

## Tips on Patent Searches

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Whether you are a first time inventor or have multiple patents, searching the “prior art” is a must. Patent searching is done to determine patentability

of an invention or the validity of an existing patent. Other reasons include clearing or determining infringement risks involved in bringing a new product online. Often a search is performed to find the state of the art or the direction of an existing technology as well as innovations coming off patent. Such information can be invaluable in directing engineering and design efforts.

First, the inventor must define the invention. This is typically done by completing an invention disclosure form in which the invention is defined in a way that enables others skilled in the art to make and use the invention. Use engineering terminology to describe the use and composition of the invention and what is believed to be new and nonobvious. You are now ready to go online and start the search.

Free online patent searching services include [www.uspto.gov/patft/index.html](http://www.uspto.gov/patft/index.html),

**If you are a first-time inventor, don't despair. Even a preliminary search can save you time and money.**

[www.freepatentsonline.com](http://www.freepatentsonline.com), and [www.google.com/patents](http://www.google.com/patents). There are in excess of seven million issued patents and thousands of published patent applications. The objective of the search is to find your invention or several closely related references. Searching can be as much of an art as a science. Most prior-art searchers have developed their own formula for wading through the multitude of references. As you conduct a few searches, you will develop your own formula. A formula that I have found workable includes: 1) specification searching, 2) assignee searching, 3) inventor searching, 4) class/subclass searching, and 5) family searching.

Starting with a specification search for the terms defining your invention provides

a snapshot of potentially related references. However, you may find more references than can be reviewed during a career. You will want to at least scan the titles for references related to your invention. View the figure and read the abstract on the first page of these related references. If little is found related to your invention, revise your search using fewer parameters and try again.

Eventually, you will find at least a few references related to your invention. Review the specifications of the more closely related references and revise your terms to more closely match the terminology used in those references. Repeat the specification search using the revised terms. You will eventually find several references closely related to your invention. If you are already aware of related patents, you will be able to streamline this initial search considerably.

The initial search results will give you the information needed to search for companies and inventors who are filing related patents. If you are already aware of your competitors, you may start with an assignee

and/or inventor search. However, you will still want to conduct a specification search to find those of whom you are unaware. Search for the assignees of the closely related art you found in the initial search. You may wish to include a broad term in the specification, abstract, or title to narrow the search results. Do the same for the inventors you found in the initial search.

Hopefully, you will find about a dozen or so closely related patents or published applications. You will see a U.S. class/subclass listing on the first page of each reference. Many of the same classes and subclasses will appear on several references. These are the classes and subclasses in which the U.S. Patent and Trademark Office will most likely classify your invention.

There are a multitude of class/subclass combinations, many of which overlap. Putting this part of the search toward the end increases the likelihood that you are searching the same class/subclass as the examiner examining your case. The class/subclass search is independent of terminology, inventorship, and assignee, and therefore will most likely pick up the references missed in the previous searching. Verify the relevancy of the class/subclasses by using the classification schedule in the *Manual of Classification*. Read the classification definitions to verify the scope of the subclasses. However, there may be an excessive number of references in your particular class/subclass. If this is the case, review the references as you did in the initial search and thoroughly review the references that pass your initial screen.

At the end of this process, you should have several related references. Finally, you will want to search the family of the very closely related references. This can be done at <http://portal.uspto.gov/external/portal/pair>. The family includes applications that share a common claim of priority.

Searching the prior art isn't for the weary. Many corporations continuously search the recently published applications by assignee (competitor) and class/subclass. This information helps to guide engineering and design efforts toward or away from specific areas of development. If you are a first-time inventor, don't despair. Even a preliminary search can save you time and money. If you don't find a disclosure of your invention, you will have at least given your patent attorney a head start on the search and opinion.

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