Europäisches Patentamt
European Patent Office
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Learning path for patent examiners

Preliminary search: Intermediate level

Version: May 2024

Introduction

This publication, "Preliminary search, Intermediate level", is part of the "Learning path for patent examiners" series edited and published by the European Patent Academy. The series is intended for patent examiners at national patent offices who are taking part in training organised by the European Patent Office (EPO). It is also freely available to the public for independent learning.

Topics covered include novelty, inventive step, clarity, unity of invention, sufficiency of disclosure, amendments and search. Also addressed are patenting issues specific to certain technical fields:

- patentability exceptions and exclusions in biotechnology
- assessment of novelty, inventive step, clarity, sufficiency of disclosure and unity of invention for chemical inventions
- the patentability of computer-implemented inventions, business methods, game rules, mathematics and its applications, presentations of information, graphical user interfaces and programs for computers
- claim formulation for computer-implemented inventions

Each publication focuses on one topic at entry, intermediate or advanced level. The explanations and examples are based on the European Patent Convention, the Guidelines for Examination in the EPO and selected decisions of the EPO's boards of appeal. References are made to the Patent Cooperation Treaty and its Regulations whenever appropriate.

The series will be revised annually to ensure it remains up to date.

Disclaimer

All references to natural persons are to be understood as applying to all genders.

Contents

Legal references

1. Learning objectives

Participants to this course will learn:

- The definition of patent families
- How to understand the technical context of patent applications
- How to retrieve and re-use existing search reports
- Performing keyword- and classification- based searches

2. Technical context of an application

When examiners first receive an application, they should:

- read the description to understand the context of the application
- see if the prior art cited in the description explains the technical background and where it is classified because these classes may be useful during the search; sometimes the cited documents will even anticipate the application to be searched
- try to find any patent applications and scientific publications by the same company or inventor/author which may be mentioned and may be relevant
- see if there are any "fallback positions" mentioned in the description (unclaimed inventive concepts)

In certain circumstances it may be desirable to extend the search to include the "technological background" of the invention. This would include:

- the preamble to the first claim, i.e. the part preceding the expression "characterised by" or "characterised in that"
- the state of the art which the description of the application alleges to be known but without any specific citations
- the general technological background of the invention (often called "general state of the art")

Examples

In chemical applications, the examples may be regarded as describing possible fallback positions.

Legal references:

GL B-III, 3.13

3. The "effective date" of an application

Under Article 4 of the Paris Convention, the effective date of the beginning of legal protection for a given application is the priority date, provided the priority document meets the following requirements:

- The priority date precedes the filing date by no more than 12 months.
- The priority document is the first filing of the invention.
- The priority document relates to the same invention.
- The priority document has the same applicant or lawful successor in right.

However, if the above-mentioned requirements are not met, the effective date of the beginning of legal protection for a given application is the filing date.

As per Article 80 EPC, a European application is accorded as its date of filing the date on which it satisfies the requirements of Rule 40 EPC or, if filed under the Patent Cooperation Treaty (PCT), the date on which it satisfies Article 11 PCT. This date remains unchanged except in the exceptional circumstances of late-filed drawings or parts of the description provided for in Rule 56 EPC and Article 14(2) PCT.

The date of filing may be the only effective date of the application. It will be key for determining the expiry of certain time limits (e.g. the date by which the designation of the inventor must be filed under Rule 60 EPC), for determining the state of the art relevant to the novelty or obviousness of the subject-matter of the application, and for determining, in accordance with Article 60(2) EPC, which of two or more European applications from separate people for the same invention is to proceed to grant.

Legal references:
Art. 87 EPC, Art. 4 Paris convention, GL F-VI, 1.1

4. Patent families

The EPO keeps a patent family system based on application data and priority data of the patent documents stored in EPO databases. When viewing patent documents on screen, normally only one representative document of a patent family is displayed but links to the other members are provided. In its broadest definition, a patent family includes all patent applications having at least one priority in common. A patent family can cover many documents since one application can claim several other applications as priority documents and vice versa.

Legal references:
GL B-IX, 2.4; GL B-IV, 3.1; GL B-X, 9.1.2

5. Retrieving and re-using existing search reports

A lot of time can be saved by retrieving and re-using existing search reports. During the search, examiners should make use of search reports previously drafted for other patent family members (for example searches carried out by the "IP5" patent offices: the Chinese Patent Office (CNIPA), the EPO, the Japan Patent Office (JPO), the United States Patent and Trademark Office (USPTO) and the Korea Intellectual Property Office (KIPO)). Examiners can also use search reports for other applications that cite the application in hand as prior art.

Under the utilisation scheme (see Rule 141(1) EPC; GL B-XI, 9; OJ EPO 2010, 410), for applications where a priority is claimed the applicant is expected to file a copy of the results of any search carried out by the office of first filing (for details see GL A-III, 6.12). If the prior-art information of the office of first filing is made available before the search is completed, the search division will check these citations and evaluate their relevance to the examination and to the definition of the search strategy.

Documents cited in the application under consideration are examined if they are cited as the starting point of the invention, as demonstrating the state of the art, as giving alternative solutions to the problem concerned or when they are necessary to understand the application. Any such citations relating only to details not directly relevant to the claimed invention may be disregarded.

Drawing up a European search report, a European search opinion or a clarification request under Rule 62a and/or 63(1) EPC triggers a pre-search algorithm generating a list of documents to be inspected by the search division. This creates a marker which serves as evidence in the file that the search division has started the search. The date of the start of the search is relevant for a refund of the search fee in the event that the application is withdrawn, refused or deemed to be withdrawn (see GL A-X, 10.2.1).

An international (PCT) application for which the EPO acts as designated Office or elected Office and which has been accorded an international date of filing is deemed to be a European patent application. Where an international (PCT) search report is already available, this will take the place of the European search report. The search division will draw up a supplementary European search report or a declaration replacing it as per Rule 63 EPC unless stipulated otherwise in Administrative Council decisions. However, the Administrative Council decides under what conditions and to what extent the supplementary European search report is to be dispensed with (see GL B-II, 4.3.1).

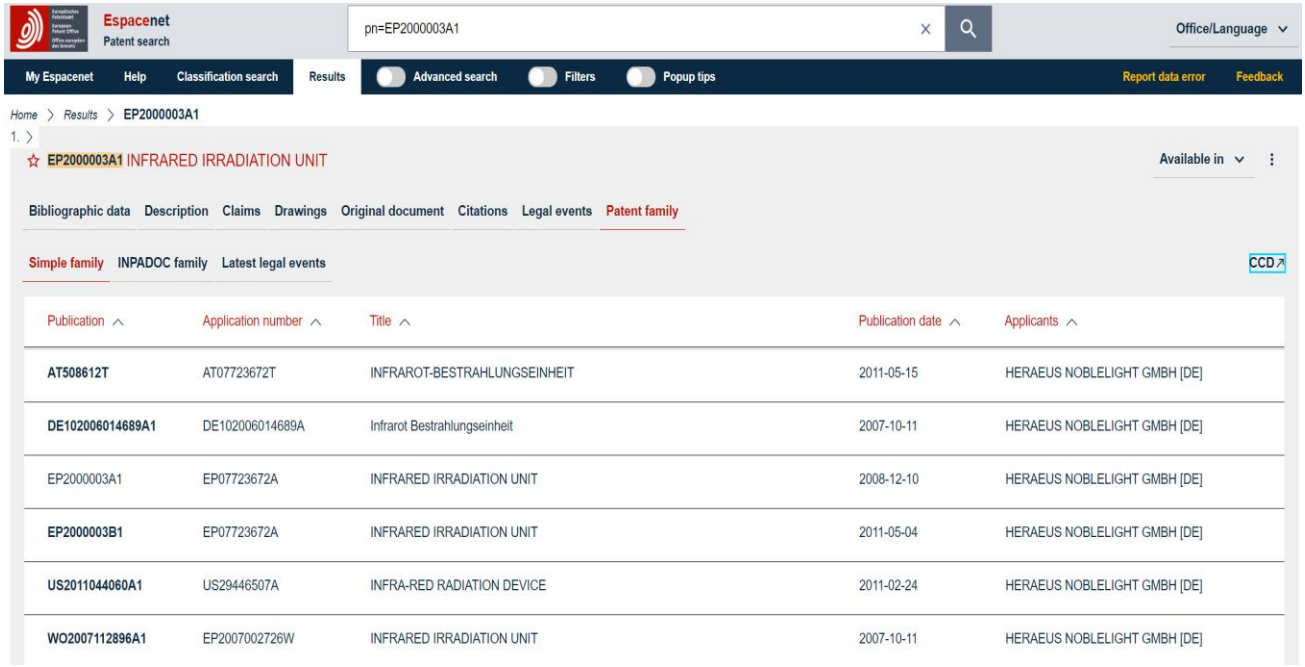
The International (or Supplementary International) Searching Authority and the International Preliminary Examining Authority (other than the EPO) will have given opinions on the novelty, inventive step and industrial applicability of the claimed invention under Article 33(1) PCT, on unity of invention under Article 34(3) PCT and on exclusions from international search/preliminary examination under Article 17(2)/Article 34(4) PCT. The search division for the supplementary European search report will consider these opinions but is free to digress from any or all of them when performing a supplementary European search and when preparing the search opinion (if applicable; see GL B-XI, 7). The search division can use the documents cited in the international search report in support of its findings (for example lack of novelty) in the search opinion (see GL B-XI, 7).

Examples

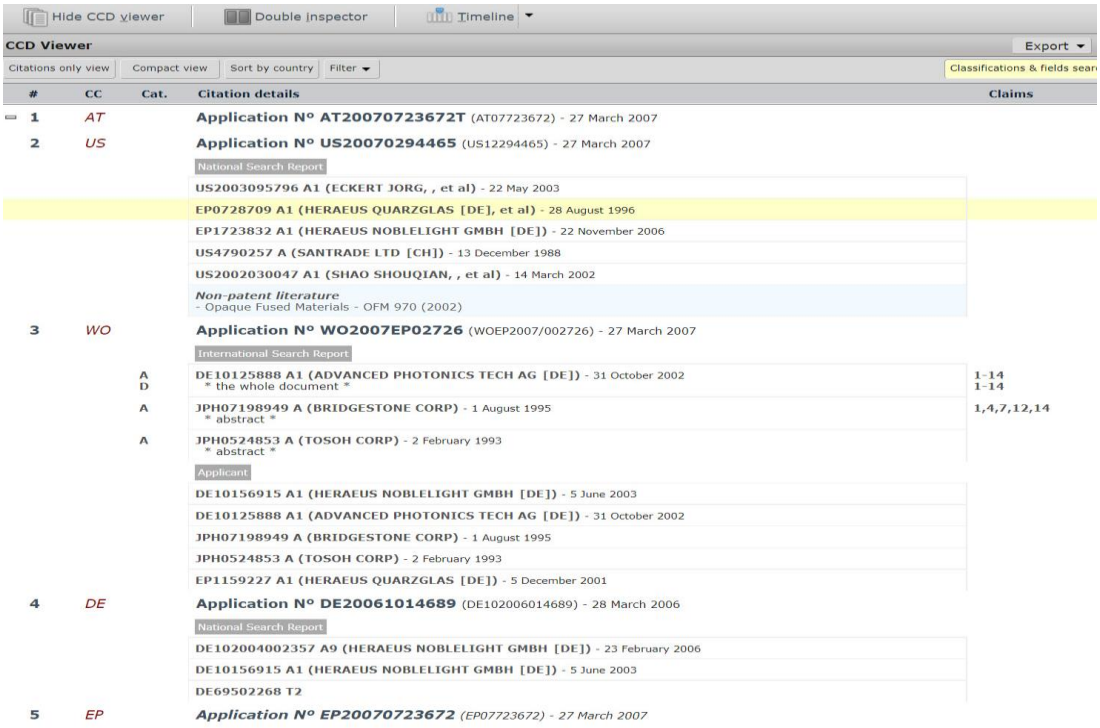
EP-A-2 000 003 (see the following section).

Legal references:
GL B-IX, 2.3; GL B-IV, 1 and 1.3; GL B-II, 4.3

6. Finding family members in Espacenet



In Espacenet, see the results relating to the corresponding US, WO and DE applications (patent family members):



After completing the search, the search division selects the publications to be cited in the search report out of the documents retrieved. These always include the most relevant documents, which will be specially characterised in the report (see GL B-X, 9.2.1). Less relevant documents are only cited when they concern aspects or details of the claimed invention not found in the documents already selected for citation.

In cases of doubt or borderline cases in relation to novelty or inventive step, the search division will cite more readily to give the examining division the opportunity to consider the matter more fully (see GL B-III, 1.1). The search division will not cite more documents than necessary, so when there are several documents of equal relevance, the search report does not normally cite more than one of them.

In any case, the search report is accompanied by an annex prepared electronically and listing the available patent documents which belong to the same patent family. In selecting the documents for citation, the search division must pay regard to language convenience, preferably citing documents in the language of the application (see GL B-X, 9.1.2).

7. Classification search

All members of the search division have at their disposal computer facilities for searching the documentation. Among other things, these allow the division to use the Cooperative Patent Classification (CPC), a joint scheme used by the EPO and USPTO (in addition to many other patent offices worldwide; to be explained later). It is based on the International Patent Classification (IPC) but includes finer internal sub-divisions. The IPC is used by all patent offices of WIPO member states. Searches can also be performed using other classification systems, for example national classification schemes like the Japanese FI and F-term schemes.

Examples

B41J2/175&111 is an example of a Japanese FI classification symbol. 2C056 is an example of a Japanese F-term symbol. Both these symbols could be used in the search if necessary.

Legal references:
GL B-IX, 1.2

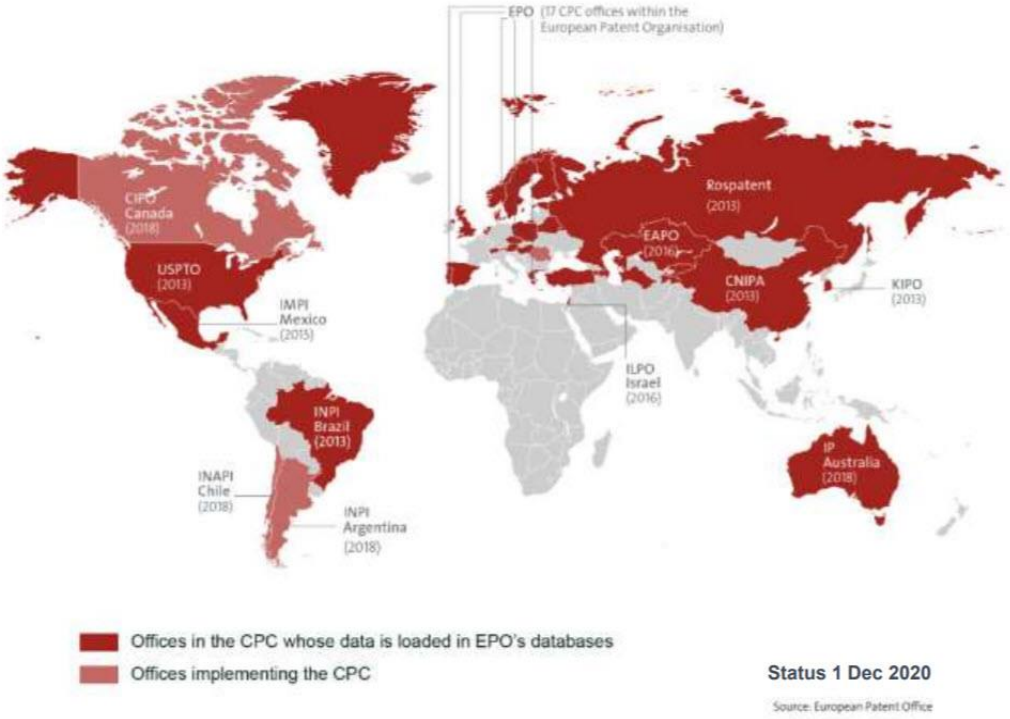
8. The CPC classification scheme

The CPC scheme permits classifications of "invention" and "invention-like" information in 1 182 technical fields with around 260 000 CPC classification symbols. CPC classification symbols are intellectually given by 30 or so patent offices worldwide, including the EPO and USPTO (see next section). The CPC scheme is divided into three parts:

1. "main trunk" symbols
2. "indexing codes" or "2000-series" (orthogonal)
3. "Y-section" (e.g. climate change technology)

The CPC facilitates access to documents because classification symbols can be used as filters in searches (either with or without keywords).

The search division classifies a patent application under the provisions of both the CPC and the IPC. In practice, classification is first performed in the CPC, with the relevant IPC symbols then being generated from the CPC allocations by one-to-one concordance (see the CPC to IPC Concordance List (CICL) published on the CPC website). The allocated CPC classification is as precise and comprehensive as permitted by the classification system.



Where it is necessary to assign more than one CPC classification symbol for the invention itself, the symbol indicated first is that which, in the search division's opinion, most adequately identifies the invention or, when this presents difficulties, that which identifies the invention for which most information is given.

As with the IPC, CPC classification is preferably carried out once the search division has studied the content of the application to carry out the search. The CPC classification is likewise determined without taking into consideration the potential future content of the application after any amendment, since the classification relates to the disclosure of the published application, i.e. the application as filed.

However, if the search division's understanding of the invention or of the content of the application alters significantly as a result of the search, the search division amends the CPC classification symbols accordingly, making use of the appropriate classification tools. Unlike changes to the IPC classification (see GL B-V, 3), this amendment can be made even after the preparations for publication have been completed.

When the scope of the invention is not clear (for example when a partial search is necessary), or in cases of a lack of unity of invention, the principles described in GL B-V, 3.2 and 3.3, for the IPC classification apply equally to the CPC classification.

Examples

"Main trunk" CPC symbols include B41J3/407, B41M5/24 and B41J29/02.

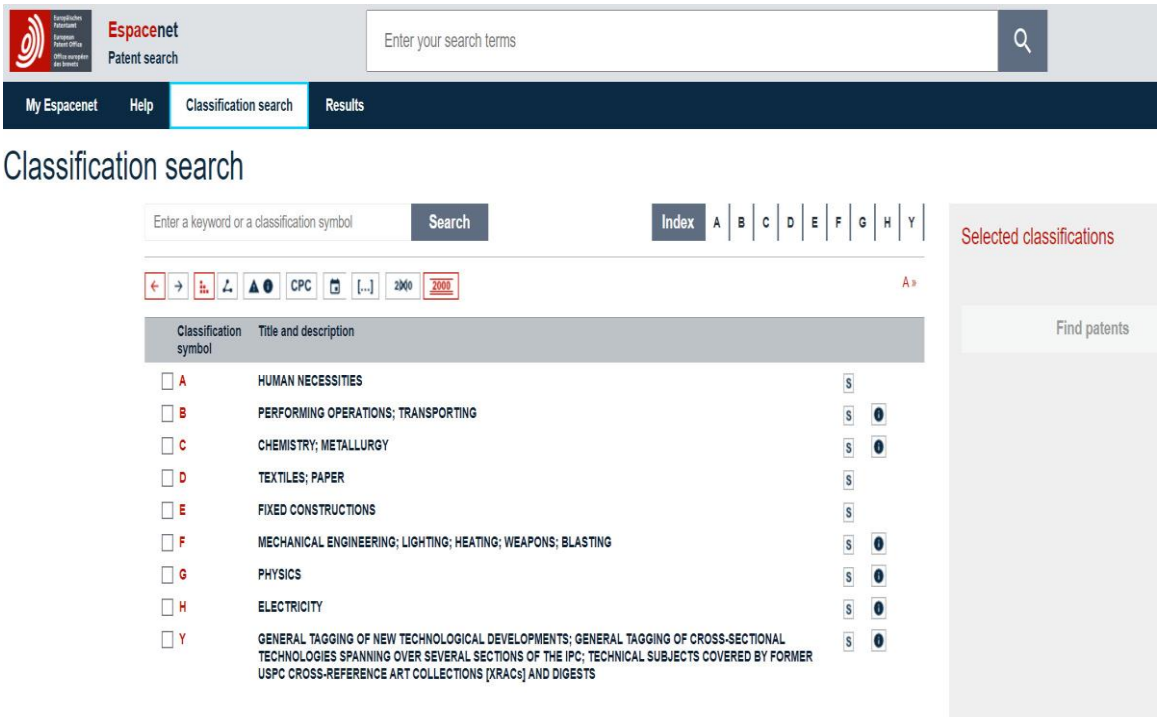
"Indexing codes" or "2000-series" (orthogonal) include B41J2203/011 and B41M2205/08.

"Y-section" CPC symbols include Y02E10/40 (solar thermal energy) and Y02E60/10 (energy storage using batteries).

Legal references:
GL B-V, 4; GL B-IX, 1.2

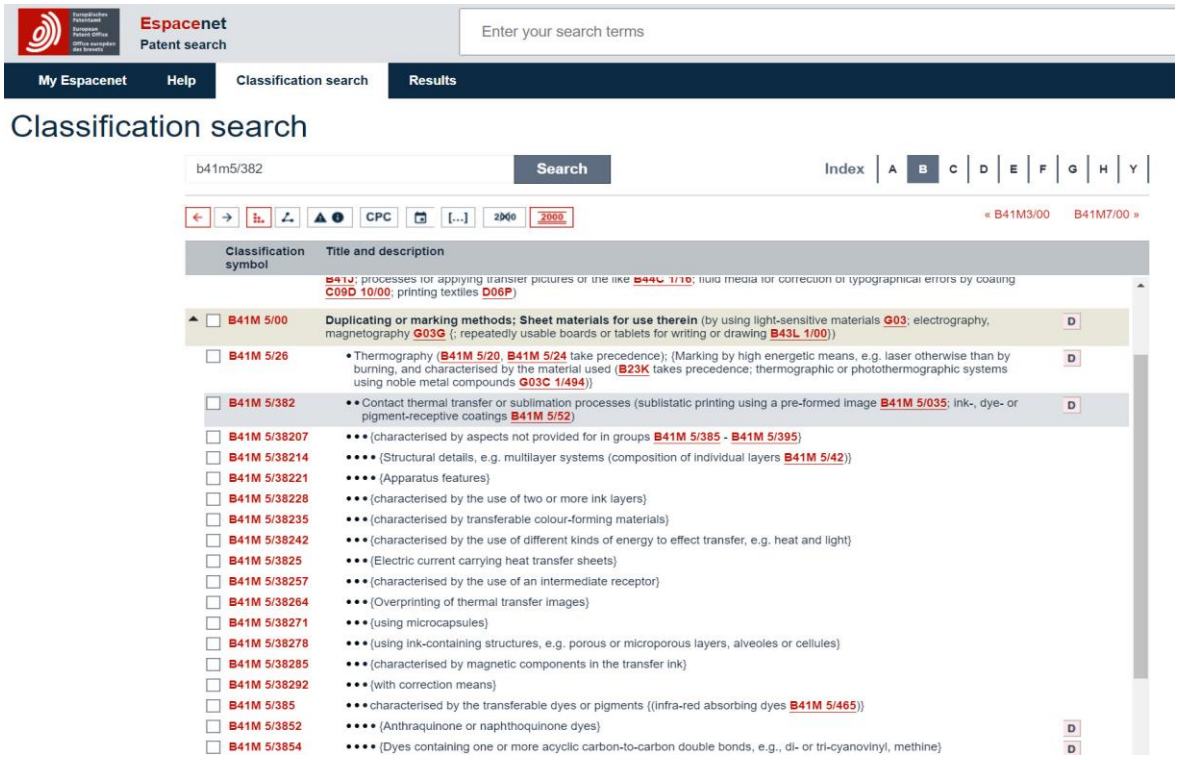
9. Finding classification symbols in Espacenet: example

Classification search



Examples

How to find the CPC classification symbol B41M5/382 in Espacenet:



10. Keywords explained

Keywords are technical terms which describe the key features of an invention in a distinctive fashion and are often the most precise and effective tool for formulating search queries. Keywords can be registry numbers, references to standards, codes for micro-organisms, sequence listings, etc. They can be extracted from the claims and from the embodiments (e.g. the examples) and should be accompanied by synonyms to ensure the search has complete coverage.

The effectiveness and efficiency of any search for relevant documents (Rule 61(1) EPC) depends on the degree of order which is available in, or which can be applied to, the collection of documents to be searched, the order allowing the search division to determine sections of the documentation to be consulted.

The basic components for creating order in a collection of documents are keywords, classification units, indexing codes or bibliographical links between documents by commonly cited documents. The order may have a permanent character, as with indexing words, classification symbols or indexing codes, or it may be created on demand by a search strategy judiciously using the above-mentioned basic components, the outcome of which is a section of the documentation which is likely to contain material pertinent to the invention.

For reasons of economy, the search division exercises its judgement, depending on its knowledge of the technology in question and of the available information retrieval systems, to omit sections of the documentation in which the likelihood of finding any documents relevant to the search is negligible, for example documents falling within a period preceding the time when the technology in question began to develop.

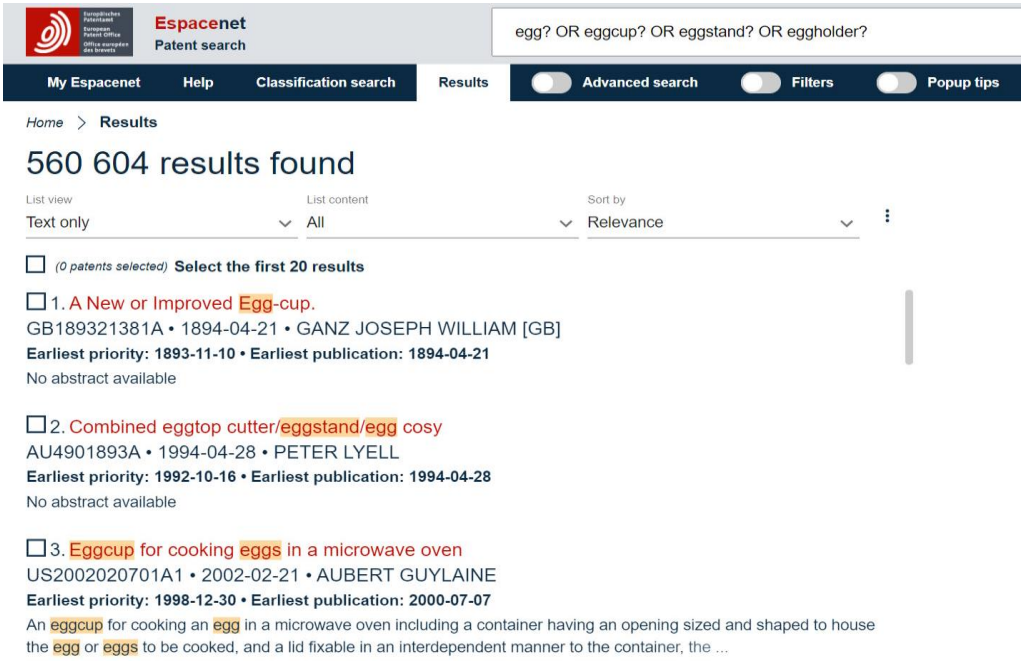
Similarly, the search division needs only to consult one member of a patent family unless it has good reason to suppose that, in a particular case, there are relevant substantial differences in the content of different members of the same family (see GL B-IX, 2.4).

Legal references:
GL B-III, 2.2

11. Searching with keywords in Espacenet: example

Have a look at a search for the keyword "egg cup".

Search results



12. Beyond the course

You can deepen what you have learned during this course with the following further readings:

- Guidelines for Examination in the European Patent Office, Part B: Guidelines for Search
- WIPO, PCT International Search and Preliminary Examination Guidelines

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