Similar to: EPC Rule 47. Form and content of the abstract; EPO Guidelines: F-II, 2.3. Content of the Abstract]

8.1. Contents and Form of the Abstract

(a) The abstract shall consist of the following:

(i) **a summary of the disclosure** as contained in the description, the claims, and any drawings; the summary shall **indicate the technical field** to which the invention pertains and shall be drafted in a way which allows the **clear understanding of the technical problem, the gist of the solution of that problem through the invention, and the principal use or uses of the invention;**

(ii) where applicable, **the chemical formula** which, among all the formulae contained in the international application, **best characterizes the invention.**

(b) The abstract shall be **as concise as the disclosure permits** (preferably 50 to **150 words if it is in English or when translated into English**).

(c) The abstract shall **not contain statements on the alleged merits or value** of the claimed invention or on its speculative application.

(d) **Each main technical feature mentioned** in the abstract and illustrated by a drawing in the international application shall be **followed by a reference sign, placed between parentheses [as in the claims!]**

(cont.)

8.2. Figure

- (a) **If the applicant fails to make the indication** referred to in Rule 3.3(a)(iii), **or if the ISA finds that a figure or figures other than that figure or those figures suggested by the applicant would**, among all the figures of all the drawings, **better characterize the invention**, it shall, subject to paragraph (b), indicate the figure or figures which should accompany the abstract when the latter is published by the IB. In such case, the abstract shall be accompanied by the figure or figures so indicated by the ISA. Otherwise, the abstract shall, subject to paragraph (b), be accompanied by the figure or figures suggested by the applicant.
- (b) **If the ISA finds that none of the figures of the drawings is useful for the understanding of the abstract**, it shall notify the IB accordingly. In such case, the abstract, when published by the IB, shall not be accompanied by any figure of the drawings even where the applicant has made a suggestion under Rule 3.3(a)(iii).

8.3. Guiding Principles in Drafting

The abstract shall be **so drafted that it can efficiently serve as a scanning tool for purposes of searching in the particular art**, especially by assisting the scientist, engineer or researcher in formulating an opinion on whether there is a need for consulting the international application itself. **[It shall indicate the title, EPC Rule 47]**

The abstract should be in **narrative form** and generally limited to a **single paragraph**. It should **avoid implied phrases** (e.g. the invention refers to ...) **and the form and legal phraseology often used in claims** (e.g. means, said...).

EPC Article 85: Abstract.

The abstract shall serve the purpose of technical **information only**; it may **not be taken into account** for any other purpose, in particular **for interpreting the scope of the protection** sought or applying Article 54, paragraph 3.

Abstract in the US

It might be used against the applicant (limiting the interpretation of the scope of protection)

Before July 1, 2003: 37 CFR 1.72(b) "The abstract will not be used for interpreting the scope of the claims"...

... but since 2010:

In 2010: 37 CFR 1.72(b) ... "The abstract in an application filed under 35 USC 111 may not exceed **150 words in length**. The purpose of the abstract is to enable the USPTO and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure".

Recommendation: for US, the abstract should not be narrower than the broadest claim

El inventor es el protagonista principal de la invención. El REDACTOR de patentes es crucial para protegerla y defenderla frente las oficinas de patentes (la colaboración del abogado especializado lo será para TT o *enforcement* frente a un tribunal)

Títulos oficiales

ES: agente de la propiedad industrial

EPO: European patent attorney (EPA)

US: patent agent & patent attorney

GB: patent attorney

DE: Patentanwalt

Los EPA con *Patent Litigation Certificate* pueden actuar ante el UPC (prob. lo harán junto a un *attorney-at-law*)





+



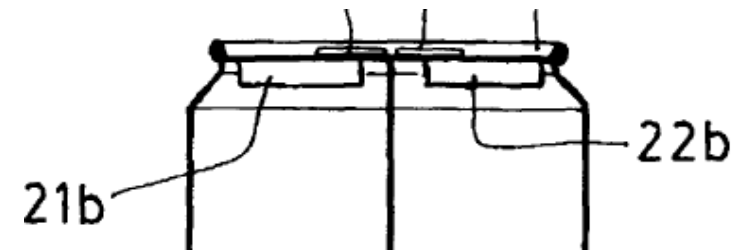
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**WORTHY
PATENT
APPLICATION**

When looking for a valuable patent protection, the question "Is there anything patentable among these R&D results?" is **WRONG**

If the results are original, one can always find something patentable; but it may be minor and worthless.

See the following example:



The RIGHT question is: "From this knowledge (R&D results, etc.) are we able to find out any invention which is worth being patented?"

**About claims:
"the name of the game"**

In page 499 of a paper published in 1990 (*), **Giles S. Rich**, then Chief Judge of the **US Court of Appeals for the Federal Circuit**, coined the phrase:

"The name of the game is the claim"

(*) Giles S. Rich, "Extent of Protection and Interpretation of Claims - American Perspectives", *International Review of Industrial Property & Copyright Law (IIC)*, 1990, vol. 21, pp 497-519



Are we able to draft claims which are worth being patented? (out of inventors/applicants knowledge and our own skills)

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 the 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)

EPC Article 84: Claims

Referral G 1/24 on claim interpretation!

(to be dealt with in next Patent Monday 2025-03-31)

The claims shall define the [subject] matter for which protection is sought [claims do not define 'the invention']. They shall be clear and concise and be supported by the description.

EPC Article 69: Extent of protection [What does it mean?]

(1) 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.

Protocol on the Interpretation of Article 69 EPC

(1) **General principles.** Article 69 should not be interpreted as... On the contrary, it is to be interpreted as defining a position between these extremes **which combines a fair protection for the patent proprietor with a reasonable degree of legal certainty for third parties**.

(2) **Equivalents.** For the purpose of determining the extent of protection conferred by a European patent, **due account shall be taken of any element which is equivalent to an element specified in the claims**.

Terminology 1: What are we talking about?

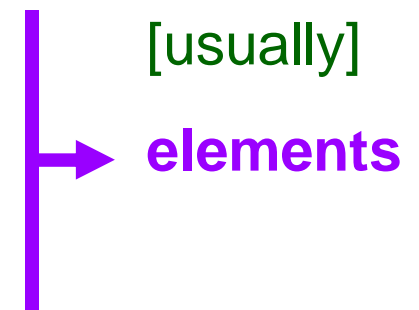
invention [blurred, undefined] \approx inventors' contribution to **the art** [technique]

claimed invention = [technical] **subject matter** defined by the claims

claim = definition of **the subject matter** for which **protection** is sought

subject matter in claims is defined in terms of:

- **technical features** (EPO)
- **limitations** (US)
- **elements, steps, means & relationships** (EPO + US)



protection? In general, to protect is to keep (someone or something) from being harmed, lost, etc. But, **what is patent protection?**

Terminology 2: What are we talking about?

claim = definition of **the subject matter** for which **protection** is sought

protection = set of negative exclusive rights (*ius prohibendi*) to prevent third parties from carrying out any of the **prohibited acts** defined by patent laws, particularly in articles on **direct and indirect infringement** (**indirect = compulsory or active inducement in US**), as. Art. 59 & 60 of Spanish LP2015

prohibited acts depend on the kind of **subject matter** defined by the claim

subject matter defined by a claim can be of three kinds:

- **product/entity**
- **process/method/activity** (in general)
- **process/method of making** (obtaining, preparing, manufacturing...)

Types / kinds / classes / categories of claims: EP vs. US

EPO (case-law based)

USPTO (statutory)

	EPO (case-law based)	USPTO (statutory)
entity	product (chem, pharma, bio)	composition of matter
	apparatus (machine, system...)	machine
	" " (object, article...)	article of manufacture
activity	process/method to obtain	process/method of making
	process/method (in general)	process/method of doing
	use of X as/for (non-medical use	" " "
	product for use in the treatment (first & second medical uses)	method of treatment of a patient (there is no first medical use)
	and others (see next slide)	

Other claim types for protecting medical uses

- **Swiss-type claim in the form "use of substance X in the manufacture/preparation of a medicament for the treatment of condition Y"**. It was the only format allowed in the EPO in the period 1985-2010, and it is still accepted in many countries. **Via the Spanish patent law of 1986 it has been introduced in several Latin American countries. [This drafting is accepted in Spain after enacting the 24/2015 Patent Act on 2017-04-01]**

EP 291 633 B1 (granted in 1992).

"*Claim 13. Use of 3'-Azido-3'-deoxythymidine in the manufacture of a medicament for the treatment or prophylaxis of AIDS.*"

- **Use claims in the form "use of substance X for the treatment of condition Y"** (accepted e.g. in **Germany, Canada and Australia**).

- **Substance when used to treat a particular disease**, such as:

AU 574620 B (granted in 1988).

"*Claim 12. 3'-Azido-3'-deoxythymidine whenever used or intended to be used in the treatment or prophylaxis of AIDS in a human*".

- Claims of **pharmaceutical formulations for a particular purpose** are accepted in other countries.

Types of technical elements/features/limitations in claims

Structural elements, that are defined by what they are. For example: a screw, a DVD, hydrogen peroxide, talc ...

Functional elements, that are defined by the functions they perform. For example: a fastening mean, a computer-readable storage medium, an oxidizing agent, a pharmaceutically acceptable excipient ...

Relational elements, that subsume the relationships between other elements. For example: attached, electrically connected, dissolved in the same solution ...

Intentional elements, that define an intention or purpose, typically being introduced with the preposition *for*. For example: for coagulation and cut, for treating cancer ...

Parametric elements, that are parameters, i.e. values of directly measurable properties. For example: the flexural strength of a metal, the resistance of an electric conductor, the melting point of a substance ...

Activity elements, that subsume the **steps** used when defining the subject matter of process/method/activity claims, and that are **typically introduced with verbs in gerund form**. For example: fixing together, reading information from, reacting with ...

Standard claim format (open-ended 'AND claim'; 'combination claim' in US)

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**" before words that begin with a consonant sound, e.g. method, process, utensil)

"The" in dependent claims

and continues with: **[one or more adjectives] noun** (apparatus, device, product, compound, composition, method/process, etc.) **[for one or several purposes, of 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]**. **An element can also comprise a set of sub-elements** (in general, not as a mere lists of parts)

**In claim preamble "A/An" and "The" are singular.
In claim body "a/an" means "one or more" by default**

The "noun" **in claim preamble** is in the singular. "A/An" at the beginning of independent claims are indefinite articles (used when the writer believes that the reader does not have been told the identity of the referent). "The" at the beginning of dependent claims is the definite article (when the identity of the noun's referent is known).

In claim body "a/an" before an element generally means "one or more", unless the plural convention is disclaimed or the description supports construing them in the singular; in these cases "a/an" means "one" (cf. e.g. 223 F.3d 1351 (Fed. Cir. 2000); 512 F.3d 1338 (Fed. Cir. 2008); PTAB. Dec. 14, 2016)

"at least one" = "one or more" elements, but **the latter is preferred** as it can later be referred back in plural ("the elements"), not in singular ("the at least one element").

"a plurality" of elements = **"more than one"** (do not use "a number", as 0 and 1 are also 'numbers')

"a first [] and a second []" = "two or more" []. Other labels can be used.

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) [a 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 second part] 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**, typically 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]

Second part (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).

Limitations, elements, means, steps... in US claims



35 U.S.C. 112 Specification [cont.]

(e) REFERENCE IN MULTIPLE DEPENDENT FORM. **A claim** in multiple dependent form shall contain **a reference, in the alternative only, to more than one claim** previously set forth and then specify a further **limitation** of the subject matter claimed. **A multiple dependent claim shall not serve as a basis for any other multiple dependent claim.** A multiple dependent claim shall be construed to incorporate by reference **all the limitations of the particular claim** in relation to which it is being considered.

(f) ELEMENT IN CLAIM FOR A COMBINATION. **An element in a claim for a combination** may be expressed as a **means or step** for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

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."

[EPO Guidelines] F-IV, 4.18. 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.**

NOTES: Usually, in US no reference numerals are placed in claims, as some judges have interpreted them as being limiting. Acronyms in claims are sometimes required to be between commas and not between parenthesis.

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 document, and

displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion; and

in response to detecting that the object is no longer on 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 electronic document and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion, in response to the 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; and

instructions for 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, 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:

Claim 19 was the only
alleged to be
infringed

Two-part claims, with reference numbers !

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.

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 screen display.

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.

A definition reference!

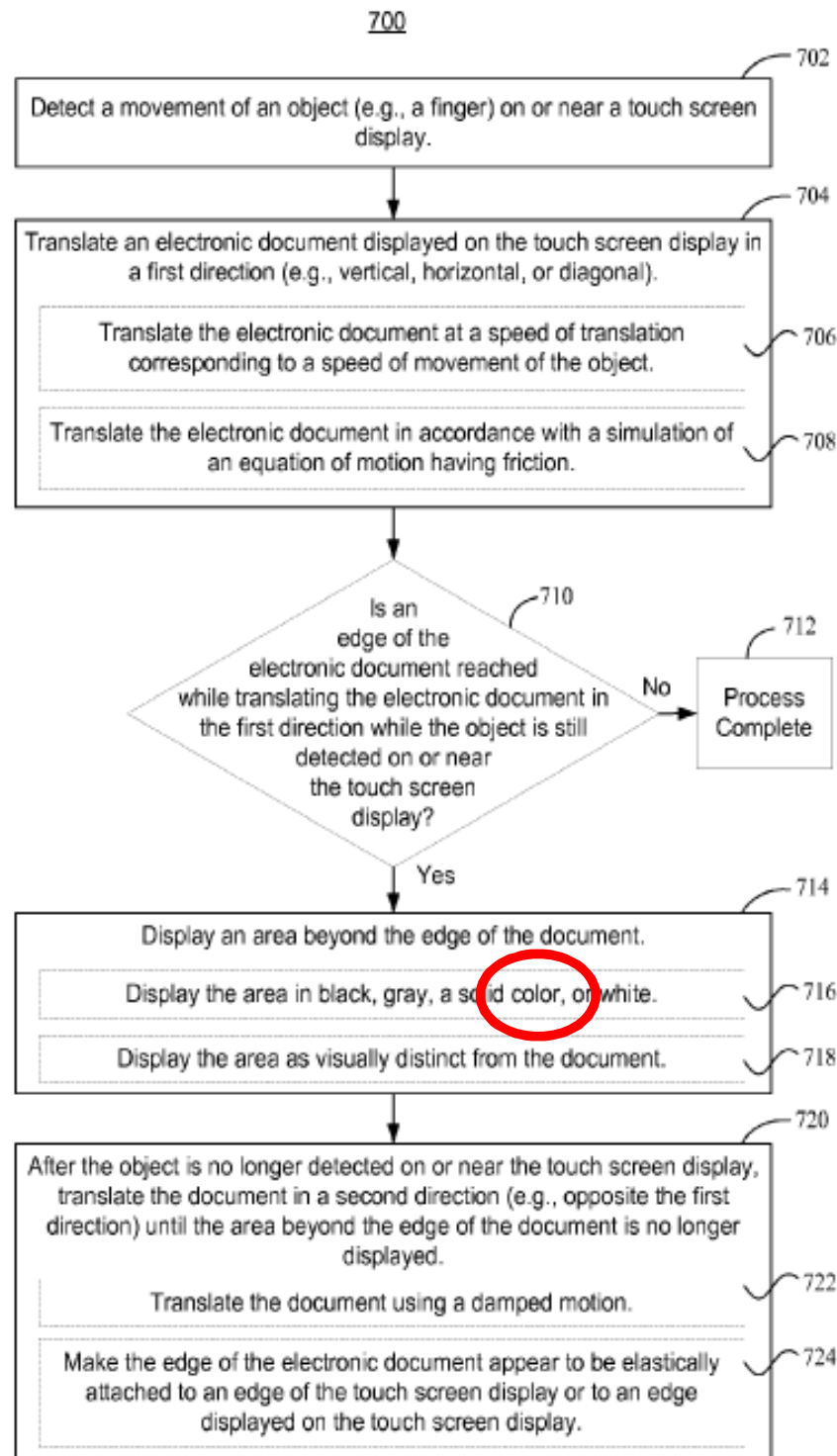
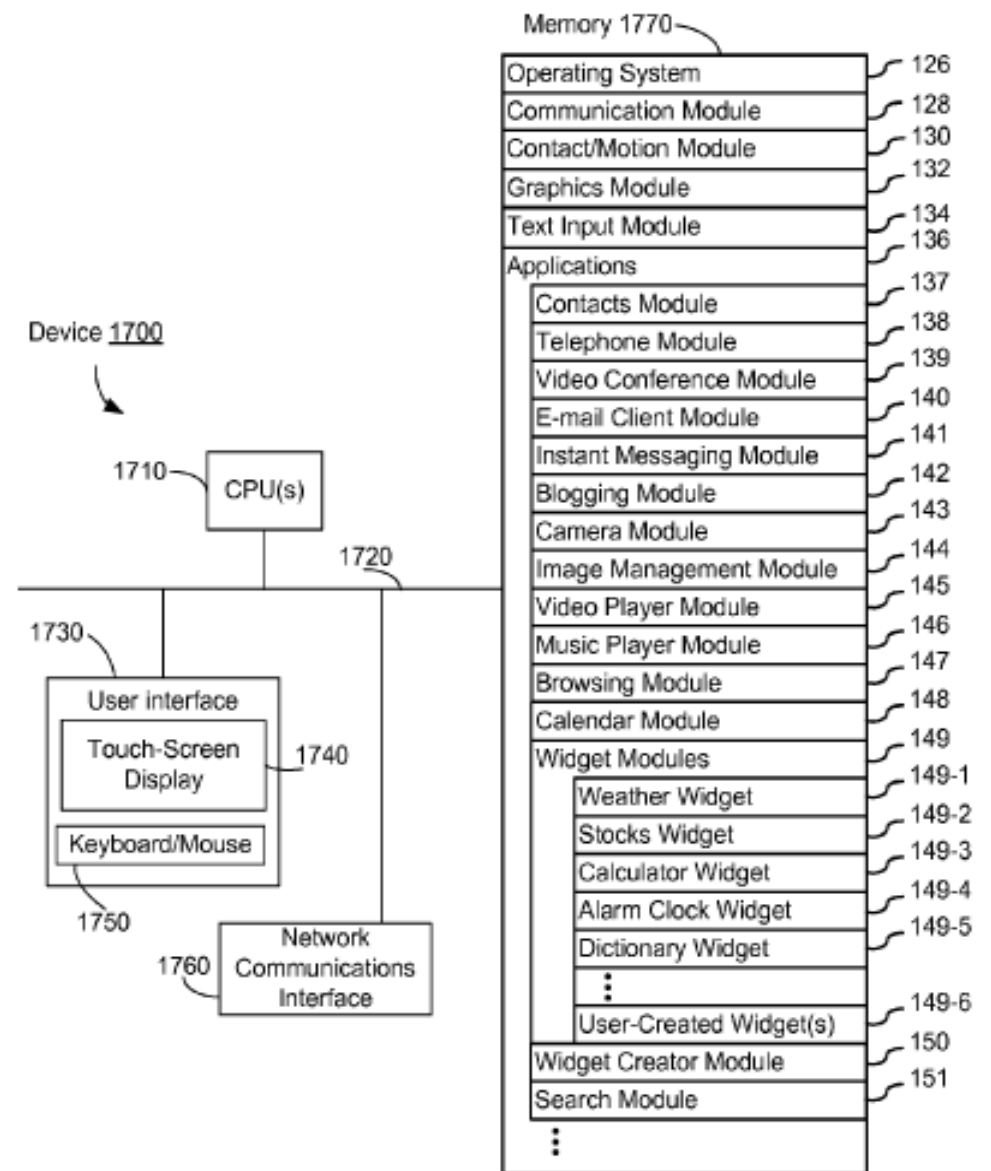


Figure 7



Drawings are the same in both US and EP Apple's patents! (as -in this case- English is official language in both offices)

Figure 17

[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.

US claim indentations

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.



The invention claimed is:

1. A stimulation device for a clitoris, comprising:
a pressure field generator comprising:
a first chamber having a single opening;
a second chamber having first and second openings, the
second opening of the second chamber for placing
over the clitoris; and
a connection element having a first opening and a
separate second opening thereby forming a straight
channel connecting the single opening of the first
chamber with the first opening of the second cham-
ber;
a drive unit that changes a volume of the first chamber in
such a manner that a stimulating pressure field is
generated in the second chamber via the connection
element; and
a control device that actuates
the drive unit; and a housing enclosing the pressure field
generator, the drive unit, and the control device;
wherein:

wrong

wherein:

the pressure field generated in the second chamber consists of a pattern of negative and positive pressures modulated with respect to a reference pressure, the first chamber is connected with the second chamber solely by the connection element, the stimulation device has no valves, the stimulation device is a portable hand-held device with a battery, the connection element is rigid and the first and second openings of the connection element are aligned to one another so that a media flow during a compression of the first chamber is directed to the clitoris through the straight channel with a nozzle effect, and the second opening of the connection element is configured to face the clitoris through the second chamber.

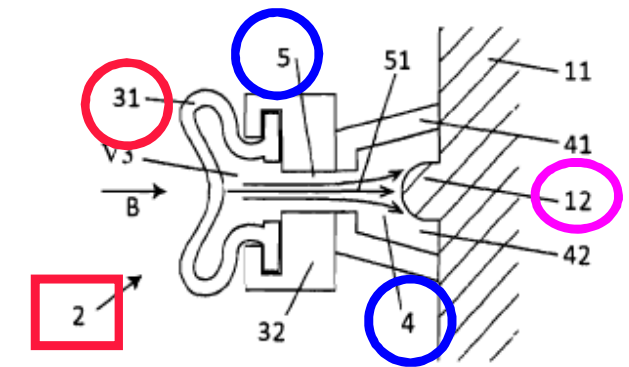
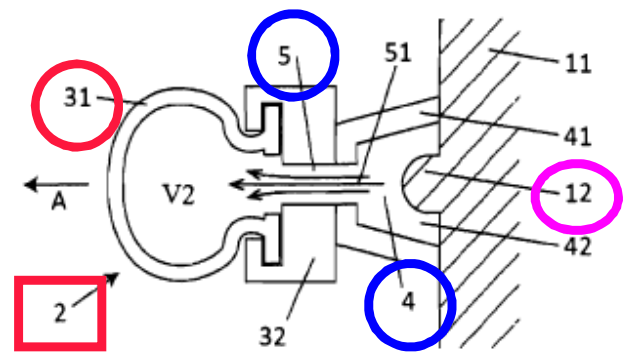
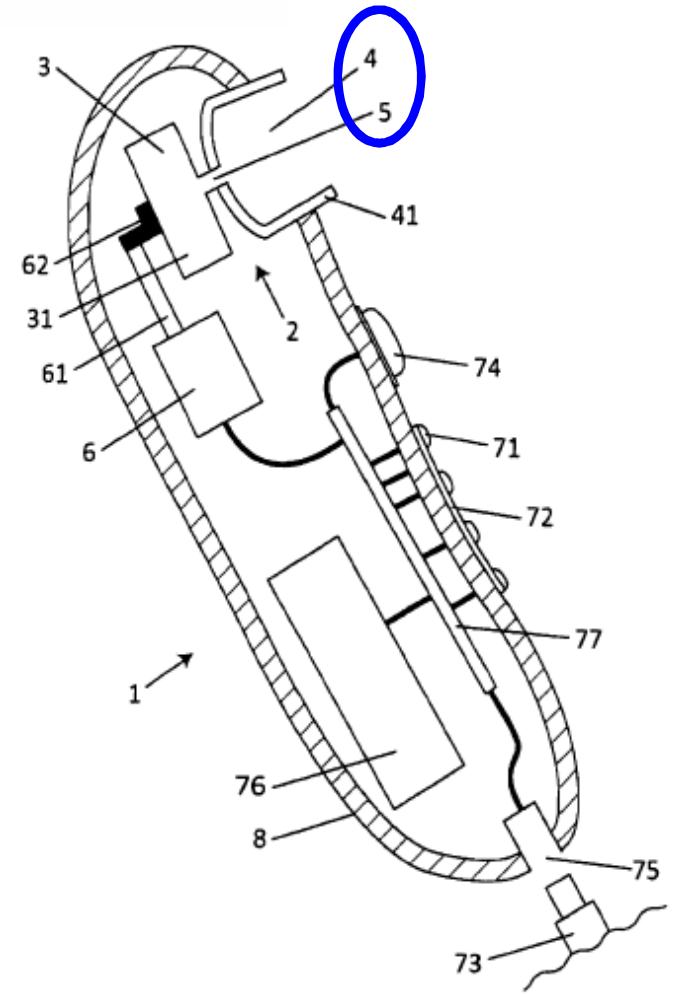
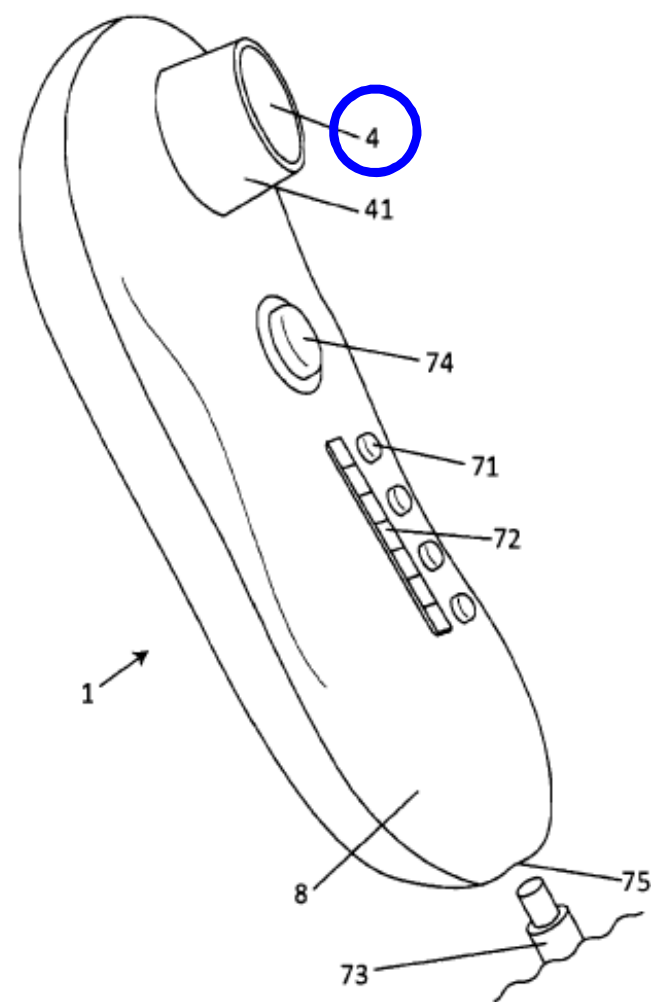
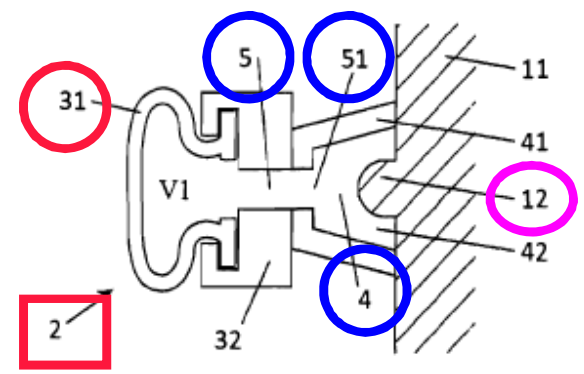
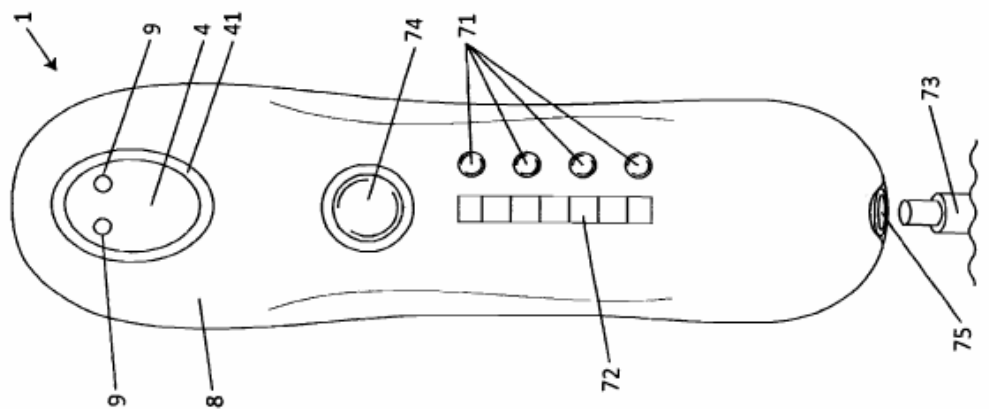
'wherein' clause separated by commas, not semicolons

) IPR2019-01444. 7/31/2019. 9763851. Novoluto GmbH. EIS GMBH.

A recommended-by-the-author 'easy & provisional' system of hyphens-with-fixed-left-margin for separating elements in claims with several *comprisings* and *wherein/whereby clauses*, for priority and PCT appls.

- Claim 1. A stimulation device (1) for a clitoris (12), **comprising**:
- a **pressure field generator** (2) **comprising**:
 - a **first chamber** (3) having a single opening;
 - a **second chamber** (4) having first and second openings, the second opening (42) of
- 5 the second chamber for placing over the clitoris (12); **and**
- a **connection element** (5) having a first opening and a separate second opening thereby forming a straight channel connecting the single opening of the first chamber (3) with the first opening of the second chamber (4);
- a **drive unit** (6) that changes a volume of the first chamber (3) in such a manner that a
- 10 stimulating pressure field is generated in the second chamber (4) via the connection element (5);
- a **control device** (7) that actuates the drive unit (6); **and**
 - a **housing** (8) enclosing the pressure field generator, the drive unit, and the control device;
- 15 **wherein**:
- the pressure field generated in ... ,
 - the first chamber (3) is ... ,
 - ... , and
 - the **second opening** of the connection element is configured to face the c
- 20 the second chamber.





1. A stimulation device (1) for the clitoris (12) for sexual arousal leading to climax, comprising:

a pressure field generating device (2) comprising:

a first chamber (3) having a single opening; and
a second chamber (4) having an opening (42) for placing over the clitoris (12); and

a connection element (5) connecting the first chamber (3) with the second chamber (4); and
a drive unit (6) that changes a volume of the first chamber (3) by deflecting a flexible wall (31) of the first chamber (3) in such a manner that a stimulating pressure field is generated in the second chamber (4) via the connection element (5); and
a control device (7) that actuates the drive unit (6), wherein
the pressure field generated in the second chamber (4) consists of a pattern of negative and positive pressures modulated with respect to a reference pressure; and wherein
the modulation of the pressure field is pre-stored in the control device (7), and wherein
the first chamber (3) with its only opening is connected solely with the second chamber (4) via the connection element (5), and wherein
the stimulation device (1) is a portable hand-held device with a battery, and wherein the pressure field generating device (2) has no valves.

**Standard claim format
(without two-parts)**

bad
inden-
tation

In
princi-
ple,
"a"
does
not
mean
"one"

2. The stimulation device (1) according to claim 1, wherein
the at least one connection member (5) has at least one opening (51) that faces the body part (11) to be stimulated
and is aimed at the body part (11) to be stimulated.

EP 2 976 057 B1

3. The device (1) according to any one of claims 1 or 2, wherein
the second chamber (4) is made of a flexible material, preferably silicone or rubber, and/or is made of an at least partly transparent material and/or is fitted to a shape of the vaginal labia minora in such a way that the latter are completely covered by the opening of the second chamber (4).

More than one (51) does not make sense, being only one (4) and one (12)

bad

10. System with a stimulation device (1) according to any one of claims 1 to 9, comprising:

a remote control device arranged separately to the stimulation device (1),
wherein the control device (7) of the stimulation device (1) can be remote controlled by the remote control device.

1. Pressure wave massage device for the clitoris, comprising
a pressure field generating device (10) which has at least one cavity (12) with a first end (12a) and a second end (12b) located opposite the first end (12a) and distanced from the first end (12a), with the cavity (12) being delimited by a side wall (12c) joining its two ends (12a, 12b) to one another, and the first end (12a) being provided with an opening (8) for placing on the clitoris, and
a drive device (20, 22), which is configured to generate a change ?? of the at least one cavity (12) between minimum volume and a maximum volume such that a stimulating pressure field is generated in the opening (8),

bad

characterised in that ← dadurch gekennzeichnet dass

characterised in that more than one cavities (12)?

the cavity (12) is formed by a single continuous chamber (14),
the side wall (12c) of the chamber (14) which delimits the cavity (12) and joins its two ends (12a, 12b) to one another other is free of points of discontinuity,
the cavity (12) of the chamber (14) is closed at its second end (12b) by a flexible membrane (18) which extends essentially over the whole cross-section of the cavity (12) and is moved by the drive device (20, 22) alternately in the direction of the opening (8) and in a direction opposite to the latter, and
the ratio of the volume change to the minimum volume is not lower than 1/10 and not greater than 1.

2. Device according to claim 1, characterised in that ^{wherein} the cavity (12) of the chamber (14) has the form of a continuous tube.

3. Device according to claim 1 or 2, characterised in that ^{wherein} the ratio of the width of the cavity (12) of the chamber (14) defined perpendicular to its longitudinal extension to the length (L) of the cavity (12) of the chamber (14) defined in the direction of its lon-

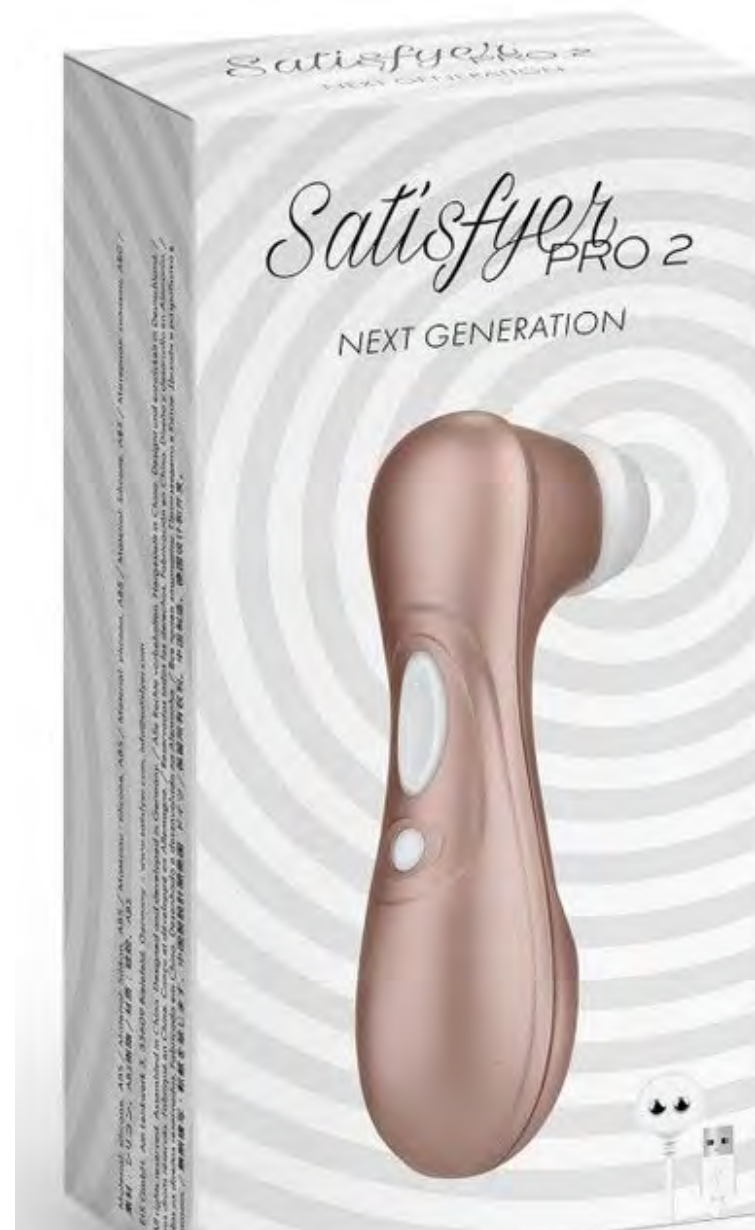
4. Device according to at least one of the preceding claims, characterised in that ^{wherein} the section of the chamber (14) comprising the opening (8) is provided as an exchangeable nozzle (6), with its inner side wall forming a section (12c1) of the side wall (12c) of the cavity (12) leading towards the opening (8).

Improper multiple dependency reference !!

First EP patents on Womanizer® & Satisfyer®



the original



best sold (Amazon dixit, 2021)

Are Satisfyer®'s patents dependent from Womanizer™'s patents?

Berlin, 23 February 2018 – Novoluto GmbH (c/o Womanizer) wins the first-instance case against EIS GmbH before Düsseldorf District Court per the judgement dated 14 December 2017 and defends its portfolio of patents against Satisfyer Pro 2. EIS GmbH has filed an appeal.

On 14 December 2017, Düsseldorf District Court confirmed Womanizer's suit against EIS GmbH in a court judgement. Womanizer thus once again successfully asserted its rights and took action against infringements of its rights by market participants.

Injunctive relief

The main component of the judgement is confirmation of the injunction asserted by Womanizer against EIS GmbH. EIS GmbH must now cease and desist from offering the Satisfyer Pro 2 in the Federal Republic of Germany, marketing or importing it, or possessing it for the above-mentioned purposes.

Claims for damages

The court also confirmed the claims Womanizer asserted for damages arising from patent infringements. As a result, EIS GmbH must compensate Womanizer for all damages incurred due to actions it has committed since 18 February 2016, and all damages which will be incurred in future. On this basis, Womanizer is currently preparing corresponding suits to claim millions in damages from EIS GmbH, and also reserves the right to take similar action against retailers who sold the Satisfyer Pro 2.

Destruction of products

EIS GmbH is also obliged to recall the Satisfyer Pro 2 from all distribution channels and to destroy any devices still in the possession of EIS GmbH.

de·pend·ent (*adjective*)

1. Contingent on another.
2. Subordinate.
3. Relying on or requiring the aid of another for support: *dependent children*.
4. **Hanging down**

Dependency in patent claims means something different to what it means in other aspects of life.

It is helpful to simplify drafting, to get a better protection, and to facilitate judgement on validity and infringement

**Dependency between Different Patents,
Concerning Infringement**

VS.

**Dependency between Claims of the Same Patent,
Concerning Scope**

US: claims written in dependent forms

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**

US: claims written in multiple dependent forms

35 U.S.C. 112 Specification [cont.]

(e) REFERENCE IN MULTIPLE DEPENDENT FORM. **A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim [as in PCT, CN, JP & KR, but differently from the EPO].** A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.

PCT Rule 6. The Claims

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

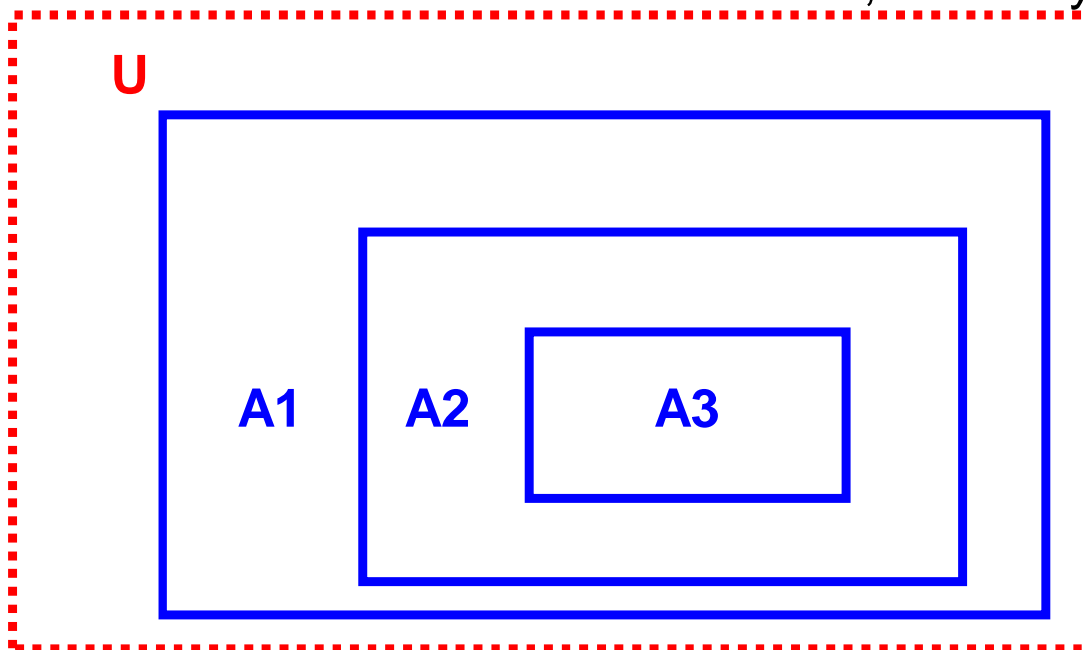
(a) Any claim which includes all the features of one or more other claims (claim [written] in dependent form, hereinafter referred to as "dependent claim") shall do so by a reference, if possible at the beginning, to the other claim [its "base claim"] or claims and shall then state the additional features 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 the USPTO, China, Korea and Japan; not in the 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 desig. 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.**

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.

$A3 \subset A2 \ \& \ A2 \subset A1 \Rightarrow A3 \subset A1$.

A3 will be written as depndt. from A2

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

Closed surfaces represent "claim scopes" or "scopes of claimed subject matter": a teaching tool

"The extent [scope, ambit] of the protection conferred by a patent **shall be determined by the claims** " (cf. Art. 69.1 EPC)

The protected subject matter is sometimes more than the claimed subject matter.

For teaching purposes, the scope of claimed subject matter is here represented by a closed surface on paper/screen plane (a rectangle is used, and not a circle or an ellipse, because the former is easy to draw with the Power Point, and it can be easily filled with information)

A rectangle like this will be used here to represent the "claim scope" or "scope of claimed subject matter" corresponding to a given claim.

Claim 1. Preamble-P comprising A + B [+ anything else implicitly]

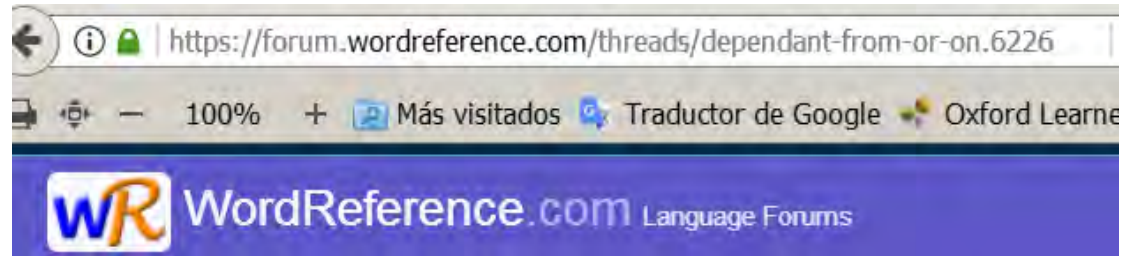
Claim 2. Preamble-P comprising A + B + C

Claim 3. Preamble-P comprising A + B + C + D

Claim 1 is the only independent claim.

Claim 2 is dependent on/from ["on" is used at the EPO; but "from" is used at the USPTO and will be used here] Claim 1.

Claim 3 is dependent both from Claim 2 and from Claim 1 [but it usually will be written as dependent from Claim 2, as base claim]



If you are **dependent from** something or someone, you are **physically hanging from it.**

If you are **dependent on** something or someone, you are **relying on it for something.**

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, wherein
D is selected from the group consisting of D1, D2, and D3**

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



Claim 4. Preamble-P comprising A + B + C + D, wherein D is D1

Claim 5. Preamble-P comprising A + B + C + D, wherein D is D2

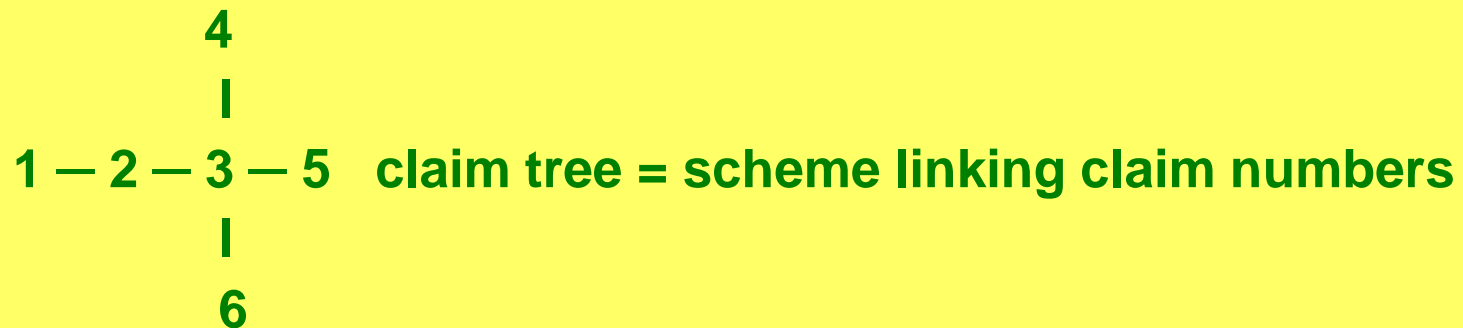
Claim 6. Preamble-P comprising A + B + C + D, wherein D is D3

Claim tree with only singular dependencies

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

Claim 2. The P's noun according to claim 1, further comprising C

Claim 3. The P's noun according to claim 2, further comprising a D selected from the group consisting of D1, D2, and D3



**This claim tree has three possible chains
and two extra branches forming a 'pyramid'**

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.

Two ways of drafting a 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]

Reference numerals and bracketed expressions

In some jurisdictions, such as the EPO, claims are encouraged and/or required to recite the reference numerals associated with particular elements:

Claim 1. An apparatus, comprising: a plurality of **printed pages (11)**; a **binding (14)** configured to hold the **printed pages (11)** together; and a **cover (21)** attached to the **binding (14)**.

Markush groups. Markush claims ('OR claims' in EPO)

A **Markush group** is a **closed group of alternative elements**, and it is typically 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".

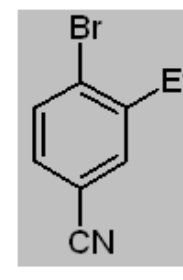
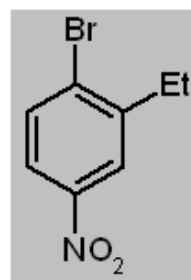
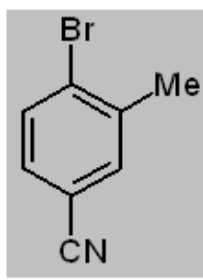
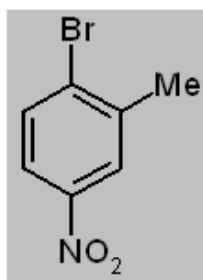
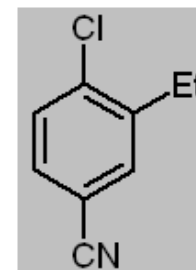
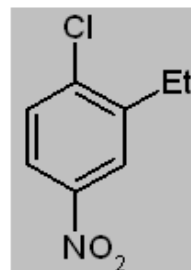
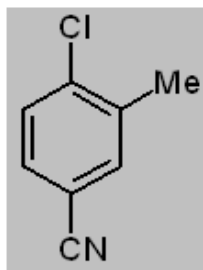
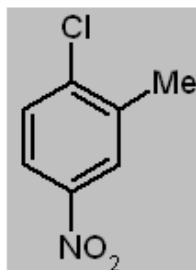
Shorthand Markush groups can also be drafted simply by using the verbal form **is/are**, and with the final member preceded by a conjunction **or**: "wherein A is A1, A2 , or A3"; e.g.: "wherein R1 is hydrogen, methyl, or ethyl".

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**.

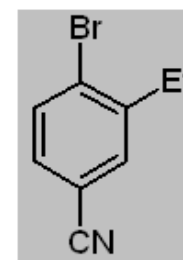
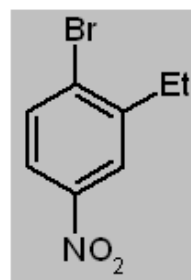
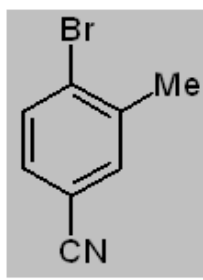
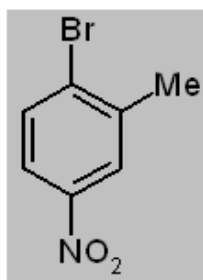
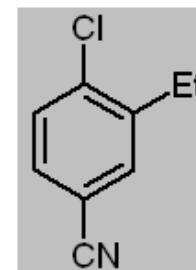
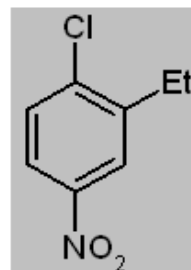
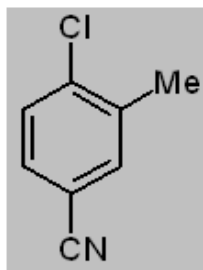
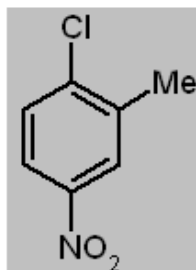
Markush groups can also be used to define alternative **electromechanical elements**, such as in: "*a fastener selected from a group consisting of a nail, a screw, and a rivet*". However, in practice **Markush groups are rarely used for electromechanical elements** because generic words that describe 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.**

Example of a (close-ended) Markush claim. Its scope consist of only 8 well-defined members



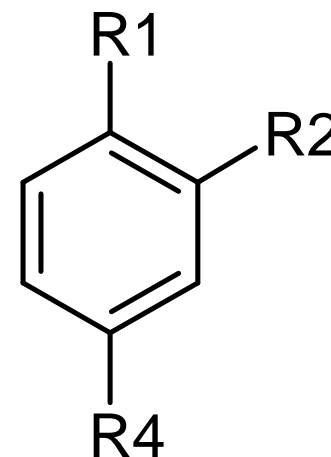
Example of a (close-ended) Markush claim. Its scope consist of only 8 well-defined members



Markush claims with three elements (R1, R2 and R4) defined by respective Markush groups of two members each

The scope of Claim 1 is closed ended, embracing only $2 \times 2 \times 2 = 8$ members

Claim 1. A 1,2,4-trisubstituted benzene of formula



wherein:

radical R1 is **selected from the group consisting of Cl and Br**;

radical R2 is **selected from the group consisting of Me and Et**; and

radical R4 is **selected from the group consisting of NO₂ and CN**.

Claim 2. The benzene **according to claim 1**, wherein **R1 is Cl**.

Singular dependency!

Claim 3. The benzene **according to claim 2**, wherein **R2 is Me**.

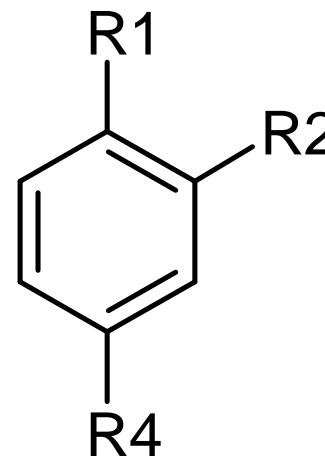
Claim 4. The benzene **according to claim 3**, wherein **R4 is NO₂**.

Importance order of element selection in dependent claims: R1 > R2 > R4

Markush claims with three elements (R1, R2 and R4) defined by respective Markush groups of two members each

The scope of Claim 1 is closed-ended, embracing only $2 \times 2 \times 2 = 8$ members

Claim 1. A 1,2,4-trisubstituted benzene of formula



wherein:

radical R1 **is** Cl **or** Br;

radical R2 **is** Me **or** Et; and

radical R4 **is** NO₂ **or** CN.

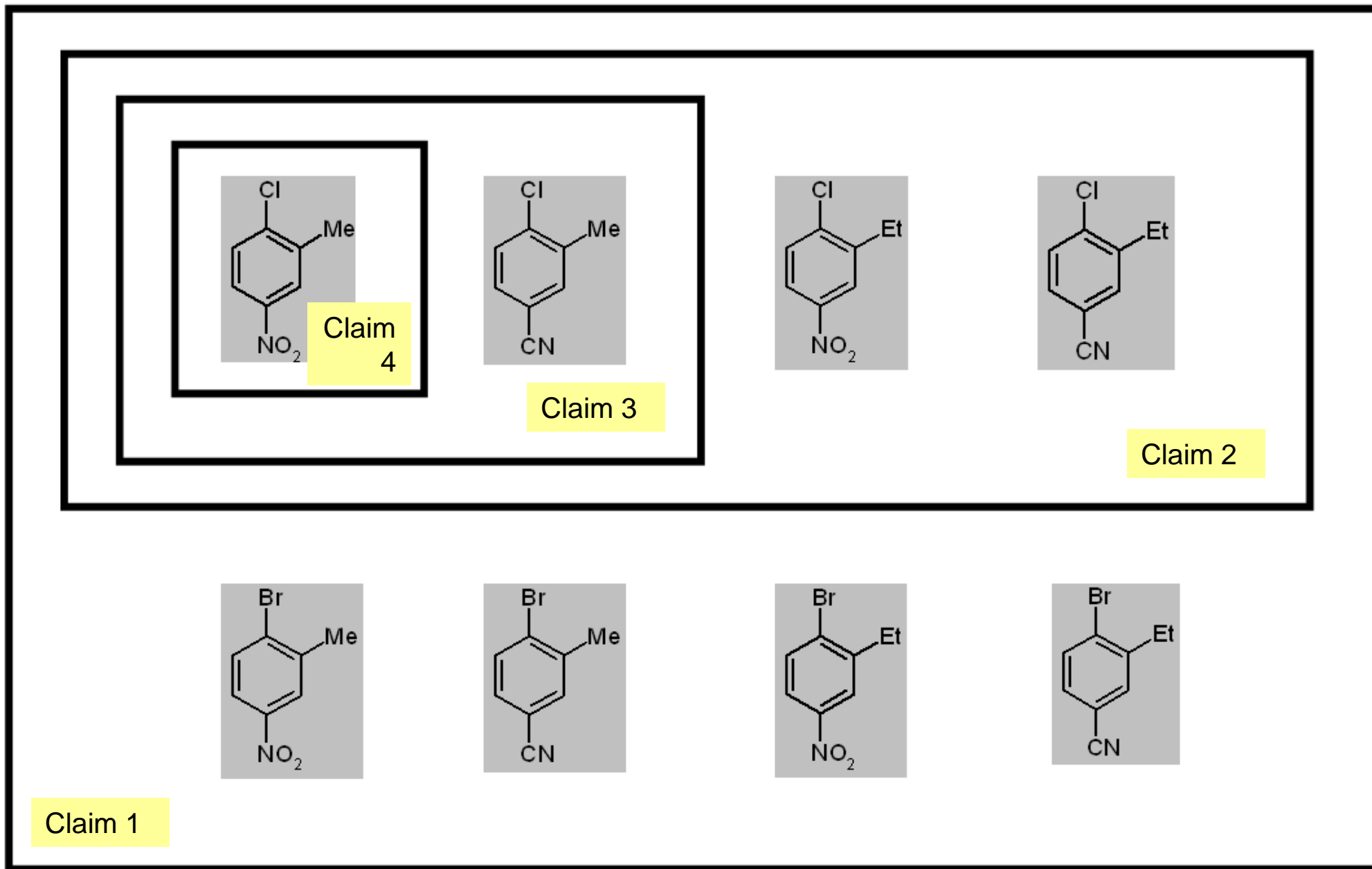
Claim 2. The benzene **according to claim 1**, wherein **R1 is Cl**.

Claim 3. The benzene **according to claim 2**, wherein **R2 is Me**.

Claim 4. The benzene **according to claim 3**, wherein **R4 is NO₂**.

**Singular
dependency!**

Scopes of four Markush claims in a **chain** of singular dependency



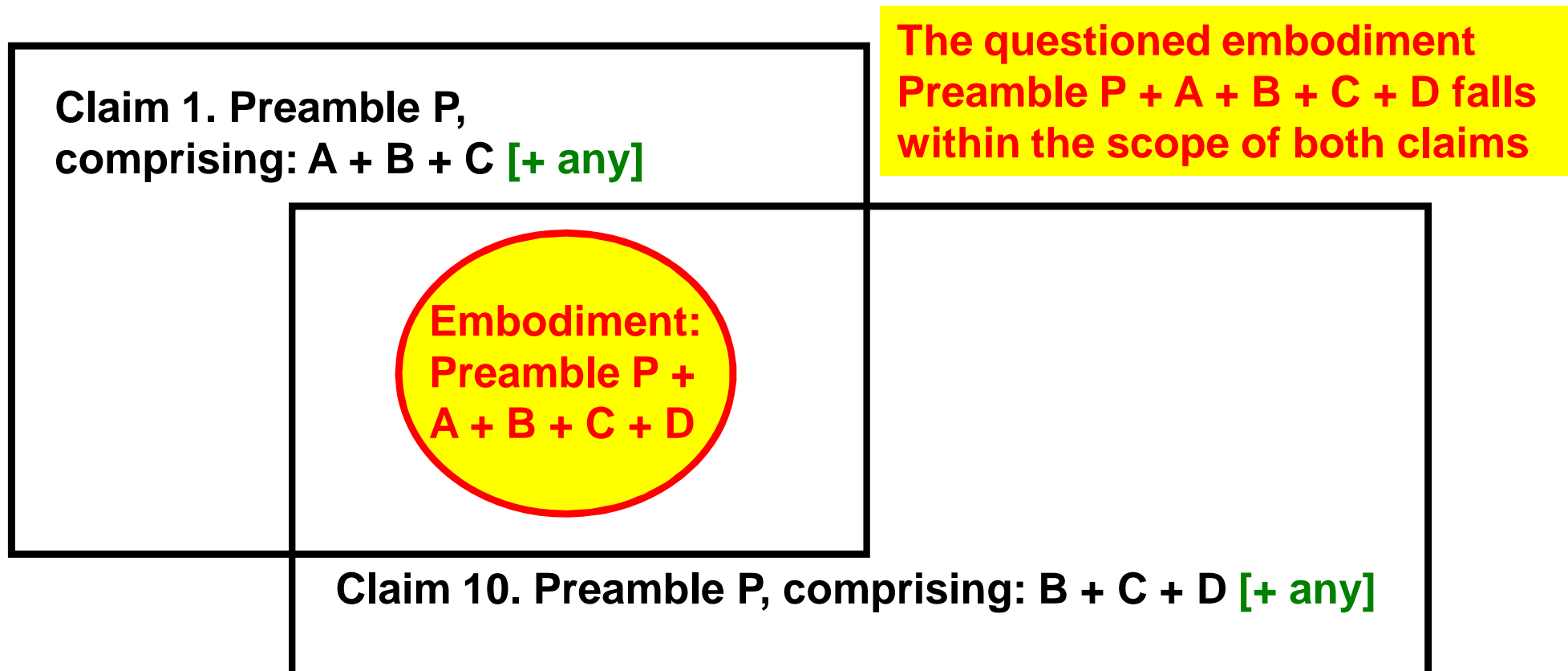
Singular dependency!

Example of claims of the same preamble (same type / category / kind / class) that are not related by dependency

"Claim 1. A preamble, comprising: elements A; B; and C." [plus anything else]

"Claim 10. A preamble, comprising: elements B; C; and D." [plus anyth. else]

There is no dependency between claims 1 and 10 !



Group that is not a single chain, written in independent form

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

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

Claim 4(3/1). Preamble-P comprising A + B + D

Claim 3(3/2). Preamble-P comprising A + B + C + D

Same group written in single- and in multi-dependent forms

Claim 1. A Preamble-P comprising A + B.

Claim 2. The P's noun of claim 1, further comprising C.

Claim 4(3/1). The P's noun of claim 1, further comprising D.

Claim 3(3/2). The P's noun of claim 2, further comprising D.

1 – 2 – 3

1 written in a single-dependent form

4

1 – 2 – 3/2

1 written in a multi-dependent form

3/1

[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

35 U.S.C. 112 (c) "A claim may be written in independent or, if the nature of the case admits, in [singular] dependent or multiple dependent form."

- Claim 1. A preamble-P comprising A + B [P+A+B]
Claim 2. A preamble-P comprising A + B + C. . [P+A+B+C]
Claim 2': The P's noun according to claim 1, further comprising C. [P+A+B+C]
Claim 3. A preamble-P comprising A+B+C+D. [P+A+B+C+D]
Claim 3'. The P's noun according to claim 2, further comprising D. [P+A+B+C+D]
Claim 3''. The P's noun according to claim 1, further comprising C and D. [P+A+B+C+D]

**Orders of preference usually are: Claim 2' > Claim 2;
and Claim 3' > Claim 3''**

Multiple dependency makes the amount of *actual claims* larger than the amount of *numbered claims*: this means more protection for the same money, and it also involves other important benefits in amendments

Claim 3'''. The P's noun according to any one of claim 1 or 2, further comprising D.

This is **one numbered claim** which is fully equivalent to the following **two actual claims**:

Claim 3/2'''. The P's noun according to claim 2, further comprising D. [P+A+B+C+D]

Claim 3/1'''. The P's noun according to claim 1, further comprising D. [P+A+B+D]

Claims written in multiple dependent 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 numbered 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:

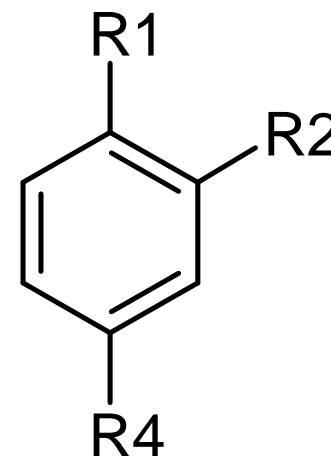
- The **actual claim 4/3/1**, comprising A+B+D+E
- The **actual claim 4/3/2**, comprising A+B+C+D+E

Markush claims written in multi-dependent form

(multiplicities will be later removed for the USPTO)

Claim 1. A 1,2,4-trisubstituted benzene of formula

With multiple dependency,
claim scopes are more
difficult to depict with Venn
diagrams (see later)



wherein:

radical R1 is **selected from the group consisting of Cl and Br**;

radical R2 is **selected from the group consisting of Me and Et**; and

radical R4 is **selected from the group consisting of NO₂ and CN**.

Claim 2. The benzene according to claim 1, wherein **R1 is Cl**.

**Multiple
dependency!**

Claim 3. The benzene **according to any one of claims 1-2**, wherein **R2 is Me**.

Claim 4. The benzene **according to any one of claims 1-3**, wherein **R4 is NO₂**.

Importance order of element selection in dependent claims: R1 > R2 > R4

8 actual claims (the new ones are underlined) of this multiple-dependency group formed by 4 numbered claims

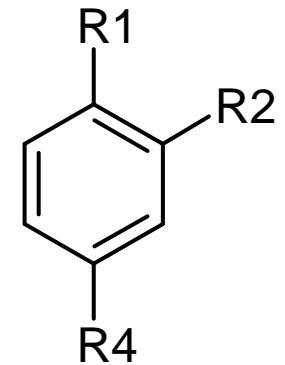
Claim 1. A 1,2,4-trisubstituted benzene of formula

wherein:

radical R1 is **selected from the group consisting of Cl and Br**;

radical R2 is **selected from the group consisting of Me and Et**; and

radical R4 is **selected from the group consisting of NO₂ and CN**.



Claim 2. The benzene according to claim 1, wherein **R1 is Cl**.

Claim 3/2. The benzene **according to claim 2**, wherein **R2 is Me**.

Claim 3/1. The benzene **according to claim 1**, wherein **R2 is Me**.

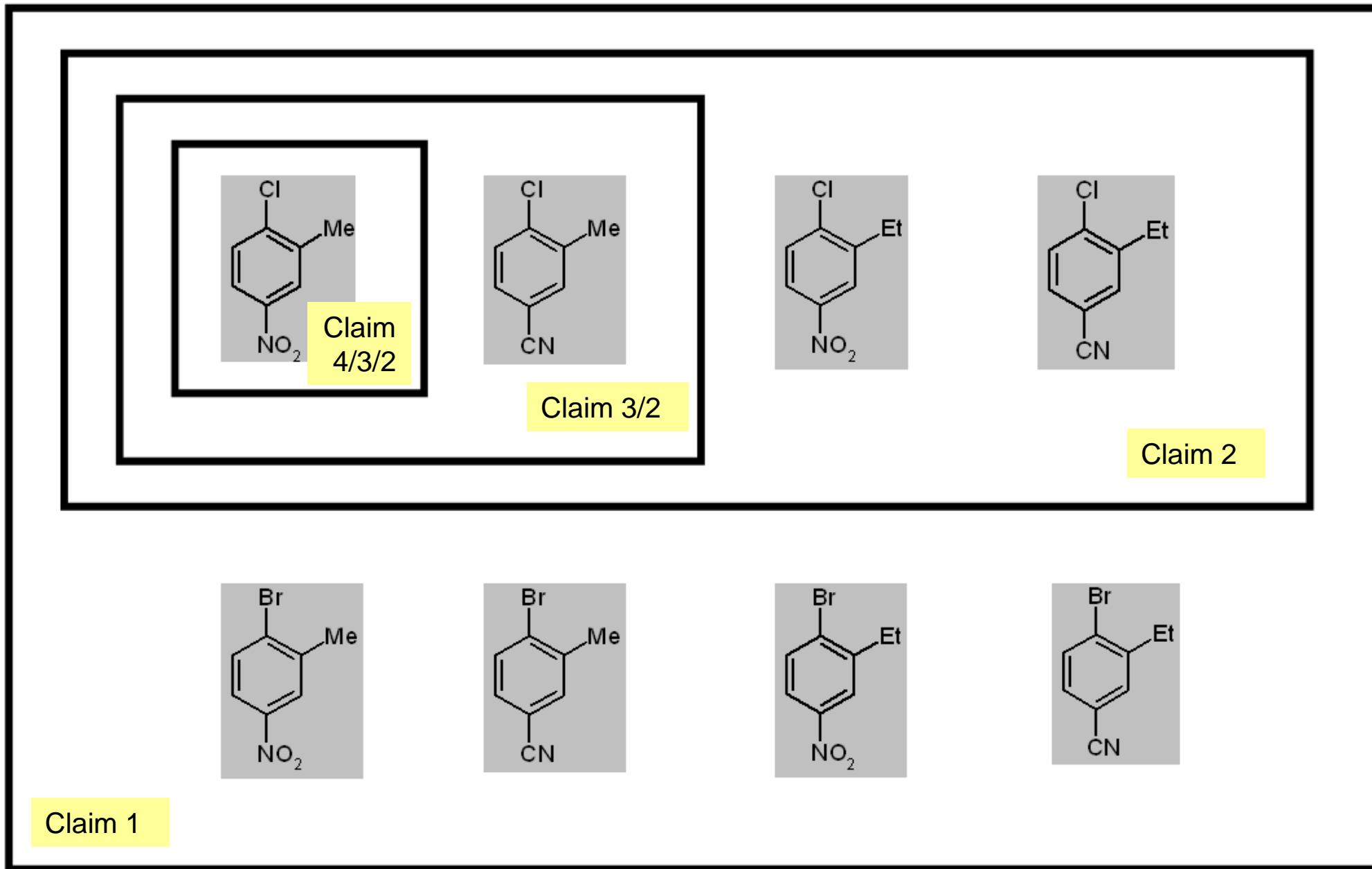
Claim 4/3/2. The benzene **according to claim 3 insofar it depends from claim 2**, wherein **R4 is NO₂**.

Claim 4/3/1. The benzene **according to claim 3 insofar it depends from claim 1**, wherein **R4 is NO₂**.

Claim 4/2. The benzene **according to claim 2**, wherein **R4 is NO₂**.

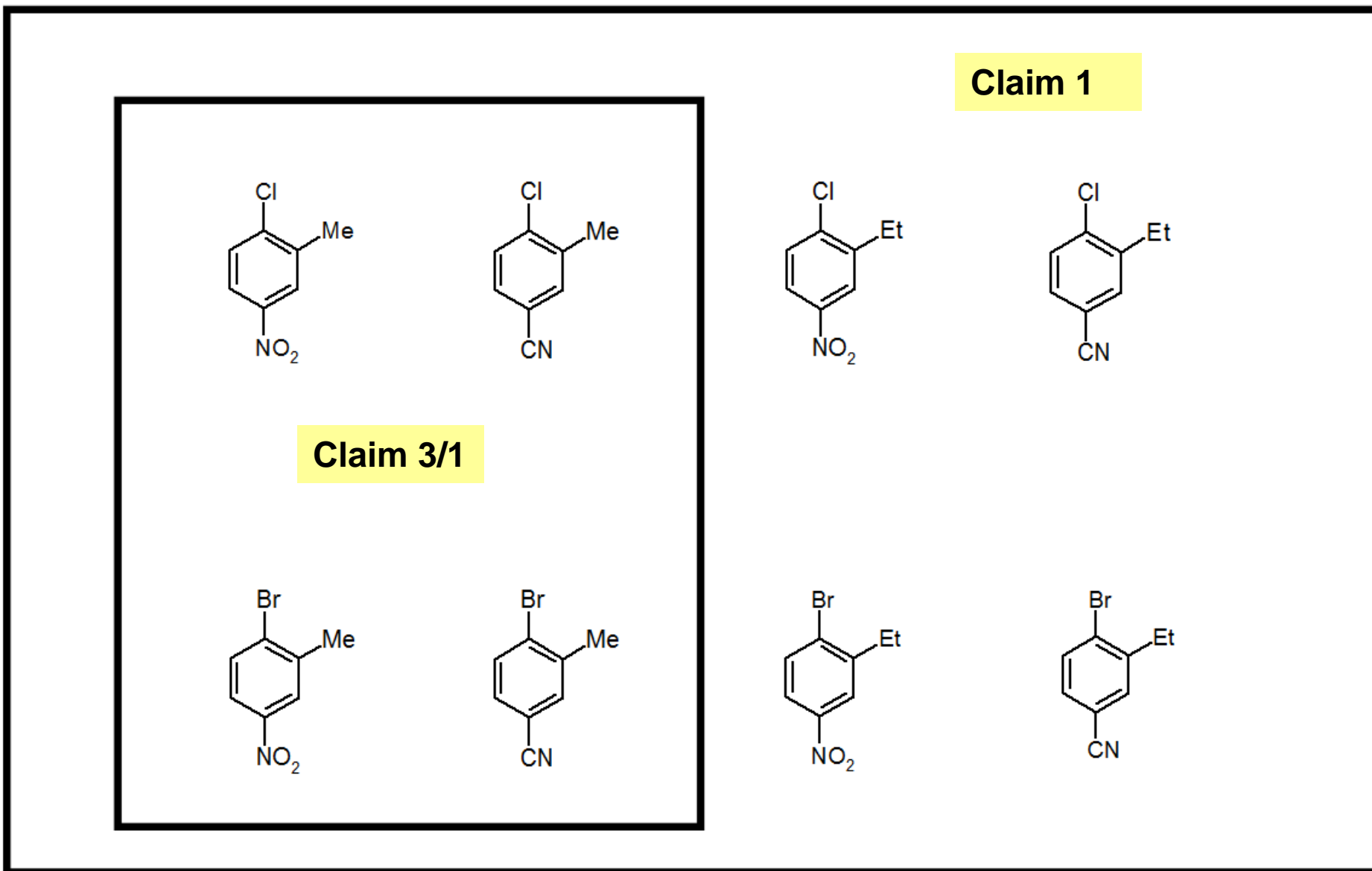
Claim 4/1. The benzene **according to claim 1**, wherein **R4 is NO₂**.

Scopes of the 4 claims that were also in the single-dependency group



Claim 1. A 1,2,4-trisubstituted benzene of formula ..., wherein:
radical R1 is **selected from the group consisting of Cl and Br**;
radical R2 is **selected from the group consisting of Me and Et**; and
radical R4 is **selected from the group consisting of NO₂ and CN**.

Claim 3/1. The benzene **according to claim 1**, wherein **R2 is Me**.

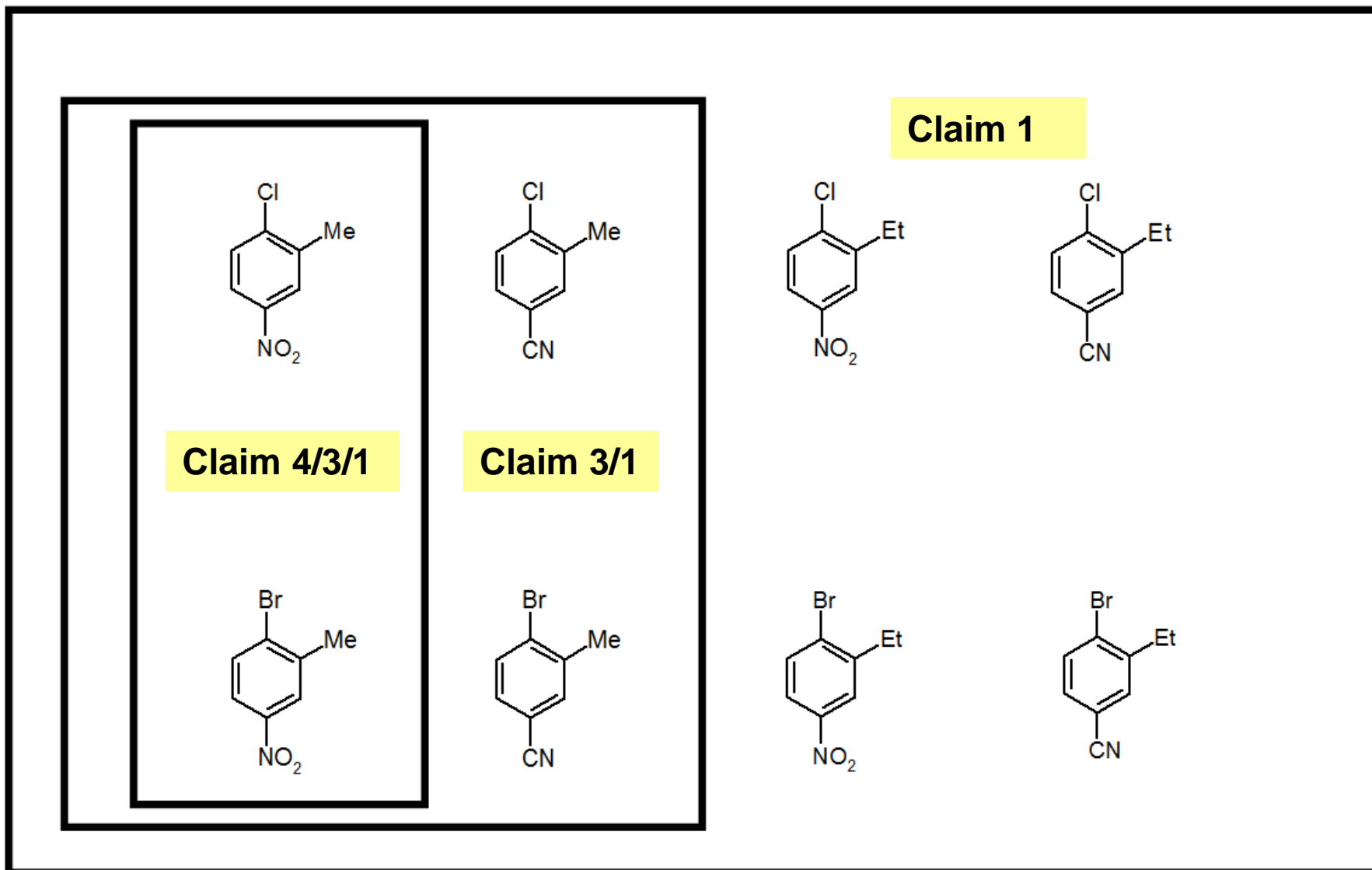


Claim 1. A 1,2,4-trisubstituted benzene of formula ..., wherein: ...

New claim 4/3/1

Claim 3/1. The benzene **according to claim 1**, wherein **R2 is Me**.

Claim 4/3/1. The benzene **according to claim 3 insofar it depends from claim 1**, wherein **R4 is NO2**.

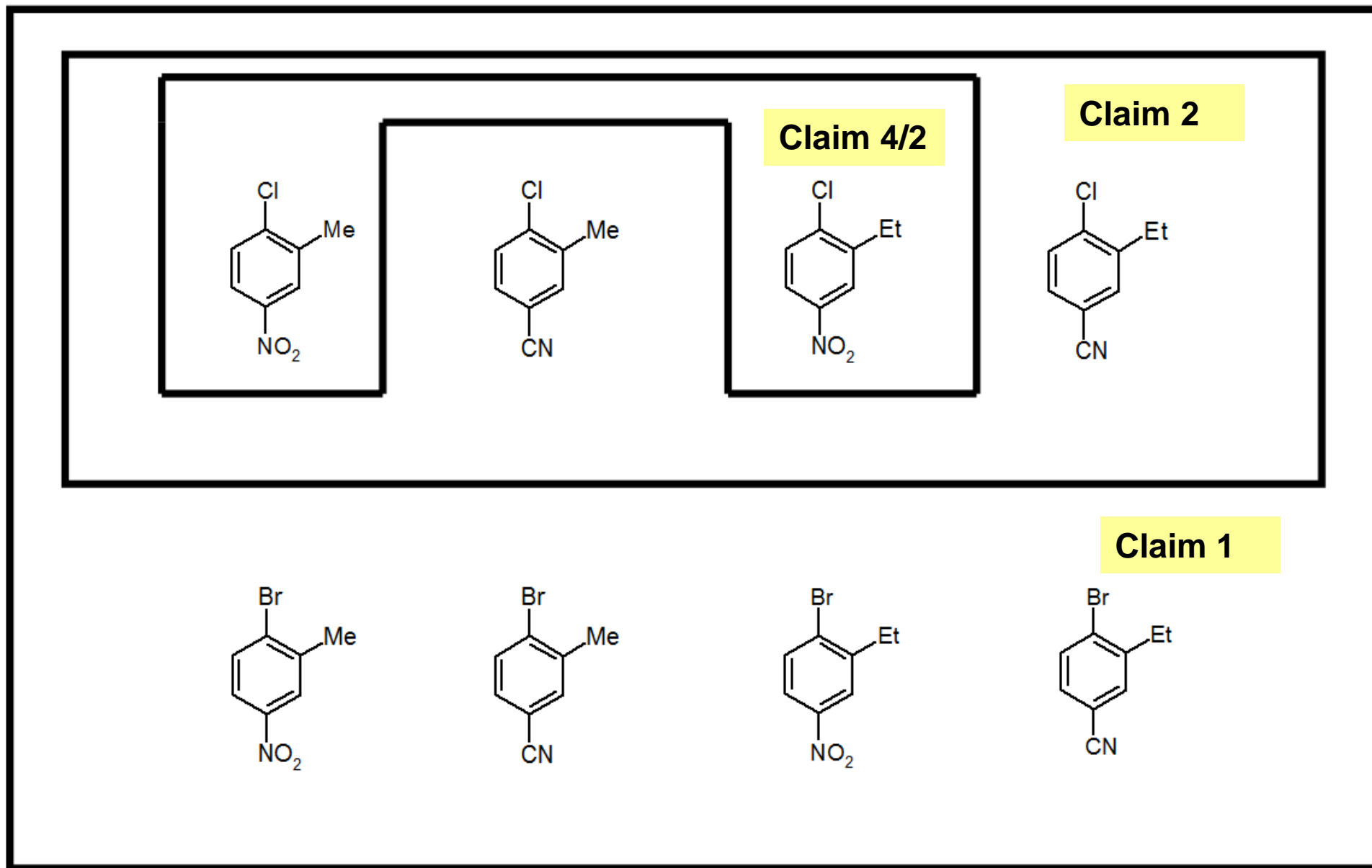


Claim 1. A 1,2,4-trisubstituted benzene of formula ..., wherein: ...

New claim 4/2

Claim 2. The benzene according to claim 1, wherein **R1 is Cl**.

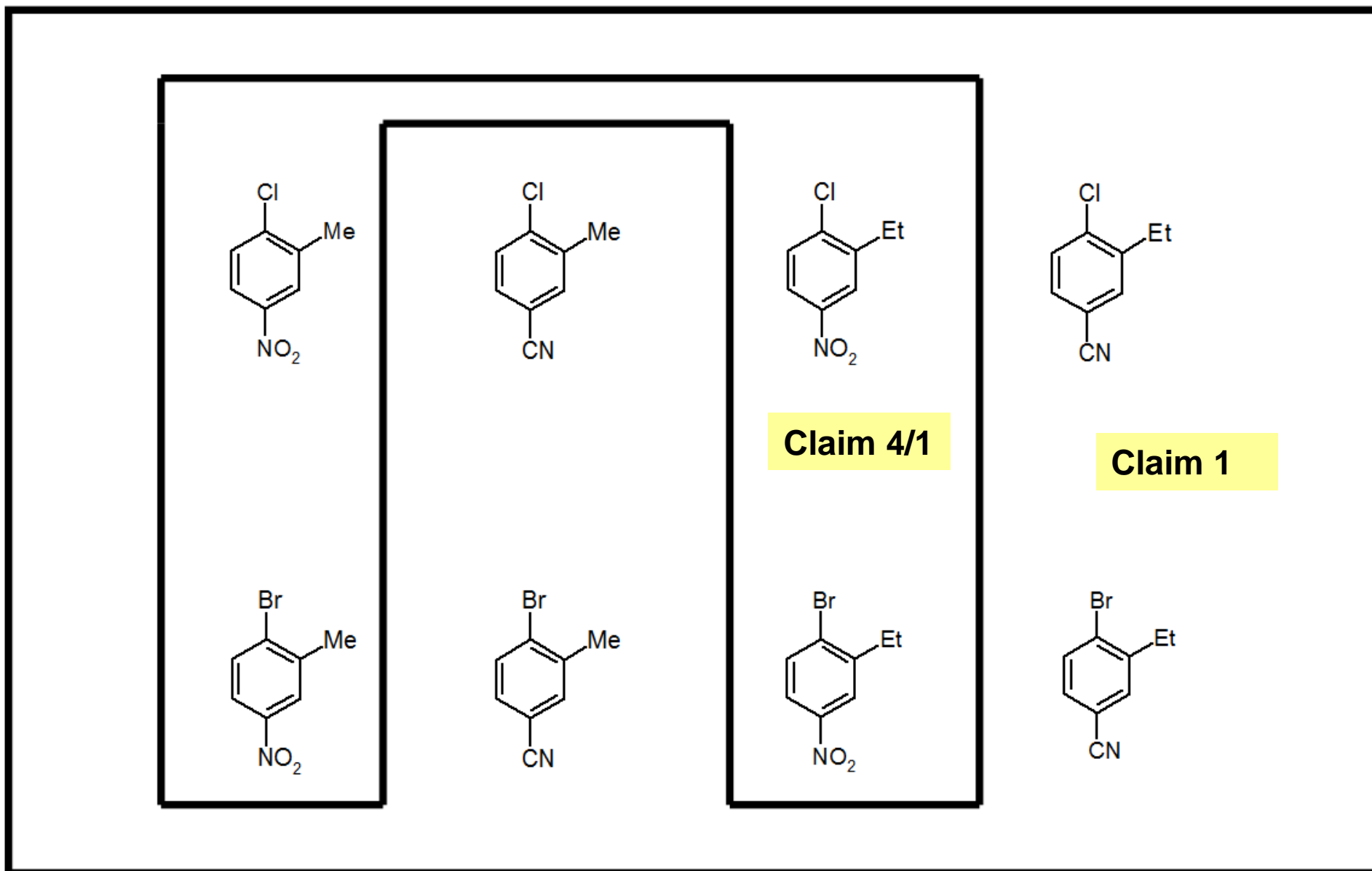
Claim 4/2. The benzene **according to claim 2**, wherein **R4 is NO2**.



Claim 1. A 1,2,4-trisubstituted benzene of formula ..., wherein:

New claim 4/1

Claim 4/1. The benzene **according to claim 1**, wherein **R4 is NO2**.



Multiple dependent claims

1(Prod.comprising A); 2(+B); 3(+C); 4(+D)

Actual claims and their ELEMENTS

1	2	3/1	4/1
A	A+B	A+C	A+D
		3/2	4/2
		A+B+C	A+B+D
			4/3/1
			A+C+D
			4/3/2
			A+B+C+D

Singular dependent claims

1	2	3	4
A	A+B	A+B+C	A+B+C+D

Elements in *actual claims* of a dependency group with 4 *numbered* claims written in standard format and "according to any one of the preceding claims", by adding an extra element in every new dependent claim.

Claim 1. A product comprising **A**.

Claim 2. The product according to claim 1, further comprising **B**.

Claim 3. The product according to any one of the preceding claims, further comprising **C**.

Claim 4. The product according to any one of the preceding claims, further comprising **D**.

Reivindicaciones NUMERADAS, con su NUMERACIÓN .

1 2 3 4 5 6 n

Reivindicaciones REALES, con la NOTACIÓN recomendada

1	2	3/1	4/1	5/1	6/1
		3/2	4/2	5/2	6/2
			4/3/1	5/3/1	6/3/1
			4/3/2	5/3/2	6/3/2
				5/4/1	6/4/1
				5/4/2	6/4/2
				5/4/3/1	6/4/3/1
				5/4/3/2	6/4/3/2
					6/5/1
					6/5/2
					6/5/3/1
					6/5/3/2
					6/5/4/1
					6/5/4/2
					6/5/4/3/1
					6/5/4/3/2

Nº TOTAL de reivindicaciones REALES en el grupo .

$1(2^0) - 2(2^1) - 4(2^2) - 8(2^3) - 16(2^4) - 32(2^5) \dots 2^{n-1}$

El nº total de reivs. reales en un grupo con *n* reivindicaciones numeradas redactadas mediante dependencia múltiple "según cualquiera de las reivs. anteriores" es 2^{n-1}

Así p.ej., para $n = 15$ reivs. numeradas, que en la EPO no pagan nada extra, el número total de reivs. reales sería de $2^{14} = 16.384$.

En la USPTO de una reiv. múltiple no puede depender otra reiv. múltiple. Si se pudiera, en este caso habría que pagar $[(16.384 - 20) \times 80] + (13 \times 780) = 1.319.260$ USD en concepto de reivs. (ver tasas de reivs. en USPTO)

1. Sistema para la recogida de residuos urbanos, **caracterizado** porque comprende unos buzones donde se depositan los residuos por parte del ciudadano, los cuales forman una red de vertido desde donde los residuos son trasladados neumáticamente por una red de transporte, que consta de una arteria principal a la que descargan ramificaciones auxiliares provistas de válvula de aislamiento, realizándose la separación de los residuos en la corriente de aire el cual es lavado dentro de una central de transporte, siendo compactados los residuos en grandes contenedores paralelepípedicos antes de su traslado final a los centros de tratamiento o de eliminación.

(Reivindicación anulada)

One
effective
claim:
Old 2

2. Sistema, según reivindicación 1, caracterizado porque los buzones son fijos y la red de transporte está constituida por tuberías enterradas que conducen los residuos a la central remota de recogida, facilitando el transporte neumático la recogida selectiva con separación de fracciones en origen, estando las tuberías provistas de medidores de velocidad que controlan el caudal del aire.

3. Sistema, según reivindicaciones 1 y 2, caracterizado porque los buzones están equipados con dis-

Publication of a "Patente de invención corregida (B9)" (Amended Spanish patent) where only Claim 1 has been invalidated by a final judicial decision

① Número de publicación: **2 245 535**

② Número de solicitud: 200202802

⑤ Folleto corregido: B1

Texto afectado: Reivindicaciones

Cumplimiento de sentencia de 11-03-2009

Anulada la primera reivindicación

④ Fecha de publicación de la corrección: 13.07.2011

⑤ Int. Cl.:

B65F 5/00 (2006.01)

Two effective claims: Old 3/1 & Old 3/2

REIVINDICACIONES

1. Sistema para la recogida de residuos urbanos, de los que comprenden unos buzones donde se depositan los residuos por parte del ciudadano, los cuales forman una red de vertido desde donde los residuos son trasladados neumáticamente por una red de transporte, que consta de una arteria principal a la que descargan ramificaciones auxiliares provistas de válvula de aislamiento, realizándose la separación de los residuos en la central **Old 2** de aire el cual es lavado dentro de una central de transporte, siendo compactados los residuos en grandes contenedores paralelepípedicos antes de su traslado final a los centros de tratamiento o de eliminación, **caracterizado** porque los buzones son fijos y la red de transporte está constituida por tuberías enterradas que conducen los residuos a la central remota de recogida, facilitando el transporte neumático la recogida selectiva con separación de fracciones en origen, estando las tuberías provistas de medidores de velocidad que controlan el caudal del aire.

2. Sistema, según reivindicación 1^a, caracterizado porque los buzones están equipados con dispositivos controladores del nivel de su llenado que, al ser activados, se producirá el transporte de las bolsas con los residuos almacenadas en el tramo vertical de las tuberías previsto en la zona baja de los buzones, o en el acerado de la vía pública, donde comprenden una válvula de aire que regula la apertura de los buzones.

Old 3/2

Mistake: Old claim 3/1 has disappeared !

Re-publication of a "Patente de invención corregida (B9)" (Amended Spanish patent) where only Claim 1 has been invalidated by a final judicial decision, and where claims have been renumbered

① Número de publicación: **2 245 535**

② Número de solicitud: 200202802

⑤ Folleto corregido: B9

INID afectado: 74

Texto afectado: Reivindicaciones

Cumplimiento de sentencia de 11-03-2009

Reivindicaciones renumeradas por nulidad de la primera

④ Fecha de publicación de la corrección: 18.11.2011

⑥ (2006.01)

REIVINDICACIONES

1. Sistema para la recogida de residuos urbanos, de los que comprenden unos buzones donde se depositan los residuos por parte del ciudadano, los cuales forman una red de vertido desde donde los residuos son trasladados neumáticamente por una red de transporte, que consta de una arteria principal a la que descargan ramificaciones auxiliares provistas de válvula de aislamiento, realizándose la separación de los residuos en la corriente de aire el cual es lavado dentro de un **Old 2** de transporte, siendo compactados los residuos en grandes contenedores paralelepípedicos antes de su traslado final a los centros de tratamiento o de eliminación, **caracterizado** porque los buzones son fijos y la red de transporte está constituida por tuberías enterradas que conducen los residuos a la central remota de recogida, facilitando el transporte neumático la recogida selectiva con separación de fracciones en origen, estando las tuberías provistas de medidores de velocidad que controlan el caudal del aire.

9. Sistema, según la 1ª reivindicación, **caracterizado** porque cada fracción de residuo dispone de su contenedor correspondiente, estando controlado el grado de su llenado mediante presostato individual que establece la señal para la compactación automáti-

REIVINDICACIONES

~~1. Sistema para la recogida de residuos urbanos, **caracterizado** porque comprende unos buzones donde se depositan los residuos por parte del ciudadano, los cuales forman una red de vertido desde donde los residuos son trasladados neumáticamente por una red de transporte, que consta de una arteria principal a la que descargan ramificaciones auxiliares provistas de válvula de aislamiento, realizándose la separación de los residuos en la corriente de aire el cual es lavado dentro de una central de trans **Old 1** do compactados los residuos en grandes contenedores paralelepípedicos antes de su traslado final a los centros de tratamiento o de eliminación.~~

(Reivindicación anulada)

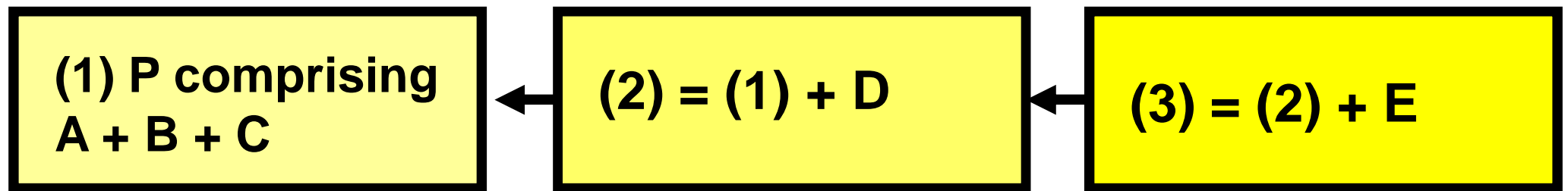
Old 10/1

10. Sistema, según reivindicación 1, **caracterizado** porque cada fracción de residuo dispone de su contenedor correspondiente, estando controlado el grado de su llenado mediante presostato individual que establece la señal para la compactación automática.

Mistake: A new claim 9/1 has been created, with the text of a non-existing Old 10/2

Claims structured as a dependency 'chain' or 'line'

Suitable for providing fallback positions, by adding further elements (D and E, shown in the figure) or by selecting more specific elements from more general ones (e.g. C1, C2 ... from element C, not shown)



A , B and C are considered the only essential elements, all of them comprised in independent claim 1. In single-dependent claims, elements are **added in decreasing order of importance** (here represented by alphabetical order: D > E)

Claims structured as a dependency 'chain' or 'line'

(1) P comprising A + B + C

(2) = (1) + D

(3) = (2) + E

In case claim 1 is not patentable, claim 2 is a good fallback position, without a problem of lack of unity

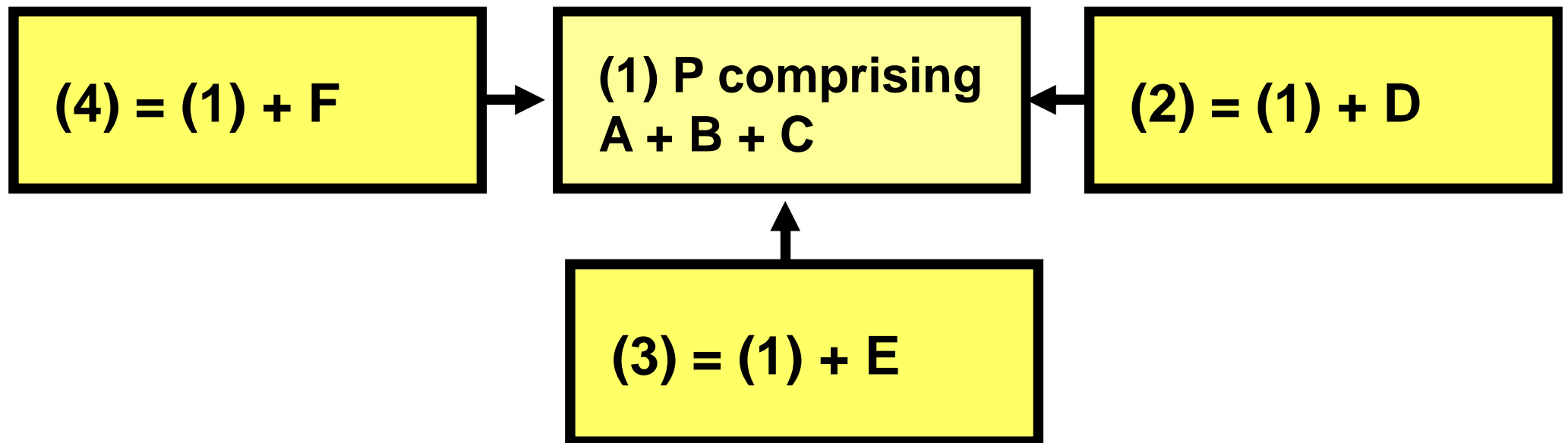
(1) P comprising A + B + C

(2) = (1) + D

(3) = (2) + E

Claims structured as a 'pyramid'

Suitable for equally preferred alternative elements, mutually exclusive or not. **It is not recommended when the 'pyramid vertex' is an independent claim with a risk of being declared invalid**



If D, E and F are **mutually exclusive**, the scope of protection is as shown in next slide.

Scopes of protection with mutually exclusive dependent claims that are structured as a pyramid

(1) P comprising A + B + C

(2) = (1) + D

(3) = (1) + E

(4) = (1) + F

RISK: If claim 1 was not patentable, there would be lack of unity *a posteriori*

(1) P comprising A + B + C

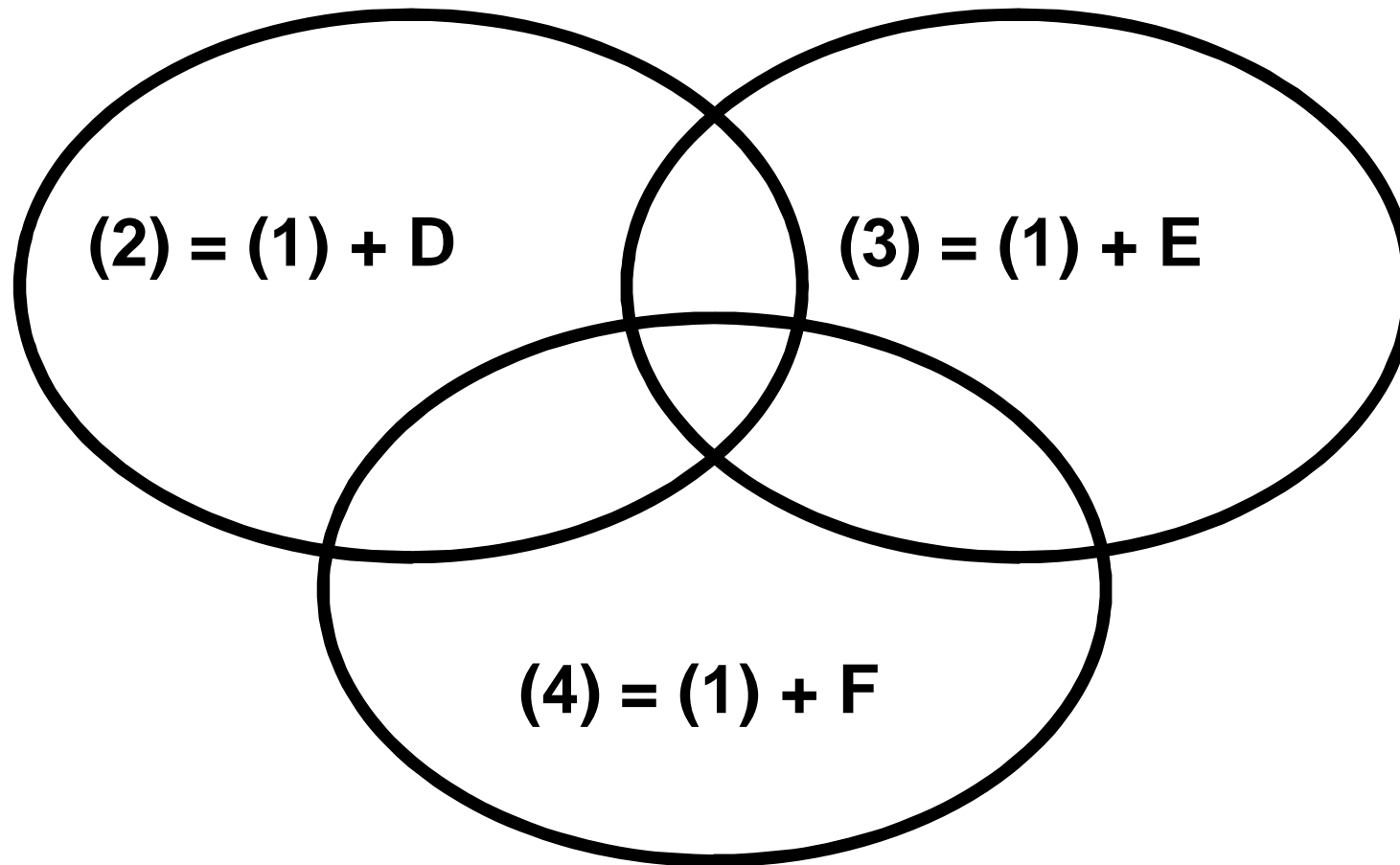
$$(2) = (1) + D$$

$$(3) = (1) + E$$

$$(4) = (1) + F$$

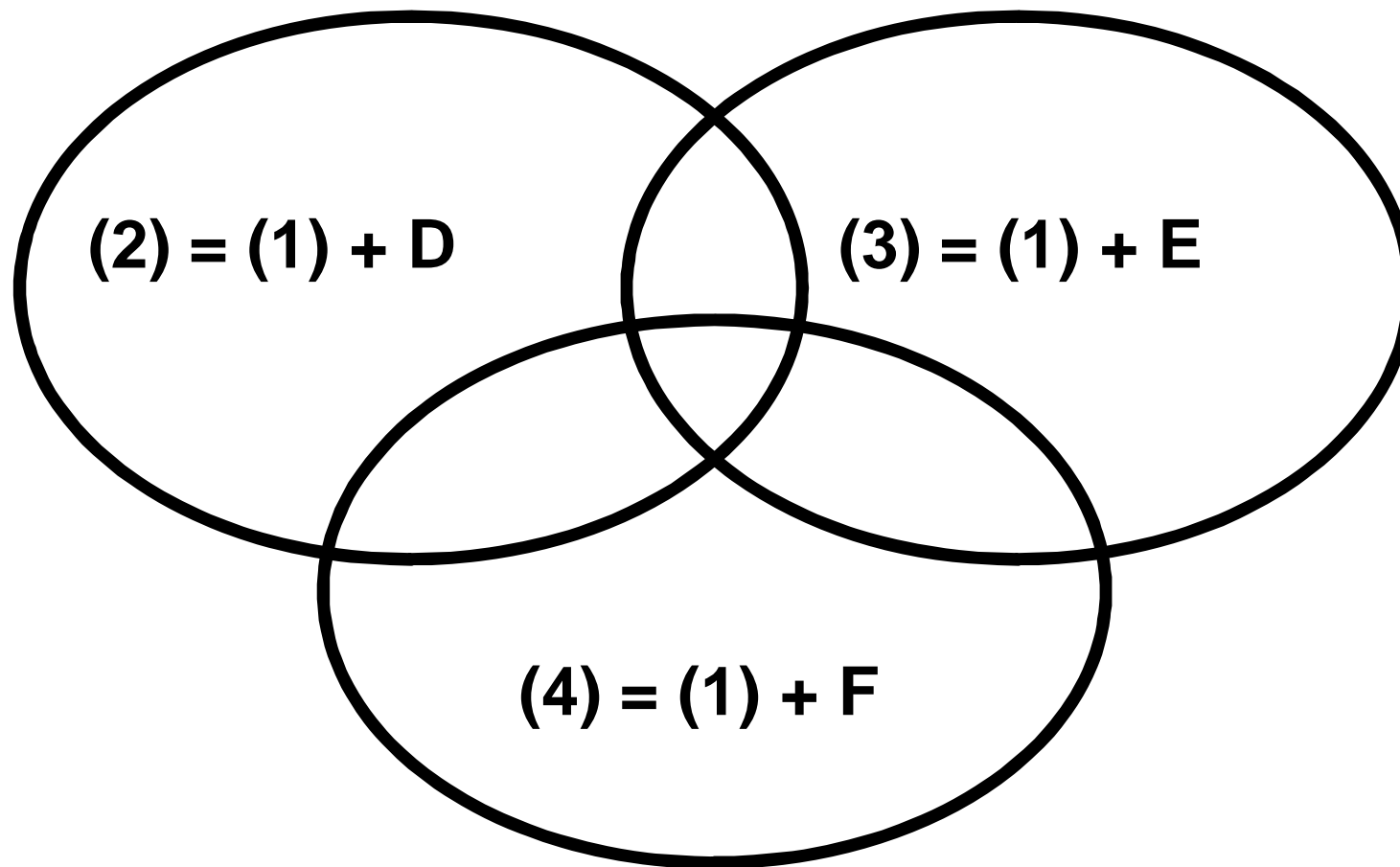
Scopes of protection with dependent claims that are structured as a pyramid but are not mutually exclusive

(1) P comprising A + B + C

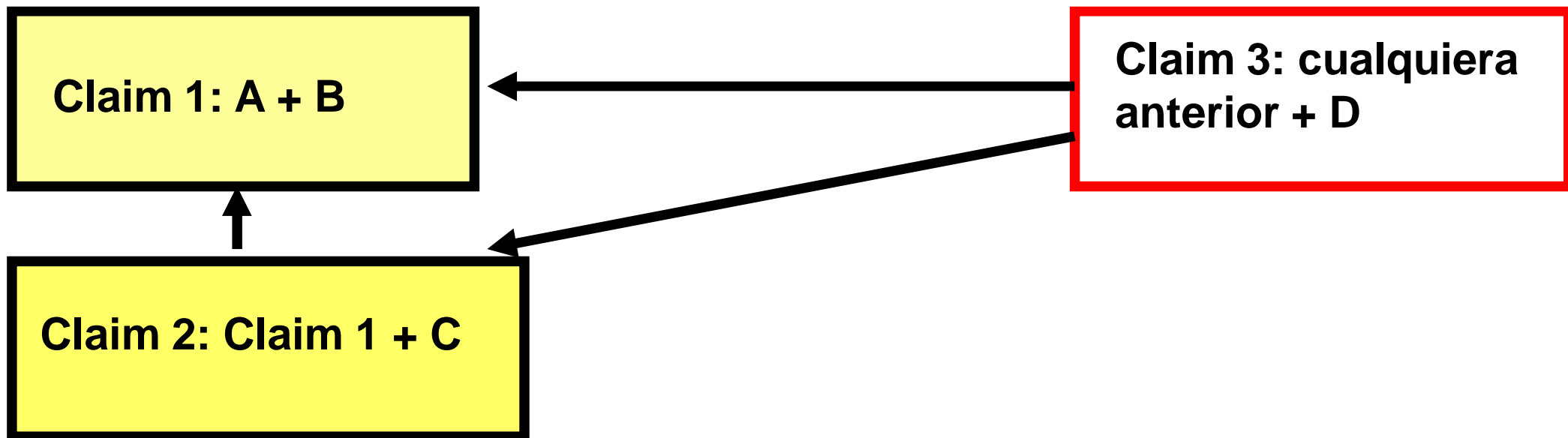


If claim 1 was not patentable, there would be some chance that the overlapping subject matter was useful to argue unity of invention. But still there would be three new independent claims of the same category (risk of having problems, e.g. with Rule 43(2) EPC)

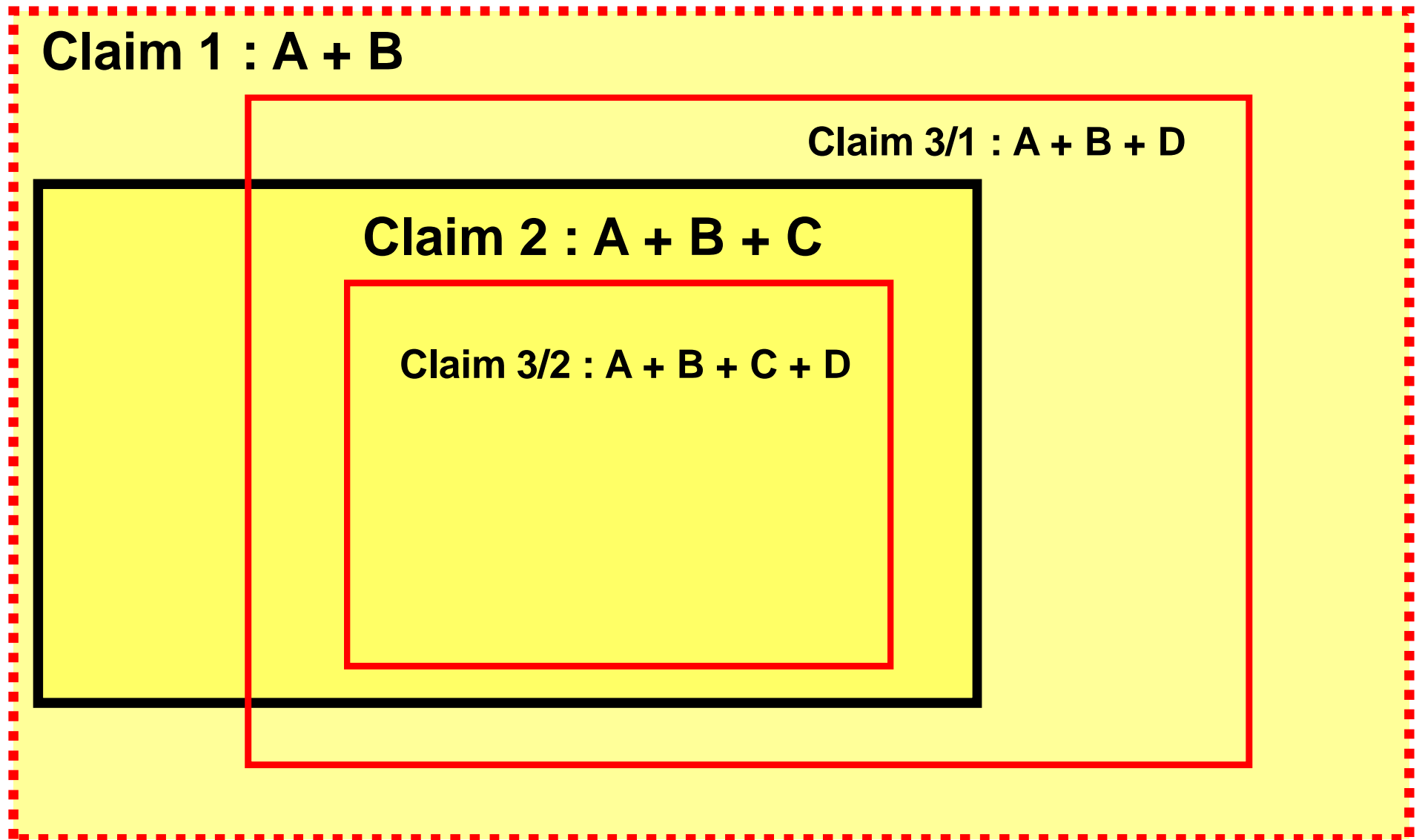
(1) P comprising A + B + C



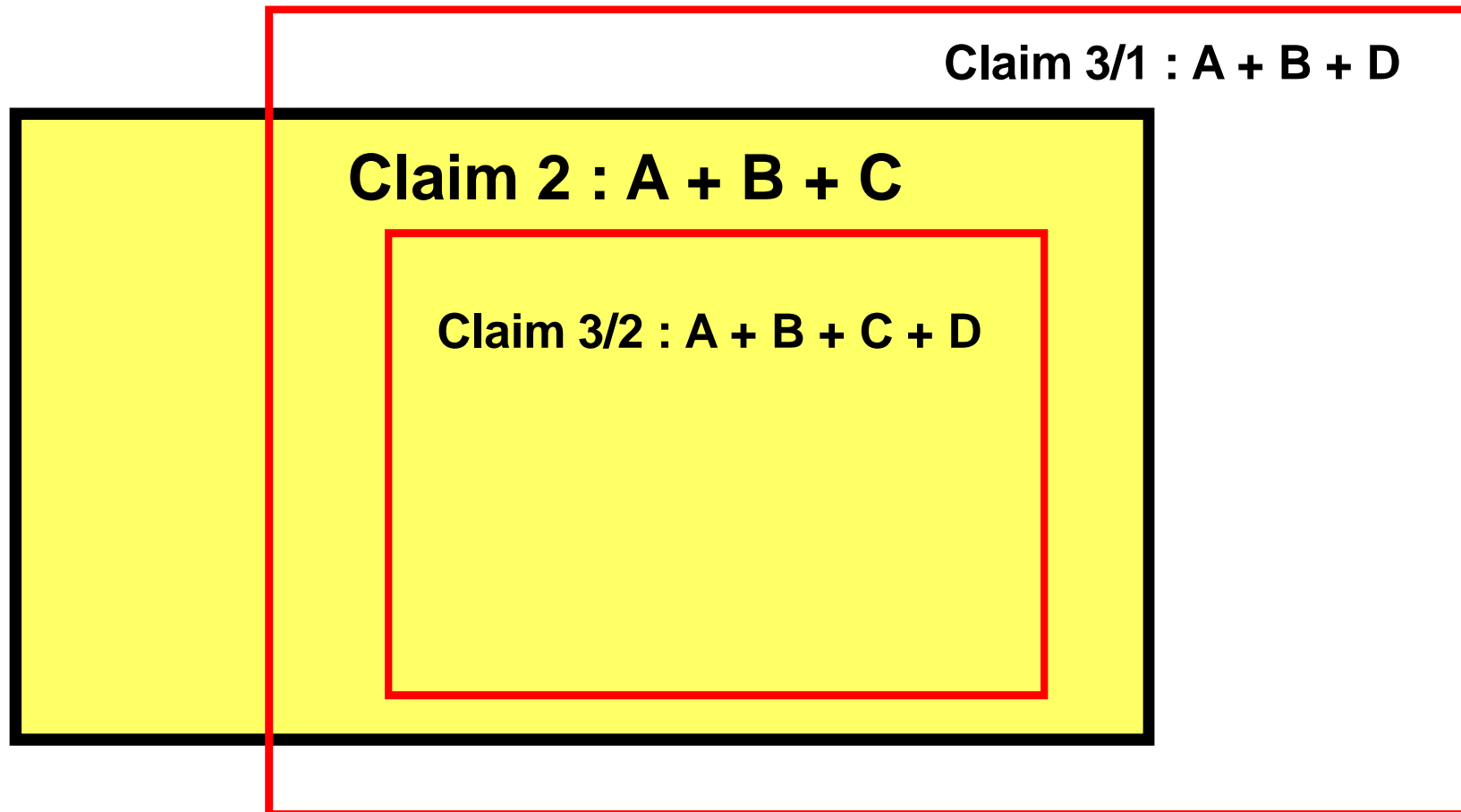
La situación de dependencia múltiple más sencilla puede ser arriesgada: cadena 1- 2- 3, donde 2 se escribe como mono-dependiente, y 3 se escribe como multi-dependiente



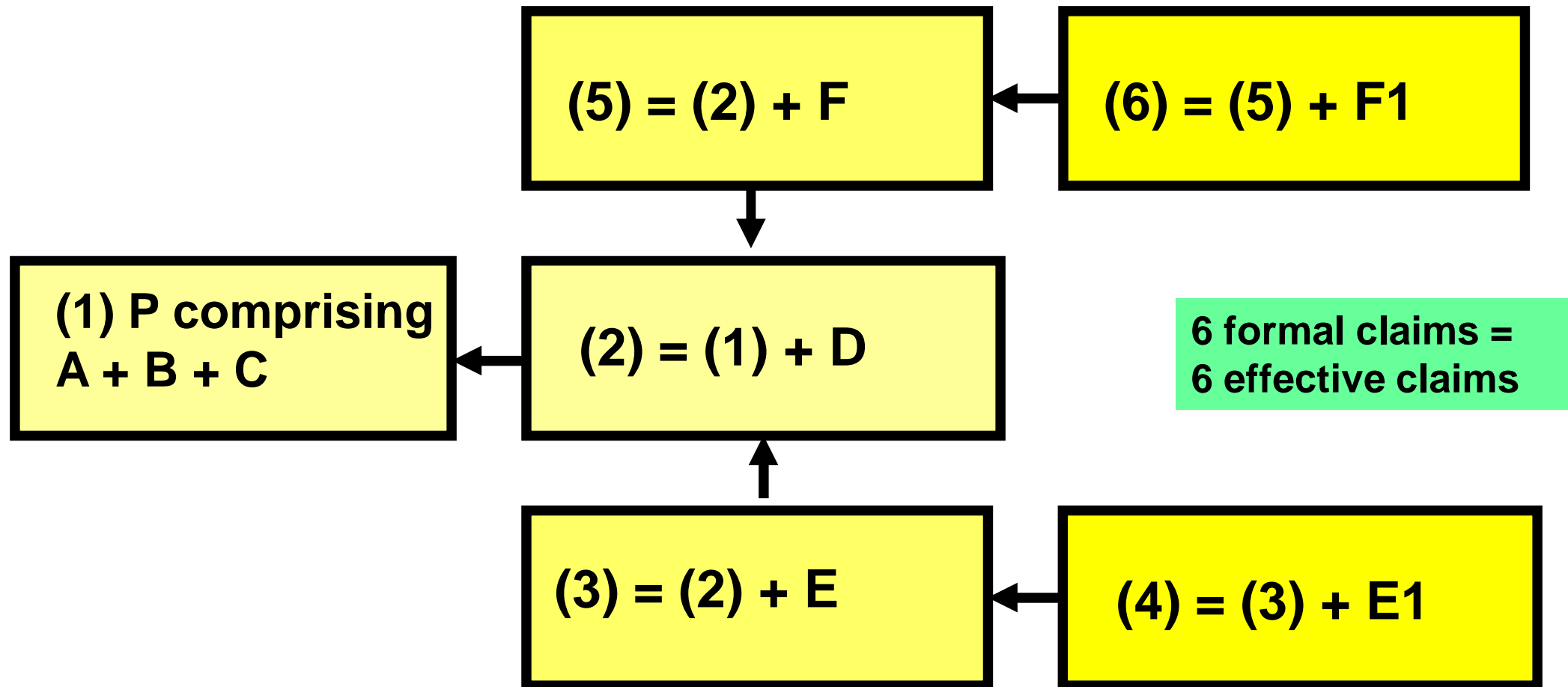
Alcance de las cuatro reivindicaciones efectivas iniciales. ¿Qué pasa si se anula la reiv. 1?



.. pues que no se pueden reenumerar con una sola reiv. independiente, manteniendo los ámbitos iniciales

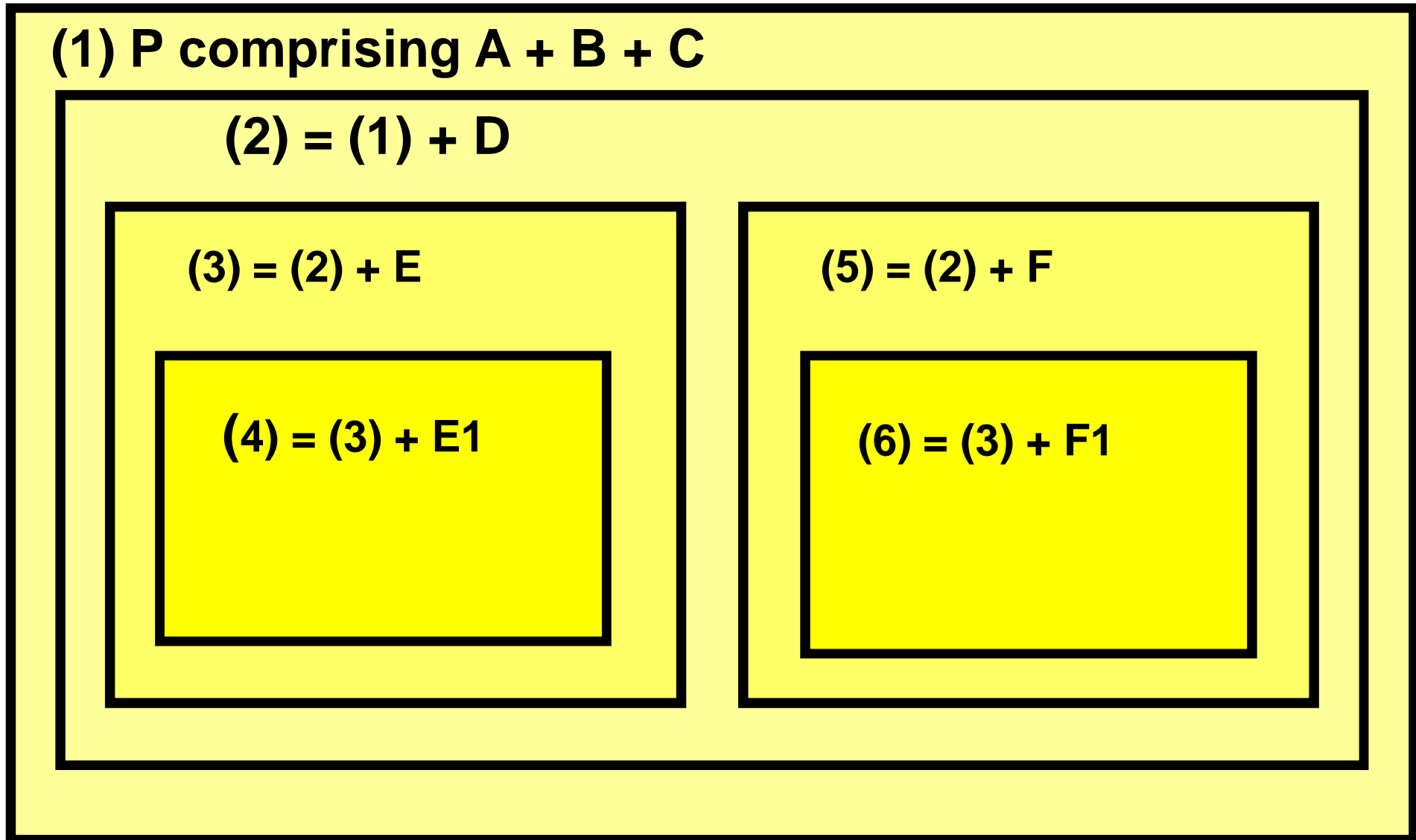


RECOMMENDED: Draft at least one fallback position before starting to claim alternatives structured as a pyramid



D is the most important element, after the essential elements A, B, and C. Separate addition of E and F build up two alternative claims

RECOMMENDED: Draft at least one fallback position before starting to claim alternatives structured as a pyramid



If claim 1 were not patentable, claim 2 would be a good fallback position, as it would be a single independent comprising the important element D

(1) P comprising A + B + C

(2) = (1) + D

(3) = (2) + E

(4) = (3) + E1

(5) = (2) + F

(6) = (3) + F1

How are dependent claims constructed?

A dependent claim can be drafted by adding extra features, preferably one at a time, either with reference to a single preceding claim, or with reference to several of (or all) the preceding claims.

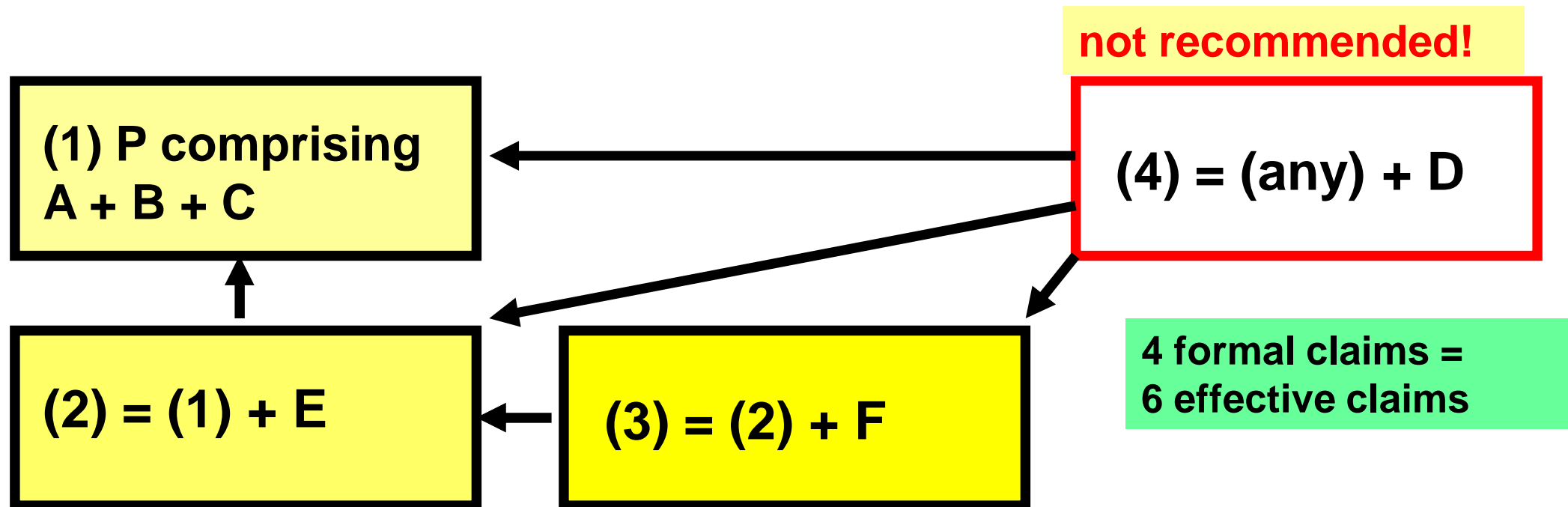
A dependent claim can also be drafted by adding a selection or an improvement to a feature. Reference can only be done to preceding claim(s) which themselves provide an antecedent for that feature.

In a single dependency chain, extra features are added successively in decreasing order of importance. In principle, in multiple dependency it should be the other way round; but having in mind that multiple dependency will not be used in the USPTO, **many professionals - this author included- think that, for the sake of EP-US similarity, in general it is better to add features in decreasing order of importance as well.**

Generally, one dependent claim is constructed per each added or selected feature. But there are cases (e.g. in Markush general formulae) where several features are selected simultaneously.

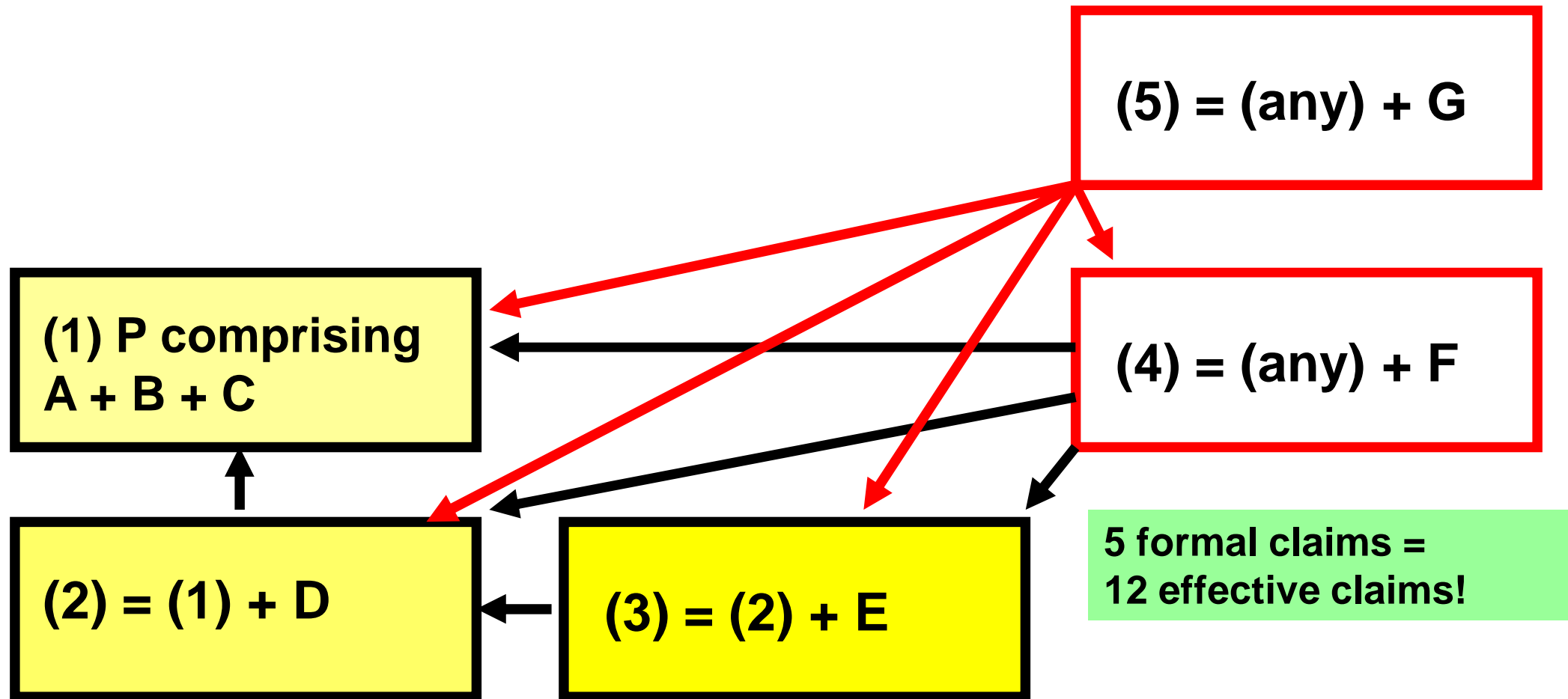
GENERAL RULE: In single dependency chain, features are added successively in decreasing order of importance

In multiple dependency it would *not* be advisable to do it the other way round, having in mind that we will not do it in corresponding US applications



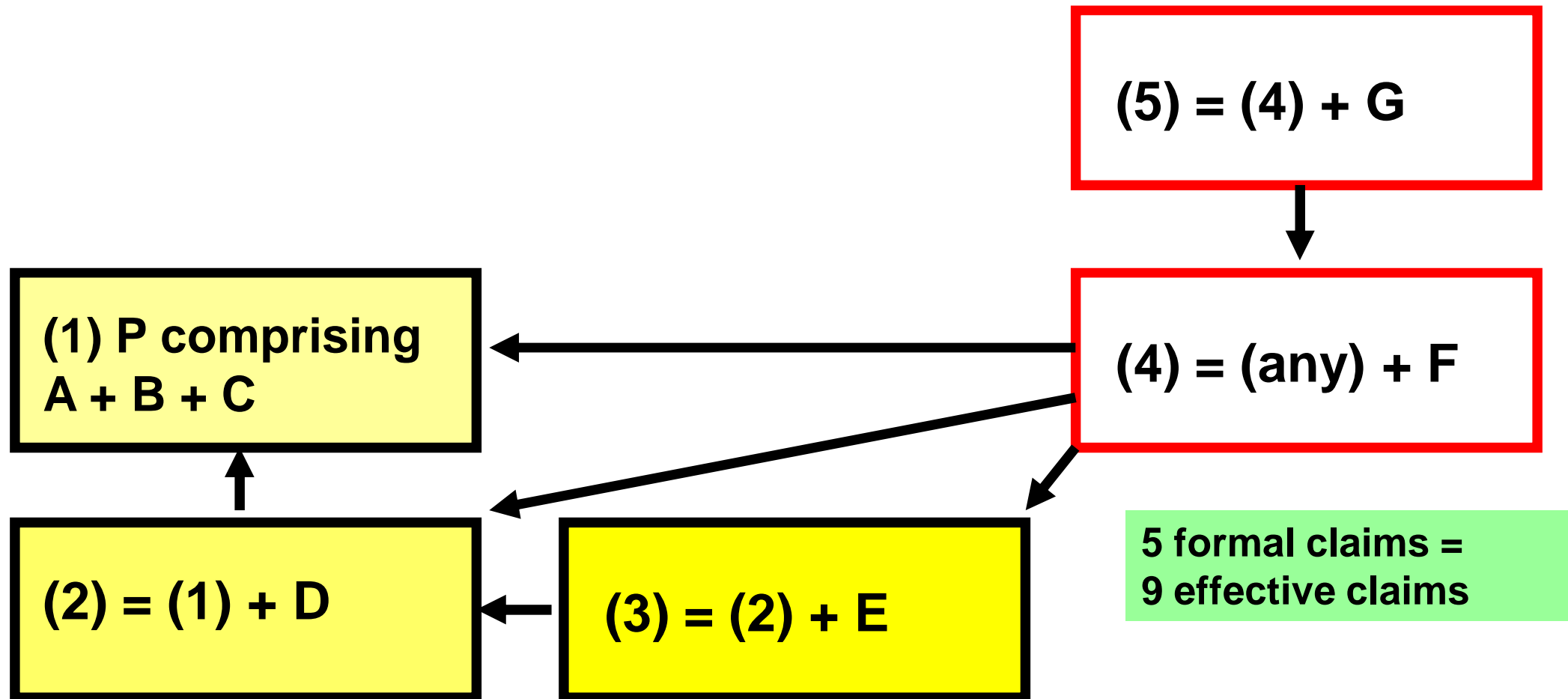
A , B y C are the only essential elements, i.e. the only comprised in independent claim 1 (**importance of elements is represented in alphabetical order: D > E > F**)

RECOMMENDED for priority, PCT and EP appln: From a claim written in multiple dependent form, other claim(s) may depend with multiple dependency in the EPO



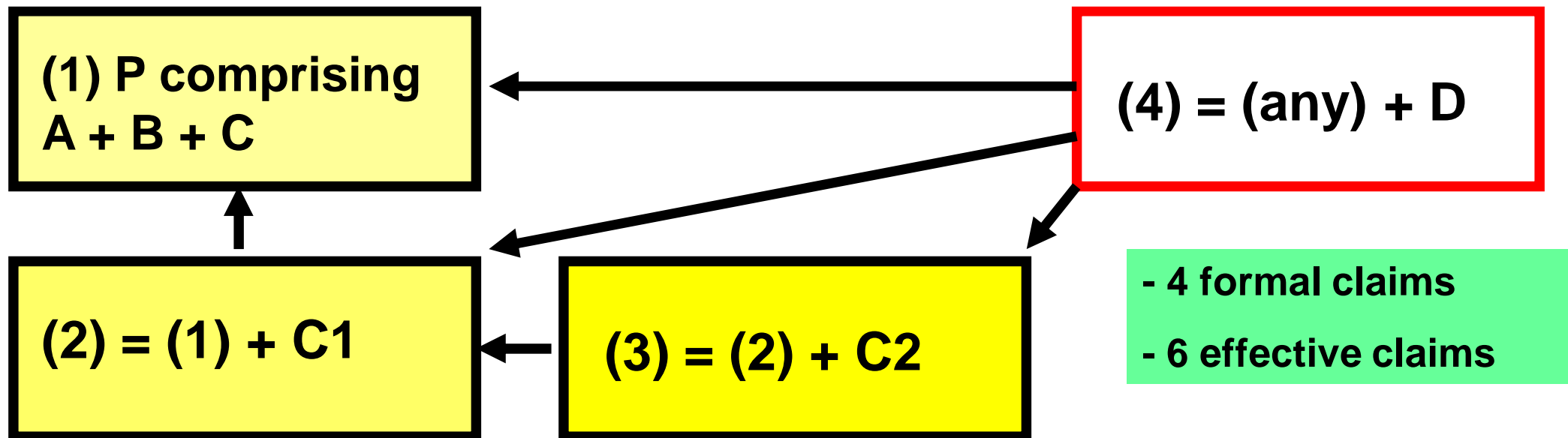
Claim 5 is accepted in EP and a PCT with EP as ISA. But not in CN, JP, KR or US, neither in a PCT having any of these offices as ISA

Adaptation of initial EP-drafting to CN, JP & KR practice: Only claim(s) written in single dependent form can hang from a claim written in multiple dependent form



According to US law & regulation (*de iure*), claims 4 and 5 would also be accepted in the USPTO; but *de facto* it is not done because claim fees would be too high

HIGHLY RECOMMENDED: The first fallback positions (here, claims 2 & 3) are constructed by selecting narrower values of one element (here C, with $C2 \subset C1 \subset C$). The addition of next extra element(s) (here D, the following in importance) is written in multiple dependency form



Branched structure made by successive selections of specific alternatives of several elements (two in this case)

A22 \subset A2 \subset A
A21 \subset A2 \subset A
A11 \subset A1 \subset A
A12 \subset A1 \subset A

B22 \subset B2 \subset B
B21 \subset B2 \subset B
B11 \subset B1 \subset B
B12 \subset B1 \subset B

(1) P comprising
A + B

(2) = (1) , A1, B1

(5) = (1) , A2 , B2

(3) = (2), A11, B11

(4) = (2) , A12, B12

(6) = (5), A21, B21

(7) = (5), A22, B22

Very typical for drafting chemical Markush (general formulae) claims, A and B being e.g. substitution radicals R1 and R2

Branched structure made by successive selections of specific alternatives of several elements (two in this case)

(1) P comprising A + B

(2) = (1) , A1 , B1

(3) = (2) , A11, B11

(4) = (2) , A12 , B12

(5) = (1) , A2 , B2

(6) = (5) , A21 , B21

(7) = (5) , A22 , B22

Five claims of a set drafted according to EP practice: claim 5 written in multi-multi dependent form

EP 2.145.597 A1 (original drafting of application for electrosurgical 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.

Claim 3 is multi-dependent

Claim 5 is multi-dependent hanging from multi-dependent

a Markush group

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

12 actual claims
5 numbered claims

Claim tree of claims 1-5 of EP 2.145.597 A1
(electrosurgical instrument)

There are several multiple dependencies!

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



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Original claims

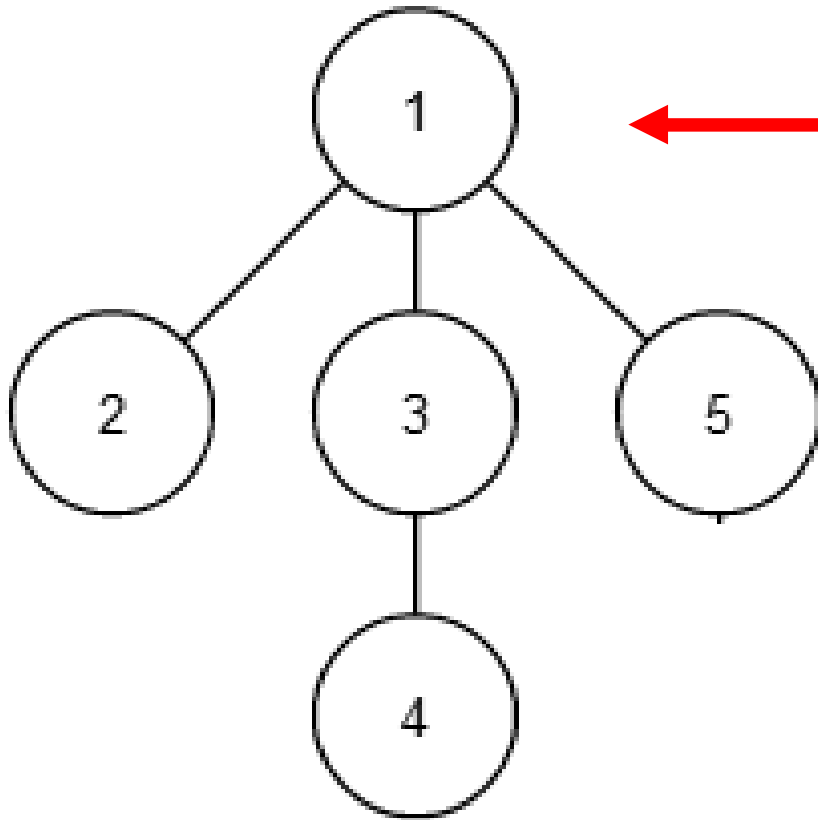
Claims tree

The EPO does not accept any responsibility for the accuracy of data and information originating from other authorities than the EPO; in particular, the EPO does not guarantee that they are complete, up-to-date or fit for specific purposes.

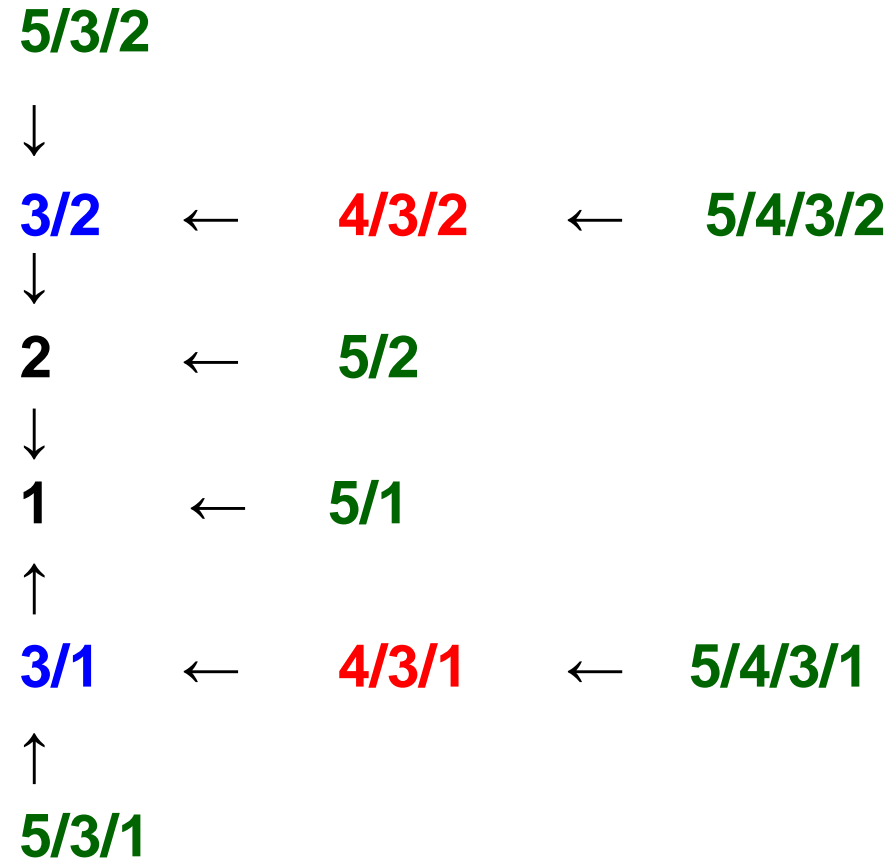
1. A monopolar electrosurgical instrument (1) for tissue coagulation and cut comprising a cylindrical metallic electrode which is connected to one pole of a radio frequency generator (14) on one extreme; said electrode comprising a liquid supply for cooling, a handle (7) that covers part of the electrode, 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 claim trees only single/singular dependencies are shown. Therefore, these claim trees are misleading in cases of multiple dependencies



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



Typical adaptation of PCT claims with EP-drafting, done by a US patent agent without instructions

US 2010/0137856 A1
electrosurgical
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 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.

Initial multi-dependent claims 3 & 5 are simply converted into single-dependent claims hanging from independent claim 1.

2

1

1 -- 3 -- 4

1

5

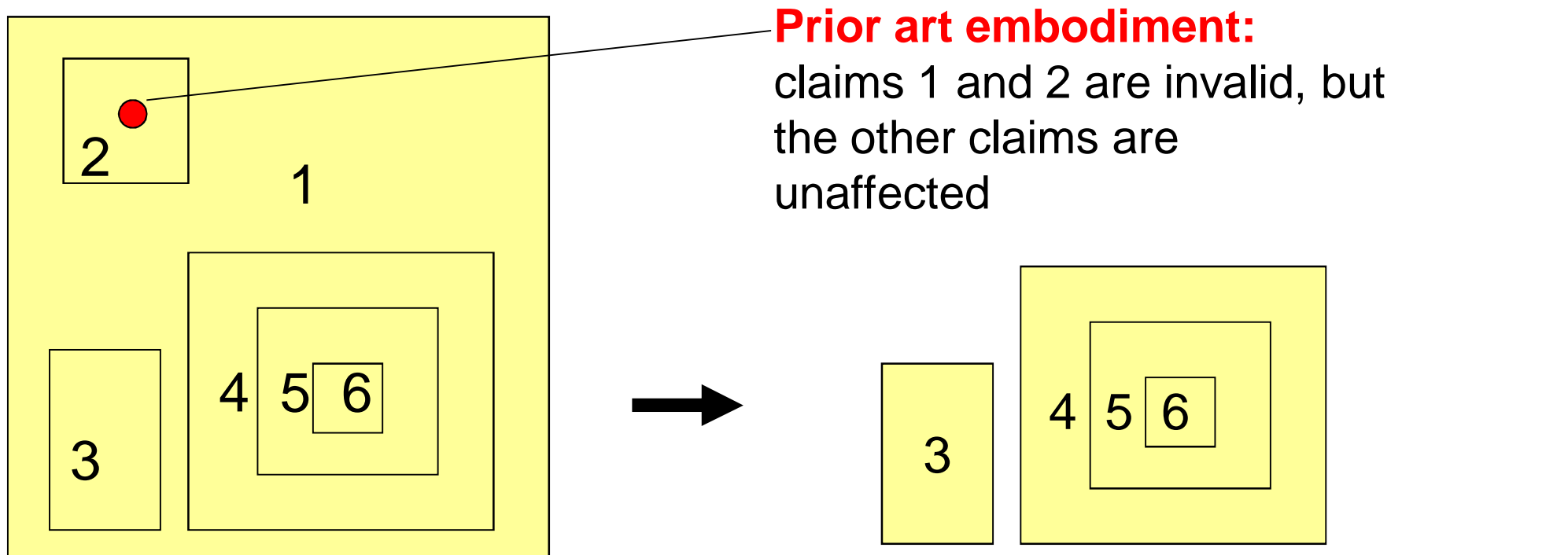
Only 5
numbered/actual
claims

**Scheme of claim dependency (claim tree) of the
first five claims of US 2010/0137856 A1
(electrosurgical instrument)**

No claims written in multiple dependent form!

**Claim dependency
as an aid for the assessment of
validity and infringement**

A patent claim is invalid for lack of novelty or for lack of inventive step when a **prior art embodiment (red cercle)** that falls within the scope of the claim is known or obvious



Original claims

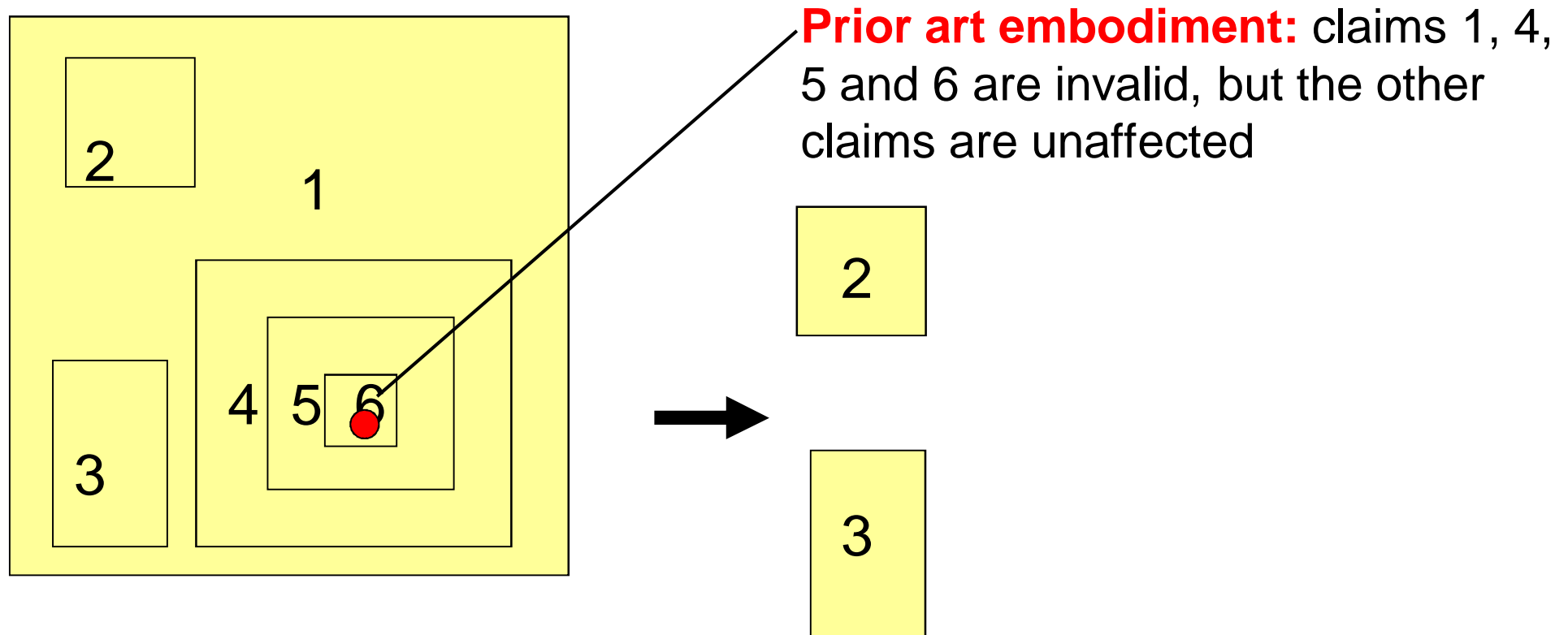
Unaffected claims (that may suffer from lack of unity *a posteriori*)

2 - 1 - 4 - 5 - 6

|

3 Claim tree

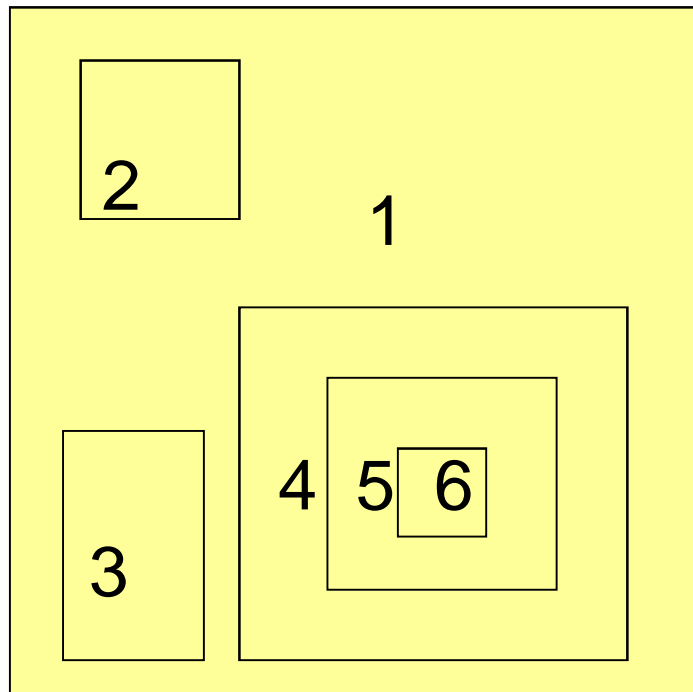
A patent claim is invalid for lack of novelty or for lack of inventive step when a **prior art embodiment (red cercle)** that falls within the scope of the claim is known or obvious



Original claims

Unaffected claims (that may suffer from lack of unity *a posteriori*)

A patent claim is invalid for lack of novelty or for lack of inventive step when a **prior art embodiment (red cercle)** that falls within the scope of the claim is known or obvious



Original claims are new and inventive (they are valid if they fulfill the rest of validity requirements)

Prior art embodiment: If an independent claim (1 in this example) is new (or it involves an inventive step), by definition all claims dependent on it are new (or they involve an inventive step)

CAREFUL: The opposite is not true: if an independent claim is invalid, the claims dependent on it will be invalid or not, conditioned by the **specific case** (cf. previous examples)

REIVINDICACIONES

1. Máquina de impresión flexográfica a alta velocidad, que comprende:

- al menos una matriz de impresión flexográfica (03) soportada por un rodillo (01);

- al menos un contrarrodillo (21) que coopera con dicho rodillo (01) con matriz;

- al menos un conjunto de entintado (26, 27, 28) que comprende un rodillo de entintado (02) en contacto con la matriz de impresión flexográfica (03), en el que la superficie cilíndrica externa del rodillo de entintado (02) está provista de microincisiones y parcialmente sumergida en agua o tinta disolvente contenida en una cámara (07), un pequeño depósito (09) o un canal;

caracterizada dicha máquina porque comprende al menos una cinta transportadora (04) continua y perforada enrollada alrededor de un rodillo motor (22) y un rodillo de retorno (23) que se desplaza sobre una superficie accionada por aspiración (05), siendo capaz dicha cinta transportadora (04) de soportar las láminas/los paneles (06), mientras se mueve hacia delante a través de la matriz (03) de dicho rodillo (21).

2. Máquina de impresión flexográfica a alta velocidad según la reivindicación anterior, **caracterizada** porque dicha cinta transportadora (04) se mueve hacia delante a través de la matriz (03) de dicho rodillo (21).

3. Máquina según las reivindicaciones 1 y 2, **caracterizada** porque la tinta está contenida en un pe-

13. Máquina según las reivindicaciones 1 y 8, **caracterizada** porque la sincronización entre la cinta transportadora (04) accionada por aspiración y las máquinas de impresión, y/o entre las máquinas de impresión está asegurada por dispositivos mecánicos y/o hidráulicos y/o eléctricos y/o electrónicos y/u ópticos.

14. Máquina según las reivindicaciones 1 a 6, **caracterizada** porque los conjuntos de entintado (26, 27, 28) se pueden retirar y sustituir por un conjunto de entintado para tinta de aceite en posición de trabajo.

15. Máquina según las reivindicaciones 1 y 2, **caracterizada** porque la matriz de impresión flexográfica (03) está en contacto con un cojín amortiguador (20), que tiene una menor dureza que la máquina de impresión flexográfica, capaz de producir presión que la hace volver inmediatamente a su posición de funcionamiento para el siguiente ciclo de impresión.

16. Máquina según la reivindicación 1, **caracterizada** porque el rodillo (01) con matriz de impresión flexográfica está provisto de agujeros para aire a presión, a fin de permitir la rápida instalación del manguito con la matriz (03) con cojín amortiguador (20).

17. Máquina según las reivindicaciones 1 y 2, **caracterizada** porque el contrarrodillo de impresión (21) actúa como rodillo motor para la cinta (04), o como rodillo de retorno para la cinta (04).

18. Máquina según las reivindicaciones 1 y 2, **caracterizada** porque el contrarrodillo de impresión (21) entra en contacto directo con las láminas/los paneles (06) durante la impresión.

STS1 2013-02-26 Se pide nulidad total de ES 2.255.891 T3 pero sólo se prueba la nulidad de la reiv. 1, nulidad que no afecta a las reivs. 2-18 (1)

FD1. Resumen de los antecedentes. I...La patente está compuesta de dieciocho reivindicaciones, de las que sólo es independiente y principal la primera. Las demás son dependientes de ella... La **Empresa-X tomó la iniciativa una vez validada la patente europea en España y ejercitó en la demanda acción de nulidad (en JM Bcn-2) de la patente ES 2.255.891 T1 [T3] (EP 1 364 783 B1), por falta de los requisitos de novedad y actividad inventiva, en todas sus reivindicaciones o, al menos, en la primera. [petición subsidiaria = auxiliary request]**

III. La acción de nulidad de la patente fue estimada en la primera instancia, con alcance a las dieciocho reivindicaciones. **El Tribunal de apelación (AP Bcn-15) limitó la declaración de nulidad a la primera reivindicación, por entender que no se había demostrado, en contra de lo alegado por la ahora recurrente, que las segunda a decimoctava carecieran de los requisitos de novedad y actividad inventiva.**

I. RECURSO EXTRAORDINARIO POR INFRACCIÓN PROCESAL DE LA DEMANDANTE. FD2. Enunciados y fundamentos de los dos motivos del recurso. **Alega la recurrente [Empresa X] que, para demostrar que la nulidad de la patente de doña Trinidad debía ser total - porque ninguna de sus dieciocho reivindicaciones tenía novedad ni actividad inventiva - presentó con la demanda el **dictamen de un ingeniero superior aeronáutico**, el cual, además, expuso de palabra en el juicio sus criterios técnicos sobre el tema que debía ser demostrado...**

STS1 2013-02-26 Se pide la nulidad total de ES 2.255.891 T3 pero sólo se prueba la nulidad de la reiv. 1, nulidad que no afecta a las reivs. 2-18 (2)

Añade que, pese a la claridad con la que el perito se manifestó, en ambas ocasiones, el Tribunal de apelación consideró probada la falta de novedad y actividad inventiva sólo de la primera reivindicación de la patente de la demandada, no de las demás. Califica la Empresa X esa valoración de la prueba pericial como notoriamente errónea y arbitraria y, al fin, lesiva de su derecho a la tutela judicial efectiva.

FD3. Desestimación de los dos motivos

Sucede, sin embargo, que esa afirmación del Tribunal de apelación - y, por tanto, la de que el perito sólo se ocupó, con el rigor que solo un previo estudio permite, de la primera reivindicación, única independiente de las dieciocho - se muestra exacta, a la vista tanto del título dado por su autor al informe - " estudio comparativo para la reivindicación primera y principal de la patente de invención ES 2 255 891 "-, como del índice de los capítulos en él contenidos - apartados V y VI - , del preámbulo - en el que se identifica el encargo recibido: " la realización de un estudio técnico comparativo de la reivindicación primera y principal de la patente de invención ES 2 255 891"-...

Lo que efectivamente hizo el perito fue afirmar - en la página 14 de su dictamen - una especie de nulidad por repercusión - " si una reivindicación independiente carece de alguno de los requisitos básicos de patentabilidad de novedad o actividad inventiva, por definición todas y cada una de las reivindicaciones dependientes de ella carecerían a su vez de los requisitos básicos de patentabilidad de novedad o actividad inventiva " - que no fue aceptada por el Tribunal de apelación en su sentencia - ni por el Juzgado de Primera Instancia -.

No hubo, por lo tanto, error en la valoración de la prueba pericial y, menos, uno que permita entender que la misma no supera el test de razonabilidad constitucionalmente exigible para considerar respetado el derecho a la tutela judicial efectiva que consagra el artículo 24 de la Constitución Española.

STS1 2013-02-26 Se pide la nulidad total de ES 2.255.891 T3 pero sólo se prueba la nulidad de la reiv. 1, nulidad que no afecta a las reivs. 2-18 (3)

II. RECURSO DE CASACIÓN DE LA DEMANDANTE. FD4. Enunciado y fundamento. II.

En una segunda parte, la Empresa X niega la posibilidad de que se mantenga la validez de unas reivindicaciones dependientes - a las que se refieren el artículo 7, apartado 2, del Real Decreto 2245/1986, de 10 de octubre, y la regla 29 (4) del Reglamento de ejecución del Convenio sobre la patente europea – cuando es declarada la nulidad de la reivindicación principal de la que dependen.

FD5. Desestimación del motivo.

I. No tiene en cuenta la recurrente - en la que hemos denominado primera parte de motivo - que la casación no constituye un instrumento que permita abrir una tercera instancia y, al fin, revisar la valoración de la prueba efectuada por el Tribunal de la segunda - sobre ello, la sentencia 797/2011, de 18 de noviembre -....

II. Por el contrario, constituye materia propia de la casación la que hemos identificado como segunda parte del motivo. Sin embargo, **dicha cuestión fue correctamente resuelta por el Tribunal de apelación, mediante la aplicación de la norma que, en casos de nulidad parcial, reconoce la vigencia a las reivindicaciones no anuladas**, dado que el hecho de que aquéllas contengan en su preámbulo referencias a una - o varias - reivindicación principal no le privan de la **autonomía de que, por sí, sean merecedoras por las características adicionales para las que se solicitó protección.**

SAPM 21.11.2023. CASO MÁQUINA DESBROZADORA. ACTIVIDAD INVENTIVA

- Error en la apreciación de la nulidad de las reivindicaciones dependientes:

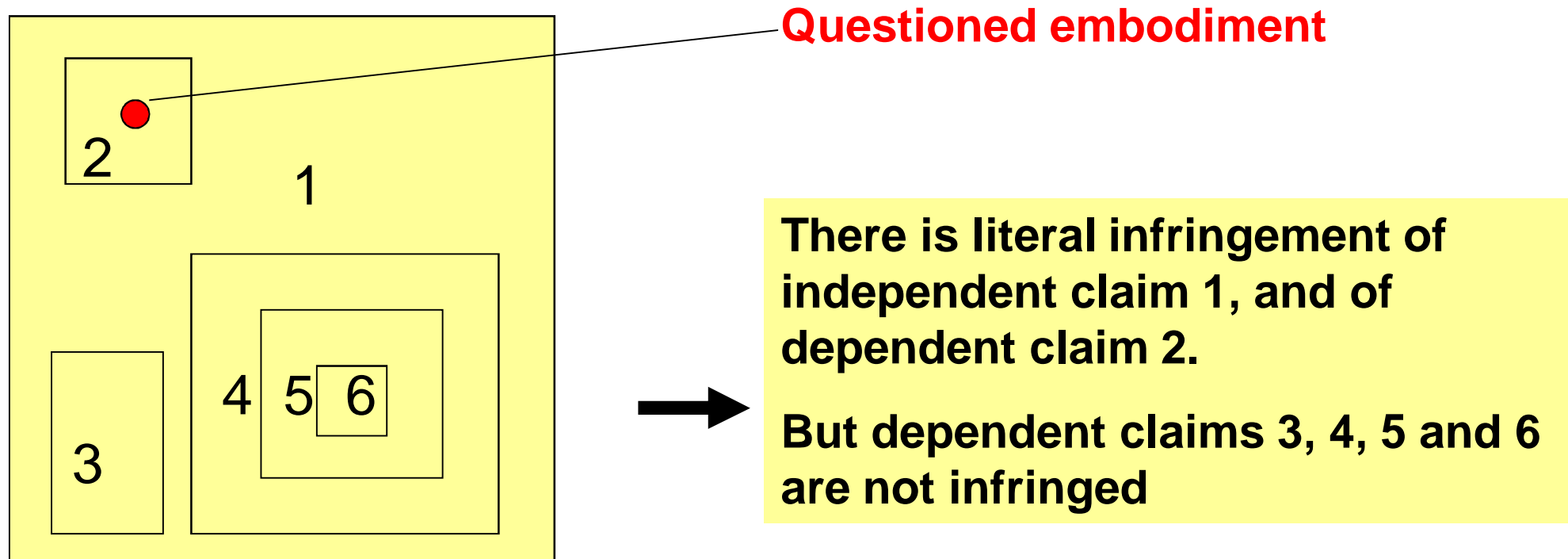
- incorrecta apreciación del juez de primera instancia cuando establece que la estimación de la excepción de nulidad de la R1, principal, comporta sin más la estimación de dicha excepción respecto de la R2, por su carácter de dependiente

- Cita por todas, sentencia del Tribunal Supremo de 16 de febrero de 2022, ECLI:ES:TS:2022:531):

“Como recordamos en la sentencia 263/2017, de 3 de mayo, «así como la nulidad de la primera reivindicación independiente no prejuzga la validez de las reivindicaciones dependientes, sin embargo la validez de la principal impide que se pueda entrar a cuestionar la nulidad de las dependientes». Por lo que, en nuestro caso, la nulidad de la reivindicación 1 no determinaba por sí la nulidad del resto de reivindicaciones dependientes.”

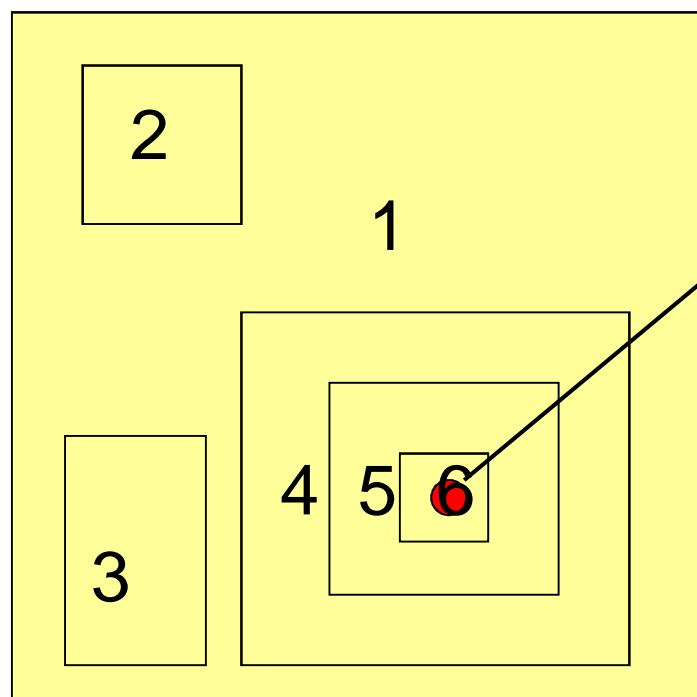
- *“No obstante, nada se dice en el escrito de interposición del recurso sobre dicho punto como motivo de impugnación de la sentencia de primera instancia, lo que nos impide pronunciarnos sobre la cuestión”*

The literal infringement test is analogous to the test of novelty/inventive step: a patent is infringed -with a literal interpretation of claims- when the **questioned embodiment associated to a proven prohibited act (red cercle)** falls within the scope of at least one valid claim



Patent claims (considered to be valid)

The literal infringement test is analogous to the test of novelty/inventive step: a patent is infringed -in a literal interpretation of claims- when the **questioned embodiment associated to a proven prohibited act (red cercle) falls within the scope of at least one valid claim**



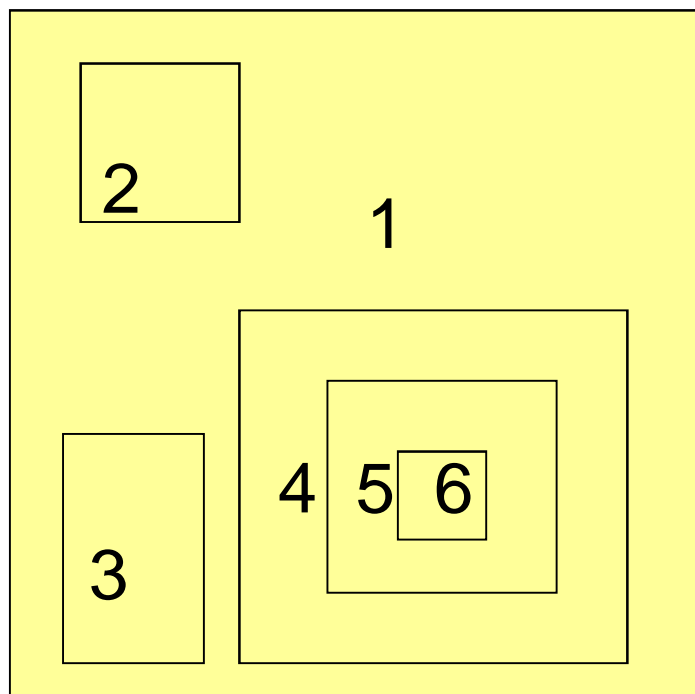
Questioned embodiment

There is literal infringement of independent claim 1, and of dependent claims 4, 5, and 6.

But dependent claims 2 and 3 are not infringed

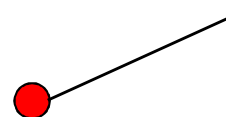
Patent claims (considered to be valid)

The literal infringement test is analogous to the test of novelty/inventive step: a patent is infringed -in a literal interpretation of claims- when the **questioned embodiment associated to a proven prohibited act (red circle) falls within the scope of at least one valid claim**



Patent claims (considered to be valid)

Questioned embodiment



When there is no literal infringement of independent claim, by definition there is no literal infringement of any of the dependent claim thereon

But the opposite is not true: An independent claim may be literally infringed whereas some of the dependent claims thereon are not literally infringed (cf. previous examples)

"Líneas de dependencia de reivs." y situaciones en las que se simplifica el juicio de infracción (SAP Bcn-15 9.05.2008 Pfizer vs Bayvit, amlodipino Richter-Gedeon)

"FD 12º. (cont.) Al respecto, conviene recordar que **una patente se infringe si, a juicio del tribunal, se ha probado la infracción de alguna de sus reivindicaciones válidas**, sin que sea necesario probar la infracción de todas las reivindicaciones válidas de la patente. **Cuando un grupo de reivindicaciones están ligadas por lo que suele denominarse "*una línea de dependencia*"** (por ejemplo: una reivindicación 1, independiente; una reivindicación 2 que depende de la 1; y una reivindicación 3 que depende de la 2) **el juicio de infracción se simplifica considerablemente en dos situaciones relativamente frecuentes:**

i) cuando se concluye que **no se infringe la reivindicación primera (independiente y más amplia)**, pues automáticamente se concluye, por definición, que tampoco se infringe **ninguna** de las demás reivindicaciones de la línea de dependencia;

y ii) cuando se concluye que **sí se infringe la reivindicación última (la dependiente más estrecha)**, pues automáticamente debe concluirse que, por definición, también se infringen **todas** las demás reivindicaciones de la línea de dependencia."

Multiple dependencies in claim sets to prepare for claim amendments that do not add subject matter (Art. 123.2 EPC) and do not extend the conferred protection (Art. 123.3 EPC)

Amending claims during prosecution

Reasons for amending claims

- **New prior art**, coming from: internal searches, trade searches, observations, oppositions, lawsuits, etc.
- **Developments of the invention by the applicant:** changes of interest or exploitation, new data in priority year, etc.
- **Third party activities:** attempts to bypass/design around, infringements/infractions (*infracciones/violaciones*), competing technologies, etc.
- **Objections from examiners** (the most frequent reason).

In the PCT & EPO claims can be amended:

- **When drafting the final application** with regards to the priority application.
- In the **PCT**, **before publication** of the application (Art. 19 PCT) and **before entering** into the National/European phase (Art. 26 PCT).
- In the **EPO**, *motu proprio*: **after receiving the ESR & WO** (if the ISR does not apply) and **after receiving the First Communication** from the examiner. Later, only with examiner's approval.

Analogy: EPC novelty vs. Art. 123(2) EPC (no added matter)

disclosure of the whole contents of a single item of prior art

Not permissible to combine separate items belonging to different embodiments described in one and the same document **unless such combination has specifically been suggested** (cf. selection inventions and the "two-list principle")

new

?

claim of a patent application

A claim is considered new/novel if it does not form part of the prior art.

Arts. 54 (1)(2)(3) EPC

The EP appln. or the EP **may not be amended** in such a way that it contains subject-matter which **extends** beyond the **content of the apln. as filed.** Art. 123(2)

content of appln. as filed (a.a.f.)

description

drawings

claims

added matter

?

?

?

alteration, removal or addition of text in the description usually add new matter

it is not normally possible to add new drawings, since in most cases they cannot be unambiguously derivable from description

an amendmend is allowed if the resulting claim is not considered new/novel over the a.a.f. Deletion of part of the matter is **allowed** if the corresponding embodiments were originally **described as alternatives in the claims** or explicitly set out in the description.

But rewriting a preexisting actual claim of the a.a.f. (e.g. from a multi-dependent form to a mono-dependent or an independent form) is not strictly a claim amendment !!

[EPO Guidelines] H-V. 3. Amendments in claims.

3.2 Inclusion of additional features

A claim may be limited by the inclusion of additional features, **provided the resulting combination was directly and unambiguously disclosed in the application as originally filed in an explicit or implicit manner If the resulting combination is novel over the application as originally filed (see the test for novelty given in G-VI, 2), the amended claim does not fulfil Art. 123(2).**

The fact that the resulting combination can be seen as:

- "not inconsistent" with the description (T 495/06) or
- "reasonably plausible" (T 824/06) or
- "obvious" in view of the application (T 329/99)

is not sufficient for an amendment to be allowable under Art. 123(2), since its direct and unambiguous disclosure is required.

A claim may be limited by inclusion of additional features, for example:

(a) from dependent claims, which were dependent on the claim to be limited;

(b) from the description (see also H-V, 3.2.1); **(c) from drawings** (see H-V, 6);

(d) arising from the conversion of an independent claim to a dependent claim; provided the above requirements are fulfilled.

[EPO Guids.] H-V. 3. Amendments in claims (cont.)

3.2.1 Intermediate generalisations

Extracting a specific feature in isolation from an originally disclosed **combination** of features and using it to delimit claimed subject-matter may be allowed **only if there is no structural and functional relationship between the features.**

When evaluating whether the limitation of a claim by a feature extracted from a combination of features fulfils the requirements of Art. 123(2), the content of the application as filed must not be considered to be a reservoir from which individual features pertaining to separate embodiments can be combined in order to artificially create a particular combination. [e.g. to create an 'undisclosed selection']...

3.3 Deletion of part of the claimed subject-matter

It is permissible to delete parts of the claimed subject-matter if the corresponding embodiments were originally described, e.g. as alternatives in the claim

or as embodiments explicitly set out in the description.

Multiple dependencies to prepare for claim amendments (1): Dependent claim in multiple form when adding a new element

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

*Claim 1. A Preamble-P, comprising: an element **A**, and an element **B**. [P+A+B]*

*Claim 2. The P's noun **according to claim 1**, further comprising **C**. [P+A+B+C]*

*Claim 3. The P's noun **according to claim 2**, further comprising **D**. [P+A+B+C+D]*

and, for some reason (e.g. it is the only one reaching the market), the embodiment "Preamble-P comprising A + B + D" (without C) is so interesting that **the applicant wants to amend the claim set by replacing previous Claims 1-3 with a new independent claim reading:**

[desired] Claim 1. A Preamble-P, comprising: elements A, B, and D. [P+A+B+D]

Unless in the application's description there is an embodiment specifically disclosing "Preamble-P comprising A, B and D" (what we assume does not happen in this case), **in the EPO (contrary to USPTO) such amendment would likely be objected under Art. 123(2) EPC saying that it artificially adds new subject matter by extracting a specific feature (C) in isolation from an originally disclosed combination (i.e. it is an "intermediate generalisation").**

The recommended drafting involve using multiple dependencies starting from claim 3:

[recom.] Claim 3. The P's noun according to any one of claims 1-2, further comprising D.

Thus, the actual claim 3/1 is exactly the desired claim, reading: [P+A+B+D]

Multiple dependencies to prepare for claim amendments (2): new elements added one by one, with multiple dependency

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

*Claim 1. A Preamble-P, comprising: an element **A**, and an element **B**. [P+A+B]*

*Claim 2. The P's noun **according to claim 1**, further comprising **C**. [P+A+B+C]*

[bad] Claim 3. The P's noun according to any one of claims 1-2, further comprising D and F

Claim 3/1: [P+A+B+D+F] ; Claim 3/2: [P+A+B+C+D+F]

If, for some reason (e.g. it is the only one reaching the market), the embodiments "Preamble-P comprising A + B + F; or A + B + C + F " (without D) is so interesting that **the applicant wants to amend the claims by replacing previous Claims 1-3 with new independent claims reading:**

[desired] Claim 1. A Preamble-P, comprising: elements A, B, and F. or

[desired] Claim 1'. A Preamble-P, comprising: elements A, B, C, and F.

Unless in the application's description there are embodiments respectively disclosing [P+A+B+F] or [P+A+B+C+F] (what we assume does not happen in this case), **in the EPO (contrary to USPTO) such amendment would likely be objected under Art. 123.2 EPC saying that it artificially adds new subject matter by extracting a specific feature (D) in isolation from an originally disclosed combination (a sort of "intermediate generalisation").**

In this case, it is recommended to draft separate claims with multiple dependencies:

[recom.] Claim 3. The P's noun according to any one of claims 1-2, further comprising D.

[recom.] Claim 4. The P's noun according to any one of claims 1-3, further comprising F.

The actual Claims 4/1 or 4/2 (embedded in recom. Claim 4) have the desired scope.

No multiple forms should be used in a chain of dependent claims where only element selections are added

Claim 3 (the third in a chain of dependent claims by selection $B11 \subset B1 \subset B$) should not be written in multiple form, by comparing the following two claim sets:

Claim 3 written in singular form:

Claim 1. A Preamble-P, comprising: an element A, and an element B. [P+ A+B]

Claim 2. The P's noun according to claim 1, wherein B is B1. [P+ A+B1]

[recom.] Claim 3. The P's noun according to claim 2, wherein B1 is B11. [P+ A+B11]

Claim 4. The P's noun **according to any one of claims 1-3**, further comprising C.

Claim 4/1: [P+A+B+C] ; Claim 4/2: [P+A+B1+C] ; Claim 4/3: [P+A+B11+C]

Claim 3 written in multiple form:

Claim 1. A Preamble-P, comprising: an element A, and an element B. [P+A+B]

Claim 2. The P's noun according to claim 1, wherein B is B1. [P+A+B1]

[bad] Claim 3. The P's noun according to any one of claims 1-2, wherein B or B1 is B11.

Claim 3/1: [P + A + B=B11] ; Claim 3/2: [P + A + B1=B11]

As the scopes of 'bad' Claims 3/1 and 3/2 are the same, and they are identical to the scope of recommended Claim 3, in this case multiple dependency is redundant.

Multiple dependencies to prepare for claim amendments (3): avoiding 'undisclosed selection from two lists'

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 (contrary to USPTO) 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 to prepare for claim amendments that do not extend the conferred protection of a patent (Art. 123.3)

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 (**cf. Art. 123.3 EPC**). 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.**

An schematic example of drafting a dependency group of claims

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 C4, 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 [not a USPTO one] may ask Claim 1 to be drafted in two-part format. Thus, having in mind that "Preamble-P having A11 and B11" is part of prior art, Claim 1 may 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 in the following dependent claims an extra element is 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 CN, JP, KR, US**).

Adapting EP claim set drafting to CN, JP and KR

Concerning types of multiple dependencies that may be used

- in CN, JP and KR multiple dependents hanging from singular dependents are used, but **multiple dependents hanging from multiple dependents are not allowed** (as in PCT Rule 6.4), therefore appropriate adaptation should be done to remove the multiple-to-multiple dependency/definition references.

Concerning unity provisions and other limitations (claim style, number of claims, claim fees, etc.), the advice of a local patent professional is recommended (in fact, the use of local professional services will be compulsory for non-residents from the point of view of representation before the patent office)

Adapting a claim set drafted in EP style to CN, JP and KR practices

INITIAL SET OF CLAIMS:

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 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.

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.

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.

As "multi-dependent claims shall not serve as basis for any other multi-dependent claim", only one multi-dependent can be left. The first appearing (Claim 4 in this case) seems to be the best choice, as it includes the broadest *actual* claims

- | | |
|--|-----|
| Claim 1. A preamble-P <u>comprising</u> : element A; element B; and an element C selected from the group consisting of C1, C2, C3, and C4. | OK |
| Claim 2. The P's noun <u>according to claim 1</u> , <u>wherein</u> element <u>A is A1</u> . | OK |
| Claim 3. The P's noun <u>according to claim 2</u> , <u>wherein</u> element <u>A1 is A11</u> . | OK |
| Claim 4. The P's noun <u>according to any one of claims 1-3</u> , <u>wherein</u> element <u>B is B1</u> . | OK! |
| Claim 5. The P's noun <u>according to claim 4</u> , <u>wherein</u> element <u>B1 is B11</u> . | OK |
| Claim 6. The P's noun <u>according to any one of claims 1-5</u> , <u>wherein</u> element <u>C is C1</u> . | No! |
| Claim 7. The P's noun <u>according to any one of claims 1-6</u> , <u>further comprising</u> element D. | No! |
| Claim 8. The P's noun <u>according to any one of claims 1-7</u> , <u>further comprising</u> element E. | No! |
| Claim 9. The P's noun <u>according to any one of claims 1-8</u> , <u>further comprising</u> element F. | No! |
| Claim 10. The P's noun <u>according to any one of claims 1-9</u> , <u>further comprising</u> element G. | No! |
| Claim 11. The P's noun <u>according to any one of claims 1-10</u> , <u>further comprising</u> element H1. | No! |
| Claim 12. The P's noun <u>according to any one of claims 1-10</u> , <u>further comprising</u> element H2. | No! |

**Original EP Claims 1-5
are also proper for CN,
JP & KR**

1 -- 4/1 -- 5/4/1

|

2 -- 4/2 -- 5/4/2

|

3 -- 4/3 -- 5/4/3

These 9 actual claims, which are common in EP, CN, JP & KR applns., are the 9 broadest claims in the initial EP set.

Independent Claim 1 and mono-dependent Claims 2 & 3 are the three broadest claims, and they will also appear in the US appln. (Claim 4 will not appear in US because is written as multi-dependent)

RESULTING SET WITH THE BROADEST PARTIAL-PYRAMID STRUCTURE

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 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.

*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 claim 1**, wherein element C is C1.*

*Claim 7. The P's noun **according to claim 1**, further comprising element D.*

*Claim 8. The P's noun **according to claim 1**, further comprising element E.*

*Claim 9. The P's noun **according to claim 1**, further comprising element F.*

*Claim 10. The P's noun **according to claim 1**, further comprising element G.*

*Claim 11. The P's noun **according to claim 1**, further comprising element H1.*

*Claim 12. The P's noun **according to claim 1**, further comprising element H2.*

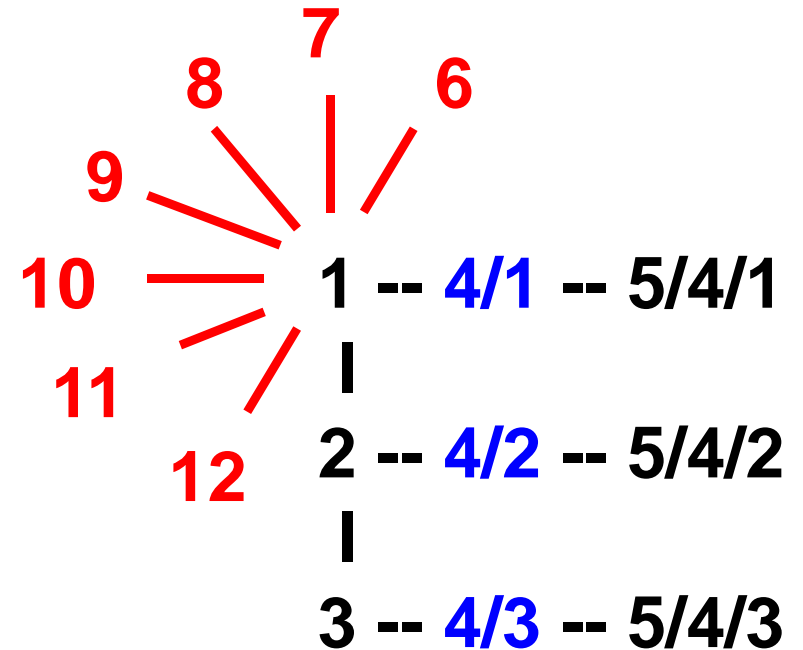
drafting singular dependencies of Claims 6-12 hanging all from Claim 1

Notation of Claims 6-12 in the claim tree is appropriate.

Writing 6/1, 7/1, etc., would be improper, as this notation uses numbers to the extent necessary to specifically identify each claim (cf. US MPEP. 608.01(n).I.F.)

**Total number of actual claims:
9 + 7 = 16**

Claims 1-12 with the broadest partial-pyramid structure



Risk of lack of unity *a posteriori* during examination, in case Claim 1 is considered not patentable

RESULTING SET WITH THE NARROWEST CHAIN STRUCTURE

Claim 1. A preamble-*P* comprising: element *A*; element *B*; and an element *C* selected from the group consisting of *C*1, *C*2, *C*3, and *C*4.

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

Claim 3. The *P*'s noun according to claim 2, wherein element *A*1 is *A*11.

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

Claim 5. The *P*'s noun according to claim 4, wherein element *B*1 is *B*11.

Claim 6. The *P*'s noun according to claim 5, wherein element *C* is *C*1.

Claim 7. The *P*'s noun according to claim 6, further comprising element *D*.

Claim 8. The *P*'s noun according to claim 7, further comprising element *E*.

Claim 9. The *P*'s noun according to claim 8, further comprising element *F*.

Claim 10. The *P*'s noun according to claim 9, further comprising element *G*.

Claim 11. The *P*'s noun according to claim 10, further comprising element *H*1.

Claim 12. The *P*'s noun according to claim 10, further comprising element *H*2.

drafting singular dependency of each claim hanging from its immediately previous one

RESULTING SET WITH PARTIAL-PYRAMID STRUCTURE HANGING FROM THE FIRST AND ONLY ONE MULTI-DEPENDENT CLAIM IN THE SET

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 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*.

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 claim 4, wherein element *C* is *C1*.

Claim 7. The *P*'s noun according to claim 4, further comprising element *D*.

Claim 8. The *P*'s noun according to claims 4, further comprising element *E*.

Claim 9. The *P*'s noun according to claim 4, further comprising element *F*.

Claim 10. The *P*'s noun according to claim 4, further comprising element *G*.

Claim 11. The *P*'s noun according to claim 4, further comprising element *H1*.

Claim 12. The *P*'s noun according to claim 4, further comprising element *H2*.

Claims for CN, JP & KR, with claims 6-12 hanging from the only multi-dependent claim in the set (Claim 4 in this case)

1 -- 4/1 -- 5/4/1
|
2 -- 4/2 -- 5/4/2
|
3 -- 4/3 -- 5/4/3

Notation of Claims 6-12 in the claim tree should be:

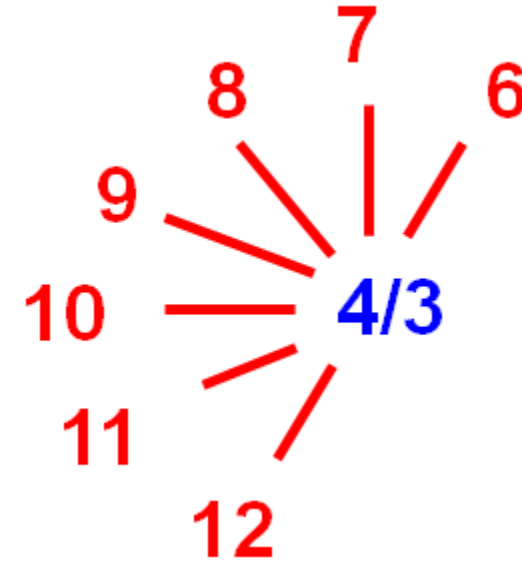
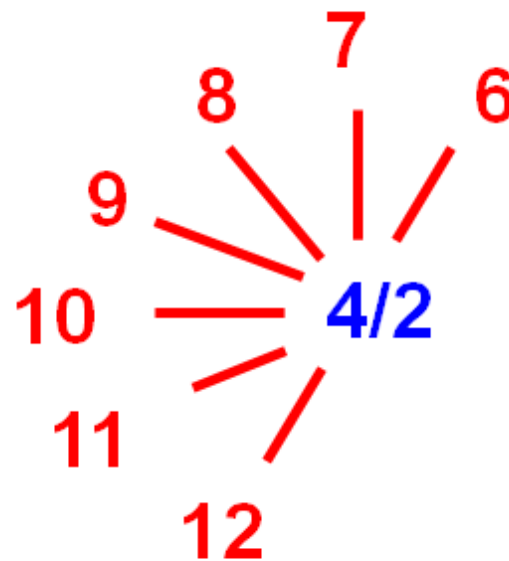
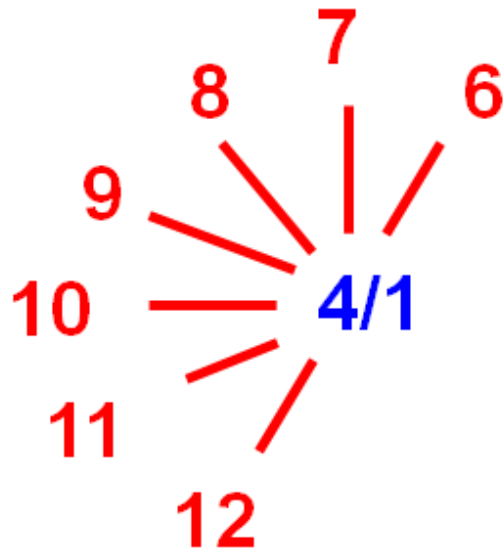
6/4/1 ; 6/4/2 ; 6/4/3

7/4/1 ; 7/4/2 ; 7/4/3

.....

12/4/1 ; 12/4/2 ; 12/4/3

Total number of *actual* claims: $9 + 7 + 7 + 7 = 30$



Note: The number of *actual* claims would be the same in case Claims 6-12 were hanging from Claim 5 (5/4/1 + 5/4/2 + 5/4/3); but their scopes would be reduced from comprising B = B1 to comprising B = B11.

Adapting a claim set drafted in the EP style to the US 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 happen 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.

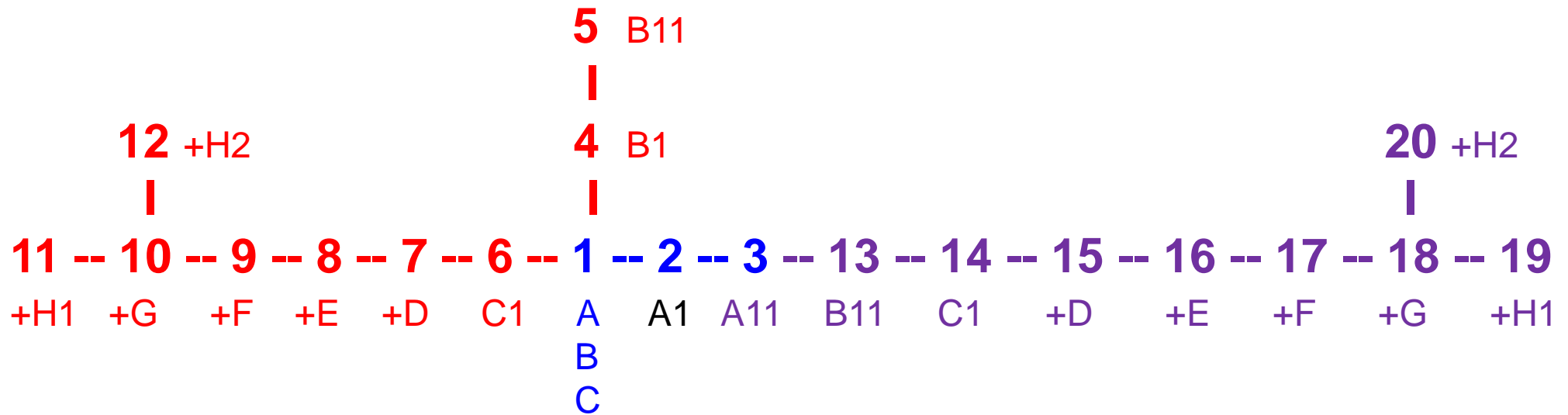
US-Claim 17. The P's noun according to claim 16, further comprising element F.

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

Claim set adapted to US practice (no multi-dependencies *de facto*, not *de iure*)



<--- **chain with broadest scopes**

chain with narrowest scopes -->

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

According to brainstorming: $A11 \subset A1 \subset A$

$B11 \subset B1 \subset B$

C consist of [C1 or C2 or C3 or C4] , with preferred C1

Comments to US-practice 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 a scope between the one of US-Claim 1 (broadest) and those of US-Claims 19-20 (narrowest)**

**Claim drafting simplification by using
definition references
to claims of different preambles**

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)

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.

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.

Claims allowed in the EPO for a CII-method

Claim 1. A **computer-implemented method** for [doing something], comprising the steps: A; B; C; and D.

Claim 10. A **computer program [product]** adapted to perform the method as defined in claim 1.

Claim 11. The **computer program product** according to claim 10, **embodied on a storage medium.**

Claim 30. A computer-readable **storage medium** comprising the program as defined in claim 10.

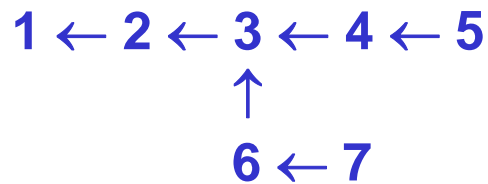
Claim 12. The computer program product according to claim 10, carried on a **signal carrier.**

Claim 40. A **signal carrier** wave carrying a signal incorporating the computer program as defined in claim 10.

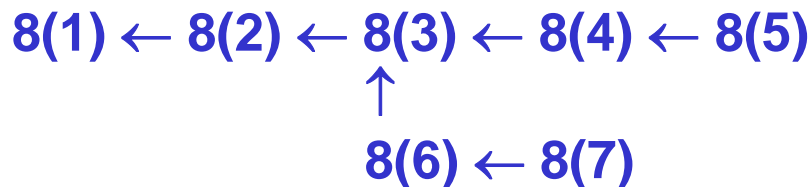
Claim 50. A **record carrier** having recorded on it the computer program as defined in claim 10.

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

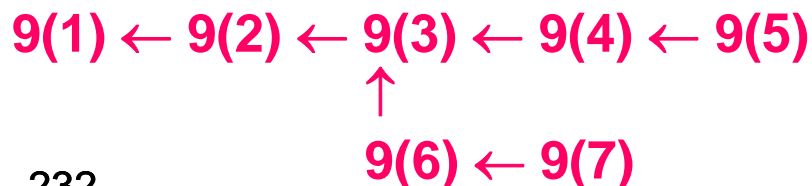
1.-7. : Claim set of "Method for [doing something]", with the claim tree:



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



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



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

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.

definition ref.

reference of a dependent claim

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

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

86. A transgenic soybean plant which contains a homologous gene which encodes an EPSPS enzyme for phosphoenolpyruvate (PEP) between 1 and 20 amino acids and a $K_i(\text{glyphosate})/K_m(\text{PEP})$ ratio between about 1 and 1000. Said plant exhibiting tolerance to N-phosphonomethylglycine herbicide at a rate of 1 to 10 lb/acre without significant yield reduction due to herbicide application.

87. Seed of a soybean plant of claim 86.

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.

← definition ref.

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.

← references of dependent claims.

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.

← "A" is improper and it 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 $K_t(\text{glyphosate})/K_m(\text{PEP})$ 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.

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.

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.

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

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

reference
of a
dependent
claim

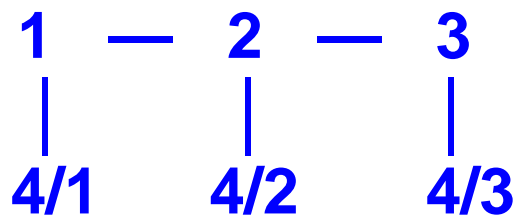
definition
reference

reference
of a
dependent
claim

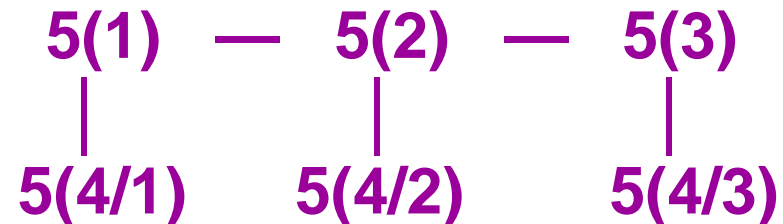
Simultaneous use of multiple dependency refs. and multiple definition refs.

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**.



236 **composition claims**



process claims

Final reflection on optimizing protection and costs

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

The initial (priority/PCT) drafter should worry about such 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 and decision makers during prosecution;
- **claim fees** paid for by applicant, and
- **patent professional fees** paid for by the applicant...

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

Everything should be done for the sake of applicant's good!

Acknowledgments

With the risk of forgetting somebody, the author acknowledges training, ideas and materials on patent drafting from:

Brian Cronin (CH, invited professor from CEIPI Int. Div. 1988 -)

Philip W. Grubb (GB, invited professor from CEIPI Int. Div.; author of "Patents for Chemicals, Pharmaceuticals, and Biotechnology", 1982, 1986, 1999, 2004, 2010, 2016)

Anna Barlocchi (ZBM Patents & Trademarks, ES)

Montserrat Jané (ES; ex Centre de Patents UB; ZBM Patents & Trademarks)

Gwilym Roberts (GB, author of "A Practical Guide to Drafting Patents", 2007)

Several European patent attorneys at **Hoffmann Eitle** (DE)

Several US patent attorneys at **Finnegan** (US)

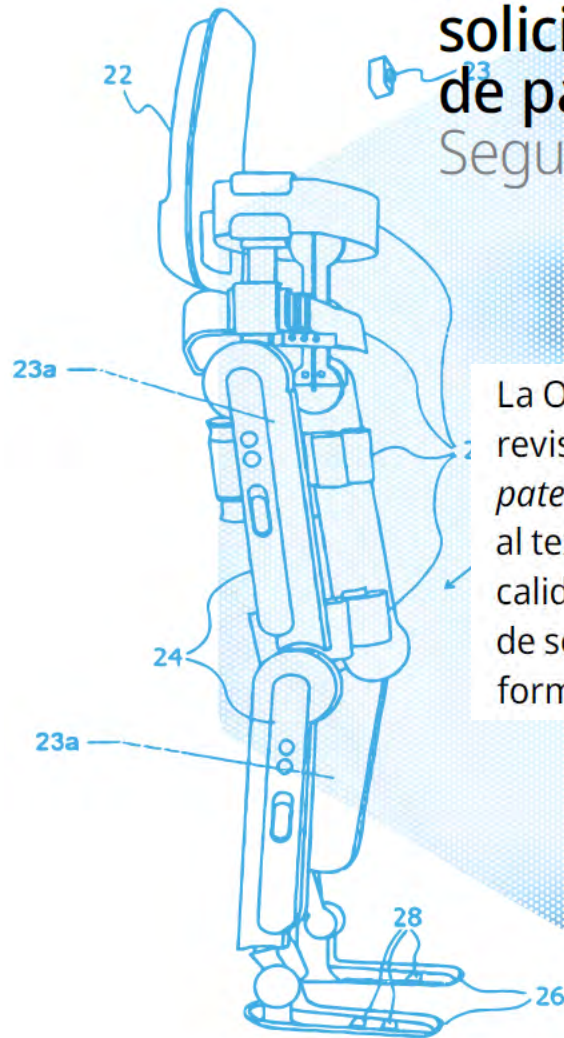
Editor (**Tomoko Miyamoto**, (JP)) and referees (**Anton Blijlevens** (NZ), **Pablo Paz** (AR), **Karl Rackette** (DE), **Robert Sayre** (US)) of "WIPO Patent Drafting Manual, 2nd ed. 2022"

WIPO Patent Drafting Manual (2nd ed. 2022)

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Manual de la OMPI de redacción de solicitudes de patente

Segunda edición



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Esta traducción ha sido posible gracias al apoyo del Fondo fiduciario mundial del Japón para la PI.

La OMPI desea expresar su profunda gratitud a Pascual Segura (España) y Kay Konishi (Japón), que revisaron exhaustivamente la primera edición del *Manual de la OMPI de redacción de solicitudes de patente*, detectaron y señalaron los aspectos que podían mejorarse y aportaron contribuciones al texto para actualizar y complementar el contenido de la primera edición. En sus respectivas calidades de abogado de patentes con experiencia y de tutor cualificado para enseñar redacción de solicitudes de patente, los conocimientos especializados que transmitieron a estudiantes con formación en diversos ámbitos fueron indispensables para la elaboración de la segunda edición.



<https://www.wipo.int/edocs/pubdocs/es/wipo-pub-867-23-es-wipo-patent-drafting-manual.pdf>

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Sugerencia de cita: OMPI (2022), *Manual de la OMPI de redacción de solicitudes de patente*, 2.^a edición. Ginebra: OMPI.

DOI: [10.34667/tind.48733](https://doi.org/10.34667/tind.48733)

[wipo.int](https://www.wipo.int)

ISBN: 978-92-805-3582-2 (impresa)

ISBN: 978-92-805-3583-9 (en línea)

WIPO Patent Drafting manual

Second edition



First edition published 2007
Second edition published 2022



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<https://www.wipo.int/publications/en/details.jsp?id=4584>

Acknowledgments

WIPO would like to express its great appreciation to Pascual Segura (Spain) and Kay Konishi (Japan), who thoroughly reviewed the first edition of the WIPO Patent Drafting Manual, identified and suggested areas for improvement, and made contributions to the text to update and supplement the contents of the first edition. As an experienced patent attorney and a qualified tutor for teaching patent drafting, the expertise they provided to trainees from different backgrounds was indispensable in the successful completion of the second edition. Valuable contributions and suggestions were also made by Anton Blijlevens (New Zealand), Pablo Paz (Argentina), Karl Rackette (Germany), Robert Sayre (United States of America). Thanks are due to the various WIPO officials who peer reviewed the draft content, in particular to Tomoko Miyamoto for the hard work and coordination which were key for this work to be finished successfully.

Since the second edition of the WIPO Patent Drafting Manual is largely based on its first edition, the contribution of Thomas Ewing (United States of America), who was the principal author of the first edition, is fully acknowledged. Equally, WIPO acknowledges the valuable contributions made by the following experts and institutions throughout the preparation of the first edition: Markus Engelhard (Germany), Takashi Fujita (Japan), Valérie Gallois (France), Wendy Herby (United States of America), Albert Jacobs (United States of America), Karuna Jain (India), Emmanuel Jelsch (Switzerland), Samuel Le Cacheux (France), Carlos Olarte (Colombia), Karl Rackette (Germany), Sorin Schneiter (Switzerland), Kanika Radhakrishnan (India and United States of America), Douglas Weinstein (United States of America) and the Geneva International Academic Network.



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It has been a pleasure to be here with you.

If I can be of any help in the future ...

just contact me !