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<https://doi.org/10.4224/21273345>

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NATIONAL RESEARCH COUNCIL OF CANADA

INVENTIONS - AND WHAT TO DO ABOUT THEM

BY

F. E. LATHE

TECHNICAL INFORMATION SERVICE



OTTAWA

OCTOBER, 1947

N.R.C. NO. 1624

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## INVENTIONS - AND WHAT TO DO ABOUT THEM

### Purpose of this Statement

So many inquiries regarding inventions and patents have been received over the years by the National Research Council that it seems desirable to present, in more or less systematic form, answers to some of the questions most frequently asked. An attempt is therefore made, in what follows, to provide the inventor with such general information as may be useful to him in protecting and exploiting his invention.

It must be emphasized, however, that this statement does not attempt to cover fully all questions that may arise. It does not pretend to be in any sense an exposition of patent law, and legal language has in fact been purposely avoided. The opinions expressed and statements made, while intended to be accurate and helpful, of course have no legal standing or authority whatever.

### What is Invention?

According to the Oxford Dictionary, invention is, "the original contrivance or production of a new method or means of doing something, of an art, kind of instrument, etc., previously unknown". The term is also used to describe the method or thing so invented.

The Canadian Patent Act, passed in 1935, defines an invention as, "any new and useful art, process, machine, manufacture or composition of matter, or any new and useful



improvement in any art, process, machine, manufacture or composition of matter".

In the United States, the law does not even attempt to define invention, being content to specify the rights of one who has made an invention.

However invention may be defined, it does not necessarily follow that every invention is patentable. This subject will be further discussed below under the heading, "What May Be Patented?".

#### What is a Patent?

A patent, as related to inventions, is a legal document which confers upon an inventor exclusive rights for a limited period to make, use or dispose of an invention. In Canada and the United States this period is 17 years from the date of issue, and the period in most countries is approximately the same.

There is still much confusion as to the object of patents, and a brief explanation therefore seems desirable.

Before the patent system was devised, manufacturers usually tried to keep from their competitors information both as to the processes used in manufacture and the composition of their products. The result was that trade practices were jealously guarded secrets, frequently not even committed to paper, but conveyed by word of mouth

from father to son, or from employer to trusted employee. Sometimes generations passed before such secrets became public knowledge, and as a consequence production was limited, prices were high, and people as a whole did not reap the maximum benefit from inventions made. In extreme cases, the secrets were never disclosed, and arts were for a time "lost".

In order to discourage the harboring of trade secrets, and thereby promote the useful arts, the patent system was devised. It may be observed that Switzerland for years tried to get along without a patent system, on the assumption that industry would then use all processes freely. It was found, however, that new inventions were often not being applied because of the risks involved, and a patent system was eventually adopted in 1888. Similarly, Holland dropped its patent system in 1869, but found the results unsatisfactory and re-established it in 1912.

A patent provides an incentive to inventors to make public their inventions, as is indeed implied by its derivation from the Latin word meaning "to open". The fundamental idea was - and still is - that the inventor must disclose the details of his invention so fully that after the patent expires anyone skilled in the art will be able to apply it, and this without restriction. It is therefore very important that all information necessary for applying



or working the invention be set out; if a process as claimed can be proved unworkable, the patent is in fact not valid.

It was recognized that in return for a full disclosure of his invention the inventor should be given protection for a sufficient period to give him a reasonable opportunity to arrange for commercial manufacture or use, and the enjoyment of any returns which might be forthcoming.

Essentially, a patent consists of a specification and one or more claims. A specification must tell how to practice the invention, and the claims should state clearly and fully, but without exaggeration, the actual improvements for which the inventor is personally responsible. Details of these will be discussed below.

#### What May Be Patented?

It is impossible to lay down any hard and fast rule in regard to patentability, for this varies greatly with different countries, and may in fact vary with different examiners in a single country. Inventions must be new and useful. It should be made clear, however, that the limiting factor in patentability is the degree of novelty. It does not follow that because a thing has never been done or produced before it can be patented. For example, men's shoes are usually black or brown, but one could not patent the idea of making them red, white and blue. Pencils are usually

about six inches long, but making them nine and a half inches long would not involve patentable novelty, even though none had ever before been made of this exact length. No invention is of a patentable character if, prior to the invention, it would be obvious to an ordinary person skilled in that particular field. If, on the other hand, one were to develop a distinctly new type of black dye for shoe leather, a new and better composition for a lead pencil, or a new method of making either, these ideas might be accepted as patentable.

To be patentable, ideas must be of practical utility. One could not patent an abstract theory, or a newly discovered natural law. It would not be patentable invention to make a clock on whose face the hands revolved in the reverse direction, for no useful purpose would be gained thereby.

On the other hand, patentability does not necessarily involve major differences in practice, complex operations or machines, or substantial changes in composition. Simplifications in practice may, in fact, be patentable, as may also minor improvements in machines or changes in composition, provided that the result is substantially different or unexpected, and advantageous. That is, there should in fact be a new idea, the application of which produces the benefits set out in the specification. Invention is



quickly recognized as such if it produces something which fills a long-felt want.

Sometimes it is difficult to show that there is much novelty in the practice described in a patent application, but there is much significance, even in Canada, in the view expressed by the United States Supreme Court:- "It may be laid down as a general rule that if a new combination and arrangement of known elements produce a new and beneficial result never attained before, it is evidence of invention."

It should also be remembered that, even though a process, machine or product be already patented, improvements upon it may still be patentable. One could not, of course, make an improved article involving the infringement of an earlier patent without arrangement with the earlier inventor, but neither would the latter be free to adopt the improvement. In such cases, some satisfactory agreement can usually be reached whereby both inventors may profit.

Attention is called to certain definite restrictions which do exist in regard to patents. In so far as Canada is concerned, the law specifies that one cannot obtain a patent on anything which (1) was previously known or used by others, (2) was described in any patent or publication - even by the inventor - more than two years before application for Canadian patent, or (3) was in public use or on sale in Canada for more than two years prior to application. In the



United States, the periods relating to publication and use are one year in each case, while in England any publication or use there prior to placing an application debars one from getting a patent. (For an exception to this rule, see discussion below regarding the International Convention.)

### The Thrill of Invention

To be fully appreciated, the thrill of invention must be experienced. Many have at some time conceived an idea which seemed to them so new - perhaps so brilliant - as to fill a long-standing need. It may be the production of some small article to meet a popular demand, or some improvement in a machine which will simplify its operation and increase its output; it may relate to a completely new commercial product, or a new and different method of manufacturing an old product. It could mean the establishment of a great new industry and the creation of employment on a large scale; it could thereby serve the national interest, and at the same time bring wealth and honour to the inventor. In its effect upon the inventor, it may be likened to a prospector's discovery, after years of toil, of a vein carrying gold in quantities beyond his wildest dreams.

Once the first flush of triumph has passed, however, the inventor realizes that the rosy future pictured is not actually at hand, that some action on his part is needed to make the dream a reality. He is frequently puzzled



to know what he should do. Can he persuade some business man to pay him a handsome cash sum for the invention, and thereby relieve him of the necessity of patenting it and subsequently arranging for commercial manufacture? Perhaps - and this is a gratifying thought - the Dominion Government itself will appreciate the importance of the invention, undertake its further development, if any be necessary, and suitably reward him for his contribution to the national welfare; perhaps this is one of the functions of the National Research Council, which is surely concerned with inventions and their application.

But the way of the inventor (like that of the transgressor) is hard. Fully convinced of the value of his invention, he becomes afraid to disclose it to anyone, for fear that the idea may be appropriated. Is it safe to discuss it with any manufacturer, who might be tempted to discredit the invention in the expectation of being able to buy it for a trivial sum? Could the manufacturer himself not then apply for a patent? Should one even trust the Dominion Government, when the details of the invention might conceivably leak out or fall into the hands of some unscrupulous civil servant?

Perhaps the invention should first be patented - but how does one go about getting a patent, and what would be the cost? If one did get a patent in Canada, would it afford protection in England, the United States and other

countries? Would fees have to be paid in each country separately? If patents were granted, would the government see to it that no one else made use of the invention? What would happen if some manufacturer should disregard the patent and begin to make the article in question? Would action have to be taken in the courts? Might not infringement go unnoticed for years? Where would the money come from for the prosecution of the case?

Worst of all, what if someone else had already conceived the idea? If so, would the first man to put in his application get the patent? Might the idea already have been patented? How could one find out? If a patent on the same invention had been issued in the United States, could one still get a patent in Canada? If one got a patent, and then could not raise the money required to engage in manufacture, would he lose his rights to the patent itself? Who is competent to advise him in the matter?

Obviously, the inventor's first need is for advice, and in the following pages an attempt will be made to provide answers to the questions most likely to arise.

#### Preliminary Protection

An invention is not something to be discussed freely with everyone, yet no effective action in regard to it can be taken until disclosure is made. Great care should therefore be taken in this initial step.



In a later section, reasons will be set out why one should always proceed through a registered patent attorney. It is quite possible, however, that no patent attorney is at hand, and that one does not wish immediately to go to the expense of a journey to an attorney's office. Several important steps can nevertheless be taken. First, the inventor should write out and sign a clear and full statement of the invention, recording the date at which he conceived the idea, and the steps which led up to it. He should state briefly what was previously known or practiced along the same line, and describe fully the specific improvements which he has conceived, with their advantages and probable applications. If the invention involves the production of a new or improved article or machine, sketches should be made to show clearly the new features proposed. If a new machine or method of manufacture has been tested, the results of the test should be given in full. Frequently an invention takes some time for complete development, in which case a record of the steps taken and the dates of these steps should be made.

It will usually be found that the mere writing out of such a statement will clarify the inventor's ideas, indicate weaknesses which must be eliminated, or suggest further desirable improvements. When the document is complete, it should be dated and witnessed by two or more competent and

trusted friends, who should state over their signatures on the document itself that they have read and understand the description of the invention and its application. As an alternative, or in addition, the inventor may sign and date the document before a notary public or other person empowered to take oaths.

If the inventor prefers not to disclose the invention even to his lawyer or friends, or if he has not yet perfected his invention and wishes to protect his ideas in so far as they have been developed, he may send such a statement, with covering letter and a fee of \$5.00, to The Commissioner of Patents, Ottawa, and ask for a caveat. The Commissioner will preserve the document in secrecy as a proof of the date of conception of the invention. In such a case, a patent application should be filed within one year of the time of filing the caveat if the inventor wishes to obtain protection over a period of years.

As will be shown later, Canadian patents are usually of less commercial value than those issued in the United States, and consideration should therefore be given to the early disclosure of the invention in that country. The importance of this step lies in the fact that the earliest date which can be claimed there is not the date of conception of the idea, but the date of actual introduction into the country. Such a date can be established by asking



one's patent attorney to forward a written disclosure of the invention to his associates in Washington for purposes of record; a small charge is sometimes made for this service.

When, as often happens, additional ideas or modifications of the original idea occur to an inventor after he has taken the above steps, these may be dealt with in a similar way.

If such steps as the above are taken, it must not be concluded that the invention is fully protected. On the contrary, only the date of conception and the state of the invention at that date have been established. These are important in case anyone else conceives the same idea at a later date, or attempts to rob the true inventor of his idea, but serious consideration should still be given to the question of making actual application for a patent, a matter which is discussed in the following sections.

#### Advisability of Taking Out Patents

Before making application for a patent, the inventor would do well to consider carefully both the cost of doing so and the advantages to be derived. The following discussion of this question is intended to apply primarily to the independent inventor, and not necessarily to one whose invention arises from his work for a large company or for a government research organization, in which cases conditions may be substantially different.



An application for a patent on behalf of an individual is in a very real sense a gamble. The inventor should realize in advance that, for each country in which he may be granted a patent, he will have to spend anywhere from \$100 up to several times that amount, the actual cost depending upon the complexity of the case, the difficulty that may be encountered in meeting any objections raised by the examiner, the scale of fees charged by the patent attorney who handles the case, and other factors. If protection is to be obtained in all major industrial countries, the total cost will be quite substantial, and for many inventors will be regarded as prohibitive. If action in the courts should ever be required in order to protect one's patent, the costs may run much higher.

On the other hand, the possibility of large returns from real inventions is definitely attractive. It is known that certain inventions have brought in many thousands, and in some cases millions, of dollars. Even for less important patents the return - if any - is often substantially greater than the cost. One must therefore try to estimate in advance the chances of getting a substantial return. The inventor is in a similar position to the prospector, who expends his time, energy and money over a period of many months or years in the hope that he may eventually discover a mineral deposit which will bring large returns. It may be suggested that not only the stakes, but also the chances of success, are of the same order in both cases.



The plain truth is that the vast majority of patents are never applied commercially, and the percentage of those which reach large-scale application is very small indeed. While no exact figures are available to show this, it is significant that in England, where annual fees must be paid by the inventor after three years in order to maintain a patent in force, these fees are either never paid or are discontinued in at least 97 per cent of the cases before the patents would otherwise expire. In some instances a partial or complete return of costs may of course have been obtained, but that would not be generally the case.

Among the points bearing on the desirability of taking out patents are the following:-

(1) Is the invention one which the inventor can utilize in his own business, or which he is in a position to utilize personally by establishing a new business? If so, his chances of getting a satisfactory return are greatly increased. For example, a manufacturer of small specialties may be in a position to add to his line of products a new specialty which he has invented. On the other hand, if the invention has to do with a new type of aeroplane, a new method of making steel, or other large-scale operation, it may be necessary for him to dispose of his interests to others in order to realize anything from the invention.

(2) Is the invention of a basic character, or is its application dependent upon other patents still in force?



Let us assume, for example, that the inventor gets a patent on an improvement for an already patented safety razor. He cannot make his improved razor without obtaining a license from the one who holds the basic patent, but neither can the latter use the improvement without a license. In this instance, the prospect of making an application of the invention is less favorable than in case (1), but frequently some arrangement can be made with the earlier inventor.

(3) If the use of the invention on a large scale were contemplated, would the cost of production be low enough to make the venture commercially attractive? For example, one might develop a special platinum alloy which would give much longer service in electric heating elements than do present materials, but the cost would probably be prohibitive, and nothing would be realized from the invention.

(4) Is the market sufficiently large to permit one to make a substantial profit in supplying it? Whereas an improved radio tube or automobile tire might be sold by the millions, this would scarcely be true of special attachments for tandem bicycles, or special canes for the blind.

(5) Is the invention a device which can be easily applied to the machine for which it is intended, or would it involve redesigning that machine? If an invention involves major changes in equipment or practice, the chances of a profitable return are greatly reduced.



Does the Inventor Need to Employ a Patent Attorney?

There is no law compelling an inventor to employ a patent attorney, and one may be tempted to save the fairly substantial fees which are charged for the preparation and prosecution of an application. The task of writing out a specification telling how to practice the invention, and one or more claims defining clearly what has been invented, does not look particularly difficult.

Actually, however, a patent application is a highly technical and legal document, and there are so many traps into which the unwary may fall that even those who have had long experience in inventing and writing descriptions of inventions are well advised to use the services of a competent patent attorney. One's chances of securing a patent are thereby greatly improved, and the value of any patent which may be granted is likely to be increased to a major degree.

As will be seen later, a specification must contain much more than a simple description of the invention as ordinarily practiced, and only an experienced person can give all the information required and arrange it in systematic and effective form. The inventor should remember that when his application goes to the patent office it will be examined by an expert whose first task - or so it seems - is to show that no invention has been made. Frequently he succeeds; almost always he rejects all claims in his first response, and he

subsequently raises objections to all the inventor's arguments. The patent attorney anticipates this, and by careful questioning of the inventor and the exercise of his own trained faculties, he is able to meet in advance most of the objections that may be raised. He is also qualified to advise on any new questions brought up by the examiner.

In the claims, every word is critical. It is almost equally bad to make them too broad or too narrow. They must be developed in logical sequence. All the rules of the patent office must be strictly observed. Claims are even more difficult to draft than is the specification, and only an expert should undertake the task.

If drawings are required, these must be prepared according to detailed regulations specified by the patent office, and on paper of exactly the size called for by law. They must be properly related to the specification, and together with the specification should completely disclose the nature of the invention and the method of utilizing it.

In fact, it may be said that the most important point to be observed by a new inventor who proposes to protect his invention is that he employ a patent attorney.

#### Selection of a Patent Attorney

According to the Patent Act:- "A register of attorneys shall be kept in the Patent Office on which shall be entered the names of all persons entitled to represent



applicants in the presentation and prosecution of applications for patents or in other business before the Patent Office."

While the patent office does not guarantee the reliability or the competence of the patent attorneys listed, their names may be removed for misconduct, and the regulations for registration are such that one can be reasonably sure that all registered are familiar with general patent law and practices, and can be trusted with full details of even the most important inventions. By writing to the patent office one can secure the names of registered patent attorneys in his own vicinity. Similar information can be obtained by writing to J.R. Lanoue, Secretary of the Patent Institute of Canada, P.O. Box 370, Montreal.

Most patent attorneys are willing to handle any ordinary invention. If a case is particularly complex, it may be possible by inquiry to secure a specialist, and this is desirable. Thus difficult chemical cases should preferably be handled by chemists who have also qualified as patent attorneys.

#### Questions to Raise With One's Patent Attorney

Having selected a patent attorney, one should tell him the full story of the invention, giving every detail, since some minor detail may in fact be the critical thing in the invention. Every question should be freely answered,

for the patent attorney cannot best serve the inventor unless he thoroughly understands every phase of the matter. The inventor must convince him that an invention has in fact been made, in order that the patent attorney may in turn be able to convince the patent examiner.

It will be well in the first interview or letter to raise with the patent attorney the question of fees. These vary considerably, and by arranging the matter in advance one may be able to avoid disappointment at a later date. In particular, one should find out whether the fees include those charged by the patent office, which in Canada are \$25 on filing an application for an ordinary patent and \$25 when the patent is granted. In the United States, the patent office fees are \$30 at the time of application and \$30 on allowance. These rates are subject to modification at any time.

Before spending any considerable amount of money in applying for a patent, one should first make reasonably sure that he has actually made an invention. This fact cannot be positively established, but one should always obtain as much evidence as possible by arranging to have a search made at the patent office in Washington. Washington is suggested rather than Ottawa, for two reasons. First, the number of United States patents granted to date is far greater; second, the facilities for searching are much better in Washington than in Ottawa. In the Washington search room



all United States patents that have ever been granted are classified according to subject, and placed where those on any particular subject can be conveniently examined. This is of immense help in determining what other inventors have previously done.

Ordinarily, it will be best to have a search arranged through one's patent attorney, who can enlist the services of his associates in Washington. The cost may be anywhere from \$10 or \$15 up, according to the breadth of the subject treated and the complexity of the case.

If the inventor is himself a well trained technical man, he may prefer to go personally to Washington and make a search (as the writer has often done), for he may observe things in a previous patent which one who is not a specialist might easily miss. Further, the amount of technical information obtained by examining all patents in any particular field will in itself frequently justify the trip.

A search will often reveal the fact that the supposed invention is not actually new, having previously been patented or disclosed; in that case one is saved the much greater expenditure of applying for a patent. If the idea is in fact new, prior patents will nevertheless almost invariably disclose details of the art which will be of value in the preparation of the specification and claims, and the result will be a stronger patent than could otherwise have been obtained.



If the search discloses no previous conception of the inventor's idea, and the chances of commercializing the invention are sufficient to justify the expense of a patent, the next thing to be decided is the country or countries in which an application should be placed.

In this connection, it should be remembered that according to the International Convention (which was subscribed to by 31 countries, including Canada, Britain and the United States) an inventor who applies for a patent in one country is automatically given the advantage of that date for a period of one year in every other country subscribing to the Convention. This does not necessarily mean that patents can be obtained in all such countries, but the inventor may claim the date of his first application as the date of his invention elsewhere. For example, if A's application in Canada is dated August 1, 1947, and B applies for a U.S. patent on the same invention in February, 1948, A will have the priority of date in the United States even though his own application be not filed there until July, 1948. This is an important point, for it means that an application can be placed in one country and the decision regarding applications in other countries can be deferred without loss of rights. By the time it is necessary to apply elsewhere, the examiner's response in the first country may have been received, and conceivably the examiner may have shown that the idea is old, in which case additional expenditure can be avoided.



Obviously, the Canadian market is much smaller than that of the United States, and application for U.S. patents is therefore frequently desirable. If such application is to be placed, it is often advantageous to file the American application first, since the examiner's response is likely to be more informative than any received from the Canadian patent office. Because of the better facilities for searches in Washington and the larger staff provided there, the American patent office is much more likely to locate any pertinent prior art.

Who is the Inventor?

In Canada, the United States, and some other countries (but not Great Britain) every application must be placed in the name of the actual inventor or inventors, and it is therefore important to establish who made the invention. The identity of the inventor may seem obvious, but it is not necessarily so, and the patent attorney is fully justified in raising the question.

If a group of people have been working together on a problem, it is not always clear who is actually responsible for the inventive idea. In some laboratories, patent applications are always placed in the name of the leader of the group working on a problem, but he is not necessarily the inventor, and a patent issued to any other than the inventor is in fact not valid. Frequently two or

more people in a group have contributed new ideas of an inventive kind, in which case they are co-inventors, and applications should be made in their joint names.

It should be pointed out, however, that merely following directions which lead to invention does not make an inventor of the man who obtained the final result. If a group leader does practically all the thinking, and his assistants merely carry out his instructions, he is the true inventor, and his name alone need appear on the patent applications.

#### Who Owns the Invention?

In the case of an independent inventor, this question does not usually arise. It frequently arises, however, when the inventor is an employee of a manufacturer, a research organization, or the government.

In hiring technical employees, some companies specify the respective rights of employer and employee, and may require that all inventions made by the employee become the property of the employer. All such agreements should, of course, be strictly observed, and employees must, if required, assign to their employers all their rights in connection with inventions made, even though the true inventor's name must still appear on the patent.

If no contract exists, an employee who makes an invention not directly related to his assigned tasks ordinarily has no legal obligation to his employer. If, on the



other hand, the invention arises directly as a result of the tasks assigned, and the invention is made on the company's time, it is reasonable that some rights be retained (usually "shop rights" at least) by the employer. No general rule can cover all cases, and many inventions result in negotiations or even actual litigation.

Employees of the Dominion Government - except those of the National Research Council - are governed by the Canadian Patent Act, which places the matter under the jurisdiction of the Patent Commissioner, but requires him to give the inventor a portion of the Canadian rights and all foreign rights. According to the National Research Council Act, all inventions made by technical employees of the Council are the property of the Council itself, rather than the individual.

#### Preparation of the Application

Since this is primarily the task of the patent attorney, the question of major interest is how the inventor can be of greatest assistance. Most of the information upon which the specification and claims are based must obviously come from the inventor, and he should therefore submit to the attorney, preferably in writing, a carefully prepared statement covering all the following points:-

1. Subject of the patent.

2. Objects of the invention, that is, the principal practical advantages which it provides over ordinary practices or products.
3. Preferred practice of the invention, that is, what will actually be done in its commercial application, and normal variations to be expected. There is contemplated a fairly full statement of materials used, conditions of use or manufacture, and nature and properties of the product.
4. All new and distinguishing features of the invention, whether they appear to be patentable or not.
5. Theoretical basis of the invention, in so far as this is known, to supplement Item 4.
6. Range (of conditions, raw materials, composition, etc.) in which good results are obtained; these indicate the scope of the invention.
7. Limitations, if any, to be imposed within the range noted in Item 6. This statement should indicate whether the results obtained are satisfactory throughout the given range, or if there are exceptions. In the latter case, the exceptions should be clearly stated.
8. Results of laboratory or commercial tests to illustrate both preferred practice (Item 3) and extremes (Item 6), and also, if available, unfavorable results outside the range of Item 6, in order to illustrate why the limits given are critical.



9. Nature and extent of any search of the patent and technical literature already made.
10. List of patents or articles found which give details of practices or products sufficiently close to that of the applicant's invention that they are likely to be cited by the patent examiner. The essential similarities and differences should be given in each instance and also complete references, including, in the case of patents, the name of the inventor, the number of the patent, country and date of issue.
11. A broad statement of the invention in a single sentence, including the whole range in which it applies and excluding all the prior art, to serve as a basis for a general claim.
12. Names and addresses of the inventors.
13. Countries in which applications are to be placed.

It should again be emphasized that the inventor must give in the specification sufficient information to permit any reasonably skilled person to practice the invention. If any important step is omitted, the invention is "unworkable", and the patent is therefore worthless.

It is important to remember that nothing can be claimed which is not disclosed in the specification, and the latter should therefore include details of everything which is new and likely to be of any value whatever. A further point is that the specification - unlike the claims -



cannot afterwards be supplemented by the introduction of new material. Only actual errors can be corrected, or changes in wording made to clarify the meaning.

The inventor should ordinarily ask the patent attorney to submit to him for criticism a draft of the application. He should check this very carefully, both to see that every statement is strictly correct, and to ensure that all necessary information is given. Less attention need be paid to claims than to the specification, in spite of the importance of the former, since these can afterwards be changed at will if it appears to be desirable.

#### Prosecution of the Application

The inventor is usually anxious to obtain a patent as quickly as possible, and may therefore be disturbed by the long delay which inevitably occurs. Little or nothing can be done to reduce delays. The patent examiner considers cases in the order in which they are received, and since there is always a large backlog of applications it is not unusual for six to twelve months to elapse before any reply is received. Even if all the examiner's responses are dealt with promptly, one or two years are likely to pass before allowance occurs, and frequently the delay is much greater than this. The inventor should not become discouraged, for the examiner's willingness to allow the application has no bearing whatever upon the delays which occur.



In his first response, an examiner almost always cites several patents more or less closely related to the subject matter of the application, and on the strength of these rejects all claims. This does not necessarily mean that he finds nothing patentable in the invention; rather, it is an invitation to the patent attorney and inventor to point out wherein the invention differs from those of the patents cited. The inventor can assist the patent attorney by indicating such differences, which he should be the better able to recognize.

If invention is clearly demonstrated, the examiner will usually, after one or more rejections, allow some claims, and the patent will eventually be allowed. If, however, it proceeds to "final rejection" either in Canada or the United States, it may still be appealed with a fair chance of success.

Before allowance, several other things may occur. If - as sometimes happens - the application is only one of two or more submitted by different inventors and dealing with substantially the same subject matter, the applications may be declared in "interference", in which case special action must be taken to determine who was the first to suggest the patentable idea.

Occasionally the examiner may state that the so-called invention is so broad in character as to constitute two or more separate inventions, in which case division will

be required. Each application will then have to be prosecuted separately, and separate fees must be paid.

### Disposal of Inventions

The responsibility of the patent office ends with allowance or rejection of a patent application. Under no circumstances will a patent office purchase a patent from the inventor. In fact, unless a patent relates directly to problems of national defence, it is useless to suggest that the government acquire it. Disposal is the responsibility of the inventor - and, if he sees fit - of his attorney.

Attention may be called to one form of assistance rendered by the U.S. Patent Office to the owners of American patents. At the request of any patent owner, the number of the patent and the subject matter may be published in the Official Gazette of the U.S. Patent Office, in a special section entitled "Register of Patents Available for Licensing or Sale". This service came into effect in June, 1945, but no definite information is available as to the number of patents licenced or sold as a result. Most of the patents listed are those of individual inventors, but a few of the larger companies have also taken advantage of the system to offer patents which they were not themselves utilizing. More than 1000 patents were thus offered by one company alone. It may be of interest to manufacturers to note that the U.S.



Patent Office will, on request, supply a list of patents available in a special subject field. The service is therefore not only one for the inventor, but also for the manufacturer.

There would seem to be no problem involved if the inventor wishes to utilize his own patent. However, as already pointed out, a problem does arise when the invention constitutes an improvement on a patented article and the basic patent is not owned by the inventor. In this case the obvious step is to negotiate with the owner of the basic patent, whereby one of the inventors acquires the other's rights. If the owner of the basic patent does not wish to adopt the patented improvement, he is of course under no compulsion to do so, nor does he have to give a license to the inventor of the improvement unless required by the Commissioner of Patents in order to provide for the application of the later invention in meeting the public needs.

In the United states, no one is required to utilize his patent so as to make the patented process or product available to the public, and it sometimes happens that a company obtains a patent and subsequently does nothing about it. There is no compulsory licensing.

In Canada, however, if for any reason the inventor does not utilize his invention in such a way as to make the patented product available to the public, the Commissioner



of Patents may, on application from another party, order the patentee to license it at a reasonable rate in order that it may be used for the benefit of the country. In England, working is also compulsory, but advertising a patent for sale or license is usually accepted as "nominal working" within the terms of the Act, and if no one is interested the inventor does not necessarily lose his rights to the patent.

Since it usually takes from one to several years to secure a patent, the inventor frequently wishes, even before allowance, to arrange for license or sale.

In some cases manufacturers are approached before a patent is applied for, but it is unwise to take such action until one obtains at least such preliminary protection, as referred to above, and preferably not until the patent application is actually filed. As a matter of fact, many manufacturers will not consider the purchase of inventions until patents have actually been issued, since only then do they know exactly what they are offered. There are the further reasons that they thereby eliminate many suggestions of a trivial or impractical character, and avoid the possibility of misunderstanding with the inventor.

Approaches to manufacturers are frequently made by the inventors themselves. If they do not feel wholly competent to take such action, the patent attorney is usually willing, for a fee, to undertake this service.



Often the inventor may not know who would be interested in acquiring his patent, and needs advice on this point. Most large manufacturers will consider the purchase or licence of a patent which will permit them to make profitably a new or improved product in their own line, or to make an old product at lower cost. Smaller companies may be more ready to undertake the manufacture of a specialty which would not offer sufficient business to be attractive to a larger company.

The names of Canadian manufacturers are obtainable from two main sources, the Canadian Trade Index, issued by the Canadian Manufacturers' Association, Toronto, and Fraser's Canadian Trade Directory, 507 University Tower Building, Montreal. Both of these publications, in which manufacturers are classified by the type of product made, are available in the larger city libraries, and may be consulted there.

#### Publications on Patents

The average inventor, who employs a patent attorney and leaves all matters to him, will not need to secure any publications on patents, although some of those listed below might be of interest. Those who make many inventions and who wish to be well informed on the question of patents will profit by securing or consulting one or more of the following publications:-

(1) Canada

(Canadian patent publications are obtainable from The Commissioner of Patents, Ottawa; all remittances should be made payable to the Receiver General of Canada.)

(a) The Patent Act (free).

(b) Rules, Regulations and Forms under The Patent Act (free).

(c) The Canadian Patent Office Record, issued each week and containing a complete list of Canadian patents granted during that period, with from one to four claims. There is an annual index by inventor, assignee and subject.

(Price, \$10 per year; single copies, 25 cents).

(d) Certified copies of individual Canadian patents are available at \$4.00 each, plus a charge for any drawings. Photostat copies can be obtained at 25 cents per sheet.

(2) United States

(Except as noted below, U.S. patent publications are obtainable from The Commissioner of Patents, Washington 25, D.C., to whom remittances - in U.S. funds - should be sent.)

(a) General Information Concerning Patents (free).

(b) Patent Laws (free).

(c) Rules of Practice in the United States Patent Office (free).



- (d) Information Concerning Register of Patents Available for License or Sale (free).
- (e) The Official Gazette of the United States Patent Office, issued each week and containing a complete list of U.S. patents granted during that period, with a single claim for each. There is an annual index by inventor, assignee and subject.  
(Price, \$16 per year, or \$18.75 with index; single copies, 35 cents; obtainable only from the Government Printing Office, Washington, D.C., to which office remittances should be made payable.)
- (f) Manual of Classification of Patents (U.S.).  
(Price, \$1.00 per copy, obtainable only from the Government Printing Office, Washington, D.C., to which office remittances should be made payable).
- (g) Printed copies of individual U.S. patents.  
(Price, 25 cents each).

(3) General

- (a) A Research Chemist Looks at Patents, by Dr. G.H. Young, Mellon Institute of Industrial Research, Pittsburgh, Pa. This is a mimeographed statement of 20 pages, of particular interest to chemists.
- (b) Patent Law for Chemists, Engineers and Students, by C.H. Biesterfeld, a book of 225 pages published by John Wiley and Sons, Inc., New York City.  
(Price, \$2.75).