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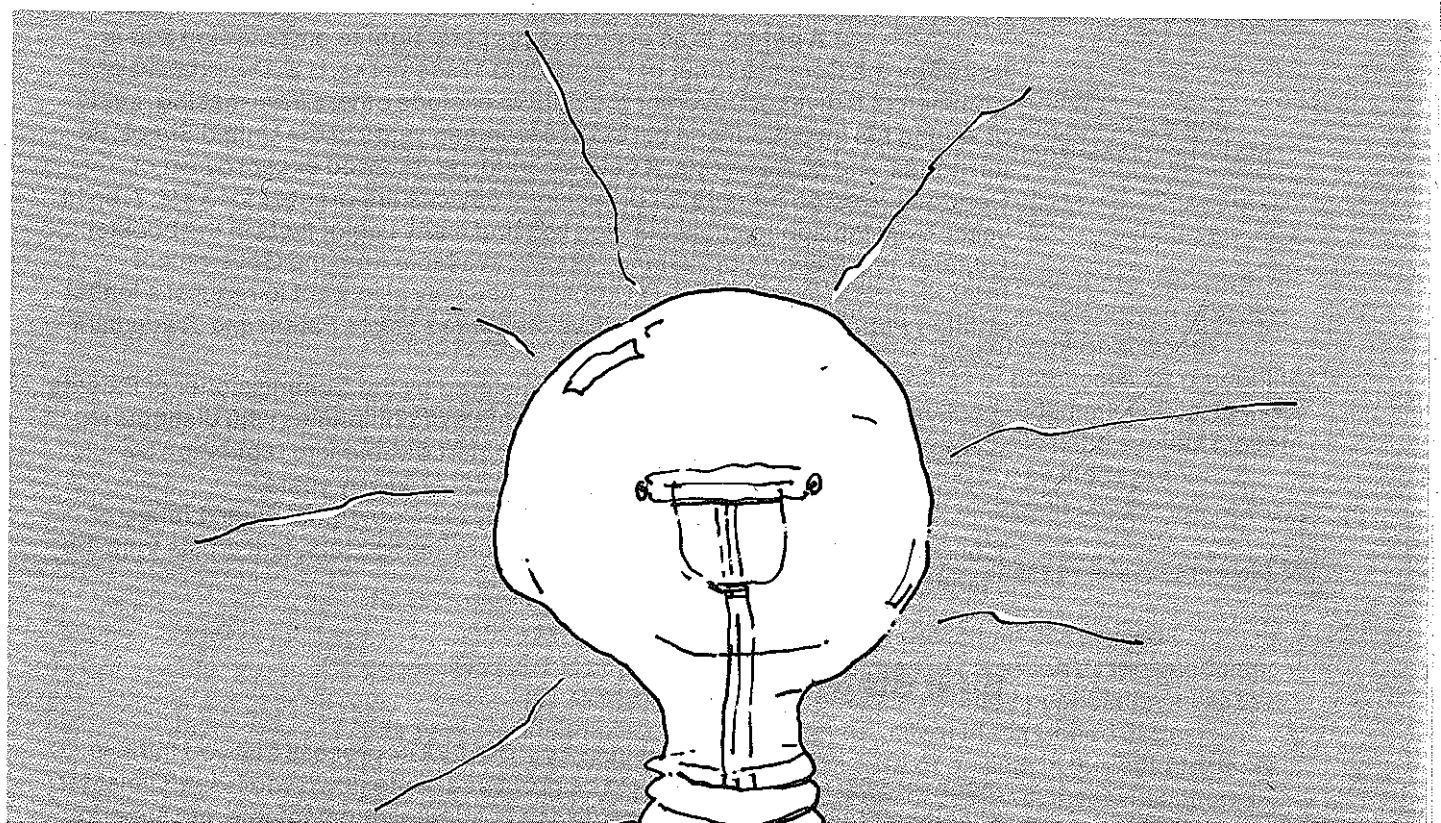
Management Aids for Small Manufacturers
U.S. Small Business Administration

Introduction to Patents

by **Staff Members of the Small Business Administration**



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Summary

Because of the tremendous development and complexity of technology, products, and processes, manufacturers should be familiar with patent protection and procedures. It is important to understand patent rights and the relationships among a business, an inventor, and the Patent and Trademark Office to assure protection of your product and to avoid or win infringement suits. This Aid gives some basic facts about patents to help clarify your rights in this important legal area. The U.S. Department of Commerce, Patent and Trademark Office and the courts are the final authorities in this field.

To understand the details of patent procedure you should at the start know what a patent is and distinguish among patents, trademarks, and copyrights.

What is a Patent?

• A **patent** is an exclusive property right to an invention and is issued by the Commissioner of Patents and Trademarks, U.S. Department of Commerce. It gives an inventor the right to exclude others from making, using or selling his invention for a period of seventeen years in the United States, its territories, and possessions. A patent cannot be renewed except by act of Congress. **Design patents** for ornamental devices are granted for 3 1/2, 7, or 14 years — as the applicant elects. You will find many useful facts in the booklet *General Information Concerning Patents,* available from the Government Printing Office, Washington, D.C. 20402. You may also want to request a leaflet entitled *Publications Obtainable from the United States Patent and Trademark Office.*

• **Trademarks** are also registered by the Commissioner of Patents and Trademarks on application by individuals or companies who distinguish, by **name** or **symbol,** a product used in commerce subject to regulation by Congress. They can be registered for a period of twenty years.

• **Copyrights,** administered by the Copyright Office (Library of Congress, Washington, D.C.), protect authors, composers, and artists from the "pirating" of their **literary** and **artistic** work.

First Steps

When you get an idea for a product or process that you think is mechanically sound and likely to be profitable, write down your idea. Consider specifically what about your new device is original or patentable and superior

instance, you may not claim broad enough protection for your device. As a rule therefore, it is best to have your application filed by a patent lawyer or agent.

Only attorneys and agents who are **registered** with the Patent Office may prosecute an application. That Office has geographical and alphabetical listings of more than 11,000 such people. It will not, however, recommend any particular attorney or agent, nor will it assume responsibility for your selection.

• **Establishing Novelty.** This is one of the most crucial and difficult determinations to make, involving two things: 1) analyzing the device according to specified standards and 2) seeing whether or not anyone else has patented it first. The only sure way of accomplishing this is to make a search of Patent Office files.

• **Analyzing your device.** This should be done according to the following standards of what is **patentable:**

(1) Any **new, useful,** and **unobvious** process (primarily industrial or technical); machine; manufacture or composition of matter (generally chemical compounds, formulas, and the like); or any new, useful, and unobvious improvement thereof;

(2) Any new and unobvious original and ornamental design for an article of manufacture, such as a new auto body design, (Note that a design patent may not always turn out to be valuable because a commercially similar design can easily be made without infringing the patent);

(3) Any distinct and new variety of plant, other than tubes-propagated, which is asexually reproduced.

Another way of analyzing your product is to consider it in relation to what is **not** patentable, as follows:

(1) An idea (as opposed to a mechanical device);

(2) A method of doing business (such as the assembly line system; however, any structural or mechanical innovations employed might constitute patentable subject matter);

(3) Printed matter (covered by copyright law);

(4) An inoperable device;

(5) An improvement in a device which is obvious or the result of mere mechanical skill (a new assembly of old parts or an adaptation of an old principle - aluminum window frames instead of the conventional wood).

Applications for patents on machines or processes for producing fissionable material can be filed with the Patent and Trademark Office. In most instances, however, such applications might be withheld if the subject matter affects national security and for that reason should not be made public.

The invention should also be tested for novelty by the following criteria:

(1) Whether or not known or used by others in this country before the invention by the applicant;

(2) Whether or not patented or described in a printed publication in this or a foreign country before the invention by the applicant;

(3) Whether or not described in a printed publication more than one year prior to the date of application for patent in the United States;

(4) Whether or not in public use or on sale in this country more than one year prior to the date of application for patent in the United States.

These points are important. For example, if you describe a new

have this done.

Only the files of patents granted are open to the public. Pending applications are kept in strictest secrecy and no access is given to them except on written authority of the applicants or their duly authorized representatives. Existing patents may be consulted in the Search Room of the Patent and Trademark Office where records of over 4,000,000 patents issued since 1836 are maintained. In addition, over 9,000,000 copies of foreign patents may also be seen in the Patent Library. That library contains a quantity of scientific books and periodicals which may carry a description of your idea and thus affect its patentability.

A search of patents, besides indicating whether or not your device is patentable, may also prove informative. It may disclose patents superior to your device but not already in production which might profitably be manufactured and sold by your company. A valuable business association may result.

Points of Caution

While the advantages of obtaining a patent are fairly obvious, it must be recognized that a number of pitfalls and obstacles lurk in the path of every applicant. For example, a patent by no means guarantees immunity from lawsuits, but rather sometimes seems to attract challenges as to its legality. As one patent lawyer has said, "A patent is merely a fighting interest in a lawsuit."

- **Interference.** One of these snags is interference (occurring in about only one percent of the cases) when two or more applicants have applications pending for substantially the same invention. Because a patent should be granted to only one applicant, the parties in such a case must give proof of the date the invention was made. Ordinarily, the applicant who proves that he was the first to conceive the invention and produce a working device will be held to be the prior inventor. If no other evidence is submitted, the date of filing the application is used to settle the controversy. Priority questions are determined on evidence submitted to a board of examiners.
- **Infringement.** Unauthorized manufacture, use, or sale of subject matter embraced by the claims of a patent constitutes infringement. The patent owner may file suit in a Federal court for damages and/or an injunction prohibiting the continued use or manufacture of his patented article. If an item is not marked "patented," the holder of the patent may sue for damages on account of infringement but no damages can be received covering the period before the infringer is so notified. Moreover, no recovery of damages is possible for any infringement occurring more than six years before the filing of the complaint. There is no established method of learning of any infringement. A clipping service and a sharp eye for reference in trade literature may be helpful, but the responsibility lies entirely with the patentee (patent holder).
- **Foreign Patents.** If you wish to market your patented product in a foreign country, you should apply for patent protection in the particular country to prevent infringement. See ***General Information Concerning Patents*** for further details, or consult a patent attorney or agent who can assist in getting you foreign patents.
- **Selling Part Interest.** Once you get a patent, consider how to make the best use of it. You have several choices of action. If you have the facilities and money, you can manufacture and sell the article. Alternatively, you can sell all or part of it.

many pitfalls unless restricted by a contract. A joint owner, no matter how small his interest, may use the patent as the original owner. He may make use of or sell the item for his own profit, without regard to any other owner, and he may also sell his interest in it to someone else. A new part owner is responsible for making sure that any such transfer is recorded within three months at the Patent and Trademark Office.

This is what could happen. An inventor offers to sell his patent for $100,000, but the prospective buyer, claiming this is too expensive, proposes to buy part interest of say $10,000 or ten percent interest in it. If the sale were concluded, the new part owner — unless specifically restrained from doing so by contract — could go ahead and manufacture and sell the item as if he owned it 100 percent, without accounting to the other part owner (who is the original investor and patent holder).

- **Assignments and Licenses.** A patent is personal property and can be sold or even mortgaged. You can sell or transfer a patent or patent application. Such a transfer of interest is an **assignment;** and the assignee then has the rights to the patent that the original patentee had. A whole or part interest can be assigned.

Like an assignment, a **grant** conveys an interest in a patent but only for a specified area of the United States.

A mortgage of patent property gives ownership to the lender for the duration of the loan.

You can license your patent which means someone pays you for the right to your patent according to the conditions of the license.

All assignments, grants, licenses, or conveyances of any patent or application for a patent should be notarized and must be recorded with the Patent and Trademark Office within three months of the transfer of rights. If not, it is void against a subsequent buyer unless it is recorded prior to the subsequent purchase.

All references and documents relating to a patent or a patent application should be identified by the number, date, inventor's name and the title of the invention. Adequate identification will lessen the difficulties of determining ownership rights and what patents and applications are in issue.

- **Other Problems You Confront as an Inventor.** Even though your invention passes the expert, impartial judgment of a patent examiner as to novelty and workability, it still must be commercially acceptable if you are to make money from it. In this respect you should expect no help from the Patent and Trademark Office, as it can offer no advice on this point.

Also, you should realize that, in modern technology, the vast majority of patents granted are merely improvements or refinements on a basic invention. The claims allowed on an improvement patent are narrow, as compared with those of a basic invention. Because the claims allowed on an improvement patent are narrow as compared with those of a basic patent, the inventor therefore runs a proportionately greater risk of infringement if a basic patent is in force.

Here is an example: Inventor George Westinghouse patented an entirely new device - the air brake. For this he was granted **broad protection** by the Patent and Trademark Office. Suppose that later, inventor "B" devised a structural improvement, such as a new type of valve for the compressed air. Inventor "B" would have received relatively **narrow** protection on the valve and he would not have been able to manufacture the complete air brake without infringing Westinghouse's patent. Nor could anyone

American citizen.

Finally, purchasing is an important aspect of all business and touches upon patents. Purchase orders can have clauses dealing with patent infringement. Practice, type of goods, and many factors affect the clause; but such a clause could be as follows:

> Seller shall indemnify and save harmless the buyer and/or its vendees from and against all cost, expenses, and damages arising out of any infringement or claim of infringement of any patent or patents in the use of articles or equipment furnished hereunder.

Application for a Patent

If you find, after preliminary search, that your invention appears to be patentable, the next step is the preparation of a patent application covering your invention. File it with the **Commissioner of Patents and Trademarks, Washington, DC 2023l.** All subsequent correspondence should also be addressed to the Commissioner.

• **The Patent Application.** With few exceptions the patent application must be filed in the name of the inventor. Even the application for a patent on an invention by a company's researcher must be filed in the inventor's name. If there is more than one inventor, a joint application is made. The patent application can be assigned, however, to an individual or a corporation, and then the patent will be granted to the assignee, although filed in the inventor's name.

Often employment agreements require an employee to assign to the employer any invention relating to the employer's business. Even without such an agreement, the employer may have a "shop right" to use (free) an invention developed on the job by an employee.

Application for a patent is made to the Commissioner of Patents and Trademarks and includes:

(1) A written document that comprises a petition, a specification (descriptions and claims), and an oath;

(2) A drawing in those cases in which a drawing is possible; and

(3) The filing fee of $65 (plus an additional $2 for each claim in excess of ten).

The exacting requirements of the Patent and Trademark Office for a patent application are described in **Title** 37, **Code of Federal Regulations,** which may be purchased from the **Superintendent of Documents, Government Printing Office, Washington, DC 20402.** The construction of the invention, its operation, and its advantages should be accurately described. From the "disclosure" of the application, any person skilled in the field of the invention should be able to understand the intended construction and use of the invention. Commercial advantages, which would be attractive to a prospective manufacturer, need not be discussed.

The claims at the end of the specification point out the patentably new features of the invention. Drawings must be submitted according to rigid Patent and Trademark Office regulations.

The filing fee is normally paid by check, payable to the Commissioner of Patents and Trademarks or by a money order sent by registered mail. The Patent and Trademark Office assumes no responsibility for its safe arrival.

• **What Happens to Your Application in the Patent Office.** When your application is received in the Patent and Trademark Office, it is given a preliminary examination to determine whether or not all requirements are met. If the application is in order, you will be notified of that fact and your application assigned a serial number and filing date. These govern its position on the docket. If there is some very minor deficiency, such as some irregularity in the drawings, the date and number will be assigned and the necessary revision requested later. If the application is incomplete, you will be notified and your application will be held up until you supply the required information to correct the deficiency.

After your application is filed, it is examined by an examiner trained and experienced in the field of your invention. Frequently, the examiner finds existing patents showing inventions enough like yours that revision of the application claims will have to be made. Sometimes several revisions and arguments by your patent attorney (or agent) are necessary to overcome successive objections raised by the examiner. Each objection constitutes an **action** by the Patent and Trademark Office; and if no response is made to an action within a prescribed period, the application is considered **abandoned.** An abandoned application is dropped from further consideration. Because each application must ordinarily await its turn to be considered or reconsidered, it generally takes on the average of nineteen months to get a patent.

If the examiner finally refuses to grant a patent on the basis of the claims requested, the application may be appealed to the Board of Appeals of the Patent Office on payment of a $50 fee plus $50 if a brief in support of an appeal is filed. A brief for this appeal must be filed within sixty days after the date of the appeal.

When all the examiner's objections are satisfied, a patent may be obtained by payment of a final fee: $100 plus certain printing charges. A brief description of each patent issued is published weekly in the **Official Gazette of the U.S. Patent Office.** At the same time, specifications and drawings of current issuances are published separately; and copies are generally available to the public for fifty cents each.

• **Making Applications Special.** Only under limited conditions may a petition be filed requesting that an application be given **special** treatment; that is, taken up for examination before its normal turn is reached. These requirements are of particular importance to small business owners who are eager to obtain a patent before starting a manufacturing program. If you ask for special treatment for that reason, you must state under oath:

(1) That you have sufficient capital available and facilities to manufacture the invention in quantity. If you are acting as an individual, there must also be a corroborating affidavit from an officer of a bank, showing that you have obtained sufficient capital to manufacture the invention.

(2) That you will not manufacture unless it is certain that the patent will be granted.

(3) That you will obligate yourself or your company to produce the invention in quantity as soon as patent protection has been established. A corporation must have this commitment agreed to in writing by its board of directors.

(4) That if the application is allowed, you will furnish a statement under oath within three months of such allowance, showing (a) how much money has been expended, (b) the number of devices manufactured, and (c) labor employed.

Your attorney must file an affidavit to show that he has made careful and thorough search of the **prior art** and believes all the claims in the application are allowable. He will also be expected to make sure that the last sworn statement described above is properly filed.

As distinguished from mechanical patents, there are also available patents to protect ornamental designs for articles of manufacture. The filing fee on each design application is $20. Issue fees for design patents are

$10 for 3 1/2 years protection, $20 for seven years, and $30 for fourteen years, as the applicant elects.

Printed copies of issued design patents may be purchased by the public for twenty cents each.

Plant Patents

Plant patents were introduced in 1930. A plant patent is granted to an inventor (or his heirs or assigns) who has invented or discovered and asexually reproduced a distinct and new variety of plant. Plant seedlings discovered, propagated asexually, and proved to have new characteristics distinct from other known plants are patentable. Tuber-propagated plants (such as potatoes and artichokes) or plants found in the uncultivated state are not patentable. Tuber-propagated plants are excluded because, among asexually reproduced plants, they are propagated by the same part of the plant that is sold as food.

The grant is the right to exclude others from asexually reproducing the plant, or selling, or using the plant so reproduced. Patented plants must have new characteristics which distinguish them from others, such as resistance to drought, cold, or heat. They must also not have been introduced to the public nor placed on sale more than one year before the filing of a patent application. Application papers must be made out in duplicate and sent to the Commissioner of Patents and Trademarks.

Get More Information

The Patent and Trademark Office can give you detailed information and all the forms you need. Address all business to: **Commissioner of Patents and Trademarks, Washington, DC 20231.** The physical location of the office is at **Crystal Plaza, 2021 Jefferson Davis Highway, Arlington, VA (phone (703)557-3158).**

To minimize your frustration, disappointment, and difficulty in applying for a patent, you should consult first with the Patent and Trademark Office and follow the customery, required, and professional procedures as recommended and advised.

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