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The United States Patent Laws: Historically and Practically Considered.*

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Several years ago a writer in the *Iron Industry Gazette*, an English publication, said: "Disparagement of patents is common and easy, but it should not be forgotten by those who sneer at inventions that, out of a total of eight billions of capital invested in manufacturing in the United States, patents form the basis for an investment of about six billions. Evidently, the United States system of encouraging invention that has resulted in the patenting of over 500,000 inventions is a system which is exceedingly wise and valuable. The only thing that has enabled manufacturers to make so wonderful a progress in the United States is its patent system."

Up to the present time, there have been granted in the United States nearly 800,000 patents, and, while I have no recent figures, there is no doubt but that the proportion of capital invested in manufactures with patents as a basis is as great, if not greater, now than it was when the foregoing statement was made.

At a time when the right of property in patents, or rather in patented inventions, is so well recognized, it strikes one as a curious fact that there ever was or should have been a time when a right to such property was not recognized. Yet the fact is that in comparatively recent periods, considered in the light of the world's history, property rights in connection with inventions were not recognized, and if a man was possessed of an inventive turn of mind and was an

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inventive genius, and made inventions or improvements in machines or in mechanical devices or in the art of doing things, he had to stand by and see others enjoy equally with him the benefits of his intellectual thought and effort.

In the very earliest history, the right of property in tangible things was recognized, but an exclusive right in intellectual property, such as inventions and writings, was not regarded as a natural right, and the right to such property was only established as a result of advancing and improved civilization.

It seems that quite early in England the practice grew up under which the Crown, as a matter of grace and favor, but not of right, granted to the inventor of a new manufacture or a new art, the exclusive right for limited periods to his invention or improvement, and it is reported that in the fourteenth century, in the reign of Edward III, some wise subjects of the realm, alchemists they were, invented or discovered a philosopher's stone. A commission was appointed by the King, consisting of two aldermen and two friars, who, after an investigation, which, of course, was very carefully made, reported that the philosopher's stone possessed merit, and upon this report the King granted an exclusive right to the discoverers to manufacture and sell the philosopher's stone.

When the nature of intellectual property is considered, it seems somewhat anomalous that rights of property therein should not have been recognized from the very earliest times.

Professor Shaler has said : " When we come to weigh the rights of the several sorts of property which can be held by men, and in this judgment take only the absolute questions of justice, leaving out the limitations of expedience and prejudice, it will be seen clearly that intellectual property is after all, the only possession in the world. The man who brings out of nothingness some child of his thoughts has rights therein which cannot belong to any source of property."

Mr. Fessenden, in his work on patents, published in 1821, says : " In a moral as well as in a political point of view,

the author of a new and useful invention has the best of all possible titles to a monopoly of the first fruits of his ingenuity. The invention is the work of his hands and the offspring of his intellect; and after he is allowed a temporary monopoly, becomes at the expiration of the patent a valuable donation to society."

At least as early as about the year 1600 the right of property in invention was well understood and had a well-established and defined standing in the common law. As indicating that in the common law of England at that time the reason for granting exclusive privileges to inventors, and that the rights of property in inventions were fairly understood, I will read you what was said by the Court in the case of *Darcy vs. Allin*: "Where any man, by his own charge and industry, or by his own wit or invention, doth bring any new trade into the realm, or any engine tending to the furtherance of a trade that was never used before; and that for the good of the realm: that in such cases the King may grant to him a monopoly patent for some reasonable time, until the subjects may learn the same, in consideration of the good that he doth bring by his invention to the commonwealth; otherwise not."

Sir Edward Coke said of patent privileges that: "The reason wherefor such a privilege is good in law is because the inventor bringeth to and for the commonwealth a new manufacture by his invention, costs and charges, and therefore it is reason that he should have a privilege for his reward (and the encouragement of others in the like) for a convenient time."

It does not appear that there was any statutory law passed in England concerning the patenting of inventions until the year 1623, in the twenty-first year of the reign of James I, at which time the statute of monopolies was passed, which declared certain monopolies to be void, and prohibited the grant of such monopolies in the future. One section of this statute, however, related to patents and read as follows:

"Provided also, and be it declared and enacted: That any declaration before mentioned shall not extend to any

letters-patent and grants of privilege, for the term of fourteen years or under, hereafter to be made, of the sole working or making of any manner of new manufactures, within this realm, to the true and first inventor and inventors of such manufactures, which others, at the time of making such letters-patent and grant, shall not use, so as also they be not contrary to the law, nor mischievous to the state, by raising prices of commodities at home, or hurt of trade, or generally inconvenient: The said fourteen years to be accounted from the date of the first letters-patent or grant of such privilege, hereafter to be made: but that the same shall be of such force as they should be, if this act had never been made and of none other."

I quote this section of the statute in full because it is the first English statute on the subject, and is the very foundation of our own laws on the subject of patents. These laws are the result of development and evolution.

Mr. Robinson, the author of one of our most elaborate treatises on the subject of the patent laws, has said that in this statute, as interpreted by the English courts, are found the sources of the patent laws of the United States.

The 150 years following the statute just referred to covered the Colonial period of the United States. During that period of our existence there was, as is well known to all, very little manufacturing within the present borders of the United States, and very little improvement in the manufacturing arts was made by the Colonists. The country was very thinly and sparsely settled; the Colonists, our forefathers, had duties to perform which were much more pressing upon them than the making of inventions or improvements in the method or art of doing things in the manufacturing world. The Colonists were making a continual fight for existence and constant effort to subdue the many obstacles incident to the development of a new country, and had no time to engage in the fascinating and frequently profitable pursuit of making improvements and inventions in existing devices in the manufacturing arts.

It is not surprising that under these conditions the Colonists made few inventions. But there was still another

obstacle in the way of improvement by the Colonists of the manufacturing arts. This obstacle was the attitude of England toward the Colonists upon this matter. It was England's idea that the Colonists should supply raw articles of commerce, such as the products of the farm, and that England should furnish to the Colonists all such manufactured articles as might be needed or demanded by the Colonists. England's policy toward the Colonists was expressed by Sir William Pitt, when he said: "It is the destiny of America to feed Great Britain, and the destiny of Great Britain to clothe America." Lord Chatham said, "I would not allow the Colonists to make so much as a hob nail for themselves."

Laws were enacted by England prohibiting every species of manufactures in the Colonies. When the Colonists began to make iron and nails for their use, the House of Commons resolved that "none of the plantations should manufacture iron nails of any kind out of any sows, pigs, whatsoever." And the House of Lords added, "No forge going by water, or other works, should be erected in any of the plantations for the making, working or converting of any sows, pigs, or cast iron into bar or rod iron."

By an act of 1750 the erection of buildings and mills for making iron was prohibited. There were corresponding restrictions imposed upon the Colonies with respect to all sorts of manufacturing arts. For instance, in 1684, Virginia passed an act encouraging the manufacture of the textile fabrics which was annulled by Parliament. The condition of manufactures in the Colonies has been well set forth by Senator Thomas C. Platt, of Connecticut, as follows:

"Manufactures were practically unknown; . . . there were no machines as we now understand the term; . . . men knew how to plough and sow, hoe and chop, reap, mow and cradle, break flax and hackle it, thresh with the flail, winnow with the blanket or fan and to shell corn by hand. The women knew how to spin, card, weave and knit. Mechanical knowledge was monopolized by the blacksmith, the carpenter, the millwright and the village tinker. Pro-

duction was a toilsome, weary task, limited by the capacity for muscular endurance."

It is probable that the first patent granted within the limits of the United States was by the general court of the Colony of Massachusetts, under date of May 6, 1646, to one Joseph Jenckes, of Lynn, for a scythe. In his petition or prayer, he prayed for protection for "Fowerteen yeeres, without disturbance by any other setting up the like inventions, so that his study and cost may not be in vayne or lost."

Before proceeding to a discussion of the laws relating to patents which have been enacted by the United States Government, I desire to call attention briefly to some of the objections which have been made to patents. The objection has been made that there is no such thing as intellectual property, and that ownership of such property restricts common rights. Also that the granting of a patent is a creation of a monopoly. Patents have been compared to letters of marque, which allowed the holder to prey upon honest industry. It has been urged that patents increase the price of commodities, and that they encourage labor-saving inventions and take opportunities from the artisan.

It is needless to say to an audience of the present day that the last objection is utterly without foundation. Exactly the reverse has been proved adequately. It has been urged that patented inventions reduce or sink man to automata, and that the granting of a patent enables one man to say to another that he shall not carry on his business in the best way, and that by granting a patent the idea involved in the patent is tied up, and the course of thought in that direction is stayed. A Frenchman has advanced a picturesque objection that patents give undue advantage to their possessor by "making a golden bridge for him who enters the arena with arms more subtle and more finely tempered than those of his adversaries."

The foundation of all the patent-law legislation in the United States is the clause or phrase in the Constitution which vests in Congress power "to promote the progress of science and useful arts by securing for limited times to

authors and inventors the exclusive right to their respective writings or discoveries."

The first patent law of the United States was enacted in the year 1790, April the 10th. It followed in a general way the law then in existence in England authorizing the grant of patents without an examination of the prior art, as is now the case. The authority to grant patents was conferred upon the Secretary of State, the Secretary of War and the Attorney-General of the United States.

It appears that Mr. Jefferson, who was at that time Secretary of State, took great interest in the patent laws, and regarded them and the granting of a patent as of the very greatest importance, and he is generally referred to as the Father of the United States Patent Laws.

In the Official Gazette of the United States Patent Office, published September 24, 1877, an interesting description of the early practice under the Act of 1790 occurs: "By Act of April 10, 1790, the first American Patent System was founded. Thomas Jefferson inspired it, and may be said to have been the Father of the American Patent Office. He took great pride in it, it is said, and gave personal consideration to every application that was made for a patent during the years between 1790 and 1793, while the power of revision and rejection granted by that Act remained in force. It is related that the granting of a patent was held to be in these early times quite an event in the history of the State Department, where the clerical part of the work was then performed.

It is a matter of tradition, handed down to us from generation to generation, by those who love to speak of Mr. Jefferson, his virtues and his eccentricities, that when an application for patent was made under the first Act, he would summon Mr. Henry Knox, of Massachusetts, who was Secretary of War, and Mr. Edmund Randolph, of Virginia, who was Attorney General—these officers being designated by the Act, with the Secretary of State, a tribunal to examine and grant patents—and that these three distinguished officials would examine the applications critically, scrutinize each point of the specification and claims carefully and

rigorously. The result of this examination was that during the first year, a majority of the applications filed failed to pass the ordeal, and only three patents were granted. In those days every step in the issuance of a patent was taken with great caution, Mr. Jefferson seeking always to impress upon the minds of his officers and the public that the granting of a patent was a matter of no ordinary importance."

It is not to be understood that the examination referred to an investigation of the prior art. The only examination required was of the petition, description, drawing, etc., of the application.

The next patent act was amendatory in its nature, and was passed in 1793. Among other changes, it imposed the duty of issuing patents upon the Secretary of State, subject, however, to the approval of the Attorney General.

From 1793 down to 1836, various unimportant amendments to the patent laws were enacted. In the last mentioned year, however, the first comprehensive law was passed relating to the grant of patents. This law remained in force until 1870, and was in fact in substance very much the same as our present laws.

By the enactment of 1836, a sub-department of the State Department was created, which was known as the Patent Office. Provision was made for the appointment of a Commissioner of Patents, and the Commissioner of Patents was required to make or to have made an examination of the alleged new invention or discovery to determine whether or not the same had been invented or discovered by any other person in the United States prior to the alleged invention thereof by the applicant and to determine whether or not, in view of the prior art, the applicant was entitled to a patent.

Prior to this Act examinations were not required, and if the applicant averred that his alleged invention was new and novel, the Commission or the Secretary of State was required to grant or issue a patent upon his application, provided the discovery or invention of the applicant was deemed of sufficient importance.

It will readily be seen that a patent granted under such circumstances was necessarily of very small commercial value, because it would not be reasonable to expect men to invest their capital in a species of property good title to which and the value of which were so uncertain.

The Act of 1836 established patent property upon a higher plane than it had ever before occupied and it is believed that the importance of this act to the people of the United States cannot be overestimated.

Senator Thomas C. Platt, speaking in 1884, referring to this Act, said:

“To my mind, the passage of the Act of 1836 creating the Patent Office marks the most important epoch in the history of our development—I think, the most important event in the history of our Government from the Constitution until the Civil War. The establishment of the Patent Office marked the commencement of that marvelous development of the resources of the country which is the admiration and wonder of the world, a development which challenges all history for a parallel; and it is not too much to say that this unexampled progress has been not only dependent upon, but has been coincident with, the growth and development of the patent system of this country. Words fail in attempting to portray the advancement of this country for the last fifty years. We have had fifty years of progress, fifty years of inventions applied to the everyday wants of life, fifty years of patent encouragement, and fifty years of a development in wealth, resources, grandeur, culture, power which is little short of miraculous. Population, production, business, wealth, comfort, culture, power, grandeur, these have all kept step with the expansion of the inventive genius of the country; and this progress has been made possible only by the inventions of its citizens. All history confirms us in the conclusion that it is the development by the mechanic arts of the industries of a country which brings to it greatness and power and glory. No purely agricultural, pastoral people ever achieved any high standing among the nations of the earth. It is only when the brain evolves and the cunning hand fashions

labor-saving machines that a nation begins to throb with new energy and life and expands with a new growth. It is only when thought wrings from nature her untold secret treasures that solid wealth and strength are accumulated by a people."

Under the patent laws now in force in the United States any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, or more than two years prior to his application, and not in public use or on sale in this country more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law and other due proceedings had, obtain a patent therefor.

It may be remarked here that the word "discovered" in this section of the statute means "invention."

It will be noted that foreigners have the same rights under this law as citizens of the United States.

The first requisite to the securing of a patent is the making of an invention. Just what invention is or what it takes to constitute an act of invention is a question that has been discussed by the courts and by text-book writers many, many times, and it is a question which cannot be answered by definition. I say this, notwithstanding that definitions of the term "invention" will be found in many text-books, and in many decisions of the courts. Suffice it to say that invention comprehends a new idea of means and it must be something beyond the scope of merely mechanical effort.

Having made an invention, the next step in the process of securing a patent consists in the preparation of an application and the filing of the same in the Patent Office. This application comprises a petition to the Commissioner of Patents, requesting the grant of the patent for the invention disclosed in the application, an oath answering to the

requirements of the statutes, a specification descriptive of the invention, and such specification must be concluded with a claim or claims specifically pointing out the improvement or invention. If no application has been made in a foreign country, the oath should set forth that the applicant is the original and first inventor of the invention disclosed in the application and described and claimed in the specification; that such invention was never known or used before his invention or discovery thereof; that such invention had not been patented or described in any printed publication in the United States of America or any foreign country before his invention or discovery thereof, or more than two years prior to his application; that the said invention had not been in public use or on sale in the United States for more than two years prior to his application, and that no application for foreign patent had been filed by him or his legal representatives or assigns in any foreign country prior to his application in the United States. If, however, applications for patents in countries foreign to the United States have been made at the time of the filing of an application in the United States, it is necessary for the applicant to name the foreign country or countries in which such applications have been made, giving the date of the filing of the same.

The claims are necessary to a complete specification. The specification must, of course, be signed by the applicant, who in nearly all cases is the inventor, and the application when forwarded to the Patent Office must be accompanied by the first Government fee of \$15. Where the application relates to an invention which can be graphically depicted, it is necessary to prepare and file drawings with and as a part of the application.

If any one of the parts above referred to are omitted, the application will not be accepted by the Patent Office, and the same will not be filed until all of the parts have been received by the Patent Office.

After an application has been received by the Patent Office, it goes to the Application Division, where it is classified, and is then forwarded to the division in the Patent Office in which is to be found the class of machine or art to

which the invention belongs. Applications received in the office are examined in regular order, according to their filing dates.

Before the claims of an application are allowed, careful examination of the prior art is made, and only such claims are allowed as distinguish from the constructions disclosed by the patents and other publications discovered by the examiner in his search of the art.

As a rule these examinations are carefully made, though, as you will readily understand, where several hundred examiners and assistants are employed, some of them are more careful in their work than others. The more care taken in the search and examination of the records in the Patent Office, the more likely is it that the patented claims will be valid.

It frequently becomes necessary to amend the claims, perhaps many times, before they can be brought into such shape that they distinguish from the art.

There is one thing that should be understood by all applicants for patents, and that is that the claims of a patent are of the very greatest importance; in fact, I should regard the claims as the most important part of a patent. Unless the claims are well drawn and unless they cover well the invention forming the subject-matter of the patent, the patent loses much of its value.

The phraseology of the claims should be accurate. It is as necessary that the elements or parts entering into and forming the combination set forth in a claim should be stated and put together with exactness and precision as it is that the same elements be fitted together with exactness and precision in the machine itself.

As I have already said, the claims of a patent should be drawn with very great care, and should be made as accurate and as exact and as much to the point as it is possible.

I am sorry to say, however, that in many, many instances claims are vaguely and loosely drawn. This in some instances is due to a lack of knowledge of what the invention really is; in others it is a lack of ability to express ideas clearly in writing; in others it is perhaps a lack of effort;

and in others it is perhaps due to a lack of proper time; but whatever the cause may be, failure to secure good claims is a misfortune so far as the patentee is concerned.

A writer in *The Forum*, referring to the difficulty of claim writing, has said: "It takes a very experienced hand to avoid defects which will nullify the patentee's proper advantage. An omission is fatal; an addition is fatal; and a vagueness is fatal."

Broadly considered, the claims of an application may be divided into generic and specific claims. If the invention disclosed in an application will support a broad or generic claim, such a claim should by all means be included. But in addition to such claim, specific claims also should be included because it is very much easier to anticipate a broad claim in the prior art than it is to anticipate a specific claim, and it may happen, if the claims of the patent are ever subjected to litigation, that the patentee would be able to sustain the validity of the specific claim but would be unable to sustain the validity of the generic claim. In such case, the patent, by reason of the presence of the specific claim, would still be of value to the patentee, while, on the contrary, if it had included only the generic or broad claim or claims, which had been anticipated, the value of the patent would be entirely destroyed.

It is not always so, but, generally speaking, a broad claim includes a small number of elements in combination, while a specific claim will include a greater number of elements in combination, and these elements may be still further affected and narrowed by qualifying limitations.

It sometimes happens that an inventor, who fully understands the details and principles of his invention, concludes that he is better fitted to write his specification and claims, that is to say, is better fitted to prepare his application for the Patent Office than some one who has had experience in the writing of specifications and the drawing of claims, and therefore undertakes to do this work. It is very unusual to find an inventor who has had sufficient experience to prepare the specification and claims of an application properly, and the chances are about one hundred to one against his

succeeding in drawing claims which adequately protect his invention.

After the application has been placed in condition for allowance, it is allowed by the examiner, after which it goes to the Issue Division of the Patent Office. Then, upon the payment of the final fee of \$20, the patent is printed, the grant is prepared and is signed by the Commissioner of Patents, and the patent is issued under the seal of the Patent Office.

Many inventors suppose that when they have secured their patents their troubles are over, but the fact is that if the invention is of any considerable value or worth, the patentee will be beset by a horde of infringers who will attempt to use the invention and secure the benefit of the inventor's thought and ingenuity.

The patentee can protect his rights only by bringing and prosecuting a suit in the Federal Courts and securing an injunction against infringers.

It seems strange that a person who would not think of trespassing upon the real property of another person, or who would not think of interfering with ordinary chattel property belonging to a stranger, will not hesitate to trespass upon the patented property of another, whenever it appears to him that such trespassing would inure to his advantage, considered from a business and financial standpoint.

Notwithstanding the fact that patented property is constantly being subjected to the attacks of infringers, such property is very valuable, and, as has already been pointed out, constitutes the basis of investment of many millions of dollars in the United States, and it has been asserted in a comparatively recent annual report of one of the Commissioners of Patents "that we mainly owe to our patent system such foothold as we have gained during the past fifty years in foreign lands for our manufactured products."

AN 8-FOOT STEEL CHIMNEY, 230 feet in height, has just been completed and will be erected in Mexico. This will be the highest steel chimney in America.