Chapter 1

The Innovation Process

In This Chapter

- Applauding yourself
- Keeping your idea safe
- Making it to market
- Pushing your idea through the pipeline

Maybe you can come up with an idea in the morning, make one phone call, receive a check by noon, and reach financial success, all in time to watch the sunset through your lovely rose-colored glasses. It's possible. (It's possible to win the lottery, too. It's possible to earn both an Olympic gold medal and an academy award.)

Being possible doesn't make it likely, however; just as getting a patent doesn't make your invention commercially viable. Try to accept right now that making money from your idea may well be a long, grueling, expensive, and perhaps unachievable task. Prepare to recognize little successes along the way as victories. Many people never see their idea converted into a real working model. Of these, few ever receive patents. Fewer yet ever see a return on their financial investment, much less their time. Only a *very* small percentage — about 7 percent — of patent holders ever make enough money to recoup even the cost of getting their patents. So, as you reach the milestones that you have set for yourself, be happy and proud of these victories.

In this chapter, I give you some practical advice on deciding what you want to do with your invention, how to protect it, and give you a few basic pointers on going to market. I also go over the product life cycle to give you a better idea of the process you need to go through.

Deciding Where to Go with Your Idea

You have an idea, now what? Where do you go? What steps do you take to bring your new idea to fruition?

Decide as early as possible what your true objective is. In other words, what do you want from your invention? Do you want to be famous? Is just getting a patent what you really care about? Are you all about the money? Are you all about the altruism and making the world a better place?

If you're an inventor with a commercialization bent, you're in good company. When Thomas Edison couldn't find a buyer for his first patented invention — an electric vote counter — he formulated a lifelong policy: Anything that won't sell, I don't want to invent!

Your goal plays a large part in how you proceed with your idea. If your true desire is to have your name on a patent and commercialization isn't important to you, your task is substantially different than if you're expecting to achieve financial independence through your invention.

Carefully consider where you are today and where you want to end up. It may be helpful to take a sheet of paper and list the steps involved in achieving your final objective. I suggest writing where you are today at the top, skipping several lines, and entering your final goal. Now enter the milestones that you consider to be of critical importance along the way. Some of the tasks you may list are

- Conducting a patent search (see Chapter 3)
- Submitting your idea for evaluation (see Chapter 11)
- Building a prototype (see Chapter 9)
- Researching the market (see Chapter 17)
- Filing a provisional patent application (see Chapter 4)
- Forming a company (see Chapter 15)
- Meeting with a potential licensee (see Chapter 20)
- Writing a business plan (see Chapter 13)

You don't have to fill in all the blanks if you aren't sure of all the steps; having a rough idea of some the steps is enough to get started (you may come up with additional ideas as you go through this book). But preparing even a preliminary list may make you realize that there is a lot more to the process than you had originally anticipated and that you may need some help along the way.

You should continually update the list and prioritize it as you go. If you have a target date for success, then you should include that as well, and then date the milestones that must be met accordingly.

One of your objectives, regardless of your overall goals, should be to make your idea yours. In order to do this, you have to patent your idea. If you're interested only in getting a patent, stick to the chapters in this part. The rest of this book, however, focuses on sharing my experience and expertise in

bringing inventions to market. If you want to make money from your idea, and I hope that you do, every chapter and every section should be of interest to you.

Protecting Your Idea

Your idea — or at least your rights to your idea — can slip out of your grasp if you don't protect it well. Just bragging too specifically to the wrong person can be dangerous — people claim credit for ideas that aren't theirs all the time. So, though you may be proud of your idea (and you have every right and reason to be), be careful about how you talk about it and to whom. If you think about it, it isn't logical to share your brainstorm with the world without safeguarding it.

If you plan to market your invention, you probably will pursue getting some legal intellectual property protection — a patent, copyright, or other protection mentioned in later chapters in this part and in Part II. Taking some precautions from the very start can help bolster those claims and establish your ownership rights should the need arise.

Keeping good records

Keeping an inventor's diary, engineering notebook, or logbook is almost essential, not just to protect your rights, but to document your invention's history and progress.

Detailed documentation can be a valuable resource in many stages of your invention's life cycle. Potential investors interested in funding your project can use your logbook to make decisions about your product's potential and about your capabilities. Investors are often more interested in the person than in the product. A logbook that shows attention to detail and an organized, well-thought-out plan of action can mean money in the bank for you. If, for some reason, or no reason, the tax man audits you, your logbook can show and justify deductions you may have taken.

What if someone overhears an explanation of your invention and files a patent application before you do? Or an employee claims that she is the actual inventor or maybe a co-inventor? Or your lab may suffer a break-in, and whether the thief was hired by a competitor or is just an opportunist, you may lose your prototype and equipment. In cases like these, a well-kept invention log can help you prove your claim and pick up the pieces.

The notebook itself should be a bound book — one you can't take pages out of. Use permanent ink to make dated entries that detail the activity on a day-to-day basis. Get two witnesses to sign and date each entry. Keep your journal current and factual.

Record everything into the logbook, including

- The title of your invention
- The purpose of the invention — what you use it for
- A detailed description, including any unique features
- A sketch, drawing, or picture
- Various uses and applications for your product — these may even vary by industry
- The differences between your invention and similar products, if you know of any
- Advantages of your product compared to other products or close substitutes
- Names of the people with whom you speak with about your product, including consultants, prototype builders, packaging designers, and so on; names of people you know are aware of your product including employees, friends and family, and current or former colleagues
- Contact information of companies you talk to about licensing, production, pricing, and packaging

Document not only what you and any colleagues do to further your invention, but add in records of any correspondence, receipts and bills related to the project, and *letters of revelations,* which are any type of documentation or paperwork written to other companies about your product. For example, you may have correspondence about manufacturing cost estimates, potential licensing agreements, hiring an engineer or prototype builder, and so on. (The record of expenses comes in handy at tax time, also.) This type of information should be kept in a separate folder from your logbook. Figure 1-1 shows a sample logbook entry.

If your invention is very good, you almost certainly face having it copied. Or you may face a situation in which another inventor, working completely separately, comes up with a very similar item. Sooner or later you may end up in court defending your intellectual property rights. In the U.S., a patent is issued to the first inventor of a product, not the first person to apply for a patent on it. In many instances, those two are different people. Even after a patent is issued, it can be disputed by someone claiming to have invented it earlier, or by someone who just hopes to cash in. Often, your best defense is great documentation.

Inventor's Logbook

Title: Solar Dog House

Reference: Date of conception was on February 2004. Currently working with engineers regarding density of panels needed.

Description: A dog house that stays warm using solar panels. Currently working with professional prototyper, Jackson Murphy, regarding building of solar model for dogs under 30 lbs.

Picture or Drawing of Product showing solar panels on roof, windows, and energy-efficient siding.

Current Status: We tried a new double insulated window; however, this window made the dog house too hot. We are looking at alternative energy efficient materials for prototyping of dog house.

Testing: We tested the results of the heating panels. It is necessary to make further adjustments due to variation of sunrays during the winter months.

Results: Must keep working on product as it needs improvements with improved hardware usage. Will continue with CADCAM drawings.

Inventor/s: _____ Date: _____

I have witnessed and understood the above-mentioned invention.

Witness Signature _____ Date _____

Witness Signature _____ Date _____

Figure 1-1: A sample logbook entry.

Participating in the Disclosure Document Program

One of the services provided by the United States Patent and Trademark Office (USPTO) is the Disclosure Document Program. For a $10 fee you can forward a paper called a Disclosure Document to the USPTO as evidence of the date of conception for your invention. The document is in effect for two years, after which time your papers are destroyed unless you refer to them in your patent application, which must be filed within those two years.

Although there are no restrictions regarding the contents and claims of the Disclosure Document, the overall benefits depend upon what the document claims. You should write a clear and complete explanation of the manner and process of making and using your invention. The use of the invention should be described in detail, especially with inventions that are chemically related.

Cheering on inventors

Inventors are frequently made fun of, ridiculed, and criticized as crackpots. The general public thinks of them as wild and crazy eccentrics, best avoided. That is, until one of their inventions sells. The wild-eyed madman suddenly becomes a hero, the salt of the earth, the kind of person who makes this country great.

The truth is that inventors have changed and continue to change the way you live. The vehicle you drive, the medicines you take, the clothes you wear, the computer you use — the list of just everyday inventions you use without thinking about them could go on and on. Inventors contribute to society, often with no idea of how great an impact their creations will have on generations to come.

I asked an inventor in my office one day, "Why do you invent?" He replied, "Well, I never could be God, but I love to create." Down deep, we all like to help each other make life easier, and inventors do make a difference. Successful inventors share the same characteristics of any other successful individual. They have an extreme type of dedication in a particular field.

Although our base of technical knowledge has increased exponentially in modern times, revolutionary inventions don't have to be complicated. The paper clip and the safety pin are fairly simple pieces of engineering, but both continue to have a huge impact on everyday life.

Inventions, like inventors, come in all shapes, sizes, colors, and classes. You don't have to have an advanced engineering degree to be a successful inventor; in fact, a major study revealed that an inventor with a PhD is only a third more likely to bring an invention successfully to market than an inventor with a high school diploma.

The Disclosure Document needs to be just that — a document. Write on regular paper (you can use drafting paper) and don't include videotapes, prototypes, or a photo larger than 8½ by 11. Get the full specifications at `www.uspto.gov`.

The USPTO asks that you send two copies of your cover letter (not the whole disclosure document) so that they can send one back in the self-addressed, stamped envelope you include also.

A disclosure document is *not* a patent application. It merely establishes your invention's date of conception, which can certainly be a very important issue if the validity of your patent is ever challenged.

Spinning Through the Product Life Cycle

You've come up with a practical solution to a common problem and you want to make money from it. Where do you start? Well, first of all, don't quit your day job and take a credit-card vacation just yet. Your inventor's high may soon come crashing down amid the frustrations and setbacks of developing your idea and getting it to market. You must consider many things before running to a patent attorney to file a patent application.

There are specific steps you can take to discover whether you want to spend a lot of time and money on a new concept. In today's competitive market, you must not only have a great idea, but also know how to move the idea through the entire commercialization process.

Your very first step in the cycle is to think about how your idea will be used. Think about your idea in terms of marketability. Can you turn it into a saleable item? If so, will people buy it? Is there something already on the market that's very similar? What other competition is there? Remember, ideas are cheap and products are expensive.

Inventors often want to turn over their idea to someone else to make money for them. A good analogy for this desire is handing someone a newborn child and asking him to feed, clothe, potty train, educate, and otherwise care for the kid until the child is fully grown and through college. No one has more interest in, investment in, or ideas about your invention than you do. In order to maximize the potential profits, you have to be involved in bringing up your baby — er, your invention. Commercializing a product is like having a baby — easy to conceive and hard to deliver!

A product, like the aforementioned child, has a distinct life cycle, shown in the chart in Figure 1-2.

The life cycle of a product is basically seven years. The stages are as follows:

- **Evaluation and analysis stage:** The first two and a half years encompass the beginning stage of the life cycle. You receive no income because you're not selling anything yet. Your idea is in the evaluation and analysis stage, during which you test feasibility, viability, and reality. You conduct a patent search to make sure someone else doesn't already hold a patent on your idea. (Just because a product hasn't been marketed doesn't mean that there's no patent on it.) You make a prototype or otherwise refine your design. You do estimates of production costs, and do some market research to find out whether consumers are interested and how much they'd pay.
- **Introductory stage:** At approximately year 2½, your product enters the market. After introducing your invention, you continue to develop the markets for it and, hopefully, witness rapid growth and soaring profits. As a product's market presence grows, it has to be competitive in order to survive. Marketing is civilized warfare! Your product will go through all sorts of growing pains, much like a teenager moving to adulthood. You have to be as creative as you were during the invention stage in order to take and hold a place in the market.

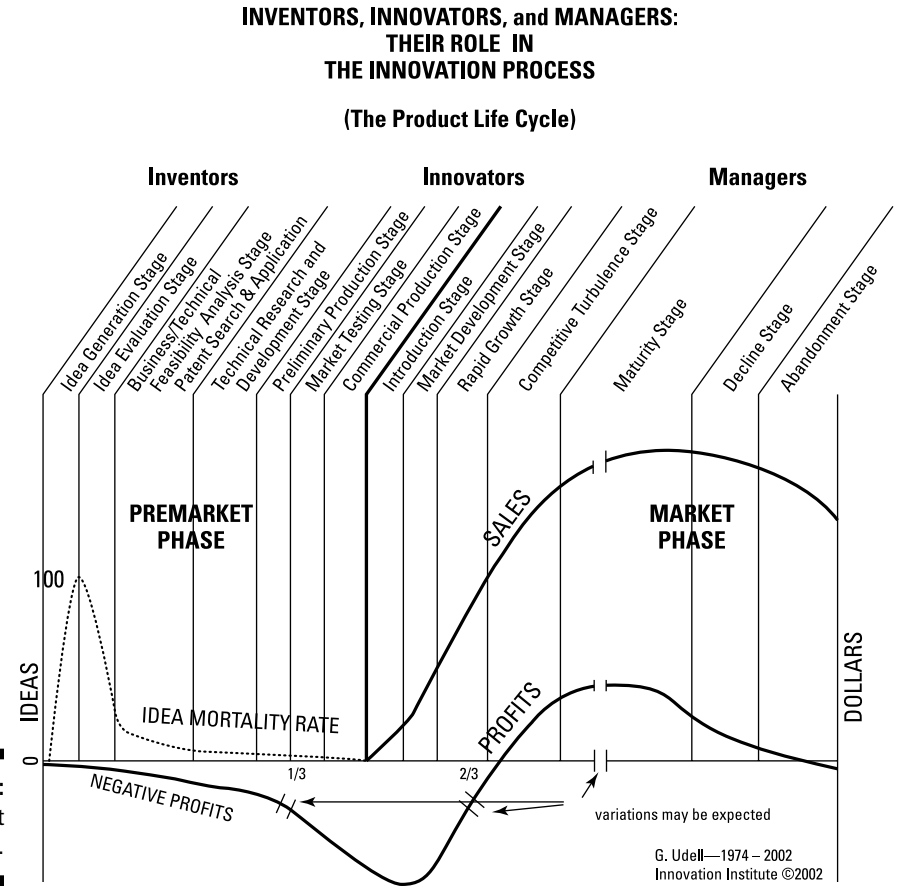

Figure 1-2: The product life cycle.

In the marketplace, your invention fights for the same dollar that can be spent on a family vacation, a mortgage, a new car, a child's education, and so on. Consumers only have so much money to spend and a variety of ways to spend their money. Your product is in direct competition with other products and services. How consumers choose to spend their money must be analyzed. Failure to do so and to understand consumer psychology can cause them to purchase similar products or close substitutes instead of your invention.

- **Development and Growth:** In Figure 1-2, note the point where managers take hold and their expertise takes over in order to move the product into the next stage, the Market Development and Growth Stage. Management teams come from various walks of life, with different fields of expertise and experiences. In fact, one of the most valuable things an investor brings to a company isn't necessarily funding, but the management expertise and experience to help push your product along.

Clearly, people with money to invest in your product don't have the funds because they're bad at business. No doubt they made mistakes, but that just means that they can advise you of errors to avoid. Try to build a solid and varied advisory team to help steer your invention down the most profitable path.

It isn't necessarily the best product that ultimately reaches the market. A product that has advantages in terms of knowledge, exposure, and information can succeed over similar products.

- **Maturity:** Your product eventually moves into a mature stage in which sales peak, capturing as much of the potential market share as possible. This generally happens during the fourth year of the product life cycle. Eventually, other new products with new technologies and improvements start competing in your market and your sales decline. This stage is one reason companies constantly develop new and improved products.
- **Abandonment:** Finally, at about the seventh year, a product reaches an abandonment stage, and it's no longer profitable to continue manufacturing, marketing and distributing it. Your patent is still in effect — a design patent is good for 14 years — but the patent isn't enough to make your invention profitable.

The merit of your product isn't the sole key to its success. So many factors can affect how your invention does in the marketplace. The most you can do is to cover all your bases as well as you can, which is what I help you do with this book.