

## Chapter 8

### -- Establishing Inventorship --

In the preceding chapter, we explored who is, and who is not, an inventor of a patented invention. We also discussed the rights that are accorded to an inventor. In this chapter, we will explain how one establishes that he or she is an inventor, what constitutes an “invention,” what is evidence of the creation of an invention, and what happens when different people or groups discover an invention around the same time.

When different people or groups discover an invention around the same time and are both claiming patent rights, there should be a rule for determining which is awarded the patent, if any, on the invention. In almost every country in the world, the rule is that the first to file a patent application will be the one that receives the patent.

The “first-to-file” rule obviously creates a rush to get the patent application filed with your national patent office. This is beneficial because it increases the rate at which discoveries are disclosed. As discussed, providing an incentive for rapid disclosure of new inventions and new discoveries is a prime purpose of any patent system.

The first-to-file rule also provides a very clear-cut determination as to who receives the patent rights as between two roughly contemporaneous inventors. It will be very difficult to dispute who was first to file a patent application with an appropriate patent office.

However, the development of any given invention may be a lengthy and on-going process. It may be difficult to know exactly when the invention has been developed sufficiently that a patent application should be prepared and filed. Companies with large resources will have an advantage over individual inventors who may not be able to get a patent application prepared as quickly. Thus, simply awarding the patent to the first to file a corresponding patent application may, in some instances, be unfair.

The only country in the world that does not adhere to the first-to-file rule is the United States. In the United States, we follow our own first-to-invent rule. The first-to-invent rule awards the patent, as between two roughly contemporaneous inventors, to the inventor who was the first to invent and who has since diligently pursued the invention. We will explore below what is meant by being the first to invent and diligently pursuing the invention.

Under the U.S. first-to-invent rule, an invention consists of two events that take into account the actual process of producing a useful invention. These events are (1) conception and (2) reduction to practice.

The process of “invention” begins with conception of the idea for the invention. At this stage, the inventor may not know if the idea will work, there may be some details that remain unsolved, but the inventor has conceived of the idea for the invention and can begin work on implementing the invention. This is conception.

After conception, if the invention is to be utilized, the inventor will have to do the further work necessary to enable practice of the invention. This may include testing the idea of the invention, solving any residual problems, etc. The process ends when the inventor has the

knowledge to actually make the invention in a form that would serve some purpose, e.g., the inventor could build a working prototype of the invention. This is reduction to practice, meaning that the conception of the invention has been reduced to a form in which the invention can now be practiced by those working in that field or art.

It is important to note that the inventor does not have to build a prototype in order to complete the reduction to practice or to apply for a patent. The inventor could simply prepared “blueprints” for the invention. That would satisfy the definition of reduction to practice. By “blueprints,” we mean documentation sufficient to allow someone to make and use the invention. The precise form of the documentation would naturally be determined by the nature of the invention.

It should be noted that a patent application, as described in the preceding chapters, must be documentation sufficient to allow someone to make and use the invention. Therefore, preparing and filing a valid patent application is a reduction to practice of the invention.

Thus, an invention is complete when it has been reduced to practice following the initial conception. Conception, without the know-how to use the idea, is not a complete invention. Adding the know-how is reduction to practice and completes the invention.

Now, we have said that in the U.S., the first to invent receives the patent between competing inventors. However, it is not always true that the first to finish the process of invention by reaching reduction to practice is the “first-to-invent” and, in turn, the person who receives the patent.

The rules for determining who, in fact, is the first to invent can be complicated. In general, the inventor who is the first to conceive of the invention and who then works diligently to a reduction to practice will be awarded the patent over a competing inventor.

Working diligently to “reduce to practice” means simply that the inventor continued to work with the idea after conception to refine the idea into a useful form. This refinement is a reduction to practice. Working diligently to reduce to practice means that the inventor did not shelve the idea, did not decide to suppress or conceal the idea, did not decide to hold the idea as a trade secret for some period of time, did not abandon the idea as unworkable, etc.

Let’s consider two scenarios. In the first example, a first inventor conceives of the idea for the invention and then works diligently to reduce the invention to practice. However, the first inventor is an individual of limited resources and requires a lengthy period of time to reduce the invention to practice. However, the inventor has worked reasonably within her means to keep moving the invention to a reduction to practice.

After the first inventor conceives of the invention, a second inventor, working for a large corporation, conceives of essentially the same idea. Using the resources of the employer-corporation, the second inventor is able to quickly reduce the invention to practice and does so many months before the first inventor is able to complete her reduction to practice.

Both the first and second inventors file for patent on the invention. The patent will be awarded to the first inventor and not the second. This is the case because the first inventor conceived of the invention first and worked diligently to a reduction to practice. Thus, the first inventor is, under U.S. patent practice, the first to “invent” and merits the patent. It does not matter that the second inventor was the first to reduce the invention to practice.

The second scenario we should consider is a slight alteration in these facts. Suppose that the first inventor was not diligent in reducing the invention to practice. Perhaps the first inventor thinks that the idea won't work and doesn't try to implement it or investigate it for a prolonged period of time. Perhaps the first inventor doesn't want to invest any resources in trying to reduce the idea to practice. Perhaps the first inventor simply becomes disinterested in the idea and does not pursue it further. In any of these or similar circumstances in which the first inventor does not exhibit diligence in reducing the invention to practice, the second inventor who conceives of the idea later and reduces the invention to practice first will be awarded the patent.

Obviously, some mechanism is required to determine the underlying facts so that these rules can be applied. An inquiry will be necessary to determine who was the first to conceive of the idea of the invention and whether that party then proceeded diligently to a reduction to practice. This mechanism is a proceeding called an "interference" that is conducted in the U.S. Patent Office by the Board of Patent Appeals and Interferences (BPAI).

An interference is somewhat like a trial. The competing inventors who are seeking a patent on essentially the same invention will have the opportunity to submit evidence to demonstrate which conceived of the invention first and evidence to demonstrate, if possible, diligence after conception in reducing the invention to practice. There may be more than two competing inventors or groups of inventors.

An interference can be declared by the patent office when an examiner notes that two applications have been filed on essentially the same invention at about the same time. An interference can also be between a pending patent application and a recently issued patent. A patent applicant can also provoke an interference.

From this discussion, it becomes clear how important it is to maintain evidence of the date an invention was conceived and the diligent action taken thereafter to reach a reduction to practice. This evidence may be required in an interference in order to secure rights to a patent.

Conception can be documented or evidenced in a number of ways. The most common is to create a document that describes the idea for the invention and, perhaps, the process that lead to the conception of the idea. This document is then dated and witnessed by one or more people. The witnesses preferably attest that they have read the document, understood its contents and that they did so on a particular date. The document and the testimony of the witnesses can then be used as evidence that the inventor did in fact have possession of the idea for the invention at least as early as the date the document was witnessed.

In a formal research setting, the investigators are likely in the habit of keeping, or are required to keep, a notebook or lab book that documents the progress of the research. The pages or sections of the lab book are dated and may periodically be witnessed so as to better serve as evidence of the creation of an invention.

In addition to documenting the conception of the invention, it may also be important to document the subsequent diligence exercised by the inventor in reducing the invention to practice. In particular, it may be important to document and explain any periods of inactivity in reducing the idea to practice.

For example, if work on the invention is halted due to a prolonged illness of the inventor, that situation can be documented to prove that the delay was not due to a lack of diligence on the part of the inventor, but to factors beyond the inventor's control. If, for whatever reason, the inventor plans to stop working on the idea, it will be wise to document the reason why and express an intention to return to the idea as soon as possible.

In summary, the patent race goes to the first to invent, not the first to file a patent application. For this reason, it may be important to create and maintain evidence that demonstrates how and when the invention was developed. An invention consists of the conception of an idea and the reduction of that idea to practice, e.g. a practical application.