Searching for patent documents

If you have an invention and you are thinking about getting a patent for it, it is often worth searching for any similar patents or patent applications which may have already been published. This will help you find out both if your invention meets the patentability requirements to be granted, and if there might be a chance that your invention infringes anyone else's granted patent.

Having a professional search carried out prior to filing a patent application is possible, but comes at a cost. Carrying out a preliminary search yourself may therefore be useful before filing a patent application. It is also helpful to perform a search before your product is launched to check for any relevant third party patent rights although we would always recommend getting a professional search done in this case. Be aware though, that no search, performed by you, a professional searcher or a patent office can be guaranteed to find all the patent rights and other documents relevant to your invention.

Most Patents and patent applications are freely searchable and downloadable online. There are a number of ways to access them, such as the search engine Espacenet™ (https://worldwide.espacenet.com/) which currently gives free access to over 90 million patents worldwide. We will discuss, below, ways of using this search engine effectively, although the techniques we describe may be useful with other patent searching tools.

Creating your search terms

The first stage in a search is to think about the key features of your invention. Write down a list of these features, but also think about alternative ways of describing similar features that another person might use instead.

If you have invented, say, a new type of torch powered by a hand crank, you would need to think of different words which might be used to describe a similar invention. So in addition to searching for 'torch' you might need to search 'flashlight', or even 'light' as well, and for the hand crank part of the invention you might think of the words 'windup', 'winding handle', 'hand crank', 'crank', 'mechanical generator', 'dynamo', and so on.

Using a truncation operator (*) after part or all of a word will make the search engine look for alternatives of that word with different endings. So, searching for 'crank*' will return 'crank', 'cranking', 'cranks', 'cranked', and so on.

Once you have your list of alternatives for each main descriptor of your invention, it is then useful to combine your alternatives into a command line. Many search engines will use the 'Boolean operators' AND, OR and NOT. So, for each feature, group the alternative search words for each feature in a set of brackets separated by OR, and separate the features with AND. An example is shown below where each of the alternatives for torch are within the first set of brackets and all of the alternatives for 'hand crank' are within the second set of brackets.

(torch OR light* OR flash*) AND (wind* OR dynamo OR crank* OR mechan*)

This will look for results which have one or more of the terms in the first set of brackets, and also one or more of the terms in the second set of brackets.

NOT will exclude any results which include a search word you specify. So, if your invention is not applicable to the type of torches powered by a squeezing handle, or by shaking, you might further add '**NOT (squeez* OR shak*)**' to your command line.

Putting these terms all together into the 'Title or Abstract' field of the advanced search tool in Espacenet™ will provide you with a list of results which fit the search terms. Often there will be many hundreds or even thousands of results. Sometimes there can be very few, or none at all. Changing the text in the command line will widen or narrow the search. Several attempts are usually needed to find a set of search terms which return a sensible number of relevant results.

Using patent classifications to refine your search

When patents are filed they are typically assigned one or more patent classifications by the patent office you filed your application at. Several classification systems exist, but each one typically breaks inventions down into groups of similar technologies wherein each technology group is assigned a unique code. Using these codes in your search can help remove unwanted results from unrelated fields. The search terms shown above, for example, return thousands of results, and include many things far removed from a wind-up torch, such as welding torches and wind turbines.

The Cooperative Patent Classification system (CPC) is commonly used in Europe and the USA. This is a system of hierarchical codes which specify increasingly specific areas of technology. For example, H is Electricity, H02 is Generation; Conversion or Distribution of Electric Power, H02K is Dynamo-electric machines, and H02K47/00 is Dynamo-electric converters. Browse through these categories using the Classification search on Espacenet™ for some ideas. An older version of this system, the IPC, has similar codes, so look out for these too.

Be aware that there may be more than one suitable field. For example, while H02K might seem suitable for the flashlight, other codes may also be appropriate such as category 'F' (Mechanical engineering; lighting; heating; weapons; blasting engines or pumps), such as F21L (Lighting devices or systems thereof, being portable or specially adapted for transportation) or even F21L 13/00 (Electric lighting devices with built-in electric generators).

Suitable categories can be added to an advanced search in the 'CPC' field. Alternatives can be separated with 'OR', as before (e.g. 'H02K OR F21L'). Choosing a suitable code should narrow a search and filter out some irrelevant results, for example those classified under B23K (Soldering or unsoldering; Welding...). Be careful not to narrow too much, though, as relevant documents in similar fields might be lost, for this reason it is often better to stick to a more general code (F21L rather than F21L 13/00) at least to begin with.

Keep Going!

The first few searches you make may not show many relevant results, and may be too broad or too narrow. There may well still be important documents out there, so persevering with different search terms or new CPC codes is advisable.

Have a look at any particularly relevant results found during searching and see where they are classified, and what keywords you can find in their abstracts which might be useful for your search. It might take as much as several hours to design a properly optimised search. However, as mentioned above, no search can be guaranteed to find all the documents which might be relevant to your invention.

For more information on patent searching please see the Keltie blog:

www.ipcopy.wordpress.com/tag/searching

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