How to Perform a Patent Search
For Attorneys and Inventors

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Introduction

The first mechanical patent issued in the United States was issued to Joseph Jenkes on March 6, 1646, for a manufacturing mill. This patent was issued by the General Court of Massachusetts. The United States Patent and Trademark Office (USPTO) was created on April 10, 1790, when President George Washington signed the bill that began the patent system as we know it today. Since then, the United States Patent and Trademark Office has seen many inventions, including Edison’s electric lamp, Bell’s telephone, and the Wright Brothers’ flying machine.

What is the website address?

The United States’ Patent and Trademark Office website is found at: http://www.uspto.gov

What can I find on the website?

The USPTO website has several potential uses for attorneys. When companies produce a new, innovative product, the Patent Database can be searched to determine if there is a patent for the design of the product. This is an important step. Safety Engineering Resources develops innovative products, and we have had to stop development of a new product when we realized that someone had patented the idea already. Safety Engineering Resources can provide a booklet, “Patent Search for Inventors”, document number 5002-4, describing the procedure used to determine if a product idea has been patented for a fee of $40.00. Call us at (479) 549-4860 to order this document. In patent infringement cases, the USPTO website can be used to research the relevant patents involved.

The information most useful to attorneys doing preliminary research on a products liability case that can be found on the USPTO website is the state of the art for the time period of the product. Once the date of manufacture is established, the USPTO website can be used to determine if there were better ways of manufacturing the product at the time. This is very constructive information. Many states require plaintiffs to produce an alternate design if it is being claimed that a design is unreasonably dangerous. A patent search is a potential quick, easy solution to this issue. Safety Engineering Resources has used the USPTO website over the years to determine the state of the art of guarding issues, machine control issues, and machine interlocking to name a few.

How to determine the state of the art for a specific product and date


1. Click on “Quick Search” (red arrow in Figure 1) in the green shaded box under “Issued Patents”
2. This is the patent quick search engine. This can be used to quickly locate patents from 1976 to the present date. To search patents prior to 1976, dating back to 1790, a search can only be performed using the patent number or current U.S. Classification. When trying to establish the state of the art, the patent number will rarely be known, and determining the correct Classification to search can be quite complicated. The simplest and by far the quickest method of determining the state of the art is to use the quick search engine to find patents relating to the product in question. Once the right type of patent is located, similar patents that date back to the early 1900’s can be found in the References Cited section of the patent summary page. This will be demonstrated shortly.
On the quick search page, type in key terms in the first blank, labeled by the red arrow in Figure 2. This is where some trial and error will take place. In product liability cases, it is beneficial to determine when and if safety devices were made available for the product your client has been injured on. One method to start with is to type in the product description in the blank labeled “Term 1”, and type in “safety” or “safety device”, etc. in “Term 2”. This is a good way to do it if the nature of the safety device of the product is not known. Some safety devices will be known. If the name of the safety device is known, type this in “Term 2”. For instance, if your client was injured in a head-on automobile collision, you might know to type in “automobile” for Term 1, and “air bag” or “air bag restraint” for Term 2. If, for instance, your client injured his child while operating a lawnmower, the safety devices associated with a lawnmower may not be known. So in this case you would type in “lawnmower” for Term 1 and “safety device” or something similar for Term 2.

3. Once the search engine returns its results, you can check out the different patents it returned. Figure 3 shows the typical layout of a patent search using the USPTO website. The first patent returned, number 6,625,963 (see the red arrow in Figure 4), entitled “Reverse lockout feature for a mower” could be of interest.
4. After clicking the link to the patent, the summary of the patent is displayed, including the abstract, references cited, and other pieces of information. Figure 5 shows the summary for patent number 6,625,963. This patent is dated September 30, 2003. This patent appears to detail an invention that prevents a mower from being shifted into reverse when the mower blade is engaged. This could be of interest to the example case of a lawnmower injury, but the date is too recent to be of much use. The next thing to do is to go past the abstract in the patent summary to the “References Cited” section. This section contains patents that are cited in the patent. Usually these are patents for a very similar invention from the past. Click on the patent number, they are links to the patent. Often you can find safety devices for the product you are looking for from a time period before the manufacture of the product. In Figure 5, clicking on the 3,984,967 (red arrow) brings up that patent.
Reverse lockout feature for a mower

Abstract

A lawn mower including a frame, an engine having an electrical system and attached to the frame, a mower deck assembly connected to the frame and having a rotating blade selectively engaged with the engine, a reversible transmission driven by the engine and having a shift mechanism having forward and reverse positions, a switch in electrical communication with the electrical system and mower deck assembly, and a solenoid attached to the transmission, in electrical communication with the switch, and having a plunger. The plunger has an extended position when the switch is in its first position and the blade engages the engine, wherein the plunger blocks movement of the shift mechanism into its reverse position, and a retracted position when the switch is in its second position and the blade disengages the engine, wherein the plunger does not block movement of the shift mechanism into its reverse position.

Inventors: Johnson; Kevin L. (Salem, IN)
Assignee: Tecumseh Products Company (Tecumseh, MI)
Appl. No.: 963059
Filed: September 25, 2001

Current U.S. Class: 56/10.8
International Class: A01D 069/00
Field of Search: 56/10.5,10.8,11.3,11.2,16.7,DIG. 15,10.2 R,10.2 A 74/473.11 180/6.48,6.5,733

References Cited [Referenced By]

U.S. Patent Documents
4352302 Oct., 1982 McAuliffe et al. 74/473.
6026514 Feb., 2000 Peter et al. 56/10.
6237311 May, 2001 Richards 56/10.
6405513 Jun., 2002 Hancock et al. 56/10.

Foreign Patent Documents
0343022 Nov., 1989 EP.
0589145 Mar., 1994 EP.

Figure 4: Patent Summary of 6,625,963

5. Figure 5 shows Patent Number 3,984,986 from 1976 showing a device to disengage a mower blade when the mower is shifted into reverse, and to prevent the mower blade from engaging when the mower is in reverse. This patent shows that the technology was available in 1976 to produce a device that would have prevented the client’s child from
being injured in the back-over accident describe earlier. This patent also shows references cited where even older patents can be explored. Patents older than 1976 usually do not have online abstracts, but you can access the actual patent document images. These images are in TIFF format, a specific type of image format that requires a TIFF viewer. These are available free from a number of sources. “Alterna-TIFF” is one such free TIFF viewer. The link to this viewer is: [http://www.alternatiff.com/](http://www.alternatiff.com/)

You can cut and paste this link into the address line of your web browser, or simply search for “Alternatiff” from your favorite search engine. Follow the instructions at the website to install the free TIFF viewer. Investigation of the 2,899,793 patent shows it to be a patent for a riding lawnmower; apparently without the reverse mow safety lockout (modern terminology calls this feature “no-mow-in-reverse”).

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**Figure 5: Patent Number 3,984,986 from 1976 showing a device to disengage a mower blade when the mower is shifted into reverse, and to prevent the mower blade from engaging when the mower is in reverse.**
How to Perform a Patent Search: Searching patents to discover if an idea for a product has been patented

Innovative inventions continue to be made. Inventors and average people are constantly coming up with new, better ways to do things. Entrepreneurs interested in developing a product based on a new idea should investigate whether or not a patent exists on the idea. This step will prevent wasted time by determining if the new idea has already been developed, and patented. The process is basically the same as described above, except that the patent search will be cross-referenced using the US Patent Offices’ classification system. The USPTO has a system where patents are classified according to the type of product that is being patented. The easiest way to determine what classification a particular idea for a product falls under is by finding a product that falls in the same general category.


1. Click on “Quick Search” (red arrow in Figure 6) in the green shaded box under “Issued Patents”
2. Type in a search term that your product could be generalized to fall under and search. For example, if you were making a ladder leveling device, you would type in ladder safety device in the search box. Figure 7 shows what is returned. You can search these patents to see if your idea has been used, and you will locate the classification number in order to do a more thorough search.
3. The next step is to click on a patent that appears to be somewhat similar to the type of product you are inventing. In this example, the patent 7,156,205 is clicked on. You will have to scan the patent to make sure it is the correct type of product. Once verified, locate the classification for the product. Figure 8 shows the abstract page. The arrow in Figure 8 indicates the classification for this patent. Locate this classification number (in the format # / #) for the patent you are looking at. In this example in Figure 8, the classification number is 182/129. Write this class number and subclass number down.
4. You now have the classification number for your type of product. Repeat this with several patents, as there may be numerous classes that your product could fall under. Once you have searched to your satisfaction using search terms and not found a patent that resembles your invention, you will want to search using the class and subclass that you just identified. So, click on Quick search again. Here, in Term 1 you will type in the class and subclass that you identified previously (red arrow). Be sure to select “Current US Classification” from the pull-down menu to the right of the search box (green arrow). Now click on search.

5. This will return a list of patents based on the class and subclass that you entered. From here you can perform your own exhaustive search to determine if your idea has been patented or not. Figure 10 shows you an example of what your search will return.
6. This is a quick way to perform a patent search to determine if an idea has been patented. It will require an extensive amount of time to adequately search. This will provide you information on how new your idea is. While you will want to probably hire a patent attorney to file a patent for your invention, who will want to do his or her own patent search, this will give you an idea of where you stand. It is possible to file your own patents, also. Go to the following web address for more information on how to file patents electronically, without the help (and expense!) of a patent attorney: http://www.uspto.gov/ebc/efs_help.html