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### BASIC PATENT SEARCHING

The novelty search, sometimes referred to as a patentability search, is a procedure to attempt to examine the stuff out there in the world (prior art) and see what exists that is relevant to your idea.

The search is something you can hire someone to do for you, such as a patent attorney or patent agent. However, even if you hire someone, I recommend that you try to do a search yourself first. There are good reasons for doing this. First of all, in the age of the Internet, you have access to millions of documents with powerful search capability, for *free*, all from the convenience of your home. If you don't have a computer with Internet access at home, many local libraries provide free use of computers with Internet access. This is a value you don't want to turn down, so try it yourself; you've got nothing to lose, and everything to gain.

The first step is to consider your enabled solution (we won't call it an invention yet, because we are trying to assess the novelty of it, if it turns out it isn't novel, then it is not an invention).

If you haven't already done so, write a summary (one or two paragraphs) of your idea, and its main features and mechanisms. Here, let's pretend that you have invented a laser-powered can opener:

My idea is for a can opener that uses a laser beam to cut the can lid. It has the advantages of being very fast, quiet, and sanitary. The laser can be a low-powered argon or helium based laser. It can be coupled with the standard can-holding mechanisms. Another way to do it is to hold the can still, and steer the laser around the perimeter of the can.

Scan the list, and identify "elements" and "keywords" that can be used to search for you invention. In this case, keywords from the above paragraph have been underlined.

If you built a prototype, or have a detailed design for your invention, ask yourself: "What were some of my biggest technical hurdles for getting this thing to work?"

Your answers may identify additional elements of your invention. For example:

I had to make a special mount that used spherical bearings in order to mount the steerable laser to the underside of the top of the can opener.

Now list the elements:

- Laser powered
- steerable laser
- spherical bearing mount for laser

Your "special mount" may be a valuable part of your patent application, if it is in fact novel, and useful to successfully building the can opener.

Now update your summary, and identify keywords (underlined).

My idea is for a can opener that uses a laser beam to cut the can lid. It has the advantages of being very fast, quiet, and sanitary. The laser can be a low-powered argon or helium based laser. It can be coupled with the standard can-holding mechanisms. Another way to do it is to hold the can still, and steer the laser around the perimeter of the can. In this case, the laser can be mounted to the underside of the top ledge of the opener using a low-friction spherical bearing mount.

Next, let us expand our keyword list with the help of a thesaurus.

For example: a "perimeter" may also be described as an "edge," "border", or "boundary," to name a few. Write down these synonyms as additional keywords to search.

Armed with these keywords, you can then proceed to do a keyword based search. There are a variety of web sites for searching, and since web sites come and go, providing a list of web pages that stays current is difficult. Therefore, we will focus on some of the main web sites that are not likely to disappear. In particular, the U.S. Patent and Trademark Office site: [www.uspto.gov](http://www.uspto.gov) has the ability to search U.S. Patents and Published Patent Applications. The publishing of patent applications is fairly recent (going back to about 2001). I find it to be a quirk of the web site that you must explicitly search patents and patent applications from a similar (but not identical) web

page within the U.S. PTO site. However, be advised that when doing a search, you should search both the patents **and** the published applications.

There is a quick search, and an advanced search. The quick search lets you specify two terms, where you want to look for those terms within the documents (e.g. title, abstract, etc...) and how to logically apply them (e.g. This **and** that, or this **or** that).

When I look for "can opener" in the abstract and "laser" in the specification with the applications (and then again within the issued patents), I get these matches, among others:

United States Patent Application 20060037948  
United States Patent 5,347,720

In addition to searching by keywords, it is also good to identify relevant classes and subclasses. The USPTO has a categorization system along the lines of the "Dewey decimal system" found in a library. It lets you find references in a particular field without having to worry about keywords. A thorough search should include both keyword searching and searching by category. You can search the category descriptions to find relevant categories. However, I think it is easier to get started by searching with keywords, finding some relevant references, and looking at what class/subclass the reference is. Note that a reference (patent or published application) can be assigned to more than one class/subclass pair.

We can identify these U.S. classes via the "Tools to Help in Searching by Patent Classification" from the USPTO web site.

The class information for the two references mentioned above is as follows:

United States Patent Application 20060037948 U.S. Class 219/121.67  
International: B67B 7/46 (among others)  
United States Patent 5,347,720 U.S. Classes: 30/422 ; 30/416; 30/426  
International: B23K 26/38 (among others)

Looking up these categories we have:  
219/121.67 - Using a laser for cutting  
Class 30 Subclass 400 broadly refers to Cutlery --> Can Openers

Subclass 416: With driven roller to continuously engage bead and relatively rotate can and opener

Subclass 422: A subclass of 416 and 420: Roller drive means causes initial piercing --> Cutter comprising rotatable disc.

Subclass 426: A subclass of subclass 416 --> Cutter comprising rotatable disc

You can then conduct classification-based searches of the U.S. PTO Patents and published applications. An important point to note is that at the time of this writing the USPTO keyword searchable database goes back to the mid 1970's. Obviously, for some inventions that is plenty far, but for many, that is not far enough back in time to search. For example, if your invention pertains to nanotechnology, it may not be critical to search older references, since it is a relatively new technology. If, on the other hand, you have an invention for a new kind of scissors, then it is well worth the extra effort to search by classification, to pick up older references that may be more relevant than anything new.

Note that at this time, the USPTO stores images in TIFF format. If you want to view the images of patent pages, your browser needs to support TIFF. Free plugins are available. I have used the AlternATIFF plugin with no problems on both Explorer and Mozilla.

Also take note of the international classifications. You can use these to search the database maintained by the European patent office, found at <http://ep.espacenet.com>.

The European site search engine is not as good as the USPTO in my humble opinion, but it is worth searching there as part of your due diligence.

Another place that warrants a search is the Google patent site: [www.google.com/patents](http://www.google.com/patents).

Google has performed OCR (optical character recognition) on the US PTO database, allowing for text searching of the older references. That is great! I now do a text search at Google whenever I do a search.

Finally, it is worthwhile to do a general Internet search (e.g. with Google & Yahoo, or other search engine). This can help turn up any relevant products, research papers, or other NPL (non-patent literature).

In summary, the following are the minimum steps you should do when performing a search.

- 1) Write summary of your invention
- 2) Generate Keywords
- 3) Search USPTO Patents with keywords
- 4) Search USPTO Applications with keywords
- 5) Identify US and international classifications
- 6) Search USPTO Patents with classifications
- 7) Search USPTO applications with classifications
- 8) Search European Patent Office database with keywords
- 9) Search European Patent office database with classifications
- 10) Search Google Patents with keywords
- 11) Search Internet with keywords

Your search may reveal one of the possible outcomes:

**Nothing like it:** When this happens to me when doing a search, I always assume I didn't look hard enough, and keep looking some more. It is rare to find nothing even remotely pertinent to your idea. But if that's the case, it would probably be an indicator to pursue patent protection.

**Similar, but not quite:** Your search may turn up other approaches to solving the problem that your idea addresses, but not done the same way. There may be some elements of the other references that are also found in your invention. Here you need to carefully analyze the references in combination as well as individually. That is, if I found a reference with a can opener, and a reference for a laser mounted on a spherical bearing mount in another reference, those references in combination might be deemed "obvious" by the USPTO. You will need to make a judgment call for the go-no go decision. If possible, hire a competent patent attorney to help you analyze the search results.

**Similar, but not for the same reasons:** Your search may turn up something very similar, but intended for a different use. Your idea for claw clippers for a cat may look very much like a reference for a tool intended to be used as a wire cutter. Again, this situation requires thorough analysis. Normally, an apparatus that is very similar to another apparatus will be difficult or impossible to patent. It is possible to patent "methods" and it is possible that methods of cutting cat claws are different from methods of cutting wires or other stuff. You will need to make a judgment call for the go-no go decision. If possible, hire a competent patent attorney to help you analyze the search results.

**Direct Hit:** You found someone trying to solve the same problem, and doing it in just about the same way. In my experience doing searches, I've had a few direct hits. In one case, it was in a patent from the 1920's. The client did a

search by herself first, but missed it since she did not know about classification based searching. In a few other cases, I have found direct hits in non-patent literature by doing general Internet searches. When you get a direct hit, you will be disappointed. However, here are some things to remember:

1) You save money by knowing early on that the idea is not novel, and not pursuing a patent.

2) Just because the idea exists does not mean you can not pursue it from a business standpoint. You may be able to buy or license the reference that you found. It is also possible that the reference that you found has expired. While that prevents you from getting a patent on the idea, you may be able to use the idea without the need to pay royalties. You'll want to get the help of a competent patent attorney to help you analyze the references if you are thinking to pursue the business idea, even if you can't patent it.

3) You had a good idea, but someone beat you to it. So don't give up. Think of another idea. You had at least that one good idea, and there are probably more where that came from. Don't waste energy lamenting, go and think up the next big thing!

Howard M. Cohn & Associates can help you with your patent search. Contact our [Office Administrator](#) or call us at 800-613-1067 for more information.